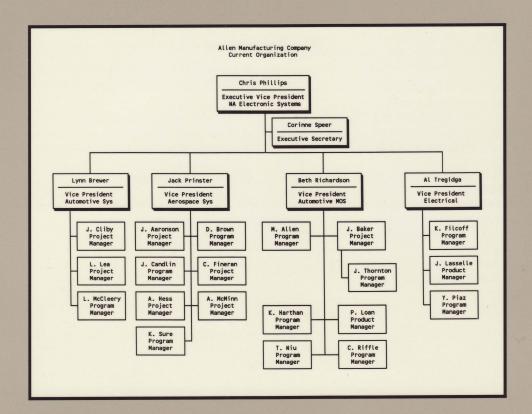*Org Plus Advanced™ makes organization charts quickly and professionally. Just enter the information. Org Plus formats and draws with perfect spacing.*

Allen Manufacturing Company
Current Organization

Chris Phillips
Executive Vice President
NA Electronic Systems

Corinne Speer
Executive Secretary

Lynn Brewer
Vice President
Automotive Sys

Jack Prinster
Vice President
Aerospace Sys

Beth Richardson
Vice President
Automotive MOS

Al Tregidga
Vice President
Electrical

J. Cliby
Project
Manager

L. Lea
Project
Manager

L. McCleery
Program
Manager

J. Aaronson
Project
Manager

J. Candlin
Program
Manager

A. Hess
Project
Manager

K. Sure
Program
Manager

D. Brown
Program
Manager

C. Fineran
Project
Manager

A. McMinn
Project
Manager

M. Allen
Program
Manager

K. Harthan
Program
Manager

T. Niu
Program
Manager

J. Baker
Project
Manager

J. Thornton
Program
Manager

P. Loan
Product
Manager

C. Riffle
Program
Manager

K. Filcoff
Program
Manager

J. Lasselle
Product
Manager

Y. Piaz
Program
Manager

ORG PLUS™
ADVANCED

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ORG PLUS™
A D V A N C E D

User's Guide

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1 Introduction to Org Plus Advanced

What Org Plus Advanced Can Do

Org Plus Advanced automatically prints tree diagrams for a wide range of applications. You can use Org Plus for organization charts, work breakdown structures, family trees, and more. Just enter the names and comments. Then Org Plus draws and spaces the boxes, positions the text, and precisely lays out the connecting lines. Org Plus offers a selection of seven different chart styles.

A simple diagram may have a single name in each box. A complex diagram may have up to eight lines of text and twelve additional lines of numerical data in each box. You can also print four lines of text on the outside corners of each box. Keep track of numerical information such as salaries, commissions, budgets, office space, and project hours with a mini-spreadsheet for each position. Org Plus does the arithmetic so it is easy to compare results by position, branch, or level. The power lies in its ability to consolidate numerical results, position by position, up the branches of your chart.

Org Plus prints simple tabular reports, such as a phone list, from the information in your chart. And its exciting, new ability to recognize names from around the world is a real time saver. Enter names in your chart first name first. Then Org Plus can do the hard work of sorting and printing your reports last name first.

Org Plus gives you a complete set of editing capabilities that let you insert, delete, and move positions. You can update charts in minutes.

Org Plus lets you electronically cut and paste your chart. Put your chart in the Drawing Board and make changes right on the screen. Draw vertical and horizontal lines. Add boxes and annotations anywhere. Depending on your printer, enhance the text with bold, underline, and italics. Make chart titles larger, and add borders to your chart.

Here are examples of the kinds of charts you can produce with Org Plus.

Figure 1-1. Work Group Display menu tree showing the program command structure

Figure 1-2. Product cost roll-up chart showing component costs

System Unit BB-9000
Product Cost Roll-Up

System Unit BB-9000	
Mat'l	$1630.00
Mfg Ovrhd	$456.40
Labor Hrs	37.5
Labor Cost	$3150.00
Tot Cost	$5236.40
% Tot Cost	100.00

Enclosure 09000-00100	
Mat'l	$255.00
Mfg Ovrhd	$71.40
Labor Hrs	9.3
Labor Cost	$781.20
Tot Cost	$1107.60
% Tot Cost	21.15

I/O Assembly 09000-04190	
Mat'l	$335.00
Mfg Ovrhd	$93.80
Labor Hrs	11.7
Labor Cost	$982.80
Tot Cost	$1411.60
% Tot Cost	26.96

Memory Assembly 09000-02200	
Mat'l	$861.00
Mfg Ovrhd	$241.08
Labor Hrs	5.8
Labor Cost	$487.20
Tot Cost	$1589.28
% Tot Cost	30.35

Assembly Labor	
Mat'l	$0.00
Mfg Ovrhd	$0.00
Labor Hrs	4.8
Labor Cost	$403.20
Tot Cost	$403.20
% Tot Cost	7.70

Assembly Labor	
Mat'l	$0.00
Mfg Ovrhd	$0.00
Labor Hrs	1.5
Labor Cost	$126.00
Tot Cost	$126.00
% Tot Cost	2.41

Assembly Labor	
Mat'l	$0.00
Mfg Ovrhd	$0.00
Labor Hrs	1.2
Labor Cost	$100.80
Tot Cost	$100.80
% Tot Cost	1.92

Backplane 09003-80705	
Mat'l	$82.00
Mfg Ovrhd	$22.96
Labor Hrs	3.0
Labor Cost	$252.00
Tot Cost	$356.96
% Tot Cost	6.82

General I/O Board 41001-04002	
Mat'l	$110.00
Mfg Ovrhd	$30.80
Labor Hrs	4.5
Labor Cost	$378.00
Tot Cost	$518.80
% Tot Cost	9.91

Memory Board 46002-02205	
Mat'l	$321.00
Mfg Ovrhd	$89.88
Labor Hrs	2.6
Labor Cost	$218.40
Tot Cost	$629.28
% Tot Cost	12.02

Figure 1-3. Chart of accounts diagram with account names and numbers

Anderson Incorporated
March 10, 1988

Chart of Accounts

Balance Sheet Accounts — P & L Accounts

Assets 100-000 · Liabilities 200-000 · Equity 300-000 · Revenues 400-000 · Cost of Goods Sold 500-000 · Sales & Mktg. Exp. 600-000 · Payroll & Related Exp. 630-000 · General & Admin. Exp. 650-000

Checking Acct. 101-000 · Accounts Payable 201-000 · Common Stock 301-000 · Sales 401-000 · Assembly & Packaging 501-000 · Advertising & Promotion 601-000 · Sales Salaries 631-000 · Business Insurance 651-000

Accounts Receivable 103-000 · Accruals 210-000 · Paid in Capital 310-000 · Interest Income 415-000 · Duplication 505-000 · Graphic Arts 603-000 · Office Salaries 633-000 · Contributions 653-000

Material Inventory 105-000 · Loan (Short Term) 215-000 · Retained Earnings 350-000 · Miscellaneous Income 420-000 · Materials 507-000 · Public Relations 608-000 · Outside Service-Office 637-000 · Equipment Rental 658-000

Pre-Paids 108-000 · Medical Insurance 640-000 · Maintenance & Repairs 661-000

Computer Equipment 150-000 · Payroll Taxes 643-000 · Miscellaneous 665-000

Office Furn. & Equip 151-000 · Pension (401K) 645-000 · Office Supplies 667-000

Leasehold Improvements 155-000 · Workmen's Compensation 647-000 · Travel 670-000

Auto 158-000 · Profit Sharing 649-000 · Rent 675-000

Accumulated Depreciation 160-000 · Utilities 678-000

Using this Guide

"Chapter 2: Getting Started" tells how to install Org Plus for use with your computer and printer. Everyone should read this chapter.

"Chapter 3: Building a Chart" describes how to use the basic capabilities of Org Plus. It includes a short tutorial to help you get started.

"Chapter 4: Printing Your Chart" explains how to print a chart or display it on the screen. It discusses the choices you can make to control the way your chart appears.

"Chapter 5: Editing Your Chart" tells you how to make changes to an existing chart. This includes revising the text, moving parts of the chart around, and much more.

Read the following chapters as your needs require.

"Chapter 6: Advanced Chart-Making" discusses some advanced features. These features can help you achieve even more flexibility in the way your final charts appear. It also provides hints for accomplishing a number of specific chart layouts and applications.

"Chapter 7: Tables and Reports" shows you how to produce a tabular report, such as a phone list, from the information in your chart.

"Chapter 8: Amounts" discusses how to use the numerical abilities of Org Plus for counting, classifying, calculating, and consolidating.

"Chapter 9: Custom Drawing" explains how to use the Drawing Board to electronically cut and paste or customize your chart.

"Appendix A: Key Assignments" puts all key assignments in one convenient location. This appendix also describes advanced cursor movement and text editing commands.

"Appendix B: Troubleshooting" addresses a few of the most common problems that users of Org Plus may encounter.

"Appendix C: Memory Utilization and Other Org Plus Limits" describes the specifications and requirements for running this program.

Note: Most examples in this guide refer to an organization chart because that is the most common use for Org Plus. Don't let that discourage you from using it for other applications.

What You Need

Org Plus requires an IBM personal computer or 100% compatible computer. It must have at least 384KB of memory (512KB recommended) and a hard disk or two double-sided diskette drives.

You also need IBM Disk Operating System (PC-DOS) Version 2.0 or above and a graphics printer or plotter.

Org Plus runs with monochrome, CGA, EGA, VGA, and Hercules display adaptors.

Org Plus supports a wide variety of printers. For the best quality output, you should use a printer that supports graphics, such as a dot matrix or laser printer. Org Plus also works with a daisywheel (letter-quality) printer. However, a daisywheel printer cannot produce the solid lines and boxes you normally expect in an organization chart.

Org Plus supports printers from most major printer manufacturers. It also supports most printers that use the standard protocols defined by Epson or IBM printers, or the Hewlett-Packard LaserJet family.

It supports Hewlett-Packard plotters and other plotters that use Hewlett-Packard's plotter language (HPGL).

2 Getting Started

This chapter contains information and procedures you need to set up Org Plus on your computer system. It covers:

- the README program
- installing Org Plus on a fixed-disk system
- making a working copy of the program for a two-diskette drive system
- telling Org Plus about your printer or plotter

First, please fill out and return the Org Plus Advanced Registration Card. Our philosophy is one of continued product improvement. As a registered user, you will receive the latest information on product enhancements.

Org Plus comes on two $5^1/4$ inch diskettes for those who have $5^1/4$ inch diskette drives. It also comes on one $3^1/2$ inch diskette for those with $3^1/2$ inch drives. (The $5^1/4$ inch diskettes have a hole in the middle when you take the disk out of its sleeve.) Follow the appropriate set of instructions below for your system.

Your Org Plus diskettes contain two sample charts that are already created and ready-to-print. You can use the Retrieve Chart command to retrieve and look at these charts. The Figures in "Chapter 3: Building a Chart" show the SAMPLE1.ORG chart. "Chapter 7: Tables and Reports" also refers to SAMPLE1.ORG. And SAMPLE2.ORG contains the chart pictured on the front of this user's guide.

The README Program

"Diskette 2 - Draw" (or "Diskette A - Chart & Draw" if you have a $3^1/2$ inch drive) contains a program named README. This program contains information about Org Plus not possible to include in the user's guide due to publication lead times. You may also find advanced topics, timely tips, and troubleshooting information.

Follow these steps to access this information:

1. Insert "Diskette 2 - Draw" into your diskette drive. Or insert "Diskette A - Chart & Draw" if you have a $3^{1}/2$ inch drive.

2. Make sure that the DOS prompt for that diskette drive is on your screen. In other words, if the Org Plus diskette is in drive A, the prompt on your screen is A>.

3. Type `README` and press Enter ⏎. (You can type in uppercase or lowercase letters.)

4. Use the cursor up ↑ and cursor down ↓ or PgUp and PgDn keys to scroll through the information.

5. Press Escape Esc to return to DOS.

You can also print the information on your printer. Make sure your printer is turned on. Then type `PRINTDOC` at the DOS prompt.

Installing Org Plus on Your Computer

You can install Org Plus on your fixed disk, or you can run it from the program diskettes as long as you have two disk drives available. Make sure you follow the correct set of instructions for the type of computer system you are using.

Do not run Org Plus from the original Org Plus diskettes. Install Org Plus on your fixed disk, or make working copies of the diskettes, and store the originals as a backup.

This software and the user's guide are protected by U.S. and International copyright law. Like a book, the software can be used by one person on one computer at a time. You cannot make copies of the software except for back-up purposes. You may make a maximum of two back-up copies. The software can be installed on your fixed disk. Be sure to read the license agreement at the front of this user's guide before installing and using Org Plus.

A separate license is required for installing or downloading Org Plus on a network. Contact Banner Blue for details.

Installing Org Plus on a Fixed Disk

Banner Blue recommends that you install Org Plus in its own subdirectory on your fixed disk. A subdirectory is like a folder in a filing cabinet. When you keep Org Plus in its own subdirectory, you avoid intermingling charts with files produced by other programs. This makes it easier to locate the file you need.

If you already have an earlier version of Org Plus installed in the same subdirectory, this version will replace it. Your chart files will not be disturbed.

Follow these steps to install Org Plus from $5^1/4$ inch diskettes.

1. Make sure the DOS C> prompt is on your screen. If you are installing Org Plus in a subdirectory, make it the current subdirectory.

2. Insert "Diskette 1 - Chart" in drive A and close the door.

3. Type A:FD and press Enter ⏎. A message appears on the screen to tell you that installation is taking place. The installation procedure copies the files from drive A to the current drive and directory (drive C).

   When the files from "Diskette 1" have been copied, a message appears asking you to insert the second diskette.

4. Remove the diskette and insert "Diskette 2 - Draw" in drive A and press Enter ⏎.

5. When installation is complete, remove the original Org Plus diskettes from drive A. Store them in a safe place.

Note: If you copy Org Plus from a diskette drive other than drive A, do not use the instructions above. Use the DOS COPY command instead. Refer to your DOS (operating system) manual for instructions.

Follow these steps to install Org Plus from a 3¹/₂ inch diskette.

1. Make sure the DOS C> prompt is on your screen. If you are installing Org Plus in a subdirectory, make it the current subdirectory.

2. Insert "Diskette A - Chart & Draw" in drive A and close the door.

3. Type A:FD and press Enter ⏎. A message appears on the screen to tell you that installation is taking place. The installation procedure copies the files from drive A to the current drive and directory (drive C).

4. When installation is complete, remove the Org Plus diskette from drive A. Store it in a safe place.

Note: If you copy Org Plus from a diskette drive other than drive A, do not use the instructions above. Use the DOS COPY command instead. Refer to your DOS (operating system) manual for instructions.

Starting Org Plus from a Fixed-Disk System

If you have a fixed-disk system (such as an IBM PC XT), install Org Plus on the hard disk. Then follow these steps to start using Org Plus:

1. Make sure the DOS C> prompt is on your screen.

2. If you installed Org Plus into a subdirectory, make this subdirectory the current directory.

3. Type ORG and press Enter ⏎. After several seconds you see the Org Plus Main Menu and copyright notice. You also see the version number of Org Plus that you have.

If your system has insufficient memory available, Org Plus tells you how to proceed.

If this is the first time you have used Org Plus, proceed to the section "Printer/Setup" below.

Installing Org Plus on a Two-diskette Drive System

Before you use Org Plus on a two-diskette drive system (one without a fixed disk), make working copies of the program diskettes.

Do not use the original diskettes as your working copies! Keep them as a backup. Then, if something happens to your Org Plus working copy, you can make another copy from the original diskettes. If you accidentally damage the original diskettes, you will have to pay to have Banner Blue send you a replacement.

If you are using $5^{1}/4$ inch diskettes, you need two blank, formatted, double-sided diskettes to make the working copies. If you are using $3^{1}/2$ inch diskettes, you need one blank, formatted diskette.

Note: You can also make a working copy of Org Plus by using the DOS COPY or DISKCOPY command. Refer to your DOS (operating system) manual for instructions.

Follow these steps for making a working copy of Org Plus from a $5^{1}/4$ inch drive.

1. Load DOS and make sure the DOS A> prompt is on your screen.

2. Insert "Diskette 1 - Chart" in drive A.

3. Insert a blank, formatted, double-sided diskette in drive B.

4. Type WORKCOPY and press Enter ⏎.

   After the first diskette has been copied, Org Plus asks you to insert the second diskette.

5. Remove the diskettes from both diskette drives. With a soft-tipped pen, label the copy "Working Copy Diskette 1 - Chart."

6. Insert "Diskette 2 - Draw" in drive A. Insert a second blank, formatted, double-sided diskette in drive B.

7. Press Enter ⏎ to copy the second diskette.

8. When the copy is complete, remove the diskettes from both diskette drives. With a soft-tipped pen, label the copy "Working Copy Diskette 2 - Draw."

9. Store the original Org Plus program diskettes in a safe place. Use the working copies for all other procedures in this guide.

Follow these steps for making a working copy of Org Plus from a 3^1/$_2$ inch drive.

1. Load DOS and make sure the DOS A> prompt is on your screen.

2. Insert "Diskette A - Chart & Draw" in drive A.

3. Insert a blank, formatted, double-sided diskette in drive B.

4. Type WORKCOPY and press Enter ⏎.

5. Remove the diskettes from both diskette drives. With a soft-tipped pen, label the copy "Working Copy Diskette A - Chart & Draw."

6. Store the original Org Plus diskette in a safe place. Use the working copy for all other procedures in this guide.

Starting Org Plus from a Two-diskette Drive System

If you plan to run Org Plus from a diskette rather than a fixed disk, you must have two diskette drives available. One diskette drive will contain the Org Plus program diskette, the other will contain the diskette with your chart and drawing files.

1. Make sure the DOS default drive prompt is on your screen. For example, if your default drive is A, the prompt on your screen is A>.

2. Insert "Working Copy Diskette 1 - Chart" in the default drive. Or insert "Working Copy Diskette A - Chart & Draw" if you have a $3^1/2$ inch drive.

3. Insert the diskette that will contain your chart files into the other disk drive (usually drive B).

    Important: Make sure this diskette has plenty of empty space on it. Org Plus may need space for temporary files as it works. Do not change diskettes, especially when you go to the Drawing Board.

4. Type ORG and press Enter [⤶]. After several seconds you see the Org Plus Main Menu and copyright notice. You also see what version of Org Plus you have.

If you have insufficient memory available, Org Plus tells you how to proceed.

If this is the first time you are using Org Plus, proceed to the section "Printer/Setup" below.

As you use Org Plus on a two-diskette drive system, Org Plus may ask you to exchange "Working Copy Diskette 1 - Chart" and "Working Copy Diskette 2 - Draw". Do so when requested.

When using Org Plus on a two-diskette system, there will be substantial delays when printing landscape on a dot matrix printer and when going in and out of the Drawing Board. You can eliminate this by starting Chart stand-alone. If you start Chart stand-alone, then you must also start Draw stand-alone to print in landscape on a dot matrix printer or to use the Drawing Board.

Starting Org Plus Stand-alone

There may be several reasons to start Chart and Draw stand-alone. You may have a two-diskette drive system. You may have just 384KB of memory. Or you may have a very large chart and 384 to 640KB of memory. To start Chart and Draw stand-alone, follow these instructions if you have a two-diskette system.

To start Chart stand-alone:

1. Make sure the DOS default drive prompt is on your screen. For example, if your default drive is A, the prompt on your screen is A>.

2. Insert "Working Copy Diskette 1 - Chart" in the default drive. Or insert "Working Copy Diskette A - Chart & Draw" if you have a $3^1/2$ inch drive.

3. Insert the diskette that will contain your chart files into the other diskette drive (usually drive B).

4. Type CHART and press Enter ⏎. After several seconds you see the Org Plus Main Menu and copyright notice. You also see what version of Org Plus you have.

If this is the first time you are using Org Plus, proceed to the section "Printer/Setup" below.

To use the Drawing Board and to print in landscape, you must start Draw.

To start Draw stand-alone:

1. Make sure the DOS default drive prompt is on your screen. For example, if your default drive is A, the prompt on your screen is A>.

2. Insert "Working Copy Diskette 2 - Draw" in the default drive. Or insert "Working Copy Diskette A - Chart & Draw" if you have a $3^1/2$ inch drive.

3. Insert the diskette that will contain your drawing files into the other diskette drive (usually drive B).

4. Type DRAW and press Enter ⏎. After several seconds you see the Org Plus Main Menu and copyright notice. You also see what version of Org Plus you have.

If this is the first time you are using Org Plus, proceed to the section "Printer/Setup" below.

If you have a fixed-disk system, simply type CHART or DRAW at the DOS prompt to start Chart or Draw stand-alone.

Printer/Setup   Org Plus needs to know some information about your printer or plotter and where you will store your charts. Org Plus saves this information from work session to work session.

In Printer/Setup you can also customize certain aspects of the program, such as the colors the program uses on screen.

Start Org Plus as described in "Starting Org Plus from a Two-diskette Drive System" or "Starting Org Plus from a Fixed-Disk System." Then follow these steps:

1. Select **Printer/Setup** from the Main Menu. (Press cursor down ⬇ key to highlight Printer/Setup, then press Enter ⏎. Or, just type the letter P.) Org Plus displays a list of printers.

Printer/Setup — Page 1

2. Use the cursor keys, ⬆ ⬇ ➡ ⬅, to select your printer. If you need additional information to make your selection, continue reading. Otherwise, skip ahead to Step 3 on page 2-13.

For Printers Listed by Name:

Org Plus lists many printers by name. However, some printers have multiple settings. Some of these give you a choice of landscape or portrait orientation. Others provide a choice of font sizes. If there are multiple settings for your printer, try each one to determine which works the best for your particular charts. Refer to the discussion below for further information on specific printer settings.

If you have a printer that is listed by name and it is not working properly, refer to "Appendix B: Troubleshooting."

Epson and Epson LQ: The Epson settings print 10 or 17 characters per inch (cpi). The Epson LQ settings print 12 or 17 cpi. The Epson, Epson Tiny Font, and Epson LQ Tiny Font settings use the 20 cpi font (super/subscript) on Epson printers.

Okidata: Many Okidata printers have electronics that make them behave like the IBM Graphics printer. If you have one, choose IBM Graphics instead of Okidata.

HP LaserJet: If you select HP LaserJet landscape or portrait, Org Plus asks you for the model. Be sure the HP LaserJet model you select matches your printer. If they do not match, your chart will not print properly.

Org Plus also asks you if you want to use a 16.66 cpi font cartridge to print your charts. You need a 16.66 font cartridge to print 16.66 cpi if you have an HP LaserJet. (You can print 10 cpi without a cartridge.) You also need a 16.66 font cartridge to print landscape if you have an HP LaserJet Plus. (You can print 10 cpi without a font cartridge. You can also print 16.66 cpi portrait without a font cartridge.) The following table lists the fonts that are built into each model.

LaserJet Model and Orientation	Built-in Fonts
HP LaserJet portrait	10 cpi
HP LaserJet landscape	10 cpi
HP LaserJet Plus portrait	10, 16.66 cpi
HP LaserJet Plus landscape	10 cpi
HP LaserJet Series II portrait	10, 16.66 cpi
HP LaserJet Series II landscape	10, 16.66 cpi

To use a built-in font, select **None/Other**. To use a font cartridge if you do not have 16.66 cpi built-in, select **16.66P** (portrait), **16.66L** (landscape), or **16.66P&L** (both). If you tell Org Plus you are using a font cartridge, you must have it installed when you print.

Org Plus does not support 12 cpi or proportional fonts on any HP LaserJet models.

If you have a legal-size paper tray, specify the proper paper size in Printer/Setup. Insert the tray and reset (turn printer off and on) the printer. If you hand feed legal size paper, a flashing indicator on the printer tells you when to insert a sheet of paper. Please refer to the operator's guide for your printer model for more information on this process.

Soft fonts can be used on the HP LaserJet Plus or the LaserJet Series II. They are not available for the HP LaserJet (standard model). Only 10 cpi and 16.66 cpi fonts can be used with Org Plus. Proportional-spaced fonts are not supported.

Download the selected font or fonts to the HP LaserJet Plus or Series II using the "Downloading Your Soft Fonts" instructions provided with your HP fonts. If you use fonts from other companies, follow their downloading instructions.

Make the downloaded font the primary font.

Once the fonts have been downloaded, run the Org Plus program. In Printer/Setup, set your printer type to HP LaserJet portrait or landscape, depending on the font you downloaded. Print your chart, making sure to select the correct font size during printing. (If you downloaded a 16.66 cpi font, select **Yes** for Use Small Type Font. If you downloaded a 10 cpi font, select **No** for Use Small Type Font.)

If you let Org Plus control your chart's appearance by selecting Automatic when you print with small fonts, you should download a 10 cpi font and a 16.66 cpi font.
Org Plus then chooses the font that best suits your chart.

For Printers Not Listed by Name:

Org Plus does not list all printers by name. However, many printers emulate (behave like) the ones listed. For example, a printer may emulate an Epson printer, IBM Graphics printer, or IBM Proprinter.

If your printer emulates one on the list, select the printer that is 100% compatible with yours. Use the cursor keys, ↑ ↓ → ←, to make your selection.

For help in determining which printer to select, see "When You Are Not Sure What Printer Setting To Use" later in this chapter.

Other Setting: If your printer does not emulate one on the list, try one of the selections named Other.

Printer with graphics {

```
┌─────────────────────┐
│  Monty K. Allen     │
│ Owner and President │
└──────────┬──────────┘
           │  ┌─────────────────────┐
           └──┤    Elaine Burns     │
              │   Admin. Assistant  │
              └─────────────────────┘
```

Printer without graphics {

```
 ---------------------
:   Monty K. Allen    :
: Owner and President :
 ---------------------
           :  ---------------------
           :-:    Elaine Burns     :
           : :  Admin. Assistant   :
           :  ---------------------
```
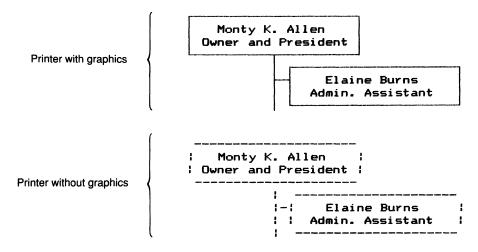
Figure 2-1

Other printer settings work with almost any printer, however they print dashed lines instead of smooth, solid lines. Make sure you select the Other setting which matches the cpi your printer uses. Org Plus cannot change any settings on these printers for you.

Even if your printer is listed by name in Printer/Setup, there may be situations when selecting Other is appropriate. These settings print much faster if you have a dot matrix printer. They are ideal if you are printing "what if" charts for your own use.

All Other settings assume the printer prints 6 lines per inch (lpi). If your printer is set for 8 lpi, set Paper Length in Printer/Setup to a value longer than the actual paper measurement. For example, if your paper is 11 inches long, set Paper Length to 14 inches.

3. When you have selected a printer, press Enter ⬐ .
   Org Plus sometimes displays a message specific to the printer you have chosen.

Print Orientation

4. If you have a dot matrix printer and it can print in both portrait and landscape, Org Plus asks you to select the orientation to use for printing your charts. Select **Portrait** or **Landscape**.

   There are advantages to printing in either orientation. If you select **Portrait**, the characters are higher quality and the chart also prints faster. If your chart is too tall to print on one page, select **Portrait**. You still have to tape the pages of your chart together, but it is higher quality print. On some printers, you can print smaller characters in Portrait. This makes your chart smaller overall.

   If your chart is wide, select **Landscape**. On some Epson and IBM-*compatible* printers, printing in Landscape is the only way to use small fonts.

For some very large charts that you want to print in Landscape, you must use the Sideways™ program available from Funk Software, Inc. Org Plus warns you if your chart exceeds its limits. See "Chapter 4: Printing Your Chart" for more information about printing with Sideways.

5. Press Enter ⏎ to continue unless Org Plus already displays Printer/Setup — Page 2.

Printer/Setup — Page 2

6. Give Org Plus additional information about your printer, and tell it where you want to store your charts. Make selections as follows:
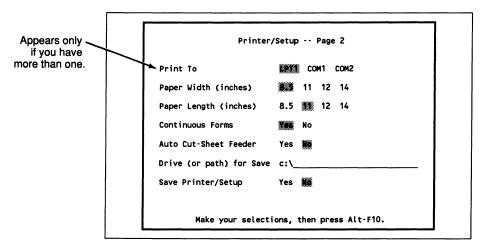
Appears only if you have more than one.

```
                    Printer/Setup -- Page 2

→ Print To                    ████  COM1  COM2

  Paper Width (inches)        ███  11  12  14

  Paper Length (inches)       8.5  ███  12  14

  Continuous Forms            ███  No

  Auto Cut-Sheet Feeder       Yes  ██

  Drive (or path) for Save    c:_____

  Save Printer/Setup          Yes  ██


          Make your selections, then press Alt-F10.
```

Figure 2-2

Print To
Your printer connects to your computer via a cable to a "port." If your system has more than one port, you need to tell Org Plus which one your printer connects to. Use cursor right → to select the port to your printer.

If there is only one port on your computer, Org Plus does not display the Print To line.

When you select a serial port (COM1, COM2, etc.) Org Plus asks additional questions about the connection later in the Printer/Setup process. If you do not know which connection to use, try LPT1 (the most commonly used port for printers). Or ask someone who knows how your computer is set up to help you. If Org Plus does not display the ports your system has, refer to the section "Logical Printer Ports" later in this chapter.

Paper Width (inches), Paper Length (inches)
For systems with just one printer port, this is the first selection. Set the paper width and length to match the actual size of the paper in your printer. Use cursor right $\boxed{\rightarrow}$ to select the width of the paper in your printer. Do the same to select the paper length.

If you change the paper size in your printer, you must change the paper length and width in Printer/Setup. Otherwise, your charts do not center on the page.

For printers, you can use up to 14 inch wide paper. For plotters, you can select paper sizes up to 34 x 44 inches.

Note: Some plotters and laser printers can print in either portrait or landscape orientation. Set the paper width and length accordingly.
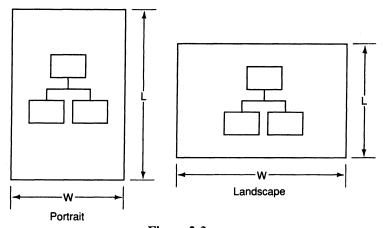

Portrait

Landscape

Figure 2-3

Continuous Forms

If your printer uses continuous forms (each sheet of paper connects to the next one), select **Yes**.

If your printer automatically loads the next sheet of paper (like most laser printers), select **Yes**.

If you manually insert single sheets of paper into your printer, select **No**.

Auto Cut-Sheet Feeder

If your printer has a cut-sheet feeder attached, select **Yes**. This tells Org Plus to compensate for the extra top margin most sheet feeders leave at the top of the page. You should also have Continuous Forms set to **Yes**.

Org Plus ignores this setting if you are using a laser printer.

Drive (or path) for Save

Here you tell Org Plus the drive to use for saving and retrieving the charts you create.

For a two-diskette system, typically you have the program diskette in drive A and store your charts on a diskette in drive B. If this is the case, type B:

For a fixed-disk system, you probably save your charts to the fixed disk, drive C. Type C: to indicate that Org Plus should look for files in the current directory on the fixed disk. You can also specify a subdirectory name as the path, for example, C:\ORG. In this case Org Plus looks in the ORG subdirectory for your charts.

Note: Path is an advanced DOS concept. Its use is optional.

Save Printer/Setup

Select **Yes** and Org Plus stores these settings permanently (in the CNFG.BIN file). Then, Org Plus automatically gets this information each time you start the program.

If you leave this set to **No**, the settings you make are not permanently stored. They stay in effect until you change them or you exit Org Plus.

7. Make sure that all the other settings on Printer/Setup — Page 2 are correct, then press Enter ⌐┘. (Or press and hold down [Alt], then press [F10]. This tells Org Plus that your choices are complete.)

   If you selected a serial connection for your printer (for example, COM1 or COM2), Org Plus now displays Printer/Setup — Serial. Otherwise, Org Plus displays Printer/Setup — Page 3.

Printer/Setup — Serial

8. For a Serial Port (COM1 through COM4), set up the communication parameters.

   The communication settings on this form must match the settings your printer or plotter uses. The preset values are common ones. Check your printer or plotter to make sure these values are correct for your device. Then press [Alt] - [F10].

   If you have an HP 7470A, 7475A or ColorPro plotter, Org Plus displays an image of the plotter's switch block. If the image does not match the switches on your plotter, you may have selected the wrong plotter in Printer/Setup.

   For the large format HP plotters, or for plotters that emulate an HP plotter, select **Other** as the plotter model.

   Org Plus assumes that the plotter uses hardwire handshaking.

   You must use D-size paper (22 x 34 inches) or larger with an HP 7580B, 7585B, 7586B, DraftPro, or DraftMaster plotter. If you use smaller paper your chart prints out of limits. See the README file for detailed information on configuring Large Format Plotters.
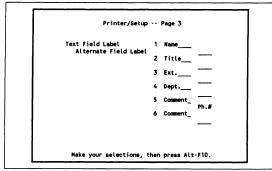
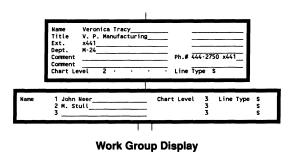   Org Plus now displays Printer/Setup — Page 3.

Printer/Setup — Page 3

9. Org Plus allows you to customize the default Text Field and Alternate Text Field labels. (See "Chapter 3: Building a Chart" for a description of these 12 field labels.)

The labels are preset to Name, Title, Comment, and Alt.

To change the labels, simply type new ones. Press [Alt] - [F10] when you finish. You can have different labels for different charts because Org Plus saves them with your chart.

```
                Printer/Setup -- Page 3


Text Field Label          1 Name____
  Alternate Field Label
                          2 Title___  ____

                          3 Ext.____  ____

                          4 Dept.___  ____

                          5 Comment_  ____
                                      Ph.#
                          6 Comment_
                                      ____


        Make your selections, then press Alt-F10.
```

Printer/Setup form

```
Name      Veronica Tracy_____      _____
Title     V. P. Manufacturing_____      _____
Ext.      x441_____                   _____
Dept.     M-24_____                   _____
Comment   _____ Ph.# 444-2750 x441_
Comment   _____
Chart Level    2  ·    ·    ·   · Line Type  S
```
```
Name    1 John Neer_____  Chart Level  3  Line Type  S
        2 M. Stull_____                3             S
        3 _____                3             S
```

Work Group Display

Figure 2-4. Customized Field Labels

Printer/Setup — Int'l

10. On the Printer/Setup — Int'l form you can set Org Plus for international money and numbering conventions.

You can also customize the labels used in reports Refer to "Chapter 7: Tables and Reports" for information on reports.

To change the report labels, just type in the new ones. The labels for Totals, Averages, and Counts appear in your report when you ask Org Plus to include those summaries.

To change the money symbol to Yen, Pounds Sterling, or another one, type the symbol you want to use. (If your keyboard does not have these symbols, use the [Alt] key with the numeric keypad keys to type the symbol.) Then choose whether to place the money sign before or after a number. The decimal point can be a period or a comma.

11. Press [Alt] - [F10] to continue.

12. If your computer has a graphics display adapter, Org Plus asks you to choose the colors for your display. Use the cursor keys to highlight your selections. As you select each one, Org Plus displays the set of colors that corresponds to that choice. Press Enter [←┘] to select one of the colors. The selection takes effect as soon as you have completed the Printer/Setup process. You can reset the display to black and white by pressing [Ctrl] - [F5] from the Org Plus Main Menu.

The setup process is now complete. If you elected to save the printer settings, Org Plus stores them on the disk.

When You Are Not Sure What Printer Setting To Use

If you do not find your printer listed on Printer/Setup — Page 1, it may still work correctly with Org Plus. You need to know the following two things:

1. Can your printer emulate another printer? If so, which one?

2. What character spacing does your printer use for normal and compressed fonts, in characters per inch (cpi)?

You should be able to determine this information from your printer manual.

Org Plus must make assumptions about the character spacing each printer uses, in order to place the text properly inside the boxes when it prints your chart.

The list below shows the character spacing that Org Plus assumes for the printers most commonly emulated.

Printer	Built-in Fonts	
	Normal Font	Compressed Font
Epson	10 cpi	17.14 cpi
Epson LQ series	12 cpi	17.14 cpi
HP LaserJet	10 cpi	16.66 cpi
IBM Color	12 cpi	17.14 cpi
IBM Graphics	10 cpi	17.14 cpi
IBM Proprinter	12 cpi	17.14 cpi
Tandy DMP- 430, 2110	12 cpi	16.7 cpi

For your printer to work correctly with Org Plus, it must emulate one of these printers. It must also be able to use the same character spacing for its normal and compressed fonts. If this is the case, you can select the compatible printer in Printer/Setup, and it should print without problems.

If the character spacing your printer uses does not match that of the printer it emulates, you have several options.

1. If your printer emulates an Epson, IBM Proprinter, or IBM Graphics printer, try the setting Epson Compatible. This printer setting prints 10 cpi only when you select portrait orientation, but it prints a compressed font in landscape orientation.

2. If your printer emulates an IBM Proprinter or IBM Graphics printer and the Epson Compatible setting did not work, try the setting IBM Compatible. This setting uses the IBM line drawing characters found in the IBM graphics character set 2, often called the extended graphics character set. You may need to set switches on your printer to access this character set. This setting prints in portrait orientation only.

3. If neither of these options works correctly, try one of the settings named Other. Make sure you select the Other setting which matches the cpi your printer uses.

Logical Printer Ports

There are situations where Org Plus may not recognize the printer ports on your computer. This can result in an incomplete or incorrect list of ports. To solve this problem, you can have Org Plus use "logical" port addresses.

To do this, press ⌈Ctrl⌉ - ⌈F6⌉ at the Main Menu. (If you are already in Printer/Setup, use Escape ⌈Esc⌉ to return to the Main Menu. Quit the program, load Org Plus again, and press ⌈Ctrl⌉ - ⌈F6⌉). Then select **Yes** to confirm the use of logical ports. Now when you go to Printer/Setup — Page 2 you can choose from LPT1 through LPT4 and COM1 through COM4.

Using Org Plus on a Network

Anyone who owns Org Plus can print to a printer on a network. If you plan to download Org Plus from the network, you will need Banner Blue's reasonably priced Server License. This is a very cost-effective way to provide network users simultaneous access to Org Plus. A Server License ensures that you are in compliance with Banner Blue's License Agreement and you will get additional user guides.

Information about networks is constantly changing. Check the README program for the latest facts.

The Reset Command

Before printing from OrgPlus on a network, many printers need to be reset.

To reset your network printer every time you print:

1. Go to the Org Plus Main Menu

2. Press ⌈Ctrl⌉ - ⌈F7⌉. Now, Org Plus will reset your printer for every chart and drawing you print.

To save this setting:

1. Select **Printer/Setup** on the Main Menu.

2. Select **Yes** to Save Printer Setup on the Printer Setup—Page 2.

Novell NetWare™

If you are using Novell NetWare, you must verify that your spool command is as follows:

P=# - — This statement must be the same port that you have chosen in Printer/Setup. If you do not know if they are the same, check with your network administrator.

TI=# - — the timeout interval must be set to a number greater than zero.

An example of a typical spool command would be:
```
SPOOL P=0 TI=5
```

Note, a spool command may contain other statements in addition to the ones mentioned above.

Exiting Org Plus

You can exit from Org Plus by selecting Quit from the Main Menu.

To select Quit, press cursor down $\boxed{\downarrow}$ to highlight Quit on the Main Menu and press Enter $\boxed{\leftarrow\!\!\rule[-0.3ex]{0.1ex}{1.5ex}}$. Or, type the letter Q.

If you have worked on your chart without saving it, Org Plus warns you. Select **Yes** to lose the chart and exit to DOS. Select **No** to return to the Main Menu for another chance to save your chart.

3 Building A Chart

This chapter covers some basics about the use of Org Plus. Then it takes you step-by-step through the construction of a typical application, an organization chart.

This chapter covers:

- definition of program concepts and terminology
- general rules for making charts
- tutorial—creating and printing a chart
- using the program—menus, screen displays, Help
- working with your chart—editing text, commands, moving around the chart
- saving, retrieving, clearing, and erasing chart files

The step-by-step tutorial in this chapter leads you through creating and printing a simple chart. It is a good way to get hands-on experience with Org Plus. However, you can skip the tutorial and read in detail how Org Plus works. You can run Org Plus while you read, observe the screen displays, and experiment with the program features.

Some Essential Terms

This section explains some terms that will help you understand how Org Plus works.

Position

Positions are the things that Org Plus charts. In an organization chart, each position is an individual or department. Technical users can think of positions as nodes. Generally, each position represents a box on the printed chart.

Work Group

A work group is a position and its direct subordinates (if any). In a company organization chart, a work group usually includes a manager or supervisor and his or her direct reports.

The work group is the building block for all Org Plus charts. A chart is just a collection of work groups stacked upon each other like a pyramid. The manager of a lower work group is a subordinate in the next higher work group.

Chart Level

A chart level is a single tier or layer of the chart. Figure 3-1 shows a four-level chart. Positions at a single level usually appear next to each other, as in level 2 or 3. However, the positions at level four appear in a column, stacked vertically upon one another.

Normally, the direct subordinates of a position are one chart level below the position. For example, a manager at chart level 2 has subordinates at chart level 3.

```
        Allen Manufacturing Company
           Current Organization
           September 15, 1988


        ┌─────────────────────┐
        │    Monty K. Allen   │                        Chart
        │ Owner and President │                        level 1
        │        x205         │
        └─────────────────────┘
                   ┌───────────────────────┐
                   │     Elaine Burns      │
                   │  Admin. Assistant     │
                   │        x672           │
                   └───────────────────────┘
                                                        Chart
                                                        level 2

  ┌─────────────────────┐      ┌─────────────────────┐
  │    George Simko     │      │   Veronica Tracy    │
  │   V. P. Marketing   │      │  V. P. Manufacturing│
  │        x616         │      │        x441         │
  └─────────────────────┘      └─────────────────────┘
           ┌──────────────┐
           │  Sue Rosen   │
           │  Secretary   │
           │    x601      │                            Chart
           └──────────────┘                            level 3

  ┌───────────┐ ┌───────────┐  ┌───────────┐ ┌───────────┐ ┌───────────┐
  │ Tom Banks │ │ C. Mosher │  │ John Neer │ │ M. Stull  │ │ Steve Cox │
  │  Western  │ │  Eastern  │  │  Plant 1  │ │  Plant 2  │ │ Engineer  │
  │   x307    │ │   x310    │  │   x515    │ │   x605    │ │   x706    │
  └───────────┘ └───────────┘  └───────────┘ └───────────┘ └───────────┘
                                 ─A. Dash      ─H. Ash
                                 ─C. Jones     ─R. Cole
                                 ─F. Maas      ─R. Hess      Chart
                                 ─L. Neff      ─P. Hoke      level 4
                                 ─N. Smith     ─J. Tse
                                 ─J. Yu
```
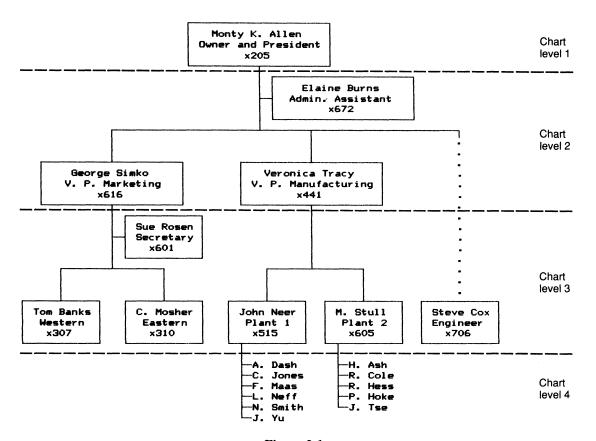
Figure 3-1

Siblings

Siblings are subordinate positions that report directly to the
same position. In Figure 3-1, Tom Banks and C. Mosher are
siblings. John Neer and M. Stull are siblings. However,
C. Mosher and John Neer are not siblings, because they do not
report to the same position.

Branch

A branch consists of a position and all positions, to the bottom
of the chart, that report to it. In Figure 3-1, Veronica Tracy's
branch includes John Neer, M. Stull, and their subordinates.

Chart Style

Chart Style is the arrangement of positions in the printed chart. Org Plus normally arranges boxes horizontally. Other arrangements are available. "Chapter 4: Printing Your Chart" contains a detailed discussion of chart styles.

List	1-Column	Boxed List

```
   List                  1-Column                Boxed List

  ┌─────────┐           ┌─────────┐             ┌─────────┐
  │John Neer│           │John Neer│             │John Neer│
  │ Plant 1 │           │ Plant 1 │             │ Plant 1 │
  └─────────┘           └─────────┘             └─────────┘
  ─A. Dash                                       A. Dash
  ─C. Jones            ┌─────────┐               C. Jones
  ─F. Maas             │ A. Dash │               F. Maas
  ─L. Neff             │ Shift 1 │               L. Neff
  ─N. Smith            └─────────┘               N. Smith
  ─J. Yu                                         J. Yu
                       ┌─────────┐
                       │ C. Jones│
                       │ Shift 2 │
                       └─────────┘

                       ┌─────────┐
                       │ F. Maas │
                       │ Shift 1 │
                       └─────────┘

                       ┌─────────┐
                       │ L. Neff │
                       │ Shift 3 │
                       └─────────┘

                       ┌─────────┐
                       │ N. Smith│
                       │ Shift 3 │
                       └─────────┘

                       ┌─────────┐
                       │  J. Yu  │
                       │ Shift 2 │
                       └─────────┘
```
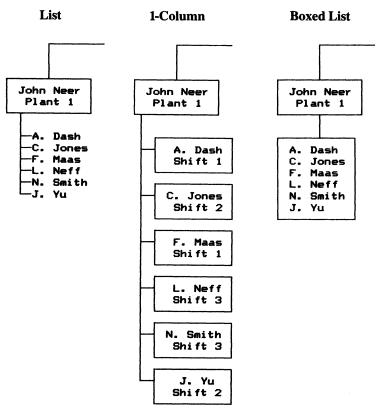
Figure 3-2

You can select from seven different chart styles when you print. (See "Print Chart: Print" in "Chapter 4: Printing Your Chart.") The horizontal style results in the widest chart, the list style results in the narrowest. Other styles fall somewhere between.

The style you select controls the arrangement of positions at the bottom of your printed chart. At higher levels, Org Plus uses a horizontal style unless you specify another using the Set Option command. You can also use the Set Option command to change the chart style for a work group or chart level. (See "Options: Set Option" in "Chapter 6: Advanced Chart-Making.") And, using hidden positions, you can create special chart style effects. (See "Hidden Positions" in "Chapter 6: Advanced Chart-Making.")

General Rules for Making Organization Charts

Here are some general rules for making organization charts. Following these rules will make your charts easy to understand. They will look professional, too.

Keep the chart simple.

A chart that is crammed with information can be very hard to read and understand. To avoid this:

- make reporting relationships easy to see
- don't try to show too much on one chart
- use auxiliary lines sparingly

Treat equal status or rank equally.

Make boxes at the same level the same size. Make boxes at the top at least as big as boxes lower down in the chart.

(Org Plus has both of these rules built into the program.)

Use horizontal chart styles except at the bottom of the chart.

The horizontal chart style is the easiest to read and is the most professional looking. Equal positions are aligned in a horizontal style. Columnar or list chart styles are very useful at the lowest levels of the chart. They maintain clarity while limiting the width of your chart.

(Again, Org Plus has this rule built into the program.)

Make the order of information consistent throughout the chart.

Decide whether the name or the title (or other information) should be first in each position. Then do it the same way throughout the chart. Org Plus lets you select which field prints first with the Special Print Control/Format command. (See "Chapter 4: Printing Your Chart.")

Within groups, put individuals in alphabetical order by name.

You can use the Sort Subordinates command to sort positions in a work group, last name first if you wish. (See "Chapter 5: Editing Your Chart" for information about sorting subordinates.)

Break up cluttered and crowded charts into separate charts by division or department.

You can print sections of your chart with the Print Part command. (See "Chapter 4: Printing Your Chart.") Or save branches of your chart as separate charts using the Save Branch command. (See "Chapter 6: Advanced Chart-Making.")

A Tutorial   The best way to learn to use Org Plus is to create and print a small chart. This tutorial shows you how to create the chart in Figure 3-3.

```
            Company Executives
            September 15, 1988

              ┌──────────────────┐
              │  M. Lynn Brewer  │
              │    President     │
              │    and CEO       │
              └──────────────────┘
                        │
                        │   ┌──────────────────┐
                        ├───│  Corinne Speer   │
                        │   │    Secretary     │
                        │   └──────────────────┘
              ┌─────────┴─────────┐
     ┌────────────────┐   ┌────────────────┐
     │  Dan McMinn    │   │ Jack Prinster  │
     │   VP Sales     │   │    VP R&D      │
     │ and Marketing  │   │ and Operations │
     └────────────────┘   └────────────────┘
```
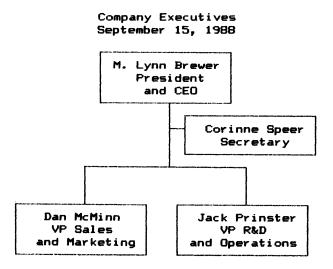
Figure 3-3

You will also learn how to move around the chart and how to print.

Before you begin, install Org Plus on your computer, and start the program following the instructions in "Chapter 2: Getting Started."

Start a new chart from the Main Menu.
1. Select **Work On Chart** from the Main Menu.

   To make a selection, you can press the first letter of the selection. Or you can use the cursor keys ⬆ ⬇ ➡ ⬅ to highlight your selection and then press Enter ⏎. If your selection is already highlighted, just press Enter ⏎ to confirm your selection.

   You should see a Current Position Box at the top of the screen with only the Name Line displayed.

2. Type `M. Lynn Brewer` and press Enter ⏎. Org Plus now shows the complete Work Group Display.

   The Work Group Display consists of a Current Position Box at the top of the display and a Subordinates' Box underneath.

3. Press the cursor down key ⬇ to move the cursor to the Title line.

4. Type `President` press Enter ⏎. The cursor moves to the first Comment line.

5. Type `and CEO` and press Enter ⏎.

Enter the President's subordinates.
1. Press the cursor down key ⬇ to move to the Name line in the Subordinates' Box.

2. Type `Dan McMinn` and press ⏎. Another line appears in the Subordinate's Box.

3. Type `Jack Prinster` and press ⏎.

4. Type `Corinne Speer`

Make Corinne Speer's position a Staff-Level position.
On a printed chart, a Staff-Level position appears at a location
between a position and the position's other subordinates.

1. Press ⬅ to move the cursor to the Chart Level Field
   on line 3.

2. Type `S` over the 2 and press Enter ⏎.

   Your work group display should now appear as shown in
   Figure 3-4.

```
┌─────────────────────────────────────────────────────────────┐
│ Name      M. Lynn Brewer_____   Alt   _____        │
│ Title     President_____           _____        │
│ Comment   and CEO_____           _____        │
│ Comment   _____         _____        │
│ Comment   _____         _____        │
│ Comment   _____         _____        │
│ Chart Level    1  ·    ·    ·    ·         _____        │
└─────────────────────────────────────────────────────────────┘
        ┌────────────────────────────────────────────────────────┐
        │ Name      1 Dan McMinn_____   Chart Level  2  Line Type  S │
        │           2 Jack Prinster_____              2            S │
        │           3 Corinne Speer_____              S            S │
        │           4 _____               2            S │
        └────────────────────────────────────────────────────────┘
```

```
┌─────────────────────┐
│ F1  - Help          │
│ F9  - Command Menu  │
│ Esc - Main Menu     │
└─────────────────────┘
```

Work Group • Working Copy
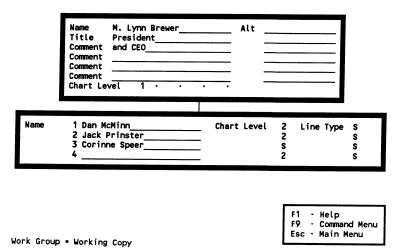
Figure 3-4

Make Dan McMinn's position the Current Position.
(You can make any position the Current Position.)

1. Press the cursor up key ⬆ until the cursor is in the Name 1
   line in the Subordinates' Box (Dan McMinn).

2. Press `Ctrl` - `PgDn` to make Dan McMinn the Current Position.

   `Ctrl` - `PgDn` moves you down one level in the chart.

   Dan's position becomes the Current Position and you can now type information about his position. An empty Subordinates' Box appears underneath.

3. Press the cursor down key `↓` to move the cursor to the Title line.

4. Type `VP Sales` and press Enter `⏎`. The cursor moves down a line.

5. Type `and Marketing` on the first Comment line.

Make Jack Prinster's position the Current Position.
1. Press `Ctrl` - `→` to make the position to Dan's right the Current Position. `Ctrl` - `→` moves you to the right one position.

   Jack's position becomes the Current Position and you can now type information about his position. An empty Subordinates' Box appears underneath.

2. Press the cursor down key `↓` to move the cursor to the Title Line.

3. Type `VP R&D` press Enter `⏎`. The cursor moves down a line.

4. Type `and Operations` on the first Comment line.

Make Corinne Speer's position the Current Position.
1. Press `Ctrl` - `→` to make the position to Jack's right the Current Position.

Corinne's position becomes the Current Position and you can now type information about her position. No Subordinates' Box appears because within Org Plus, Staff-Level positions cannot have subordinates. (For more information, see "The Staff-Level Location" later in this chapter.)

2. Press the cursor down key ⬇ to move the cursor to the Title line.

3. Type `Secretary`

Add a title to your chart.

1. Press F9 to display the Command Menu.

   The Command Menu gives you access to most of the commands in Org Plus. To use the Command Menu, first select from the list on the left, then select from the list on the right.

2. Press P to select **Print Chart**.

3. Press T to select **Titles & Annotations**. A form for typing the titles appears.

4. Type `Company Executives` on the first Chart Title line.

5. Press Enter ⏎. The cursor moves to the second Chart Title line.

6. Type today's date.

7. Press Alt - F10 to continue. A form for typing Annotations appears.

8. Press [Alt] - [F10] again. (You will not print annotations in your chart.)

You have now entered all the information for this chart. Press [Alt] - [F6] to make the topmost position the Current Position.

Now print the chart. First, print to the screen. This way you can see what the chart looks like before you print it on paper.

1. Press [F9]. The Command Menu appears.

2. Press [P] to select **Print Chart.**

3. Since Org Plus already selected the **Print** command, press Enter [←┘] to confirm the selection. The first form in the print sequence appears.

4. Press [A] to select **Automatic.** This means Org Plus will control the style of your chart.

5. Since Org Plus already selected 8.5 x 11 paper, press [Alt] - [F10] to continue. Org Plus now asks you to select a style for the boxes in your chart. Org Plus already selected Unbroken.

6. Select a different box style if you want. (Press the first letter of the style name. Or move the cursor to highlight your selection, then press [Alt] - [F10].)

   Org Plus now asks what information you want to print in your chart. Org Plus already selected the Name, Title, and first Comment fields. (Yes appears highlighted next to the Name, Title, and first Comment fields.) You did not enter information in any other field, so you do not need to print them. (No appears highlighted next to the other fields.)

7. Move the cursor to the Print To line near the bottom of the screen.

8. Press $\boxed{S}$ to select **Screen.** This makes Org Plus display your chart on the screen.

9. Press $\boxed{Alt}$ - $\boxed{F10}$ to continue.

    The messages "Formatting" and then "Working" flash on the screen. Then Org Plus displays your chart.

10. To see what your chart looks like on paper, print it by pressing $\boxed{Alt}$ - $\boxed{F10}$. (Make sure you have set up your printer in Printer/Setup before printing.) Then the Work Group Display appears again.

    If you do not print your chart on paper, press $\boxed{Esc}$ to return to the Work Group Display.

11. Press $\boxed{Esc}$ to return to the Main Menu.

    From the Main Menu, you can:
    - save the chart (Save Chart);
    - clear it (Clear Chart) so you can start another chart; or
    - leave Org Plus (Quit).

Using the Program

The Main Menu

When you start Org Plus, the first screen you see displays the Main Menu. From this menu you can begin a new chart or get a chart you saved previously. You can set up or change your printer settings, and so on.

On the Main Menu, you can select from the following:

Work On Chart — allows you to create a new chart. It also allows you to resume work on a chart if you go to the Main Menu to use another command. For example, you must go to the Main Menu to Save your chart. Then select **Work On Chart** to return to work on your chart.

Retrieve Chart — lets you work on an existing chart you saved on a disk at an earlier time. You can make changes to the chart or print it.

Save Chart — lets you save the chart you are working on to a disk file. This is where you give your chart a name.

Erase File — lets you erase a file permanently from the disk.

Clear Chart — allows you to start a completely new chart if you have been working on another chart. Save your chart before selecting Clear Chart or you will lose the chart.

Printer/Setup — lets you give Org Plus necessary information about your printer, plotter, or disk drive.

Quit — allows you to exit Org Plus and return to DOS.

Making a Selection

When Org Plus presents you with a menu or "multiple-choice" question, you can respond in either of two ways:

- You can highlight your selection by using the cursor keys, ↑ ↓ → ←. Then press Enter ⏎.

- Or you can type the first letter of your selection.

Both methods of making a selection are always possible.

Getting Help

You can press F1 for help at any time.

The Help topic is the one judged appropriate given your location in the program. You can choose another Help topic by making a selection at the bottom of the Help form.

A message tells you when there is more information about a topic than you can see at one time. You can scroll through the information using PgUp and PgDn or the cursor keys ↑ ↓.

You can leave Help by selecting **Exit** or by pressing Esc.

Work on Chart

The Work Group Display

To create a chart, select **Work On Chart** from the Main Menu. Org Plus displays a box that represents the topmost position in your chart. The box is blank except for a Name line. Enter a name (or other text) and press Enter ⏎. Then you see the Work Group Display. It consists of the Current Position Box and the Subordinates' Box.

```
Name      Monty K. Allen_____      Alt  _____
Title     Owner and President_____          _____
Comment   x205_____          _____
Comment   _____              _____
Comment   _____      444-2700 x205__
Comment   _____              _____
Chart Level    1  ·    ·    ·    ·
```
                                                          Current
                                                          Position

```
Name      1 George Simko_____   Chart Level   2   Line Type  S
          2 Veronica Tracy_____                 2              S
          3 Steve Cox_____                 3              D
          4 Elaine Burns_____                 S              S
          5 _____                    2              S
```
                                                          Subordinates'
                                                          Box

Your chart's filename
appears here

```
                                         F1  - Help
                                         F9  - Command Menu
                                         Esc - Main Menu
```

        Work Group · Working Copy
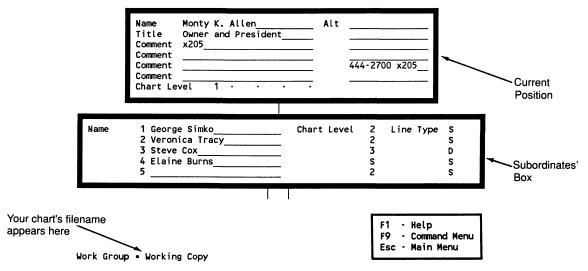
Figure 3-5. The Work Group Display

Current Position Box

In the Work Group Display, the box at the top is the Current
Position Box. Here you enter the information you want to
appear in that position on your printed chart. The position
displayed in the Current Position Box is the Current Position.
To add information about a position, it must be the Current
Position. Also, many commands act only upon the Current
Position.

The Current Position does not have to be a "manager." Any
position in the chart can be the Current Position.

The Current Position does not have to have subordinates.
(Positions at the bottom level of your chart do not have entries
in their Subordinates' Boxes.)

At the bottom of the Current Position Box is the Chart Level
Field. This tells you the chart level of the Current Position.

If the position is at chart level 2 or lower, you also see a Line Type Field. This tells you the type of line (Solid, Dotted, or None) that connects this position to its manager. (Since there is no one above the topmost position, it has no Line Type field.)

Subordinates' Box

The Subordinates' Box is the lower, wider box in the Work Group Display. Here, you enter the positions that report directly to the Current Position. Org Plus displays "Work Group: Working Copy" at the bottom of the screen after you enter subordinates. Once you save your chart, it displays your chart name instead of "Working Copy."

Each line in the Subordinates' Box represents a separate position in the chart. To the right of each line, you see the Chart Level and Line Type for the position.

When you print your chart, positions appear left to right, in the order you type them in the Subordinates' Box. In a columnar or list chart style, Org Plus orders positions top to bottom, left to right. You can use the Sort Subordinate command described in "Chapter 5: Editing Your Chart" to sort positions in a work group.

Any position in the Subordinates' Box can become the Current Position. Just move the cursor to that position and press [Ctrl] - [PgDn] (see "Moving Around the Chart" later in this chapter).

Adding Subordinates to the Work Group

To add subordinates to a work group, type a name in the bottom row in the Subordinates' Box. Then press Enter [↵]. Another line appears to allow another subordinate.

You can enter up to 100 subordinates under one manager. Org Plus displays up to 10 subordinates at a time. You can page through them using [PgUp] [PgDn] or [↑] [↓].

Additional Work Groups

The work group is a building block in your chart. A subordinate in one work group is automatically the manager of a work group at the next lower level.

Often, a position displayed in the Subordinates' Box has subordinates of its own. You must make that position the Current Position before you can add its subordinates.

To make a subordinate the Current Position, place the cursor on that subordinate's row in the Subordinates' Box and press Ctrl - PgDn . Once the position appears as the Current Position, simply add its subordinates, as discussed above.

Text Fields

The Current Position provides twelve lines, or *Fields*. This is where you enter the information that appears in the position's box when you print the chart.

The six lines on the left, labeled Name, Title, and Comments, are the Text Fields. Typically, you enter the employee's name on the Name line, title on the Title line, and other information on the Comment lines.

Despite their names, you can put any type of information in any of the Text Fields. For example, you can put a person's phone number in the Title Field. However, Org Plus is easiest to use if the information in the Name Field (Text Field 1) is unique to that position and easily identifies it (like a person's name).

The following table shows other things you can do with Text Fields.

Alternate Text Fields

The Alternate Text Fields are the six fields to the right of the Text Fields. They have a variety of uses. They are ideal for birth dates, hire dates, phone numbers, salary grades, social security numbers, and similar information. You can edit these fields in the same way as the Text Fields.

Things You Can Do With Text and Alternate Text Fields

What you want to do:	Command or capability to do it with:
Change order in which fields print	Special Print Control/Format
Have different fields print for columnar style & Staff-Level positions	Columnar Style/ Staff Print Control
Print Alternate Text Fields 1-4 outside corners of box	Special Print Control/Format
Print Alternate Text Fields 5 and 6 in addition to Text Fields	Special Print Control/Format
Print Alternate Text Fields in place of Text Fields	Set Option
Extra long fields	Append Alt Field Print-Time Code
Suppress printing of a single field	Suppress Field Print-Time Code
Force blank fields to print	Blank Line Print-Time Code
Copying fields contents to other positions	Copy Information
Printing field labels	Special Print Control/Format
Changing field labels	Printer/Setup

Editing Text Fields

Use the ⬆ or ⬇ keys to move to the field directly above or below your current location in the box.

Use the Tab ⬅⇥ key to move from field to field, left to right. If you are in the rightmost field, it moves you to the first field of the next row. Reverse Tab ⇧Shift - ⬅⇥ moves you from field to field in the opposite direction.

To edit the information in any of the fields, use the standard IBM PC editing keys:

- cursor left ← or cursor right → to move character by character without erasing.
- Home or End to go to the beginning or the end of a field.
- Backspace ⟵ to back up and erase the previous character.
- Insert Ins to add characters between those already there. (The cursor changes to a small block to let you know that you are in insert mode.) Press Ins again to turn insert mode off and overtype characters already there.
- Delete Del to delete characters to the right, one by one.
- Ctrl - T to delete the word to the right of the cursor.
- Ctrl - N to insert a blank line and push any text already in that field down one line.
- Ctrl - Y to clear the field. Pressing Ctrl - Y twice pulls the text in the fields below up one line.

"Appendix A: Key Assignments," describes other useful editing keys.

Line Type

The Line Type specifies the type of line that connects a position to its manager. Org Plus can draw a solid line (S), a dotted line (D), or no line at all (N).

Org Plus automatically assumes that you want a solid line. You can change the line type by typing the appropriate letter in the Line Type Field.

Chart Level Field

There is a Chart Level Field associated with each position. Org Plus automatically assigns the chart level for a position; however, you can change the chart level to create certain positions (Staff-Level, hidden, and removed) for special chart layouts, discussed next.

Staff-Level Positions

Org Plus provides for positions at a Staff-Level location. This is a special location on the printed organization chart, between a manager and his or her other subordinates. Many organizations like to place secretaries and administrative assistants in this special location.

In Figure 3-6, Elaine Burns and Sue Rosen are at Staff-Level locations.

```
                  Allen Manufacturing Company
                      Current Organization
                      September 15, 1988


                            Monty K. Allen
                          Owner and President
                                x205

       Positions at                    Elaine Burns
    Staff-Level locations            Admin. Assistant
                                          x672


           George Simko             Veronica Tracy
           V. P. Marketing          V. P. Manufacturing
                x616                      x441
                                                              Line
                        Sue Rosen                             type "D"
                        Secretary
                          x601


   Tom Banks     C. Mosher     John Neer      M. Stull      Steve Cox
   Western       Eastern       Plant 1        Plant 2       Engineer
   x307          x310          x515           x605          x706

                               ─A. Dash       ─H. Ash
                               ─C. Jones      ─R. Cole      Position "removed"
                               ─F. Maas       ─R. Hess      one level
                               ─L. Neff       ─P. Hoke
                               ─N. Smith      ─J. Tse
                               ─J. Yu
```

Figure 3-6

You place a position in the Staff-Level location by typing an S in the Chart Level Field. A manager can have as many positions in this location as you like.

A single Staff-Level position appears to the right of the line connecting its manager to the regular subordinates. If there are several Staff-Level Positions, Org Plus orders them left to right. For an odd number of positions, there is one more position to the right than to the left. Org Plus handles Staff-Level positions in the same way as other subordinates in a columnar chart style.

You can print different Text Fields for Staff-Level positions by selecting Manual when you print. (See "Print Chart: Print" in "Chapter 4: Printing Your Chart.")

A position placed at a Staff-Level location may not have true subordinates. When the Current Position shows a Staff-Level position, Org Plus does not display a Subordinates' Box. However, you can print a limited set of subordinates under a Staff-Level position. "Chapter 6: Advanced Chart-Making" contains instructions for doing this.

Note: Some organizations distinguish between line and staff functions. That is not the meaning Org Plus uses. Often staff functions, such as a legal department, have many subordinates. Do not place them at the Staff-Level location.

Hidden Positions
Hidden positions are positions that do not show when you print your chart. They are useful when you want to create special layouts. For example, you can use two different chart styles for the subordinates of one manager by creating a hidden position. (See "Hidden Positions" in "Chapter 6: Advanced Chart-Making.")

You create a hidden position by typing H in the Chart Level Field.

When you create a hidden position, the line from the hidden position's manager goes straight to the hidden position's subordinates. Org Plus does not draw a box for a hidden position. It does not print the Text Fields of a hidden position on a chart or a report.
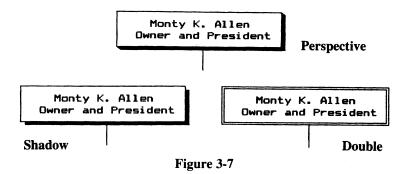
Positions "Removed" to a Lower Chart Level

Occasionally, one subordinate in a work group needs to appear at a lower chart level than the other subordinates. For example, in Figure 3-6, Steve Cox is at level 3. His manager is at level 1.

To remove a position to a lower chart level, change the number in the Chart Level Field.

Boxes

Generally, each position in your chart prints as a box. Box style refers to the type of box that encloses each position in the printed chart. Org Plus normally draws boxes with an unbroken, solid line. "Chapter 4: Printing Your Chart" contains a description of the other box styles available.

```
┌─────────────────────────┐
│     Monty K. Allen      │
│   Owner and President   │    Perspective
└─────────────────────────┘
            │
┌─────────────────────────┐    ┌─────────────────────────┐
│     Monty K. Allen      │    │     Monty K. Allen      │
│   Owner and President   │    │   Owner and President   │
└─────────────────────────┘    └─────────────────────────┘
Shadow      │                             │      Double
```

Figure 3-7

Select a box style for your chart with the Print Command. (See "Print Chart: Print" in "Chapter 4: Printing Your Chart.") You can select a different box style for specific positions with the Options command. (See "Options: Set Option" in "Chapter 6: Advanced Chart-Making.")

A box can contain any of four types of fields: Text Fields, Alternate Text Fields, Amount Fields, and Consolidated Amount Fields.

You control the size of boxes in two ways. The width of a box depends on the length of the information you put in the fields. The longer the information, the wider the box. In addition, Org Plus makes every box at a given level the same size. Just one long name, title, or comment can force Org Plus to assign extra space for all boxes at a level.

Your printer can print only so many characters across one page. If you type long names, titles, and comments, fewer positions can fit across the page.

It is a good idea to limit the length of names, titles, and comments at levels with many positions. (We are not suggesting that you rename people! You can use initials rather than full names and so forth.) How much you limit the length depends on your printer and the complexity of your chart.

Full names will not fit across page with this printer and chart size.

```
                        ┌──────────────┐
                        │ Paul Davoust │
                        └──────────────┘

┌───────────────────────┐ ┌──────────────────┐ ┌──────────────────┐ ┌──────────────────┐ ┌──────────────────┐
│ Katherine A. Fitzgerald│ │ Carl G. Sassenrath│ │ Barbara L. Sudlov │ │ Kenneth L. Gilbert│ │ Richard A. Knudtsen│
└───────────────────────┘ └──────────────────┘ └──────────────────┘ └──────────────────┘ └──────────────────┘
```

Using first initials, the chart will fit perfectly.

```
                        ┌──────────────┐
                        │ Paul Davoust │
                        └──────────────┘

┌──────────────┐ ┌───────────────┐ ┌──────────┐ ┌────────────┐ ┌──────────────┐
│ K. Fitzgerald│ │ C. Sassenrath │ │ B. Sudlov│ │ K. Gilbert │ │ R. Knudtsen  │
└──────────────┘ └───────────────┘ └──────────┘ └────────────┘ └──────────────┘
```
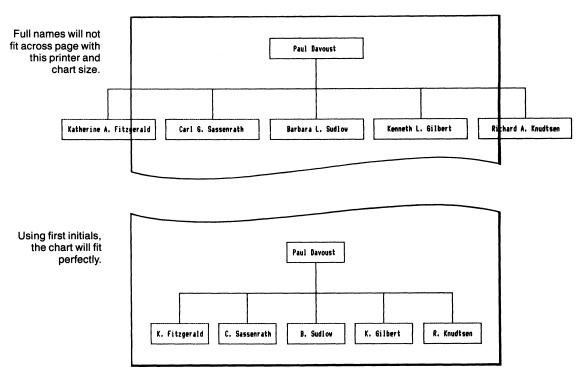
Figure 3-8. Making your chart fit

You control the height of your box by choosing which fields to print. The more fields, the taller your box. Choose which fields print using the Print Control forms. Basic print control is part of the Print command sequence. More sophisticated control is available with the Special Print Control/Format command.

Org Plus prints a field only if it contains something. Generally, all boxes at a given chart level will be the same height. If text is in a field for any position at a level, that field prints for all positions at the level.

The one exception is for columnar styles and Staff-Level positions. The Columnar Style/Staff Print Control form gives separate control over which fields print for these positions. This form is available if you select Manual to Print.

You can also force all boxes to be the same height and width if you select Manual to Print. Make these choices on the Chart Format form.

Things You Can Do With Boxes

What you want to do:	Command or capability to do it with:
Select a box style for all boxes	Print
Print more than one box style at the same time	Set Option
Print Text Fields	Print
Print different Text Fields in Staff-Level positions	Print (select Manual)
Print different Text Fields in columnar chart style positions	Print (select Manual)
Print Alternate Text Fields in or around boxes	Special Print Control/Format
Print Amount Fields	Amount: Print Control
Print lines in boxes	Line in Box Print-Time Code

Commands

Commands tell Org Plus what you want to do next. Org Plus has commands for printing your chart, moving positions from one place to another, deleting positions, and many other functions.

You can start most commands from the Command Menu. When learning to use Org Plus, it is a good idea to use the Command Menu.

You can also start commands by pressing the assigned keys. This is the quick way to start a command. Some of the assigned keys are function keys (the keys labeled F1 through F10). On most PCs, you find the function keys at the top or the left side of the keyboard. Sometimes you need to press and hold Alt, Ctrl, or ⇧Shift while you press another key (for example, Alt - F2). You can find a list of the command key assignments in "Appendix A: Key Assignments."

After you start a command, Org Plus frequently displays a form. You type information or make selections on the form.

The Command Menu

You can perform most Org Plus commands from the Command Menu. The only exceptions are the commands found on the Main Menu.

Press F9 from the Work Group Display and the Command Menu appears. On the left you see a list. Each selection represents a group of commands. On the right you see the commands associated with the highlighted selection on the left.

The Command Menu is easy to use. First select from the list on the left. Then select from the list on the right. The single line box always moves to surround the list you can select from. Press Esc to back up and change your previous selection.

The fastest way to make a selection is to press the first letter of the selection.

This user's guide identifies commands like this: Edit Chart:
Move Position. The first half of the command refers to the list
on the left in the Command Menu. The second half refers to
the list on the right.
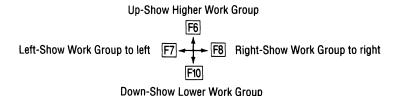
Backing Out

You can press [Esc] to back out of any Org Plus command or
form, one step at a time. If you keep pressing [Esc], you will
reach the Main Menu. Then select **Quit** to return to DOS.
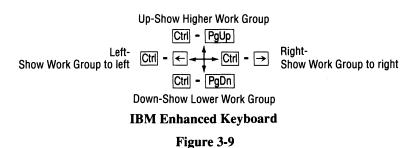
Moving Around the Chart

An organization chart typically has multiple work groups
at various chart levels. The Work Group Display, described
above, shows you one work group at a time. To work with
Org Plus, you move from one work group to another, up,
down, and sideways in your chart.

To move between work groups, use the keys identified in
Figure 3-9. If the function keys are at the top of your keyboard,
it is probably easier to use the control and cursor keys. If the
function keys are at the left of your keyboard, it is probably
easier to use the function keys.

Up-Show Higher Work Group

[F6]

Left-Show Work Group to left   [F7] ◄─┼─► [F8]   Right-Show Work Group to right

[F10]

Down-Show Lower Work Group

IBM Keyboard

Up-Show Higher Work Group

[Ctrl] - [PgUp]

Left-
Show Work Group to left   [Ctrl] - [←] ◄─┼─► [Ctrl] - [→]   Right-
Show Work Group to right

[Ctrl] - [PgDn]

Down-Show Lower Work Group

IBM Enhanced Keyboard

Figure 3-9

[Ctrl] - [PgDn] (or [F10]) moves you down one level in the chart.

- Press [Ctrl] - [PgDn] when the cursor is in the Current Position Box. The first subordinate at the next lower level becomes the Current Position. The Subordinates' Box now shows any subordinates that report to the new Current Position.

- Press [Ctrl] - [PgDn] while the cursor is on any line in the Subordinates' Box. The position on that line becomes the Current Position.

[Ctrl] - [PgUp] or [F6] moves the Current Position up one level in the chart. The new Current Position is the manager of the old Current Position. The position that was the Current Position appears in the Subordinates' Box along with its siblings.

[Ctrl] - [←] (or [F7]) lets you move left to display work groups at the same chart level.

- Press [Ctrl] - [←]. The position to the immediate left of the Current Position, at the same chart level, becomes the Current Position. [Ctrl] - [←] has no effect if there is no position to the left.

[Ctrl] - [→] (or [F8]) lets you move right to display work groups at the same chart level.

- Press [Ctrl] - [→]. The position to the immediate right of the Current Position, at the same chart level, becomes the Current Position. [Ctrl] - [→] has no effect if there is no position to the right.

Press [Alt] - [F6] to make the topmost position the Current Position.

Using Figure 3-10 as an example, suppose Monty Allen's position is the Current Position, and the cursor is in that box. George Simko and Veronica Tracy are on lines 1 and 2 of the Subordinates' Box.

1. Ctrl - PgDn makes George Simko the Current Position.

2. Ctrl - → makes Veronica Tracy the Current Position.

3. Ctrl - PgUp makes Monty Allen the Current Position again.
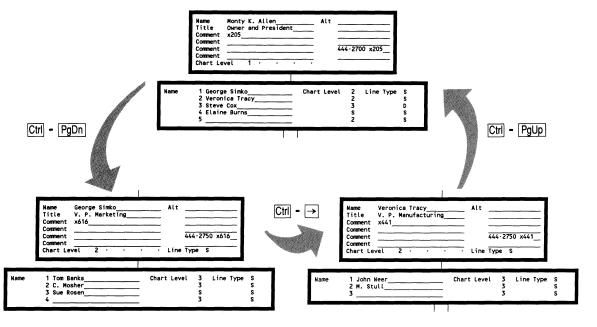
Figure 3-10. Moving Between Work Groups

You can also move around the chart by using the Move Around Chart commands from the Command Menu. However, using the control and cursor keys or the function keys is faster.

Finding a Specific Position in Your Chart

There is another way to move between work groups. You can display a list of all the positions in your chart. Then you can select the one you want to be the Current Position.

1. From the Work Group Display, press [F9]. Org Plus displays the Command Menu.

2. Select **Tables/Reports: View Table**. A table with columns for names, titles, and comments appears, alphabetized by last name. (You can control the fields that appear in a Table. See the Table Setup command in "Chapter 7: Tables and Reports.")

3. Find and highlight the position you want as the Current Position. Use the [↑] [↓] and [PgUp] [PgDn] keys.

4. Press [↵]. That position becomes the Current Position.

   Note: If you have not typed names into some of your positions, blank fields appear at the top of the list.

**Chart:
Preview Chart** [F5]

Preview Chart lets you locate your position relative to the entire chart. (To see how your printed chart will look, print to the screen. For more information, see "Chapter 4: Printing Your Chart."

1. From the Work Group Display, press [F9]. Org Plus displays the Command Menu.

2. Select **Chart: Preview Chart**. Each regular position appears as a small square. Each staff position appears as a dash, and each hidden position appears as a small circle. The current position blinks on and off. If you have a large chart, some of the positions may overlap.

3. Press any key to return to the Work Group Display.

Save Chart

Once you have finished your chart, you should save it as a file on your disk. Then, you can easily retrieve and change the chart when your organization changes.

When you are ready to save your chart:

1. From any Work Group Display, press Esc. Org Plus returns you to the Main Menu.

2. Select **Save Chart**. Org Plus displays the Save Chart form.

   The Drive (or path) field is at the top of the form. This is the drive and subdirectory, if applicable, where Org Plus will save your chart. This is the drive or path that you specified in Printer/Setup. Org Plus also displays the names of files already on the disk where your chart will go.

   Note: The path tells Org Plus which drive and subdirectory to look in for your chart files. If you keep your charts on a diskette, you normally will not use subdirectories, and will not need a path.

   If the Drive (or path) field is empty, Org Plus stores the chart on your default drive (and subdirectory).

3. If you want to save the chart to a different drive (or path), press Tab. Type the correct drive (or path). Then press Enter.

   The Filename field is where you enter the name for your chart. If you saved your chart before, its name automatically appears in the Filename field. If you have not yet saved your chart, Org Plus displays the name of the first file listed on the form.

4. To give your chart a new, unique name, type the new name over the name in the Filename field. The name must be in DOS file name format. Then press Enter. Once you start to type a filename, you cannot use the cursor keys to highlight a name listed below the Filename field.

   You can replace one of the charts listed below the Filename field. Use the cursor keys ↑ ↓ → ← to highlight the name of the file you want to replace. Then press Enter.

If you previously retrieved or saved your chart, you can replace it on the disk with the one you are working on. Just press Enter ⏎ to use the name already in the Filename field.

Warning: When you replace a chart file that exists, you lose the contents already in that file. Therefore, Org Plus asks you to confirm your action before it goes ahead.

Org Plus tells you when it saves your chart. If anything goes wrong while Org Plus is saving the file, it tells you so. It does **not** save your file in that case.

Retrieve Chart   To work on a chart you created and saved before:

1. If you are working on a chart, press Esc to return to the Main Menu.

2. Select **Retrieve Chart** from the Main Menu.

    If you have been working on another chart, and have not saved it, you will lose the information in the chart. Org Plus warns you that it will clear the chart. Select **No** to return to the Main Menu if you need to save the chart you have been working on. Select **Yes** to clear the chart and display the Retrieve Chart form.

    Org Plus displays a list of all the files from the current drive (or subdirectory). It displays the name of the current drive (and subdirectory, if applicable) in the Drive (or path) field.

    If the Drive (or path) field is empty, Org Plus retrieves the chart from your default drive.

3. If you want to retrieve a chart from a drive (or path) different from the one displayed in the Drive (or path) field, press Tab ⇤. Type the correct drive (or path). Press Enter ⏎.

If you previously saved or retrieved a file, its name automatically appears in the Filename field. Otherwise, Org Plus displays the name of the first file from the list in the lower part of the form.

4. Select the name of the chart to retrieve in either of two ways.

   ▪ Highlight the name using the cursor keys $\boxed{\uparrow}$ $\boxed{\downarrow}$ $\boxed{\rightarrow}$ $\boxed{\leftarrow}$. When you have highlighted the name of the chart you want to retrieve, press Enter $\boxed{\leftarrow\!\!\perp}$.

   ▪ Or, type the name of your chart in the Filename field and press Enter $\boxed{\leftarrow\!\!\perp}$. Once you start to type a filename, you cannot use the cursor keys to highlight a name listed below the Filename field.

   Org Plus retrieves your chart and displays the topmost position.

Clear Chart   You may want to start a new chart after working on another.

1. If you are working in a chart, press $\boxed{\text{Esc}}$ to return to the Main Menu.

2. Select **Clear Chart** from the Main Menu.

   If you have been working on a chart, and have not saved it, you will lose the information in the chart. Org Plus warns you that it will clear the chart.

3. Select **No** to return to the Main Menu if you need to save the chart you have been working on.

   Select **Yes** to clear the chart and return to the Main Menu. Org Plus confirms that it has cleared the chart.

Note: Clear Chart removes a chart from the Org Plus working area only. It does not affect charts you have saved on a disk. To remove a chart from your disk, use Erase File (described below).

Erase File   The Erase File command removes a chart or other file
permanently from a disk. You cannot retrieve it once you have
erased it. Erase a file only if you are sure you will not ever
need it again.

Use Clear Chart to remove a chart from the Work Group
Display.

To erase a file:

1. If you are working in a chart, press ⎡Esc⎤ to return to the
   Main Menu.

2. Select **Erase File** from the Main Menu.

3. If you want the file erased from a drive (or path) different
   from the one displayed in the Drive (or path) field, press
   Tab ⎡⇆⎤. Type the correct drive (or path). Press Enter ⎡↵⎤.

   If the Drive (or path) field is empty, Org Plus erases the file
   from your default drive.

   If you previously saved or retrieved a file, its name will
   automatically appear in the Filename field. Otherwise, the
   name of the first file in the list appears.

4. Select the name of the file to erase in either of two ways.
   - Highlight the name using the cursor keys ⎡↑⎤ ⎡↓⎤ ⎡→⎤ ⎡←⎤.
     When you have highlighted the name of the file you
     want to erase, press Enter ⎡↵⎤.
   - Or, type the name of the file in the Filename field and
     press Enter ⎡↵⎤. Once you start to type a filename, you
     cannot use the cursor keys to highlight a name listed
     below the Filename field.

     Org Plus asks you to confirm that you want to erase the
     file.

5. Select **Yes** to erase the file and press Enter ⎡↵⎤.

4 Printing Your Chart

When you work on a chart, Org Plus keeps it in "shorthand" form. This makes it easy for the program to add, change, or move parts of the chart around when you make changes. In order to see what your organization chart looks like, you must print it. You can print it on your printer or to the screen. Printing to the screen allows you to see the chart as it will look when printed.

This chapter covers:

- using the Print Chart command
- selecting Automatic versus Manual to print
- printing to the screen
- adding Titles and Annotations to your chart
- printing the Alternate Text Fields, marked positions, and other special formats
- printing parts of your chart
- printing with the Sideways™ program
- batch printing

When you print your chart, Org Plus determines how to layout the chart, based on a number of built-in rules. The choices you make with the Print command give you some control over how your chart will look. "Chapter 6: Advanced Chart-Making" describes several additional features of Org Plus that give you even more control over your chart's appearance. You can also modify the chart layout using the Drawing Board, as described in "Chapter 9: Custom Drawing."

See "Chapter 7: Tables and Reports" for information about printing tables and reports.

The Print Chart Commands

You will find the Print Chart commands on the Command Menu. With these commands you can print your entire chart, or just part of your chart. You can specify the chart and box styles and the fields to print. You can also specify a title and annotations for the chart, and set certain special format choices. When you print the chart, Org Plus automatically draws and spaces the boxes, positions the text, and precisely lays out the connecting lines.

Print Chart: Print F2

Before printing a chart, make sure the printer is on-line. Adjust the paper so the top of the sheet is as close to the printing element as possible. This allows Org Plus to center the chart on the page.

Make sure you have selected the correct printer type and paper length and width in Printer/Setup. You can check these by choosing Printer/Setup from the Org Plus Main Menu. If these settings are not correct, your chart will not print correctly. See "Chapter 2: Getting Started" for help in setting up your printer.

Reset your printer (turn it off, then back on) if you have been using it with another software product. Now follow these steps:

1. From the Work Group Display, press F9 to display the Command Menu.

2. Select **Print Chart: Print.**

    Org Plus now asks some questions to make sure that the chart appears as you want it to appear.

Manual or Automatic

Org Plus asks you to choose between Manual and Automatic. Manual gives you maximum control over your chart's appearance and prints a chart of any width. Automatic gives Org Plus control over many aspects of your chart's appearance. Automatic also makes the chart fit a size you select (but, Org Plus may have to omit positions to do so).

Select **Automatic** if your chart is fairly small and simple. For example, select **Automatic** for a chart with 3 or 4 levels, and 2 or 3 positions at level 2. If you select **Automatic**, see "Printing with Automatic" below.

Select **Manual** if your chart has more than 35 positions. You should also select **Manual** if you have set chart style options. If you select **Manual**, see "Printing with Manual" later in this chapter.

Printing with Automatic

When you select **Automatic**, Org Plus arranges your chart to fit the size you pick. It picks chart styles for the bottom two levels of your chart. It also decides whether to use the large or small font. You still need to tell Org Plus what box style to use, and which fields to include within the boxes.

You should not select Automatic if you have set chart style options in your chart. "Chapter 6: Advanced Chart-Making" discusses when to use chart style options. Org Plus may not try different chart styles if you set options.

After you select **Automatic**, Org Plus asks you to make several choices:

1. First, select a size for your chart. This tells Org Plus how much space it has to work with. Choose from:

   8.5 x 11 inches (letter size), 11 x 8.5 inches (letter size turned sideways), 14 x 8.5 inches (legal size turned sideways), or 14 x 11 (wide computer paper size).

   If you want your chart centered on one sheet of paper, pick the chart size that matches the paper in your printer. If you tell it to, Org Plus will omit lower-level positions to print the chart on the size paper you pick.

   Note: The size you select when you print tells Org Plus how large your chart can be. The paper size you set in Printer/Setup tells Org Plus what size paper is actually in your printer.

   For example, you might have a chart that is too large to fit in 8.5 x 11 inches. You can select 14 x 11 inches for your chart, even though you have 8.5 x 11 inch paper in your printer. Org Plus will print your chart across two pages. When pasted together, this is easily photo-reduced to 8.5 x 11 inches.

   Select a large chart size if your printer prints only 10 or 12 characters per inch. Printing with large characters makes your chart larger.

2. Press Alt - F10 when you have made your selection.

3. Next select a box style for the boxes in your chart.

   If you want some positions to have a different box style, you can use the Set Options command. The selection you make here will not override a box style set with Set Options. (See "Chapter 6: Advanced Chart-Making" for more information.)

   Note: Some printers cannot faithfully reproduce all box styles. For example, the IBM Quietwriter leaves a slight gap in the lower left corner of the shadow and perspective styles. It also prints the Shadow and Perspective styles the same.

4. Press Alt - F10 when you have made your selection.

   Org Plus displays the Print Control form.

5. Make selections as follows:

   Print Position Name, Title, etc.
   Here, tell Org Plus which Text Fields to print in each box. Select **Yes** for those lines you want to include. Org Plus adjusts the height of the boxes accordingly.

   Print To
   You can also tell Org Plus where to print your chart. Select **Printer** to send your chart to the printer or plotter as determined in Printer/Setup. Select **Disk** to write the print image of your chart to a disk file. Select **Screen** to display your chart on the screen.

   Number of Copies to Print
   You can ask Org Plus to print up to 5 copies of your chart. (If you select 0, Org Plus saves all the print settings, but does not print the chart.)

6. When you have made your selections, press ⌈Alt⌉ - ⌈F10⌉ .

If you are printing the chart to a disk file, or using a plotter, Org Plus asks you more questions. See "Printing with Plotters" and "Print to Disk" later in this chapter.

Org Plus now lays out your chart. A box on the screen flashes messages as this happens. Org Plus tries different font sizes and chart styles to make your chart fit the size you requested. Then Org Plus prints the chart.

If Org Plus cannot make the chart fit, it displays a message telling you the chart's dimensions. It asks you if it should try the Boxed List chart style at the bottom of your chart. This chart style takes the least space, but displays only the first line from each position. (See the "Printing with Manual" section for examples of the chart styles.) If you select **Yes**, Org Plus tries the Boxed List chart style.

If the chart still will not fit, Org Plus asks you if you want to omit lower-level positions. If you select **Yes**, it will omit lower-level positions to print on the paper size you selected. If you select **No**, you cannot use Automatic printing. Org Plus switches you to Manual and provides you with the forms to make all the decisions about your chart. With Manual, you can print your entire chart, no matter how many pages it takes. (See "Printing with Manual.")

Printing with Manual

Selecting Manual gives you control over the chart styles and font size Org Plus uses for your chart. With Manual, Org Plus prints your entire chart, even if it requires multiple pages.

1. Choose a chart style for the bottom level positions in your chart.

   You can choose from seven chart styles. The horizontal style results in the widest chart, the list style results in the narrowest. Other styles fall somewhere between.

   Org Plus uses the chart style you select at the bottom of all branches of your printed chart. However, you can tell Org Plus to use the chart style at the lowest level only. See "Print Chart: Special Print Control/Format" later in this chapter for more information.

   At higher levels Org Plus uses a horizontal style unless you specify another using the Set Option command. "Chapter 6: Advanced Chart-Making" describes this command.

   A chart style set with the Set Option command overrides the one selected now for the bottom of the chart.

   The horizontal, staggered, and the columnar chart styles arrange each position in its own box. You select which fields appear in the boxes.

   With the list and boxed list chart styles, Org Plus arranges all the positions in the work group in the same list or box. Org Plus prints only one field from each position — the first field you selected for printing. This is normally the Name Field. Figure 4-1 shows the difference between the 1-column, list, and boxed list chart styles.

List	1-Column	Boxed List

John Neer
Plant 1

—A. Dash
—C. Jones
—F. Maas
—L. Neff
—N. Smith
—J. Yu

John Neer
Plant 1

| A. Dash |
| Shift 1 |

| C. Jones |
| Shift 2 |

| F. Maas |
| Shift 1 |

| L. Neff |
| Shift 3 |

| N. Smith |
| Shift 3 |

| J. Yu |
| Shift 2 |

John Neer
Plant 1

A. Dash
C. Jones
F. Maas
L. Neff
N. Smith
J. Yu
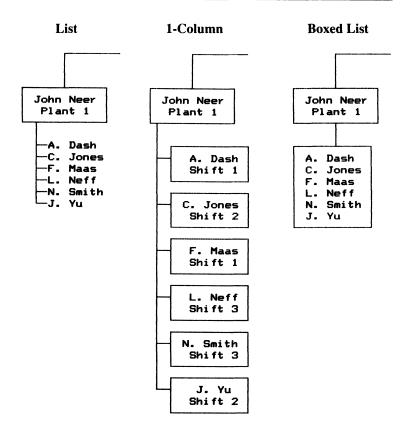
Figure 4-1

2. Make selections on the Chart Format form as follows:

Make Boxes Equal Height
If you select **Yes**, Org Plus prints each field you have selected in every box, even if the field is blank.

If you select **No**, Org Plus prints a field only if it contains something. Generally, all boxes at a given chart level will be the same height. If text is in a field in any position at a level, that field prints for all positions at the level.

The one exception is for columnar style and Staff-Level positions. The Columnar Style/Staff Print Control Form (discussed later in this section) gives separate control over which fields print for these positions.

Make Boxes Equal Width
If you select **Yes,** Org Plus forces all boxes in the chart to have the same width. All boxes must be as wide as the longest line of text. Selecting **Yes** may make your chart wider.

If you select **No,** Org Plus makes boxes at least as wide as those at the next lower level. In all cases, Org Plus makes boxes at one level the same width.

Use Small Type Font
Using the small type font, if one is available with your printer, makes the chart narrower. Some printer settings, however, such as the Other setting, do not offer a small font. In this case, Org Plus ignores your selection.

Use Narrow Line Spacing
Selecting **Yes** usually tells Org Plus to print at 8 lines per inch rather than 6 lines per inch. (The exact line spacing depends on your printer.) This makes the chart shorter. This option is not available on some printers. Org Plus ignores the setting if that is the case.

Justify Text
You can choose to justify the text in the boxes to the left, center (the most common), or right.

Squeeze Chart
Turning on Squeeze Chart can reduce the size of your chart by 10 to 20 percent. Squeezing reduces the space between boxes. This makes the chart more compact at the risk of making it less attractive.

Note: Squeezing a chart to reduce the amount of space it requires can conflict with some of the other features of Org Plus. For example, on certain printers, the sides of shadow or perspective boxes may actually touch if you squeeze the chart. Auxiliary lines or printing Alternate Text Fields 1-4 on the outside corners of the boxes may also conflict with the Squeeze feature.

3. Press [Alt] - [F10] when you have made your selections.

   Org Plus now asks you to select a box style.

4. Select a box style.

   A box style set with the Set Option command overrides the one selected now for the entire chart.

   Note: Some printers cannot faithfully reproduce all box styles. For example, the IBM Quietwriter leaves a slight gap in the lower left corner of the shadow and perspective styles. It also prints the Shadow and Perspective styles the same.

5. Press [Alt] - [F10] when you have made your selection.

   Org Plus displays the Print Control form.

6. Make selections on the Print Control form as follows:

   Print Position Name, Title, etc.
   Select **Yes** for those lines of text you want printed in each box. Org Plus adjusts the height of the boxes accordingly.

Print To
You can also tell Org Plus where to print your chart. Select **Printer** to send your chart to the printer or plotter as determined in Printer/Setup. Select **Disk** to write the print image of your chart to a disk file. Select **Screen** to display your chart on the screen.

Number of Copies to Print
You can ask Org Plus to print up to 5 copies of your chart. (If you select 0, Org Plus saves all the print settings, but does not print the chart.)

7. When you have made your selections, press [Alt] - [F10] .

   If you have Staff-Level or columnar chart style positions in your chart, Org Plus displays the Columnar Style/Staff Print Control form.

   If you do not have Staff-Level or columnar chart style positions, messages flash on the screen. Then Org Plus prints your chart.

8. If you have Staff-Level or columnar chart style positions, select **Yes** for those lines of text you want printed in each box. The height of the boxes adjusts accordingly. Press [Alt] - [F10] to continue. If you are printing a chart to a disk file, or using a plotter, Org Plus asks you more questions. See "Print to Disk" and "Printing with Plotters" later in this chapter.

   Messages flash on the screen. Then Org Plus prints your chart.

If your chart is too large for one page, it prints on more than one. Org Plus determines how to print a multiple-page chart based on the orientation (portrait or landscape) you select in Printer/Setup. However, it always prints the top left corner of your chart first. On a multiple-page chart, the topmost position may not appear on the first page that comes out of the printer.

It is not uncommon to find charts that are too large to fit on one page. Sometimes, a simple change causes a one-page chart to print on two pages.

Org Plus decides where to put each piece of the chart based on chart styles, type size, and so on. Most charts get wider at the bottom. Org Plus allows room at the top so that all positions at the bottom fit.

Org Plus orders the positions left to right, in the order they appear in the Subordinates' Box. In a columnar or list chart style, Org Plus orders positions top to bottom, left to right. You can use the Sort Subordinates command described in "Chapter 5: Editing Your Chart" to alphabetize the positions in a work group.

If you want even more flexibility in arranging your chart, read about the Special Print Control/Format command in this chapter, and about Options in "Chapter 6: Advanced Chart-Making." Options allow you to control the appearance and arrangement of positions or work groups. Special Print Control/Format lets you use the Alternate Text Fields, and offers some additional formatting choices. See also "Chapter 9: Custom Drawing." This chapter explains how to customize your chart using the Drawing Board.

Note: Do you have some unexpected empty boxes or positions in your chart? That means you accidentally created some blank positions while you were in the Subordinates' Box. Except the bottom field, a blank field in the Subordinates' Box represents a blank (or empty) position. (You may want to do that on purpose.) These positions print as blank boxes. You can remove those empty positions using Delete Position, described in "Chapter 5: Editing Your Chart."

Default Print Settings   Whenever you create a new chart, Org Plus sets the print settings to the defaults. The defaults include printing with Manual, using the horizontal chart style, unbroken box style, small type font, etc.

When you save your chart, you also save the print settings you specified for the chart. When you retrieve a chart, the settings saved with it override the default settings (or the settings from the previous chart).

You can also save your print settings with the Name Chart/Report Spec command. You can then use the same settings with other charts by using the Use Chart/Report Spec command. (See "Chapter 6: Advanced Chart-Making" for more information about these commands.)

Printing to the Screen   You can display your chart on the screen before you print it. This allows you to check your chart's appearance before printing.

1. From the Work Group Display, press [F9] Org Plus displays the Command Menu.

2. Select **Print Chart: Print** or **Print Chart: Print Part**.

3. Make selections as you normally do. When you get to the Print Control form, select **Screen** as the Print To setting.

    When Org Plus displays your chart, you can move around to view different areas of the chart.

    To scroll the display one line or column:
    [↑]   [↓]   [←]   [→]

    To scroll the display half a screen:
    [PgUp] — up
    [PgDn] — down
    [Home] — left
    [End] — right

To scroll the display a full screen:

Ctrl - PgUp — up
Ctrl - PgDn — down
Ctrl - ← — left
Ctrl - → — right

To move to a specific point:

Alt - F6 — top center of the chart
Ctrl - End — lower right corner of the chart

Note: The lower right corner of the chart may be blank if the right-most positions do not have subordinates at the lowest levels of the chart.

Indicators at the bottom of the screen tell you how many pages Org Plus needs to print from the bottom of the visible portion of your chart (the bottom of the screen) to the top of the chart. The indicators also tell you how many pages Org Plus needs to print from the right-most visible column to the left edge of the chart. Press Ctrl - End to go to the lower right corner of your chart. The indicators show how many pages Org Plus needs to print the entire chart.

4. If you want to print the chart after you have viewed it on screen, press Alt - F10 .

5. To return to the Work Group Display, press Esc.

Print Chart: Titles & Annotations F4

Your chart can have a title of up to three lines, with 39 characters each. Org Plus centers the title above the chart. You can also put annotations in the four corners of your chart. Each annotation can be four lines of 39 characters.

To add a title and annotations to your chart, follow these steps:

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Print Chart: Titles & Annotations**. Org Plus displays the Chart Titles form.

3. Type a title and subtitles for your chart.

4. Press ⬚Alt - ⬚F10 when you finish. Org Plus displays the Annotations form.

5. Type the annotations.

   You can print annotations in any of the chart's four corners.

6. Press ⬚Alt - ⬚F10 when you finish.

% (Date Print-Time Code)

You can have Org Plus automatically print the date in a title or annotation. To print the date, type the % Date Code as the first character in the field where you want the date. Then type a number from 1 through 6 following the % . This number tells Org Plus what format to use when printing the date. The formats are:

1 — March 19, 1968
2 — 19 March 1968
3 — 3/19/68
4 — 19/3/68
5 — 3-19-68
6 — 19-3-68

For example, type %3 and Org Plus automatically prints the date in the format 3/19/68 in the title or annotation.

Org Plus ignores anything you type after the code.

Note: For the Date Print-Time Code to print correctly, the system date on your computer must be current.

**Print Chart:
Spec'l Prnt
Ctrl/Format**
⬚⇧Shift - ⬚F10

This command gives you some additional control over how Org Plus formats your chart. This command lets you:

- specify whether to print all positions, just marked positions, or just unmarked positions

- print Alternate Text Fields in special positions in your chart

- print the Text Field labels along with the text, and right justify the contents of the Text Fields

- change the print position of the first Text Field (usually the Name Field) from the first line in each box to either the last line, next-to-last, or second-to-the-last line
- specify how Org Plus should handle page breaks in a multi-page chart
- change how Org Plus uses chart styles at the bottom of your chart

To use the Special Print Control/Format command:

1. From the Work Group Display, press [F9]. Org Plus displays the Command Menu.

2. Select **Print Chart: Spec'l Prnt Ctrl/Format.**
   Org Plus displays the Special Print Control form.

3. Select the settings you want to use as follows:

   Positions to Print
   Normally Org Plus prints all positions in your chart (or in a branch if you use Print Part). Optionally, you can mark the positions you want included in your chart, and Org Plus will print only the marked positions. Or, you can mark positions to be excluded, and have Org Plus print only the unmarked positions. (See "Chapter 5: Editing Your Chart" for information about the Find & Mark and Assign Mark commands.) This feature lets you print variations of your charts with only selected positions included. It also makes it easy to print a few levels of your chart without having to include all positions at each level.

   Select **Marked** to print only marked positions in your chart. Org Plus does not print subordinates of unmarked positions even if they are marked.

   Select **Unmarked** to print only unmarked positions. Org Plus does not print subordinates of marked positions even if they are unmarked.

Print Alternate Text Field 5 and 6

You can print Alternate Text Field 5 or Alternate Text Field 6 below Text Fields 1 through 6. Select **Yes** for the appropriate settings.

Alternate Text Fields 5 and 6 always appear below any other Text Fields but before any Amount Fields.

Figure 4-2 shows the placement of Alternate Text Fields, along with two regular Text Fields.
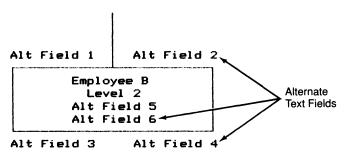
Figure 4-2

Print Alternate Text Fields 1-4 on Corners

Select **Yes** to print Alternate Text Fields 1 through 4, one outside each corner of every box.

Use caution when you print Alternate Text Fields 1-4 on the corners of each box and use Squeeze Chart. Text on the corners of neighboring boxes may run together.

Print Text Field Labels

When you select **Yes**, Org Plus prints the field labels before the contents of each field in your chart. This includes the Text and Alternate Text Fields.

You can change the Text Field labels with Printer/Setup (see "Chapter 2: Getting Started").

```
┌─────────────────────┐
│  Name  John Neer    │
│  Title    Plant 1   │
│  Ext.       x515    │
└─────────────────────┘
```
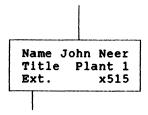
Figure 4-3. Printing Text Field Labels

Right Justify
If you select **Yes**, Org Plus right-justifies the contents of
the Text Fields in boxes. It also left-justifies the Text Field
labels. This overrides any justification setting you make
with the Print command. If you do not print Text Field
labels, this setting has no effect.

4. Press [Alt] - [F10] to continue. Org Plus displays the Special
Format form.

5. Select the settings you want to use as follows:

Print Text Field 1
This setting lets you change the print position of the first
Text Field (usually the Name Field). This means you can
keep employee names in the first Text Field, but print them
on the last, next-to-last, or second-from-the-last line in
each box. Keeping names in the first Text Field lets you
sort them last-name-first, and see them displayed in the
Subordinates' Box.

Select **1st** to print Text Field 1 on the first line of each box
(its normal position). Select **Last, Next-Last,** or **2nd-Last**
to change its print position.

If you also print Alternate Text Fields 5 and 6, Last causes Text Field 1 to appear after Alternate Text Fields 5 and 6. However, Text Field 1 always appears above any Amount Fields you print. If you plan to use lines in boxes (see below) make sure you think about their positions in relation to where Text Field 1 prints.

Note: Do not change the position of the first Text Field if you have used the Staff Subordinates Print-Time Code (see "Chapter 6: Advanced Chart-Making").

```
┌──────────────────────────────────────────────────────────┐
│ Name       George Simko_____   Alt  _____     │
│ Title      AMC Division_____         _____     │
│ Comment    a_____            _____     │
│ Comment    V. P. Marketing_____       _____     │
│ Comment    _____              _____     │
│ Comment    _____              _____     │
│ Chart Level    2  ·   ·    ·    ·   Line Type  S          │
└──────────────────────────────────────────────────────────┘
```

Work Group Display

```
┌───────────────────┐       ┌───────────────────┐       ┌───────────────────┐
│  George Simko      │       │   AMC Division     │       │   AMC Division     │
│  AMC Division      │       ├───────────────────┤       ├───────────────────┤
├───────────────────┤       │  V. P. Marketing   │       │  George Simko      │
│  V. P. Marketing   │       │  George Simko      │       │  V. P. Marketing   │
└───────────────────┘       └───────────────────┘       └───────────────────┘
        First                       Last                      Next-Last
```
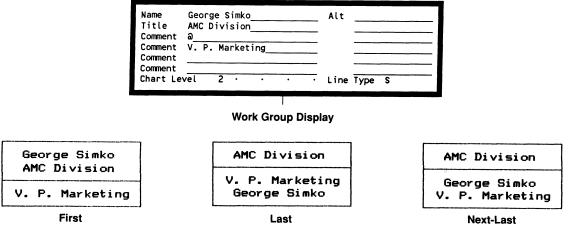
Figure 4-4. Print Text Field 1

Overlap Printing of Pages

Overlap Printing of Pages makes it easier to tape together a chart printed on multiple pages. When you select **Yes**, Org Plus duplicates the right edge of one page on the left edge of the following page. When you select **No**, each page starts where the previous page ends.

Use Chart Style At:

This setting tells Org Plus where to use the chart style you pick when you print. Select **Bottom of All Branches** to use the chart style at the bottom of each branch. Select **Lowest Level Only** to use the chart style at the lowest level only. Selecting **Bottom of All Branches** usually makes your chart narrower.

Bottom of All Branches   Lowest Level Only
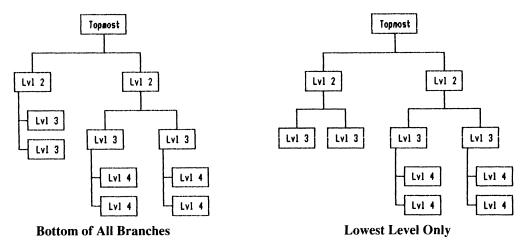
Figure 4-5

6. Press ⌐Alt⌐ - ⌐F10⌐ when you have made your selections.

Print Chart: Reprint ⌐Ctrl⌐ - ⌐2⌐

Sometimes you want to reprint your chart with exactly the same print selections you made previously. Reprint saves you time by doing just that.

1. From the Work Group Display, press ⌐F9⌐ to display the Command Menu.

2. Select **Print Chart: Reprint.** Org Plus immediately formats and prints the chart.

Org Plus uses the settings you chose the last time you printed your chart. No warning messages appear as they do when you Print Chart. If Org Plus needs to cut off the bottom levels of your chart, it does so without warning.

If you retrieved this chart, Org Plus uses the settings that were in effect when you last saved the chart. (The print settings are saved with each chart.) If this is a new chart that you have not printed before, Org Plus uses the default print settings.

Print Chart:
Print Part Alt - 2

If you have a large chart, you may want to print it in sections. Printing a part of a chart is the same as printing the whole chart, except you specify the area to print. You can use any position in the chart as the top of the part you print. You can print all the way to the bottom of the branch, or down just a few levels.

1. Move the Work Group Display until the position you want at the top of the printed chart becomes the Current Position.

2. From the Work Group Display, press F9. Org Plus displays the Command Menu.

3. Select **Print Chart: 1-Print Part**. Org Plus confirms the position at the top of the chart, and asks you how many levels you want to print.

4. Select the number of levels you want to print. Count the current position as one level. If you want to print to the bottom of the chart, select **All**.

From this point on, printing a part of a chart is the same as printing the entire chart.

Print Chart:
Reprint Part Alt - F2

Reprint Part lets you reprint the part of your chart you last printed with the Print Part command. You do not have to confirm all the print settings.

1. Move the Work Group Display until the position you want at the top of the printed chart is the Current Position.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Print Chart: 2-Reprint Part.** Org Plus immediately formats and prints part of your chart.

Printing with Plotters

If you use a plotter to print your chart, you must select pens for drawing various parts of the chart. Org Plus asks you about pens during the Print command, before it formats the chart.

You can choose a pen for the text, one for the lines and boxes, and one for "enhancements." Enhancements include the shadow part of a shadow or perspective box. You can also tell Org Plus to slant the text, to give it an italic look.

If you request more pens than your plotter has, Org Plus stops when it needs another color. Then it asks you to change pens.

The Set Option command allows you to select pens for the text in individual positions. You can also specify a pen when you set an auxiliary line. (See "Chapter 6: Advanced Chart-Making" for more information.)

Print to Disk

You can print an entire chart, or part of a chart, to a disk file.

Note: Org Plus cannot read a file you print to disk. If you want to make future modifications using Org Plus, save the chart using the Save Chart command before you print to disk. ("Chapter 3: Building a Chart" describes this command.) The file you print to disk is a picture of your organization chart. Your printer can understand it. However, Org Plus cannot modify it.

Be sure to give different names to the file printed to disk and to the saved chart. You cannot use the name of your chart for the name of the file you print to disk.

To print a chart to a disk file:

1. From the Work Group Display, press F9 Org Plus displays the Command Menu.

2. Select **Print Chart: Print** or **Print Chart: Print Part.**

3. Make selections as you normally do. When you get to the Print Control form, select **Disk** as the Print To setting.

4. After you complete the Print Control form, Org Plus gives you a choice of formats for your disk file. Select **Sideways-Ver2** or **Sideways-Ver3** if you plan to print your chart using Sideways. If you plan to print the file to a printer using the DOS COPY command, select **Printer.**

   If you want the chart to be a standard ASCII file, select the **Sideways-Ver2** setting. This creates a print image using the USASCII character set, and does not provide solid lines or boxes.

   If you select the **Sideways-Ver3** setting, Org Plus makes the chart an ASCII file. However, it uses the IBM extended Graphics character set for the lines and boxes. Choose this setting if you plan to import your file into software that can handle lines and boxes.

   Selecting **Printer** tells Org Plus to send the code that it would send to the printer to a file instead. This file contains whatever printer control codes are necessary to control the printer selected in Printer/Setup.

   Note: Some programs, such as certain desktop publishing systems, accept files in HPGL (Hewlett-Packard Graphics Language) format. This is the language used by HP plotters. You can create an HPGL output file by selecting one of the HP Plotter settings in Printer/Setup. When you print to disk, Org Plus does not ask you to select a format. It automatically prints an HPGL file to disk. You can then import this file into a program that accepts HPGL code.

   Org Plus formats the chart. Then it asks you to provide a file name.

5. Provide a file name and press Enter ⏎. Org Plus writes the chart to the file you specify.

6. Save your chart as described in "Chapter 3: Building a Chart" before you quit Org Plus.

To print the disk file using DOS, use the DOS COPY command:

```
copy/b file-specification device-name
```

for example,

```
copy/b mychart.org lpt1:
```

(Do not use the DOS PRINT command. Some graphics characters in the file might cause the PRINT command to behave incorrectly.)

Printing Through Sideways

Sideways is a program from Funk Software, Inc., that allows many dot matrix printers to print sideways (landscape) on the paper. Thus, wide output (like some organization charts) can print in one pass without requiring taping of the pages.

You do not need to use Sideways to print landscape. Org Plus prints landscape if you select **Landscape** in Printer/Setup. (See "Printer/Setup" in "Chapter 2: Getting Started.") However, some charts may be too large to use this feature. If you want to print such a large chart using Sideways, select **Portrait** in Printer/Setup. Then follow these instructions:

1. Print to disk by selecting **Disk** for the Print To setting on the Print Control form.

2. Select **Sideways-Ver2** or **Sideways-Ver3** when Org Plus asks you to choose a format for your disk file. Your choice depends on which version of Sideways you have. (If you have Version 2.xx, choose version 2. If you have Version 3.xx, choose 3.)

   Org Plus formats the chart. Then it asks you to provide a file name.

3. Provide a file name and press Enter [⏎]. Org Plus writes the chart to the file you specify.

4. Save your chart as described in "Chapter 3: Building a Chart" before you quit Org Plus.

5. Type `Sideways` to start the Sideways program, and make sure you have configured it for the printer you plan to use.

   Note: Use any version of Sideways that is direct from Funk Software, Inc. to print Org Plus charts. Do not use a version of Sideways bundled with another software program. Do not use the Lotus 1-2-3® version of Sideways (SW123) or the version that comes with SuperProject® or SuperCalc® from Computer Associates. Those versions print only Lotus, SuperProject, or SuperCalc files, and will not recognize an Org Plus file.

6. Make sure you enter the name of the Org Plus file you printed to disk, not the saved Org Plus chart.

7. Set Glue Lines on the Sideways menu to match what Sideways shows is the number of lines per page. (The number of lines per page varies, depending on your printer and the font you choose.) If you do not set the number of Glue Lines correctly, gaps appear when Sideways prints the chart.

   Note: If you have a tall chart (top person to bottom person), Sideways may need to print the chart in more than one section. In this case, even when you set the Glue Lines as described above, gaps appear in the chart. If this happens, set Glue Lines to twice the number of lines per page (or 3 times if the chart should print in 3 sections).

Print Chart: Custom Drawing
[⇧Shift] - [F9]

The Custom Drawing command lets you convert an organization chart into a drawing, and then modify it with the Org Plus Drawing Board. This command is described in detail in "Chapter 9: Custom Drawing."

Batch Printing   If you have many charts, drawings, or reports that you print regularly, you can have Org Plus print them, one after another. You do not have to retrieve and print each one individually.

For example, to batch print charts DEPT1, DEPT2, and DEPT3, type ‑C and the chart names after Org at the DOS prompt:

```
ORG -C DEPT1 DEPT2 DEPT3
```

This command starts Org Plus, retrieves each chart, and prints it. Batch print drawings in the same way. You can mix charts and drawings in the same line.

Org Plus uses the drive or path set in Printer/Setup when executing a batch print command.

You can include as many names as will fit within the 128 character limit for DOS commands. To batch print a great number of charts, write a simple DOS batch file.

If you want to batch print reports instead of charts, type ‑R (or ‑r) after ORG. For example:

```
ORG -R DEPT1 DEPT2 DEPT3
```

This prints reports from the charts. (See "Chapter 7: Tables and Reports.")

Org Plus uses the printer type, paper size, etc. that you last saved from Printer/Setup. It uses the saved Table Setup and Print Report settings when you print a report. If you specified that the chart, drawing, or report should print to the screen or a file, Org Plus will send it to the printer when you batch print.

If Org Plus cannot find a file, or an output error occurs, printing stops. To abort the batch printing process while a chart is printing, press Escape Esc.

When batch printing charts and reports, you can have Org Plus automatically print the current date. See "Print Chart: Titles & Annotations" in this chapter for information on using the Date Print-Time Code on charts. See "Tables/Reports: Headers and Titles" in "Chapter 7: Tables and Reports" for information on using the Date Print-Time Code in reports.

Note 1: You cannot mix charts and reports in one batch command. Print all your charts with one batch command. Then print all your reports with another batch command.

Note 2: Batch printing also works when you start Chart or Draw stand-alone. If starting Chart stand-alone, you cannot print landscape on a dot matrix printer.

5 Editing Your Chart

You may discover that you need to make changes to your chart after you have created it. This chapter describes the commands you can use to change the structure or contents of your chart. It covers:

- inserting, moving, and deleting positions
- copying the contents of fields to other positions
- sorting positions in your chart
- searching for positions that match criteria you specify

Selecting Ranges

Some of the editing commands operate on one position at a time. Others operate on several positions at once. The range tells Org Plus what set of positions you want a command to apply to. For example, you can copy the Title Field from one position to other positions in the same level or branch. Or you can copy the information to all the positions in the chart.

Ranges include:

Current Position — the position in the box at the top of the Work Group Display.

Siblings — all positions that report directly to the same manager as the Current Position (including the Current Position).

WrkGrp/Subordinates — all positions that report directly to the Current Position (not including the Current Position).

Level — all positions at the same chart level as the Current Position (including the Current Position).

Branch — the Current Position and all positions below, including those reporting directly and through subordinate managers.

All Positions — all positions in the chart.

Marked Positions — all positions marked by the Find & Mark or Assign Mark command. This range includes the Current Position only if it is marked.

Edit Chart:
Insert Position F3

Insert Position adds a new (blank) position to your chart. You can use this command to insert a new level between two existing levels of your chart. You can also use it to add another subordinate to a work group.

If the cursor is in the Current Position Box, Org Plus creates a position at that chart level. The Current Position, and all positions below it in its branch, move down one chart level. This creates a chart level between the Current Position and its manager.

To insert a new position between the Current Position and its manager:

1. Find the position that will report to the new position. Make it the Current Position. Place the cursor anywhere in the Current Position Box.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Edit Chart: Insert Position**. An empty Current Position Box appears. The old Current Position and all positions reporting to it move down one level.

If the cursor is in the Subordinates' Box, Org Plus adds a position at the line the cursor is on. Org Plus pushes the position that was on that line, and all the siblings below it, down one line.

To insert a new position in the Subordinates' Box:

1. Place the cursor on the row in the Subordinates' Box where you want the new subordinate to appear.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Edit Chart: Insert Position**. The position the cursor is on, and those below, move down one line to make room for the new position.

Edit Chart:
Move Position Alt - F3

Move Position allows you to pick up an individual position or a complete branch and move it somewhere else within a chart.

To move a position or branch:

1. Find the position you want to move. You can move the Current Position or a position in the Subordinates' Box. To move the Current Position, place the cursor anywhere in the Current Position Box. To exchange two adjacent positions in the Subordinates' Box, place the cursor on the lower one.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Edit Chart: Move Position**. Org Plus displays an asterisk by the name of the position you want to move.

4. Find the position where the position you are moving should appear. You can move to the Current Position or to a position in the Subordinates' Box. Place the cursor anywhere in the Current Position Box. Or place the cursor on the appropriate row in the Subordinates' Box.

5. Press F9. Org Plus displays the Command Menu.

6. Select **Edit Chart: Move Position** once again. Org Plus asks you to confirm the move.

7. Select **Yes.**

When you move a position within the same work group, Org Plus automatically moves any subordinates along with the position. Use this to rearrange the order of positions in the Subordinates' Box.

You can also move a position with subordinates to a different work group. Org Plus asks if you want to move the individual position, or the branch. If you select **Position,** Org Plus leaves the subordinates behind. They will report to an "open" position (a position with "open" in the first text field).

To move a position to a new chart level and insert it between an existing position and its manager:

1. Select the position you want to move using Move Position as described in steps 1 through 3 above.

2. Find the position that should report to the position you are moving. Make it the Current Position. Place the cursor anywhere in the Current Position box.

3. Press F9. Org Plus displays the Command Menu.

4. Select **Edit Chart: Move Position** once again. Org Plus asks you to confirm the move.

5. Select **Yes.**

   The position you are moving appears as the Current Position. The position that was the Current Position now appears in the Subordinates' Box, reporting to the moved position.

   Org Plus allows you to move only an individual position into a new chart level in this manner. If the position you are moving has subordinates, Org Plus leaves them behind, reporting to an "open" position.

Edit Chart: Delete Position [Alt] - [F4]

The Delete Position command lets you delete a single position or an entire branch of a chart.

When you delete a position, the box disappears from the printed organization chart. If you are simply replacing the contents of a position, just type over the contents with the new information. There is no need to delete the position.

Conversely, you cannot delete a position just by erasing its contents. Deleting the contents of a position simply makes it blank, and it appears as a blank box in your chart. Use the Delete Position command to remove the position from your chart.

To eliminate a position or branch from your chart, follow these steps:

1. Place the cursor on the position you want to delete. You can delete the Current Position, or a position in the Subordinates' Box.

2. Press [F9]. Org Plus displays the Command Menu.

3. Select **Edit Chart: Delete Position**. Org Plus asks you to confirm that you want to delete the position.

4. Select **Yes.**

5. If the position you are deleting has subordinates, Org Plus asks if you want to delete the position or the branch. If you select **Position,** all subordinates move up one chart level, and report to the next higher manager. If you select **Branch,** Org Plus deletes the entire branch.

Note: There can be only one topmost position in each chart. For that reason, you can delete the topmost position only if it has exactly one direct subordinate.

If you want to delete the entire chart, select **Clear Chart** from the Main Menu.

Edit Chart:
Copy Information Ctrl - F9

The Copy Information command gives you a quick way to copy information to other positions in your chart. You may copy a single field, all fields, just the Text Fields, or just the Amount Fields.

Org Plus also provides a clipboard which can temporarily hold information while you decide where to put it. Using the Clipboard gives you the most flexibility in copying information. It is the only way you can copy information to positions which are not part of a defined range.

Copying Information
Using the Clipboard

To copy information using the Clipboard, first copy the information from the position to the Clipboard.

1. Find the position that contains the information you want to copy. Make it the Current Position. If you want to copy a single field, place the cursor in that field.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Edit Chart: Copy Information.** Org Plus asks you what information you want to copy.

4. Select the set of fields to copy and press Enter ⏎.
   Org Plus asks you to select the range you want the information copied to.

5. Select **Clipboard** and press Enter ⏎. Org Plus copies the field(s) you have specified to the Clipboard.

   Now you can copy the information from the Clipboard to another position or range of positions. (You can do other things along the way—the information stays in the Clipboard until you replace it.)

6. Find the position you want to copy the information to. Make that position the Current Position. Place the cursor anywhere in the Current Position Box.

   To copy from the Clipboard to all members of a work group or a branch, make the manager the Current Position. To copy to all positions at a given chart level, make any position at that level the Current Position. To copy to a single position, make it the Current Position.

7. Press F9. Org Plus displays the Command Menu.

8. Select **Edit Chart: Copy Information** again. Org Plus asks you what information you want to copy.

9. Select **Clipboard** and press Enter ⏎. Org Plus asks you to select the range you want the information copied to.

10. Select a range and press Enter ⏎. Remember that Org Plus uses the Current Position to find the range you pick. The information stays in the Clipboard until you replace it. You can copy from the Clipboard any number of times.

Note: If you select a single field to copy, Org Plus leaves all other fields untouched by the Copy Information command. If you copy a group of fields, Org Plus clears any fields that are blank or zero in the destination position.

You can clear a range of fields by copying a blank field or a zero value over the fields. This does not clear an Amount Field that contains a formula — use the Formula Setup command to do that.

Edit Chart:
View Clipboard Ctrl - F10

The View Clipboard command lets you see the contents of the Clipboard. When you view the Clipboard contents, a dot appears at the far right of all fields you copied. If you copied a blank field, a dot also appears to the right of that field. The dots tell you what fields Org Plus will copy from the Clipboard to positions in your chart.

Copying Information
Without the Clipboard

You can copy information without the Clipboard to sibling positions or those in the same level, branch, or work group. For example, you can copy from the Current Position to all positions in the branch below without the Clipboard.

You can also copy directly from the Current Position to marked positions (discussed below) or to all positions in the chart. In both of these cases, Org Plus does not need the Current Position to tell where to put the information.

To copy without using the Clipboard:

1. Find the position that contains the information you want to copy. Make it the Current Position. If you want to copy a single field, place the cursor in that field.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Edit Chart: Copy Information.** Org Plus asks you what information you want to copy.

4. Select the set of fields to copy and press Enter ⏎.
   Org Plus asks you what range you want to copy to.

5. Select the range you want the information copied to and press Enter ⏎.

Edit Chart:
Sort Subordinates
⇧Shift - F3

The Sort Subordinates command allows you to sort positions within each work group in your chart. Use this command to alphabetize your subordinates as a matter of protocol, or to rank them according to quota or budget performance. You can sort one work group or the entire chart.

Org Plus is preset to sort on the first Text Field (usually the Name Field), in alphabetical order, last name first. To change the sorting sequence, use the Table Setup command discussed in "Chapter 7: Tables and Reports." You can sort on any field, alphabetically or numerically, in ascending or descending order.

To sort subordinates:

1. Find the manager of the work group you want to sort. Make that position the Current Position. If you want to sort the entire chart, any position can be the Current Position. Place the cursor anywhere in the Current Position Box.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Edit Chart: Sort Subordinates**. Org Plus asks you if you want to sort the entire chart or just the work group.

4. Select **Chart** or **Work Group**.

When you sort a single work group, Org Plus rearranges only the subordinates in that one group. When you sort the entire chart, Org Plus rearranges the subordinates in every work group, at every level.

Caution: If you sort the entire chart, the chart layout may change. For example, if you arranged branches by size so the chart looks balanced, sorting the entire chart could make the chart look out of balance. Therefore, use caution before you decide to sort your entire chart.

Do not use Sort Subordinates on a work group with the Stacked Boxed List Print-Time Code. Org Plus sorts this as one box no matter how many you have, so the results will not be what you expect.

Note: Org Plus sorts hidden positions along with the other positions at the same level. If their fields are blank, an ascending alphabetical sort places them first in the Subordinates' Box. They then become the left-most positions when printed in a horizontal chart style.

Marking Positions

Org Plus provides several commands that let you "mark" positions. A mark is simply an electronic tag that Org Plus uses to identify positions you select. Then Org Plus can easily find those positions when you want to do something with them as a group.

For example, suppose you need to change the titles of all the "Product Managers" in your chart to "Brand Managers." You can use Find & Mark to search for and mark all positions with the title "Product Manager." Change the title in one position. Then use the Copy Information command to copy the new title to all the other marked positions.

If you want, you can make the following commands operate only on the marked fields: Print, Copy Information, Print Report, Set Option, Clear Option, Exchange Data, and Adjust Amount.

You can mark positions explicitly with the Assign Mark command. Or, let Org Plus mark ones that match criteria you provide with the Find & Mark command. You can also Unmark Positions, and find out what positions are marked with the Review Marked command.

When the Current Position is a marked position, a plus sign appears in the lower right corner of the box. The plus sign does not appear in your printed chart.

Edit Chart:
Find & Mark ⌐⇧Shift⌐ - ⌐F7⌐

The Find & Mark command lets you search for and identify all positions that meet criteria you specify. For example, you might want to find all positions with a particular title or those with salaries within a certain range.

When you select Find & Mark, you must specify three things: the field to inspect, how to decide whether to mark the position or not, and what to look for. You must also tell Org Plus what to do with marked positions from previous searches.

You can combine the results of multiple searches. For example, you can find all positions with a certain title *and* whose salary is within a certain range.

To find and mark positions:

1. Press ⌐F9⌐. Org Plus displays the Command Menu.

2. Select **Edit Chart: Find & Mark.** Org Plus displays page 1 of the Find and Mark form.

3. Select the field you want to inspect. This tells Org Plus where to look. You can select any Text Field, Alternate Text Field, Amount Field, or Consolidated Amount Field.

4. Press ⌐Alt⌐ - ⌐F10⌐. Org Plus displays page 2 of the Find and Mark form.

5. Tell Org Plus how to decide whether to mark the position or not. Org Plus can mark positions that are:
    =   equal to the search value
    >   greater than the search value
    <   less than the search value
    ≥   greater than or equal to the search value
    ≤   less than or equal to the search value
    ≠   not equal to the search value

6. Move the cursor to the Search Value Field. Type the text or amount that you want Org Plus to look for.

   In text, you may include the "wild card" symbols : * or ?

   If you use an * (asterisk), Org Plus matches all characters from the asterisk to the end of the text, or to the next character you type. For example, JO* matches JOE, JOHN, JOSEPH, and JOANN, but not JAMES. *ER* matches any word that has an ER anywhere in the word.

   You can use a ? (question mark) to match any single character. For example, JO?N would match JOHN and JOAN but not JOANN.

   If you want to search for the characters * or ?, precede them with a backslash — * or \?

   If you are searching a Text Field, Org Plus asks if you want to distinguish between capital and lower case letters.

7. Select **Yes** for Match Case if you want Org Plus to match the case exactly. For example, if you select **Yes**, Org Plus considers e, E, and ë to be different. If you select **No** then e, E, and ë are equivalent.

   Finally, you must tell Org Plus what to do with marked positions from previous searches.

8. Select **Erase, Intersect,** or **Overlap.**

   Select **Erase** to clear the results of previous searches. This erases all previous marks, and marks only those cases that match the current search criteria.

Select **Intersect** to mark those cases found by this search AND those already marked by previous searches (logical AND). For example, to find all Product Managers with salaries greater than $10,000, first search for Product Managers with Previous Mark set to Erase. Org Plus marks all Product Manager positions. Then search for Salaries greater than $10,000, with Previous Mark set to Intersect. Org Plus looks for salaries more than $10,000 only among the Product Managers. It erases the marks from any Product Managers whose salaries are not more than $10,000. (If Org Plus does not find a case that matches *both* searches, it does not mark any position.)

Select **Overlap** to mark all cases found by this search in addition to those found by the previous search (logical OR). For example, to find all individuals with titles of either Product Manager or Project Manager, first search for Product Managers with Previous Mark set to Erase. Then search for Project Managers with Previous Mark set to Overlap. Org Plus first marks all the Product Managers, then marks all the Project Managers.

9. Press ⌷Alt⌷ - ⌷F10⌷.

   When Org Plus finishes the search, it displays a table of the positions that match the search criteria. This table appears in the same form as View Table. Org Plus sorts the entries in the table according to the settings made with the Table Setup command.

   If no entry matches your criteria, you see a message to that effect.

   You can examine the table of marked positions using ⌷↑⌷ ⌷↓⌷ and ⌷PgUp⌷ ⌷PgDn⌷.

10. To make the highlighted position the Current Position, press Enter ⌷◄┘⌷. Or press ⌷Esc⌷ to return to the Work Group Display. Org Plus saves your search criteria. Or press ⌷Alt⌷ - ⌷F10⌷ to perform another search.

Edit Chart: Assign Mark ⇧Shift - F6

The Assign Mark command lets you mark positions directly. You can mark a single position or a range of positions.

1. Find the position you want to mark. Make it the Current Position. Place the cursor anywhere in the Current Position Box.

   To mark all members of a work group, make the manager of the work group the Current Position. To mark all positions at a chart level, make any position at that level the Current Position.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Edit Chart: Assign Mark**. Org Plus displays the Assign Mark form.

4. Select the range to mark and press Enter ⏎.

Edit Chart: Unmark Positions ⇧Shift - F8

You can erase marks for individual positions or for ranges of positions.

1. Find the position you want to unmark. Make it the Current Position. Place the cursor anywhere in the Current Position box.

   To unmark all members of a work group, make the manager of the work group the Current Position. To unmark all positions at a chart level, make any position at that level the Current Position.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Edit Chart: Unmark Positions.** Org Plus asks you what range of positions you want to unmark.

4. Select the range to unmark and press Enter ⏎.

Edit Chart:

Review Marked ⟨⇧Shift⟩ - ⟨F5⟩

The Review Marked command displays a table of marked positions. This table appears in the same form as View Table. Org Plus sorts the entries in the table according to the settings made with the Table Setup command.

To look at a table of the marked positions:

1. From the Work Group Display, press ⟨F9⟩. Org Plus displays the Command Menu.

2. Select **Edit Chart: Review Marked.** Org Plus displays a table of the marked positions.

   You can examine the table using ⟨↑⟩ ⟨↓⟩ or ⟨PgUp⟩ ⟨PgDn⟩.

   To return to the Work Group Display and make the highlighted position the Current Position, press Enter ⟨←⟩.

   Press ⟨Esc⟩ to return to the Work Group Display.

6 Advanced Chart-Making

The Print command gives you some control over the shape and format of your chart.

Org Plus also provides a number of features that give you additional flexibility. Commands are available to help shape your chart, communicate with other programs, and more.

This chapter covers:

- features that shape your chart: options, Print-Time Codes, and hidden positions
- how to make your chart fit on one page
- special chart layout situations
- other advanced features: checking chart status, appending charts, saving a branch of a chart, exchanging data with other programs, and chart/report specifications

Note: The features described in this chapter should always be your first choice for shaping your chart. They all take advantage of Org Plus's automatic drawing which makes future updating a snap. However, you can manually draw virtually any chart configuration using the Drawing Board. See "Chapter 9: Custom Drawing" for more information.

Features that Shape Your Chart

Org Plus offers many features that allow you to shape the format and layout of your chart to your needs. Among these features are the Options commands, the Print-Time Codes, and hidden positions.

Selecting Ranges   Some of the commands discussed here operate on one position at a time. Others operate on several positions at once. The range tells Org Plus what set of positions you want a command to apply to. For example, you can set a box style for all positions at the same level or in the same branch.

The range can be:

Current Position — the position in the box at the top of the Work Group Display.

Siblings — all positions that report directly to the same manager as the Current Position (including the Current Position).

WrkGrp/Subordinates — all positions that report directly to the Current Position (not including the Current Position).

Level — all positions at the same chart level as the Current Position (including the Current Position).

Branch — the Current Position and all positions below, reporting directly and through subordinate managers.

All Positions — all positions in the chart.

Marked Positions — all positions marked by the Find & Mark or Assign Mark command. This range includes the Current Position only if it is marked.

Options   The Options commands let you fine tune the format and layout of your chart. The Set Option command lets you:

- set chart styles for individual work groups or levels
- set box styles for a single position or a range of positions
- print Alternate Text Fields instead of Text Fields
- select plotter pens or colors for the text in a single position or a range of positions
- exclude the Amount Fields in a position or range of positions from being used in calculations and consolidations
- exclude positions from all Amount Field or print-time counts
- suppress printing all Amount Fields for a position or range of positions

You can also create and modify auxiliary lines with the Draw Auxiliary Line and Modify/Delete Line commands. Auxiliary lines are additional lines between positions in your chart.

You can clear options you set with the Clear Option Command. And you can use the View Options command to see the options set in your chart.

Chart style and box style choices you make using the Set Option command override any choices you make with the Print command. For example, you can use Set Option to select specific box styles for certain positions in your chart. Then when you print the chart, you can select another box style for everyone else.

When you set *chart style* options, do not select Automatic when you Print the chart—always select Manual. This ensures that you get the chart style that you want at the bottom levels of your chart.

Options: Set Option Alt - F7

To set an option:

1. Find the position for which you want to set an option. Make it the Current Position. Place the cursor anywhere in the Current Position Box.

    Make the manager the Current Position to set an option for the subordinates in a work group. Make the position at the top of the branch the Current Position to set an option for a branch. To set an option for siblings, make any sibling the Current Position. To set an option for all marked positions, any position can be the Current Position. To set an option for a level, make any position at that level the Current Position.

    Note: If you set a *chart style* option for WrkGrp/ Subordinates, it will apply to the group of positions shown in the Subordinates' Box. If you set a chart style option for a level, it will apply to all positions at the subordinates' level.

2. From the Work Group Display, press ⬚F9⬚. Org Plus displays the Command Menu.

3. Select **Options: Set Option.** Org Plus lists the options you can select.

4. Select the option you want to set as follows:

Chart Style
You can set a chart style for any work group or level in your chart. If you set a chart style for a work group, the option affects the subordinates of the Current Position only. If you set a chart style for a level, it affects all subordinates of managers at the Current Position's level. For example, if the Current Position is at chart level 2, Org Plus applies the chart style to the subordinates of all level 2 managers.

When you select Manual during the Print command, you can set a chart style for the bottom of your chart *only*. When you set a Chart Style option, you can set a chart style for *any* work group. Use chart style options in these cases:

■ When you want one chart style for some groups at the bottom of your chart, and a different style for other groups. For example, you may want some groups in a one-column chart style, and some in a two-column style.

■ When you want columnar, list, or boxed list styles at the bottom two levels of a branch in your chart. For example, you may want your level 4 subordinates in a 1-column style, with their subordinates listed beneath them. This can help make your chart narrower.

■ When you want a staggered chart style instead of a horizontal chart style at upper levels of your chart.

You can control both the height and width of your chart by your selection of chart style. For example, if a 1-column style work group is too tall, try a 2-column style. It is half the height and only slightly wider. (See "How To Make Your Chart Fit on One Page," and "Special Chart Layout Situations" later in this chapter.)

Do not select Automatic when you print if you set chart style options.

After you set a chart style option, you will see a letter or number indicator to the right of the top position in the Subordinates' Box. This shows that you set a chart style option. The chart style indicators are:

1C — One-Column   **L**   — List   **H** — Horizontal
2C — Two-Column   **BL** — Boxed List **S** — Staggered
4C — Four-Column

You must use a horizontal or staggered chart style for positions with more than one level of subordinates. Positions with a columnar, list, or boxed list chart style can print only one level of subordinates. If these styles have more than one level of subordinates, Org Plus warns you that lower levels of your chart will be omitted when you print.

Org Plus automatically arranges subordinates of positions with a columnar, list, or boxed list style in a similar chart style. If a position is in a 1-, 2-, or 4-column chart style, its subordinates must be in a 1-column, list, or boxed list style. If you do not select one of these styles for the subordinates, Org Plus corrects it for you.

If a position is in a list or boxed list chart style, its subordinates must also be in a list or boxed list style, respectively. If you do not select one of these styles for the subordinates, Org Plus corrects it for you. When the chart is printed, Org Plus indents these subordinates under their manager.

If you change a work group or level to a columnar chart style, be aware that Staff-Level positions will not appear in the Staff-Level location. Org Plus handles them in the same way as the other subordinates.

Box Style

You can set the box style for single positions in your chart, or for a range of positions.

For example, you might use a box style option to set off the top levels of management in your chart. Or you might highlight all the individuals due for promotions.

Org Plus sets a box style option for the Current Position, or for the range you select.

The border around the Current Position changes to indicate the box style when you set a box style option.

Alternate Text Field Print

You can ask Org Plus to print the contents of the Alternate Text Fields *instead* of the Text Fields. This replaces all six Text Fields with the six Alternate Text Fields. When you set this option, Org Plus highlights the top Alternate Text Field label in the Work Group Display. (The top Alternate Text Field label is Alt unless you change it.)

You can also print Alternate Text Fields *in addition to* Text Fields. Use the Special Print Control/Format command discussed in "Chapter 4: Printing Your Chart."

Plotter Pen/Color

You can select a pen/color for the text (and amounts) for a single position or a range of positions. This will override the pen selection you make when you print to a plotter.

Exclude From Amount
This option excludes the Amount Fields in a single position or range of positions from all calculations and consolidations. For more information on using calculations and consolidations, see "Chapter 8: Amounts."

Do Not Count
You can exclude positions in your chart from all Amount Field and Print-Time counts. When you set this option, Org Plus does not include the position in any counting function (@CNT, @CMP, or @CLS). Org Plus does not include the position in the count given by the # (Count Print-Time Code). See "Chapter 8: Amounts" for more information on the Count Print-Time Code.

This option does not affect report counts, the display of amounts with Display Amounts, or the printing of amounts.

Suppress Amount Print
You can suppress printing all six Amount Fields for a single position or range of positions in your chart. This option overrides the Amount Print settings you specify with the Amount Print Control command. For more information on using Amounts, see "Chapter 8: Amounts."

5. Press Enter ⬐. Org Plus asks you for more information about the option you selected. If the selection is a default, Org Plus asks for confirmation.

6. Make a selection from the form Org Plus displays and press Enter ⬐.

7. Select the range that you want the option applied to and press Enter ⬐.

Options:
Clear Option Alt - F8

The Clear Option command lets you clear options you have set with the Set Option command.

To clear an option:

1. Find the position for which you want to clear an option. Make it the Current Position. Place the cursor anywhere in the Current Position Box.

   Make the manager the Current Position to clear an option for the subordinates in a work group. Make the position at the top of the branch the Current Position to clear an option for a branch. To clear an option for siblings, make any sibling the Current Position. To clear an option for all marked positions, any position can be the Current Position. To clear an option for a level, make any position at that level the Current Position.

   Note: To clear a *chart style* option for a work group, branch, or level, make the manager of those positions the Current Position.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: Clear Option**.

4. Select the option you want to clear press Enter ⏎.

5. Select the range for which you want this option cleared and press Enter ⏎.

Options:
View Options Alt - F9
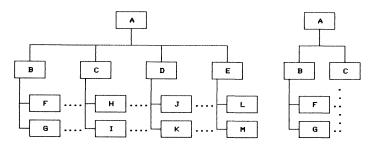
View Options lets you see what options are set for the Current Position.

1. Find the position for which you want to see option settings. Make it the Current Position. Place the cursor anywhere in the Current Position Box.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: View Options.** Org Plus displays the options set for the current position.

Options:
Draw Auxiliary Line
Ctrl - F7

Auxiliary lines are additional lines between positions in your chart. You might use auxiliary lines if you have a Staff-Level position that reports to two managers. You can also use auxiliary lines to show a matrix management structure. Figure 6-1 shows some common uses of auxiliary lines. (See also "Special Chart Layout Situations" later in this chapter.)

Matrix organizational structures

Staff with two managers   **Multiple topmost managers**
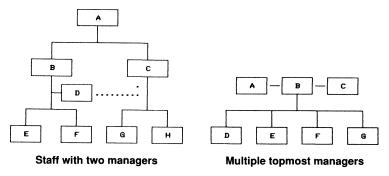
Figure 6-1. Appropriate Uses of Auxiliary Lines

Note: If you do not like the way Org Plus draws an auxiliary line, you can change it or draw it manually in the Drawing Board. See "Chapter 9: Custom Drawing" for more information.

To draw an auxiliary line:

1. Find one of the positions to which you want to connect an auxiliary line. Make it the Current Position. Place the cursor anywhere in the Current Position Box.

2. Press $\boxed{\text{F9}}$. Org Plus displays the Command Menu.

3. Select **Options: Draw Auxiliary Line**.

4. Select the line type you want to use for the auxiliary line (**Solid** or **Dotted**). If you are using a plotter, select the pen you want to use to draw this line.

5. Press $\boxed{\text{Alt}}$ - $\boxed{\text{F10}}$.

6. Now find the position you want to connect to the other end of the auxiliary line. Make it the Current Position. Place the cursor anywhere in the Current Position Box.

7. Press $\boxed{\text{F9}}$. Org Plus displays the Command Menu.

8. Select **Options: Draw Auxiliary Line** again. Org Plus asks you to confirm the line between the two positions you selected.

9. Select **Yes** if these are the two positions you intended to connect. Select **No** if they are not.
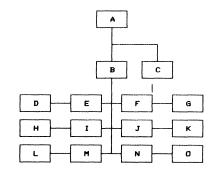
A mark appears at the right outside corner of both positions connected with the Auxiliary Line.

Org Plus draws the auxiliary line in the space between the boxes. It passes underneath any lines it must cross. When planning your chart, place positions you want to connect as close to each other as possible to minimize line crossing.
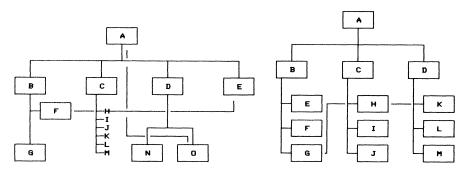
Org Plus draws auxiliary lines between any positions you specify. However, lines that spans multiple columns or multiple levels may result in an unattractive or confusing chart.

If you use Squeeze Chart when printing, the space between the boxes may be compressed. There may no longer be room for the auxiliary line and part of the line may disappear.

If you have auxiliary lines in your chart, be cautious if you decide to Sort Subordinates. A change in the order of positions could result in awkwardly placed auxiliary lines.

**Auxiliary line to inside position of
a 4-column style work group (from C to I)**

Auxiliary lines that cross multiple columns and levels

Figure 6-2. Awkward Uses of Auxiliary Lines

Note 1: An organization chart is already crowded with lines and boxes. Room for auxiliary lines is sparse. Therefore, do not use auxiliary lines casually. To maximize your chances for acceptable results, limit the number of auxiliary lines in your chart. Use auxiliary lines as shown in Figure 6-1. Do not use auxiliary lines as shown in Figure 6-2.

Note 2: Auxiliary lines can produce unpredictable results if you try to connect hidden positions or Staff-Level positions with subordinates. The use of auxiliary lines in either of these cases is not recommended.

Options:
Modify/Delete Line
Ctrl - F8

The Modify/Delete Line command lets you change or remove auxiliary lines. It displays in turn each auxiliary line connected to the Current Position. You can also change the line type and pen setting.

To modify or delete an auxiliary line:

1. Find the position for which you want to delete or modify an auxiliary line. Make it the Current Position. Place the cursor anywhere in the Current Position Box.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: Modify/Delete Line**. Org Plus tells you the positions connected with first auxiliary line.

4. Change the line type or plotter pen if you want.

5. Press Alt - F10. Org Plus asks you if you want to keep (confirm) or delete the line.

6. Select **Yes** if you want to keep (confirm) the line. Select **No** if you want to delete the line.

7. Press Alt - F10. Org Plus then displays the next auxiliary line, if one exists.

8. Press Esc to stop the display of any remaining auxiliary lines.

It is possible to clear all auxiliary lines from a chart at once. When you save a chart to a disk file, all auxiliary lines in the chart are saved with it. However, when you append the chart file to a chart you are working on, the auxiliary lines are *not* brought along.

To erase all auxiliary lines in a chart at once, save the chart. Then use the Clear Chart command to clear the Work Group Display. Select **Work On Chart** to create a new chart. Make one empty position. Use the Append Chart command to append your saved chart to it. Delete the empty position and you have your chart minus its auxiliary lines. For a chart with many auxiliary lines this is faster than searching through the chart and deleting them one by one.

Print-Time Codes

The Print-Time Codes are special characters that you can place in a Text Field to create a special effect when you print the field. The Codes are:

@ — Line in Box
^ — Blank Line
] — Suppress Field
[— Append Alt Field
> — Staff Subordinates
) — Stacked Boxed Lists

@ (Line in Box)

You can place a line in a box instead of text. Just type @ as the first character of the field.

Org Plus ignores any characters you type after the @ .

Whether or not the line joins the sides of the box depends on the box style, the chart style, and the type of position. The line joins the sides of an unbroken box in a horizontal, staggered, and boxed list chart style. There is a one-character space between the line and the sides of the box with any other box style. This is also the case with columnar chart styles.

To force a space between the sides of the box, type @@ in the first two spaces of the field.

When using a plotter, lines that join the sides of the box have the same color as the box. Lines that do not join the sides of the box have the same color as the text.

^ (Blank Line)

If you select Automatic when you print, fields that are empty across an entire chart level do not print. This is also true if you set Make Boxes Equal Height to No.

To force a blank field to print at a particular chart level, type ^ as the first character of the Text Field for one position at the level. Org Plus prints the field as a blank line in every position at that level.
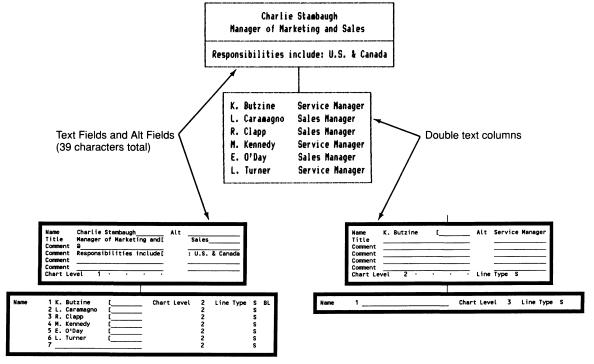
] (Suppress Field)

You can suppress the printing of a single field for a single position. Type] (closed square bracket symbol) as the first character of the Text Field.

[(Append Alt Field)

The [Print-Time Code lets you append an Alternate Text Field to the end of a Text Field. This lets you print double column text in a box. Or, you can append an Alternate Text Field to the Text Field to its left and print extra-long fields (up to 39 characters).

To print two columns of information, make sure the ['s line up vertically. This way the Alternate Text Field contents will line up. To make extra-long fields, type the [as the last character of the Text Field. Org Plus appends the contents of the Alternate Text Field at the character position containing the [Print-Time Code.

Work Group Displays for chart above

Figure 6-3. Append Alt Fields

> (Staff Subordinates)

Org Plus does not allow a Staff-Level position to have subordinates in the regular sense. However, Org Plus can format a Staff-Level box so it has a list of subordinates printed below it.

1. Find the Staff-Level position that should have subordinates. Make that position the Current Position.

2. Type > (greater than symbol) as the first character of all the Text Fields containing subordinate names. Org Plus left-justifies these fields below the box in a list, as shown in Figure 6-4.

```
┌─────────────────────────┐
│     Monty K. Allen      │
│  Owner and President    │
│          x205           │
└─────────────────────────┘
           │
           │    ┌─────────────────────────┐
           │    │     Elaine Burns        │
           ├────│   Admin. Assistant      │
           │    │          x672           │
           │    └─────────────────────────┘
           │      - Sarah Smith
           │      - Jane Wilson
```
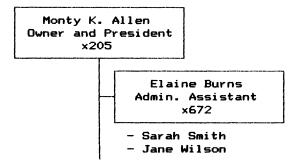
Figure 6-4. Staff-Level Subordinates

3. After the > symbol, type the names of the subordinates in the Text Fields or Alternate Text Fields 5 and 6.

4. Make sure you tell Org Plus to print the fields you have used when you print the chart. Make the appropriate selections on the Columnar Style/Staff Print Control form in the Print command. If you use Alternate Text Fields 5 or 6, you must tell Org Plus to print these fields. Use the Special Print Control/Format command to set Print Alt Text Field 5 and/or 6 to Yes.

Org Plus prints all Text Fields which follow the first >
below the box, whether or not they include the >. However,
Org Plus does not left justify them unless you include the >
as the first character in the field.

Any amounts you print for the Staff-Level position appear
below the staff subordinates. In this case you may want to use
the Set Option command to Suppress Amount Print for the
position.

When you use this Print-Time Code to print subordinates
for a Staff-Level position, be sure to print Text Field 1 first.
(Text Field 1 prints first unless you use Special Print Control/
Format to change the print position to last, next-to-last, or
second-from-last.)

Note 1: This Print-Time Code works only for Staff-Level
positions (positions whose Chart Level is "S"). The > prints
as a character if you use it in a regular position.

Note 2: Do not draw auxiliary lines to Staff-Level positions
with subordinates.

) (Stacked Boxed Lists)

The) Print-Time code lets you split subordinates into more
than one boxed list. Type) in the first character position of
the Name line in the Subordinates' Box where you want the
split to occur. Type another) on the next Name line. The
name immediately above the first) is the last name in the
upper boxed list. The name below the second) is the first
name in the lower boxed list. Any text on the same line as the
) is ignored. To make the distance between the boxed lists
longer, type) on more than two consecutive lines. You can
split subordinates into as many boxed-lists as you wish, within
the overall limit of 100 subordinates for each manager.

```
┌─────────────────────────────────────────────────────┐
│ Name      Gail Sassenrath_____   Alt  _____  │
│ Title          _____        _____  │
│ Comment        _____        _____  │
│ Comment        _____        _____  │
│ Comment        _____        _____  │
│ Comment        _____        _____  │
│ Chart Level    2   ·    ·    ·   · Line Type  S      │
└─────────────────────────────────────────────────────┘
```

```
┌──────────────────────────────────────────────────────────────┐
│ Name     1 Account Reps_____ Chart Level  3 Line Type S BL │
│          2   Robert Baker_____                3          S    │
│          3   Chris Barnes_____                3          S    │
│          4   Victoria Dean_____                3          S    │
│          5 )_____                3          S    │
│          6 )_____                3          S    │
│          7 Service Reps_____                3          S    │
│          8   Regina Bloom_____                3          S    │
│          9   Alex Kane_____                3          S    │
│         10   Richard Sears_____                3          S    │
└──────────────────────────────────────────────────────────────┘
```

Work Group ▪ 6-5.ORG

```
              ┌────────────────┐
              │ Patrick Carlton│
              │     Sales      │
              │  U.S. & Canada │
              └────────────────┘
                      │
          ┌───────────┴───────────┐
  ┌────────────────┐      ┌────────────────┐
  │ Gail Sassenrath│      │  Carl Schmidt  │
  └────────────────┘      └────────────────┘
          │                       │
  ┌────────────────┐      ┌────────────────┐
  │ Account Reps   │      │ Account Reps   │
  │   Robert Baker │      │   Jean McAllen │
  │   Chris Barnes │      │   Gwyn Olson   │
  │   Victoria Dean│      │   Keith Wade   │
  └────────────────┘      └────────────────┘
          │                       │
  ┌────────────────┐      ┌────────────────┐
  │ Service Reps   │      │ Service Reps   │
  │   Regina Bloom │      │   Julie Lucero │
  │   Alex Kane    │      │   Kathy Sure   │
  │   Richard Sears│      │   Joe Willis   │
  └────────────────┘      └────────────────┘
```

Figure 6-5. Stacked Boxed Lists

Note: Your chart style for the subordinates must be the boxed list style. This Print-Time Code does not work with any other chart style.

Hidden Positions

Hidden positions are positions that do not show when you print your chart. They are useful when you want to create special layouts. For example, you can use two different chart styles for the subordinates of one manager by creating a hidden position. (See "Special Chart Layout Situations" later in this chapter.) They also provide a choice of appearance when printing charts with employees removed more than one level from their manager (see Figure 6-6).

Create a hidden position by typing H in the Chart Level Field.
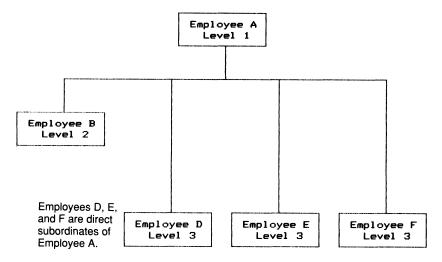
When you create a hidden position, the line from the hidden position's manager goes straight to the hidden position's subordinates. Org Plus does not draw a box for a hidden position. It does not print the Text Fields of a hidden position on a chart or a report.

You can set options for a hidden position.

Org Plus does not count hidden positions when counting positions in a branch. You cannot mark hidden positions. You cannot copy information to them. When you copy information, Org Plus copies the information to the hidden position's subordinates instead. Org Plus treats the subordinates of a hidden position as if they were subordinates of the hidden position's manager.

Caution: You cannot enter amounts for a hidden position. If you make an existing position a hidden position, Org Plus clears the Amount Fields. If you later change the position so it is no longer hidden, all amounts remain blank.

Without a Hidden Position

```
          ┌─────────────────┐
          │   Employee A    │
          │   Level 1       │
          └────────┬────────┘
    ┌──────────────┼──────────────┬──────────────┐
┌───┴─────────┐    │              │              │
│ Employee B  │    │              │              │
│ Level 2     │    │              │              │
└─────────────┘    │              │              │
              ┌────┴────────┐┌────┴────────┐┌────┴────────┐
              │ Employee D  ││ Employee E  ││ Employee F  │
              │ Level 3     ││ Level 3     ││ Level 3     │
              └─────────────┘└─────────────┘└─────────────┘
```

Employees D, E, and F are direct subordinates of Employee A.

With a Hidden Position

```
          ┌─────────────────┐
          │   Employee A    │
          │   Level 1       │
          └────────┬────────┘
         ┌─────────┤
┌────────┴────┐    │
│ Employee B  │    │
│ Level 2     │    │
└─────────────┘    │
    ┌──────────────┼──────────────┐
┌───┴─────────┐┌───┴─────────┐┌───┴─────────┐
│ Employee D  ││ Employee E  ││ Employee F  │
│ Level 3     ││ Level 3     ││ Level 3     │
└─────────────┘└─────────────┘└─────────────┘
```

Type an H in the Chart Level Field of a subordinate to Employee A. This creates a hidden position, Employee C. No text or box will print for the hidden position.

Employees D, E, and F direct subordinates of the hidden position, Employee C.

Figure 6-6

How To Make Your Chart Fit on One Page

It is not uncommon for a chart to be too large to fit on one page. Sometimes, a simple change makes the difference between a one-page chart and a two-page chart.

Org Plus decides where to put each piece of your chart based on chart styles, type size, and so on. Most charts get wider at the bottom. Org Plus allows room at the top so that all positions at the bottom fit.

Some charts simply cannot fit on one page. However, here are some tips for adjusting the size of your chart.

Making Your Chart Narrower

If your chart is too wide, there are ways to make your chart narrower. You can make it narrower whether you select Manual or Automatic when you print:

- Use first name initials instead of writing the full name.

- If you have one extremely long name, abbreviate it. Org Plus makes all boxes at a level large enough to hold the longest name and makes boxes at higher levels at least that wide. There are four dots at the bottom of each manager's box to help judge text length. The dots line up with the 10th, 15th, 20th, and 25th characters of the Text Fields.

- Put names and titles on two lines instead of one. This makes boxes (and your chart) narrower but taller.

- If you are printing amounts and they are the widest lines in your boxes, make the labels shorter or print without labels.

- Beware of placing a solitary position at the lowest level of your chart. The narrowest chart styles are available for the lowest two levels only. Do not use up one of the levels for a position you can move up a level or omit.

- If you are printing Alternate Text Fields 1-4 on the outside corners of the box, make sure one of those fields does not include lengthy text. Org Plus makes the boxes more than twice as wide as the longest corner text.

- Sometimes you can use a hidden position to move a long branch down a level. It then becomes the only position at that level with subordinates. As a result, Org Plus does not space the higher positions out as far (see Figure 6-7).
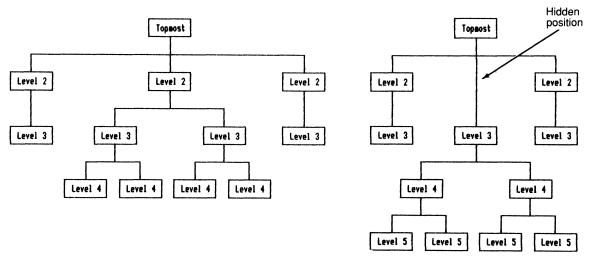
Figure 6-7

- Print your chart in pieces, one department or group at a time. This often makes your charts more legible as well. You can make an overview chart with department names or other information appropriate to your chart. (Often the overview information can be placed in the Alternate Text Fields and printed using the Alternate Text Field Print option.)

These tips help make your chart narrower when you select Manual to print:

- Select **Yes** for Use Small Type Font if it is available on your printer.

- Use a chart style that makes your chart narrower. Try stagger instead of horizontal style if you need to reduce width just a little. Try list, boxed list, or 1-column style if you need to squeeze a lot. Of course, this makes your chart taller.

- When printing the chart, select **Height, Width,** or **Both** for Squeeze Chart. This eliminates white space between boxes. Select **No** for Make Boxes Equal Width.

- A large work group at the bottom of your chart makes your chart very wide if left in a horizontal style. It can also cause the higher levels of the chart to spread far apart.

  You can solve this problem using options by putting the shorter work groups into a 1-column style, and the longer work group into a 2- or 4-column style. This makes all the groups similar in length, without making the chart much wider.

```
                    ┌──────────────────┐
                    │     Topmost      │
                    └──────────────────┘
                             │
              ┌──────────────┴──────────────┐
    ┌──────────────────┐          ┌──────────────────┐
    │     Level 2      │          │     Level 2      │
    │  3 Subordinates  │          │  6 Subordinates  │
    └──────────────────┘          └──────────────────┘
              │              ┌──────────┐ │ ┌──────────┐
           ┌──────────┐      │  Pos 1   ├─┼─┤  Pos 2   │
           │  Pos 1   │      └──────────┘ │ └──────────┘
           └──────────┘      ┌──────────┐ │ ┌──────────┐
           ┌──────────┐      │  Pos 3   ├─┼─┤  Pos 4   │
           │  Pos 2   │      └──────────┘ │ └──────────┘
           └──────────┘      ┌──────────┐ │ ┌──────────┐
           ┌──────────┐      │  Pos 5   ├─┴─┤  Pos 6   │
           │  Pos 3   │      └──────────┘   └──────────┘
           └──────────┘
```
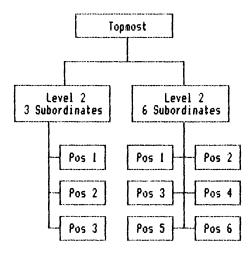
Figure 6-8

- You can use a columnar or list chart style at the bottom *two* levels of your chart.

  Selecting a chart style when you print affects only the bottom level of your chart. Use the Set Option command to set a chart style for work groups one level above the bottom. Then select a 1-column, list, or boxed list chart style for the subordinates when you print. (If you select any other columnar or horizontal chart style for the subordinates, Org Plus overrides your selection.) See "Options: Set Option" in this chapter for information about setting chart style options.

Figure 6-9 shows the effect of using the 2-column style instead of the Horizontal style at level 3. Figure 6-9 also shows the List style at Level 4.
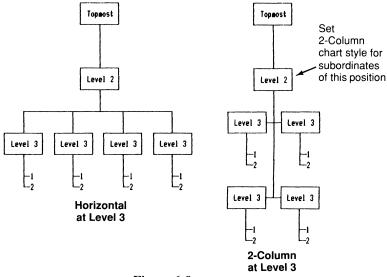
Figure 6-9

Making Your Chart Shorter

Here are some ways to make your chart shorter, whether you select Manual or Automatic when you print:

■ Use fewer lines of chart titles and annotations.

■ Make sure position names and titles are on one line instead of two. Don't print any lines of text or amounts that are not necessary. In particular, printing Alternate Text Fields 1-4 on the corners increases the height of every box by two lines.

■ Do not print Amount Fields that are not necessary for one or more levels of your chart. Turn them off for the entire level with the Suppress Amount Print option. (See "Options: Set Option" in this chapter.) Or use Special Print Control to turn them off for the lowest level or the topmost level. (See "Special Print Control" in "Chapter 8: Amounts.")

■ If you are using a plotter or a laser printer, print in portrait orientation.

- For a balanced chart, try to place the long branch in the center of the chart, with shorter branches on either side. When only one position at a level has subordinates, Org Plus prints those subordinates in the empty space beneath the short branches. However, if more than one position has subordinates, Org Plus spaces them horizontally to allow room for lower level positions.
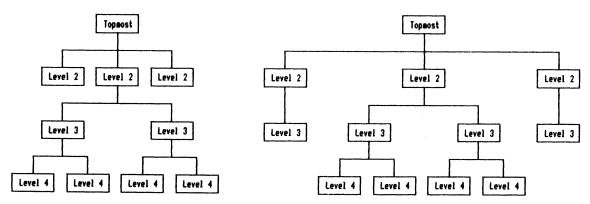
Figure 6-10

- Print your chart in pieces, one department or group at a time. This often makes your charts more legible as well. You can make an overview chart with department names or other information appropriate to your chart. (Often the overview information can be placed in the Alternate Text Fields and printed using the Alternate Text Field Print option.)

These tips help make your chart shorter when you select Manual to print:

- Select **Yes** for Use Narrow Line Spacing if it is available on your printer.

- Use flatter chart styles such as horizontal or 4-column. This makes your chart wider as well as shorter. Even better, use the list or boxed list chart styles. They are extremely compact.

- When printing, select **Height** or **Both** for Squeeze Chart. This eliminates some space between levels. Select **No** for Make Boxes Equal Height.

Trading Off Between Chart Width and Height

If you choose a chart style such as 1-column, one work group might be much taller than the others. Use Options to make that work group 2- or 4-column style. This makes your chart shorter, with a small increase in width.

On the other hand, you might choose 4-column style because most of your work groups are large. If one work group is smaller, use Options to make it a 1-column style. This makes your chart narrower without making it too much taller.

Special Chart Layout Situations

This section includes suggestions for meeting special chart layout and formatting needs. These are hints and techniques for getting the most from Org Plus.

Different chart styles for positions under one manager.

Occasionally, you may need to split the subordinates of one manager into several chart styles. For example, you may want a few people to have individual boxes, and the rest to be in a boxed list. Use a hidden position to accomplish this.

In Figure 6-11, the subordinates are to have different chart styles. Positions A, B, and C are to have individual boxes. Positions E, F, and G are to be in a boxed list. Positions A, B, and C are at chart level 2. To change the chart style of positions E, F, and G, first create a hidden position, D, at level 2. Make positions E, F, and G subordinates of the hidden position at chart level 3. To change positions E, F, and G to a boxed list chart style, make the hidden position the Current Position. Place the cursor anywhere in the Current Position Box. Set a boxed list chart style for the level 3 subordinates using the Set Options command.

For more information on hidden positions, see "Hidden Positions" in this chapter.
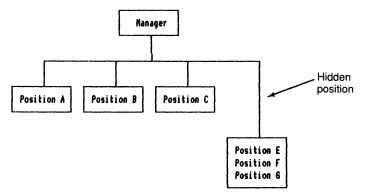
Figure 6-11

More than one level of subordinates under a columnar chart style.

There may be cases where you want more than one level of subordinates under a position in a columnar chart style. Use the Stacked Box List Print-Time Code to split subordinates into more than one boxed list. See "Print-Time Codes" in this chapter for more information.

Multiple Names Under a Single Title in One Box

To save space, you can list a group of positions with the same title in one box. You can do this with the boxed list chart style at the bottom of your chart.

With a boxed list chart style you can have boxes up to 100 lines tall. A boxed list prints the text in one field from each of the subordinate positions (usually this is the Name line in the Subordinates' Box).

You can enter the title for the group on the first line (or lines) of the Subordinates' Box. Then list the names of the individuals in the group. You can separate the title from the names by leaving a blank Name line. Or you can separate the title from the names with a line drawn across the box. Use the @ (Line in a Box Print-Time Code) to draw this line.

A second method is to put the shared title into a regular chart position. Then enter the names of the individuals as subordinates of the title position. This way the title will be in its own box above the boxed list containing the individual names.

In either case, once you have entered the information into the Subordinates' Box, move the cursor to the Current Position. Then use the Set Option command to set a boxed list chart style.
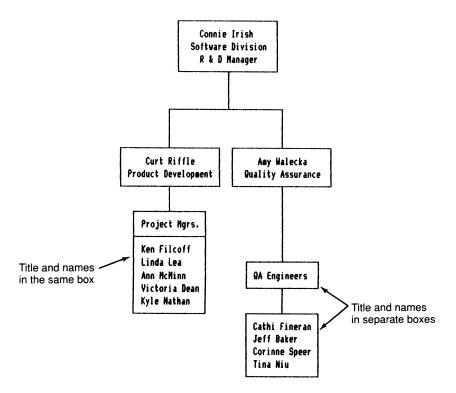
Figure 6-12. Multiple Names Under a Single Title

BIG Boxes

At the bottom of your chart you can have boxes up to 100 lines tall. Type the contents for these boxes in the Name lines (in the Subordinates' Box) below the manager for the box. Then select the boxed list style.

You can also specify a line type of None and use Set Option to change the box type to none. Then the big box will look like a large paragraph. These large boxes are ideal for job descriptions.

Another way to do this is to make a box the size you want in the Drawing Board. You can also type blocks of text anywhere on your drawing. See "Chapter 9: Custom Drawing" for more information.

Two or More Topmost Managers

Org Plus allows only one topmost manager in a chart. Of course, you can always put more than one name in the topmost box and separate the names with a line. Or, try this:

1. Put your chart title (or no information at all) in the position at Chart Level 1.

2. Enter the topmost managers as subordinates of the position at Chart Level 1. Type N in their Line Type Fields.

3. Move the cursor to the position at Chart Level 1. Use Set Option to select a box style of None for the position at Chart Level 1.

4. Draw auxiliary lines between the topmost managers.

See the examples under "Options: Draw Auxiliary Lines" in this chapter.

Two or More Managers for One Department

You can use auxiliary lines to create a department with more than one manager.

1. Enter all the department managers as subordinates of one manager (the department managers' manager). Make sure they are next to one another at their level. Set the Line Type of the manager closest to the center in the group to S. Set the Line Type of the others to N.

2. Enter department employees as subordinates of the manager closest to the center (the one connected to his or her manager with a solid line).

3. Draw auxiliary lines to connect the other department managers to the center manager. See "Options: Draw Auxiliary Lines" in this chapter.

Advisory-Level Positions

If you need to place a position off to the side but at the same level as another position, you can accomplish it with the following steps.

1. Put your chart title (or no information at all) in the position at Chart Level 1.

2. Use Set Option to select a box style of None for the position at Chart Level 1.

3. Enter both the topmost manager and the advisory position as subordinates of the position at chart level 1. Type N for both Line Type Fields.

4. Draw an auxiliary line between the manager and the advisory position.

If the advisory position is not at the topmost level of the chart, skip steps 1 and 2 above. At step 3, enter both positions as subordinates of one manager. Only the advisory position should have Line Type N. Then draw the auxiliary line as above. See "Options: Draw Auxiliary Lines" in this chapter for more information.

Abbreviating Text Fields

You can print two versions of a chart—overview and detail. To make an overview version, use the Alternate Text Fields to hold the shorter, overview text. Then print the Alternate Text Fields instead of the Text Fields.

Another trick to making a good overview chart is to place the most important information in the Alternate Text Fields, rather than abbreviated versions of what is in the Text Fields. For example, if the name is the most important information to appear on your chart, you might want to put the first name in the first Alternate Text Field and the last name in the second and so on. Then print the Alternate Text Fields instead of the Text Fields.

More Advanced Features

The Chart commands provide an overview of your chart. View Chart Status allows you to see a summary of information about your chart.

The File commands allow you to combine charts, save parts of charts, and exchange data with certain other software packages. You can also name the chart and report specifications for your chart and use them in other charts.

Chart:
View Chart Status
Alt - F1

View Chart Status gives you some important information about your chart.

To see this information:

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Chart: View Chart Status**. Org Plus displays information about your chart.

   Item 1 shows the Org Plus version and revision date. The Mode of Calculation indicator shows you whether Org Plus is set to calculate amounts Automatically (A) or Manually (M).

   Item 2 shows which options you have set and how many auxiliary lines there are in your chart. A "Yes" means you set the option at least once in your chart. If you set a chart style option for the current work group, an asterisk appears next to the that option.

Item 3 displays the number of levels in your chart (Lowest level in chart). Levels to bottom of branch shows how many levels there are from the Current Position to the bottom of its branch.

Item 4 displays the number of positions in your chart (Total) and the number of positions you can add (Remaining available). The sum of the numbers is the maximum number of positions you can have in a chart. This value depends on available memory, up to a maximum of 600 positions. On the right, Org Plus displays how many positions are hidden, removed, and marked.

Item 5 shows information about some of the selections you made in Printer/Setup. It displays the printer type, and the paper width (W) and length (L) as they are currently set. A "C" appears if you have continuous set to Yes. An "S" appears if you have selected Yes for Auto Cut-Sheet Feeder.

Item 6 shows how much memory (RAM) was available for the Org Plus program when you loaded it (Available). The Total memory shows how much memory your computer has.

3. Press any key to return to the Work Group Display.

You must use the Options or Printer/Setup command to change the information on the Chart Status Display. Use the Options commands to clear or set options or auxiliary lines. Change your printer settings with the Printer/Setup command (on the Main Menu).

File:
Append Chart Alt - 3

Org Plus lets you attach a chart stored on your disk to the chart you are working on. This combines the two charts into one.

To append a chart:

1. Find the work group where you want the topmost manager of the chart you are appending to appear. Place the cursor in the Subordinates' Box on the line where you want the manager to appear.

2. Press F9. Org Plus displays the Command Menu.

3. Select **File: Append Chart**. Org Plus asks you to identify the name of the chart you want to append.

4. Move the cursor to highlight the name of the chart, and press Enter ⏎. Org Plus appends a copy of the chart to the chart you are working on. (The chart you append also remains, unchanged, as a file on the disk.)

File:
Save Branch Alt - 4

Save Branch creates a new file that contains a part of the chart you are working on. You can then work on the branch you save as a separate chart. Or you can append it to another chart.

To save a branch as a new chart:

1. Find the position you want to be at the top of the new chart. Make that position the Current Position. Place the cursor anywhere in the Current Position Box.

   The file you create will contain every work group below and reporting through this position.

2. Press F9. Org Plus displays the Command Menu.

3. Select **File: Save Branch**. Org Plus asks you to name the new chart.

4. Give your chart a name.

5. Press Enter ⏎. Org Plus saves the branch as a file.

Note 1: Using Save Branch from the position of the topmost manager is the same as selecting Save Chart (on the Main Menu).

Note 2: You can use the Save Branch command together with the Append Chart command to copy a branch to another part of the same chart.

File:
Exchange Data Alt - 5

The Exchange Data Command lets you move information between other programs, such as dBase® or Lotus 1-2-3®, and Org Plus. You move only the contents of positions when you export or import.

Org Plus imports and exports data as comma-delimited ASCII. Each record contains the Text, Alternate Text, Amount Fields, and Consolidated Amount Fields for a single position in the chart, ended by a carriage return/linefeed. Each field is separated with a comma and Text Fields are in quotes. For each position, Org Plus exports and imports all the fields in order.

Exporting Data from Org Plus

You can export the data from all positions in your chart, or you can export marked positions only.

To export the data from your chart:

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **File: Exchange Data**.

3. Select **Export All** if you want to export the information for your entire chart.

   Select **Export Marked** if you want to export information from marked positions only.

   Org Plus asks if you want to include field labels as the first line of the exported data.

4. Select **Yes** to write the Text and Amount Field labels as the first line of exported data. (This is particularly useful if you plan to import your chart data into a spreadsheet.)

   Org Plus asks you to specify a name for the file to contain the exported data.

5. Give the file a name.

6. Press Enter ⏎. Org Plus writes the data, record by record, into this file.

Org Plus encloses each Text Field in quotes. Blank Text Fields appear as two quote marks with nothing in between.

Org Plus exports Amount Fields in scientific notation. Zeros appear in blank Amount Fields. For example, suppose a position contains the following information:

Name—J. Doe, Title—Boss, Amount Field A—$3000. All other Text, Alternate Text and Amount Fields (except for Consolidated Amount A) are blank.

Caution: Org Plus exports as zero any Amount Field that displays ERR.
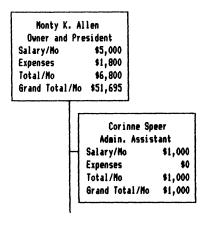
Org Plus can export numbers that are very large or close to zero. Programs such as dBase III® or Lotus 1-2-3 cannot import these numbers correctly. If you import numbers that are very large or close to zero, verify that they are imported correctly.

Org Plus can export a record over 500 characters in length if all fields in a position are full. Some other programs may not accept records of this length.

To read exported data into a dBase database, use the APPEND FROM command, with file type DELIMITED (see the dBase documentation for further information).

To export data for use in Lotus 1-2-3, use a file name with an extension of ".PRN." Use the /FILE IMPORT NUMBERS command to read the data into your spreadsheet. Because Lotus has its own international character set definition, international characters may not be imported correctly.

Sample chart with Amounts

```
          Monty K. Allen
       Owner and President
    Salary/Mo         $5,000
    Expenses          $1,800
    Total/Mo          $6,800
    Grand Total/Mo   $51,695
```

```
             Corinne Speer
            Admin. Assistant
          Salary/Mo         $1,000
          Expenses              $0
          Total/Mo          $1,000
          Grand Total/Mo    $1,000
```

Corresponding export records

"Monty K. Allen","Owner and President","","","","","","","","","","","",.5E4,.18E4,.68E4,0,0,0,.49895E5,.18E4,.51695E5,0,0,0
"Corinne Speer","Admin. Assistant","","","","","","","","","","","",.1E4,0,.1E4,0,0,0,.1E4,0,.1E4,0,0,0

Figure 6-13. Export Data

Importing Data into Org Plus

To import data from another program, you must first structure a chart for the data. Org Plus then puts the data in this chart.

Org Plus uses the first Text Field (usually this is the Name Field) to determine where to put each incoming record. When you create your chart, you must put a name, or other information that uniquely identifies the position, into the first Text Field. You can import the data for all the other fields.

To import data into an Org Plus chart:

1. Create a chart with a position for each record you want to import.

2. Put a unique name (or other text item) in the first Text Field (this is usually the Name Field) of each position.

Once you structure your chart:

3. Press F9. Org Plus displays the Command Menu.

4. Select **File: Exchange Data**.

5. Select **Import**.

   Org Plus asks you to specify the name of the file that contains the data to import.

6. Provide the file name.

7. Press Enter ↵. Org Plus reads the data, record by record, from this file. It matches each record with a position, based on the contents of the first Text Field.

The first item in each line (record) of the imported file must be a text string (in quotes). It must match exactly the contents of a Name Field in your chart. When Org Plus finds a match, it puts all the data from the record into the fields for that position.

If the first item in the incoming record does not match any position in the chart, Org Plus ignores the whole record. It also ignores any extra data in an incoming record.

There cannot be duplicate information in the first Text Fields in either the chart or the incoming data. Org Plus overwrites each duplicate record from the imported file into the first matching position it finds in the chart.

Org Plus imports fields in order. The first character string goes into Text Field 1, the second into Text Field 2. The first number goes into Amount Field A, and so on.

Each Text Field in an imported record can be up to 80 characters in length. However, Org Plus uses only the first 25 characters for Text Fields and 15 characters for Alternate Text Fields. Text Fields cannot include embedded quotation marks.

You can import twelve text strings and up to six numeric fields. You cannot import data into Consolidated Amount Fields or into an Amount Field containing a formula.

Once Org Plus imports the data, you can edit the chart, add formulas and Amount Field labels, and so on.

The text in Text Field 1 does not have to be a name. You can use any sort of identifying code you want in the field, as long as it uniquely identifies the position. (However, codes might make your chart harder to work with.)

Text and numerical data can be mixed in the imported file (i.e. Text Field 1, Amount Field A, Text Field 2, etc.). Org Plus still stores them, in order, in their respective fields. You can skip a field when you import data. For example, you can import Text Field 1 and Text Field 3 but not Text Field 2. Use " " in place of the field you want to skip. Skip numerical fields with a comma (321,,45).

To import data from dBase III into an Org Plus chart, use the COPY TO command with file type DELIMITED. Use the FIELDS specification in the COPY command to select the data items that should be imported into your Org Plus chart, with the key field first.

Data cannot be exported directly from Lotus 1-2-3 in comma delimited ASCII. However, you can use the /PRINT FILE command to print your spreadsheet data to a file and then edit it into comma-delimited form.

File:
Name Chart/Report Spec
Alt - 8

The chart and report specifications include settings, labels, and titles you make for the overall chart, not individual positions.

You can name as many sets of chart/report specifications as you want.

Use Name/Chart Report Specs to:

- Name a custom set of defaults (for example, your company name as the chart title) to use with each chart you start.

- Name and use several chart/report specifications for a single chart to print it in different formats. Or print different reports without having to manually change any of the settings.

The specifications include:

- the print settings you made with the Print command, the Amount Print Control command, and Special Amount Print Control command

- the settings you selected with the Special Print Control/Format command

- the fields you selected to include in tables and reports with the Table Setup command

- the titles and annotations you wrote with the Titles & Annotations command

- headers and titles you created for reports and tables with the Headers & Titles command

- formulas you entered with the Formula Setup command

- Amount Field formats set with the Number Format command

- Text and Amount Field labels

- Find & Mark command retrieve spec

The chart and report specifications *do not* include:

- text in Text or Alternate Text Fields
- amounts in Amount Fields
- marks you made with the Find & Mark and Assign Mark commands
- options you selected with the Set Options command
- auxiliary lines

To name the chart and report specifications for your chart:

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **File: Name Chart/Report Spec**.

3. If you want to save the specifications on a different drive (or path), press Tab. Type the correct drive (or path). Then press Enter.

4. Give your specifications a name.

   End the name with ".HDR" so you always know that the file contains chart and report specifications. Org Plus adds this extension to the name if you do not.

5. Press Enter. Org Plus saves the specifications.

6. Press any key to continue.

Note: When you copy a chart to another drive (or path), copy the specifications file, too. The specifications file has the extension ".HDR."

File:
Use Chart/Report Spec
Alt - 9

You can use chart and report specifications you named with the Name Chart/Report Spec command each time you work on your chart.

To use the chart and report specifications:

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **File: Use Chart/Report Spec**.

3. If the specifications are on a different drive (or path), press Tab ⇤. Type the correct drive (or path). Then press Enter ↵.

4. Select the name of the specifications file.

5. Press Enter ↵. The specifications are ready to use.

6. Press any key to continue.

7 Tables and Reports

Org Plus lets you create simple tables or reports from information in your chart. You can use this feature to create phone lists, salary reports, or employee listings.

```
                    Allen Manufacturing
                    Telephone Directory
                    September 15, 1988


         Name                   Title              Phone


    Allen, Monty K...Owner and President..444-2700 x205
    Ash, H..........Shift 1..............555-2600 x646

    Banks, Tom......Western..............444-2800 x307
    Burns, Elaine....Admin. Assistant.....444-2700 x672

    Cole, R.........Shift 3..............555-2600 x331
    Cox, Steve......Engineer.............444-2700 x706

    Dash, A.........Shift 1..............333-2500 x503

    Hess, R.........Shift 2..............555-2600 x381
    Hoke, P.........Shift 1..............555-2600 x532

                                         333-2500 x63
```

Figure 7-1

This chapter covers:

- setting up tables and reports
- sorting by last names
- viewing tables and reports on the screen
- adding titles and headers to tables and reports
- printing tables and reports

The chart SAMPLE1.ORG on "Diskette 1—Chart" (or "Diskette A— Chart & Draw") has the information for the phone list in Figure 7-1. If you would like to follow along using this as an example, retrieve SAMPLE1.ORG using the Retrieve Chart command from the Main Menu (see "Chapter 3: Building a Chart").

Note: You cannot use the Drawing Board to create, view, or modify tables or reports.

Tables/Reports:
Table Setup ⇧Shift - F1

A table or report can have up to three columns. Table Setup lets you select which field Org Plus should use for each column. You can select from any of the Text, Alternate Text, Amount, or Consolidated Amount Fields.

Table Setup also determines how Org Plus sorts positions when you use Sort Subordinates. It also determines the order of positions when you use the Find & Mark and Review Marked commands.

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Tables/Reports: Table Setup.**

3. For each column, move the cursor to select a field. Choose from any one of the following:

   Text Fields (numbered 1 through 6)
   Alternate Text Fields (also 1-6)
   Amount Fields (A-F)
   Consolidated Amount Fields (A-F)

   If you select **None** instead of a field, the column does not print. If you select **Lvl,** the column contains the chart level number for each position.

4. Select how Org Plus should order the information in each column—in ascending or descending order. Ascending order is alphabetical from A to Z, or numerical from 0 to 9. Descending order is the reverse.

5. Select which column to sort first (the Primary Sort). Then select which column to sort next (the Secondary Sort).

   Org Plus uses the values in the primary sort column to order your list. If there are identical entries (ties) in your Primary Sort column, Org Plus sorts them according to the Secondary Sort column.

6. Select **Yes** if you want to sort last name first (see below for more information on this choice).

7. Press [Alt] - [F10] when you finish.

You can use the Table Setup command to display the Table Setup form for the chart SAMPLE1.ORG. Org Plus includes names (Text Field 1), titles (from Text Field 2), and telephone numbers (from Alternate Text Field 5) in this phone list. On each line in the report, the name appears in the first (left-most) column. The title is in the center, and the telephone number is on the right. Org Plus sorts the list alphabetically by name, last name first, in ascending order. When there are identical names, Org Plus alphabetizes them by title.

Sorting Last Name First

You can sort by last names even if you entered first names first. Select **Yes** for Sort Last Name First in the Table Setup form.

Sort last name first works only on names in the first Text Field.

The names must be punctuated correctly. Those names you enter last name first must have a comma following the last name (before the first name). You must also include a comma before an abbreviation, such as Jr., Sr., MD, or PhD, that follows a name.

Note: DO NOT select Yes for Sort Last Name First if you do not have proper names in the first Text Field.

Tables/Reports: View Table Alt - F5

This command displays on screen the three fields you chose with the Table Setup command. You can use this command to see the information included in your printed report. You can also use it to find a position in your chart, as discussed in "Chapter 3: Building a Chart."

If you do not change the Table Setup, Org Plus displays the first three Text Fields—Name, Title, and the first Comment field. The appropriate field name heads each column on the screen.

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Tables/Reports: View Table** to display the current table.

    You can scroll through the list using the ↑ ↓ and PgUp PgDn keys.

3. Press Esc to return to the Work Group Display. Or, select the name of the position you want to display and press Enter ↵. That position becomes the Current Position.

If you use View Table to look at the sample chart SAMPLE1.ORG, you see names, titles, and telephone numbers. This is the information contained in the first two Text Fields and Alternate Text Field 5. Org Plus sorted the list in alphabetical order, by last name.

Note: If you typed Print-Time Codes in any field displayed in the table, they appear in the table. The exception is the Append Alt Field Print-Time Code. If you typed this code in the first Text Field and sorted last name first, the code does not appear. ("Chapter 6: Advanced Chart-Making" discusses Print-Time Codes.)

Note: If you typed Print-Time Codes in any field displayed in the table, they appear in the table. The exception is the Append Alt Field Print-Time Code. If you typed this code in the first Text Field and sorted last name first, the code does not appear. ("Chapter 6: Advanced Chart-Making" discusses Print-Time Codes.)

Tables/Reports:
Header & Titles
⟨⇧Shift⟩ - ⟨F4⟩

You can print your table as a report. Use the Header & Titles command to add a report title, a page header, and column titles to the report.

1. From the Work Group Display, press ⟨F9⟩. Org Plus displays the Command Menu.

2. Select **Tables/Reports: Header & Titles.** Org Plus displays the Report Header and Titles form.

3. Type up to three lines as report titles. These will print on the first page of the report.

   Type a title for each column. Column titles print at the top of the column on each page of the report. You can also type a page header. Headers print at the top of each page of the report. The header will not print on the first page of the report if you have entered a title for the first page. By specifying the header location you control where the heading prints—at the left, center, or right side of the page.

4. Press ⟨Alt⟩ - ⟨F10⟩ when you finish.

% (Date Print-Time Code)

You can have Org Plus automatically print the date in a report title or header. To print the date, type % as the first character in the field where you want the date. Then type a number from 1 through 6 following the % . This number tells Org Plus what format to use when printing the date. The formats are:

1 — March 19, 1968	**4** — 19/3/68
2 — 19 March 1968	**5** — 3-19-68
3 — 3/19/68	**6** — 19-3-68

For example, type %3 and Org Plus automatically prints the date in the format 3/19/68 in the report title or header.

Tables/Reports:
Print Report ⇧Shift - F2

To print your report, use the Print Report command.

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Tables/Reports: Print Report.** Org Plus displays the Report Format Form.

3. Specify how to format the information in your report as follows:

   Draw Box Around Page
   Select **Yes** to enclose your report in a box. If there is not enough room on the page, Org Plus only prints lines at the top and bottom of the page. This may happen if you are printing at 10 cpi on an 80 column printer.

   Fill Lines with Dots...
   Select **Yes** to fill the spaces between columns with dots. Org Plus prints dots in all the spaces up to the beginning of the last column. If the last column contains Amounts or Consolidated Amounts, the dots may not fill all the space up to the number.

   Skip Line on Letter Change
   Select **Yes** to skip a line each time the first letter of the first column changes. For example, Org Plus prints a blank line between the end of the "A" names and the start of the "B" names. Org Plus ignores this setting if you select subtotals or subaverages. It also ignores this setting if the first column is not a Text Field.

   Double Space
   Select **Yes** to Double Space, and Org Plus prints the entire report double spaced.

Use Small Type Font
Select **Yes** to use the small type font, if one is available on your printer. The small font makes your report narrower. Some printers do not offer a small font. In this case, Org Plus ignores this setting.

Use Narrow Line Spacing
Select **Yes** and Org Plus prints less space between lines (usually, 8 lines per inch rather than 6 lines per inch). This makes the report shorter. This option is not available on some printers, however. Org Plus ignores the setting if that is the case.

4. When you finish, press [Alt] - [F10]. Org Plus displays the Report Print Control form.

5. Select what Org Plus should print in your report as follows:

Positions To Print
Select **All** to print all Positions. Select **Marked** to print only those positions you have marked. This lets you include in your report only those positions you marked with the Find & Mark or Assign Mark commands. Select **UnMarked** to print only *unmarked* positions. See "Chapter 5: Editing Your Chart" for information on marking positions.

Print Page Numbers
Org Plus prints a page number on each page of your report if you select **Yes** for Print Page Numbers.

Print Totals and **Print Averages**
Select **Sub** to print subtotals (or subaverages). Select **Grand** to print grand totals (or averages). Select **Both** to print both of them. These apply to the right-most two numeric columns (containing an Amount or a Consolidated Amount). If all three columns are numeric, the left-most one will not include totals or averages.

If you select subtotals (or subaverages), Org Plus calculates them at the break points based on your sorting sequence. Your primary sort column must be non-numeric (Text or Level) to use subtotals or subaverages. For example, if you use Level as your primary sort field, you get a subtotal between each change of level.

Org Plus ignores Print Totals and Print Averages settings if you do not select Amount or Consolidated Amount Fields as columns. "Chapter 8: Amounts" discusses Amounts and their functions.

Note: An amount excluded from calculation (with the Exclude from Amounts option) prints as zero in your report. An amount excluded from printing (with the Suppress Amount Print option) prints as a blank. You can find a discussion of these commands under "Options: Set Option" in "Chapter 6: Advanced Chart-Making."

Print Counts
Finally, you can ask Org Plus to print counts for your report. This will print subtotal and/or grand total counts of the lines in your report. You can print counts if your columns contain text or amounts. The Do Not Count options set in your chart do not affect the report count.

Print to Disk File
If you select **Yes**, Org Plus writes the report to a disk file.

Number of Copies to Print
You can ask Org Plus to print up to 5 copies of your report.

If you want to keep the settings you've just made, without printing the report, select **0** copies.

6. Press Alt - F10. Org Plus prints your report.

   If you are printing the report to a disk file, Org Plus asks you more questions. See "Printing a Report to Disk" later in this chapter.

When Org Plus prints a report, it makes the left margin one inch wider than the right margin, if possible. This makes the pages more readable when they are bound at the left edge.

If you print your report on a graphics printer, it will print in Portrait orientation regardless of what you select in Printer/Setup.

If you use Print-Time Codes in your chart, they affect your report as follows:

@ and) (Line in a Box and Stacked Boxed Lists)
If you use one of these in the first Text Field (Name field), Org Plus does not include the *position* in the report. This is the case even if you do not use the Name field in the report.

] and ^ (Suppress Field and Blank Line)
The field prints as a blank.

> and [(Staff Subordinates and Append Alt Field)
Org Plus blanks these characters, but the remaining text prints.

 # (Count)
Org Plus displays the appropriate count.

See "Chapter 6: Advanced Chart-Making" for a discussion of Print-Time Codes.

Printing a Report to Disk

You can print your report to a disk file. You might do this to copy the report into your favorite word processing program.

To print your report to a disk file:

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Tables/Reports: Print Report.**

3. Make Selections on the Report Format form.

4. Press [Alt] - [F10] when you finish.

5. Make selections on the Report Print Control form, selecting **Yes** for Print to Disk File.

6. Press [Alt] - [F10] when you finish.

7. Select a format for the disk file.

   Select **Printer** if you plan to print the file to a printer using the DOS COPY command. The resulting file includes printer control sequences based on your choice of printer in Printer/Setup.

   Select **ASCII** or **ASCII with Graphics** to create an ASCII file. Word processing software and other software programs will read ASCII files. The ASCII setting creates a straight ASCII image of the report. ASCII with Graphics uses line drawing characters for the box around the report. (If you do not select **Yes** for Draw Box Around Page, the ASCII and ASCII with Graphics settings produce the same results.)

8. Press [Alt] - [F10] when you finish.

9. If you want to store your file on a drive (or path) different from the one displayed, press Tab [⇆]. Type the correct drive (or path) and press Enter [↵].

10. Select or type a file name and press Enter [↵]. Org Plus formats the report and writes it to the file you specified.

8 Amounts

Org Plus lets you work with numbers as well as text. Because Org Plus knows the structural relationships between positions, you can do calculations that are difficult or impossible in a spreadsheet.

Org Plus totals budgets, revenues, project hours, or any quantity you choose, position by position, up the branches of your chart. You enrich your understanding by visually comparing results between positions, departments, and divisions. Rearrange your chart to forecast changes and Org Plus immediately recalculates the totals. A wide variety of counting and statistical functions are available.

The Amounts features of Org Plus act much like a "mini-spreadsheet" at each position of your chart. You can enter numeric data directly for each position, or set up formulas that apply to all positions.

This chapter covers:

Basic Amounts Features
- entering and modifying amounts
- labeling amounts
- specifying number formats
- printing amounts

Advanced Amounts Features
- consolidating amounts up the organization
- using formulas and functions

Figure 8-1 highlights many of the Amount features found
in Org Plus. In this example, Org Plus maintains salary
information at each position in the chart and then averages it
for the entire work group. It maintains budget information and
then consolidates it at each level of the organization. Flexible
printing options allow the meaningful information for each
level and position to be printed. You will refer to this example
often throughout the first part of this chapter.

Note: The numeric capabilities of Org Plus allow extremely
complex calculations. Foolproof guidelines are impossible and
there is always the remote possibility of hardware or software
error. Therefore, it is imperative that you verify your results to
avoid incorrect conclusions.

```
              ┌─────────────────────────────────┐
              │        Connie White             │
              ├─────────────────────────────────┤
              │ Salary          $20,000         │
              │ Average Salary  $16,333         │
              │ Budget          $40,000         │
              │ Total Budget    $170,000        │
              └─────────────────────────────────┘
                            ┌──────────────────────────────────┐
                            │        Katie Baldwin             │
                            ├──────────────────────────────────┤
                            │ Salary          $13,000          │
                            │ Budget          $10,000          │
                            └──────────────────────────────────┘

              ┌─────────────────────────────────┐
              │        Jeff Jones               │
              ├─────────────────────────────────┤
              │ Salary          $18,000         │
              │ Average Salary  $16,250         │
              │ Budget          $50,000         │
              │ Total Budget    $120,000        │
              └─────────────────────────────────┘

┌──────────────────┐   ┌──────────────────────┐   ┌──────────────────────┐
│  Amber Hess      │   │  Phyllis Howard      │   │    Amy Scott         │
│  United Way      │   ├──────────────────────┤   ├──────────────────────┤
│                  │   │ Salary    $16,000    │   │ Salary    $15,000    │
│                  │   │ Budget    $40,000    │   │ Budget    $30,000    │
└──────────────────┘   └──────────────────────┘   └──────────────────────┘
```
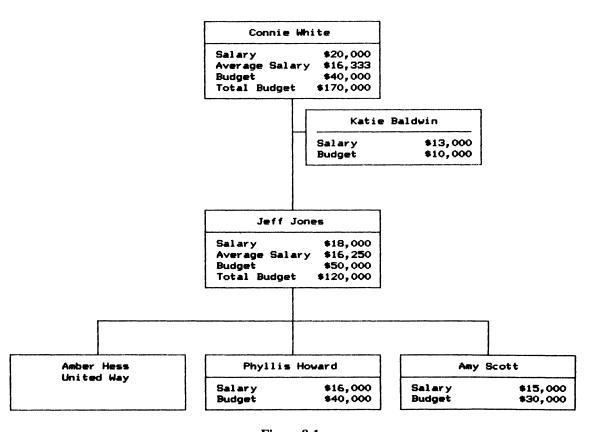
Figure 8-1

Amounts:
Display Amounts
Ctrl - F1

Display Amounts expands the Current Position Box to show the Amount and Consolidated Amount Fields. You can then enter and edit values in the Amount Fields.

```
┌──────────────────────────────────────────────────────────────┐
│ Name       Connie White_____    Alt  _____     │
│ Title      a_____       _____     │
│ Comment      _____            _____     │
│ Comment      _____            _____     │
│ Comment      _____            _____     │
│ Comment      _____            _____     │
│ Chart Level    1  ·    ·     ·    ·                            │
│─────────────────────────────────────────────────────          │
│                    Amount            Consolidated              │
│  ┌──────┐                               Amount             ┌── │
│  │ Name │                                                  │ S │
│  │      │   Salary    $20,000_____    $16,333 Avg    │ S │
│  │      │   Budget       _____$40,000   $170,000 Sum   │ S │
│  └──────┘   C              _____0.00                  └── │
│             D              _____0.00                      │
│             E              _____0.00                      │
│             F              _____0.00                      │
│                                                               │
│                   Press ESC to continue.                      │
│                                            ┌──────────────────┐│
│                                            │ F9  ·  Command Menu│
│ Work Group · 8-1.ORG                       │ Esc ·  Main Menu  │
└────────────────────────────────────────────┴──────────────────┘
```
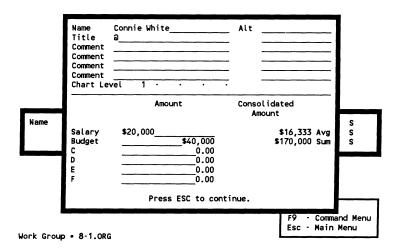
Figure 8-2. Work Group Display with Amounts

The Amounts are on the left. Org Plus labels them A-F. However, you can customize the labels with the Labels command, as shown in the first two Fields in Figure 8-2. The Consolidated Amounts Fields are on the right. Each is associated with an Amount Field. Usually, the consolidated amount is the sum of the values in the associated Amount Field for the position and all its subordinates. You cannot enter data in a consolidated field—Org Plus calculates it automatically.

An Amount Field can contain either a value or a formula. For a value, enter the number directly in the Amount Field. For a formula, use the Formula Setup command discussed later in this chapter.

To enter an amount:

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Amounts: Display Amounts**. Org Plus displays the Amount Fields for the Current Position.

3. Enter your numbers in the appropriate Amount Fields. You may enter numbers in regular form or in scientific notation (for example, 2.6E-5).

   You can move around your chart while displaying amounts.

4. Press $\boxed{\text{Esc}}$ to return to the Work Group Display with Text Fields only.

When you enter an amount in a field you can copy that amount to other positions in the chart. See "Edit Chart: Copy Information" in "Chapter 5: Editing Your Chart" for more information.

When you enter amounts in Org Plus:

■ If you enter an invalid character in an Amount Field, Org Plus ignores everything following the invalid character. For example, if you enter t or t5, Org Plus changes it to 0. If you enter 5t Org Plus changes it to 5.

■ If you enter a number that is too small to display in an Amount Field (more than 9 decimals), Org Plus displays 0 or -0. For example, if you enter 0.0000000001, Org Plus displays a 0 in that Amount Field. The original number is stored internally and will be used in any calculations. (The number of decimals is preset to 2. You can change the number of decimals to 9 with the Number Format command.)

■ If you enter a number that is too large to display in an Amount Field (more than 20 digits), Org Plus displays asterisks (****). For example, if you enter 1E25, Org Plus displays asterisks in that Amount Field. The original number is stored internally and will be used in any calculations.

■ Precision in Org Plus is 15 digits. Therefore if you enter the number 12345678901234567890 in an Amount Field, Org Plus rounds the number and displays 12345678901234570000.

Amounts:
Labels Ctrl - F4

Using the Labels command, you can replace the letter labels (A-F) of the six Amount Fields with a descriptive name. (In Figure 8-1, "Budget" replaced Amount Field label B.) Org Plus also uses the name if you print labels on your chart (see "Amounts: Print Control"). You can also change the Consolidated Amount prefix label with this command. (The Consolidated Amount prefix label is preset to "Total" because the consolidation type is preset to Sum for all Consolidated Amount Fields.)

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Amounts: Labels**.

3. For any of the Amount Field Labels (A-F), type over the existing labels. For any of the Consolidated Amount Field prefix labels, the default is "Total." To change it, type over it. To make it blank, just delete it. See "Amounts: Print Control" in this chapter for more information.

4. Press Alt - F10 when you finish.

Amounts:
Number Format
Ctrl - F5

For each Amount Field, you can specify if it is a money field, and how many decimal places to display. Org Plus uses this number format for displaying and printing the amount on a chart.

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Amounts: Number Format**.

3. Select **Yes** and Org Plus inserts commas in numbers greater than 999. Select **No** if you do not want Org Plus to insert commas.

4. For each of the Amount Fields A-F, make selections as follows:

Money Field
Select **Yes** to display and print the amount with a money symbol (preset to a dollar sign). To change the money symbol for different currencies, refer to "Printer/Setup" in "Chapter 2: Getting Started."

Dec. Places
Specify 0 to 9 decimal places to the right of the decimal point. Org Plus displays numbers that are too small as 0 and numbers too large as asterisks.

5. Press [Alt] - [F10] when you finish.

Amounts: Adjust Amount
[Ctrl] - [F6]

The Adjust Amounts command allows you to apply an adjustment amount or factor to all the amounts in a field within a specified range. For example, you can give a ten percent salary increase to all subordinates.

1. Find the position for which you want to adjust the amount. Make it the Current Position.

   Make the manager the Current Position to adjust an amount for all members of a work group. Make the position at the top of the branch the Current Position to adjust an amount for a branch. To adjust an amount for siblings, a level, or all marked positions, make any member the Current Position.

2. Press [F9]. Org Plus displays the Command Menu.

3. Select **Amounts: Display Amounts.** Org Plus displays the Amount Fields.

4. Place the cursor on the field you want to adjust.

5. Press [F9]. Org Plus displays the Command Menu.

6. Select **Amounts: Adjust Amount.**

7. Select an adjustment operation: **Add**, **Subtract**, **Multiply** or **Divide**. This tells Org Plus what you want to do to the amount—add to it, subtract from it, multiply it, or divide it.

8. Enter the amount of the adjustment. This can be a constant amount, or a multiplication or division factor.

9. Press Alt - F10 to continue.

10. Select the range to which the adjustment applies. (See "Selecting Ranges" in "Chapter 5: Editing Your Chart.") Press Alt - F10.

Printing Amounts

Org Plus offers flexibility for printing amounts in your chart. This is important because sometimes an amount is meaningful and its consolidated amount is not (or vice versa). Sometimes an amount is meaningful but not at all chart positions.

- The Print Control command lets you choose which amounts to print.

- The Special Print Control command lets you suppress printing Amount Fields at the bottom level or topmost position of your chart.

- The Set Option command lets you suppress printing of all amounts for an individual or range of positions.

Amounts: Print Control Ctrl - F2

Use the Print Control command to specify which Amount Fields (if any) should appear in your printed chart. You can choose whether or not to print each of the Amount and Consolidated Amount Fields A through F.

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Amounts: Print Control**. Org Plus displays the Amount Print Control form.

3. Make selections as follows:

Print
For each Amount Field, select **No** if you do not want to print the Amount or Consolidated Amount. Select **Amount** if you want just the Amount printed. Select **ConAmnt** if you want to print the Consolidated Amount only. Select **Both** to print both amounts, with Amount on one line and Consolidated Amount on the next.

Print Field Labels
Select **Yes** to print labels with each field you print. Select **No** and no field labels print. Field labels do not print in reports.

Right Justify
Select **Yes** to right justify numbers on the printed chart. Org Plus left justifies the Amount Field labels and right justifies the amounts. This selection overrides the choice for Justify Text in the Print command for Amount Fields only.

4. Press Alt - F10 when you finish.

Amounts:
Special Print Control
Alt - 7

Use this command to suppress the printing of Amount Fields at the lowest level (including Staff-Level positions at any level) or topmost position. This feature is useful when amounts are meaningless at the top or bottom of the chart. (In Figure 8-1, the Consolidated Amount Fields, Total Budget and Average Salary for all bottom-level and Staff-Level positions, were suppressed. The Consolidated Amounts do not make sense for those positions, since they have no subordinates.)

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Amounts: Special Print Control**. Org Plus displays the Special Amount Print Control form.

3. For each of the Amount Fields (A-F), select **No** if you do not want to suppress the amounts.

   Select **Top** to suppress printing the Amount and Consolidated Amount for the topmost position (level 1).

   Select **Bottom** to suppress printing the Amount and Consolidated Amount for all Staff-Level and lowest-level positions.

   Select **Partial** to suppress printing of the Consolidated Amount *only* for all Staff-Level and lowest-level positions. You must also select **Both** (to print both Amount and Consolidated Amount) in the Print Control command.

4. Press [Alt] - [F10] when you finish.

Suppress Amount Print

The Suppress Amount Print option prevents the printing of all Amount Fields for an individual or range of positions. Set this option with the Set Option command. See "Chapter 6: Advanced Chart-Making" for more information.

With Suppress Amount Print, blank spaces replace the Amounts on the printed chart. In the budget example at the beginning of this chapter, the Suppress Amount Print option prevents amounts from showing for Amber Hess.

When you Suppress Amount Print, the Consolidated Amount column does not appear when you display amounts.

Exclude From Amount

The Exclude From Amount option excludes the six Amount Fields in designated positions from all calculations and consolidations. For example, in Figure 8-1, the Exclude From Amount option keeps the amounts for Amber Hess from being summed into the budget and salary totals. Use the Exclude From Amount option in positions for which amounts are meaningless. See "Options: Set Option" in "Chapter 6: Advanced Chart-Making" for more information.

When you Display Amounts for a position with this option set, the amounts do not appear. Instead Org Plus tells you that you set the Exclude From Amount option. If you print amounts with this option set for a position, the amounts appear as zero.

Org Plus still counts the position in any position counts.

If you set Suppress Amount Print and Exclude From Amount, Org Plus does not print amounts or include them in calculations.

Using Hidden Positions with Amounts

Org Plus does not let you enter or maintain amounts in hidden positions. When you hide a position already containing amounts, Org Plus clears them. If you later change that position so it is no longer hidden, all amounts are zero.

Consolidated Amounts

Consolidated Amounts are derived from pre-defined formulas. Org Plus calculates a Consolidated Amount by consolidating the values from the Current Position down all positions in the branch. For each Consolidated Amount Field (A-F), you can select one of five consolidation types: Sum, Average, Product, Derived, and None.

Consolidated Amounts do not include amounts at positions with the Exclude From Amount option set. Since Org Plus computes Consolidated Amounts, you cannot enter or edit them.

Org Plus provides six fields for consolidated amounts. To make good use of all the Amount Fields, enter values in the Amounts Fields. Then use the Consolidated Amounts Fields for consolidating those amounts.

Figure 8-3 shows a Sum consolidation of budgets and an average consolidation of salaries. The Total Budget amount at Connie White's position contains the sum of budgets for all positions below her, including her own budget. The Average Salary contains the average of salaries for positions below and including Connie. In this chart, use of the Label command causes the labels "Total Budget" and "Average Salary" to print.
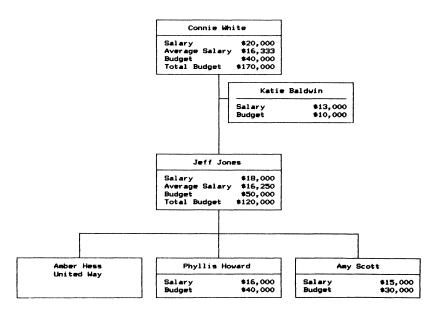
Figure 8-3

Setting the Consolidation Type

Select the consolidation type for each Consolidated Amount Field using the Formula Setup command. Until you change them, all six Consolidated Amount Fields are preset to Sum. When you set a consolidation type for a field, Org Plus uses it for that field in every position.

To set a consolidation type:

1. From the Work Group Display, press F9. Org Plus displays the Command Menu.

2. Select **Amounts: Formula Setup**.

3. Move the cursor to the Consolidation line for the appropriate Amount Field.

4. Select the consolidation type you want. Org Plus uses this type for that Amount Field for all positions in your chart. Select from:

None — Does not consolidate this field.

Sum — Totals the amounts from the Current Position and all positions below in the same branch.

Avg — Computes the average value from the amounts in the Current Position plus all positions below in the same branch.

Product — Multiplies amounts from the topmost position down through the Current Position. Use this for yield and probability applications.

Derived — Uses the formula found in its Amount Field, but applies the formula to Consolidated Amount Field. Use this for consolidating ratios and percentages calculated by Org Plus.

5. Press Alt - F10 when you finish.

6. Verify that the consolidated results displayed by Org Plus are the results you expect.

The most commonly used consolidation methods are Sum and Avg. For most applications, such as budgeting, cost accumulations, and so on, these two are sufficient.

To print the Consolidated Amounts on your chart, use the Print Control command. See "Amounts: Print Control" in this chapter.

The Consolidation Types

Sum and Average Consolidations

Figure 8-3 illustrates typical uses of the Sum and Avg consolidations. The Sum consolidation is equivalent to the pre-defined formula @sum(brn,f) . The Average consolidation is equivalent to the pre-defined formula @avg(brn,f) . (See "Formulas" later in this chapter.)

In this chart, Salary and Budget are the amounts for each manager. Org Plus calculates Average Salary using the Avg consolidation on the Budget fields. It calculates Total Budget using the Sum consolidation on the Budget field.

Consolidation Type — None

Select this type when a consolidation of values for an Amount Field does not make sense, or is not needed. For example, the sum of all performance ratings is not a useful number.

The Product Consolidation

Use the Product consolidation for specialized applications. A typical use for a product consolidation is to generate a probability or yield factor using fractional amounts.

A Product consolidation multiplies the values in an Amount Field, from the topmost position down through the Current Position. For example, you might start at the topmost level with a certain number of objects. At each subsequent level, a Product consolidation multiplies the number from the previous level by some factor. This factor may be a success rate or wastage factor, for example. The consolidation yields a new number after that level.

To use the Product consolidation:

1. Enter the starting value (number of items, for example) in the Amount Field at the topmost position. Let us say, Amount Field A in the topmost position contains 1000 (units).

2. For all lower positions in the chart, enter a multiplication factor for Org Plus to multiply against the result from the next higher level. Amount Field A for Product 1 contains .6 (60%), and for Product 2 contains .4.Thus the consolidated results are 600 and 400 respectively. At chart level 3 the values in Amount Field A are again percentages.

The Derived Consolidation

A Derived consolidation is used only when the Amount Field contains a formula. (See the discussion of formulas in the next section). Org Plus uses the formula, but applies it to the Consolidated Amount Fields instead of the Amount Fields. A typical use of a Derived consolidation is to calculate a ratio between sums of Budgets and Actuals as shown in Figure 8-4.
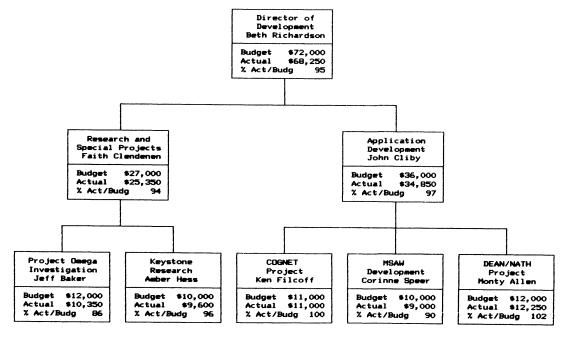
Figure 8-4

This chart displays three Consolidated Amounts: the sums for Budget and Actual, and a Derived consolidation for "% Act/Budg." (The latter is a percentage of actual expenses to budget). The Derived consolidation applies the formula for percent of budget (Actual/Budget times 100) to the Consolidated Amounts instead of the Amounts. It finds one sum as a percentage of the other sum.

If you used a Sum instead of a Derived consolidation, Org Plus sums the individual percentages. In this case, the sum for John Cliby is 100 + 90 + 102 = 292, a meaningless number.

Formulas   You may enter a formula instead of a value in any Amount
                      Field. Using formulas in Org Plus is very similar to using
                      formulas in spreadsheet applications. Uses include
                      mathematical operations as well as "spreadsheet functions"
                      (see "Available Functions" below).

                      Enter formulas for Amount Fields using the Formula Setup
                      command. The formula for a given Amount Field applies to
                      all the positions in the chart. For example, enter the formula
                      A + B on the Amount Field C formula line. This displays
                      the sum of the Amount Fields A and B in Amount Field C.

Amounts: Use the Formula Setup command to enter formulas in the
Formula Setup   Amount Fields, and to specify the consolidation type for
Ctrl - F3   each field. (See "Consolidated Amounts" in this chapter.)

                      Note: The numeric capabilities of Org Plus allow extremely
                      complex calculations. Foolproof guidelines are impossible and
                      there is always the remote possibility of hardware or software
                      error. Therefore it is imperative that you verify your results to
                      avoid incorrect conclusions.

                      Entering Formulas

                      The Formula Setup form provides a choice of consolidation
                      methods and a formula line for each Amount Field. To enter
                      a formula:

                      1. From the Work Group Display, press F9. Org Plus displays
                          the Command Menu.

                      2. Select **Amounts: Formula Setup**. Org Plus displays the
                          Formula Setup form.

                      3. Move the cursor to the Formula line for the appropriate
                          Amount Field.

                      4. Type the formula on the line.

                      5. Press Enter ⏎. Org Plus notifies you of any errors, such
                          as unbalanced parentheses or illegal symbols.

6. Press [Alt] - [F10] when you finish.

7. Verify for a few positions that the results of the formula are what you expect.

Once you specify a formula for a particular Amount, you cannot enter data in that field. The absence of the underscore on the amount line indicates a formula and the cursor automatically skips over that line.

The format for Org Plus formulas is much the same as for formulas in Lotus 1-2-3®. You can use constants and the basic math operators (+, -, *, /). You can also use functions as defined below, and variables representing each of the Amounts fields (A, B, C, D, E, F). You cannot use scientific notation to enter a constant in a formula.

Errors in Entering Formulas

Org Plus can detect the following kinds of errors when you enter formulas. For these errors, Org Plus will not allow you to leave the field until you correct the problem.

- **Unbalanced parentheses** — For example, 2*(A+B should be corrected to 2*(A+B).

- **Invalid argument** — For example, @SUM(xyz,B) contains the invalid argument xyz, which should be a range (see "The Format of a Function" below).

- **Improperly formed function** — For example, @SUM is missing the two arguments.

- **Unknown characters, variables, or functions** — For example, @SUN(all,B) should be corrected to @SUM(all,B).

- **Variable, operator, or function in the wrong place (syntax error)** — For example, 2(A+B) should be corrected to 2*(A+B).

Order of Calculation

Org Plus calculates in column order — first Amounts A through F in order, then Consolidated Amounts A through F. Be aware that circular references can occur when one calculation is dependent on the results of a later calculation and that calculation has not yet been done. The results of the calculation may then be erroneous since the data used was invalid or incomplete. Org Plus displays a warning message when you enter a formula containing a circular reference. If you continue, Org Plus displays a CIRC message on the upper right portion of the screen. This indicates that a circular reference exists in your formula definitions. Circular references can occur when:

■ A formula is defined as itself. For example, Amount A is defined as 2.5*A*B.

■ A field references a formula in a lower field. For example, Amount A is defined as @SUM(brn,B) where B is defined as @AVG(brn,C).

■ A derived consolidation references a lower field. For example, Amount A is defined as @MAX(B). In this case the derived consolidation for Amount A looks for the maximum value among the consolidated sums of Amount fields B, but the sums have not been consolidated yet.

Circular references can usually be fixed by changing the order of your equations.

Functions

You can use a function as part of a formula for an amount. Org Plus functions include several arithmetic functions, statistical functions, and counting functions. The counting functions include a classify function which lets you count members of a class you define. For example, you can define a class of all positions with a particular job code, or all female employees.

The Format for a Function

The format of an Org Plus function is very similar to functions in Lotus 1-2-3 and other similar programs.

The general format is: @function_name(rng,f)

where rng is the range of positions over which the function operates, and f is the field to use in the function. For example, @SUM(sub,A) sums the contents of Amount Field A for all subordinates of each position in the chart.

The range (rng) for a function can be:

sib — the Current Position's siblings (includes the Current Position)

sub — the Current Position's direct subordinates

lvl — all positions at the current level (includes the Current Position)

brn — all positions in the current branch (includes the Current Position)

all — all positions in the chart (includes the Current Position)

mgr — the Current Position's manager

top — the topmost position in the chart

The field (f) specified for a function may be any one of the Amount Fields A, B, C, D, E, or F. You must use the letter — not the descriptive field label — for the Amount Field in a function.

The function names, range names, and field letters can be uppercase, lowercase, or mixed. Org Plus ignores spaces.

Available Functions

The functions provided by Org Plus include:

Counting Functions:

@CNT(rng) — Count. Counts the number of positions in range (rng). (See also "# (Count)" in this chapter.)

@CMP(rng,f) — Compare. Counts each position in range (rng) where field (f) is not zero.

@CLS(rng,tf,"string") — Classify. Counts every position in range (rng) where the contents of Text Field (tf) match the text "string." Field (tf) must be one of the Text Fields 1-6 (i.e, 1, 2, 3, 4, 5, or 6) or the Alternate Text Fields A1-A6. The text for "string" must be in quotes.

Org Plus recognizes matches for text strings regardless of whether they are uppercase or lowercase. You may also use the wildcard characters * and ? (See wildcard characters under "Find & Mark" in "Chapter 5: Editing Your Chart"). If you need to search for a quotation mark within the string, precede the quotation mark with a backslash (\).

Note: If you use the Do Not Count option, Org Plus does not include the designated positions in these counting functions. (See "Options: Set Option" in "Chapter 6: Advanced Chart-Making" for more information about Do Not Count.)

Arithmetic/Statistical Functions:

@SUM(rng,f) — Gives the sum of values in field (f) within range (rng). The Sum Consolidated Amount gives the same result as @SUM(brn,f) without using up one of the six Amount Fields.

@AVG(rng,f) — Gives the average of values in field (f) within this range (rng). The Avg Consolidated Amount gives the same result as @AVG(brn,f) without using up one of the six Amount Fields.

@MAX(rng,f) — Returns the largest of the values in field (f) within range (rng), or 0 if the range is empty.

@MIN(rng,f) — Returns the smallest value in field (f) within range (rng), or 0 if the range is empty.

@STD(rng,f) — Calculates the standard deviation across range (rng) for field (f). Returns ERR if less than 2 positions in the range. The formula used for calculating the standard deviation is as follows:

$$\sqrt{\frac{n * \Sigma f^2 - (\Sigma f)^2}{n(n-1)}}$$

where n = @CNT(rng) (number of positions in range)

@VAR(rng,f) — Calculates the variance across range (rng) for field (f). Returns ERR if less than 2 positions in the range.

Miscellaneous:

@AMT(rng,f) — Returns the amount from field (f) for range (rng), which must be a single position. Rng must be either "top" or "mgr."

In the examples below, Amount Field A contains each person's Sales Quota and Amount Field B contains their actual Sales Performance. Some formulas you might use are:

@MIN(sub,B)/@AVG(sub,B) — This gives the ratio of the poorest performer among each manager's subordinates to the group's performance average.

A/@AMT(mgr,A) — This gives an individual quota as a percentage of the departmental quota (as represented by the next higher level's quota).

@MAX(all,B) — This returns the highest Sales Performance amount found anywhere in the organization.

An example of the classify function is:

@CLS(sub,A3,"Sec. II") — This counts every position among each manager's subordinates where the contents of Alternate Text Field 3 match the job title "Sec. II."

 # (Count Print-Time Code)

Org Plus can count the positions in a branch and print the result in a Text Field. To get this count, type # (number sign) as the first character in a field. If you type # , Org Plus includes the position with the # in its count. If you want to exclude the Current Position from the count, type #S.

Org Plus precedes the count with a label if you follow the # with a colon (:) and the label you want.

Org Plus interprets the # as a Print-Time Code if the rest of the field is blank, is followed by "S," or a colon (:). Otherwise, it assumes you want to use the # as a regular character in the text.

If you do not want a position included in the count, set the Do Not Count option for that position. See "Options: Set Option" in "Chapter 6: Advanced Chart-Making" for more information about this option.

Amounts: Mode of Calculation
Alt - 6

With the Mode of Calculation command, you control whether Org Plus does amount calculations automatically or only when you request it.

Selecting Automatic recalculates all Amount and Consolidated Amount Fields each time you enter or modify data. This is the default mode, and is similar to automatic recalculation in a spreadsheet. Org Plus calculates Amounts A through F in order, then Consolidated Amounts A through F.

Selecting Manual calculates amounts only when you request them using the Calculate command (see below).

Use Manual calculation if you intend to work with large charts. As the amount of data in your chart grows, calculations take increasingly more time. Selecting Manual speeds up Org Plus because it does not have to recalculate after every change. If you make a change requiring a recalculation, Org Plus displays a CALC message in the upper right corner of the screen.

To switch between Automatic and Manual mode of calculation:

1. From the Work Group Display, press [F9]. Org Plus displays the Command Menu.

2. Select **Amounts: Mode of Calculation**.

3. Select **Manual** or **Automatic** and press Enter [↵]. Org Plus switches the mode of calculation.

Note: Org Plus will take advantage of a math co-processor (8087 or 80287) if you have one installed in your computer. This will significantly increase the speed of any amount calculations you do.

Amounts:
Calculate [Alt] - [1]
Use the Calculate command to recalculate your Amount and Consolidated Amount Fields when the Mode of Calculation is Manual.

When your chart needs recalculation, Org Plus displays a CALC message in the upper right hand corner of the screen. The message disappears after you recalculate.

To calculate Amount and Consolidated Amount Fields:

1. From the Work Group Display, press [F9]. Org Plus displays the Command Menu.

2. Select **Amounts: Calculate**. The CALC message flashes while Org Plus calculates the amounts.

Numeric Limits in Calculations

Org Plus may encounter the following numeric limits when calculating formulas or consolidations. Org Plus handles the results as described below.

- If a "divide by zero" calculation occurs, Org Plus displays ERR in the Amount Field. A "divide by zero" could occur when using the formula @AVG(sub,A) at the lowest level of the chart. In that case, Org Plus tries to take the average of 0 subordinates.

- Org Plus maintains the precision of a number up to 15 digits. If Org Plus adds 123456789012345 to .0000001, the result remains 123456789012345.

- If the result is too small to display (less than 9 decimals), Org Plus displays a 0 or -0. However, the entire number is stored internally and will be used in dependent calculations.

- If the result is too large to display (more than 20 digits), Org Plus displays asterisks (****). However, the entire number is stored internally and will be used in dependent calculations.

- If the result is too small to store internally (+/-E-100), Org Plus converts the number to 0.

- If the result is too large to store internally (+/-E100), Org Plus displays ERR. Any calculations dependent on that result will also display ERR.

A Product Cost Accumulation Example Using Amounts

The most common use for Org Plus is for organization charts. However, you can use its tree-structured charts for many other applications. Its numerical capabilities make it well suited for doing cost accumulations based on a product structure breakdown.

The chart in Figure 8-5 is an example of a product costing chart. For each part of the product, you enter the material cost and the hours of labor. Org Plus calculates the manufacturing overhead and labor costs from the material cost and labor hours respectively. Org Plus also calculates the percentage each part contributes to the total cost. It divides the total cost of the node by the total cost of all nodes. This is the formula used: E/@SUM(ALL,E)*100 (Amount Field E accumulates the total cost.)

Figure 8-5 shows Consolidated Amounts printed for all fields. Thus, the amounts printed at each position represent the sum of all the components and labor subordinate to that position.

Note: For this chart, all cost information appears at the bottom level of each branch. Each higher level position displays the sum of the costs of the subordinate parts. As a general rule, you should not enter data in positions at higher levels of the chart for this type of structure. If the amounts for each assembly do not equal the sum of its parts, the chart does not make sense to the reader.

In the example, there is labor required to assemble the parts. This labor appears in a position called "Assembly Labor" as if it were a part itself. Thus, the costs for each assembly are the cost of its parts plus the labor to assemble them.

System Unit BB-9000
Product Cost Roll-Up

```
                              ┌─────────────────────────┐
                              │       System Unit        │
                              │        BB-9000           │
                              │ Mat'l         $1630.00   │
                              │ Mfg Ovrhd      $456.40   │
                              │ Labor Hrs        37.5    │
                              │ Labor Cost    $3150.00   │
                              │ Tot Cost      $5236.40   │
                              │ % Tot Cost      100.00   │
                              └─────────────────────────┘
```

Assembly Labor		Enclosure 09000-00100		I/O Assembly 09000-04100		Memory Assembly 09000-02200		Processor Assembly 09000-03201	
Mat'l	$0.00	Mat'l	$255.00	Mat'l	$335.00	Mat'l	$861.00	Mat'l	$179.00
Mfg Ovrhd	$0.00	Mfg Ovrhd	$71.40	Mfg Ovrhd	$93.80	Mfg Ovrhd	$241.08	Mfg Ovrhd	$50.12
Labor Hrs	5.6	Labor Hrs	9.3	Labor Hrs	11.7	Labor Hrs	5.8	Labor Hrs	5.1
Labor Cost	$470.40	Labor Cost	$781.20	Labor Cost	$982.80	Labor Cost	$487.20	Labor Cost	$428.40
Tot Cost	$470.40	Tot Cost	$1107.60	Tot Cost	$1411.60	Tot Cost	$1589.28	Tot Cost	$657.52
% Tot Cost	8.98	% Tot Cost	21.15	% Tot Cost	26.96	% Tot Cost	30.35	% Tot Cost	12.56

Assembly Labor		Assembly Labor		Assembly Labor		Assembly Labor	
Mat'l	$0.00	Mat'l	$0.00	Mat'l	$0.00	Mat'l	$0.00
Mfg Ovrhd	$0.00	Mfg Ovrhd	$0.00	Mfg Ovrhd	$0.00	Mfg Ovrhd	$0.00
Labor Hrs	4.8	Labor Hrs	1.5	Labor Hrs	1.2	Labor Hrs	1.5
Labor Cost	$403.20	Labor Cost	$126.00	Labor Cost	$100.80	Labor Cost	$126.00
Tot Cost	$403.20	Tot Cost	$126.00	Tot Cost	$100.80	Tot Cost	$126.00
% Tot Cost	7.70	% Tot Cost	2.41	% Tot Cost	1.92	% Tot Cost	2.41

Backplane 09003-80705		General I/O Board 41001-04002		Memory Board 46002-02205		EPROM - 256K (10) 06121-08010	
Mat'l	$82.00	Mat'l	$110.00	Mat'l	$321.00	Mat'l	$100.00
Mfg Ovrhd	$22.96	Mfg Ovrhd	$30.80	Mfg Ovrhd	$89.88	Mfg Ovrhd	$28.00
Labor Hrs	3.0	Labor Hrs	4.5	Labor Hrs	2.6	Labor Hrs	0.0
Labor Cost	$252.00	Labor Cost	$378.00	Labor Cost	$218.40	Labor Cost	$0.00
Tot Cost	$356.96	Tot Cost	$518.80	Tot Cost	$629.28	Tot Cost	$128.00
% Tot Cost	6.82	% Tot Cost	9.91	% Tot Cost	12.02	% Tot Cost	2.44

Cabinet 09052-60307		HDLC Board 23000-00147		Memory Module - 1MB (2) 04272-60001		Processor Board 71006-03200	
Mat'l	$86.00	Mat'l	$68.00	Mat'l	$472.00	Mat'l	$18.00
Mfg Ovrhd	$24.08	Mfg Ovrhd	$19.04	Mfg Ovrhd	$132.16	Mfg Ovrhd	$5.04
Labor Hrs	0.2	Labor Hrs	2.6	Labor Hrs	1.8	Labor Hrs	2.8
Labor Cost	$16.80	Labor Cost	$218.40	Labor Cost	$151.20	Labor Cost	$235.20
Tot Cost	$126.88	Tot Cost	$305.44	Tot Cost	$755.36	Tot Cost	$258.24
% Tot Cost	2.42	% Tot Cost	5.83	% Tot Cost	14.43	% Tot Cost	4.93

Front Panel 09050-30901		LAN Board 21000-00047		uController 03646-90002		Real Time Clock 04936-70003	
Mat'l	$37.00	Mat'l	$79.00	Mat'l	$68.00	Mat'l	$35.00
Mfg Ovrhd	$10.36	Mfg Ovrhd	$22.12	Mfg Ovrhd	$19.04	Mfg Ovrhd	$9.80
Labor Hrs	0.5	Labor Hrs	2.6	Labor Hrs	0.2	Labor Hrs	0.8
Labor Cost	$42.00	Labor Cost	$218.40	Labor Cost	$16.80	Labor Cost	$67.20
Tot Cost	$89.36	Tot Cost	$319.52	Tot Cost	$103.84	Tot Cost	$112.00
% Tot Cost	1.71	% Tot Cost	6.10	% Tot Cost	1.98	% Tot Cost	2.14

Power Supply 04020-65010		uController 03672-90003			uProcessor 36720-90005	
Mat'l	$50.00	Mat'l	$78.00		Mat'l	$26.00
Mfg Ovrhd	$14.00	Mfg Ovrhd	$21.84		Mfg Ovrhd	$7.28
Labor Hrs	0.8	Labor Hrs	0.5		Labor Hrs	0.0
Labor Cost	$67.20	Labor Cost	$42.00		Labor Cost	$0.00
Tot Cost	$131.20	Tot Cost	$141.84		Tot Cost	$33.28
% Tot Cost	2.51	% Tot Cost	2.71		% Tot Cost	0.64

February 5, 1988

Mfg Ovrhead = .28 * Material Cost
Labor Cost = 84 * Labor Hours
% of Total Cost = Total Cost / Total
Cost of All Positions

Figure 8-5. Product cost roll-up chart showing component costs. With Org Plus' numeric capabilities, these costs are automatically summed up the branches of the chart.

9 Custom Drawing

The Drawing Board commands give you additional flexibility and control over your chart's appearance.

In the Drawing Board, you can add lines, boxes, or text. You can move parts of your drawing anywhere you want. You can also enhance text or make it larger (assuming your printer supports these features).

However, using the Drawing Board is a one-way street. *Changes you make in the Drawing Board are not communicated back to your chart in the Work Group Display.* Thus, if you change someone's title in a drawing, it remains unchanged in the chart.

This chapter covers:

- when to use the Drawing Board
- the Drawing Board display
- getting to the Drawing Board
- adding text anywhere in a drawing
- Drawing Board commands

When To Use the Drawing Board

When deciding whether to do something in the Work Group Display or the Drawing Board, consider their different advantages.

In the Work Group Display, Org Plus does the hard work of formatting, spacing, and drawing. Updating charts is a snap and revised charts can be printed in minutes.

In the Drawing Board, you can fine tune a chart created in the Work Group Display. You have control over positioning of all chart elements. On the other hand, a drawing is much more difficult to update because you do the hard work, not the computer.

For clarity, it is helpful to remember that you work on charts in the Work Group Display, and you work on drawings in the Drawing Board.

Experienced Org Plus users like to follow this formula:

1. Create all charts in the Work Group Display, letting Org Plus format and space your chart.

2. Then, make only those changes in the Drawing Board that can't be made in the Work Group Display.

3. When the chart needs to be updated, use the Work Group Display. This is where editing is the easiest. Let the computer do the hard work. This updates your chart, but not the drawing.

4. Make a new drawing from your revised chart. Use the Drawing Board to recreate the changes you previously made to the drawing.

Some good uses of the Drawing Board include:

- Manually drawing auxiliary lines to control their placement.
- Manually drawing a special layout that cannot be generated using the Work Group Display.
- Placing annotations at special locations on the drawing.
- Drawing box and line diagrams that are not in the shape of an organization chart or tree.

**Getting to the
Drawing Board**

You can get to the Drawing Board when you are working on a chart in the Work Group Display. You can also get directly to the Drawing Board from DOS.

If you are working on a chart, go to the Drawing Board with the Custom Drawing command.

**Print Chart:
Custom Drawing**
⌞⇧Shift⌟ - ⌞F9⌟

This command allows you to work in the Drawing Board. Select one of the following:

Create Drawing — makes a drawing from the chart you are working on.

Retrieve Drawing — allows you to modify a drawing you created before.

Create Part — makes a drawing from a part of the chart you are working on.

Create Drawing

Create Drawing makes a drawing from the chart you are working on. When you work in the Drawing Board, you make changes to the drawing only. Your chart remains unchanged.

1. From the Work Group Display, press ⌞F9⌟. Org Plus displays the Command Menu.

2. Select **Print Chart: Custom Drawing**.

3. Select **Create Drawing**. Org Plus takes you through the same sequence of screens as the Print command. (See "Chapter 4: Printing Your Chart.")

4. Make selections as you would to print your chart. Org Plus displays the Name Drawing form and asks you to provide a drive (or path) and a file name.

5. To store your drawing on a drive (or path) different from the one displayed, press Tab ⌞↹⌟. Type the correct drive (or path). Then press Enter ⌞↵⌟.

6. Give your drawing a name.

   End the name with ".DWG" so you will always know that the file is a drawing. Org Plus adds this extension to the drawing name if you do not.

7. Press Enter [↵]. After a slight delay, the Drawing Board displays the top center of your drawing (approximately).

You can have a chart that is too big to make into a drawing. If your chart is too big, Org Plus tells you so. When this is the case, you can make a drawing of part of your chart with the Create Part command described below. Alternatively, you can try to make your chart smaller. See "How To Make Your Chart Fit on One Page" in "Chapter 6: Advanced Chart-Making" for suggestions about how to make your chart narrower and shorter.

Note 1: Org Plus can assign different pens or colors to individual auxiliary lines in a chart. However, when you make a drawing from a chart, you lose the auxiliary line colors. Solid auxiliary lines will be the same color as the lines and boxes. Dotted auxiliary lines will be the same color as the text.

Note 2: You cannot create, view, or modify a report in the Drawing Board.

Retrieve Drawing

Retrieve Drawing allows you to modify a drawing you made before.

1. From the Work Group Display, press [F9]. Org Plus displays the Command Menu.

2. Select **Print Chart: Custom Drawing**.

3. Select **Retrieve Drawing**. Org Plus displays the Retrieve Drawing form and asks you to select a file name.

4. To retrieve a drawing from a different drive (or path) than the one displayed, press Tab ⇆. Type the correct drive (or path). Then press Enter ⏎.

5. Select the name of your drawing.

6. Press Enter ⏎. The Drawing Board displays your drawing.

Create Part

Create Part allows you to make a drawing from a part of the chart you are working on.

1. Move the Work Group Display until the position you want at the top of the drawing is the Current Position.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Print Chart: Custom Drawing**.

4. Select **Create Part**. Org Plus asks you how many levels you want in the drawing.

5. Select the number of levels. If you want the drawing to include the bottom of the branch, select **All**.

6. Press Alt - F10. Org Plus takes you through the same sequence of screens as the Print command. (See "Chapter 4: Printing Your Chart.")

7. Make selections as you would to print your chart.

8. Press Alt - F10 when you finish. Org Plus displays the Name Drawing form and asks you to provide a file name.

9. If you want to store your drawing file on a drive (or path) different from the one displayed, press Tab ⇆. Type the correct drive (or path). Then press Enter ⏎.

10. Give your drawing a name.

    End the name with ".DWG" so you will always know that the file is a drawing. Org Plus adds this extension to the drawing name if you do not.

11. Press Enter ⌊←⌋. After a slight delay, the Drawing Board displays the topmost position of your drawing (approximately).

Getting to the Drawing Board from DOS

If you want to edit an existing drawing or create a simple drawing from scratch, you can go to the Drawing Board from DOS. You do not need to go to the Work Group Display first.

To start the Drawing Board as a stand-alone program from a fixed disk, type DRAW at the DOS prompt. (You can use uppercase or lowercase letters as you type.)

To start the Drawing Board as a stand-alone program from a diskette drive, insert "Diskette 2 - Draw" in the drive. (Or insert "Diskette A - Chart & Draw" if you have a 3 1/2 inch drive.) Type DRAW at the DOS prompt for that drive.

You will see a Main Menu. Select from the following commands:

Work on Drawing — to edit a drawing already in the Drawing Board or to start one from scratch.

Retrieve Drawing — to modify a drawing you created before.

Save Drawing — to save the drawing currently in the Drawing Board, making it a file on disk.

Erase File — to permanently erase a drawing from a disk.

Clear Drawing — to erase the contents in the Drawing Board.

Printer/Setup — to give the Drawing Board necessary information about your printer.

Quit — to exit the Drawing Board and return to DOS.

The Drawing Board Display

The Drawing Board displays your drawing much as it appears when printed. You see part of your drawing at a time.

Rulers show cursor position.

Scrollbars show where you are in relation to the whole drawing area.

Your filename appears here with instructions on how to use commands.

Keys you can use are shown here.

Monty K. Allen
Owner and President
x205

Elaine Burns
Admin. Assistant
x672

George Simko
V. P. Marketing
x616

Veronica Tracy
V. P. Manufacturing
x441

Drawing Board • 9-1.DWG
Esc - Work Group Display   F1 - Help   F9 - Command Menu

Figure 9-1. The Drawing Board Display

Due to limitations of the monitor and differences among printers, not all characters can be displayed on the screen exactly as they print. The lines may appear to connect to the box on the screen, however they do not connect when printed and vice versa. This is particularly true if you are trying to draw lines to connect to the exact corners of certain box styles.

Rulers

The rulers show the character row and column of the current cursor position. The horizontal ruler measures character spacing. The vertical ruler measures line spacing. Use the rulers to help you determine where to place text, lines, and boxes. If your drawing covers more than one page, a "P" on the ruler shows you where one page ends and another begins. If your printer prints on continuous form paper, P's do not appear on the ruler that represents that paper direction.

Each mark on the ruler measures a distance of one character row or column. If the drawing is set to 10 character per inch spacing (10 cpi), each mark on the horizontal ruler represents .10 inch. If the drawing is set for 17.14 cpi, each mark represents .059 inch (ten marks equal about half an inch).

If the drawing is set to print 8 lines per inch, each mark on the vertical ruler represents .125 inch. If the line spacing is 6 lpi, each mark on the ruler represents .166 inch.

The length of each ruler depends on the number of pages the drawing covers.

You can change character spacing, line spacing, and the number of pages with the Format/Drawing Area command.

You can turn off the display of the rulers with the Toggle Rulers command.

Scrollbars

The vertical scrollbar represents the height of your drawing area. The horizontal scrollbar represents the width of your drawing area. The indicator on the scrollbar shows where you are in relation to the whole drawing area. For example, when you are at the top-left corner of the drawing area, the horizontal scrollbar indicator is at the far left. The vertical scrollbar indicator is at the very top. When you are at the bottom-right corner of the drawing area, the horizontal scrollbar indicator is at the far right. The vertical scrollbar indicator is at the bottom.

Messages

Two lines at the bottom of the screen display messages as you work. On the first line you see "Drawing Board:" and your file name (or "Working Copy" if you have not yet saved your file). You also see text enhancement indicators when your cursor moves over enhanced text. The indicators are:

Bold — for bold text

Undl — for underlined text

Xpnd — for expanded text

Font — if the alternate font is set

Pen # — when a plotter pen/color is set

If you are using a command, Org plus may print instructions on how to use the command on the first message line. On the second message line you see reminders of keys you can use.

Moving Around the Drawing

You can use different keys to move the cursor in your drawing and to shift the part of the drawing displayed. You can also move the cursor by selecting commands from the Command Menu. Choose keys from the following list to move around a drawing.

To move the cursor one character position:

[↑] [↓] [←] [→]

To move the cursor several positions at a time:

Tab [⇤]   — right 10 characters
Reverse Tab [⇧Shift]-[⇤]   — left 10 characters
[Ctrl] - [A]   — beginning of the previous word
[Ctrl] - [F]   — beginning of the next word

To scroll the drawing:

[F6] — up one row
[F7] — left one column
[F8] — right one column
[F10] — down one row

To move the window half a screen:

[PgUp] — up

[PgDn] — down

[Home] — left

[End] — right

To move the window a full screen:

[Ctrl] - [PgUp] — the window moves up

[Ctrl] - [←] — the window moves left

[Ctrl] - [→] — the window moves right

[Ctrl] - [PgDn] — the window moves down

To move to a specific point:

[Alt] - [F6] — top center of the drawing

[Ctrl] - [Home] one time — left column of the window

[Ctrl] - [Home] two times — leftmost column of the drawing area

[Ctrl] - [Home] three times — upper left corner of the drawing area

[Ctrl] - [End] one time — right column of the window

[Ctrl] - [End] two times — rightmost column of the drawing area

[Ctrl] - [End] three times — lower right corner of the drawing area

Note: [Ctrl] - [Home] three times and [Ctrl] - [End] three times moves the cursor to the corners of the drawing area, not of the drawing. For example, your drawing may be two pages wide. Pressing [Ctrl] - [End] three times moves the cursor to the bottom right-hand corner of the second page. You may not see any part of the drawing itself, since it may not extend to the lower right corner of the drawing area.

Adding Text Anywhere in a Drawing

You can add text anywhere in your drawing. Simply move the cursor to the place where the text should start, and type. You can type over, insert, or delete text.

Normally, inserting and deleting text rearranges the text to the right of the cursor. In the Drawing Board, insert and delete behave in a smarter fashion.

If you insert or delete text that is outside boxes, text inside boxes remains undisturbed. Text outside boxes that is more than ten spaces to the right also remains undisturbed. However, if you insert within ten spaces of that text, it will shift right.

When you insert text inside a box, characters shift right until they reach the edge of the box. The characters pushed right are deleted when they reach the edge. Only by placing the cursor directly on the side of the box can you type over the box. When you delete text inside a box, text outside the box is undisturbed.

The Drawing Board Commands

You can use the Drawing Board commands by accessing the Command Menu or by using the assigned keys. To access the Command Menu, press F9. It works just like the Command Menu in the Work Group Display.

Edit Drawing

Custom Drawing provides a set of editing commands that let you move, copy, or delete parts of your drawing. In addition, the Justify Text command lets you change the justification of text in boxes.

Edit Drawing: Move Block
Alt - F3

The Move Block command lets you "pick up" part of your drawing and place it in a different location. Together with the Draw Lines command, it lets you move positions to locations different from those drawn automatically in the Work Group Display. You can also use Move Block to move the entire drawing on the page. This allows you to adjust the margins of your drawing.

1. Place the cursor at a corner of the section you want to move.

2. Press ⌷F9⌷. Org Plus displays the Command Menu.

3. Select **Edit Drawing: Move Block**.

4. Use the cursor keys and Tab ⌷⇆⌷ to highlight the area you want to move. Or press ⌷Alt⌷ - ⌷F10⌷ to recall the last block you used. (Everything within the highlighted area will move.)

   Pressing any keyboard character makes the cursor move ahead to the next occurrence of the key you press. This may help you move the cursor across the drawing more quickly.

5. Press Enter ⌷↵⌷. The Drawing Board displays a dotted rectangle — the block outline.

6. Use the cursor keys and Tab ⌷⇆⌷ to move the outline to the new location. The outline follows the cursor as you move it around the screen.

7. Press Enter ⌷↵⌷. The marked section of the drawing disappears from its former location, and appears at the new location. The section you move overwrites anything that is at that location.

**Edit Drawing:
Copy Block**
⌷Ctrl⌷ - ⌷F9⌷

The Copy Block command lets you duplicate a section of your drawing and place it in another location.

Copy Block works like the Move Block Command above. However, the marked section remains in place and a copy of it appears at the new location.

**Edit Drawing:
Delete Block**
⌷Alt⌷ - ⌷F4⌷

The Delete Block command lets you mark and remove sections of your drawing.

1. Place the cursor on a corner of the section you want to delete.

2. Press ⌷F9⌷. Org Plus displays the Command Menu.

3. Select **Edit Drawing: Delete Block**.

4. Use the cursor movement keys to highlight the area you want to delete. Or press ⏄Alt⏄ - ⏄F10⏄ to recall the last block you used. (Everything within the highlighted area will be deleted.)

Pressing any keyboard character makes the cursor move ahead to the next occurrence of the key you press. This may help you move the cursor across the drawing more quickly.

5. Press Enter ⏄◄─┘⏄. Org Plus asks you to confirm that you want to delete the highlighted block.

6. Select **Yes** and the highlighted block disappears from your drawing.

Select **No** and the block remains in your drawing.

Edit Drawing: Justify Text
⏄⇧Shift⏄ - ⏄F3⏄

The Justify Text command allows you to change the justification of text inside boxes.

To justify text:

1. Place the cursor on the text you want to justify.

2. Press ⏄F9⏄. Org Plus displays the Command Menu.

3. Select **Edit Drawing: Justify Text**.

4. Select **Left**, **Center**, or **Right**.

Note: If there is a line across the inside of the box, the command justifies text on one side of the line only. Place your cursor on the side of the line where you want to justify the text.

Draw

In the Drawing Board you can draw solid or dotted lines anywhere in your drawing. You can erase existing lines and fill in small gaps in lines. You can also create boxes of any size and style.

**Draw:
Solid Lines** Ctrl - F7
**and
Draw:
Dotted Lines** Ctrl - F6

To draw a solid or dotted line in your drawing:

1. Place the cursor where the line should start.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Draw: Solid Lines** or **Draw: Dotted Lines**.

4. Use the cursor movement keys to move the cursor along the route the line should take. The cursor acts like a drawing pen. A line follows the cursor as it moves.

   As soon as you start to draw, you can use a variety of drawing options. They let you change the behavior of the cursor. The second message line lists the options available. Type the corresponding character, and the function of the pen-point changes. The options are:

   Erase and **Draw:** — type E and the pen-point changes to an eraser. The cursor shape changes to a blinking rectangle when it is an eraser. As an eraser, the pen-point erases any lines or text the cursor travels along. (Selecting a Draw command and then using the Erase option is the same as using the Erase Lines command.) Type D to continue drawing.

   Spacebar-Skip — press the spacebar to move the cursor one space in the direction it was last moving, without drawing a line segment. This lets you skip spaces (or leave out dots) in your line.

Pen Up/Down — type P to temporarily stop the cursor pen-point from drawing. The Drawing Board displays a reminder in the message line that your pen-point is up. While the pen-point is up, you can move the cursor to another location without drawing a line. This lets you start and stop as many lines as you like. Type P again to put the pen-point down and resume drawing.

Cross Mode and **Join Mode** — type C or J to set the style of intersecting lines. These two options appear only when you are drawing a solid line. They specify how the intersection should look when you draw one line at right angles across another.

Join Lines   Cross Lines
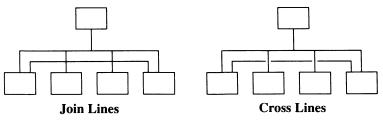
Figure 9-2

The Drawing Board is preset to Join Lines. Type C to cross lines. Type J to join lines.

Undo — type U to restore the character that was there before. This works one character at a time, backwards from the cursor position. Continue to type U to retrace your steps.

To place an arrowhead on a line, press F4 and select the direction for the arrowhead.

5. Press Escape Esc to end the Draw command.

Draw:
Erase Lines Ctrl - F8

To erase lines and text:

1. Place the cursor where you want to start erasing.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Draw: Erase Lines.** The cursor changes to a blinking rectangle.

4. Use the cursor keys and Tab ⇥ to move the cursor along the line or text you want to erase. The cursor acts like an eraser: lines and text disappear under the cursor.

   As soon as you start the Erase command, you can use a variety of drawing options. They let you change the behavior of the cursor pen-point. The second message line lists the options available. Type the corresponding character, and the function of the pen-point changes. (See "Draw: Draw Solid/Dotted Lines" for a description of the options.)

5. Press Escape Esc to end the Erase command.

Draw:
Cleanup Lines/Boxes
F5

This command helps you easily repair your drawing. It connects lines and joins lines to boxes. It also restores box corners and eliminates line stubs. Use this command when you erase or type over part of your drawing. For example, use Cleanup Lines/Boxes to restore the side of a box if you accidentally type over it.

Note:
Position the cursor immediately adjacent to one line segment as shown.

Before   After
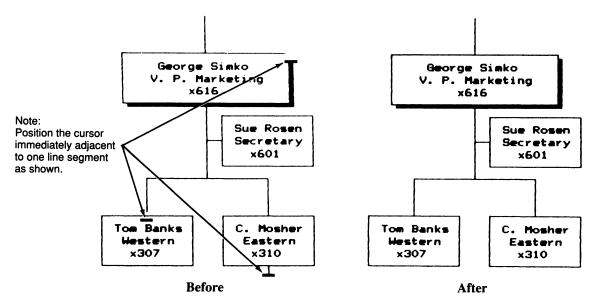
Figure 9-3. Cleanup Lines/Boxes

1. Place the cursor where you want to repair your drawing. The cursor must be immediately adjacent to at least one existing line or box segment.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Draw: Cleanup Lines/Boxes**. The Drawing Board draws a one character wide (or tall) line segment. (If the line segments are at right angles, they join rather than cross.)

4. Press Escape Esc to end the Cleanup Lines/Boxes command.

To repair a large gap or several small gaps, select **Draw: Cleanup Lines/Boxes** and use the cursor keys ↑ ↓ ← →. Move the cursor to each gap and Org Plus repairs the gap as you move over it.

While using the Cleanup Lines/Boxes command, you can use the Undo option. Type U to restore the character that was there before. This works one character at a time, backward from the cursor. Continue to type U to retrace your steps.

If the damage is to a shadow or perspective box, Org Plus asks you to identify the box style.

Note 1: Due to limitations of the monitor and differences among printers, not all characters can be displayed on the screen exactly as they print.

Note 2: Cleanup Lines/Boxes will not work with dotted lines or with broken and asterisk style boxes. Simply type the appropriate character to repair these.

**Draw:
Boxes** F3

You can create boxes anywhere in your drawing with the Draw Boxes command. As you draw, the message line displays the height and width of your box.

To draw a box:

1. Place the cursor where a corner of the box should be.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Draw: Boxes**.

4. Use the cursor keys and Tab ⇆ to specify the dimensions of the box. As you move the cursor, you create a rectangle that expands and contracts with your cursor movements. When the rectangle is the size you want, press Enter ⏎.

5. Select the box style you want.

6. Press Enter ⏎. A box in the style you select replaces the dotted rectangle.

Note: You can also use the Copy Block command to create a new box. This is the best way to ensure that boxes are the same size.

**Draw:
Other Symbols** F4

You can print arrowheads that face up, down, left, or right. You can place the arrowheads anywhere in the drawing.

1. Place the cursor where you want the arrowhead.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Draw: Other Symbols**.

4. Select **Up**, **Down**, **Left**, or **Right**.

You can also press F4 to select Other Symbols while you are drawing lines.

Options

These commands let you enhance the text and titles in your drawing. You can specify bold, underline, or an alternate font (if available on your printer). You can expand text to large size characters. You can also specify pens or colors for different sections of text if you are using a plotter.

When the cursor moves over enhanced or expanded text, indicators on the first message line show the option set. The indicators are:

Bold — for bold text

Undl — for underlined text

Xpnd — for expanded text

Font — if the alternate font is set

Pen # — if a plotter pen/color is set

These indicators appear and disappear as the cursor moves in and out of enhanced text. On a monochrome monitor, text that is enhanced or expanded is made double intensity. On a color monitor, enhanced or expanded text changes color.

**Options:
Enhance Text**
Alt - F7

The Enhance Text command lets you make text bold, underlined, an alternate font, or a combination of the three.

The effects of this command depend on the capabilities of your printer. If your printer does not support an alternate font, you will not see an alternate font when you print your drawing. Some printers support italic as an alternate font, others do not.

If you are using a plotter, the Enhance Text command will not make text bold. Use the Plotter Pen/Color command instead. Set a different pen where you want bold text. Then use a wider pen in that location. Plotters cannot underline text.

To enhance text:

1. Place the cursor at the beginning of the text you want to enhance.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: Enhance Text**.

4. Use the cursor keys and Tab ⇤ to highlight the text you want to enhance and press Enter ↵.

   Pressing any keyboard character makes the cursor move ahead to the next occurrence of the key you press. This may help you move the cursor across the drawing more quickly.

   You can enhance text in the middle of a line or a word. The Drawing Board enhances only the characters you highlight.

5. Select the enhancement you want to use. (You can select one enhancement at a time.)

6. Press Enter ↵. The Drawing Board enhances the highlighted text.

   To combine enhancements on one section of text (such as bold and underline together), repeat the Enhance Text command. The effects of combined enhancements depends on your printer. If your printer cannot combine the enhancements in the way you have asked, it decides which enhancement has precedence.

Options: Clear Enhancements
Alt - F8

The Clear Enhancements command removes enhancements you place in your text. You can remove the enhancement from part of the text, character by character. You can also remove one enhancement but leave another. For example, you can remove bold from text you made bold and underlined.

To clear an enhancement:

1. Place the cursor at the beginning of the enhanced text.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: Clear Enhancements**.

4. Use the cursor keys and Tab ⇥ to highlight the text you want to clear and press Enter ↵.

    Pressing any keyboard character makes the cursor move ahead to the next occurrence of the key you press. This may help you move the cursor across the drawing more quickly.

5. Select the enhancement you want to clear. (You can select one enhancement at a time.)

6. Press Enter ↵. The Drawing Board clears the enhancement from the highlighted text.

Options:
Xpanded Text
⇧Shift - F4

This command lets you make text larger. Unlike the text enhancements described above, Expanded Text affects the entire line of text (across the full width of the drawing area). Use expanded text for titles, subtitles, and annotations. Do not expand text on lines where there are boxes. If you do, text inside the boxes expands outside the edges of the box.

When Org Plus expands text, it tries to keep the same relative position of the text in your drawing. If you expand text, make sure there is room to expand it. (It takes up more space.) If there is not enough room, the expanded text may extend beyond the right edge of the drawing area. When you print the drawing, characters may be missing.

If you select the largest size text your printer supports (for example, 10 cpi) with the Format/Drawing Area command, this command has no effect.

To expand text:

1. Place the cursor anywhere on the line.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: Xpanded Text**. The Drawing Board expands the text on that line when it prints the drawing. An indicator (Xpnd) on the first message line shows that the line is expanded.

Options:
Clear Xpanded Text
⇧Shift - F5

This command lets you return expanded text to the size text you selected with the Format/Drawing Area Command.

To clear expanded text:

1. Place the cursor anywhere on the line of expanded text.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: Clear Xpanded Text**. The Drawing Board returns the text on that line to the size selected with the Format/Drawing Area Command.

Options:
Plotter Pen/Color
⇧Shift - F7

If you print your drawing on a plotter, you can specify different pens/colors for different sections of text.

To set a plotter pen/color for text:

1. Place the cursor at the beginning of the text you want to enhance.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: Plotter Pen/Color**.

4. Use the cursor keys and Tab ⇥ to highlight the text you want to enhance and press Enter ⏎.

   Pressing any keyboard character makes the cursor move ahead to the next occurrence of the key you press. This may help you move the cursor across the drawing more quickly.

   You can change pens in the middle of a line or a word. Only the characters you highlight will use the pen you select.

5. Select the pen you want to use. (You can select one pen at a time.)

6. Press Enter ⏎. The Drawing Board sets the pen for the highlighted text. This pen overrides any pen you may have previously set for the text. An indicator on the first message line shows which pen is set.

Options:
Clear Pen/Color
⇧Shift - F8

The Clear Pen/Color command removes pen/color settings you place in your text. You can remove the pen/color setting from your text, character by character. Or you can remove it from a section of text.

To clear a pen/color setting:

1. Place the cursor at the beginning of the text you want to clear the enhancement from.

2. Press F9. Org Plus displays the Command Menu.

3. Select **Options: Clear Pen/Color.**

4. Use the cursor keys and Tab ⇤ to highlight the text you want to clear and press Enter ↵.

   Pressing any keyboard character makes the cursor move ahead to the next occurrence of the key you press. This may help you move the cursor across the drawing more quickly.

5. Select the pen/color you want to clear.

6. Press Enter ↵. The Drawing Board clears the pen/color setting from the highlighted text.

   If you select the wrong pen/color, the command has no effect. The pen indicator on the message line shows which pen/color is set.

Layout: Format/Drawing Area
⟨⇧Shift⟩ - ⟨F1⟩

The Format/Drawing Area command lets you tell Org Plus what printer settings to use to print your drawing. It also lets you tell Org Plus how many pages to make available for the drawing area. You can draw anywhere in this area.

1. From any place in the Drawing Board, press ⟨F9⟩. Org Plus displays the Command Menu.

2. Select **Layout: Format/Drawing Area**. The Drawing Board displays the Drawing Format form.

3. Make selections as follows:

   Printer Selected
   Org Plus displays the printer you selected in Printer/Setup. If this is a dot matrix printer, it also displays the orientation you selected. Character size and number of pages depends on the printer setting. (You cannot change the printer selection here. To change the printer, go back to the Main Menu and use Printer/Setup.)
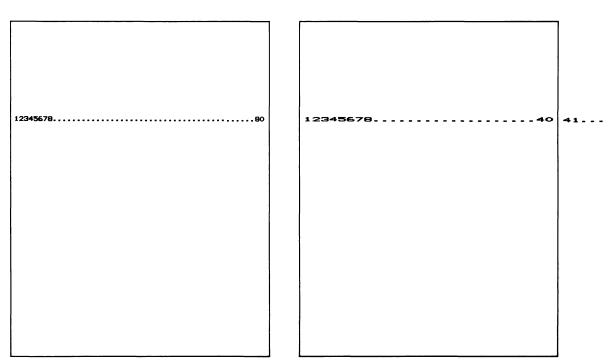
   Characters per inch
   Select the character spacing for text (non-expanded) in your drawing. This spacing will be used for text, bold, and the alternate font. If your printer supports them, you can choose to print the entire drawing in a small, medium or expanded character size. The entire drawing— lines, boxes, and text—will be scaled to fit the character size you choose.

   Changing the size of text impacts the size of your drawing. A drawing with 5 cpi is larger and covers more pages in the drawing area than the same drawing with 10 cpi. If you change the size of your text from 10 cpi to 5 cpi, the characters are larger, therefore fewer of them fit on a page. (See Figure 9-4.) If you do not increase the number of pages in the drawing area, you may lose columns on the right side of the drawing.

   You can have Org Plus adjust your drawing area, you can adjust it, or you can restore your old settings.

```
12345678..........................................80          12345678. . . . . . . . . . . . . . . . .40 | 41. . .
```

      10 cpi on 8¹/2" X 11" paper   5 cpi on 8¹/2" X 11" paper

Figure 9-4. Impact of Changing Character Size of Your Drawing

Lines per inch

Select the lines per inch (most often 6 or 8) for vertical line
spacing. This is equivalent to the Use Narrow Line Spacing
setting on the Chart Format form in the Org Plus Print
command. Selecting a smaller number makes your drawing
taller. (See Figure 9-5.) You may lose rows on the bottom
unless you also increase the number of pages in the
drawing area.

You can have Org Plus adjust your drawing area, you can
adjust it, or you can restore your old settings.

8 lpi on 8^1/2" X 11" paper

6 lpi on 8^1/2" X 11" paper

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1
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83
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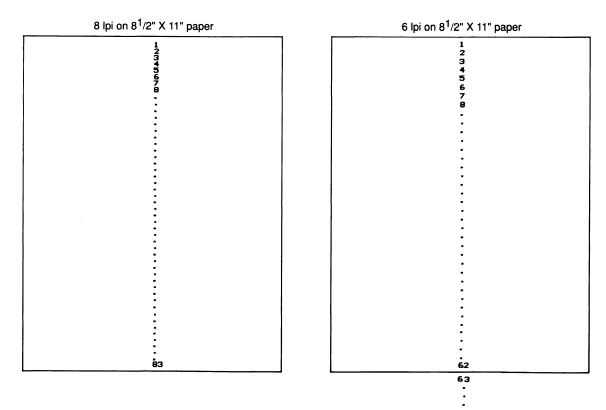
Figure 9-5. Impact of Changing Line Spacing of Your Drawing

Top Margin (inches)

Select how much space (if any) to add to the top of the drawing. This top margin is in addition to the margin already displayed. The default top margin is 0 inches.

If you add space for a top margin, you reduce the page length that your drawing can be printed on. You may need to adjust your drawing area. You can have Org Plus adjust it, you can adjust it, or you can go back to your old settings.

Note: Many printers cannot print to the very top of the paper, so they, in effect, create a top margin. You cannot control this margin with the Layout/Drawing Area command.

Changing Characters per inch, Lines per inch, and Top Margin impact the size of your drawing. For example, if you change the text setting from 10 cpi to 5 cpi (larger text), your drawing becomes larger. You may lose columns on the right side unless you also increase the number of pages in the drawing area. If the changes you make reduce the number of character rows or columns that will fit on one page, Org Plus will present you with several choices. Select **Adjust, Restore,** or **Continue**.

Select **Adjust** to have Org Plus increase the number of pages in the drawing area so none of your drawing is lost. Org Plus displays the Drawing Area form and the increased number of pages. Press ⌷Alt⌷ - ⌷F10⌷ to return to the Drawing Board.

Select **Restore** to restore your original settings. Org Plus returns you to the Drawing Format form and displays the original settings. You can make new selections on the form.

Select **Continue** to set the number of pages yourself. If you select **Continue,** Org Plus displays the Drawing Area form with the number of pages currently in the drawing area. If you do not change the number of pages, Org Plus will ask you to confirm that you want to permanently lose columns or rows of your drawing. If you increase the number of pages to accommodate your drawing, Org Plus adjusts the drawing area and returns you to the Drawing Board.

4. If you select **Restore**, press ⌷Alt⌷ - ⌷F10⌷ to continue. Org Plus displays the Drawing Area form.

5. Select the number of pages you want for the width and height of the drawing area.

The Drawing Board determines the initial drawing area width and height when you make a drawing from your chart. It uses three settings to do this. One is the size of the paper you have in your printer, as specified in Printer/ Setup. Another is the characters per inch, as set on the Drawing Format form. The last is the lines per inch, also selected on that form.

If you want to expand your drawing area, choose more pages.

Caution: You can also reduce the number of pages in the drawing area. However, you will get a warning message if your drawing extends beyond the number of pages you select. The message explains that parts of your drawing may be permanently lost. Select **No** to change the number of pages so that your drawing will fit. Then, if you want to make the drawing fit on fewer pages, use the Drawing Board commands to modify the drawing. Use the rulers to be sure the drawing fits on the pages you specified. Then change the width and height settings with this command.

6. Press ⌐Alt¬ - ⌐F10¬. The Drawing Board adjusts the space available to you and the length of the rulers if you made changes. If you change the size of your drawing area, your position in the drawing may also change.

Print Drawing

Use these commands to print and reprint your drawing. Print Drawing uses the settings for character and line spacing from the Format/Drawing Area Command.

Print Drawing: Print ⌐F2¬

The Print command prints your drawing, based on printer settings found in the Format/Drawing Area command and the printer setting from Printer/Setup.

1. From any place in the Drawing Board, press ⌐F9¬. Org Plus displays the Command Menu.

2. Select **Print Drawing: Print**. The Drawing Board displays the Print Control form.

3. If you want to print directly to your printer or plotter, select **Printer**. If you want to print to a file, select **Disk**.

4. Select how many copies you want to print and press $\boxed{\text{Alt}}$ - $\boxed{\text{F10}}$.

   If you are printing to a disk file, the Drawing Board asks you to provide a file name. The Drawing Board then stores the print image of your drawing in the file.

Print Drawing: Reprint $\boxed{\text{Ctrl}}$ - $\boxed{2}$ Use Reprint when you want to print your drawing with exactly the same print selections you made previously. This command works just like the Print command and uses the choices previously set with the Print command.

Window Control   The Window Control commands allow you to split the Drawing Board display in two. You can then work on one part of your drawing and see another part at the same time. You can move the cursor from one window to another. You can also set the windows so that they move in the same direction at the same time. In addition, you can turn the ruler display on and off.

Window Control: Toggle Rulers $\boxed{\text{Ctrl}}$ - $\boxed{\text{F5}}$ This command alternately turns on and off the display of the rulers. You can see more of your drawing if you turn off the display of rulers.

1. From any place in the Drawing Board, press $\boxed{\text{F9}}$. Org Plus displays the Command Menu.

2. Select **Window Control: Toggle Rulers**. Org Plus turns on or off the display of the rulers.

Window Control: Open Window $\boxed{\text{Ctrl}}$ - $\boxed{\text{F1}}$ The Open Window command splits the Drawing Board display in two. Your drawing appears in both halves. With two windows, you can then work on one part of your drawing and see another part at the same time.

You can split the display vertically or horizontally.

When you create two vertical windows, they move in the same direction vertically at the same time. However, they move independently horizontally. If you turn off synchronization with the Window Synchronization command, the windows move independently in all directions.

When you create two horizontal windows, they move in the same direction horizontally at the same time. However, they move independently vertically. If you turn off synchronization with the Window Synchronization command, the windows move independently in all directions.

To split the display:

1. From any place in the Drawing Board, press F9. Org Plus displays the Command Menu.

2. Select **Window Control: Open Window**.

3. Select **Vertical** or **Horizontal**.

Window Control: Close Window Ctrl - F2

Select this command to close the second window you created with the Open Window command.

1. From any place in the Drawing Board, press F9. Org Plus displays the Command Menu.

2. Select **Window Control: Close Window**. One Drawing Board window remains.

Window Control: Jump Between Windows Ctrl - F3

Select this command to move the cursor to the other window you created with the Open Window command. You can move the cursor between the two windows as many times as you want.

1. From any place in the Drawing Board, press F9. Org Plus displays the Command Menu.

2. Select **Window Control: Jump Between Windows**. The cursor moves to the other window.

Window Control:
Window
Synchronization
Ctrl - F4

Synchronization makes the two windows move in the same direction when you use any of the cursor movement keys. Vertical windows move up and down together. Horizontal windows move side to side together.

When you split the display into two windows, they are synchronized. You can cancel synchronization with this command.

To make two windows move together or to cancel synchronization:

1. From any place in the Drawing Board window, press F9. Org Plus displays the Command Menu.

2. Select **Window Control: Window Synchronization**.

3. Select **Yes** to synchronize the movement of the two windows. Select **No** to make the window without the cursor remain stationary.

File

These commands allow you to save or clear a drawing while you are working in the Drawing Board.

File:
Save Drawing Alt - 8

The Save Drawing command allows you to save a drawing.

1. From any place in the Drawing Board, press F9. Org Plus displays the Command Menu.

2. Select **File: Save Drawing**. Org Plus displays the Save Drawing form.

3. If you want to store your drawing on a drive (or path) different from the one displayed, press Tab ⇤. Type the correct drive (or path). Then press Enter ↵.

4. Select or type a name for your drawing and press Enter ⏎. The Drawing Board saves your drawing as a file on disk.

   End the name with ".DWG" so you will always know that the file is a drawing. Org Plus adds this extension to the drawing name if you do not.

5. Press any key to continue working in the Drawing Board.

File:
Clear Drawing [Alt] - [9]

The Clear Drawing command allows you to clear a drawing from the drawing board. You can then begin a drawing from scratch. If you do not save a drawing before clearing it, the drawing will be lost *permanently*.

1. From any place in the Drawing Board, press [F9]. Org Plus displays the Command Menu.

2. Select **File: Clear Drawing**. Org Plus asks you to confirm that you want to clear the drawing.

3. Select **Yes** to clear the drawing from the Drawing Board. Select **No** to return to the drawing and press Enter ⏎.

4. Press any key to continue.

Appendix A   Key Assignments

Editing Text in a Field

- Cursor left ⬅ and cursor right ➡ to move character by character without erasing.
- Backspace ⟵ to back up and erase the previous character.
- Home to move to the beginning of the field.
- End to move to the space after the last text in the field.
- Ins to turn on insert mode for squeezing characters between those already there. (The cursor changes to a small block to let you know you are in insert mode.) Press Ins again to turn insert mode off.
- Del to delete characters to the right, one by one.
- Caps Lock and Num Lock work in the normal fashion.
- Ctrl - T to delete the word to the right of the cursor.
- Ctrl - Y to clear the field. If the field has information in it, pressing Ctrl - Y once clears the field. In the Current Position Box, pressing Ctrl - Y a second time deletes the field.
- Ctrl - A to move to the previous word.
- Ctrl - F to move to the next word.
- Ctrl - N to insert a blank field in the Current Position Box at the line the cursor is on. The fields following move down one line.

Selecting Menu Items

- Spacebar to move to the next selection.
- Cursor keys ⬆ ⬇ to move one selection.
- Home and End to move to the first or last selection.
- Press the first letter of a selection to move to that selection.

Selecting Items on a Form

- Cursor up ⌈↑⌉ to move up.
- Cursor down ⌈↓⌉ to move down.
- Cursor right ⌈→⌉ to move to the next selection on the right.
- Cursor left ⌈←⌉ to move to the next selection on the left.
- ⌈Ctrl⌉ - ⌈Home⌉ to move to the top selection.
- ⌈Ctrl⌉ - ⌈End⌉ to move to the bottom selection.
- Press the first letter of a selection to move to that selection on that line.

Moving Between Fields

For moving between fields in the Work Group Display.

- Tab ⌈⇆⌉ to move one field to the right until at the right-most field; then move down and to the left-most field.
- Reverse tab ⌈⇧Shift⌉ - ⌈⇆⌉ to move one field to the left until at the leftmost field; then move up and to the right-most field.
- Cursor up ⌈↑⌉ and cursor down ⌈↓⌉ to move to the field immediately above or below the current field.
- ⌈Ctrl⌉ - ⌈Home⌉ and ⌈Ctrl⌉ - ⌈End⌉ to move to the extremes of the current box and, if pressed again, to move to the next box above or below on the screen if there is one.
- Enter ⌈↵⌉ to move down and to the left. (Exception: Enter ⌈↵⌉ adds additional fields when at the bottom row of a work group.)

Note: All keys for moving among data entry fields, except Enter ⌈↵⌉, ⌈Ctrl⌉ - ⌈Home⌉, and ⌈Ctrl⌉ - ⌈End⌉ wrap from the top to the bottom of the screen and vice versa.

Moving Around a Chart

- ⌈Alt⌉ - ⌈F6⌉ to make the topmost position the Current Position.
- ⌈Ctrl⌉ - ⌈PgDn⌉ or ⌈F10⌉ to move down one level in the chart.
- ⌈Ctrl⌉ - ⌈PgUp⌉ or ⌈F6⌉ to move up one level in the chart.
- ⌈Ctrl⌉ - ⌈→⌉ or ⌈F8⌉ to move to the right one work group (at the same level).
- ⌈Ctrl⌉ - ⌈←⌉ or ⌈F7⌉ to move to the left one work group (at the same level).

Moving Around a Drawing

To move the cursor one character position:

- ⬚↑⬚ ⬚↓⬚ ⬚←⬚ ⬚→⬚

To move the cursor several positions at a time:

- Tab ⬚⇤⬚   — right 10 characters
- Reverse-Tab ⬚⇧Shift⬚ - ⬚⇤⬚ — left 10 characters
- ⬚Ctrl⬚ - ⬚A⬚   — beginning of the previous word
- ⬚Ctrl⬚ - ⬚F⬚   — beginning of the next word

To scroll the drawing:

- ⬚F6⬚ — up one row
- ⬚F7⬚ — left one column
- ⬚F8⬚ — right one column
- ⬚F10⬚ — down one row

To move the window half a screen:

- ⬚PgUp⬚ — up
- ⬚PgDn⬚ — down
- ⬚Home⬚ — left
- ⬚End⬚   — right

To move the window a full screen:

- ⬚Ctrl⬚ - ⬚PgDn⬚ — the window moves down
- ⬚Ctrl⬚ - ⬚PgUp⬚ — the window moves up
- ⬚Ctrl⬚ - ⬚←⬚   — the window moves left
- ⬚Ctrl⬚ - ⬚→⬚   — the window moves right

To move to a specific point:

- ⬚Alt⬚ - ⬚F6⬚   — top center of the drawing
- ⬚Ctrl⬚ - ⬚Home⬚ one time   — left column of the window
- ⬚Ctrl⬚ - ⬚Home⬚ two times — leftmost column of the drawing area

- [Ctrl] - [Home] three times — upper left corner of the drawing area
- [Ctrl] - [End] one time — right column of window
- [Ctrl] - [End] two times — rightmost column of the drawing area
- [Ctrl] - [End] three times — lower right corner of the drawing area

Note: [Ctrl] - [Home] three times and [Ctrl] - [End] three times moves the cursor to the corners of the drawing area, not of the drawing. For example, your drawing area may be two pages wide. Pressing [Ctrl] - [End] three times moves the cursor to the bottom right-hand corner of the second page. You may not see any part of the drawing itself, since it may not extend to the corner of the drawing area.

Using WordStar® Commands

Org Plus supports many of the WordStar keyboard editing commands for those who are familiar with them. The WordStar commands Org Plus supports are:

- [Ctrl] - [S] for cursor left [←]
  [Ctrl] - [D] for cursor right [→]
  [Ctrl] - [E] for cursor up [↑]
  [Ctrl] - [X] for cursor down [↓]

- [Ctrl] - [H] for [←—]

- [Ctrl] - [V] for [Ins]
  [Ctrl] - [G] for [Del]

- [Ctrl] - [I] for [↹]

- [Ctrl] - [M] for Enter [↵]

- [Ctrl] - [T] to delete word to right
  [Ctrl] - [A] move to previous word
  [Ctrl] - [F] move to next word
  [Ctrl] - [N] to insert line
  [Ctrl] - [Y] to clear/delete line (not identical to WordStar command — see above)

Note: You can use all these WordStar commands in the Work Group Display. The commands also work in the Drawing Board, with the exception of [Ctrl] - [T], [Ctrl] - [N], and [Ctrl] - [Y].

Figure A-1
Chart Menu Tree

(printed on multiple pages
and photo-reduced)

Work Group Display Command Menu

Help — F1

File
- Append Chart — Alt-3
- Save Branch — Alt-4
- Exchange Date — Alt-5
- Name Chart/Report Spec — Alt-8
- Use Chart/Report Spec — Alt-9

Tables/Reports
- View Table — Alt-F5
- Table Setup — Shift-F1
- Header & Titles — Shift-F4
- Print Report — Shift-F2

Amounts
- Display Amounts — Ctrl-F1
- Adjust Amount — Ctrl-F6
- Labels — Ctrl-F4
- Formula Setup — Ctrl-F3
- Number Format — Ctrl-F5
- Print Control — Ctrl-F2
- Special Print Control — Alt-7
- Mode of Calculation — Alt-6
- Calculate — Alt-1

Options
- Set Option — Alt-F7
- Clear Option — Alt-F8
- View Options — Alt-F9
- Draw Auxiliary Line — Ctrl-F7
- Modify/Delete Line — Ctrl-F8

Chart
- Preview Chart — F5
- View Chart Status — Alt-F1

Edit Chart
- Insert Position — F3
- Move Position — Alt-F3
- Delete Position — Alt-F4
- Copy Information — Ctrl-F9
- View Clipboard — Ctrl-F10
- Sort Subordinates — Shift-F3
- Find & Mark — Shift-F7
- Assign Mark — Shift-F6
- Unmark Positions — Shift-F8
- Review Marked — Shift-F5

Print Chart
- Print — F2
- Reprint — Ctrl-2
- Custom Drawing — Shift-F9
- Titles & Annotations — F4
- Spec'l Prnt Ctrl/Format — Shift-F10
- 1 - Print Part — Alt-F2
- 2 - Reprint Part — Alt-2

Move Around Chart
- Left — F7/Ctrl-Left
- Right — F8/Ctrl-Right
- Up — F6/Ctrl-PgUp
- Down — F10/Ctrl-PgDn
- Topmost — Alt-F6

Figure A-2
Draw Menu Tree

(printed on multiple pages
and photo-reduced)

Chart produced
by Org Plus
on an HP LaserJet

Drawing Board Command Menu — F9

- **Help** — F1
- **File**
  - Save Drawing — Alt-8
  - Clear Drawing — Alt-9
- **Window Control**
  - Toggle Rulers — Ctrl-F5
  - Open Window — Ctrl-F1
  - Close Window — Ctrl-F2
  - Jump Between Window — Ctrl-F3
  - Window Synchronization — Ctrl-F4
- **Layout**
  - Format/Drawing Area — Shift-F1
- **Options**
  - Enhance Text — Alt-F7
  - 1-Clear Enhancements — Alt-F8
  - Xpanded Text — Shift-F4
  - 2-Clear Xpanded Text — Shift-F5
  - Plotter Pen/Color — Shift-F6
  - 3-Clear Pen/Color — Shift-F8
- **Draw**
  - Solid Lines — Ctrl-F7
  - Dotted Lines — Ctrl-F6
  - Erase Lines — Ctrl-F8
  - Cleanup Lines/Boxes — F5
  - Boxes — F3
  - Other Symbols — F4
- **Edit Drawing**
  - Move Block — Alt-F3
  - Copy Block — Ctrl-F9
  - Delete Block — Alt-F4
  - Justify Text — Shift-F3
- **Print Drawing**
  - Print — F2
  - Reprint — Ctrl-2
- **Move Around Drawing**
  - Left — F7/Ctrl-Left
  - Right — F8/Ctrl-Right
  - Up — F6/Ctrl-PgUp
  - Down — F10/Ctrl-PgDn
  - Top Center — Alt-F6
  - Top Left (Drawing) — Ctrl-Home (3)
  - Bottom Right (Drawing) — Ctrl-F10 or Ctrl-End (3)

Appendix B   Troubleshooting

This appendix covers some of the most common problems that
you may have using Org Plus.

Most problems relate to printing the chart. Refer to "Chapter 2:
Getting Started" for further information on setting up your
printer correctly. Refer to "Chapter 4: Printing Your Chart" for
more information on making the correct selections when
printing.

This appendix covers:

- text that prints out of boxes
- charts that wrap
- charts that are not centered on the page
- printers that print garbage
- plotter problems
- print spoolers and switch boxes
- charts that do not print correctly with the Sideways™
  program
- a few common error messages

Text Is Out of Boxes

- Sometimes other software can leave the printer in a state
  that Org Plus cannot override. Reset the printer (turn the
  power off, then on) and try printing again.
- If text still prints out of boxes, the problem may be caused
  by the printer driver you selected in Printer/Setup. The
  character spacing your printer uses must match the character
  spacing of the printer driver selected in Printer/Setup. If
  they do not match, text prints outside the boxes. Follow the
  steps in "When you Are Not Sure What Printer Setting To
  Use" in "Chapter 2: Getting Started."

■ If your printer is an HP LaserJet (Standard or Plus/500 Plus), make sure you have the font cartridge specified correctly in Printer/Setup. See "Printer Setup" in "Chapter 2: Getting Started." If you change your font cartridge, reset the printer (turn the power off, then on).

```
            Allen Manufacturing Company
               Current Organization
               September 15, 1988


              Monty K. Allen
           Owner and President
                 x205

                   Elaine Burns
                   Admin. Assistant
                      x672


     George Simko          Veronica Tracy
   V. P. Marketing        V. P. Manufacturing
        x616                   x441

            Sue Rosen
            Secretary
              x601


Tom Banks   C. Mosher    John Neer    M. Stull    Steve Cox
Western     Eastern      Plant 1      Plant 2     Engineer
 x307        x310         x515         x605        x706


            A. Dash    H. Ash
            C. Jones   R. Cole
            F. Maas    R. Hess
            L. Neff    P. Hoke
            N. Smith   J. Tse
            J. Yu
```

Figure B-1. Text out of Boxes

Chart Is Wrapping   The right edge of the chart wraps around and prints at the left edge of the paper.
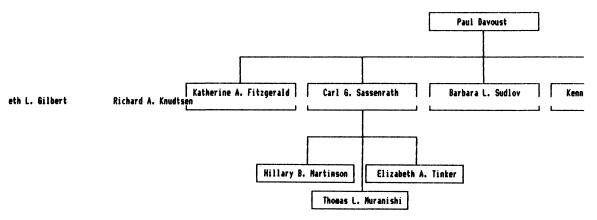
Figure B-2. Chart Wrapping

This symptom indicates that the paper width specified in Printer/Setup is wider than the maximum width that the printer can handle. Most wide carriage printers can only handle paper that is 14 inches wide. If you specify a width of 17 inches in Printer/Setup, the chart wraps. In some cases, this problem also appears to cause extra vertical spaces between lines of the chart.

■   Use a ruler to check the actual width of your paper. Then make sure the width you select in Printer/Setup is not greater than this.

■   Make sure the characters per inch that your printer is set for matches the characters per inch of the setting selected in Printer/Setup.

Chart Is Not Centered on the Page

If your chart prints off the page or is not centered on the page, there are several possible causes:

- Be sure the top of your page is set correctly on your printer.

- You selected **Manual** when you printed, and your chart is too wide to fit on one page. As a result, Org Plus prints the chart on multiple pages. The first page includes only the left part of the chart and does not look centered. Continue printing and the rest of your chart prints on pages that follow. (See also "How To Make Your Chart Fit on One Page" in "Chapter 6: Advanced Chart-Making.")

- The paper length and width you specified in Printer/Setup do not match the actual size of the paper in your printer. Org Plus uses the dimensions you choose in Printer/Setup to center the chart on the page.

  If your chart is too far to the right on the page, the paper width may be set too wide. Conversely, if the chart is too far to the left, the paper width may be set too narrow. If the chart starts too far down the page, the length may be set too long. Use a ruler to measure the actual size of your paper, then adjust the settings in Printer/Setup.

- You may have reversed the paper width and the paper length in Printer/Setup. Holding the chart so that you can read it, the width is the left to right dimension and the length is the top to bottom dimension. If you change from printing in one orientation (portrait and landscape) to another, you must reset your paper dimensions. See "Chapter 2: Getting Started" for more information on print orientation.

- If your chart is not centering top to bottom, make sure the lines per inch that your printer is set for matches the Lines per inch of the setting selected in Printer/Setup.

- If your chart is not centering left to right, make sure the characters per inch that your printer is set for matches the Characters per inch of the setting selected in Printer/Setup.

Printer Prints Garbage

Usually, a printer prints garbage characters instead of lines, boxes, or text because you selected the wrong printer driver in Printer/Setup.

- Make sure you select the correct printer type in Printer/Setup. (You can use the Chart Status command to see what printer you selected.) If you forget to save Printer/Setup, Org Plus may revert to a different setting the next time you run Org Plus.

- If you are using a printer that has several printer emulations, make sure you select the correct setting in Printer/Setup. For example, if you have an Okidata printer with the IBM option, you must select the IBM Graphics setting in Printer/Setup.

- If your printer is connected to a serial port (COM1, COM2, etc.), make sure you specify the same baud rate, parity, and data bits in Printer/Setup that your printer uses.

- Make sure you do not have a bad cable. Try using another cable.

Plotter Problems

The README program and the "Printer/Setup" section contain information on using plotters with Org Plus. "Chapter 2: Getting Started" includes information on the "Printer/Setup" section and the README file.

"Printing ..." Message but Plotter Does Not Print

If the screen continues to flash the "Printing ..." message, but nothing is happening on the plotter, press Ctrl - Break. If plotting starts, the problem is caused by having a ",p" in the mode command. Check the mode command (usually located in your AUTOEXEC.BAT file) and confirm that this is the case. You then have the choice of removing the ",p" (plotters generally don't require ",p" at the end of the mode command) or pressing Ctrl - Break each time you print a chart.

General Plotter Diagnostics

Some of the more common error conditions while using a plotter include:

- "Your printer or plotter is not responding" error message
- plots garbage
- "I/O Buffer Overflow" error message on an HP 7550 plotter

If you experience any of these problems, please use the following check list:

- Reset the plotter (turn the power off, then on).
- Check the port you selected in Printer/Setup and make sure it matches the port the plotter connects to on your computer.
- Check the settings for Baud Rate, Parity, Data Bits, and Stop Bits in Printer/Setup to make sure they coincide with the settings on your plotter.
- Check the handshake setting on your plotter. Org Plus uses hardwire handshaking.
- Check the cable. You may have a damaged cable. (Try swapping the cable.) Or, you may be using the wrong model of cable for your plotter. (Check the following table.)

	All Plotters	HP 7550
IBM PC, XT, and compatibles (25 pin connectors)	HP 17255D	HP 17255F
IBM AT (9 pin connectors)	HP 24542G	HP 24542H

Print Spoolers and Switch Boxes

Org Plus (and other graphics programs) might not work with some print spoolers and switch boxes. If your charts do not print, try the following:

- Try printing without the spooler or switch box.
- Try an Other printer setting in Printer/Setup. This often works when a printer setting that uses graphics does not.

Not Printing Correctly with Sideways

There are several reasons you chart may not print correctly with the Sideways program.

- If you get a string of characters all typed on the same line that starts with "ORG400..." it is because the file you printed is in Org Plus format, not Sideways format. Sideways can only print an Org Plus chart if it is first converted to Sideways format. This is accomplished by printing the chart to a disk file, then choosing that file in Sideways. See "Printing Through Sideways" in "Chapter 4: Printing Your Chart" for directions on printing to a disk file.

  If you did print your chart to a disk file in the Sideways format, make sure that you selected the correct file name in Sideways. Also, make sure you did not inadvertently save your chart over the print-to-disk file. (Use different file names for printing to a disk file than you use for saving a chart.)

- If there are gaps and sections out of place on the chart, you may not have set the Glue Lines properly. See the section on printing with Sideways in "Chapter 4: Printing Your Chart." See also the Sideways manual for information on setting Glue Lines.

Error Messages

"There is insufficient memory to perform this action."

This may mean your chart used all the memory available, or it may mean your chart has reached the maximum allowable number of positions. See "Appendix C: Memory Utilization and Other Org Plus Limits" for information on the maximum number of allowable positions.

- Use the Chart Status command to determine how many positions are still available and to determine how much memory is available to Org Plus. If you have a network or any other memory-resident software loaded, you can make more memory available to Org Plus. Re-start your computer without loading the memory-resident programs or the network shells.

- If your system has limited memory (less than 640KB), the chart capacity will be larger if Chart and Draw are started stand-alone. See "Starting Org Plus Stand-Alone" in "Chapter 2: Getting Started" for instructions.

"Positions in a list, boxed list, or columnar chart style can have only one level of subordinates..."

A work group set into a columnar, list, or boxed list chart style can have only one level of subordinates. For example, a level 3 work group set in 1-column style can have subordinates only at chart level 4. If you ignore the error message and print the chart the way it is, Org Plus omits the positions below chart level 4 in this example.

To find the problem, print the chart. Org Plus deletes the extra level(s) of subordinates. Note which subordinates are missing. Using the Set Options command, change the chart styles of the work groups above the "missing" subordinates to the horizontal or stagger chart style.

See "Chapter 6: Advanced Chart Making" for information about using chart style options and hidden and removed positions in your chart.

Appendix C   Memory Utilization and Other Org Plus Limits

Org Plus has the following limits:

Positions per Chart—600 (your actual maximum depends on available memory — see the note below)

Chart Levels—99

Subordinates per Manager—100

Maximum Fields per Box—24 (6 Text, 6 Alternate Text, 6 Amount, and 6 Consolidated Amount Fields)

Characters per Field—25 for Text Fields, 15 for Alternate Text Fields (39 total when combining Text and Alternate Text Fields with the Append Alt Field Print-Time Code)

Chart Titles—3 fields with 39 characters each

Annotations—16 fields with 39 characters each

Drawings in the Drawing Board—700 character columns wide, 320 character rows tall. Cannot go beyond 12 pages wide or 12 pages tall in any character size.

A chart can have only one position at the topmost level. See "Chapter 6: Advanced Chart-Making" for suggestions on how to make a chart with more than one topmost manager.

Note: The maximum number of positions in a chart depends on the amount of available memory in your computer. Org Plus allows at most 600 positions. You can check the number of positions available for your computer using the Chart Status command.

Other programs can affect the memory available to Org Plus. Programs that stay hidden until you want them (memory-resident programs or TSRs) reduce the amount of memory available. Calculators that pop-up and print spoolers also fall into this category. Org Plus may hold fewer positions if these programs are resident in memory. If you do not load these hidden programs, Org Plus may be able to handle more positions.

If your computer does not have 640KB of memory, you may also achieve a larger chart capacity by starting Chart and Draw stand-alone. If you start Chart stand-alone, you must use Draw to print in landscape. See "Starting Org Plus Stand-alone" in "Chapter 2: Getting Started."

See the README program for the most up-to-date information on Org Plus memory and utilization limits. ("Chapter 2: Getting Started" explains how to use the README program.)

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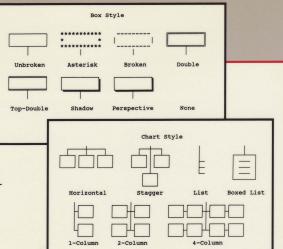
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