VersaPoint Duo

Interpoint Braille Embosser

User's Guide

Freedom Scientific

September 2002

Table of Contents

Part# 440066-001

Your VersaPoint Duo

Contents of the VersaPoint Duo Package should contain:

- Print manual

- Braille manual

- Power cord (110 volt units only)

- Lid

- Reference diskette (textfiles of the User's Guide and the Technical Manual).

If you are missing any of the items listed above, or if your shipment appears damaged in any way, call Freedom Scientific at (800) 444-4443 so we can remedy the situation.

To Unpack the VersaPoint Duo:

1. Check the VersaPoint Duo and accessories carefully for damage.

If any damage is apparent, notify the shipper immediately. Check the contents against the packing list. If a discrepancy exists, notify us as soon as possible.

2. Remove the VersaPoint Duo from the carton.

3. Place the VersaPoint Duo on a flat table, front close to the edge of the table.

4. Remove the cardboard shipping-lock from the VersaPoint Duo's rear paper slot before applying power for the first time.

It is important that you do not place the VersaPoint Duo on a foam pad or similar soft surface while power is applied. The VersaPoint Duo's cooling vents are located on the bottom of the machine, and sufficient space for cooling air circulation must be provided, or damage to your embosser may occur. If at all possible, save the carton and packing material. You will need it if you ever have to return the VersaPoint Duo for service. Although the VersaPoint Duo is sturdy and is very shock resistant, do not ship it without proper packing!

Hardware Description

The VersaPoint Duo is 11.50 inches wide, 24.63 inches deep, and 8.69 inches tall (29 cm wide, 63 cm deep, 22 cm tall) at its highest point.

The height to the embossing surface is 5.25 inches (13.3 cm). It weighs 50 pounds (22.75 kg). The front of the VersaPoint Duo slopes down.

 The back part of the top has no controls, and the front part of the top slopes down. At the center of the sloping surface, is a broad lid that lifts up to expose the tractor mechanism that feeds the paper from front to back.

At the front left of the exposed area is a square, flat, metal Paper guide. The paper-out sensor is beneath the paper guide.

To the right of the lid is the Control Panel, which consists of one knob, a row of three buttons to the right of the knob, a column of a button, a switch, and a button below the knob, and the keypad, below and to the right of the knob.

In the upper left corner is the Impact Level knob. It adjusts the impact level of the embossing mechanism. Turn it counterclockwise to reduce impact, and clockwise to increase impact.

To the right of the knob is the FF (form-feed) button. To the right of FF is the LF (line-feed) button. To the right of LF is the TF (top-of-form) button. The VersaPoint Duo does not have a thumb-wheel, or other roller mechanism, that you can use to manually roll the paper to the top-of-form position.

Below the knob is the Read button. It retracts the paper approximately one-half a page so that you can read what has been embossed.

Below the Read button is the Double-sided/Single-sided (2/#1) embossing switch. It changes the embossing from double-sided (left side of switch depressed) to single-sided (right side of switch depressed).

Escape codes to select single- or double-sided embossing will override the switch setting. Double-sided Braille is interpoint Braille. Single-sided Braille is embossed with the dots on the top of the paper (bank one).

Below the 2/#1 switch is the OL (on-line/off-line) button. It takes the VersaPoint Duo off-line. Pressing it again brings the VersaPoint Duo back on-line.

The keypad has four rows, with three keys in each row, just like a telephone keypad: Numerals 1, 2, 3 in the top row from left to right; 4, 5, 6

Part# 440066-001

in the second row; 7, 8, 9 in the third row; and *, 0, # in the bottom row. The # key terminates each command sequence.

The back has two cutouts, one near the right side and vertically oriented, the other near the middle and horizontally oriented. The vertical cutout contains the power switch and the power cord socket.

The power switch is a rocker switch. Press down on the right side.

To turn the VersaPoint Duo on; down on the left to turn it off.

The power cord socket accommodates a standard office machine power cord or other power cord as necessary, depending on your geographical location and power requirements.

The horizontal cutout contains the parallel and serial ports. To the left, when viewed from the rear, is the Centronics compatible parallel port. To the right is the RS-232 (EIA-232D) serial port. It is configured as DTE.

Right side has no controls. It has an indented handle to assist in moving the VersaPoint Duo.

Left side has no controls. It has an indented handle to assist in moving the VersaPoint Duo. Bottom surface has cooling vents along the bottom toward each end.

Using the One-touch Keypad Controls

Above the keypad is a row of buttons and a knob. To the left of the keypad is the column of buttons. Buttons have an immediate effect when pressed and are normally used when the VersaPoint Duo is in operation.

From left to right, the top row of buttons and their keypad equivalents, if any, are:

- FF--Form-feed
- LF--Line-feed
- TF--Top-of-form (2#)

From top to bottom, the left column buttons and their keypad equivalents, if any, are:

- Read (RD in Braille)
- 2/#1 Double/Single (#2 in Braille, parameter 33)

- OL On-line (OL in Braille)

- On-line/Off-line Switch (OL)

Each time the on-line/off-line button is pressed, the VersaPoint Duo toggles between on-line and off-line status. When you turn on the VersaPoint Duo, it defaults to on-line.

When on-line, you can receive and emboss data. Read and multi-copy mode commands are performed while the VersaPoint Duo is on-line. Also, when on-line, VersaPoint Duo plays the "Charge" tune.

When off-line, you can modify a configuration. You can halt reception of data into the buffer to stop embossing at the end of the current line. (Any data left in the buffer will not be disturbed, and embossing will continue as soon as the VersaPoint Duo is placed back on-line.) When off-line, VersaPoint Duo plays "The Entertainer" tune.

To switch the VersaPoint Duo from one setting to another, press OL.

Line-feed Button (LF)

The line-feed button advances the paper to the next line, and is meant for use while in single-sided mode. Each time LF is pressed, the page advances one line. (Using LF to advance the page does not disturb the top-of-form setting.)

During interpoint operation, it is not practical to use the VersaPoint Duo's LF button, because then the VersaPoint Duo is processing two pages of data at once. It will wait until it receives at least one full page of interpoint data, or 27 presses of the LF (line-feed) button, before it begins embossing or moving the paper.

To move the paper to the next line while in single-sided mode, first ensure that the VersaPoint Duo is off-line, then press LF.

Note:	Do not press LF while in multi-copy mode. It will abort embossing and switch on-line. The text in the multi-copy buffer will not be lost. You can restart multi-copy with (4*nn#).

Form-feed Button (FF)

The form-feed button advances the page to the next top-of-form position. Each time FF is pressed, the page advances to the next top-of-form position. Like LF, this function can only be used while off-line.

Note: If you press FF while in multi-copy mode, the VersaPoint Duo pauses embossing and switches on-line.

To move the paper to the top of the next page, ensure that the VersaPoint Duo is off-line, then press FF.

Use the FF button to eject: a single copy (or advance the paper for removal); the last page of an odd-numbered document, or a partial page left in the buffer of the embosser.

If you are embossing a single page while in the interpoint mode, and the VersaPoint Duo does not begin embossing, ensure that the VersaPoint Duo is off-line, and then press FF.

Read Button (RD)

The Read button is used to review embossed information without removing the document from the VersaPoint Duo. Pressing Read pauses embossing and exposes about one-half page. This enables you to read the line that was under the platen.

Pressing Read a second time reverses the process, so that the last line goes back under the platen, and your job resumes embossing where it left off.

To read the text currently being embossed while in a command mode (R*#), ensure that the VersaPoint Duo is off-line, then press Read, star, pound.

To emboss a specified parameter's current value in the current configuration (R*n#), ensure that the VersaPoint Duo is off-line, then press Read, star, parameter number, pound. (Valid parameter numbers are 2 through 32.)

For example, to emboss the control character table, press (R*20#).

To emboss all parameters in a specified configuration (n*R#), ensure that the VersaPoint Duo is off-line, then press configuration number,

star, Read, pound. (Valid parameters are: 0 = current configuration, 1 through 16.)

For example, to emboss all parameters in configuration 1, press 0*1# to enter configuration 1, press 1*R# to emboss the parameters and, finally, press # to exit.

Start-up Functions and One-touch Buttons

You can use the one-touch buttons, while turning on the VersaPoint Duo, to perform several useful functions. To perform these functions, hold down the appropriate button, or buttons, turn on your machine, and keep the buttons depressed until you hear the On-line ("Charge" tune) and Off-line tones followed by a long beep. Then, release the buttons.

System reset: Hold down FF, LF, and TF. The VersaPoint Duo resets to the default configuration, configuration 1.

Emboss test: Hold down FF. The VersaPoint Duo embosses the test message with the current model number and the firmware version number.

Emboss 6-dot pattern: Hold down LF. The VersaPoint Duo embosses double-sided, full-cell, 6-dot characters, filling the page.

Emboss configurations: Hold down FF and LF. The VersaPoint Duo embosses the values for all parameters for each configuration.

Emboss graphics test: Hold down LF and TF. The VersaPoint Duo embosses the Freedom Scientific logo.

Using the Keypad

The real power of the VersaPoint Duo is in its configurations, which will be fully described later. Your primary access to these configurations is through the keypad.

To use the keypad, VersaPoint Duo must be off-line. If necessary, press OL to toggle off-line. The star key (#) is the Enter key.

When you press #1 listen for the tone. If the valid-sequence tone (two short descending beeps) is heard, the entry was accepted.

If the invalid sequence tone (short descending tone) is heard, the sequence that you pressed was not correct and the parameter value is left unchanged. You may have to press # several times before the exit tone, a series of rapid beeps, is heard.

Setting Up the VersaPoint Duo

Here is how to set up your embosser. First, install paper, then turn the power switch OFF. Insert the line cord into the AC interlock, and plug it into a grounded outlet. Now turn the power switch ON.

The VersaPoint Duo will execute a self-test and play the "Charge" tune. If the self-test fails, a long descending tone will be played. Set the top-of-form and again turn the power switch OFF.

Now connect a parallel cable between your computer and the VersaPoint Duo, and then turn the power switch ON.

Send a short sample file. SAMPLE32.TXT and SAMPLE40.TXT are Included on your reference diskette. You're now ready to go!

To install paper: There is a paper retainer just in front of the left tractor. When installing paper, the left edge must pass under the paper retainer for the paper-out detector to function properly.

If the paper stack is small, place it on the table in front of the VersaPoint Duo. Or, if your paper stack is large, place it on the Floor in front of the table. Lift the lid to expose the paper feed tractors.

Open the paper tractors (located near the front of the machine), and lift the inside edge of each hold down. After they have been lifted to the vertical position, they will stay open until closed by hand.

Position the left tractor so that the pins line up with the holes on the edges of the paper. To move the tractor, push the release handle (located near the outside edge of the tractor) toward the rear. You can now slide the tractor right and left on the rails. (It may be a little bit stiff at first.) Adjust the right tractor according to the paper's width.

After inserting the paper on the sprocket pins, close the paper hold-downs and move the release handles toward the front of the VersaPoint Duo. Be sure to allow enough room behind the VersaPoint Duo to collect the paper so that it does not bunch up.

To set the top-of-form, first ensure that paper has been installed. Turn on the VersaPoint Duo and listen for the "Charge" tune. After the tone has finished, take the VersaPoint Duo off-line by pressing the On/off-line button (OL), located in the bottom left-hand corner of the control panel.

The VersaPoint Duo should signify its off-line status by playing "The Entertainer." Now, press the TF button--or press two, pound (2#7 on the keypad).

The paper begins to move as the VersaPoint Duo automatically seeks and sets top-of-form. Top-of-form will not be correctly set if there is more than one form-length of paper extending from the machine when the command is issued.

If top-of-form is successfully found, the VersaPoint Duo will exit, go back on-line, and play the "Charge" tune. If it becomes necessary to reset top-of-form in the middle of an embossing session, you must remove the finished pages before pressing the TF button.

Moving the paper by pressing the LF (line-feed) button, the FF (form-feed) button, or the RD (Read) button will not disturb the top-of-form setting.

Top-of-form offset is configuration parameter number 30, enabling

You to lower the default setting in 1/10-inch increments. The new value will take effect the next time you set the top of form using the TF button (or 2#).

After the top of form has been set, you can press the TF button to reset top-of-form after installing a new batch of paper.

Once set, the VersaPoint Duo will remember the top-of-form setting.

To remove the finished document, ensure that the VersaPoint Duo is off-line by pressing the OL (on/off-line) button. Move the current page out of the VersaPoint Duo by pressing the FF (form-feed) button.

If the VersaPoint Duo resumes embossing in order to finish the last part of a page, wait until it finishes, then press the FF (form-feed) button again. After removing the document, retract the blank page back into the VersaPoint Duo by pressing # twice.

Configurations

The VersaPoint Duo has eight stored configurations, numbered 1 through 8. Each of these configurations contains the 35 settings required to work with a particular computer installation.

Additionally, there are eight more configurations available for you to modify.

The current configuration is the stored configuration currently in use. The default current configuration is configuration 1. The default configuration has control whenever you turn on your VersaPoint Duo.

The configurations can also be changed temporarily by using escape sequences in the text of your documents. Escape sequences do not change the parameter values in the configuration. They remain in effect only until the document is finished being embossed, then the previous parameters are reset.

For your convenience during installation, configurations 1 through 8 are preset for some popular computers. Configurations 9 through 16 are the same as configuration 1, and are available for you to modify.

You can change the settings in any configuration. Any changes that you make will be remembered, even after the power has been turned off.

For example, you might change configuration 9 for parallel communication with one computer, configuration 10 for serial communication with a second computer, and configuration 11 for serial communication through a modem with a terminal at a university.

The eight pre-defined configurations are these:

- IBM PC/XT & compatibles--parallel
- Apple Super Serial Card--serial, 9600 baud, 8 data, 1 stop, no parity
- HP 125, HP 150--serial, 9600 baud, 7 data, 1 stop, even parity-- Kurzweil Reading Machine--serial, 9600 baud, 8 data, 1 stop, no parity
- VersaBraille--serial, 1200 baud, 8 data, 1 stop, even parity
- Micro Braille Transcription Service--serial, 9600 baud, 8 data, 1 stop, no parity

- TranSend Systems--serial, 9600 baud, 8 data, 1 stop, no parity
- Terminal communications--serial, 9600 baud, 7 data, 1 stop, even parity 11

For more detailed information about these configurations, review Appendix B in this document, and see the VersaPoint Duo Technical Manual.

To make a specific configuration the current configuration, first ensure that the VersaPoint Duo is off-line. Enter the selected configuration (0*n #). To close the configuration, press one, star, one, pound. (1*1 #). Exit the configuration (#).

For example, to make configuration 1 the current configuration, press 0*1# to enter configuration 1, press 1*1# to make configuration 1 the current configuration, and finally, press # to exit.

Listening to Tonal Messages

The VersaPoint Duo uses tones to indicate status of the embosser and to inform you that a particular key sequence was correctly or incorrectly executed.

To listen to sample tones, ensure that the VersaPoint Duo is off-line. Then press the appropriate key sequence as listed below.

Note: In this table, columns follow each other in this order:

- Message: Sequence; Tone heard.
- Power-on self test OK: 1*0 #; Reveille.
- Power-on self test failed: 1*1 #; Long descending tone (the error tone).
- Good sequence executed: 1*2 #; Two short descending beeps.
- Invalid sequence tone: 1*3 #; Short descending tone.
- Serial overrun error: 1*4 #; Four long beeps.
- On-line: 1*5 #; "Charge" tune.
- Off-line: 1*6 #; "The Entertainer" tune.
- Console bell: 1*7 #; One short beep.
- Paper out: 1*8 #; Continuous tone, rising and falling.
- Exit tone: 1*9 #; Series of rapid beeps.

- Multi-copy buffer full: 1*10 #; Tschaikovski's "1812 Overture" tune.

Modifying Configuration Parameters

To change a configuration parameter, follow these steps.

Enter the configuration (0*n #). Then, change the parameter, and finally, exit the configuration (#).

For example, to make configuration 2 the power-on default, press 0*2 # to enter configuration 2, then press 1*0 # to change the power-on default, and finally, press the # key to exit.

To enter a configuration (0*n #), ensure that the VersaPoint Duo is off-line. Press zero, star, configuration number, pound (0*n #). (Valid configuration numbers are 1 through 16.)

For example, to enter configuration 1, press 0*1 #.

To exit a configuration, returning to off-line mode (#), ensure that the VersaPoint Duo is off-line. Press # until you hear a series of beeps.

To set the configuration as the default configuration or as the current configuration (1*n #), ensure that the VersaPoint Duo is off-line. Then press one, star, parameter value, pound (1*n #).

The default configuration is the configuration that is used when the VersaPoint Duo is turned on. The current configuration is the configuration to be used until either a different configuration is selected, or until the VersaPoint Duo is turned off. (Valid values are 0 = default, 1 = current.)

To select a communication port (2*n #), ensure that the VersaPoint Duo is off-line. Press two, star, port number, pound (2*n #). (Valid port numbers are 0 = serial, 1 = parallel.)

To set the serial baud rate (3*n #), ensure that the VersaPoint Duo is off-line. Press three, star, baud rate number, pound (3*n #). (Valid baud rates are 45.5, 50, 75, 110, 134.5, 150, 300, 600, 1200, 2400, 4800, 7200, 9600, 19200, 38400.)

To set the number of serial data bits (4*n #), ensure that the VersaPoint Duo is off-line. Press four, star, number of data bits, pound (4*n #). (Valid data bit numbers are 5, 6, 7, or 8.)

To set the number of serial stop bits (5*n #), ensure that the VersaPoint Duo is off-line. Press five, star, number of stop bits, pound (5*n #). (Valid stop bit numbers are 1, 1.5, 2.)

To set the serial parity (6*n #), ensure that the VersaPoint Duo is off-line. Press six, star, parity number, pound (6*n #). (Valid parity numbers are 0 = none, 1 = odd, 2 = even.)

To set the serial communication code (7*n #), ensure that the VersaPoint Duo is off-line. Press seven, star, code number, pound (7*n #). (Valid serial communication code numbers are 0 = ASCII, 1 = Baudot.)

To set the serial handshaking (8*n #), ensure that the VersaPoint Duo is off-line. Press eight, star, handshake number, pound (8*n #). A high signal means ready. DTR & 1 RTS are outputs. CTS & DTR are inputs.

(Valid handshaking numbers are 0 = Xon/Xoff, 1 = DTR & CTS, 2 = DTR & DSR, 3 = RTS & CTS, 4 = RTS & DSR.)

To set the Braille mode (9*n #), ensure that the VersaPoint Duo is off-line. Press nine, star, Braille mode number, pound (9*n #). Braille mode determines whether 6-dot or 8-dot Braille will be embossed. (Valid Braille mode numbers are 0 = 6 dot, 1 = 8 dot.)

To set word wrap (10*n #), ensure that the VersaPoint Duo

Is off-line. Press one, zero, star, word wrap number, pound (10*n

#). (Valid word wrap numbers are 0 = OFF, 1 = ON.)

Word wrap splits words that extend beyond the right margin and moves the extra characters to the following line, rather than truncating the word and discarding the extra characters. For example, to turn word wrap ON in configuration 1, press 0*1 #, then 10*1 #, and then 1*1 #.

But, if you want word wrap that does not split words, use the hot zone feature instead (22*n #).

To set perforation skip (11*n #), ensure that the VersaPoint Duo is off-line. Press one, one, star, perf skip number, pound (11*n #). (Valid perf skip numbers are 0 = OFF, 1 = ON.)

Perforation skip advances to the next top-of-form when the lines per page setting is exceeded. For example, to set word wrap ON, perf skip OFF, and right margin to 40 in configuration 1, ensure that the VersaPoint Duo is off-line, press 10*1 #, 11*0 #, 14*40 # and then OL to go back on-line.

To set the paper-out detector (12*n #), ensure that the VersaPoint Duo is off-line. Set the paper-out detector by pressing one, two, star, paper-out detector value, pound (12*n #). (Valid paper-out detector number 0 = OFF, 1 = ON.)

If there is no paper in the VersaPoint Duo when the paper out detector is turned on, embossing ceases and a long series of rising and falling notes is heard. The paper-out detector should be turned off ONLY if an operator is present to detect a paper-out error.

> Warning: If the paper out detector is turned OFF and the VersaPoint Duo is allowed to emboss without paper installed, damage may occur to both the styluses and the platen!

To set the auto line-feed mode (13*n #), ensure that the VersaPoint Duo is off-line. Press one, three, star, auto line feed mode number, pound (13*n #).

(Valid auto line-feed values are 0 = the mainframe already handles it correctly, 1 = adds a line-feed before the test is sent from the source, 2 = adds a line-feed after every carriage return, 3 = adds a line-feed before the text is sent from the source and after every carriage return.)

Often, data received from a computer will have a carriage return character at the end of each line, but no line-feed character. This will move the carriage to the left, but will not advance it to the next line. If more text is received, it will be embossed right over the top of the previous line. If you are using the VersaPoint Duo with a computer that does not send line feed characters, setting this parameter to 2 will automatically advance the page to the next line after receiving a carriage return.

To set the right margin (14*n #): ensure that the VersaPoint Duo is off-line. Press one, four, star, right margin value, # (14*n #). (Valid right margin numbers are 2 through 40.)

The right margin number must be greater than the left margin number. For example, to center a 30-character line on an 8-1/29 page, set the left margin at 2 (15*2 #), and the right margin at 31 (14*31 #).

Here is another example: to center a 40-cell line on an 119 page, set the left margin at 1 (15*1 #) and the right margin at 40 (14*40 #).

If you are embossing one side only, for the maximum amount of Braille on the page, set right margin to 40 (the maximum line length allowed). If you are embossing on both sides (interpoint), center the Braille on the page so that the rightmost point of the line on page one is also the leftmost point on page two.

Be aware that this setting may not perfectly center your page, because your tractor feed placement will influence the results.

To set the left margin (15*n #), ensure that the VersaPoint Duo is off-line. Press one, five, star, left margin number, pound (15*n #). (Valid left margin numbers are 1 through 39.)

The left margin number must be less than the right margin number.

Here are two examples. First, to center a 30-character line on an 8-1/29 page, set the left margin at 2 (15*2 #), and the right margin at 31 (14*31 #). Or, to center a 40-cell line on an 119 page, set the left margin at 1 (15*1 #), and the right margin at 40 (14*40 #).

If you are embossing on one side only, for the maximum amount of Braille on the page, set left margin to leave just enough room for binding. If you are embossing on both sides (interpoint), center the Braille on the page so that the rightmost point of the line on page one is also the leftmost point on page two.

Just as we told you above, this setting may not perfectly center your page, because your tractor feed placement will influence the results.

To enable the VersaPoint Duo to emboss control characters (16*n #), ensure that the VersaPoint Duo is off-line. Press one, six, star, emboss control character number, pound (16* #). (Valid emboss control character numbers are 0 = OFF, 1 = ON.)

ASCII control characters (decimal values 0 thru 31) are not normally embossed, but perform special functions when received by the VersaPoint Duo. They are represented by special Braille codes, and are used by the VersaPoint Duo primarily for system diagnostics.

To set the number of lines per page (17*n #), ensure that the VersaPoint Duo is off-line. Press one, seven, star, number of lines per page, pound (17*n #). (Valid lines per page numbers are 1 through the maximum number of lines that will fit on the page.)

For example, to set lines per page to 25 in configuration 1, press 17*25 #.

To set the page length (18*n #), ensure that the VersaPoint Duo is off-line. Press one, eight, star, page length value (1.0 inch increments), pound (18*n #). (Valid page length numbers are 3.0 inches through 14 inches, in 1.0 inch steps.)

To set the multi-strike count (19*n #), ensure that the VersaPoint Duo is off-line. Press one, nine, star, multi-strike mode value, pound (19*n #). Used for embossing light weight plastics or foils. (Valid multi-strike mode numbers are 1, 2, or 3.)

To add a character into the control-character table (20*n #), ensure that the VersaPoint Duo is off-line. Press two, zero, star, control character table number, pound (20*n #). (Valid control character table numbers are the ASCII decimal values of the character.)

Some characters sent by the computer may produce unwanted responses if they coincide with control characters recognized by the VersaPoint Duo. So, that is where the control-character table comes in. All characters in the control-character table are ignored by the VersaPoint Duo, to prevent unwanted responses. A maximum of 10 characters may be entered to the table.

For example, to add the carriage return character (ASCII 13) to the control character table, press 20*13 #.

To remove a character from the control-character table (21*n #), ensure that the VersaPoint Duo is off-line. Press two, one, star, control character table number, pound (21*n #). (Valid control character table numbers are the ASCII decimal values of the character.)

To turn the hot zone on or off (22*n #), ensure that the VersaPoint Duo is off-line. Press two, two, star, hot zone number, pound (22*n #). (Valid hot zone numbers are 0 = OFF, 1 = ON.)

A hot zone is similar to word wrap, in that it prevents the VersaPoint Duo from truncating a line that exceeds the right margin. It is different in that it looks ahead at the line being embossed, and determines if the last word will fit within the right margin. If it will not, the VersaPoint Duo places it on the next line.

See also the "To set word wrap (10*n #)" section, on [print] page 13.

To turn escape sequences recognition on or off (23*n #), ensure that the VersaPoint Duo is off-line. Press two, three, star, escape sequences recognition number, pound (23*n #). (Valid escape sequences recognition numbers are 0 = OFF, 1 = ON.)

Escape sequences can be sent from the computer to temporarily override the current configuration. For more information, see the VersaPoint Duo Technical Manual.

To set the bell position (24*n #), ensure that the VersaPoint Duo is off-line. Press two, four, star, position number, pound (24*n #). (Valid position numbers are 0 = off, 1 through 99.)

Console bell will sound when current line length = n.

Reserved (25*n #): This parameter is not used.

To set local echo mode (26*n #), ensure that the VersaPoint Duo is off-line. Press two, six, star, local echo number, pound (26*n #). (Valid local echo numbers are 0 = OFF, 1 = ON.)

When local echo mode is on, text that appears on the screen using a mainframe terminal interface is embossed by the VersaPoint Duo.

To set the Braille format to Computer Braille or Grade 1 Braille (27*n #), ensure that the VersaPoint Duo is off-line. Press two, seven, star, Braille format number, pound (27*n #). (Valid Braille format numbers are 0 = Computer, 1 = Grade 1.)

To set the column mode for screen dumps (28*n #), ensure that the VersaPoint Duo is off-line. Press two, eight, star, column mode number, # (28*n #). (Valid column mode numbers are 0 = OFF, 1 = 80 column, 2 = 160 column.)

You can emboss a full 80 or 160 column computer screen on the VersaPoint Duo using your computer's Print Screen key. The first 40 characters of each line are embossed on the first page. Then, the next 40 characters for each line are embossed on the second page.

The pages (two for 80 column, and four for 160 column) can be separated at the perforations and placed side by side, producing an 80- or 160-column page.

The lines per page setting must be set correctly in order for screen dumps to function properly. On most computers, this will be equal to the number of lines that appear on the display screen, but this is not true for all computers.

For example, the IBM PC displays 25 lines on the screen but sends 26 lines to the VersaPoint Duo when a print screen is executed. And, please be aware that screen dump mode does not function while the VersaPoint Duo is in multi-copy mode.

Note:	Do not send more than 80 characters per line in 80 column mode or 160 characters per line in 160 column mode. Any characters exceeding the line length will overwrite the text just embossed.

To set the alphabet character set (29*nn #), ensure that the VersaPoint Duo is off-line. Press two, nine, star, first variable number, second variable number, pound (29*n #).

The first variable specifies the extended character set. (Valid extended character set numbers for the first variable are 0 = No extended set, 1 = IBM 437, 2 = IBM 850, 3 = Spain, 4 = France.)

The second variable specifies the standard character set. (Valid standard character set numbers for the second variable are 0 = USA, 1 = Spanish, 2 = German, 3 = Swiss, 4 = Danish, 5 = Austrian, 6 = French, 7 = Italian).

The extended character set responds to ASCII characters 128 thru 255; the standard character set responds to ASCII characters 32 thru 127.

For example, select the IBM 437 extended character set and the German standard character set in configuration 1 by following these steps:

Ensure that the VersaPoint Duo is off-line, press 29*12 #, then press OL to return to on-line.

To set the top-of-form offset (30*n #), ensure that the VersaPoint Duo is off-line. Press three, zero, star, top-of-form offset number, pound (30*n #). (Valid top of form offset numbers are in 1/10 inch increments.)

The top-of-form offset determines how far down the page the embossing will begin. Top-of-form offset is independent of the TF (top-of-form) button on the Control Panel command. For example, to set top-of-form 1.7 inches from the paper perforation, press 30*17 #.

To set eight-bit character handling (31*n #), ensure that the VersaPoint Duo is off-line. Then set eight-bit character handling by pressing three, one, star, eight-bit character handling number, pound (31*n #). (Valid eight-bit handling numbers are: 0 = emboss eight-bit characters, 1 = ignore eighth bit, 2 = replace the eighth bit with a space, 3 = discard the eighth bit.)

All of the characters in the ASCII character set can be represented with seven data bits. Many personal computers only send seven data bits. Even if they have an eight-bit setting, the eighth bit is always a logical zero. But, of course, there are always exceptions!

The IBM PC uses the eighth bit to represent special graphic characters. Some mainframe computers use it for special screen control functions. So, it is important for an embosser to provide a way of handling these eight-bit character codes.

The VersaPoint Duo provides four options for dealing with eight-bit characters:

Option 0 lets you emboss them. The character tables currently have spaces for character codes above 127, thus you will get spaces whenever the eighth bit is set. You can, however, load your own special codes into the tables to represent these characters.

Option 1 ignores the eighth bit. The ASCII character represented by the value of the first seven bits will be embossed.

Option 2 embosses a space for any character with the eighth bit set, regardless of the value of the other bits.

Option 3 discards any characters with the eighth bit set. Nothing will be embossed at all.

To set the auto-emboss constant (32*n #), ensure that the VersaPoint Duo is off-line. Set the auto-emboss constant by pressing three, two, star, auto-emboss constant number, pound (32*n #). (Valid auto-emboss constant values are 0 through 99 seconds, in one-second increments.)

To set the embossing mode (33*n #), ensure that the VersaPoint Duo is off-line. Set the embossing mode by pressing three, three, star, embossing mode number, pound (33*n #). (Valid embossing mode numbers are 0 = interpoint, 1 = bank one.)

Interpoint mode embosses on both sides of the sheet of paper. Bank one mode embosses with the dots on the top of the paper only.

To set the paper grade (34*n #), ensure that the VersaPoint Duo is off-line. Set the paper grade by pressing three, four, star, paper grade number, pound (34*n #). (Valid paper grade numbers are 0 through 12. 0 = lowest paper grade, 12 = highest paper grade.)

Higher paper grade settings are used for thicker papers. This slows the embossing action, to fully mark the paper.

To set the dynamic Braille scaling (35*n #), ensure that the VersaPoint Duo is off-line. Then set the Braille scaling by pressing three, five, star, scaling value, pound (35*n #).

(Valid scaling values are: 0 = Library of Congress standard) (.4 line-to-line), (.090 dot-to-dot), (1 = California sign mode)(2 = jumbo Braille), (3 = increased line spacing), .6 line-to-line) (4 = petite mode) (Japanese Braille, .5 line-to-line, .080 dot-to-dot), (5 = petite interline double-spaced.)

Multi-copy Mode

Multi-copy mode utilizes a special part of memory called the multi-copy buffer. It can contain up to 28,000 characters of text. Up to 99 copies can be made of the text stored in the buffer without reloading the text from the computer.

The 30,000-character text buffer can be partitioned into a 2,000 character communications buffer and a 28,000 character multi-copy buffer. The multi-copy buffer then clears itself and prepares the VersaPoint Duo to receive data from the host computer. Up to 28,000 characters can be stored in the multi-copy buffer for subsequent embossing, or about 28 pages.

Should your document exceed 28,000 characters, convert it into smaller files before sending it to the VersaPoint Duo.

If the file you are sending exceeds 28,000 characters, Tschaikovsky's "1812 Overture" will sound, warning you that subsequent data is not being stored in the buffer. The VersaPoint Duo will also begin embossing the text that has exceeded the buffer. This enables you to see where in your file the overflow occurred. Now, you know where to split your document.

Unlike other numeric keypad entries, multi-copy sequences are executed with the VersaPoint Duo on-line. Because these sequences apply only to the multi-copy function, they are not entered into any of the configurations.

Please note that the screen dump mode must be set to off (28*0 #) in the current configuration before using multi-copy mode.

These sequences are direct commands to the VersaPoint Duo and are not entered into any of the configurations. Where an "nn" appears in the sequence, it represents the number of copies to emboss, up to a maximum of 99.

To activate multi-copy mode and initialize the copy buffer (3*0 #), ensure that the VersaPoint Duo is on-line and that the screen dump mode has been set to off (28*0 #). Activate multi-copy mode, and initialize the buffer, by pressing three, star, zero, pound (3*0 #).

To indicate end of text (3*1 #), ensure that the VersaPoint Duo is on-line and that the screen dump mode has been set to off (28*0 #). Indicate the end of the text to emboss by pressing three, star, one, pound (3*1 #).

This sequence tells the VersaPoint Duo that all the data has been sent. Any data sent after end-of-text has been indicated will not be stored. If no

data was received from the computer, the error tone will sound, thus warning you that the buffer is still empty.

To emboss a specified number of copies from the multi-copy buffer (4*nn #), ensure that the VersaPoint Duo is on-line and that the screen dump mode has been set to off (28*0 #). Begin embossing by pressing four, star, the number of copies to emboss (1-99), pound (4*nn #).

This sequence begins embossing from the multi-copy buffer. The number entered for "nn" tells the VersaPoint Duo how many copies to make. From 1 to 99 copies can be made at one time. If more copies are required, enter the sequence again after embossing has completed.

To halt embossing at the end of the current copy (3*2 #), ensure that the VersaPoint Duo is on-line and that the screen dump mode has been set to off (28*0 #). You may halt embossing at the end of the current copy by pressing three, star, two, pound (3*2 #).

Halting embossing stops copy production from the multi-copy buffer. However, the VersaPoint Duo is still on-line, and its memory is still partitioned into a text buffer and a multi-copy buffer.

You may now use the VersaPoint Duo to emboss data from the computer in a normal manner, except that only the 2,000 character portion of the text buffer is available for new data. The document stored in the multi-copy buffer previously will remain intact and more copies of it can be made at any time.

For example, let's say that we set the multi-copy buffer to emboss 40 copies of the current text. But, after embossing just three copies you decided that four would be sufficient. Pressing 3*2 # while the fourth copy is being embossed causes the VersaPoint Duo to stop at the end of the fourth copy.

To exit multi-copy mode (3*3 #), ensure that the VersaPoint Duo is on-line and that the screen dump mode has been set to off (28*0 #). Exit multi-copy mode by pressing three, star, three, pound (3*3 #).

The multi-copy buffer will be disabled, the text buffer will be cleared, and the text buffer will be back to its original size of 30,000 characters.

To suspend embossing at the top of the next sheet of paper (3*4 #), ensure that the VersaPoint Duo is on-line and that the screen dump mode has been set to off (28*0 #). Suspend embossing by pressing three, star, four, pound (3*4 #).

This sequence will suspend the multi-copy operation at the top of the next sheet of paper. Provided you do not turn off power or reset the machine, you will be able to send another short document and resume embossing where you left off.

To resume embossing a suspended multi-copy job (3*5 #), ensure that the VersaPoint Duo is on-line, that the screen dump mode has been set to off (28*0 #), and that the paper is at top-of-form. Resume embossing by pressing three, star, five, pound (3*5 #).

This sequence will allow you to resume embossing a multi-copy job that was temporarily suspended with the 3*4 # sequence. Ensure that the paper is at top-of-form prior to invoking this sequence.

The OL Key and the RD Key in Multi-copy Mode

The on-line key functions normally while in multi-copy mode. Embossing can take place only while the VersaPoint Duo is on-line. If the on-line key is pressed while embossing from the multi-copy buffer, embossing will stop. It will continue when the on-line key is pressed again. This is very useful if you need to stop the VersaPoint Duo temporarily.

The Read key can also be used for this purpose. In addition to halting the VersaPoint Duo, it will move the paper out from under the platen. Now, the Braille that was just embossed can be read. Pressing the Read key again will move the paper back under the platen and embossing will resume where it left off.

Note: Pressing LF (line feed), FF (formfeed) or entering the Service Menu while off-line will exit the multi-copy mode. The current copy will not be completed, but the copy buffer will remain unchanged. You can continue embossing by going back on-line and entering the (4* nn #) sequence.

To pause multi-copy embossing, press the OL (on-line) key. You can resume embossing by pressing the OL key again.

Remember, embossing can only take place while the VersaPoint Duo is on-line.

To view progress of the embossing, first pause embossing by pressing the Read key. Read the Braille that has been revealed.

Resume embossing by pressing the Read key again. (Neither the current nor subsequent copies will be affected.)

In addition to pausing the embossing, you can move the paper out from under the platen and read the Braille that was just embossed, using the Read button.

> Note: Pressing LF (line-feed), pressing FF (formfeed), or entering the Service Menu while off-line will exit the multi-copy mode. The current copy will not be completed, but the copy buffer will remain unchanged. You can continue embossing by going back on-line and begin embossing again (4*nn #).

Single-sheet Mode

Single-sheet mode, or friction-feed option, allows your Versa-Point Duo to emboss Braille on loose paper, such as personal stationery, business letterhead or other lightweight material. When using the friction-feed option, the VersaPoint Duo must be set up to emboss single sheets.

All changes to configuration settings should be completed before entering single sheet mode. Entering configurations while off-line exits the single-sheet mode, as does turning the machine off.

> Caution: Please note that single-sheet mode automatically disables the paper-out sensor, so the VersaPoint Duo could continue to emboss even when no material is between the die bars. Since embossing without paper can eventually damage the embosser, close supervision is important when using single sheet mode.

To activate single-sheet mode, place the first sheet of paper on the tractor rollers, then turn on the VersaPoint Duo. Set the number of lines per page by pressing one, seven, start, number of lines (up to a maximum of 22), pound (17*22 #, to select 22 lines).

Now turn on perf skip by pressing one, one, star, one, pound (11*1 #). Some documents do not have a form feed control character, or pages longer than 22 lines. Then, exit the configuration by pressing #.

Go off-line by pressing the OL key. Set top-of-form by pressing two, pound (2 #). The machine is now on-line.

Activate single sheet mode by pressing five, star, one, pound (5*1 #). Begin embossing by sending a file from your computer. When the VersaPoint Duo encounters a form feed control character, or reaches the set number of lines per page, it will feed the current sheet out of the rollers.

Make sure that the first sheet is clear of the rear of the VersaPoint Duo, then place the next sheet in the tractor rollers. Stay on-line.

To reset the top-of-form, press two, pound (2 #). (2 # works on-line in single-sheet mode.) The second page is now embossed.

Repeat this sequence until the entire file has been embossed. Then, exit single-sheet mode and turn the paper-out sensor back on by pressing five, star, zero, pound (5*0 #). Don't forget to reset the configuration to your usual perf skip and lines-per-page settings.

Using Sideways Embossing

The VersaPoint Duo allows you to emboss text along the vertical axis of a sheet of paper. This mode will allow you to emboss up to 26 lines of 40 six-dot characters, or up to 22 lines of 40 eight-dot characters.

The vertical embossing mode is accessed using escape sequences. Before you activate this mode, make sure you have set the escape sequences entry to "on" in your currently selected configuration. To turn on vertical embossing, you must send the following sequence: ESC > (escape, greater than).

This will finish embossing the current page if there is text present, force single-sided embossing, and home the carriage. To deactivate vertical embossing, send the following sequence: ESC < (escape, less than).

Performing screen dumps or embossing from a spreadsheet? You will still need to activate either 80 or 160 column mode in your current configuration. Please note that the number of lines per page, in the current configuration, controls when embossing will begin in the 80 and 160 column modes.

The perf skip will allow you to control breaks between pages. If you would like the vertical printout to be continuous along the paper, turn off the VersaPoint Duo's perf skip in the current configuration. If you do

want breaks between pages, turn perf skip on in the current configuration.

Go ahead and experiment with various operating modes and the vertical embossing mode. This is the best way to learn how they function. It is easy to create a text file that contains the escape sequences to activate and deactivate vertical embossing.

These "practice text" files should be sent to the VersaPoint Duo prior to sending the Braille text file to insure the vertical printing mode is active. The VersaPoint Duo will return the carriage to the home position, confirming the receipt of the escape sequence. If the carriage does not return, check the current configuration and make sure you entered a 23*1 # to activate escape sequences.

Embossing Braille Graphics

Although it is possible for the VersaPoint Duo to place graphics characters on both sides of the page, we do not recommend that you do so because the inter-cell dot spacing is narrower in graphics mode than in text mode.

As a result, a double-sided page of graphics, or text on one side and graphics on the other, will not match the high-quality Braille of a double-sided page of text. For best results, place graphic representations on the front or the back of the page, leaving the opposite side of the page blank, and continue the document on the next empty page.

Many things that are easily expressed graphically are very difficult to describe with words. Sometimes a simple icon or picture can express a concept that would take many paragraphs to describe.

For example, how would you describe the shape of the state of Florida to someone who could not see a map? You might say it is long and skinny with a handle on top. Even if that person said he understood, how do you know he is thinking the same thing you are when you use that description?

Braille graphics are not a total solution to this problem, but they sure are a major leap forward. The VersaPoint's Braille graphics mode

enables you to produce graphs, charts, and outlines of shapes on paper from data stored in a computer.

All sorts of images can be created electronically quickly and easily, using a number of readily available software packages, such as ETgraphX.

The VersaPoint Duo supports the 6-dot graphics standard which is compatible with the Cranmer Perkins Brailler and the Romeo Braille Printer's 6-dot graphics mode.

The 6-dot graphics character set is the same as for Computer Braille. The character spacing has been changed from 0.2409 to 0.1609 (cell 1, dot 1 to cell 2, dot 1) and the line spacing from .4009 to .24094 (line 1, dot 1 to line 2, dot 1).

This produces a grid of 168 dots per line by 135 dots per 119 form. Because each character represents a 3 dot by 2 dot cell, only 84 of these graphics characters fit on a line. About 45 of these lines will fit on an 119 long page.

Because of the nature of Braille graphics, the margins and lines per page settings in the configuration are ignored. It is up to you to insert carriage returns and line feeds in the proper places.

To enter graphics mode, include the ESC 1 escape sequence in the Braille file.

To exit graphics mode, include the exit graphics mode escape code (ESC]7 in the Braille file.

To shift to embossing graphics, ensure that the VersaPoint Duo is in graphics mode. Send a carriage return and a line feed, then send CTRL plus O (shift in).

To shift to embossing text, ensure that the VersaPoint Duo is in graphics mode. Send a carriage return and a line feed, then send CTRL plus N (shift out).

To back up one line to properly align your Braille and graphics, include the reverse line feed escape code (ESC I) in the Braille file.

To put text and graphics on the same line, define all the graphics in the file and exit graphics mode. Now enter ESC I for each line that you

need to back up. Adjust the left and right spacing so that the text does not get embossed over graphics that are already on the page.

You can emboss text and graphics on the same line of paper. In the file, however, the graphics characters and the text appear on separate lines. The paper is moved back to properly align the text with the graphics.

For example, if you have a graphic box that occupies the leftmost 10 characters on the page, place the text so that the leftmost text character of each line begins more than ten characters from the left margin.

About the Service Menu

The service menu contains a few utilities that you, the user, may find helpful from time to time.

Other service menu utilities should be used only by qualified service personnel when adjusting the VersaPoint Duo. Service personnel can find additional information in the VersaPoint Duo Technical Manual.

The following service menu utilities are the ones that may benefit you when the need arises:

To enter the service menu (0.0 #), first ensure that the VersaPoint is off-line. Then press zero, star, zero, #.

To reset the VersaPoint (1 #), enter the service menu and press one, pound. The service menu is exited automatically.

To emboss the test pattern (2 #), enter the service menu and press two, pound. Exit the service menu by pressing # until you hear a series of beeps.

To emboss 6-dot pattern (3 #), enter the service menu and press three, pound. Exit the service menu by pressing # until you hear a series of beeps.

To emboss test documentation (9 #), enter the service menu and press nine, pound. Exit the service menu by pressing # until you hear a series of beeps.

To emboss the control panel and all configurations (10 #), enter the service menu and press one, zero, pound. Exit the service menu by pressing # until you hear a series of beeps.

To emboss the Freedom Scientific logo (11 #), enter the service menu and press one, one, pound. Exit the service menu by pressing # until you hear a series of beeps.

Problem Solving

DANGER! Remember there are high voltages present inside this machine; never remove the cover.

Q: Nothing happens in the embosser. I have a parallel connection. The VersaPoint Duo makes the correct tone sequence at power on. The computer seems to send data in response to the print or copy command.

A: A partial page might be left in the buffer. Press OL, then press FF.

A: The cable might be bad. To check the integrity of the cable connection, try an exact replacement cable, if possible. If you have another printer with a parallel cable attached, borrow it temporarily, and attach it between the computer and the VersaPoint Duo. If the cable was at fault, the borrowed cable will fix the problem--at least temporarily!

A: The parallel port might have been redirected to COM1 via a mode command buried somewhere in your AUTOEXEC.BAT file.

A: The embosser might be inadvertently connected to a second parallel port on the computer.

A: The parallel connection might be routed through a pass-through device that is configured incorrectly or is not working correctly.

Q: The VersaPoint Duo is not responding to a transmit or print command using a serial connection.

A: You might have the wrong cable connected. Make sure that the cable is the one that came with the VersaPoint Duo.

A: If your computer has more than one serial port, ensure that the cable is connected to the serial port where the data is being sent.

A: Ensure that the serial port is configured correctly.

A: If everything checks out as it should, and you are still unable to send data, please call Freedom Scientific for assistance.

Q:The characters I'm getting are mostly the letter x and there are few spaces.

A: If you are using a serial cable, the VersaPoint Duo and your computer are likely set to different baud rates. Change the rate on whichever device is easier to adjust.

A: If you are using a parallel cable, try a different parallel cable.

Q: The files all come out without contractions, and the punctuation doesn't look right at all.

A: In order to produce well-formatted Grade 2 Braille, your files must be passed through a Grade 2 translator program.

A: If you have a Grade 2 Braille translator program installed on your computer, perhaps your batch file has been changed or renamed by another user.

A: If you do not have a Grade 2 Braille translation program

Installed on your computer, acquire and install one. Contact Freedom Scientific if you need advice about which program to select.

Q: The VersaPoint Duo skips a blank page after each full page.

A: The lines per page in your document most likely exceeded the Lines per page setting. With perf skip on, the VersaPoint Duo automatically sends out a form feed if the lines per page exceeds the value set with parameter 17.

You can also change the setting of a parameter called perf skip in your printer's current configuration. This is a feature which keeps the pages neatly divided even if your program doesn't send a form-feed character at the end of each page.

Assuming that configuration 1 has control of your the VersaPoint Duo, the following command sequence should do away with this problem:

Press the OL key followed by zero, point, one, pound (0*1 #). Then press one, one, star, zero, pound (11*0 #) and finally one, star, one, pound (1*1 #).

If you experience drifting of the top of form, keep perf skip turned on, set parameter 17 to 27, and use your Grade 2 translator program to format your document to 25 lines per page.

Q: The first line is embossed but the rest of the document is blank.

A: Usually, the Braille translator regulates the length of the lines and pages. That said, some programs, and some devices (including the Braille 'n Speak) allow you to set line and page length to zero, and have the printer take care of these format considerations by itself. If you receive

one line of a document followed by a lot of blank space, the problem may be that there are no line or page endings in your document.

To adjust this situation, enter the current configuration and turn on perf skip (11*1 #), word wrap (10*1 #), and hot zone (22*1 #). You will find these parameters already set in configuration 4. However, this configuration is set up for serial transfers where the host device provides absolutely no formatting. This may or may not correspond exactly to your situation. Feel free to experiment with configuration 4 and customize it.

A: You might lack line-feeds in your file. Some devices and programs provide the option of ending each line with a carriage return but no line-feed. The VersaPoint Duo needs a line-feed paired with each carriage return. If you have determined that line endings are present for each line of your document, but only one line is being received by the VersaPoint Duo, check the documentation of your translator if you are using one, or the Braille 'n Speak if this is your host device.

There should be an option which allows you to specify whether line-feeds should be transmitted with each return. In the case of the Apple II series, the transmission of line-feeds is determined by a dip switch setting on the serial card. The addition of line-feeds should fix the problem instantly.

Q: I get no response when I turn the VersaPoint Duo on.

A: First verify that there is power to the electrical outlet. Try plugging something else into that outlet.

A: Check the line fuse. Listen for the fan. If you hear it running, you have power and the main fuse is okay.

A: Try the control panel. Press the FF, RD, and the LF buttons. If you get no response, press the OL button once and try them again. If these keys work, you may have nothing more than a bad speaker. If they don't, you have an electronic failure. The trouble could be on the main PC board. Contact Freedom Scientific for repairs to your embosser.

Q: When I turn on my embosser, I get an error tone.

A: The carriage might have failed to find its home position correctly. Verify that the carriage did move prior to the sounding of the error tone.

A: A failure was detected in the ROM, RAM, or NOV-RAM. To check the NOV-RAM, enter the service menu while off-line by pressing 0*0 #. Press 99 # to verify the NOV-RAM. If the error tone is heard, press 95 # and verify the NOV-RAM again. If it fails, the NOV-RAM is defective and must be replaced. If it checks okay, the NOV-RAM may be weak and might soon fail anyway. Replacing the NOV-RAM must be done by qualified service personnel.

> Note: Pressing 95 # will reload the default values into the NOV-RAM and erase any changes you may have made. It should be used with care.

Q: The VersaPoint Duo gives me a paper-out tone when turned on.

A: You must have paper in the machine when it is turned on. To avoid this, turn the paper-out detector switch off in the selected configuration.

A: Check to see that the cable from the paper out detector is plugged into the main PC board.

A: If all else fails, the detector may be dirty, defective or out of adjustment.

> Note: If the paper-out detector is disabled and the VersaPoint Duo is allowed to emboss without paper inserted beneath the platen, damage may occur to the solenoids and/or the platen.

Q: No response from control panel.

A: Try all keys and listen for tones. If there is no response at all, the control panel cable may be disconnected.

A: If the cable is okay, your problem is probably with the main PC board. The Z80 PIO chip is most likely to be at fault. Call Freedom Scientific for assistance.

Q: Incorrect response from control panel.

A: If some keys appear to work okay, the control panel is probably at fault.

A: If none of the keys appear to be correct, the cable might be reversed. Call Freedom Scientific for assistance.

Q: My parallel interface is not working.

A: Make sure the port setting in the configuration is set to port 1, and that the configuration you are working with is the current configuration.

A: Check the cable. Try printing to another device from this cable. This is actually a check of both the cable and your computer.

A: If the cable checks okay, the trouble is on the main PC board. The Z80 PIO chip is most likely at fault. Call Freedom Scientific for assistance.

Q: I get no response from the serial interface.

A: Make sure that the port setting in the configuration is set to the serial port and that the configuration that you are working with is the current configuration.

A: Check all the serial set-up parameters (baud rate, bits/character, parity, etc.) They must match the settings in your computer.

A: Check the handshake. It must be set the same as your computer.

A: Check the cable. Try printing to another device from this cable.

A: If the cable checks out okay, the trouble is on the main PC board. The most likely suspects are the MC145407 and the Z80 DART chip. Call Freedom Scientific for information and assistance.

Q: When using the serial interface, I get incorrect characters.

A: This is almost certainly the fault of one of the set-up parameters. Check the baud rate, bits/character, parity, stop bits, and communication code.

A: Try printing to another serial device to verify the set-up in your computer.

A: If you are using a modem, the trouble may be in the phone lines. Try hanging up and dialing again; you might get a better line.

A: If none of the above suggestions help, call Freedom Scientific for assistance.

Q: Embosser does not go into graphics mode.

A: Make sure you have enabled escape sequences in the currently selected configuration (23*n #).

A: Verify that your graphics file is of a format compatible with the VersaPoint Duo.

Q: Carriage does not return home when I turn on my embosser.

A: The carriage does not return to the home position and the error tone is heard. The home sensor is probably defective.

A: The carriage does not go home and nothing is played. See the "No Response When Turned On" question previously asked.

Q: Carriage jams into left margin, and the error tone is heard.

A: The home sensor is defective or not plugged in. The home sensor is connected to the PC board via the solenoid driver cables.

A: Make sure the surface of the home sensor is clean, and that nothing is blocking the opening in the embossing unit chassis.

Q: Carriage jams into right margin and the error tone is heard.

A: The carriage motor could be wired incorrectly.

A: Some failures in the NOV-RAM on the main PC board can cause this problem. Call Freedom Scientific for assistance.

Q: No paper movement.

A: Call Freedom Scientific for help.

Q: I'm getting dots too low (or too high), which results in torn paper.

A: Adjust the emboss-intensity control, located on the input connector assembly on the rear panel of the machine. It functions like a volume control on a radio: turning this control clockwise will increase solenoid impact strength, and turning it counter-clockwise will reduce solenoid impact strength, and will stop tearing on lighter paper.

A: Check the paper grade setting (34*n #) in the current menu. If you are tearing paper, you may need to use a higher setting. The factory default setting is 0.

A: Overhaul the embosser, clean the solenoids and springs.

Q: Inconsistent dot height.

A: Check paper tractor tension.

A: Check the embossing-intensity control located on the input connector assembly. You may need to increase the setting.

A: Overhaul the embosser, clean the solenoids and springs.

Q: Some of my dots are missing.

A: If a particular row of dots is consistently missing, this means a solenoid is not actuating. This could be a defective solenoid, a break in the solenoid cable, or trouble on the main PC board.

A: Check the cable for continuity. If it checks okay, measure the solenoids. If the solenoids and cable seem okay, the trouble is probably in the solenoid driver logic on the main PC board.

Q: No interpoint in single-sheet mode on friction-feed units.

A: This is not a problem with the VersaPoint Duo; it is a problem with Braille translators that embed next-page characters in the file. When in interpoint mode, some translators have a form-feed control character at the end of each page. When the 22nd line of the document gets to the VersaPoint Duo, the line-feed control character on the 22nd line sends the VersaPoint Duo to the top of the next page in memory, and then the form-feed control character sends the VersaPoint Duo to the next physical page.

A: The result is unintended single-sided Braille. Setting the VersaPoint Duo's lines-per-page setting to 23 lines (17*23 #) lets the form-feed control character in your file control the page break, instead of the VersaPoint Duo's internal line counter having control. Even though the VersaPoint Duo will only emboss 22 lines in the single-sheet mode, that sheet of 119 material will still be gripped slightly by the rollers. Turning on perf skip safeguards the embosser against Brailling without paper.

A: Set the lines per page to 23 lines (17*23 #) on the embosser, then make sure the perf skip is turned on (11*1 #). Check the file, too; the document must be formatted by the translator to 22 lines or less per page.

Q: Skewing

A: Skewing is the misalignment of Braille dots, either vertically or horizontally.

A: Vertical skewing, most of the time, is caused by paper feed problems or the tractor feed tension. Vertical skewing can be diagnosed by checking the alignment of dots 1, 2 and 3 with dots 4, 5, and 6.

A: Horizontal skewing, most of the time, is caused by friction or binding of the carriage when traversing at higher emboss speeds. Horizontal skewing can be diagnosed by checking the alignment of dots 2 and 5 in relation to the position of dots 1, 4 and 3, 6.

Q: Sounds like I have vertical skewing.

A: Check the paper tension between the tractors. The tension should be firm.

A: Check for any obstruction in the paper path.

Q: What about horizontal skewing?

A: Clean the carriage rail.

A: Use parameter 90 # within the service menu to add a small Delay before emboss. The factory default is zero (no delay before emboss). To enter a delay before emboss, perform the following steps:

A: First, enter the service menu by pressing the OL key and entering 0*0 #. Second, activate the delay before emboss routine by entering 90 #. Third, enter a number between 0 and 12 (zero is no delay before emboss, and the numbers 1 through 12 add approximately a one millisecond delay, in ascending order). After entering a number between 1 and 12, press the pound key. Fourth, end the sequence by entering a 1 #.

A: Start with the least amount of delay, test for skewing, and increase the number only if necessary. (This delay will slow down the embossing speed slightly, so use the least amount possible).

APPENDIX B: Configurations

VersaPoint Duo Control Panel

FF: Form-feed

LF: Line-feed

TF: Top-of-form (2 #)

RD: Read (toggle)

2/#1: Double-sided/single-sided

OL: On-line/off-line (toggle)

*: Numeric entry

0-9: Numeric entry

 #: Enter key

Functions and Key Sequences that Affect Multi-copy Mode While On-line

3*0 #: Activate multi-copy mode and initialize copy buffer.

3*1 #: Tell the embosser that this is the end of the document.

3*2 #: Halt embossing at end of current copy.

3*3 #: Deactivate the multi-copy mode.

3*4 #: Suspend multi-copy at top of next sheet.

3*5 #: Resume multi-copy where you left off (following

3*4 #).

4*nn #: Start embossing nn copies of the document.

Configuration Functions and Parameters While Off-line

1*0 #: Make this configuration the embosser default.

1*1 #: Exit and makes this configuration the current configuration.

2*0 #: Select serial port.

2*1 #: Select parallel port.

Part# 440066-001

3*n #: Set baud rate 6n.

4*n #: Set the number of data bits 6n.

5*n #: Set the number of stop bits 6n.

6*n #: Select parity. (0 = none, 1 = odd, 2 = even).

7*n #: Set communication code. (0 = ASCII, 1 = Baudot).

8*n #: Set handshake. (0 = Xon/Xoff, 1 = DTR & CTS, 2 = DTR & DSR, 3 = RTS & CTS, 4 = RTS & DSR).

9*n #: Set Braille mode. (0 = 6 dot, 1 = 8 dot).

10*n #: Set word wrap. (0 = off, 1 = on).

11*n #: Set perf skip. (0 = off, 1 = on).

12*n #: Set paper-out detection. (0 = off, 1 = on).

13*n #: Set auto LF mode. (0 = none, 1 = xmit, 2 = rcv, 3 = xmit & rcv).

14*n #: Set right margin 6n.

15*n #: Set left margin 6n.

16*n #: Emboss control characters. (0 = off, 1 = on).

17*n #: Set lines per page 6n.

18*n #: Set page length 6n. (1.0 inch increments).

19*n #: Set multi-strike count 6n.

20*n #: Enter character n into control-character table.

21*n #: Remove character n from control-character table.

22*n #: Set hot zone. (0 = off, 1 = on).

23*n #: Recognize escape sequences. (0 = off, 1 = on).

24*n #: Set bell position 6n.

25*n #: Reserved

26*n #: Set local echo. (0 = off, 1 = on).

27*n #: Set Braille format. (0 = computer, 1 = grade 1)

28*n #: Set 80-column mode. (0 = off, 1 = 80 column, 2 = 160 column)

29*nn #: Set alpha character set. The first n represents the extended character set value (0 = none, 1 = IBM 437, 2 = IBM 850, 3 =

Spanish, 4 = French). The second n represents the standard character

set value (0 = USA, 1 = Spanish, 2 = German, 3 = Switzerland, 4 = Danish, 5 = Austrian, 6 = French, 7=Italian).

30*nn #: Set top-of-form offset to nn (1/10 inch increments).

31*n #: Set 8-bit character handling. (0 = emboss 8-bit characters, 1 = ignore eighth bit, 2 = emboss space, 3 = discard).

32*nn #: Set auto-emboss constant. (1 second increments)

33*n #: Set embossing mode. (0 = interpoint, 1 = bank one).

34*nn #: Set paper grade setting. (0 = fastest, 12 = slowest)

Special Configuration Functions

R*n #: Embosses parameter n in this configuration.

R* #: Read function while in configuration.

n*R #: Embosses all parameters in configuration #n.

0*R #: Embosses all parameters in the current configuration.

Key Combinations That Affect Configurations While Off-line

#: Exits the current parameter sequence.

0*n #: Places you in configuration #n (1 through 16).

1*1 #: Exits and installs this configuration as the current configuration.

Default Configurations

These default settings are already loaded into the 16 configurations when you receive the VersaPoint Duo. They can be altered from the control panel to suit your particular needs. The first eight configurations are set up for the most popular computer systems in use by our customers.

The last eight all have the same default settings and are available for you to customize.

Note:	You can restore ALL the default configurations to their original values by going off-line and pressing 0*0 #, then 95 #, then 1 #.

Configuration 1 IBM PC/XT & Compatibles--Parallel

Note: In this listing, columns follow each other in this order: Parameter: Value; Description.

1: 1; This is the default configuration.

2: 1; Parallel data port.

3: 2400; Baud rate = 2400.

4: 7; Bits/character = 7.

5: 1; Stop bits = 1.

6: 2; Even parity.

7: 0; ASCII code.

8: 1; DTR & CTS handshake.

9: 0; 6-dot Braille.

10: 0; Word wrap off.

11: 1; Perf skip on.

12: 1; Paper-out detector on.

13: 0; No auto LF on transmit.

14: 40; Right margin = 40.

15: 1; Left margin = 1.

16: 0; Emboss control characters off.

17: 27; Lines per page = 27.

18: 11; Page length = 1194

19: 1; Multi-strike = 1.

20: 13; Carriage return in control table.

22: 0; Hot zone off.

23: 0; Recognize escape sequences off.

24: 0; Console bell = off.

25: 0; Reserved.

26: 0; Local echo off.

27: 0; Computer Braille format.

28: 0; Screen dump mode off.

29: 0; USA character set.

30: 0; Top-of-form offset, 0 inches.

31: 1; Ignore eighth bit.

32: 0; Auto-emboss constant, 0 seconds.

33: 0; Embossing mode, interpoint selected.

34: 0; Paper grade 0.

35: 0; Set dynamic Braille scaling.

Configuration 2 Apple Super Serial Card

Note: In this table, columns follow each other in this order:Parameter: Setting; Description.

1: 0; This is not the default configuration.

2: 0; Serial data port.

3: 9600; Baud rate = 9600.

4: 8; Bits/character = 8.

5: 1; Stop bits = 1.

6: 0; No parity.

7: 0; ASCII code.

8: 2; DTR & DSR handshake.

9: 0; 6-dot Braille.

10: 0; Word wrap off.

11: 1; Perf skip on.

12: 1; Paper-out detector on.

13: 0; No auto LF on transmit.

14: 40; Right margin = 40.

15: 1; Left margin = 1.

16: 0; Emboss control characters off.

17: 27; Lines per page = 27.

18: 11; Page length = 1194

19: 1; Multi-strike = 1.

20: 13; Carriage return in control table.

22: 0; Hot zone off.

23: 1; Recognize escape sequences on.

24: 0; Console bell = off.

25: 0; Reserved.

26: 0; Local echo off.

27: 0; Computer Braille format.

28: 0; Screen dump mode off.

29: 0; USA character set.

30: 0; Top-of-form offset, 0 inches.

31: 1; Ignore eighth bit.

32: 0; Auto-emboss constant, 0 seconds.

33: 0; Embossing mode, interpoint selected.

34: 0; Paper grade 0.

35: 0; Set dynamic Braille scaling.

Configuration 3 HP-125, HP-150

Note: In this table, columns follow each other in this order: Parameter: Setting; Description.

1: 0; This is not the default configuration.

2: 0; Serial data port.

3: 9600; Baud rate = 9600.

4: 7; Bits/character = 7.

5: 1; Stop bits = 1.

6: 2; Even parity.

7: 0; ASCII code.

8: 0; Xon/Xoff handshake.

9: 0; 6-dot Braille.

10: 0; Word wrap off.

11: 1; Perf skip on.

12: 1; Paper-out detector on.

13: 0; No auto LF on transmit.

14: 40; Right margin = 40.

15: 1; Left margin = 1.

16: 0; Emboss control characters off.

17: 27; Lines per page = 27.

18: 11; Page length = 1194

19: 1; Multi-strike = 1.

20: 13; Carriage return in control table.

22: 0; Hot zone off.

23: 1; Recognize escape sequences on.

24: 0; Console bell = off.

25: 0; Reserved.

26: 0; Local echo off.

27: 0; Computer Braille format.

28: 0; Screen dump mode off.

29: 0; USA character set.

30: 0; Top-of-form offset, 0 inches.

31: 1; Ignore eighth bit.

32: 0; Auto-emboss constant, 0 seconds.

33: 0; Embossing mode, interpoint selected.

34: 0; Paper grade 0.

35: 0; Set dynamic Braille scaling.

Configuration 4 Kurzweil Reading Machine

Note: In this table, columns follow each other in this order: Parameter: Setting; Description.

1: 0; This is not the default configuration.

2: 0; Serial data port.

3: 9600; Baud rate = 9600.

4: 8; Bits/character = 8.

5: 1; Stop bits = 1.

6: 0; No parity.

7: 0; ASCII code.

8: 0; Xon/Xoff handshake.

9: 0; 6-dot Braille.

10: 1; Word wrap on.

11: 1; Perf skip on.

12: 1; Paper-out detector on.

13: 0; No auto LF on transmit.

14: 40; Right margin = 40.

15: 1; Left margin = 1.

16: 0; Emboss control characters off.

17: 27; Lines per page = 27.

18: 11; Page length = 1194

19: 1; Multi-strike = 1.

20: 13; Carriage return in control table.

22: 1; Hot zone on.

23: 1; Recognize escape sequences on.

24: 0; Console bell = off.

25: 0; Reserved.

26: 0; Local echo off.

27: 0; Computer Braille format.

28: 0; Screen dump mode off.

29: 0; USA character set.

30: 0; Top-of-form offset, 0 inches.

31: 1; Ignore eighth bit.

32: 0; Auto-emboss constant, 0 seconds.

33: 0; Embossing mode, interpoint selected.

34: 0; Paper grade 0.

35: 0; Set dynamic Braille scaling.

Configuration 5 VersaBraille

Note: In this table, columns follow each other in this order: Parameter: Setting; Description.

1: 0; This is not the default configuration.

2: 0; Serial data port.

3: 1200; Baud rate = 1200.

4: 8; Bits/character = 8.

5: 1; Stop bits = 1.

6: 2; Even parity.

7: 0; ASCII code.

8: 0; Xon/Xoff handshake.

9: 0; 6-dot Braille.

10: 0; Word wrap off.

11: 1; Perf skip on.

12: 1; Paper-out detector on.

13: 0; No auto LF on transmit.

14: 40; Right margin = 40.

15: 1; Left margin = 1.

16: 0; Emboss control characters off.

17: 27; Lines per page = 27.

18: 11; Page length = 1194

19: 1; Multi-strike = 1.

20: 13; Carriage return in control table.

22: 0; Hot zone off.

23: 1; Recognize escape sequences on.

24: 0; Console bell = off.

25: 0; Reserved.

26: 0; Local echo off.

27: 0; Computer Braille format.

28: 0; Screen dump mode off.

29: 0; USA character set.

30: 0; Top-of-form offset, 0 inches.

31: 1; Ignore eighth bit.

32: 0; Auto-emboss constant, 0 seconds.

33: 0; Embossing mode, interpoint selected.

34: 0; Paper grade 0.

35: 0; Set dynamic Braille scaling.

Configuration 6 Micro Braille Transcription Software

Note: In this table, columns follow each other in this order: Parameter: Setting; Description.

1: 0; This is not the default configuration.

2: 0; Serial data port.

3: 9600; Baud rate = 9600.

4: 8; Bits/character = 8.

5: 1; Stop bits = 1.

6: 0; No parity.

7: 0; ASCII code.

8: 1; DTR & CTS handshake.

9: 0; 6-dot Braille.

10: 0; Word wrap off.

11: 1; Perf skip on.

12: 1; Paper-out detector on.

13: 0; No auto LF on transmit.

14: 40; Right margin = 40.

15: 1; Left margin = 1.

16: 0; Emboss control characters off.

17: 27; Lines per page = 27.

18: 11; Page length = 1194

19: 1; Multi-strike = 1.

20: 13; Carriage return in control table.

22: 0; Hot zone off.

23: 1; Recognize escape sequences on.

24: 0; Console bell = off.

25: 0; Reserved.

26: 0; Local echo off.

27: 0; Computer Braille format.

28: 0; Screen dump mode off.

29: 0; USA character set.

30: 0; Top-of-form offset, 0 inches.

31: 1; Ignore eighth bit.

32: 0; Auto-emboss constant, 0 seconds.

33: 0; Embossing mode, interpoint selected.

34: 0; Paper grade 0.

35: 0; Set dynamic Braille scaling.

Configuration 7 TranSend Systems

1: 0; This is not the default configuration.

2: 0; Serial data port.

3: 9600; Baud rate = 9600.

4: 8; Bits/character = 8.

5: 1; Stop bits = 1.

6: 0; No parity.

7: 0; ASCII code.

8: 2; DTR & DSR handshake.

9: 0; 6-dot Braille.

10: 0; Word wrap off.

11: 1; Perf skip on.

12: 1; Paper-out detector on.

13: 0; No auto LF on transmit.

14: 40; Right margin = 40.

15: 1; Left margin = 1.

16: 0; Emboss control characters off.

17: 27; Lines per page = 27.

18: 11; Page length = 1194

19: 1; Multi-strike = 1.

20: 13; Carriage return in control table.

22: 0; Hot zone off.

23: 1; Recognize escape sequences on.

24: 0; Console bell = off.

25: 0; Reserved.

26: 0; Local echo off.

27: 0; Computer Braille format.

28: 0; Screen dump mode off.

29: 0; USA character set.

30: 0; Top-of-form offset, 0 inches.

31: 1; Ignore eighth bit.

32: 0; Auto-emboss constant, 0 seconds.

33: 1; Embossing mode, single-sided selected.

34: 0; Paper grade 0.

35: 0; Set dynamic Braille scaling.

Configuration 8 Terminal Communications

Note: In this table, columns follow each other in this order:
            Parameter: Setting; Description.

1: 0; This is not the default configuration.

2: 0; Serial data port.

3: 9600; Baud rate = 9600.

4: 7; Bits/character = 7.

5: 1; Stop bits = 1.

6: 2; Even parity.

7: 0; ASCII code.

8: 0; Xon/Xoff handshake.

9: 0; 6-dot Braille.

10: 1; Word wrap on.

11: 1; Perf skip on.

12: 1; Paper-out detector on.

13: 1; Auto LF on transmit.

14: 40; Right margin = 40.

15: 1; Left margin = 1.

16: 0; Emboss control characters off.

17: 27; Lines per page = 27.

18: 11; Page length = 1194

19: 1; Multi-strike = 1.

20: 13; Carriage return in control table.

22: 0; Hot zone off.

23: 1; Recognize escape sequences on.

24: 72; Console bell = 72.

25: 1; Reserved.

26: 0; Local echo off.

27: 0; Computer Braille format.

28: 0; Screen dump mode off.

29: 0; USA character set.

30: 0; Top-of-form offset, 0 inches.

31: 1; Ignore eighth bit.

32: 0; Auto-emboss constant, 0 seconds.

33: 1; Embossing mode, bank one single-sided.

34: 0; Paper grade 0.

35: 0; Set dynamic Braille scaling.

APPENDIX C: Technical Support

Freedom Scientific has a complete support system to resolve any problems you might encounter with your VersaPoint Duo.

For technical assistance about installing or using the VersaPoint Duo, call our technical support team at (727) 803-8600.

Our website is located at www.FreedomScientific.com and is a good source of product and company information. There, you can find product manuals, news about upgrades and more. You can send e-mail to info@FreedomScientific.com.

If you want to send us a fax, please use the number (727) 803-8001.

If your VersaPoint Duo requires service, contact Freedom Scientific at (727) 803-8000 so we can expect your package.

If at all possible, please use the carton and packing material that came with your VersaPoint Duo. If the original carton was discarded, you must use a container that provides at least three inches of packing material around all sides of the VersaPoint Duo. Do not forget to insure the package. We are not responsible for shipping damage, and the carrier is not responsible if your embosser is not properly packaged and insured.

You must also include a letter with the VersaPoint Duo containing your name, your company name (if applicable), your shipping address and zip code, and a description of the trouble you are experiencing.

Please include as much information as possible about the problem and the conditions under which it occurs.

Send your package to:

Freedom Scientific
11800 31st Court North
St. Petersburg, FL 33716

APPENDIX D: Warranty Information

Guarantee of Satisfaction

This assistive device is warranted to be specifically fit for the particular needs of you, the buyer. If the device is not specifically fit for your particular needs, it may be returned to the seller within thirty days of the date of shipment.

If you return the device, the seller will either adjust or replace the device or promptly refund the total amount paid. This warranty does affect the protections and remedies you have under other laws.

Limited One Year Warranty on Hardware

Freedom Scientific warrants the hardware to be free from defects in material and workmanship, under normal and proper use, for a period of one year from the date of shipment. The liability of Freedom Scientific under this warranty is limited to the obligation to repair, or at its sole option, to replace without charge and with reasonable promptness, such defective product. This warranty applies only to hardware.

Repair and replacement of hardware shall be undertaken at Freedom Scientific offices at 11800 31st Court North, St. Petersburg, FL 33716.

The purchaser shall be responsible for all shipping charges in connection with warranty service.

This warranty shall be void if any defect or damage arises from causes beyond the control of Freedom Scientific such as fire, accident, neglect, abuse, acts of God, or environmental or electrical stress.

This warranty shall be void as to any product which has been tampered with or altered or which has been repaired or attempted to be repaired by those other than factory-authorized service personnel.

IN NO EVENT SHALL FREEDOM SCIENTIFIC BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL OR SPECIAL DAMAGES. AS SET FORTH ABOVE, FREEDOM SCIENTIFIC MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Disk Replacement Policy

Freedom Scientific warrants the magnetic media on which the software is supplied to be free of defects in material and workmanship under normal

use for a period of 90 days from date of purchase. If, during this 90-day period, the disk becomes defective, it may be returned to Freedom Scientific for a free replacement.

Your sole and exclusive remedy if the disk becomes defective is limited to replacement of the disk as stated herein.

Copyright 1998 by Freedom Scientific. This manual and the software described in it are copyrighted with all rights reserved worldwide. No part of this manual or the software may be copied without written consent from Freedom Scientific.

All brand and product names mentioned herein are trademarks or registered trademarks of their respective holders.

Freedom Scientific License Agreement

Freedom Scientific retains the ownership of the enclosed software programs. These programs are licensed to you for use under the following conditions:

You may use the software in either or both 3.59 or 5.259 media, provided that you: use the software on only one computer at a time, permanently transfer the software to another user if you transfer the documentation and all disks, and the other user agrees to the terms and conditions of this agreement.

You may not make copies of the documentation or program disks, except as described in the documentation and for archival purposes; loan, rent, sub-license, or otherwise transfer the software (in either media) or the documentation, except as provided above; alter, modify, or adapt the software or documentation, including, but not limited to, translating, decompiling, or disassembling.

This license and your right to use the software automatically terminate if you fail to comply with any provision of this license agreement. Upon termination, you will destroy all documentation and disks.