

Codeology iText utility program and i500/i100/ip600 Instructions

ip600

The ip600 has the correct interface board installed, but it is already used to communicate with the internal hand controller. To use iText, you will either need to unplug the hand controller cable temporarily or purchase a serial t-switch to allow you to select which device communicates with the ip600. You will only be able to communicate with the ip600 using the serial communications unless you completely disable the internal hand controller and select Ethernet communications full-time using iText.

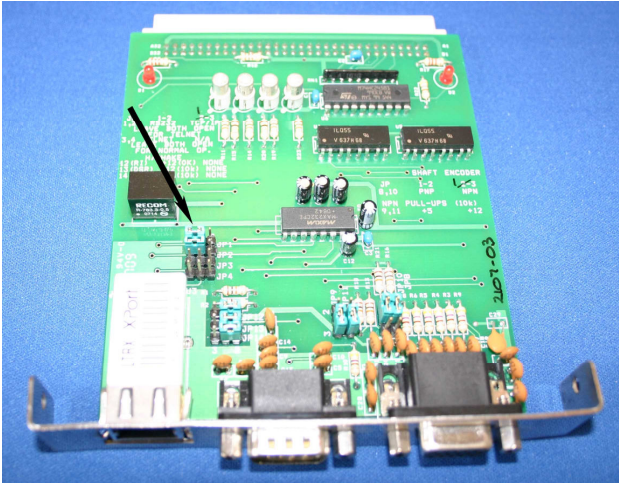
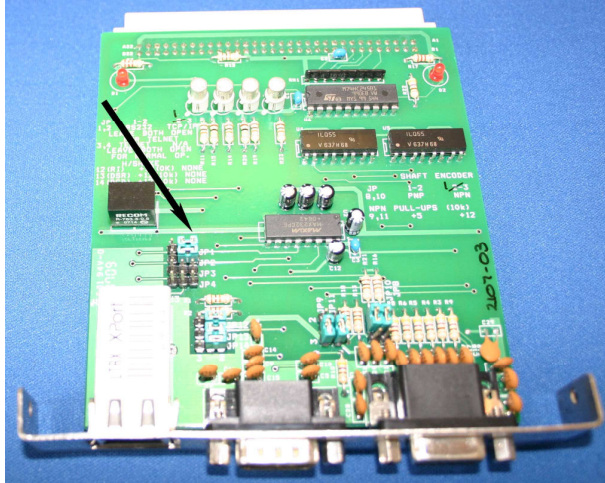
i500

You will need a Serial/Ethernet interface board to use iText with an i500 ink jet printer.

Serial/Ethernet interface board installation for i500

First of all if you are using Ethernet make a note of the 12-digit number on the label on the silver Ethernet connector on the board (this is called the X-Port).

Set the serial board to either Ethernet or Serial protocol. Do this by selecting the jumper settings JP1 and JP2 on the board, as detailed below.

Ethernet	Serial
On the i500 Serial Board Make sure that JP1 and JP2 are shorting the middle pin (pin 1) to the left hand pin (pin 3) when looking at the board from the connectors.	On the i500 Serial Board Make sure that JP1 and JP2 are shorting the middle pin (pin 1) to the right hand pin (pin 2) when looking at the board from the connectors.
	

Board Installation

Plug the serial board into the slot on the i500 that is furthest from the power and photocell connectors.

i100

The i100 is already equipped with a serial port that is used for the hand held controller. Optionally it may be fitted with an Ethernet port. You may use the Ethernet with iText even if a hand controller is plugged in, but you should only use the interfaces one at a time, do not send anything from iText when the hand controller is in use as they will interfere with each other.

Establishing communications, all models

For Serial

Connect a pin-to-pin (1-1, 2-2 etc) serial cable between the ink jet serial connector and a PC then switch on the ink jet.

For Ethernet:

In order to setup the Lantronix X-Port ethernet device (the silver Ethernet connection on the serial board), you will need to download and install the Lantronix device installer from www.lantronix.com.

The link below worked as of March 2007.

http://ltxfaq.custhelp.com/cgi-bin/ltxfaq.cfg/php/enduser/std_adp.php?p_faqid=644

Install the device installer on your pc.

Connect a standard ethernet cable from a hub or switch to the i500 board and switch on the i500. Check that there is a green led lit on the ink jet serial port to confirm that you have a good cable connection.

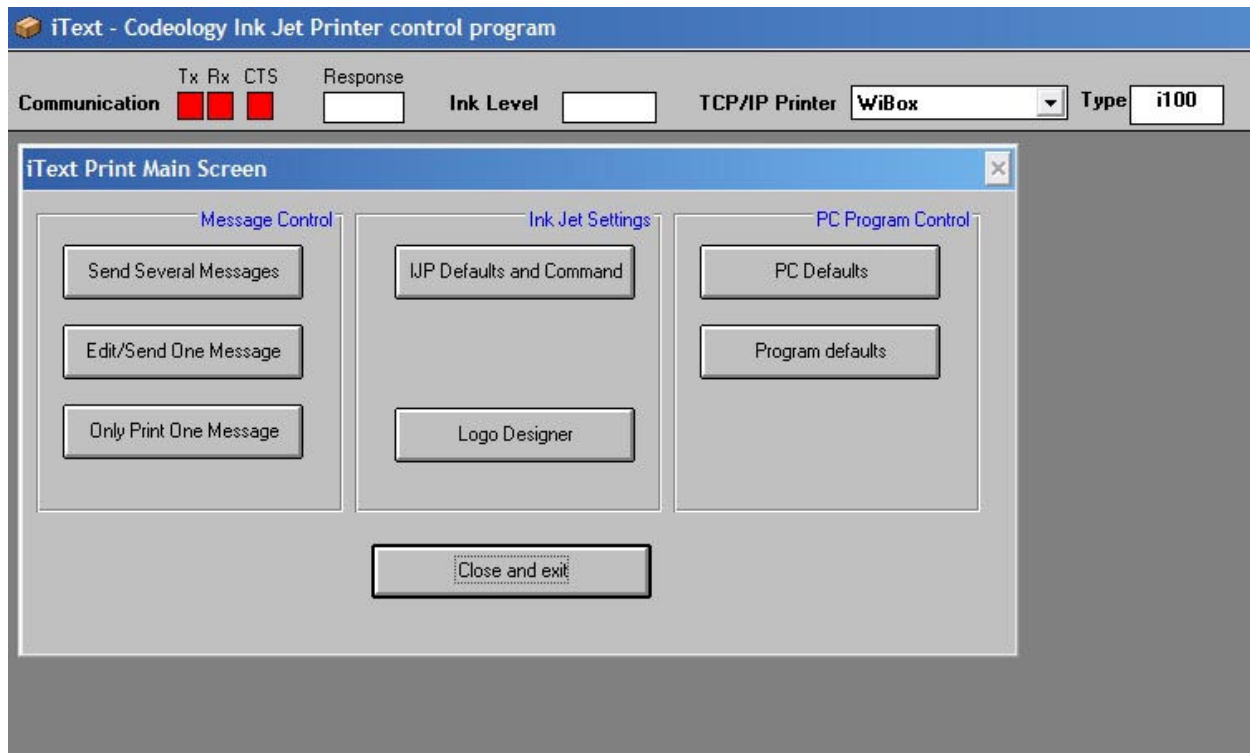
Once the device installer is running on your computer, start it and click 'search'. It should find the ink jet Ethernet X-Port device and display the hardware address as written on the label on the X-Port device.

Click on 'assign ip' and follow the instructions on-screen to assign an IP address to the ink jet. Note that some switches and firewalls may not allow you to see the X-Port device, so use a computer as close to the X-Port on your network as possible, preferably with only a non-intelligent hub between the pc and the X-Port. Also make sure that your firewalls allow you to see the IP address that you are assigning.

iText Program, Installation and Initial Setup with PC Defaults Screen

Install the iText program by running setup.exe. Follow the on-screen instructions and accept the default settings unless you really have to change any. Default settings will work for most standard Windows pc's.

After installation, select Start, Programs, iText to run the. You will see the main iText screen:



At the top of the screen you will see the communications bar:

This shows what happens at various stages of sending and receiving to the ink jet printer. Whenever something is sent to the ink jet, the 'Tx' box goes green. When something is received, the 'Rx' box goes green. The 'Response' box shows either O.K. or 'Error' depending on what happened.

If you are using the serial communications, the CTS box will also change from green to red whenever the ink jet is printing. CTS will not change if you are using Ethernet.

Ink level is read from bit 0 of the opto input on the ink jet, which can be connected to the option 5 Litre cap with level detect.

The box next to TCP/IP Printer is a drop-down selection box that allows you to select which of your Ethernet printers you will communicate with, and the Type is what type of printer it is (i100 or i500 – i500 type includes ip600). The machine names and types are changed within the PC Defaults screen, under TCP/IP settings.

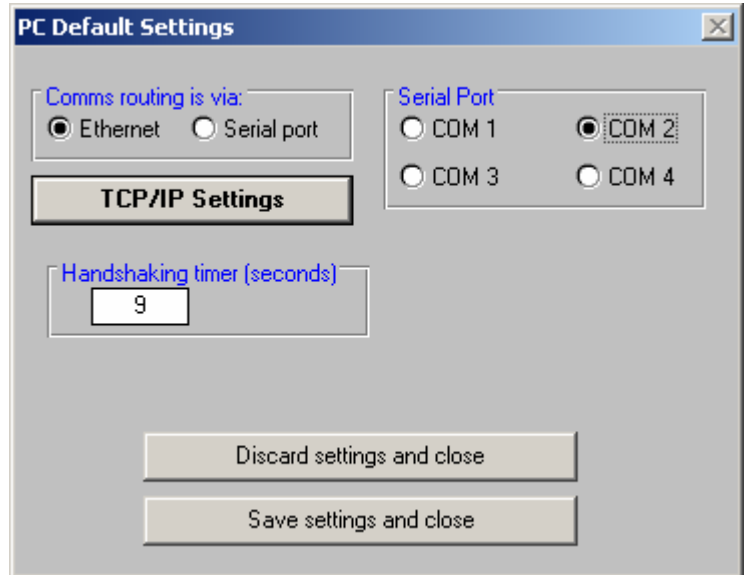
Initial Setup

First of all, set up your communications method, either serial or over Ethernet.

Click on the button labelled PC Defaults.

The method of communication shown here is Ethernet. To select serial, click on the serial port button and then select COM 1 to COM 4.

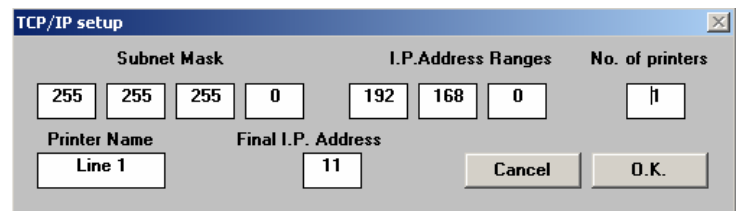
For **serial** communications, click on the button next to 'Serial port' and then select COM1 to COM4. The handshaking timer is the number of seconds that the program will wait to send if the ink jet is busy printing. Leave this at the default setting unless you have a very slow line when you may have to wait a long time for the inkjet to finish printing. In this case, increase the number.



For **Ethernet**, click on 'TCP/IP Settings.'

Leave 'No. of printers' at 1 for this version of iText.

Type in your subnet mask (enter all 4 numbers)



Type in your IP address (enter first three sets of digits in the boxes under 'I.P.Address Ranges', type the last number in the box under 'Final I.P. Address.

This screen shows a printer called 'Line 1' using an i.p. address of 192.168.0.11 on a network with a subnet mask of 255.255.255.0.

You can type in any text you like in the box under 'Printer Name'.

Note if you change from Ethernet to Serial or back again, close the program and restart it so that all of the communications buffers are cleared out correctly. You do not have to restart the program if you are just changing a COM port or an Ethernet address.

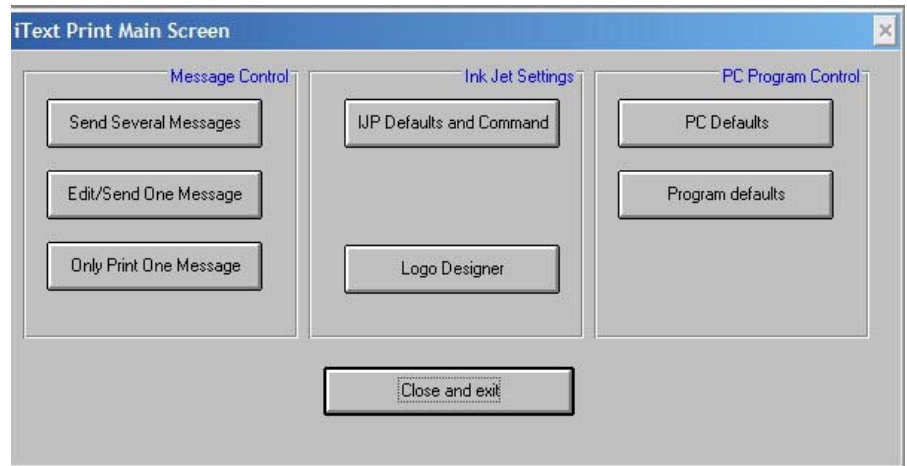
Click OK, then click on 'Save settings and close' on the PC Default screen.

Operation

Important Note: Try not to communicate with the ink jet while it is printing as you can lose data. It is better to make sure the line has stopped before sending information to the ink jet.

Main Screen

When you first install the software, you will see all of these buttons. However any of them can be turned off to allow operators access to the services you wish but to restrict access to those you do not want to use. After initial install, depending on the options selected, you may not see all of the buttons shown here.

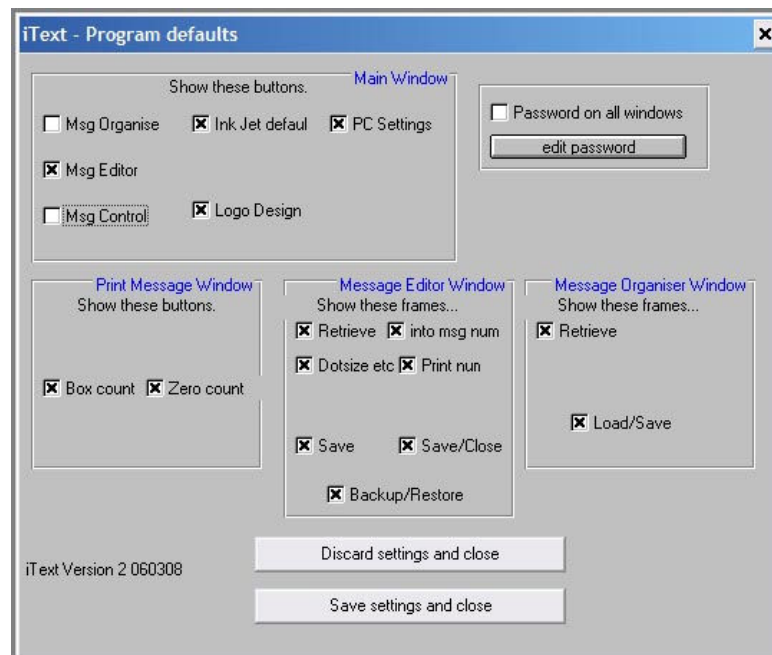


The function of each button is listed below.

Program Defaults

This allows you to select which options are available your operators. If there is a cross in any box, then that option will be visible.

The option boxes in the frame labelled 'Main Window' control the buttons the operator will see, the buttons in the other frames control what the operator see when he opens that window.



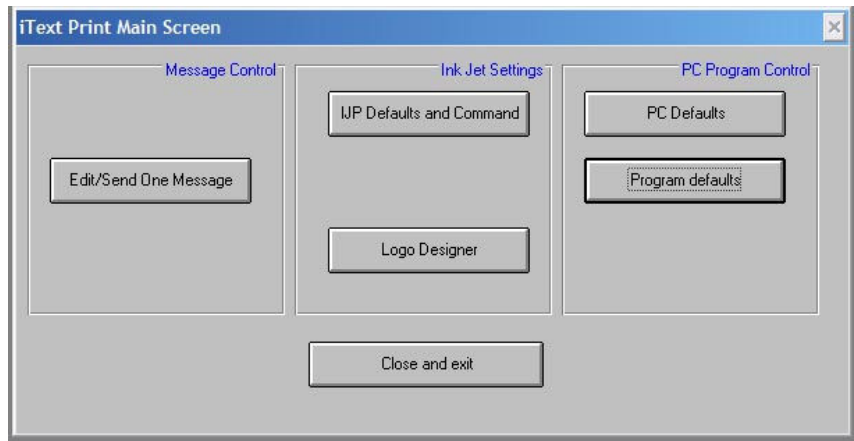
to

that

will

In this screenshot the 'Main Window' frame does not have Msg Organise and Msg Control selected, so the main screen would look like this:

You can see that only Edit/Send One Message is shown, the option above and below it have disappeared. For your first use, tick every box except (Password on all windows) to see what is available.

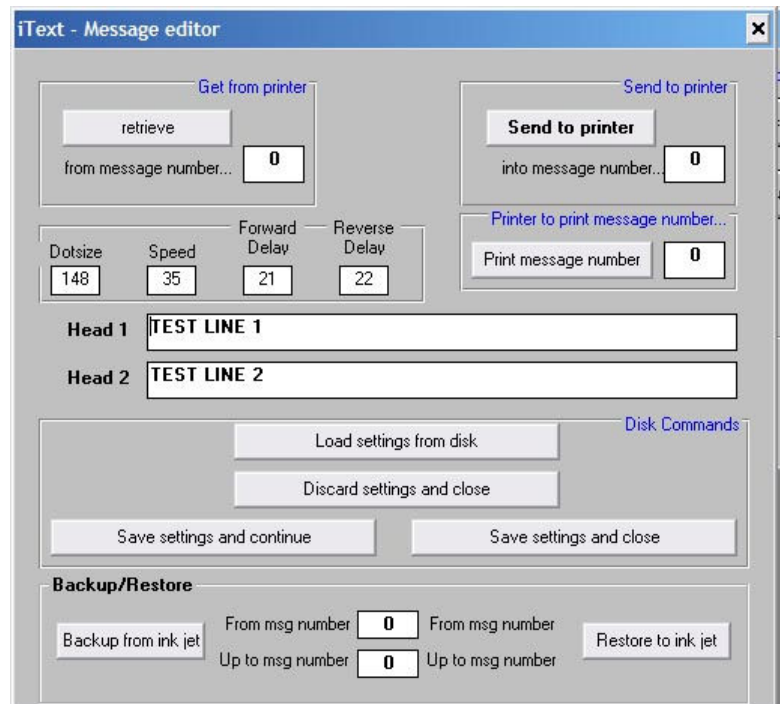


Edit/Send One Message and Backup/Restore

This is the main editing screen that allows you to type in a message and setup dotsizes, speeds and delays. From here, you can also send one message at a time to the ink jet, and retrieve messages from the ink jet.

If you press the button labelled 'send to printer', the message 'TEST LINE 1' will be sent to head 1 of the printer, 'TEST LINE 2' will go to line 2, and the message will be printed at a dotsize of 148, a speed of 35 and a delay of either 21 or 22, depending on the print direction.

You can change any of these parameters and text to print and position the message that you want from the ink jet.



To check that the ink jet has received the information, click on 'retrieve'. Make sure that you type in the same message number into the 'from message number' box as you type in the 'into message number' box.

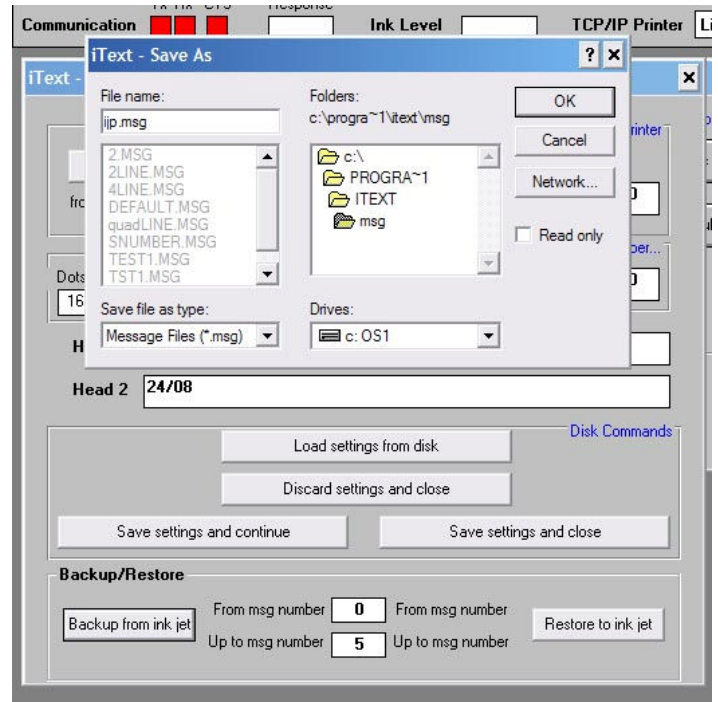
If you press 'save settings and continue' you can save the text and parameters to disk. The message can be loaded from disk later, either for sending to the ink jet one at a time or sending in a group (see the 'Send Several Messages' section).

Backup/Restore

Backup and restore allows you to save an ink jet printers message store to disk, and send it back again.

Make sure that you enter the 'from' and 'to' message numbers in the boxes, then press 'Backup from ink jet'. Once communications is established you will be asked for a file name. In this case the name is 'ijp.msg'. The software will call the first backup file ijp.msg, then write ijp1.msg, ijp2.msg and so on until it reaches the number in the 'up to msg number' box, in this case ijp5.msg

Note that it is a good idea to always start at message 0 as the first file is always the name you type in without a number. If you start at 6 and go up to 10, in this case ijp.msg will contain data from message number 6. You will have to remember that you started at 6 when you restore the data later.

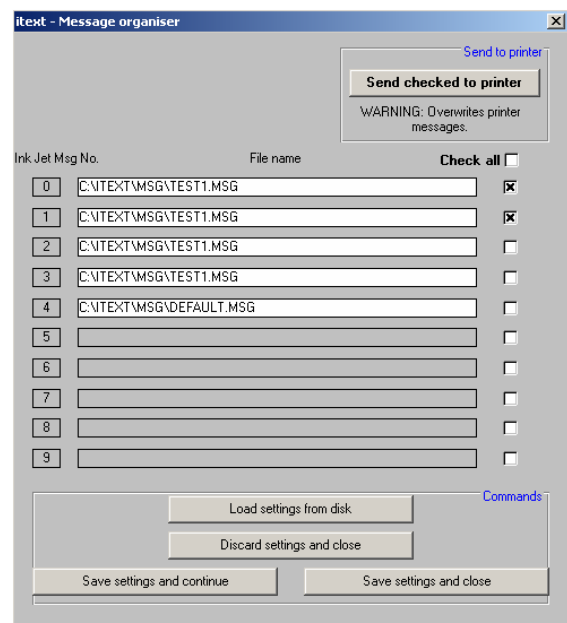


Send Several Messages

Use this screen to select messages from disk and send several down at once. In the example below, the message 'TEST1' will be sent to ink jet message 0 and 1 when the 'Send checked to printer' button is clicked.

To select a message from disk, double click on any of the white or grey File Name bars. For example, to change message 0 from TEST1.MSG, double-click on it and select a new message from your disk.

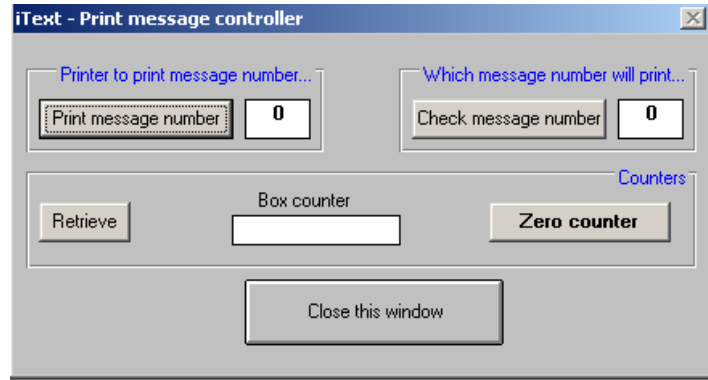
You can save the entire message list to disk, or load a new list from disk with the buttons at the bottom of the window.



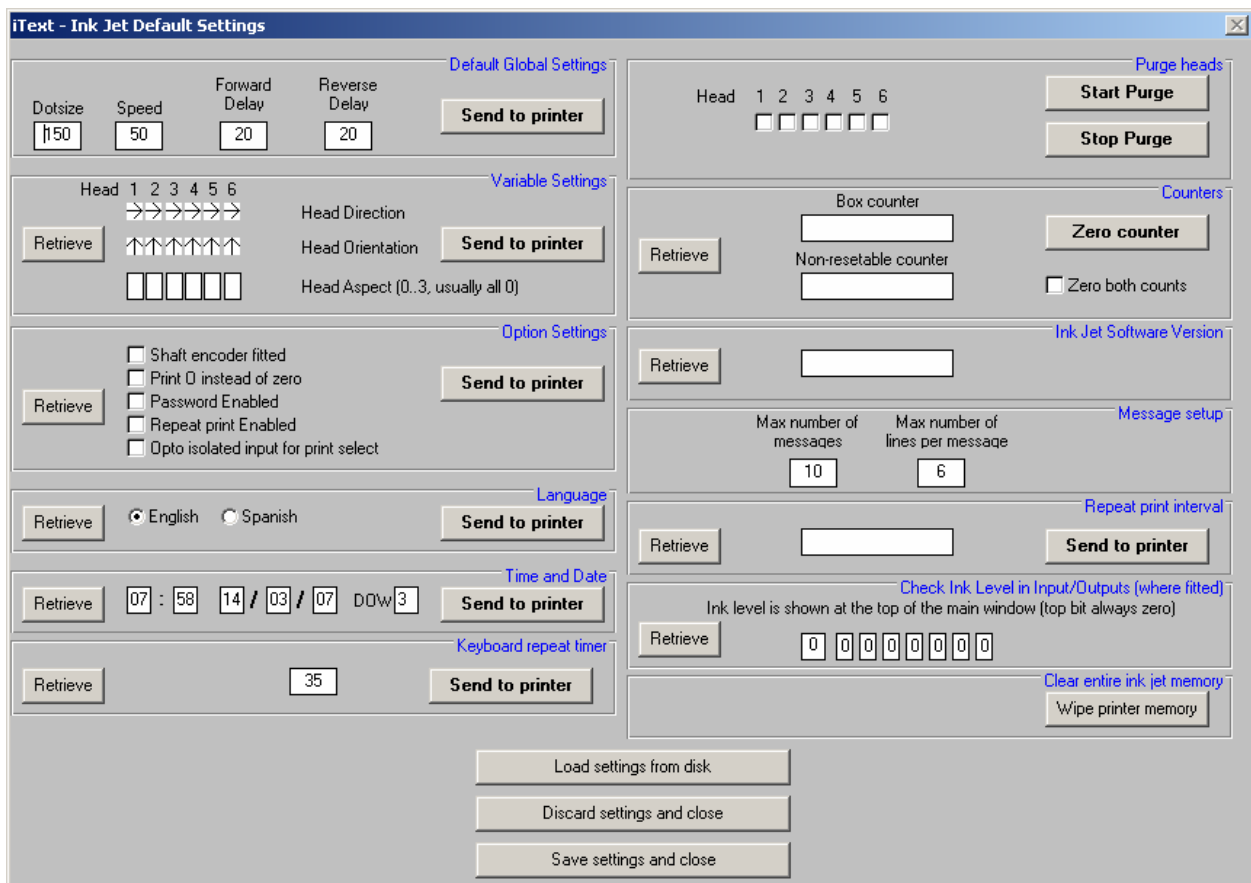
Only Print One Message

This is the minimum option to allow operators to only select a message to print that is already in the ink jet. If you want them to select a message from the PC, use the Edit/Send One Message screen and switch off all of the options except print.

They cannot edit or change any of the parameters from here. You can switch off the box count display and zero count options in the Program Default screen.



IJP Defaults and Command



This window allows you to change every parameter in the ink jet. A good first test is to click on 'Retrieve' in the box labelled 'Ink Jet Software Version'. If the communications is setup correctly then you will see the ink jet software version appear in the white box. If not, proceed to the Troubleshooting section.

To setup an ink jet printer to factory defaults, Use the Wipe printer memory button to clear the ink jet. Next set the time and date and send that to the printer. (Tip: the time and date is loaded into the screen whenever you call this window up. To set the time and date to the PC time, open the IJP Defaults and Command window and immediately sent the time to the printer).

To change head direction, orientation and aspect, click on the arrows or the number. The direction and orientation will change, the aspect number will increment from 0 to 3 then round to 0 again.

WARNING. If you have clicked Start Purge, always make sure that you press Stop Purge before closing the window or you will leave the ink jet in purge mode which you cannot cancel from the ink jet keyboard.

Logo Designer

Click on Logo Designer to open the design window to allow you to design your own 7-dot or 16-dot graphics.

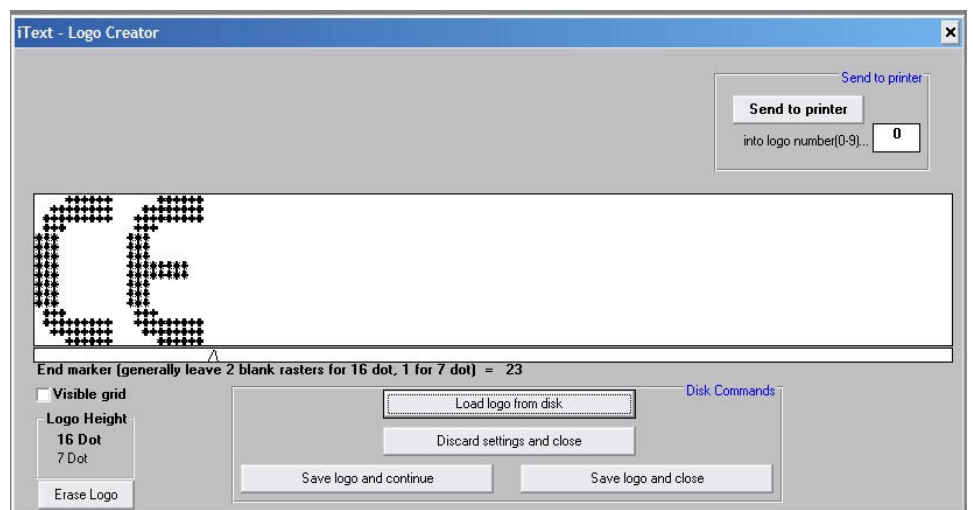
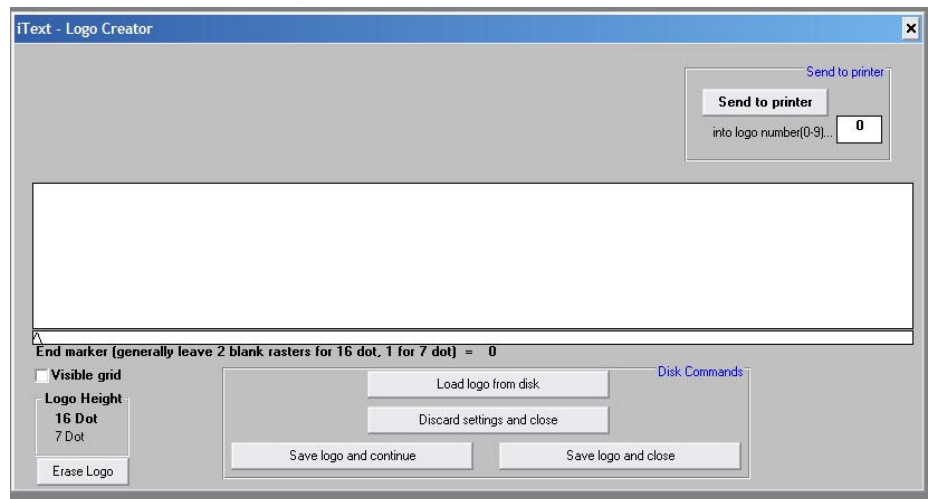
Clicking anywhere in the white box with a left mouse button will produce a black dot, the right mouse button will clear a black dot back to a white dot.

You can hold down both button and drag the mouse to produce continuous lines

You can save logos to and restore them from disk. You can also send them into an ink jet printer memory. There are ten logo areas in the ink jets, from 0 to 9. To send a logo to the printer, type in the logo number that you wish to use in the inkjet in the 'into logo number(0-9)' box and click on 'Send to printer'.

Here you can see the CE logo that is pre-installed with iText. This is a 16 dot log. If you wish to make a 7-dot log, click on the '7 dot' option button.

Note the end marker under the white box. This tells the printer when to stop printing at the end of a logo. When you add a black dot, the end marker will automatically move



beyond it if the dot is past the end marker position. You should leave 2 blank vertical lines at the end of a 16 dot logo and 1 at the end of a 7 dot logo. This matches 7 dot and 16 dot character widths, which have 1 and 2 blank vertical lines as a space between each character. If you do not leave these spaces the character following the logo will print immediately with no gap between it and the logo.

If you leave too big a gap between the end of the logo and the end marker, the gap will be printed by the ink jet as white space. Any following characters will not print until the End marker has been reached by the ink jet.

Troubleshooting

Important Note: Try not to communicate with the ink jet while it is printing as you can lose data. It is better to make sure the line has stopped before sending information to the ink jet. Do not communicate with the ink jet while it is repeat printing, it will not respond.

Serial

Using the IJP defaults and command, click on Retrieve in the Ink Jet Software Version Box. You should see the TX light change from red to green and back. The RX light should flash green, and the CTS line should go green. The communications display should flash OK.

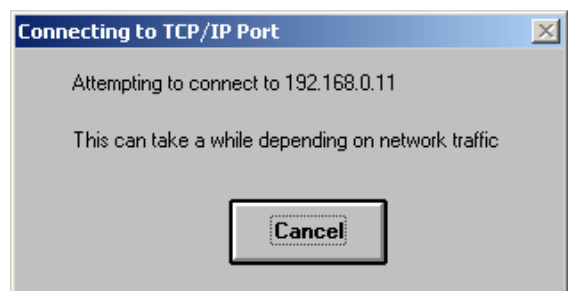
Trigger the ink jet photocell and you should see the red box under CTS change briefly to green then back to red. This tells you the serial connection and cable is working correctly.

If you only see the Tx light change colour, then you either have the wrong serial cable, the wrong PC port or the jumpers JP1 and JP2 are not set correctly on the serial board of the i500/ip600.

Ethernet

Using the IJP defaults and command, click on Retrieve in the Ink Jet Software Version Box. You should see the TX light change from red to green. You will see the ethernet communications box appear.

Initially the cancel button will not be visible. If it appears and stays on screen for more than 5 seconds, then the PC cannot detect the IP address that you have setup. Ping the IP address from your PC (search for PING on the internet to find out how to do this on your pc) and make sure that you have communications. If ping does not work, then either you have not set the IP address of the Lantronix X-Port or your network firewall is preventing communications.



If the cancel button appears for one or two seconds and then the Connecting to TCP/IP window disappears, but you get no response from the ink jet then either the ink jet is printing or you have the jumper settings JP1 and JP2 set incorrectly on the serial board on the i500/ip600.