

Your printer manual will detail the type of flow control required, and how to wire up the cable between the computer and the printer. The flow control is usually one of two types: XON-XOFF, or hardware lines.

Under XON-XOFF flow control, a device sends an XON character (DC1, or 11 hexadecimal in the ASCII table) to indicate that it can receive data, and an XOFF (DC3, or 13 hexadecimal) to indicate that it cannot receive data. If you specify the flag TXON, INTRUPT.SYS will stop sending if it receives an XOFF, and will start sending when it receives an XON character. If you specify RXON, INTRUPT.SYS will send an XOFF character when it cannot receive any more characters, and will send an XON when it is able to receive again.

N.B. Some printers send XON or XOFF characters continuously when the computer is not sending to them, causing a loss of performance by the computer, as it has to keep handling the spurious characters. It is suggested that you turn off such printers when not in use.

The other five flags are concerned with hardware flow control; i.e. they relate to the physical wires on your cable. If you specify DCD, DSR or CTS the corresponding signal must be TRUE (also referred to as HIGH, ASSERTED, and ON) before the computer will send data. Conversely, if you specify RTS, the computer will send RTS HIGH whenever it wants to send data. If you specify DTR, then it will set DTR TRUE whenever it is ready to receive data, and set it FALSE whenever it cannot receive.

The Popup Menu

Popup is a utility supplied by Hypertec to allow control of print spooling from within application programs.

If installed, you can invoke popup by holding down the ALT key and typing a sequence of numbers (usually 224) on the numeric keypad. When you do this a small menu appears in the top left of your screen. It allows you to pause and resume printing from the print spooler.

POPUP.SYS

Synopsis

device = popup.sys [0 NNN]
NNN = number specifying alternate command sequence

This device must be loaded last.

Once invoked, selections are made from the displayed options by pressing the appropriate function key. The function is performed and the menu disappears.

The 'NNN' parameter is optional. When you press ALT 224, this is converted into a single character which the popup driver intercepts and interprets as a command to show the menu. It is possible that you have an application that requires this character. If this is the case, you can change the command by specifying a decimal number in the range 135 to 254 as a parameter to the driver. If you specify 225, for example, then to invoke the popup menu, you must type ALT 225.

- F1 - Pause Spooler
- F2 - Re-start Spooler
- F3 - Discard Spooler
- F6 - Exit menu

If you have the print spooler installed, the options outlined above will appear. Unlike the commands you can give to the SPOOL.EXE program, they affect all the ports; if you are printing from PAR1 and COM1 at the same time, then the 'Pause' option will pause printing on both ports.

N.B. When using your display in graphics mode, the popup menu will display a highly attenuated summary of the options. Essentially, the summary pairs each active function key with a single letter to identify the command. This is because of space restrictions imposed to keep the driver to a reasonable size. The letters are as self explanatory as possible, but of necessity some are a little cryptic; here are the letters in use:

- P - Pause spooler
- R - Restart spooler
- D - Discard spooler buffer

APPENDICES

Part numbers for memory chips

In general, you may use any 256 kilobit "zip" memory chips for the Hyperam 50/60 2 Mb board, and any 1 Megabit "zips" for the 8 Mb board, provided they run at 120 nanoseconds or faster.

A "-12" on the end of the part number will indicate that the speed is 120 nanoseconds.

You may use 100 nanosecond chips, indicated by a "-10", but you will obtain no speed benefit.

Warranty

Hypertec Pty Ltd warrants the hardware components of this product to be in good working order for a period of one year from the date of purchase from Hypertec or an authorised Hypertec dealer. Should this product fail to be in good working order at any time in this one year warranty period, Hypertec will, at its option, repair or replace this product. Repair parts and replacement products will be furnished on an exchange basis and will be either reconditioned or new. All replaced parts will become the property of Hypertec. This limited warranty does not include service to repair damage resulting from accident, disaster, misuse, abuse or non-Hypertec modification of the product. Components, such as memory, installed by the dealer or the user are not covered by this warranty.

Hypertec Pty Ltd provides no warranty of any kind for the software component of this product. The entire risk as to the results and performance of the software is assumed by you.

Apart from the above, no warranty is expressed or implied, including warranty of merchantability or warranty of fitness for use or for a particular purpose. In any event, liability is limited to replacement of the product. In no event shall Hypertec be liable for any incidental, general, special, exemplary or consequential damages, even if Hypertec has been advised of the possibility of such damages.

Product Repair Procedure

If the hardware component of your Hypertec product ever requires repair, contact your dealer first. If the product must be returned to the factory for repair, follow these guidelines for rapid turnaround:

[1] You must be issued with a ***Return Maintenance Authority (RMA)*** number from Hypertec before shipping the faulty product. The RMA may be obtained by contacting Hypertec's Service Department.

[2] The product must be shipped in the original packaging or equivalent. You agree to insure the product or assume the risk of loss or damage in transit, and to prepay shipping charges to and from the factory. You must enclose a copy of your original purchase receipt as proof of date of purchase for all warranty repairs. You should also enclose a type-written description of the problem, and full details on how to contact you during business hours.

[3] If the product is being repaired under warranty, there is no charge for parts and labour, except for dealer or user-installed components. Dealer installed components are warranted by the dealer. If we find that your dealer or user-installed parts are defective, we can identify which parts are defective, but we will not replace parts unless you specifically authorise us to do so in writing when you return the board. The parts charges and any applicable labour charges will be billed.

[4] If the product is not being repaired under warranty, there is a minimum charge of \$50 plus parts for each board returned. If the total cost of repair will exceed \$75, we will contact you for authorisation. If you do not authorise the repair, the \$50 minimum labour charge still applies and will be billed.

[5] Be sure to clearly indicate the return address and to quote the RMA number issued to you when returning products for repair. If the product is being repaired under warranty, you are only liable for the shipping charges. If the product is not being repaired under warranty, shipping costs and repair expenses will be billed COD.

Trademarks

IBM is a trademark of International Business Machines Corporation.

The Hyperam 50/60 circuit board, circuit design, software and manual are protected by copyright 1988. Copyright belongs to Hypertec Research Pty Ltd.

The software tools for the menu driven install package were supplied by Jack Carmon and Leon Cunio.