

Software Manual

Image 4040

**High definition for
customizing cases**



101073-01



A DOVER COMPANY



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1. NetJet Introduction

Congratulation to your new Imaje product for your marking and coding needs. The Imaje 4040 Ink Jet printer with its unique technology has been developed to make your case coding easy in all aspects.

This manual includes information about all the Imaje 4040 Software. Make sure you are aware of your special system configuration and accessories chosen.

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1. NetJet Introduction

The NetJet Program

Net-Jet™: A very powerful software program that allows the user to edit the message and control the printer either directly from the controller or over a network. Using Net-Jet™ controllers may be connected utilizing an Ethernet network. Net-Jet™ follows standard TCPIP protocol. The number of controllers that may be networked is only limited by the Microsoft network (virtually unlimited).

Hardware/OS requirements: as Win 2000 or Win XP.

NETJET supports (This manual references NetJet version 5.0.):

- **“On the fly” message change over:** Messages may be edited saved and recalled to the print heads while printing, without missing a single print.
- **Fonts:** Over 350 Windows True Type™ fonts are available. Sizes range from 5pt, .08” (2mm) tall to 268 pt, 2.8” (70mm) tall.
- **Bolderization- Horizontal resolution and print width adjustment:** The message may be bolderized by adjusting the print width and increasing the horizontal resolution. This is helpful for adjusting bar codes to get better scan rates.

Messages may contain one or more of the following objects:

- **ASCII-Text**
- **Symbol/Character Map:** Virtually any language character or special character may be easily inserted and sized using the character map. Chinese, Japanese, Korean, Hebrew, Arabic, Russian languages to name a few.
- **Counters:** Increment, decrement, count by specified increment, multiple counters per print head, count stop/reset, leading zeros/no leading zeros.
- **Shift Codes:** User definable.
- **Time:** Multiple time formats. 12hr/24hr, selectable separators.
- **Date, Best Before/Expiration Date:** All format types, programmable separators, auto rollover, programmable time rollover
- **Graphics:** Net-Jet™ uses all raster image types such as .bmp, .png, .tif, .jpg, .jif, .dib files etc. for printing logos. Logos may be resized from within NetJet on the fly.
- **Bar Codes, 1D and 2D:** 1Dimensional-I2of5, EAN13, EAN8, Code 39, UPC-A, EAN128/129, Post net, SCC14 (ITF-14). 2 Dimensional: Data matrix, PDF417, RSS (Q4 2003).
- **Invert Bar Code:** Invert the to print the spaces instead of the bars when using white ink on a dark substrate.
- **User Prompts (Supplied Input):** Fields may be inserted into a message template whereby they are designated to pop up and request that the operator insert specified data. The prompt is triggered when the operator attempts to enable the print so they cannot print until the data is entered. The data may be entered via HID (Human Interface Device) using a keyboard, scanner, etc. The data may come from several sources, including a database, or entered by typing.
- **Database (ODBC):** Create message templates using database fields. Link fields to any type of ODBC database source such as MS Access, d-Base, Fox Pro, MS Excel, Paradox, Oracle ODBC, etc.



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- **Async Input:** Serial data may be sent to the printer to be printed from multiple heads. Data can be received from any device with a serial out put. The RS-232 COM settings or Ethernet, using TCPIP and Data Format are fully programmable to accommodate the device. Token The Input Options are Direct, Index or Token. The AI may be used with serial devices such as bar code scanners for direct data printing of either the exact bar code or the text version or both. Serial data may also be pumped into the print head from another PC program, from a PLC, scale, etc. In addition a scanner may be used on the USB port as a Human Interface Device (HID). If a message template is properly set up the scanner may be used to recall a new template and or call a token or index # from a database to fill all database fields in the template. The HID may also be used as a user prompt for inserting specific text information manually without stopping print.
- **Dynamic Bitmaps:** Bitmaps may be listed in a database and updated along with other database information in specified fields dynamically.
- **Database Update:** Easily update a database contained locally on the controller by simply pressing an icon and connecting a media device to the USB port.
- **Bar Code Ink Bleeding Correction:** For 1D and RSS bar codes



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Explanation of terms:

- “Click”: Press the left mouse button once.
- “Double Click”: Press on the left mouse button twice.
- “Highlight” an object, move the cursor to the object and press the left mouse button once.
- “Drag” Move the cursor to the object and press and hold the left mouse button. Release the button at the desired location.

Use of objects in NetJet

Printing in NetJet is accomplished by the use of objects. Objects are either static or dynamic. An example of a static object would be text or bar code that does not change. Dynamic objects change depending on conditions. Dynamic objects may change because of date time, input, from a database, a device, an operator or other conditions.



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Upgrading the NetJet Program

NetJet has regular updates to add features and improve functionality. When upgrading Net Jet Versions, be sure to select Remove when the option presents itself.

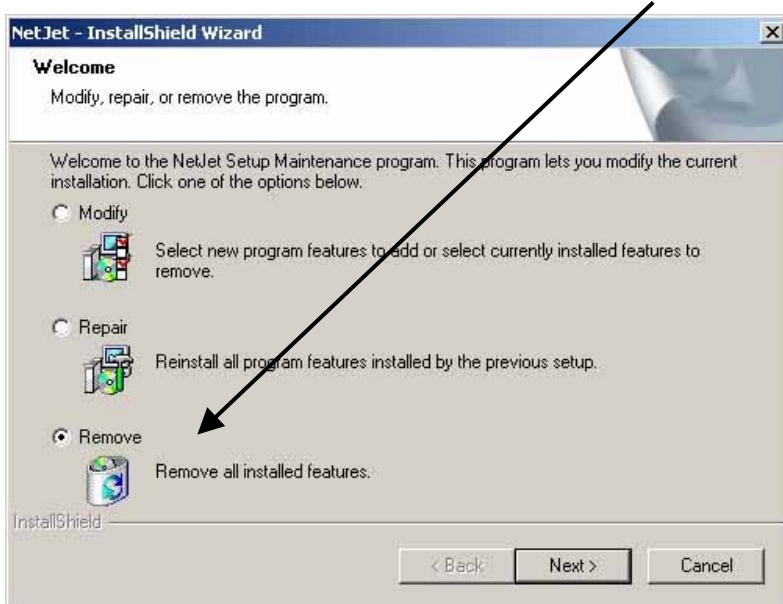


Figure 1 Upgrading NetJet

To check what version of NetJet you have Click on Help and about NJEditor on your top menu.

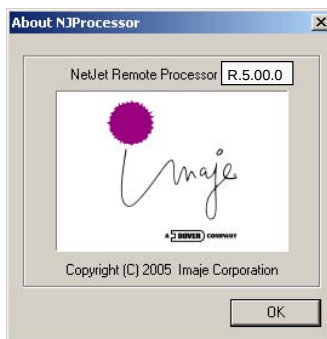


Figure 2 NetJet Version

Your NetJet Version will be displayed.

Note: Please check your NetJet version. New features or improvements are added to each release.



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Demo Mode

Demo Mode allows a PC/Laptop to simulate a 4040 controller's hardware enabling full software functionality without having a 4040 controller available. Product Detect is simulated by a Button, which prompts when print is enabled if the print head properties are set with Product Detector enabled.

(Note: Only NetJet 4.00.5q or newer versions support Demo Mode. A PC/Laptop cannot connect directly to a Print Module or Print head. Demo Mode is intended for hardware simulation only but does not support simulated Encoder functionality.)

Demo Mode Setup

1. If no previous version of NetJet is installed, skip to step 3.
2. If there is an earlier version of NetJet installed on the PC/Laptop, use Add/Remove programs from the control panel. When prompted to Modify, Repair or Remove, choose the Remove option to uninstall.
3. On a PC/Laptop install the latest version of NetJet.
4. During the setup the Install Shield Wizard will ask to install on a PC/Laptop or Controller; choose the option PC/Laptop.

Follow the on screen instructions through the rest of the steps. Re-boot when prompted.

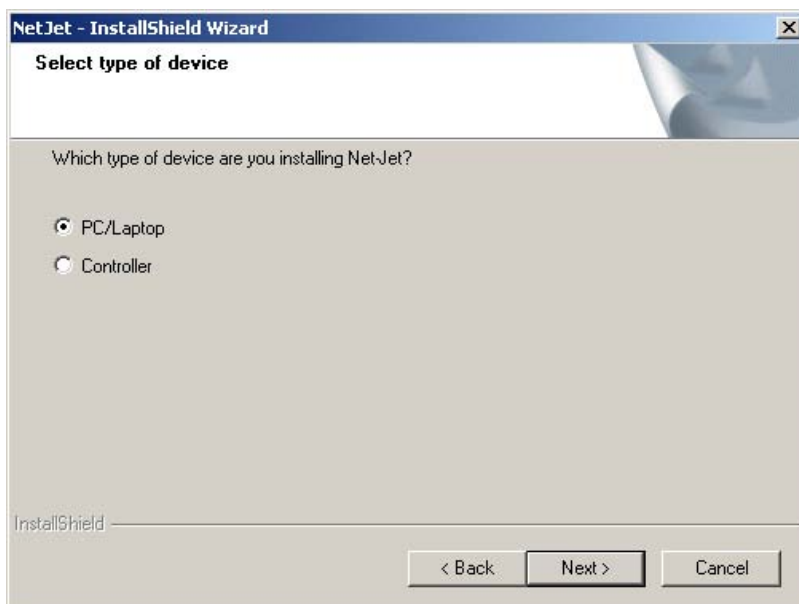


Figure 3 Demo Mode

Using Demo Mode

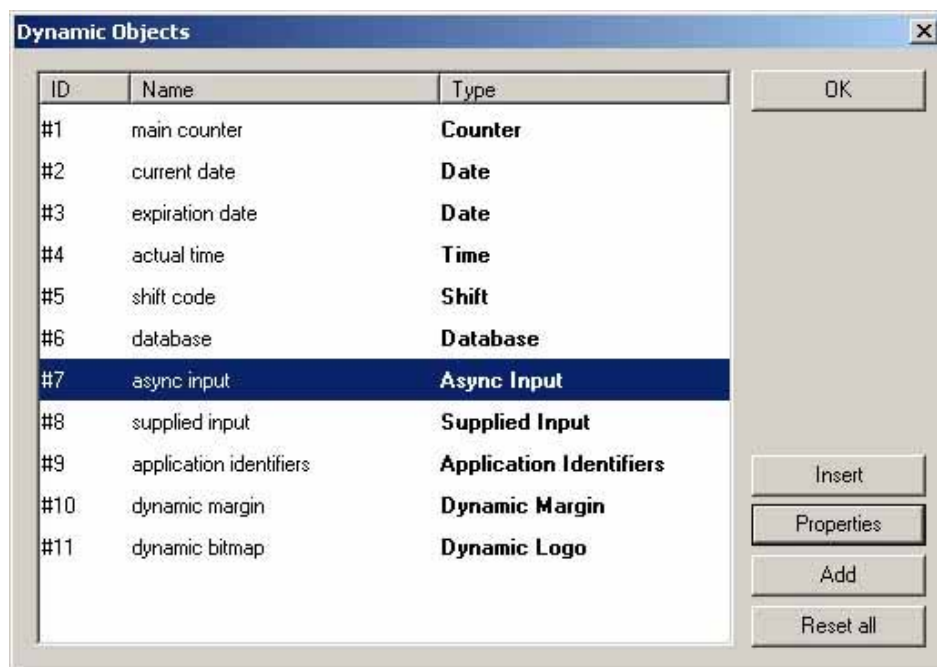
Reference the Section 1 Programming Quick Start Guide for creating a new message in NJEditor and printing a message from NJProcessor.



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General notes on Dynamic objects

One of the most flexible and useful feature of NetJet is its use of dynamic objects. Dynamic objects available in NetJet are listed below:



Click on empty space and click add to create a new dynamic object.

Note: Changing a dynamic option changes all like objects in your message. For example, if you change the date format, all dates in your message will use the same format. However, you may add new dynamic objects with different formats. For example to create two date formats in your message CLICK the dynamic objects selection, and CLICK on Add or double CLICK on empty space.

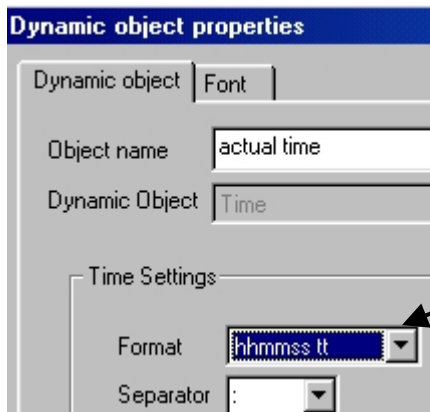
For example if you want all your actual time objects to use the same time format such as hhmmss tt (12:15:13 PM).



To do this, click on the icon select actual time and click on properties. Set your date to the hhmmss tt format.

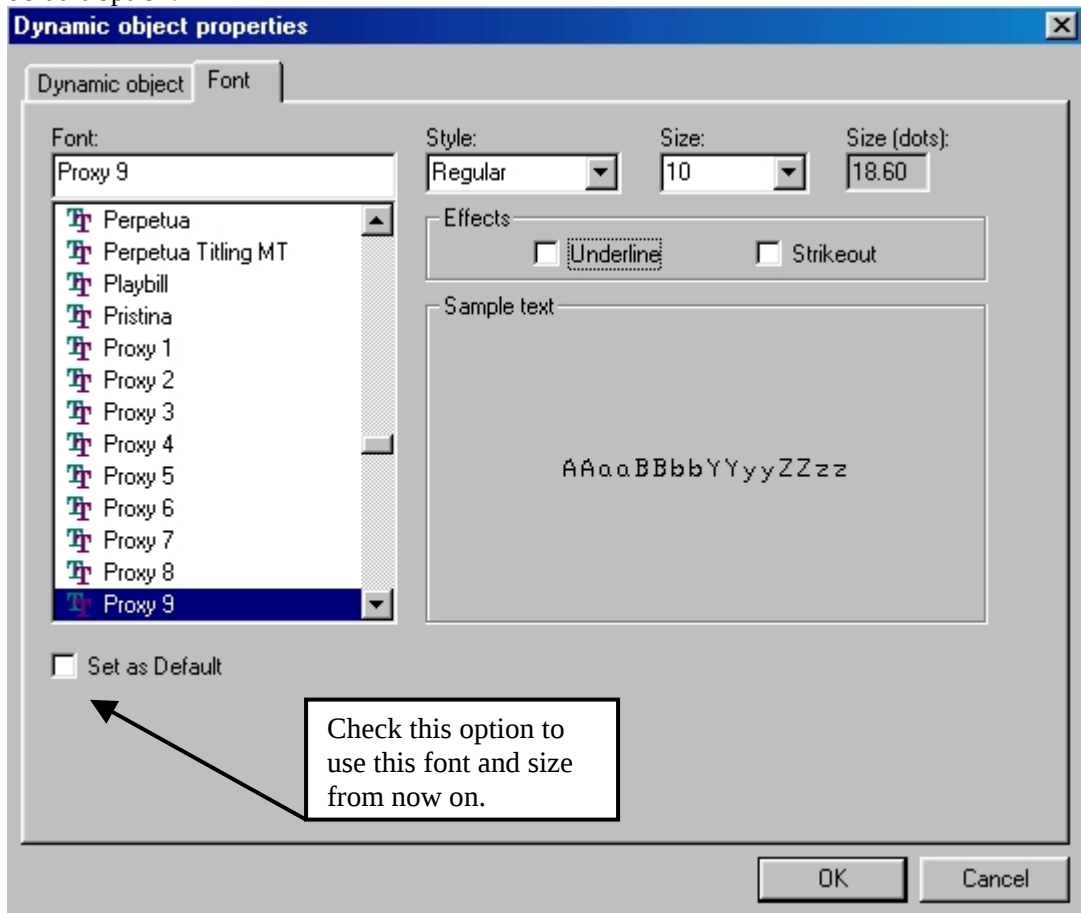


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From then on, all actual time dynamic objects will use the hhmmss tt format (12:15:13 PM)

If you click on the font tab, you may also save font and font size settings to the registry by clicking the save as default option.





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Switching Languages

Currently, NetJet 4040 software supports different languages; English, French, Spanish, German and Portuguese.



1. Click Options (from NJProcessor) from the main menu and select Options. (For NJEditor click View from the main menu and select Options.)
2. When the Options dialog opens, select the Language tab.
3. Choose a language from the drop down arrow and click OK.
4. A dialog box will appear stating "Close all the running NJ modules. The change of language settings will take place after the restart." Will prompt. Close NJProcessor, NJEditor and NJPrinter.

Once NetJet is launched the new selected language will be applied.



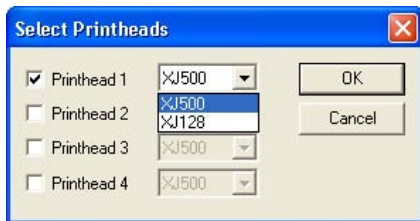
1. NetJet Introduction

Creating a New Message with NJEditor:

1. Open NJEditor from the shortcut on the desktop.
2. Click on the “New Message” icon). 
3. Give the message a name and click “OK”

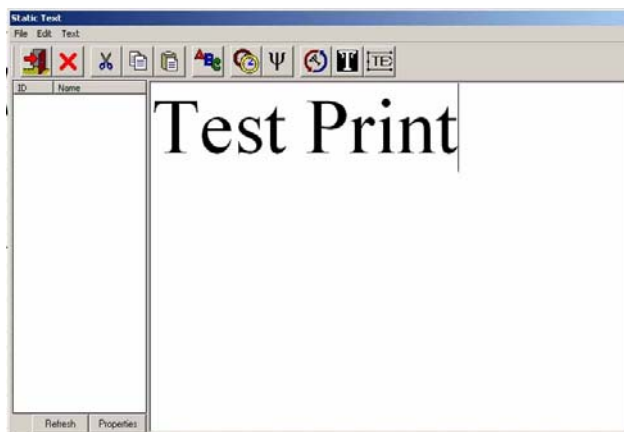


4. Select Print head/Heads and Print head type, and then click “OK”.



Insert Text:

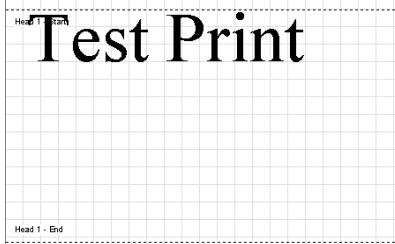
5. Click on the “Insert Text” icon and then click on the layout. 
6. In the “Static Text” window enter the text you wish to appear in the message.
7. Once you are finished entering the text, click on the “Save and Exit” icon. 





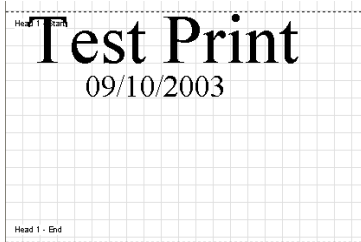
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8. Position the textbox between the Head Decomposition lines.



Insert Date:

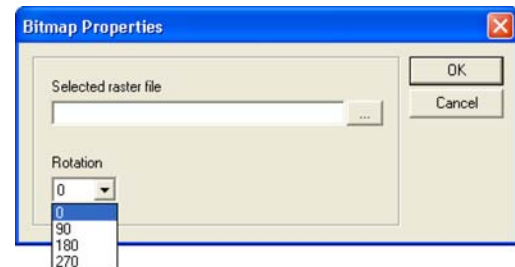
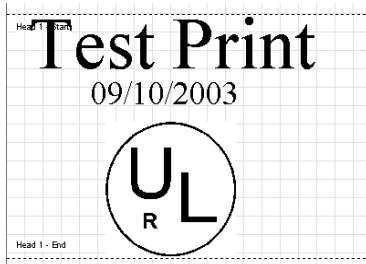
9. Click the “Insert Date” icon and then click on the layout. 
10. The “Current Date” window will now show the placeholder of the date. #2#####
11. Click on the “Save and Exit” icon. 
12. Position the Date between the Head Decomposition lines.



Insert Logo:

13. Click the “Logo” Icon. 
14. Click  and select the logo from the directory in which it is stored and click “OK”.

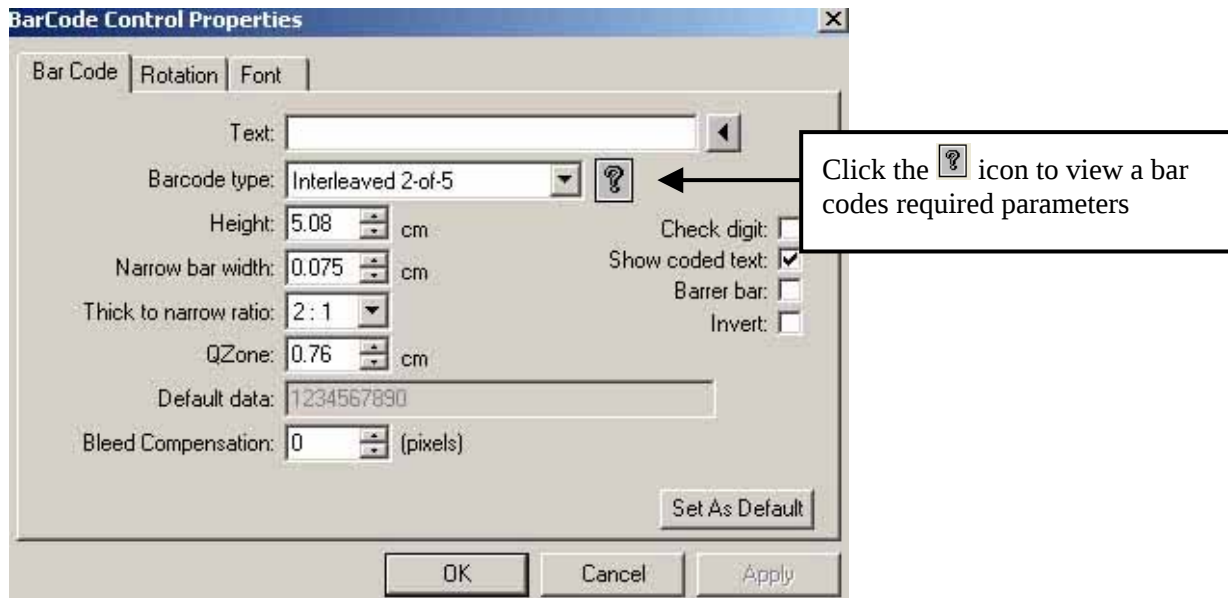
Position the Logo between the Head Decomposition lines.



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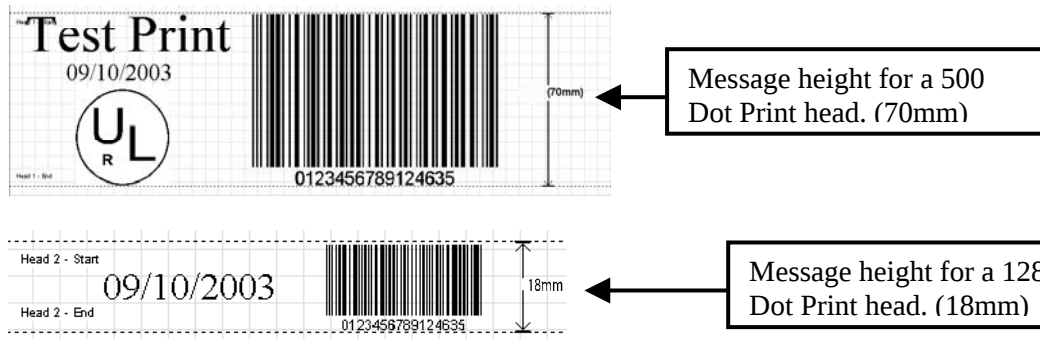
Insert Bar Code:

15. Click the “Insert Logo” icon and then click on the layout. 



16. Select a Bar Code type, enter the bar code text and click “OK”.

17. Position the Logo between the Head Decomposition lines.



Saving and Printing:

18. Click the “Save Message” icon. 

19. Click the “Enable All Print heads” icon. 

NJProcessor should be now ready to print.

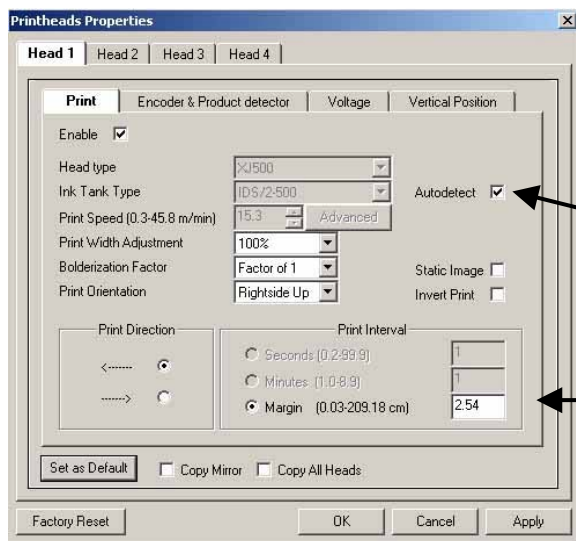
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Printing with NJProcessor:



1. Click the “Print All” icon to disable the print. 

2. Click the “Print heads Properties” icon. 



Ink Tank Type is automatically detected when checked—if no tank detected defaults to IDS/2-500

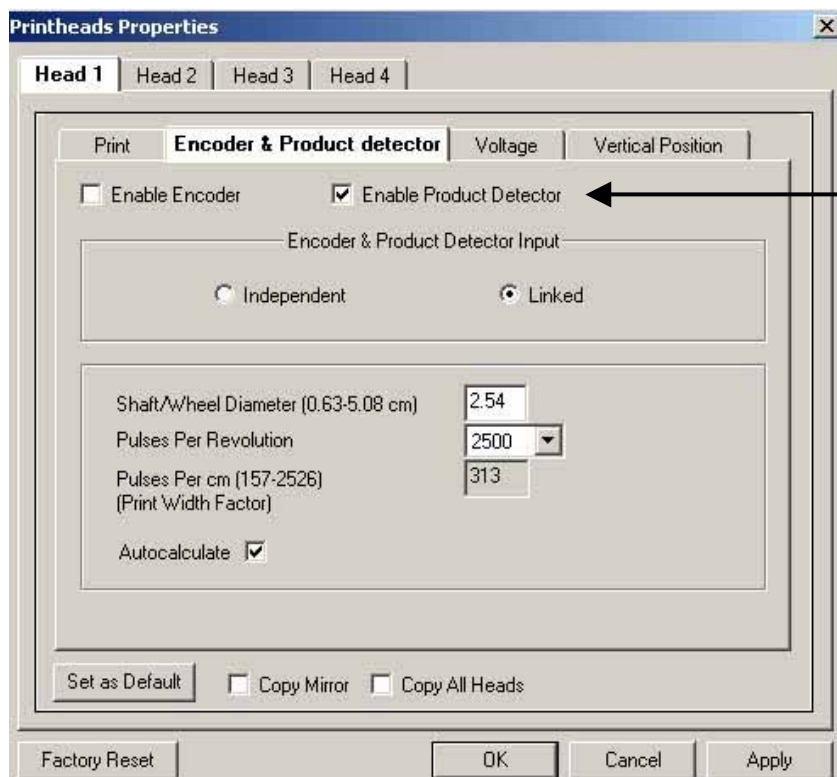
Margin

3. Under the “Print” tab for “Head 1”, select “Ink Tank” type and set the margin.

4. Click the “Encoder & Product Detector” tab. If you are using an Encoder and/or Product detector place a check next to the appropriate option or options and click “OK”



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In this example we are only using a Product detector.

5. Follow steps 3 and 4 for setting up additional heads.

6. Click the “Print All” icon and run a sample product.



Re-Opening a message with NJEditor:

1. Click the “Open Message” icon  and find the directory path where the message is stored and click “Open”.
2. You can edit the message now or set the message to print by clicking the “Send to all heads” icon. 

Re-Opening a message with NJProcessor:

1. Click on the Computer name in the NetJet Network. In this case Imaje 4040 and choose “Open Message” from the menu. Find the directory path where the message is stored and click “Open”.
2. Click the “Print All” icon and run a sample product. 





1. NetJet Introduction

Main NJEditor Window--Menu Options

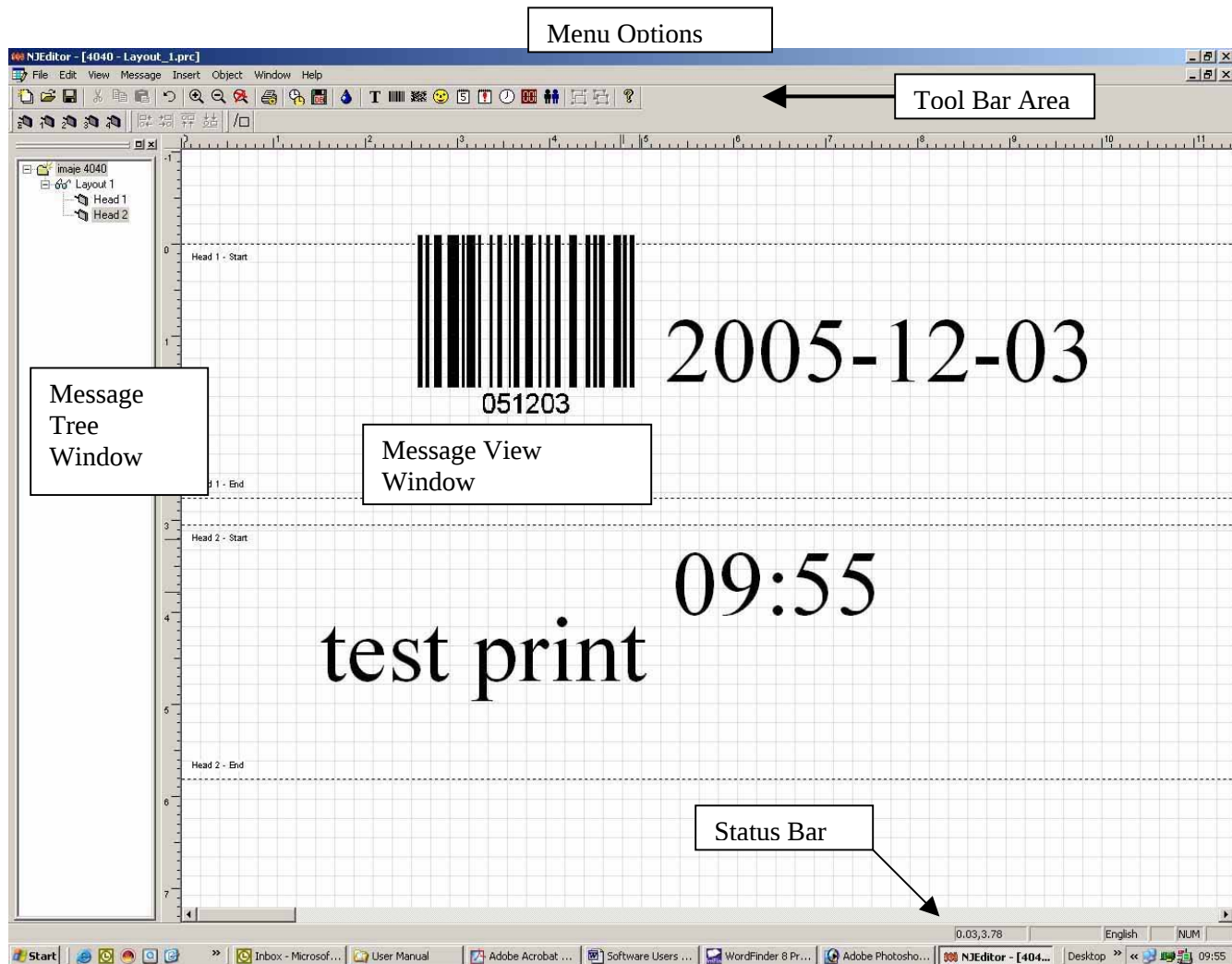


Figure 4 Main Window



1. NetJet Introduction

File Menu for NJEditor

New Message



This icon and menu option will **CREATE** a **new Message**.

Open Message



This icon and menu option will **OPEN** an **existing**

Close Message

This menu option will **CLOSE** the current **Message**.

Save Message



This icon and menu option will **SAVE** the current **Message**. If the message that you are creating is large or complex be sure to use the “Save” option several times during the building of the message.

Save Message as

When you need to create a New Message that is only slightly different for an existing message, you can open the existing Message, make the desired changes for the New Message and use the “Save Message As” option to give the changed Message a different name from the previous message. In short, use this option to **change the name** of a Message.

**The area between
“Save Message as”
and “Exit”**

The area between “Save Message as” the “Exit”, will display the last four (4) messages that have been opened. The list will be numbered from top to bottom with the most recent message on the top.

Exit

This menu option will **CLOSE** the **NetJet** Editor programming software.



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Edit Menu for NJEditor

Undo



This icon and menu option and icon would be used immediately after performing any entries (text or objects) into the current message. The “Undo” option will reverse the last entry. Use care when using the “Undo” option, this option if presses several times will undo (reverse) the last several entries. Think of the “Undo” option as taking a step backwards.

Cut



This icon and menu option and icon will allow you to delete (remove) an object. This feature is available only when and object has been selected or when in text editing mode.

Copy



This icon and menu option and icon will allow you to duplicate (COPY) an object. This feature is available only when and object has been selected or when in text editing mode. This feature works in conjunction with the “Paste” command.

Paste



This icon and menu option and icon will allow you to duplicate (place a copied object) into the current message. This feature is available only after a “Copy” command has been issued, note that once you copy an object, the copied object will remain in the controller memory until a new object is copied or until the NetJet control software and/or hardware is disabled.

Note – If an object exists in a different message than the one you are currently in and you wish to use that object in your current message:

1. Save your current message.
2. Open the message containing the object you want to use.
3. Move the cursor to the object and CLICK.
4. CLICK on the copy icon.
5. Close the current message.
6. Open the original message.
7. CLICK the “Paste icon and the object copied will appear in message opened.



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New Features added to the toolbar:

In Editor:

Insert Shape:



Allows for insertion of a Vertical line, Horizontal line and/or a frame. This option also allows for changing the line thickness by pixels.

Print Head Properties:



Opens Print Head Properties.

Dynamic Objects:



Allows for insertion and deletion as well as viewing properties of Dynamic Objects.

Update Database:



Allows for updating a database file.

Ink Consumption:



Allows for viewing ink consumption for all heads with current message.

Print Heads:



Allows for enabling the print for the message currently opened within NJEditor. Sends message to the NJProcessor along with enabling print.

In Processor:

Barcode control:



The toggle button for the Bar Code Control allows the user to open or close Bar Code Control window.

Watch Window:



The Watch Window button allows the user to toggle a watch window open or close.

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VIEW Menu

The View pull down menu provides options that allow for adjustments to the main screens appearance or how the message is viewed. Many of the options in the View menu provide quick and easy short cuts that make operating the controller with the touch pad or mouse simple.

Note! This allows for enabling and disabling toolbars, adjusting view settings, head Decomposition, Cursor, and grid settings.

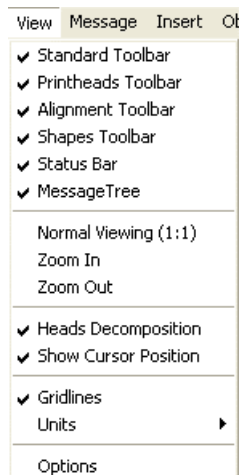
Options:

General: Specifies if the last saved file is opened as default message and if copies of NJEditor are restricted to 1 copy running at a time.

Directory: Specifies the path at which all newly created messages are stored.

Language: Specifies language you will select from the dropdown list under Language.

Tool Bar



The Tool bar contains many convenient icons, allowing for easy access to commands commonly used when creating or modifying a Message. When selected, the Tool Bar will appear across the top of the Main window, under the menu title bar. This option is selected (enabled) when a check (✓) mark appears to the left of the menu option. To enable or disable the Tool Bar, from the View pull down menu highlight the Tool Bar menu option and click. The Toolbar options are explained in detail throughout this manual.

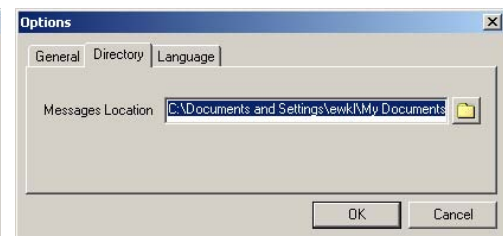
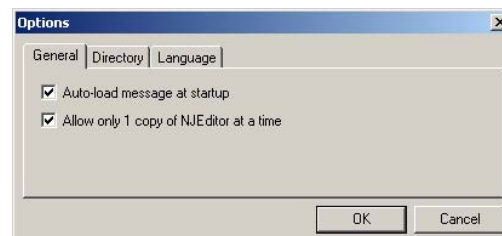


Figure 5 Display Toolbar



Figure 6 Tool Bar



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Standard Toolbar

The standard tool bar provides all the icons shown above with the exception of the alignment Toolbar.

Alignment Toolbar

The last four on the right of the tool bar shown above align the edge of the selected item to the nearest grid line in the direction indicated by the icon.

Status Bar

When selected, the Status Bar will appear across the bottom of the Main window.

The Status bar provides helpful information about the Message environment. In the example the “Counter” is displayed, the “Async Input” is displayed, used to display any input values, the “Access control” (USER), and the fact that the “number lock” is on indicated by the word “NUM”. This option is selected (enabled) when a check (✓) mark appears to the left of the menu option. To enable or disable the Status Bar, from the View pull down menu highlight the Status Bar menu option and click.

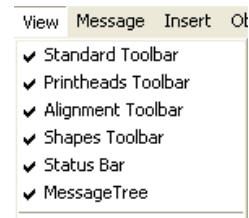


Figure 7 Display Status Bar



Figure 8 Status Bar

Message Tree

The Message Tree option when selected (enabled) will display the Message title folder and sub-components. This option is selected (enabled) when a check (✓) mark appears to the left of the menu option. To enable or disable the Message Tree option, from the View pull down menu highlight the Message Tree menu option and click. After the desired Layouts and Heads have been inserted into the Message Tree, the Message Tree can be disabled. Disabling the Message Tree will remove the Message Tree from view, giving you a larger view of the Message window.

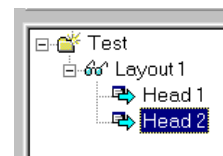
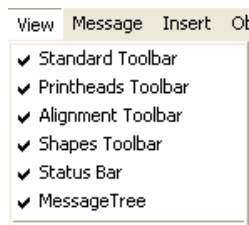


Figure 9 Message Tree View

Figure 10 Display Message Tree



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Normal Viewing



The Normal Viewing option when selected will return the Message window to the default zoom size. When selecting this option you will only notice a change in the view of the Message window if the view has been altered, using the “Zoom In” or “Zoom Out” View options. To implement the Normal View option, from the View pull down menu highlight the Normal View menu option and click.

Zoom In

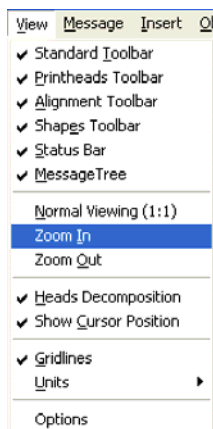


Figure 11 Zoom In

When the Zoom In option is selected two (2) things will happen. The first thing that you should notice is that the Zoom In icon will be activated (highlighted) the second is the controller cursor will be placed in the zoom in mode. The cursor, when placed in the Message window will appear as a magnifier or looking glass. The Zoom In option will allow you to get a closer look at any part of the current message.

To activate the Zoom In option, from the View pull down menu move the cursor to the Zoom In menu option and **CLICK**, or **CLICK** on the Zoom In icon. Then move the cursor onto the Message view window, notice that the cursor will change shape when it enters the message view area. With the cursor in the message view window, move the cursor (looking glass) to the area that you want to get a closer look at and **CLICK**. The Message view will be magnified by a rate of 1/4 of an inch. To disable the Zoom In option simply press the right button on the mouse or **CLICK** on the Zoom In icon and you will notice that the icon will no longer be highlighted and when the cursor is moved into the Message view window, it will be in the pointer mode.

Zoom Out

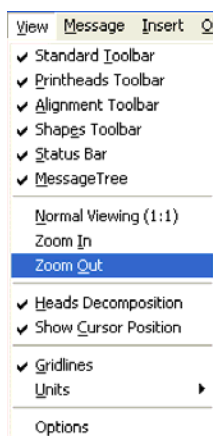


Figure 12 Zoom Out

When the Zoom Out option is selected two (2) things will happen. The first thing that you should notice is that the Zoom Out icon will be activated (highlighted) the second is the controller cursor will be placed in the Zoom Out mode. The cursor, when placed in the Message window will appear as a magnifier or looking glass. The Zoom Out option will allow you to get a wider look at the current message. To activate the Zoom Out option, from the View pull down menu move the cursor to the Zoom Out menu option and **CLICK**, or **CLICK** on the Zoom Out icon. Then move the cursor onto the Message view window, notice that the cursor will change shape when it enters the message view area. With the cursor in the message view window **CLICK**. The Message view will be expanded by a rate of 1/4 of an inch. To disable the Zoom Out option simply press the “right” button on the mouse or **CLICK** on the Zoom Out icon and you will notice that the icon will no longer be highlighted and when the cursor is moved into the Message view window, it will be in the pointer mode.

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Heads Decomposition (Head Position)

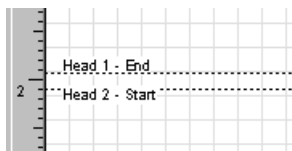


Figure 13 Head Start

This option is selected (enabled) when a check (✓) mark appears to the left of the menu. This function is very useful when viewing multiple print heads at the same time. When selected (enabled) this option will allow you to see where one print head ends and another print head begins in the Layout window. To enable or disable the Heads Decomposition option, from the View pull down menu highlight the Heads Decomposition menu option and CLICK. This option is selected option.

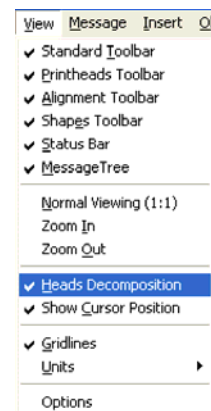


Figure 14 Display Heads Decomposition

Show Cursor Position

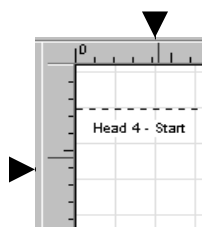


Figure 15 Cursor position

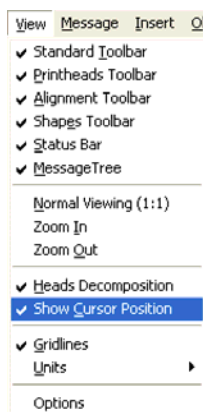


Figure 16 Display Cursor Position

This option, when selected (enabled) will provide line markers on the horizontal and vertical rules showing the placement of the cursor. The line markers will move with the cursor, making easy work of establishing correct distance and object placement. To enable or disable the Cursor Position option, from the View pull down menu highlight the Cursor Position menu option and CLICK. This option is selected (enabled) when a check (✓) mark appears to the left of the menu option. The cursor must be in the Message view window to see the Cursor Position markers.

Gridlines



Figure 17 Grid Lines

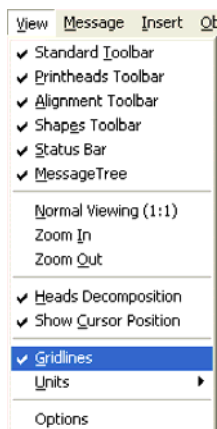


Figure 18 Display Gridlines

The Gridline option is helpful when lining up multiple images or determining the distance between images within a layout. When selected the Gridlines option displays a grid. The Grid makes easy work of aligning objects or text. To enable or disable the Gridlines option, from the View pull down menu highlight the Gridline menu option and CLICK. This option is selected (enabled) when a check (✓) mark appears to the left of the menu option.



1. NetJet Introduction

Units of Measure

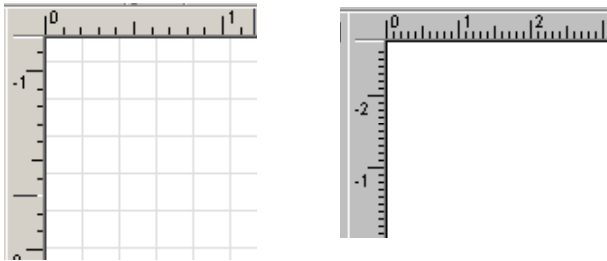


Figure 19 Ruler

The Units option when selected (enabled) will display horizontal and vertical measuring rulers. This function is useful to determine when a message will fit the desired target. The measurements can be displayed in both English (inches) and Metric. To enable or disable the Units option, from the View pull down menu highlight the Units menu option and CLICK. This option is selected (enabled) when a check (✓) mark appears to the left of the menu option.

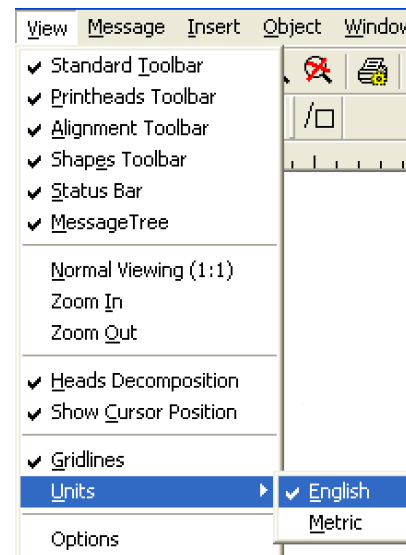
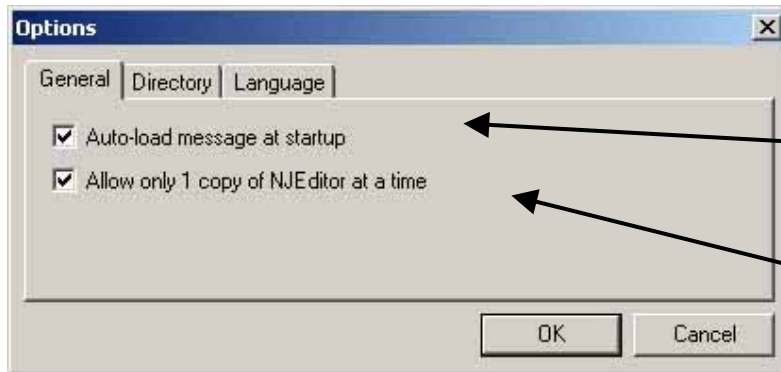


Figure 20 Display Ruler



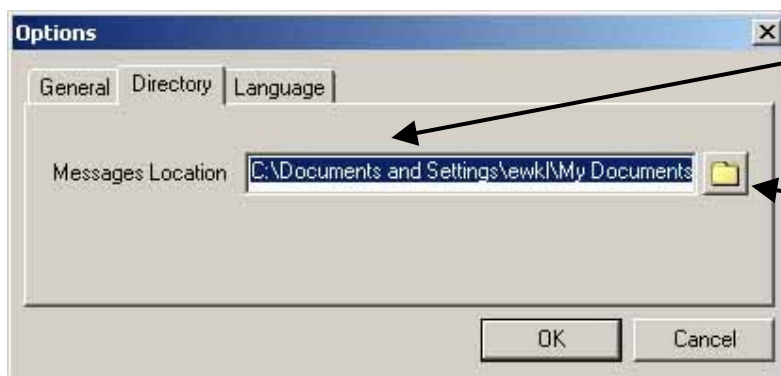
1. NetJet Introduction

View Options



Click to load previous message as startup.

Keeps you from starting more than once copy of NJEditor.



Type the location of the default directory in which your NetJet messages will be stored.

Click this icon to browse and find the directory desired.



Click on the pull-down arrow to display additional language.



2. Menus in NJEditor

MESSAGE Menus

Properties

Provides information about where the message is stored (filed).

Properties:

Location: File name and path of the current file.

Print Options: Instant print. Enable/Disable

Statistics: Statistics Reporting (see page 130).

Layout:

New, Import, Remove, View, Properties.

Print Head:

Insert, Remove, Properties...

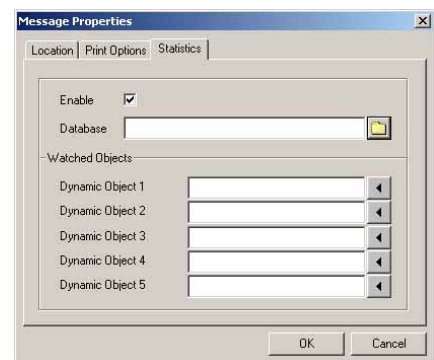
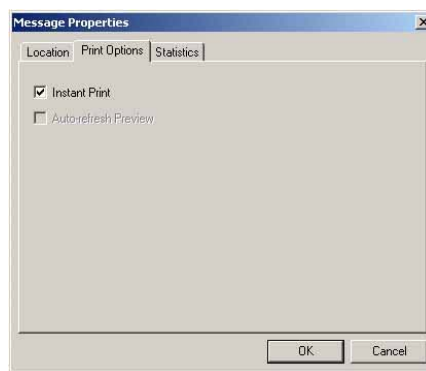
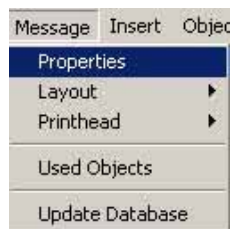
Used Objects:

Displays Objects used in current message.

Update Database:

This allows for selecting a database file from NJEditor.

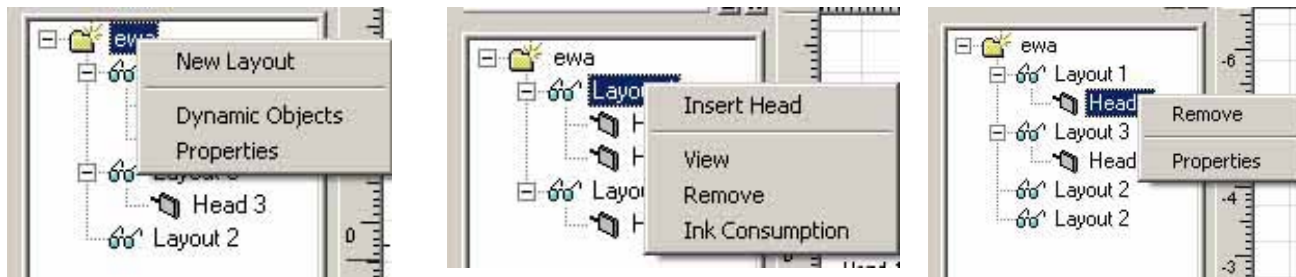
Properties





2. Menus in NJEditor

Layout



Properties

The Properties option will display the Layout Properties window. Selecting a Print head from the dropdown box and clicking “OK”, the operator can view the Ink Consumption for that layout.

New

This option allows an operator to add additional layouts to a message.

Remove

The “Remove” option will remove the selected layout from the current Message. Once you delete a layout you cannot get it back, unless your Message had been saved before the layout was removed. If the message was saved before the “Remove” was executed and you want to get the layout back, try selecting the “Exit” option under the “File” menu. When the controller asks if you want to “save message changes” say “NO”. Now click on “Open Message” and the Message with old layout should reappear.

View

The View option will allow you to switch the Message view from one layout to another. To switch layout view highlight the Layout you want to see.

Ink Consumption

The Ink Consumption calculator calculates ink consumption based off of the amount of pixels an entire message uses. There is no guarantee implied or intended by the ink consumption calculator. This can only be used as a guideline. Certain print head property settings such as boldness factor will greatly affect ink consumption. For the most accurate calculation, select ink consumption from within NJ processor because the NJ Processor will display the most current dynamic object.



2. Menus in NJEditor

Print head

The Print head option provides the same menu options as the Head pop-up menu with on addition, the Insert option. For more information / instruction using these options refer to the “Print head pop-up menu” section.

Insert, Remove or Properties

The Select Print head window will appear. This option has been designed so that the next available print head will be displayed on the Select Print head field. If the desired head is not displayed in the Select Print field use the down arrow (located to the right of the field) to reveal the list of available heads and CLICK on the head you want. If this field is blank, this is an indication that there are no more available heads on the controller.

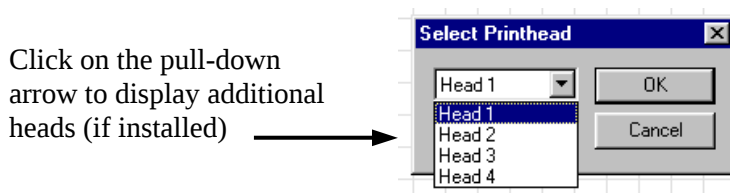


Figure 21 Select Print Head Window

Remove Print Head

The Print head Remove option will allow you remove a Print head. Removing a Print head will not delete the message (information), but will ensure that the message is not printed to the head removed. If no Print heads are installed the message will not print. Once a Print head has been removed it can be re-inserted into the current layout or into another.

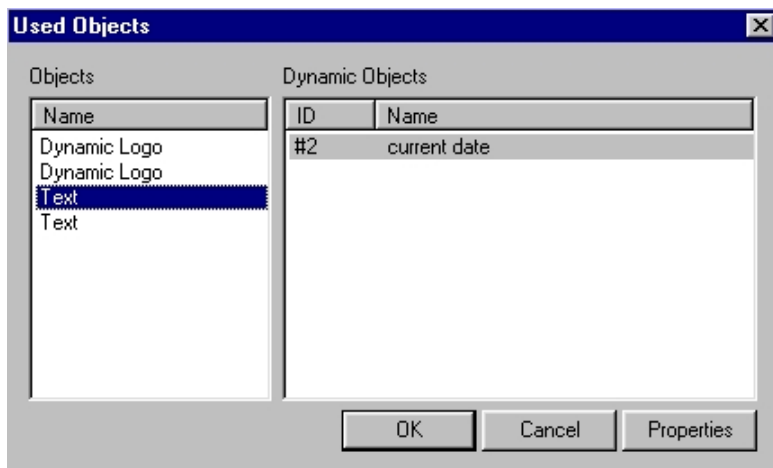
Print Head Properties

The Properties option when selected will allow you to select which type of Print Head and the print position. Once the desire Print Head has been selected, CLICK the “OK” button.

Used Objects

This option in the message menu lists all of the objects in the message. The use of these objects are dynamic objects is explained later on in the manual.

Dynamic objects will appear in the dynamic objects window. Properties of dynamic objects such as date format may be adjusted by clicking properties.



2. Menus in NJEditor



Insert Menu for NJEditor



Print head properties

Displays print head properties



Insert Dynamic Object

Allows insertion of dynamic objects



Update Database

Allows one touch update of database when no networking available



Ink consumption

Displays ink consumption. No guaranty implied or intended. Ink consumption may change due to priming, purging, maintenance or processor settings.



Text Icon

Displays the Text Properties window. Select this icon to enter or edit text within a message. For more information see the Edit Functions section of this manual



Barcode

Displays the Bar Code Properties window Select this icon to insert or edit a bar code. For more information see the Bar Code section of this manual.



2D Barcodes

This option will display the 2D Bar Code Properties window. Companies like United Partial Services commonly use the 2D Bar Code. This type of bar coding system enables large quantities of information to be encoded and scanned later. For more information on how to setup a 2D Bar Code refer to the Barcode section of this manual.



Logos

Click on this icon to insert a logo image. The Logo option when executed from the Insert pull-down menu will display the Open window; from the Open window you can search or select the desired image. Fro more information / instruction refer to the Insert a Logo section of this manual.



Date

Click on this icon to insert or edit a date function. Fro more information / instruction on the Date option read the Date Options section.



Expiration Date

Click on this icon to insert or edit an expiration date function. For more details read the Expiration Date section



Time

Click on this icon to insert or edit a time selection. For more information on how to use the Time option refer to the Time Option.



Counter

CLICK on this icon to insert or edit a count function. For more information / instruction for the Counter function see the Count Option section of this manual.



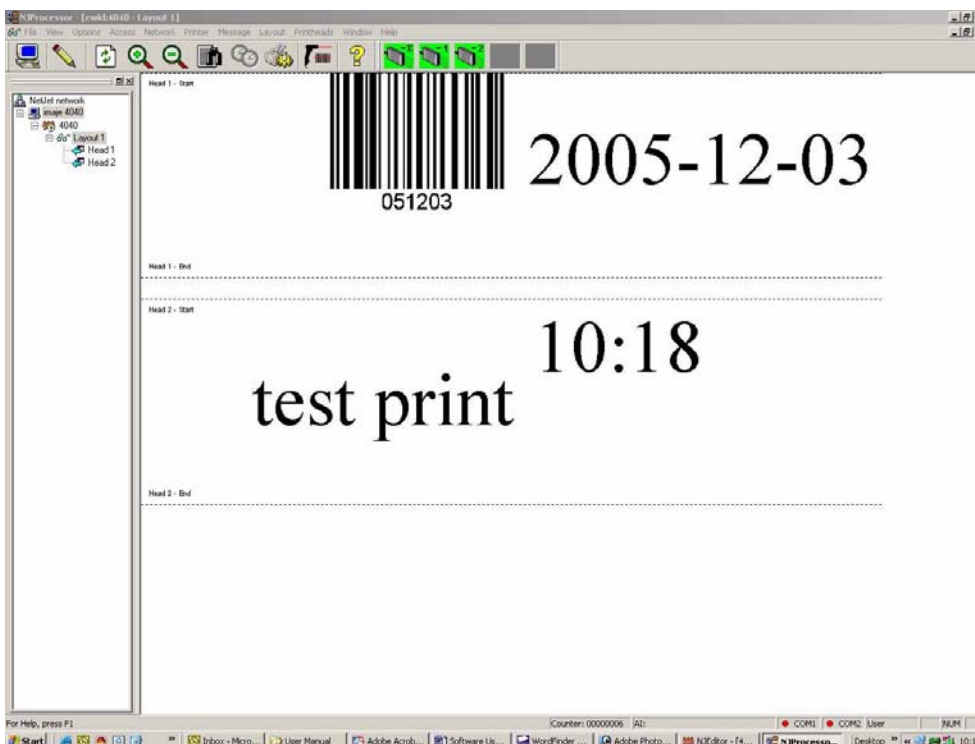
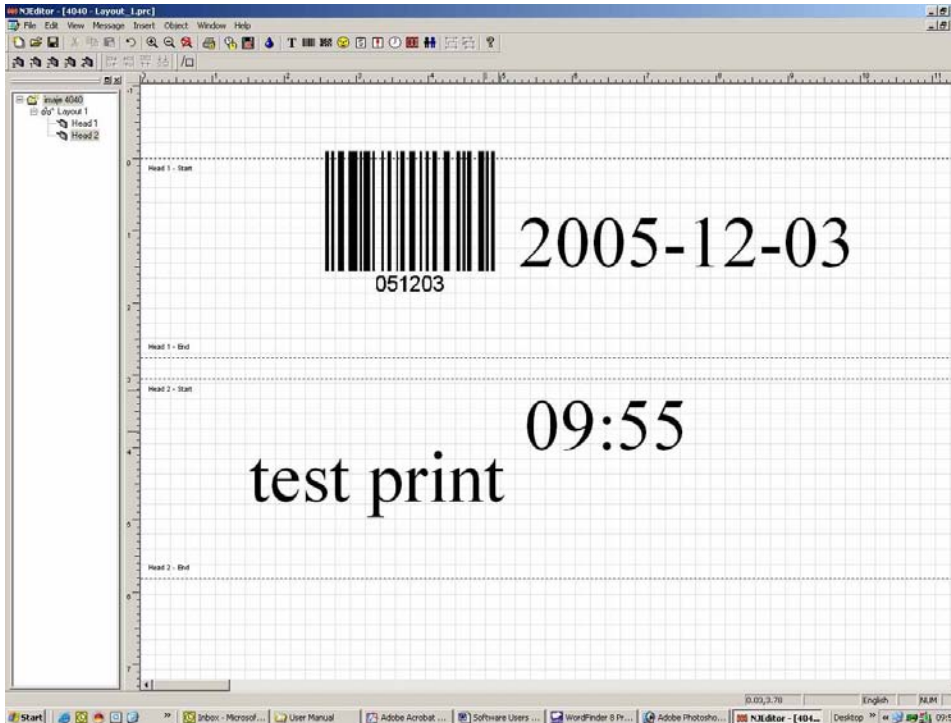
Shift Codes

This icon enables access to the Shift Code option. The Shift Code option provides a method of indicating which job shift (1st, 2nd, or 3rd) processed the media or product. Using this option you control; how the codes will look, when the codes will appear, and where the codes will be printed.



3. Creating a Message

Programming and printing require using two separate programs, NJEditor and NJProcessor. Each of these programs has separate functions, which will be explained.



3. Creating a Message



Creating a New Message with NJEditor

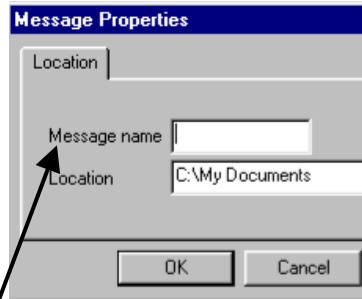


Instruction

Action

Result

1. CLICK on the New Message icon.



Message Properties window appears.

Note: If a Message is currently open the programming software will display a message asking if you wish to “close actual message”, CLICK on the “Yes” button (located in the NetJet window).

Note: If the current Message has not been saved a second message will be displayed asking if you want to “save changes to Layout”. If you have made changes that you want to save CLICK on the “Yes”.

The Message Properties window will appear.

2. Type the name for the New Message into the “Message name” field.

The new Message name will appear in the field as you type.

3. CLICK OK

Image of a file folder with the name of the new message will appear in the Message Tree window and a “Select Print heads” menu will appear.

4. Select the Print heads that will be used in the message by checking the check box. Here you will also select your Print head type by using the dropdown box.



The message tree will now display the newly added Print head or Print heads.

5. Select Insert Text from the file menu and draw a text box in the grid layout.

A “Static Text” window will appear.

6. Click the Font icon.



Here the Font Properties window will open where you can set your Font Type, Font Style, Font Size, and Font Effects. If you make a change to the font settings click ok to save those changes.



3. Creating a Message

Instruction

Action

Result

7. Enter the text you want to appear in the message. A flashing cursor should indicate the start of the first character.

The text will display in the Static Text window.

8. Click File → Save and Exit or click the Save and Exit icon.

You should now see the text that you entered in the Static Text window, highlighted in the grid layout.



9. Position the text so that it fits within the dotted decomposition lines for each Print head.



Ex. Saves all changes to the message.

10. Click File → Save Message or click the Save Message Icon.



11. Click the Send to all heads Icon or select individual Print heads to enable by clicking the H1, H2, H3 or H4 icons.

Sends the message to NetJet Processor and begins printing.

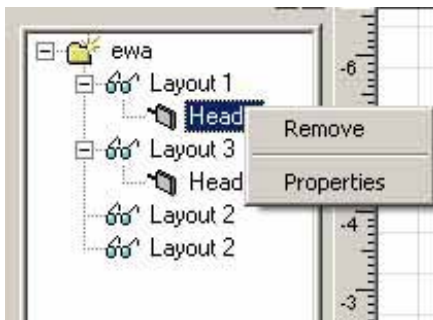




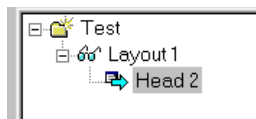
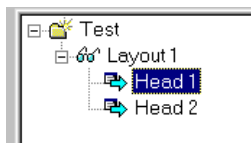
3. Creating a Message

Removing a Print Head with NJEditor

A use for this feature might be when a message is printed on both sides of the product and now it is only to be printed on one (1) side. Another use might be that you want to make sure that the current message is not printed accidentally and at the same time you do not want to delete the entire message. The “Remove” option will allow for the removal of the print head (logically) from the current message. The removing of the print head from the current message does not require that you physically disconnecting the print head, so **DO NOT UNPLUG THE PRINT HEAD**. When removing the print head using the print head pop-up menu, the “Head” icon and label will be removed from the message tree window and the head decomposition start and stop lines will be removed from the Message displayed. When the head is removed from the current message, the information in the message view window will remain. What the “Remove” option is doing is making it so that the current message will not print on the print head that has been removed. If you wish to have the current message print on a different print head, simply insert the new print head and your ready to print.



In this example, Print Head 1 is being removed.



This completes the Quick Start instruction on how to create a New Message. Refer to section 4 “Becoming familiar with the controller” for more information on inserting to insert text, logos or other message features into your newly created message.



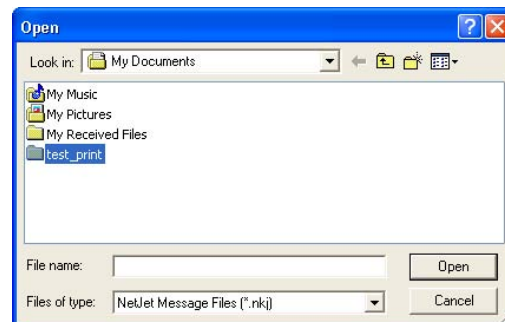
3. Creating a Message

Opening an Existing Message with NJEditor



Figure 22 Open Message Icon

<u>Instruction</u>	<u>Action</u>	<u>Result</u>
1.	CLICK on the Open Message icon.	The Open window will appear.
2.	If the desired message folder appears in the center area of the Open window, DOUBLE CLICK the message name. Or highlight the file folder that is beside the Message name that you want to open and "ENTER". If the desired message is not seen in the Open window, refer to the note below.	The message folder will appear in the "Look in" field and the message icon will appear in the center area of the open window.
3.	The Open window will change, displaying the contents of the message folder. DOUBLE CLICK on the message icon located in the large (center) area of the open window. The Message icon title will end with the file extension ".nkj"	The message will open.



Note: If the desired message does not appear in the Open window, use the down arrow (on the keypad) or place the cursor on the down scroll arrow and CLICK, to scroll through the list of available files. If the controller is connected to a network, contact your local (in-house) computer specialist and ask for assistance in locating the desired Message.

This is the end of the Programming Quick Start instruction on how to open an existing message. After opening the Message you might want to print (refer to "Printing a Message" later in this section) or if you wish to alter the Message refer to section 4 "Becoming familiar with the controller" for more information.



3. Creating a Message

Saving a Message with NJEditor



Figure 23 “Save Message” Icon

Saving a Message is a quick and easy function; in fact as you can see below there is only one step. The only condition that must be met before saving a Message is that a message must be open.

<u>Instruction</u>	<u>Action</u>	<u>Result</u>
1.	CLICK on the Save Message icon. Note: See the View menu “options” section to set default directory where messages are saved	The Message is saved.

This concludes the Programmer Quick Start instruction on Saving a Message.



3. Creating a Message

Saving a Message to a New Name with NJEditor

Saving a Message to a new name is a helpful tool when you have to create multiple Messages that all have the same basic foundation or components. Or, if you need to make changes to a Message, but will have to keep a copy of the old Message for future use this option is a good way to begin. Simply open the original Message, make your changes and then use the “Save Message As” option to give the newly changed Message a new name. Like saving a new message, the only condition that must be met before saving a Message to a new name is that a message must be open. You may also create a new directory in which to save your message.

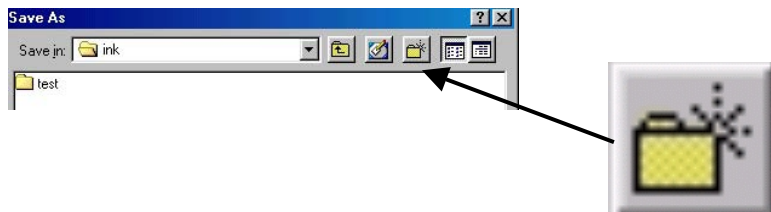


Figure 24 Creating a new directory

Instruction

Action

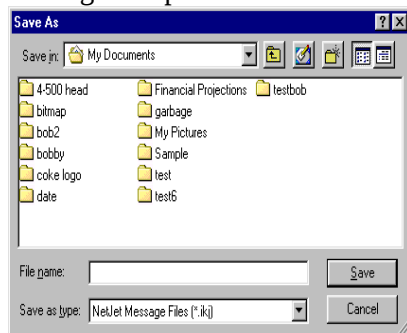
Result

1. Because there is no icon for this feature. Move the cursor to the “File” menu option and CLICK.
2. Move the cursor to the “Save Message AS” menu option and Click.
3. Type the new name for this message and press ENTER.

The file pull down menu will appear.

The “Save As” window will appear. Even though you will see a pointer (cursor) on in the display, a cursor will be blinking in the “File name” field.

As you type, using the keypad the new Message name will appear in the “File name” field. Upon pressing ENTER or clicking save, the “Save As” window will be closed. A new directory will be created with the same name as your message and your message will be saved in it.



This concludes the Programmer Quick Start instruction on Saving a Message to a new name.



3. Creating a Message

Closing a Message with NJEditor

To make Closing a Message a one step process, try “Saving” the Message first. The only condition that must be met before closing a Message is that a message must be open.

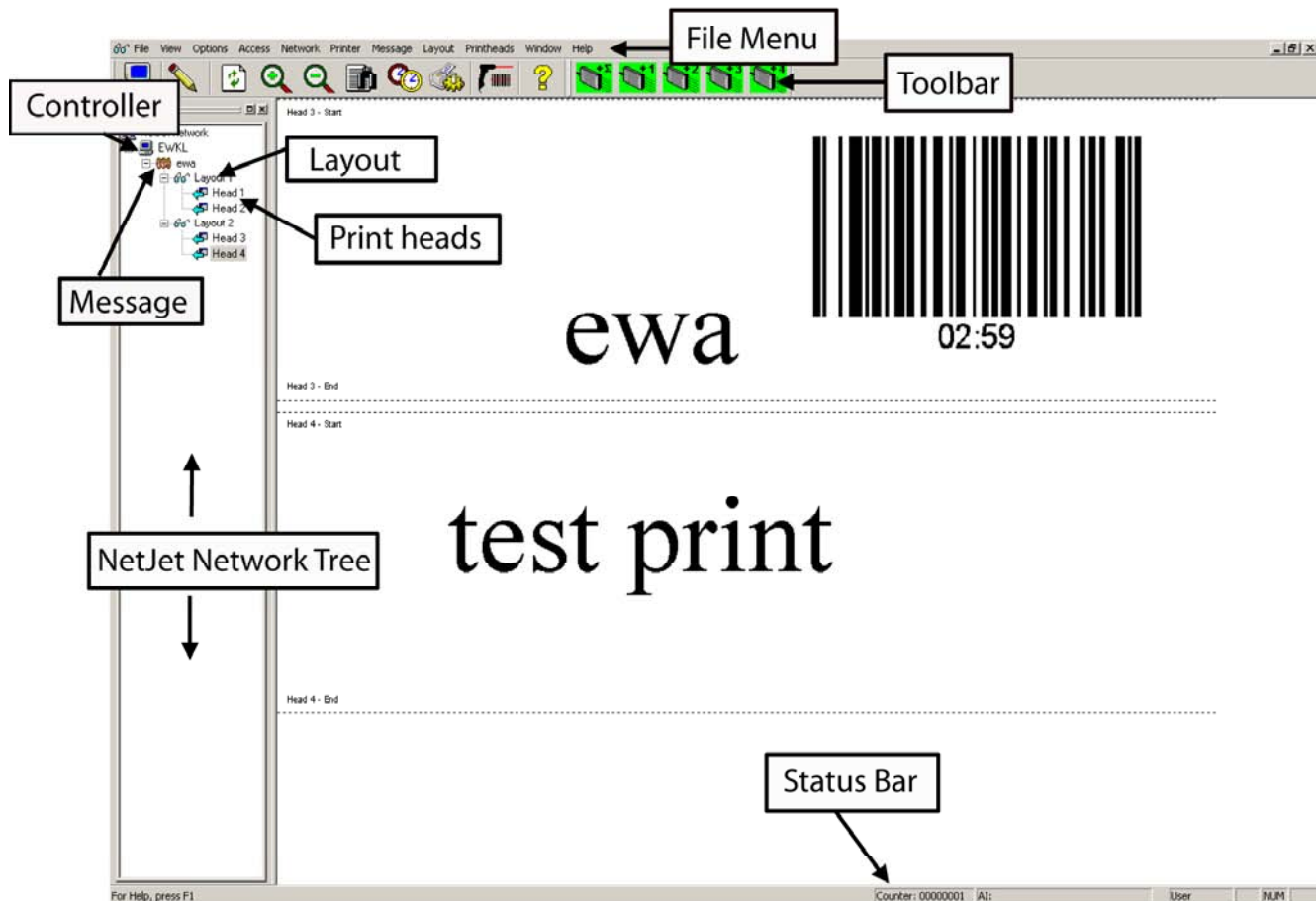
<u>Instruction</u>	<u>Action</u>	<u>Result</u>
1.	The “Close Message” option does not have an icon. So move the cursor to the File menu option and CLICK.	The file pop-up menu will appear.
2.	Then move the cursor to the “Close Message” option and CLICK.	If your message has been saved, both the Message Tree and View windows will be cleared. Only the New Message and Open Message icons will be active.
		Note: If the current message has not been saved, the “Save message” window will pop-up. If you want to save the current message CLICK on the YES button. If you do not want to save the current message CLICK on the NO button. If you have made a mistake in selecting the Close message option CLICK on the Cancel option and you will be returned to the current message.



3. Creating a Message

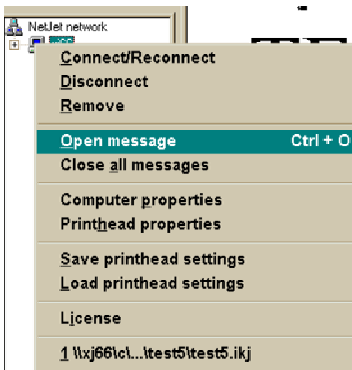
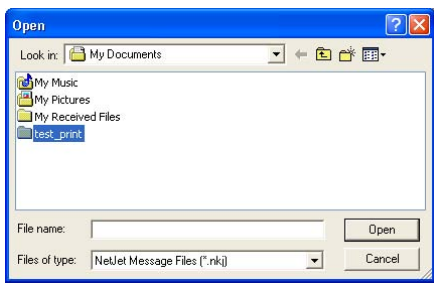
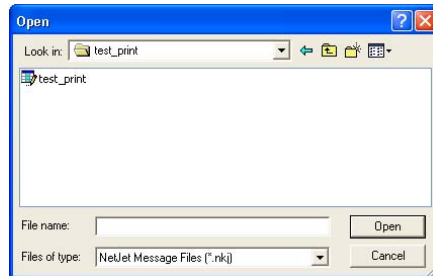
Printing a Message with NJProcessor

You may enter NJ processor from NJEditor by clicking on the Print





3. Creating a Message

Instruction	Action	Result
1.	Click on the computer you want to print to. 	A dialogue box will appear with an “Open message” selection. If the “Open Message” dialogue box is grayed out click the “<u>C</u>onnect/Reconnect” option. The last 10 previously opened messages may be selected instead of using the open message selection.
2.	Click on Open Message. The open window will appear. If folders appear, double click on them to find the saved message.  <i>NetJet messages have “.nkj” file extensions. By default, all messages are stored in the “My Documents” folder.</i>	The Message, Layout and Print heads will appear in the network tree on the left side of the NJProcessor. 
3.	Click on the Send to all print heads icon 	The message will print. (This assumes printing options are set correctly and the controller is receiving necessary photocell or encoder signals if needed.)
This is the fastest way to print the entire message. Another option is to CLICK on the Send to Print head # icon for each individual print head, there may be more that one Send to Print head # icon active depending on how many print heads are installed. Or move the cursor to the “Print” menu option and CLICK, then move the cursor to the desired print head option or select “Send to all heads”. This concludes the Programmer Quick Start instruction on Printing a Message.		



3. Creating a Message

Setting Screen options for NJEditor and NJProcessor

<u>Instruction</u>	<u>Action</u>	<u>Result</u>
1.	CLICK the “View” menu option.	The View pop-up menu will appear.
2.	CLICK on the desired option.	The option will be Disabled (unchecked) or enabled (checked). The default factory setting for each option is enabled (checked).
		Note that all of the view options have a default setting of enabled (checked).

For more information on the individual “View” options refer to the “View Menu” segment in section 4 “Becoming familiar with the controller” This concludes the Programmer Quick Start instruction on Setting Screen options.



3. Creating a Message

Print Head Options for NJProcessor

Print Head Pop-up Menu

To access the print head pop-up menu the following conditions must exist:

- A computer must be inserted into the NetJet network
- A Message must be open
- Print Head must be installed in the Layout

The Print head pop-up menu has only the “Properties” option: Print head properties are easily accessed by clicking on the Print head you wish to make changes to and by then selecting Properties.

Figure 25 Print Head Pop-up



Menu

Print Head Properties

The Print Head Properties window provides a wide range of options relating to the functionality of the physical print head. In this window the print function can be enabled/disabled, selection of the print head type is made; speed, direction, margin settings and orientation are also made here. In the following section we will describe these options.

Enable

The Enable option when checked will allow the print head to print. In effect the Enable option when clicked is like turning the print ON. Because the NetJet system is capable of supporting several print heads and because not all print heads might be used in all processes or applications there may be a need to turn one or more of the print heads off.



Figure 26 Enable Box

NOTE: A useful feature of the enable function—If you have a multi-head controller, but have less than the maximum number of print heads connected, uncheck the enable box. If you do not do this, every time the print function is turned on, an ink low warning is displayed for print heads that are not connected.



3. Creating a Message

Head Type

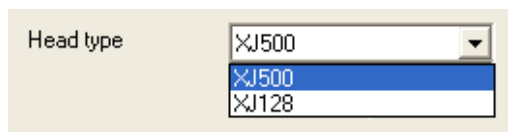


Figure 27 Select Print Head

The Controller will support the XJ500 and the XJ128 Print heads. Select, the type of print head installed.

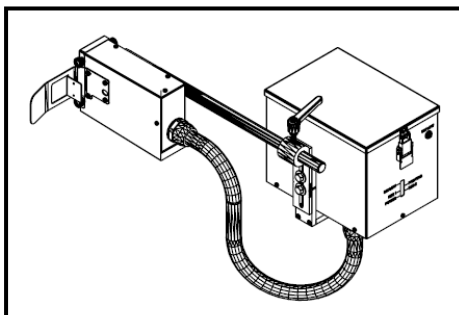
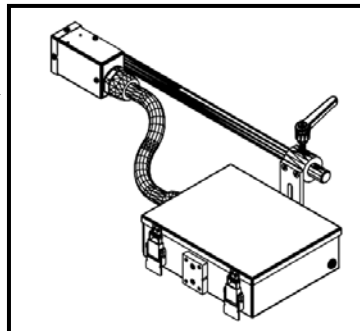


Figure 28 XJ-500 Print Module

*Uses the XJ500 Print head and IDS/2-500 Ink Tank



XJ128 Print Module

*Uses the XJ128 Print head and the IDS128 Ink Tank

Ink Tank

Ink tank is automatically detected, as is Print head. The reason that it is possible to de-select auto detect is to allow for custom configurations.

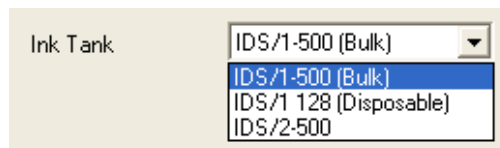


Figure 29 Print Width Adjustment

Print Speed

This is the speed (in feet/min. or meters/min.) that the object to be printed on is traveling. If using an encoder to provide automatic print speed adjustment, then you will not need to make a manual setting.

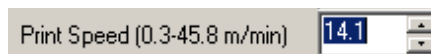


Figure 30 Print Speed

Print Width Adjustment



Figure 31 Print Width Adjustment

You can compress you print by 75% or 50%. This can be used in combination with bolderization to increase barcode readability. This function is usually used in combination with the Bolderization function to make the print appear more dense (dark) in some cases, depending on the substrate being printed, it can be used to help increase bar code readability.



3. Creating a Message

Bolderization

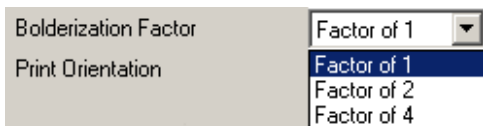


Figure 32 Bolderization

Bolderization increases horizontal resolution by adding additional lines. Use in combination with print width adjustment to increase barcode or text readability.

A factor of 1 is standard. **Factor of 2** doubles the number of vertical rasters (doubling the print width). If you combine it with a Print Width adjustment of 50% (doubling the print speed) the print will be twice as dense. This is a common setting.

Note: Be aware that there are limitations to this setting. Example: if the maximum overall print speed of the system is 150 feet per minute (45 meters per minute) then the maximum line speed that factor of 2 and 50% Width can be used is 75ft/min (22,5m/min).

Print Orientation

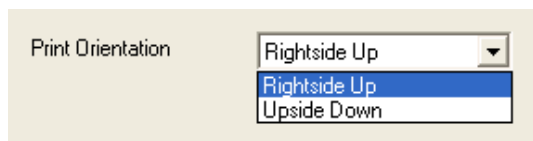


Figure 33 Select Print Orientation

In some applications product moving along the conveyor is upside down, this option will allow the NetJet system to print a message upside down without having to turn the print head over. To select the Print Orientation best suited for your NetJet application move the cursor to the pull-down arrow at the right side of the Print Orientation option and CLICK. Then move the cursor to the desired orientation option and CLICK.

Print Direction



This option controls the direction that the image (Message) will be printed. The direction should be viewed while standing at the print head facing the product.

Note: Here is a rule of thumb “If the print is backwards on the target, reverse the direction”.

Static Image

The static image option is used to improve speed for very fast printing. Do not use this option if you are printing dynamic objects. Only static (non-changing) images may be printed in this mode. Printing dynamic objects requires the processor to recalculate the image for each print. In the static mode, the image is calculated once and never changes. A ✓ mark will appear in the Static Image box when it is enabled.

The “Static Image” function could be used for example, for continuous extrusion printing with a very long message and very little space between messages at high print speeds.





3. Creating a Message

Invert Print



This option will reverse the colors of the image during printing making the dark areas light and the light areas dark. To select this option move the cursor to the Invert Print box and CLICK. A ✓ mark will appear in the Invert Print box when it is enabled.

Setting Print Margin



Margin

Margin is sometimes called “Delay”, an adjustment determining the location of the image on the object or where printing will start on the target. Margin is used to adjust the delay between prints whether in continuous print mode or product detect mode. If using a Photocell, relocating it can also change the margin. The photocell should be mounted at least as far away from the print head as the minimum required margin (only required if printing dynamic images).

3. Creating a Message



Access print head properties by clicking the icon

Print head Properties Window

The screenshot shows the 'Printhead properties' dialog box with the 'Print' tab selected. The window contains various settings for the print head, including head type, ink tank type, print speed, print width adjustment, bolderization factor, print orientation, and print interval. Annotations point to specific features:

- Enable/disable print option:** Points to the 'Enable' checkbox, which is checked.
- Set the print speed:** Points to the 'Print Speed (0.3-45.8 m/min)' field, which is set to 14.1.
- Set print orientation:** Points to the 'Print Direction' section, which has radio buttons for '<-----' and '----->'. The '<-----' option is selected.
- Set print direction:** Points to the 'Print Direction' section.
- Print head type is automatically set when a ink tank is connected to the controller:** Points to the 'Head type' dropdown menu, which is set to 'XJ500'.
- Enable/disable print option:** Points to the 'Autodetect' checkbox, which is unchecked.
- Saves Print head settings as defaults:** Points to the 'Set as Default' button.
- Completes the Print setup process:** Points to the 'OK' button.
- Cancels the print setup process:** Points to the 'Cancel' button.

3. Creating a Message

Print heads Properties

(Here you can access each of the Print heads from the same window by clicking on the tab for the appropriate head.).

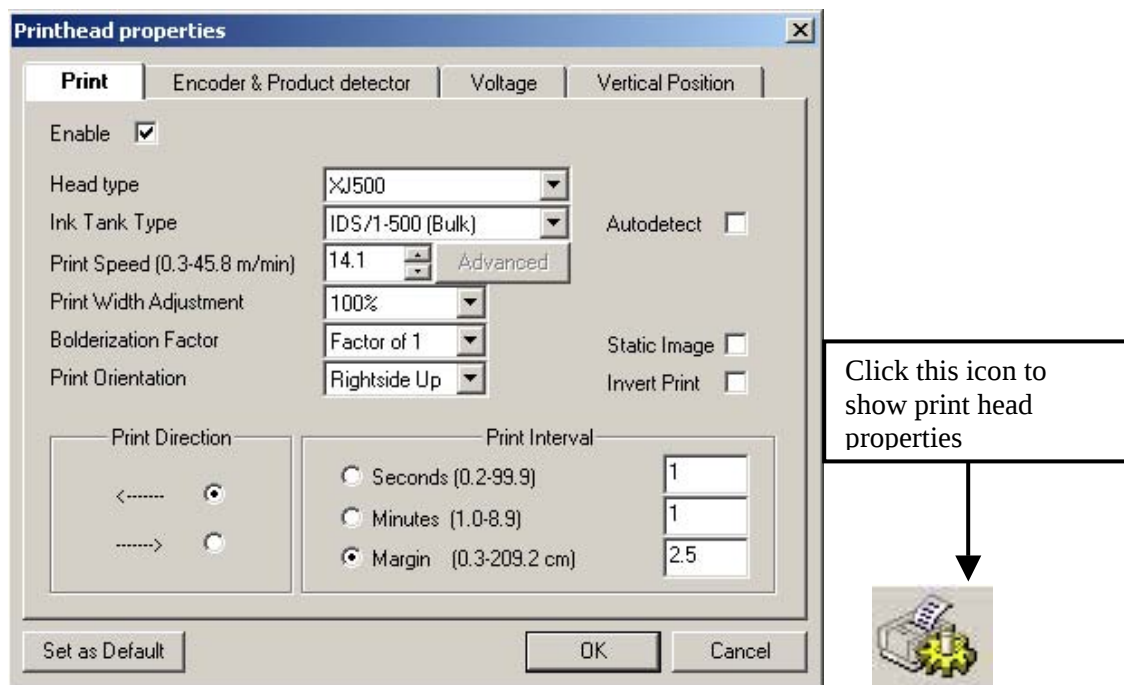


Figure 34 Print Head Properties

When reviewing this section refer to

Figure 38 Encoder and Product Detection Window.

Enable Encoder / Enable Product Detector

The default mode for the Product Detector option is “checked”. Both options should be checked when the using of an encoder and a photocell. If your NetJet system uses only an encoder, the Enable Encoder box should have a ✓ mark and the Enable Product Detector box should be blank. Likewise, if your NetJet system uses only a photocell to detect product the Enable Product Detector box must have a ✓ mark and the Enable Encoder box should be blank.

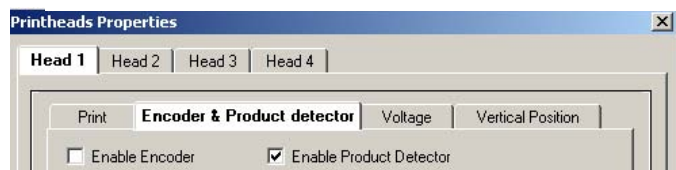
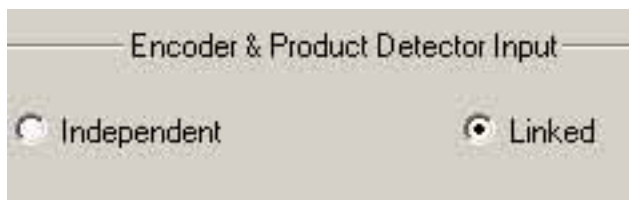


Figure 35 Enable Encoder/Detector



3. Creating a Message

Encoder & Product Detector Input



The encoder senses the motion and speed of product while the Product Detector senses when to trigger the print.

The Independent Input option supports the use of more than one photocell. ***If the NetJet setup is supporting only one photocell, the Linked option should be selected.***

Figure 36 Encoder & Product Detector Input

Speed of the Conveyor or Feeder

Figure 37 Set the Speed

The information relayed to the controller via the Encoder & Product Detector Input is an electrical pulse, the pulse can vary depending on the size and electrical features of the encoder model being used. A typical model encoder would be the Dynapar band ® H232500114007 which has a “0.63 cm” shaft diameter. Thus entering the Shaft/Wheel Diameter value it should read “0.63 cm”, if your application uses a different brand of encoder measure across the diameter of the shaft to determine to obtain a value. Using the part number of the example encoder mentioned above (H232500114007) we can see the Pulses Per Revolution are indicated in the manufacture part number, refer to your encoder distributor for specifications on Pulses Per Revolution and Pulses Per Linear Inch. If you are aware of the Pulses Per Linear Inch, select the Auto calculate option by placing a ✓ mark in the box.. This will make the Pulses Per Linear Inch data field active and allow for the entry pulses per linear inch value. Note: PPLI or Pulses Per Linear Inch is equal to the horizontal resolution.



3. Creating a Message

Printheads Properties

Head 1 | Head 2 | Head 3 | Head 4

Print | **Encoder & Product detector** | Voltage | Vertical Position

☐ Enable Encoder ☒ Enable Product Detector

Encoder & Product Detector Input

☐ Independent ☒ Linked

Shaft/Wheel Diameter (0.63-5.08 cm) 2.54

Pulses Per Revolution 2500

Pulses Per cm (157-2526) (Print Width Factor) 313

Autocalculate ☒

Set as Default

Factory Reset

OK Cancel Apply

Annotations:

- Place check a ✓ mark here if using an Encoder.
- Place check a ✓ mark here if using a photocell is being used.
- Select this option if only one (1) photocell is used.
- Select this option by placing a ✓ mark her to enter the P.P.L.I value.
- Enter the P.P.L.I value here.
- Enter a value up to 3" in this field.
- CLICK on the pull-down arrow to select a value.
- Execute/implement changes for Product Detection & Encoder.
- Cancel changes for Product Detection & Encoder.

P.P.L.I Allows for changing the horizontal resolution to better fit your product. Increasing the PPLI will increase horizontal resolution. Decreasing it, the opposite. Typically this adjustment is only used by advanced users in special applications. The default (auto-calculate) values are typically fine.

Figure 38 Encoder and Product Detection Window



3. Creating a Message

Use this feature for Solvent Based Inks Only

Buzz

The Buzz feature is a sub-ejection pulse provided to the Print head. This pulse is a voltage high enough to break up the meniscus of ink that dries at the tip of the nozzles, but low enough to not actually eject ink. This function is not as effective by itself with medium to fast drying inks. When using such inks the best results come from using the spit function in conjunction with the Buzz function.

Figure 39 Buzz Options

The correct voltage is 12V for Ink-80375. This is specified in the Repair Manual correctly, but realized it needs correcting in the User Manual.

Option	Value
Buzz	
Buzz Enabled	Checked
Buzz Voltage	12
Buzz Frequency	977

Spit

The spit function is used when using fast drying inks keeping the ink nozzles wet and ready to print. The spit function fires all nozzles simultaneously forming a column raster of ink. This column will fire once every (x) amount of seconds depending on the spit frequency. The spit function will not activate during a regular print cycle unless there is a break in the line or break between products that are greater than the Spit Frequency. The Spit Frequency setting is dependent upon two variables: Ambient temperature and Ink dry time.



3. Creating a Message

Option	Value
Spit	
Spit Enabled	Checked
Spit Frequency	90
Number of Spit Columns	10
Spit Auto Off Enabled	Checked
Spit Auto Off	240

Example: The most common solvent based ink used is classified as medium dry time. At room temperature the Spit Frequency for medium dry ink can range from 15 to 25 seconds. If the ambient temperature is increases significantly, tip drying may occur. If tip drying occurs, decrease the Spit Frequency. For fast drying inks, the Spit Frequency default is 10 seconds.

To enable/disable the Spit feature move the cursor to the Spit Enable box and CLICK. When a ✓ check mark appears in the box the Spit feature is ON and adjustments to the setting can be made. When the box is clear the Spit feature is OFF, adjustments cannot be made and no ink will be supplied to the print head while in idle mode.



3. Creating a Message

Voltage Window for NJProcessor

Printheads Properties

Head 1 | Head 2 | Head 3 | Head 4

Print | Encoder & Product detector | **Voltage** | Vertical Position

Buzz

Buzz Enable ☒

Buzz Voltage (5-22V) 15

Buzz Frequency (Hz) 977

Spit

Spit Enable ☒

Spit Frequency (2-3600 sec) 30

Number of Spit Columns (1-15) 10

Spit AutoOFF Enable ☒

Spit AutoOFF (5-240 min) 240

Default ☐ Copy Mirror ☐ Copy All Heads

Factory Reset OK Cancel Apply

CALLOUTS:

- CLICK here to turn Buzz OFF or ON.
- CLICK here to turn Spit OFF or ON.
- Click here to shut spit off after preset time.
- CLICK on the up or down arrows to adjust settings.
- CLICK on the up or down arrows to adjust voltage or type in a value.
- Use the pull-down arrow to select the appropriate Buzz frequency.
- CLICK on the up or down arrows to adjust how frequent Spits will occur or type in a value.
- CLICK on the up or down arrows to adjust the number of individual columns of ink will be produced.
- Once satisfactory results have been achieved CLICK on this option to save the settings.
- CLICK here to apply changes.
- CLICK here to cancel changes.

For solvent based inks.

Pre-set the spit to disable automatically by placing a check next to "Spit Auto Off Enable". Use this function if you never power down the printer but do not print 24 hours a day. This will limit ink waste. If the spit is disabled, the nozzles will scab over forming a natural Print head cap. To re-start in the morning, prime the Print head with 2 to 3 pumps with the priming bulb. Spray some solvent onto the nozzle plate and then prime the head with 2-3 pumps with the priming bulb.



3. Creating a Message

You may print across several heads in NJEditor. In order to do this, you need to set up your heads with special brackets.

In the stitched and non-stitched examples below, two 128 dot Print heads are used. The Stitch option is available by clicking on the “Print heads Properties” icon.

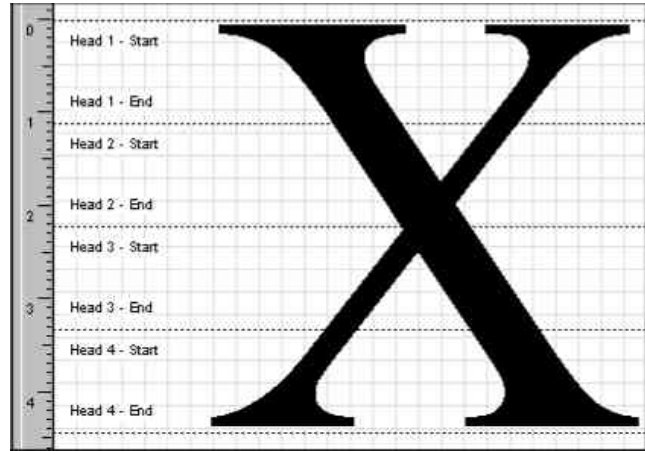
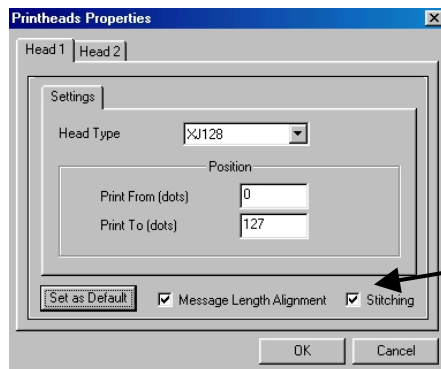
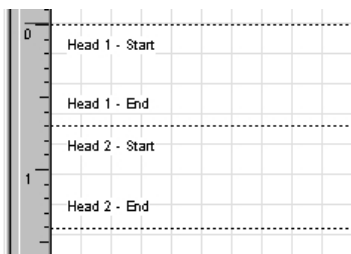


Figure 40 Enable/Disable Stitching

With Stitching enabled, the vertical position for Head 1 “Print From (dots)” starts at 0 and ends “Print To (dots)” at 127”. Head 2 “Print From (dots)” starts at 128 and ends “Print To (dots)” at 257. This is used in applications where the horizontal resolution requires a message to be constructed using more than one Print head.

Example of stitched mode



Example: Using two Print heads for a stitched message.

Stitched

Figure 41 Example of stitched mode



3. Creating a Message

With Stitching disabled, there is a 53 dot space automatically inserted between the heads in the message template. The reason for this is to allow for characters or images that may hang below the head boundary line.

*If part of the image hangs from one head boundary into another it can effect the margin reference, causing print location from one of the heads to be off.

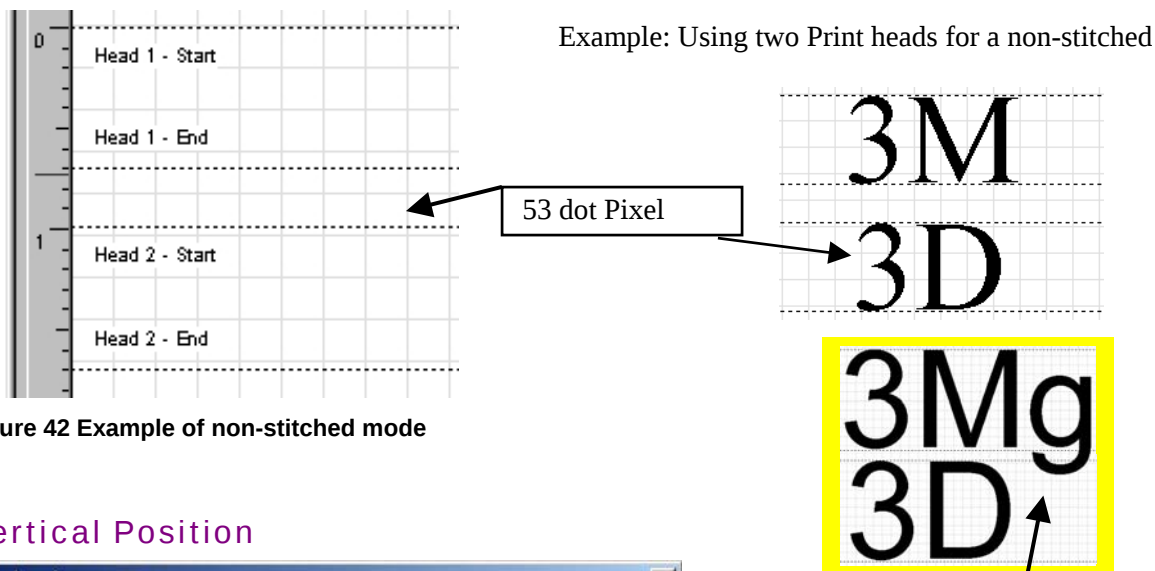


Figure 42 Example of non-stitched mode

Vertical Position

Example of character hanging between head 1 and head 2. If the 53 dot spacing is not enough based on character size, the space may be manually edited in Print head Properties/Vertical Position.

This setting defines where your text will print. Check all heads to be sure your message will print correctly.

Cancels the positioning process.

Completes the process.

Once satisfactory results have been achieved CLICK on this option to save the settings in the registry.

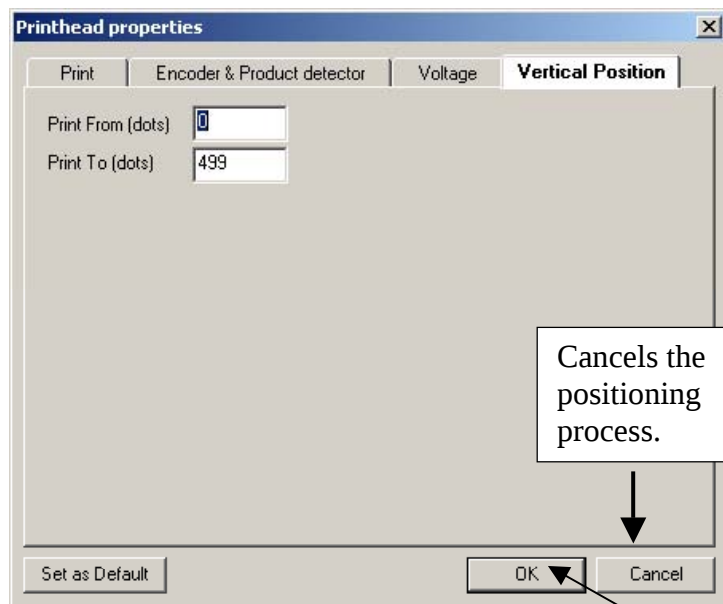


Figure 43 Vertical Position Window



3. Creating a Message

Vertical Position table with Multiple Heads

If you are using multiple heads with Stitch enabled, the “Print From” and “Print To” box entries will be as follows.

Number of Heads	“Print To”	“Print From”
1st-500 dot head	0	499
2nd-500 dot head	500	999
3rd 500 dot head	1000	1499
4th-500 dot head	1500	1999

If you are using multiple heads with Stitch disabled, the “Print From” and “Print To” box entries will be as follows.

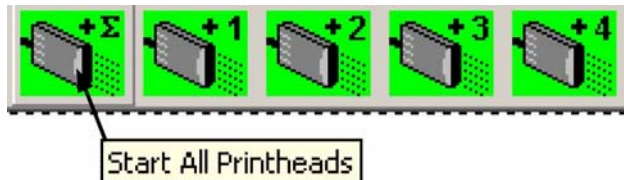
Number of Heads	“Print To”	“Print From”
1st-500 dot head	0	499
2nd-500 dot head	553	1052
3rd 500 dot head	1105	1604
4th-500 dot head	1657	2156

Figure 44 Print Head Tool Bar



3. Creating a Message

Head icons for NJProcessor



The Print icons are located on the print head Tool Bar. The tool bar can be enabled (viewed) or disabled (not in view) by placing a check mark beside the print heads Tool Bar option in the View pop-up menu. Whether enabling or disabling the view of the print heads Tool Bar, move the cursor to the View menu option and CLICK. Place the cursor on the print head tool option and CLICK.

Remember, to print all that you have to do is move the mouse to the Send to all print heads icon and CLICK, once the product detector, detects the target printing will begin.

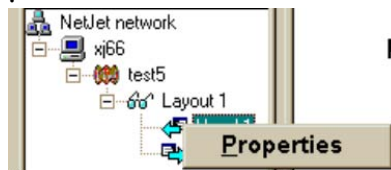


3. Creating a Message

Continuous Print for NJProcessor

The continuous print option determines how the target is detected as it moves along the conveyor. The continuous print option works in two different ways, encoder and internal clock.

To access the “Continuous Print” options



Move the cursor to the “properties” option and CLICK.

Figure 45 Head Pop-up Menu

The “Print Head Properties” window will be displayed. From the print head properties window you can make necessary settings to the “Continuous” print mode that will support your company’s requirements.



Figure 46 Print Head Properties Print Tab

Encoder

Click on the “Encoder and Product detector” tab and Move the cursor to the Enable Encoder option
CLICK to place a check in the box.

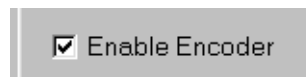


Figure 47 Print Encoder Option



Figure 48 Print Product Detector Option

Move the cursor to the Enable Product Detector option and
CLICK to remove the “check”
from the box to disable the

Select Print dialog box from Print head properties, by moving the cursor to the Print tab and CLICK.



Figure 49 Print Head Properties Print Tab



3. Creating a Message



Figure 50 Print Head Print Interval Window

Set the margin for print delay by moving the cursor to the Margin value field, CLICK and type in the value. If the margin setting is incorrect, the printer will print in the wrong position or miss its target entirely.

Select "OK" to close Print head Properties



Figure 51 OK Option

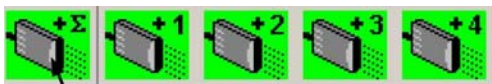


Figure 52 Print Head Tool Bar

Select the "Send to all heads icon or select the appropriate print head icon from the Print head Toolbar

When the encoder begins to turn, printing will start.

Internal clock

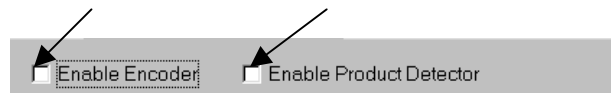


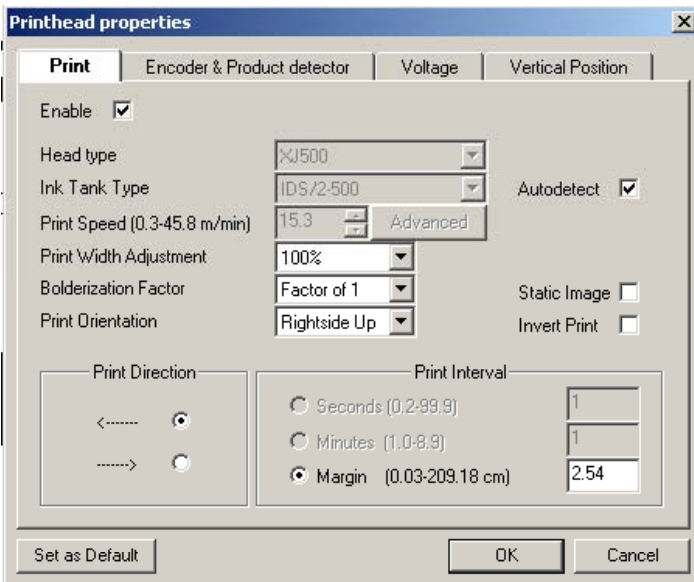
Figure 53 Print Head Tool Bar

Disable (remove the check mark) from both the encoder and the product detector by moving the cursor to each option and CLICK. Otherwise the Seconds and minute's options will be grayed out.



3. Creating a Message

Move the cursor to the “Print Head Properties” tab bar and CLICK on the “Print” tab.



1. Set Print Speed by moving the cursor to Print Speed field and CLICK, then type in the desired speed.
2. Next you must determine what the print interval will be in seconds or minutes. Move the cursor to the round button (circle) located to the left to choose seconds or minutes and CLICK to place a dot in the circle.

Figure 54 Print head Properties Window

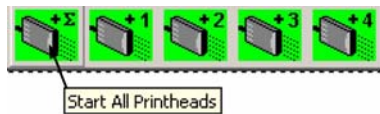


Figure 55 Print Head Tool Bar

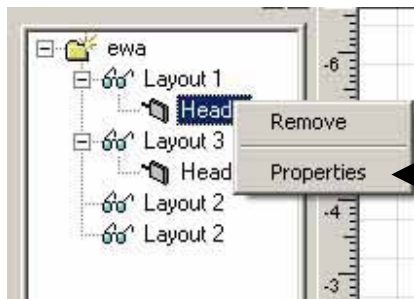
Select appropriate print head icon from the Print head Toolbar, by moving the cursor to the appropriate icon and CLICK.



3. Creating a Message

Setup for printing mirror images in NJEditor

In mirror image printing, heads are set up on opposite sides of the object printed upon. A typical application would be to print identical messages on opposite sides of a box.



First select the properties of the second head by **CLICKING** on head 2 and selecting properties. **Note: You cannot change print head direction in NJEditor. This must be done in NJProcessor.**

The head properties box will be displayed. For a 500 head change the position to the same position as head 1—0 to 499.

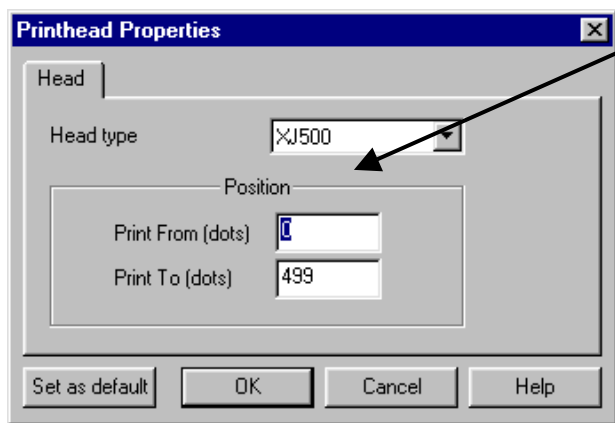
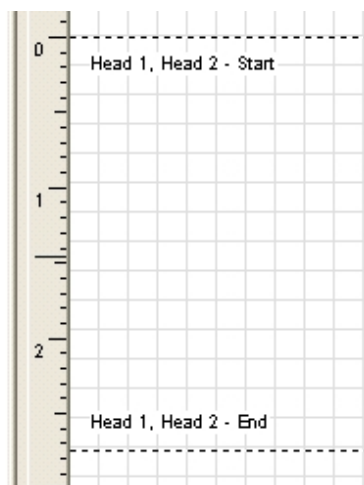


Figure 56 Printing Mirror Images

If you were using a 128 dot head the position would be from 0-127 dots. Click set as default and then OK.

After setting both heads to the same dot position, head1, and head 2 are displayed in the same area of NJEditor





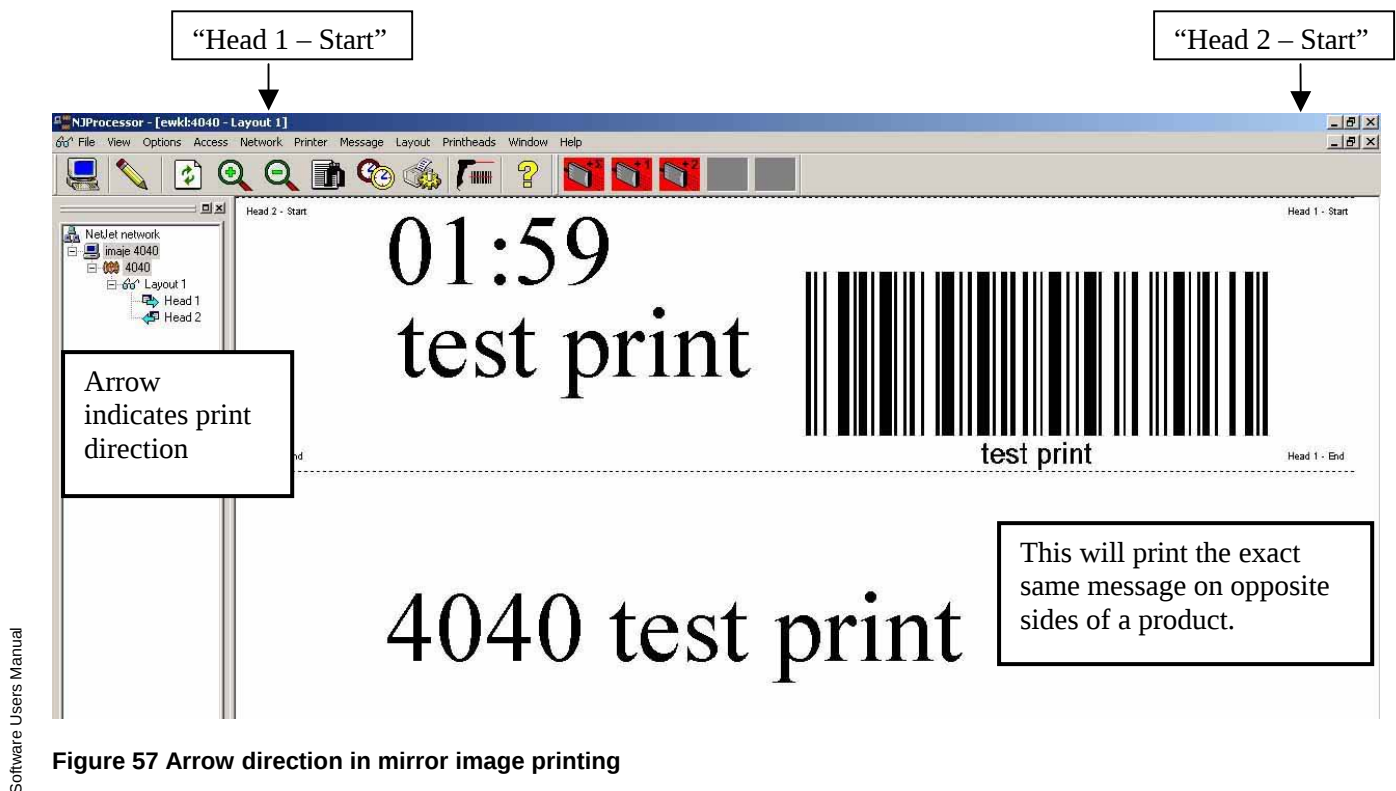
3. Creating a Message

Mirror image printing in NJProcessor

Note! Mirror imaging can only be accomplished if the two heads being mirrored are of the same size. Ex. Two 500 dot Print heads together or two 128 dot Print heads together. The purpose of the mirror image function is to allow the operator to program only one Print head and send the reverse data to the print head on the opposite side of the object being printed.



Open the message in NJProcessor and click on the “Print heads Properties” icon on the toolbar. From the “Head 1” tab, enable “Copy Mirror” by checking the “Copy Mirror” check box at the bottom of the “Print heads Properties” window and then clicking “OK”. ☒ Copy Mirror Now press the “Refresh” icon on the toolbar and you will see the print layout change to “Mirror Imaging Mode” and the “Head Directions” will now be pointing opposite directions. The purpose of Copy Mirror is so that the operator can make all Print head properties adjustments for one Head and then copy those adjustments to the other heads without entering the data for each individual head. *Note that when you click copy mirror, “Margin” and “Head Enable” are not copied. These two properties are not copied, because typically the Margins may need to be adjusted individually depending on how accurately the heads are mechanically mounted. The reason that Head Enable is not copied is for the following reason: A user may have a four headed (Quad) controller. But if they are only using two print head and only two print heads are connected, the “Ink Low” signal will flash on screen for the unused heads every time the print is enables/disabled. Disabling the unused heads will disable this annoyance.





3. Creating a Message

Using the “Copy Mirror” and “Copy all Heads” functions

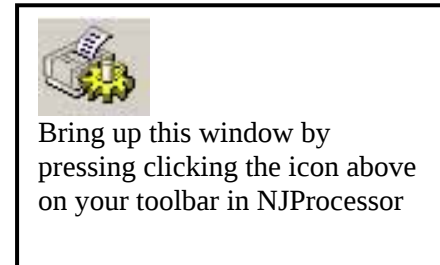
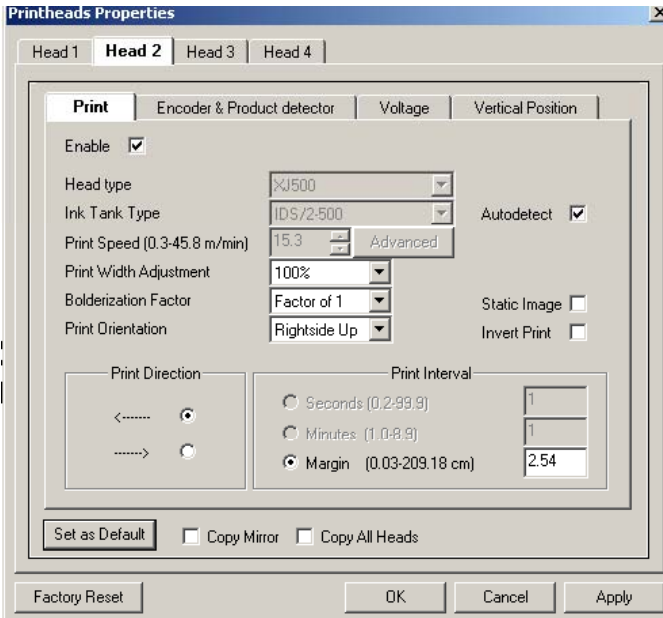


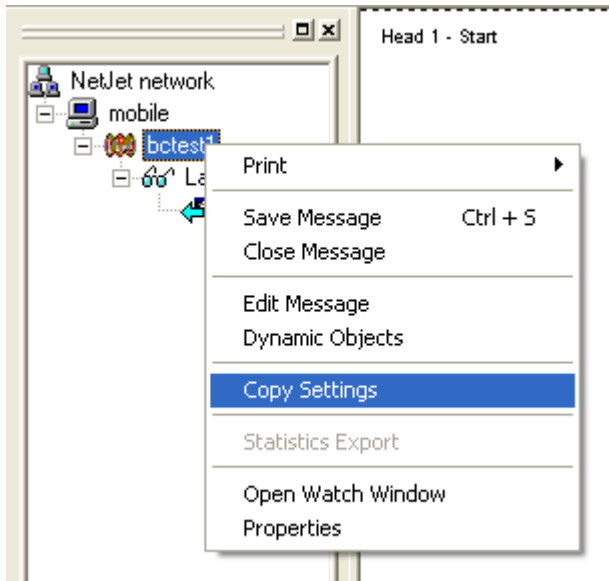
Figure 58 Copy all heads and copy mirror

When using multiple heads, instead of setting all functions in individual heads, you may use the copy all function to copy parameters such as print speed. The copy all heads is used to copy head properties to all heads if they are all printing in the same direction. Note that you must enable each head and set margin for each head. The same rules apply to copy mirror with the exception of print direction.



3. Creating a Message

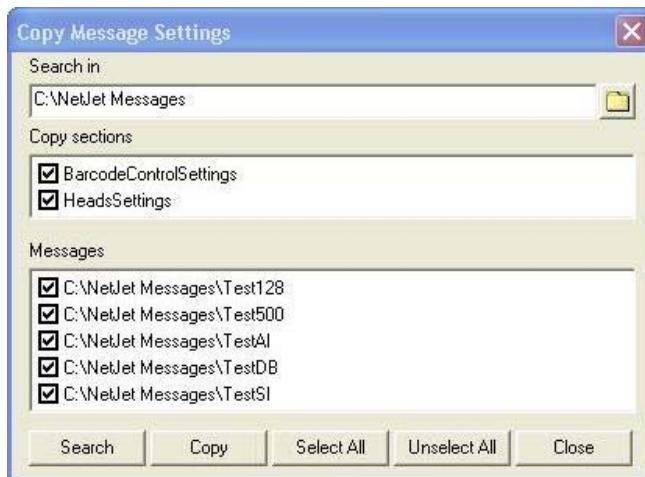
Copying print head settings to other messages



Copying print head settings to selected messages allows for an easy way of taking known good print head parameters and applying them to other selected messages. This process overrides the selected message/s properties with the properties of the current open message.

Copy Settings

1. In NJProcessor click on the message in the NetJet network tree and choose Copy Settings from the list. In this example bctest1 is clicked.
2. Once the Copy Message Settings window opens, select the Search in directory by clicking on the  icon and selecting the directory in which templates/messages are stored. By default messages are stored in "C:\NetJet Messages" directory.
3. Next, click the Search button to search for NetJet messages.
4. Under Copy sections check Heads Settings and/or Barcode Control Settings.



Below under Messages, pick and choose which messages settings need to be applied to and click copy. In this case each message selected will now inherit the settings from bctest1.



Entering Text

Before entering Text, a Message must be open, with at least one layout and one head. For more information on opening a Message or creating a New Message refer to Section 2 Creating a New Message or Opening an Existing Message.

Instruction

1

Action

Move the cursor to the Insert Text icon and CLICK, or move the cursor to the Insert | Text menu options and CLICK. Click in the message view window to insert text.

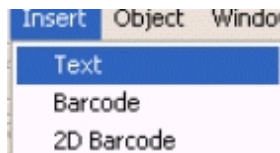


Figure 59 Insert Menu

Result

The text editor will appear. The cursor will blink in the Text window.

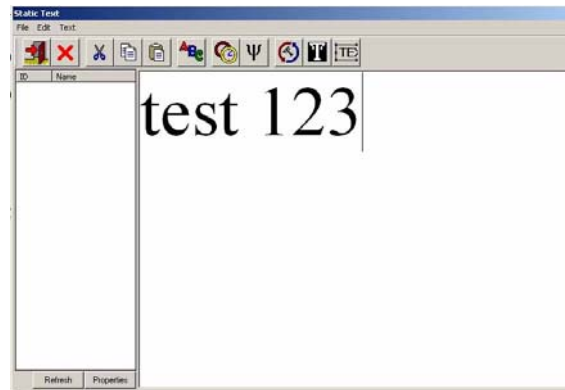


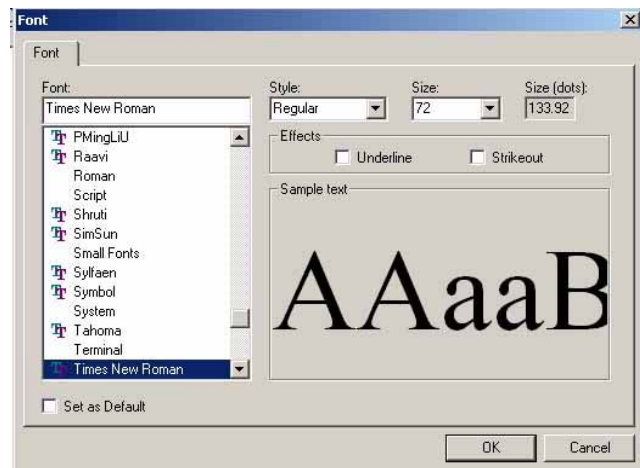
Figure 60 Static Text Window

2.

Click on this icon.



The font dialogue box will appear.





4. Advanced

Instruction

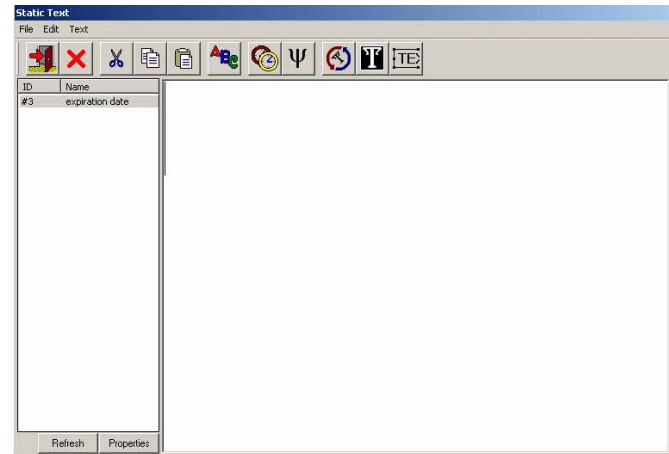
Action

Result

- 3 Choose the font, font style and font size. (For information on fonts, refer to “Font Options” in this section). If you would like to set a default font, click on the set as default box. Click OK

The text editor will appear.

- 4 Type your message text



The text message will appear in the Text window. When entering text remember to press and hold the shift key while pressing the letter(s) that you want to capitalize. The text properties window will display both capital and small case letters.

- 5.



Click the Icon in the upper left hand corner of the Text Editor.

The text will appear in the message area. You may click on the text and drag it to the desired location. If you desire to resize the text or make other changes, Double click on the text. This will reopen the text editor.

- 6.



If you do not wish to save your changes abandon them with this icon.

All changes will be abandoned. Note that even if no text is entered an object with no text will be inserted into your message. Use this icon to insure no unwanted objects are inserted.

- 7.



You may cut objects to be pasted elsewhere.

The text will disappear from the screen and will be available in memory to be pasted.

- 8.



Click this icon to paste items copied or cut.

Items cut or copied will be pasted into the editor.



4. Advanced

Instruction	Action	Result
9.	 Click this icon to copy items.	The item will be copied and left in the text editor.
10.	 Click this icon to allow text to be stretched or truncated.	Items text resizing will be pasted into the editor.
11.	 Click this icon to insert special character from the Windows Character Map.	The item will be insert special character from the Windows character map.

Undo Text Changes



Figure 61 Undo Icon

This section will discuss two basic features involved with editing text. First, how to undo what you had done and second how to access and make changes to text information that is already in a message.

If you accidentally delete text and have not saved the recent changes, move the cursor to the “Edit” menu option, touch the CLICK button. Move the cursor to the “Undo” option and touch the CLICK button once more. The “Undo” function can also be preformed by selecting “Undo” from the “Edit” menu or pressing the “Ctrl” and “Z” keys, these keys must be press together, for best results press and hold the “Ctrl” key then press the “Z” key.

<u>Instruction</u>	<u>Action</u>	<u>Result</u>
1.	Move the cursor the text object you want to edit, and DOUBLE CLICK.	The text editor will appear.

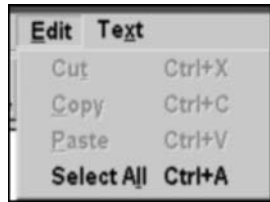


4. Advanced

Entering Text (continued)

Note: When the text editor opens, none of the text will be highlighted. You may move the cursor and edit the text as desired. If you need replace all of the text, select all text by using select all in the edit menu. You may also highlight part or all of the text with the cursor.

Caution: If you type anything while the text is highlighted, the highlighted text will be replaced by whatever you type. Be careful—you can delete all you entered text—the undo function will not get your text back.



2. Make the desired changes to the text message. Your changes will appear in the text editor as you type them
3.  Click the Icon in the upper left hand corner of the text editor. The text will appear in the message area.

Congratulations you have just edited text.

Deleting Text

<u>Instruction</u>	<u>Action</u>	<u>Result</u>
1.	Click on the text you wish to delete.	A box will appear around the text to show it is highlighted.
2.	Press the “DEL” key on the keypad.	The text object will be deleted (removed) from the current message.

If you delete a text message by accident, simply move the cursor to the “Edit” menu option, CLICK, then move the cursor to the “Undo” option and CLICK (or select the Undo icon). This will restore the Text object to the way it was before you began this process.

The undo icon





4. Advanced

1. Click the Text Insert icon on the toolbar and then click inside the layout to start a new text field.
2. The Static Text window will open and allow you to start entering text.
3. Once text is entered click the Text



4. Resizing icon.
This will enable text resizing for this text field.
5. Close the window by clicking the Save and Exit icon.
To resize; click and drag one of the corner or edge handles.

Resizable text fields are useful for messages (templates) where normal font sizes can't accommodate. This option gives the user the flexibility of resizing text fields to fit there or customer specifications and/or requirements.

Resizable text fields are also useful when populating with data that may change slightly in length. Common uses would involve Database, ASYNC input and Supplied input objects where the data length may be dynamic.

When enabled the text field has a constraint on the max and min size of the overall text box.

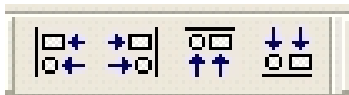
Text fields that do not have Text Resizing enabled will grow or shrink in length depending on the data inserted.



Aligning Text and Objects

Net jet allows you to precisely align your objects and text. To move an individual object or text simply select it with the pointing device and use the arrow keys to move your selected object in the desired direction.

You may also align multiple objects selecting multiple objects by holding down the control key and selecting more then one object. When you do this, the icon below will become active. Alternately you may select all objects with the Select all option in the edit menu or selecting one object and holding down the control key and the letter a.



Clicking an icon reposition to the last object selected right, left, top or bottom aligned. Alternately you may select alignment from the object menu.

Drawing lines or frames



Insert a shape by clicking on the icon or inserting a shape form the insert menu. You can draw horizontal or vertical lines or frames and select the desired width.



Font Options

The NetJet system makes changing the font and/or the font size easy.

Changing Font Options

Click on the text you wish to change to open the text editor.



Figure 62 Selecting all text

The text editor will open. To change all of the text, highlight of the text by clicking on select all in the edit menu. You may also highlight the text by holding down the shift key and moving the cursor with the arrow keys.

The text must be highlighted before text operations can be performed. Caution: If you type anything while the text is highlighted, the highlighted text will be replaced by whatever you type.

Open the font window by pulling down the text menu and selecting font or clicking on the font icon.

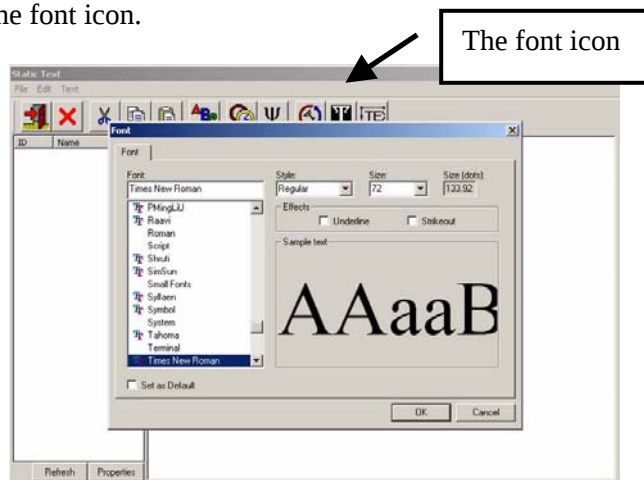


Figure 63 Accessing the font dialogue box.

4. Advanced



The Font window will appear.

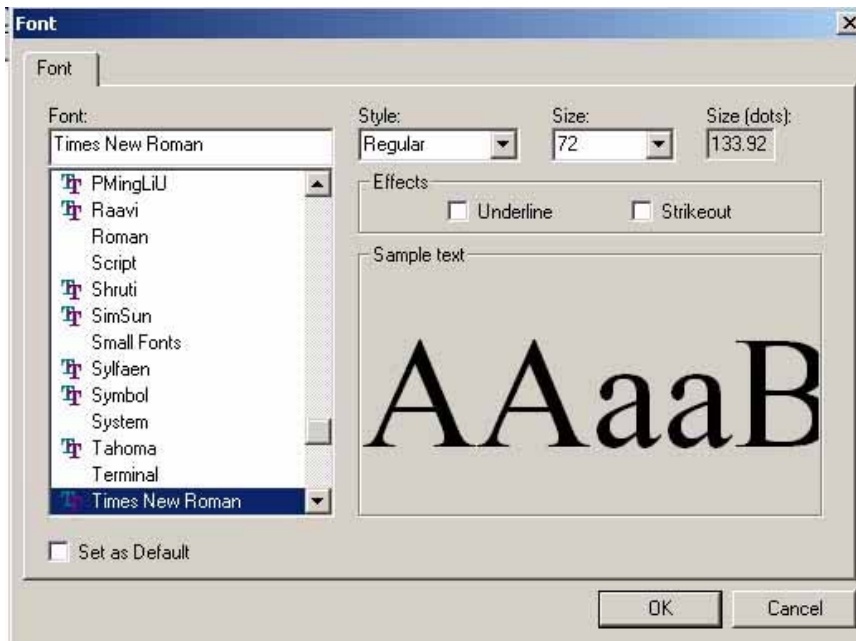


Figure 64 Text Properties Font Window

To select the desired font from the available fonts, move the cursor to slide bar on the right side of the font list window. Place the cursor on the down arrow and touch the CLICK button on the touch pad, until the desire font is visible. If you're not sure what font to use, move the cursor to any font .in the font list window and CLICK. Once you have clicked in the font list window, the name of the font that is highlighted will appear in the "selected font field". Then use the vertical arrow (↑↓) keys on the keypad to scroll one (1) font at a time. As you step through the fonts, each font name selected will appear in the currently selected font field and a sample of the font will be displayed the "Sample text" window. Once you see a font that you like your font selection complete.



Use the vertical "SCROLL" option to locate the font you want, by clicking between the scroll bar and the arrows to display the fonts a page at a time. CLICK on the font you want

Figure 65 Available Font Window

Note: The fonts available on your NetJet print may vary from those shown in SW Figure 7.3. Additional fonts can be added to you NetJet system; contact your in-house computer expert for assistance.



A sample of the highlighted font will appear in the “Sample Text” window.



Figure 66 Sample Text Window

Font Size



Figure 67 Text Style and Size Fields

The program will automatically calculate the correct dot size when you select a font size. This allows you to create a message, sizing it with standard Windows options. A font could be sampled using a word processor. You may select the font size in points. The size will be displayed the number of dots required for the selected font. [Size (dots): 132.92]

Effects

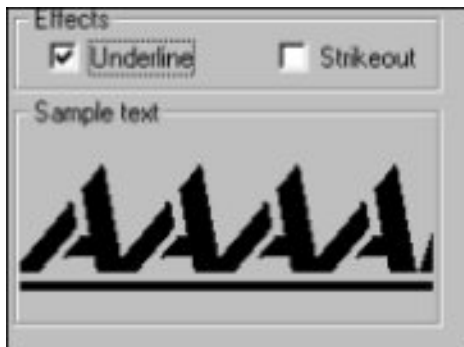


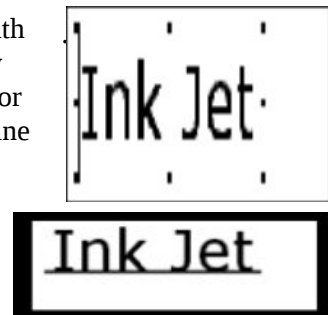
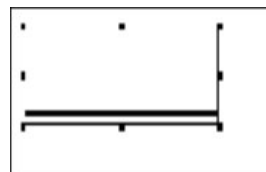
Figure 68 Text Effects Options

Select the desired Effects, Strikeout, Underline or Color. A sample for the effects chosen will appear in the “Sample” window. Both the “Underline” and the “Strikeout” options, enabled will be displayed as a thick line no matter what font size is selected.

Note: If a thinner line is required for your target message, create the text message with out underline. Then create a second text message consisting of the underline “_” key only, you will have to pay close attention to the length to ensure that a good match for the text. After you have completed the underline only text message move the underline (only) text message object into position under the original text message.

Figure 69 Text effects for NJEditor

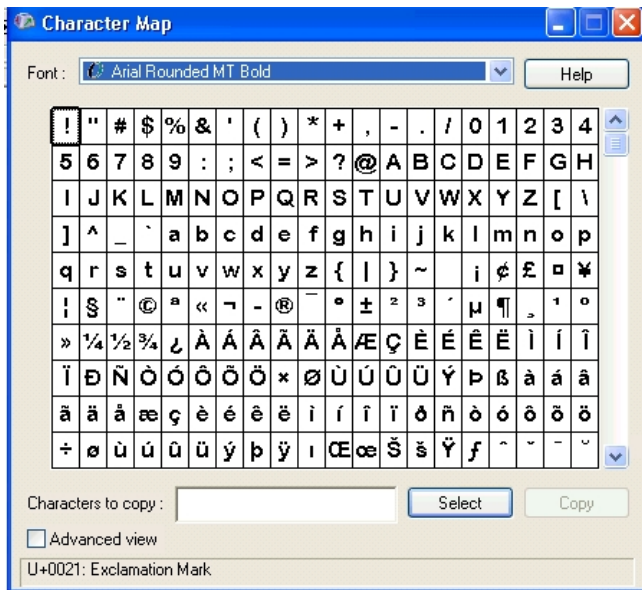
Figure 70 Building a Underline





Other Options in the Text Editor

Inserting Symbols from the Windows Character Map



Select the desired font and then click on the desired character and click select. The characters you have selected will appear in the “Characters to copy box. Click copy and close the character map. You may then click the paste icon, use paste from the edit menu or Control-V to paste your characters into the menu
Hint: Languages are available in limited fonts. Don’t expect to find languages in many fonts. See below

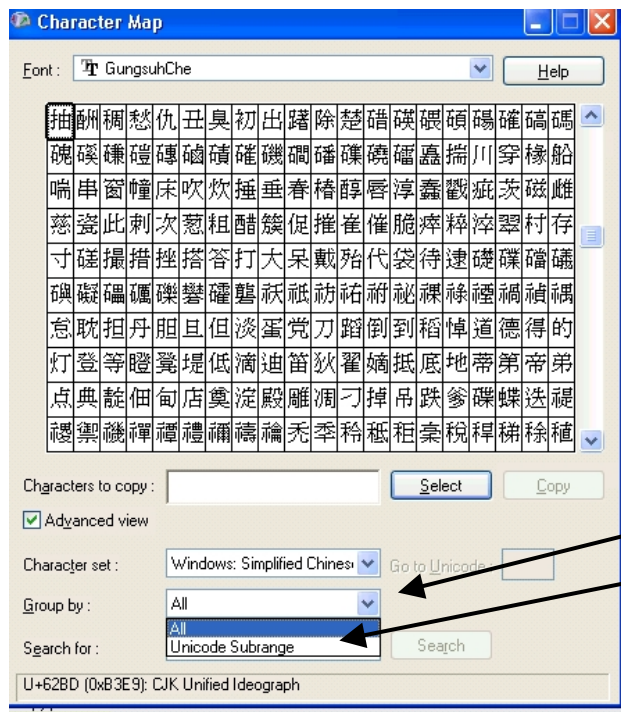
Figure 71 Inserting symbols in XP version



Click this icon to insert special character from the Windows Character Map.

The item will be insert special character from the Windows Character Map.

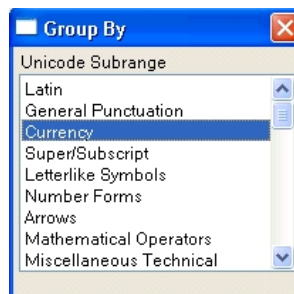
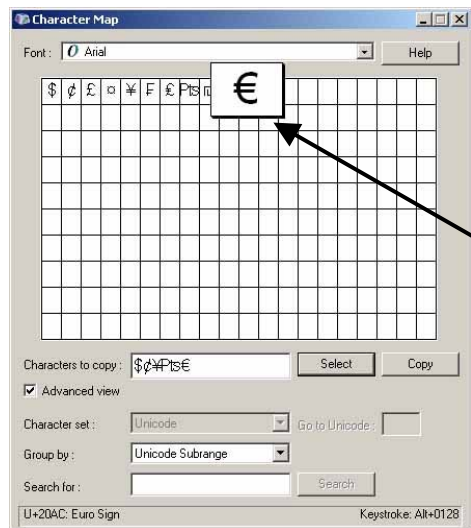
4. Advanced



There are several variables you need to change to get the font you want. For example simplified Chinese.

Note the character set is Set to simplified Chinese and all groups are shown. If Unicode sub range is selected in the Group by box, only part of the character set will be displayed.

Figure 72 Using foreign Languages in XP version



Note than only currency symbols are displayed in this font if Unicode sub range is selected. In the Group by box and currency is selected in to pop up "Group By" box.

Highlight the characters you would like and the character will pop up as shown. Click the select box. The character will appear in the "Characters to copy box. When you have selected all characters, click on "Copy" and paste the characters into your message.

Note this character could also be inserted directly by holding down the alt key while pressing 0128.

Figure 73 Selecting Characters

4. Advanced

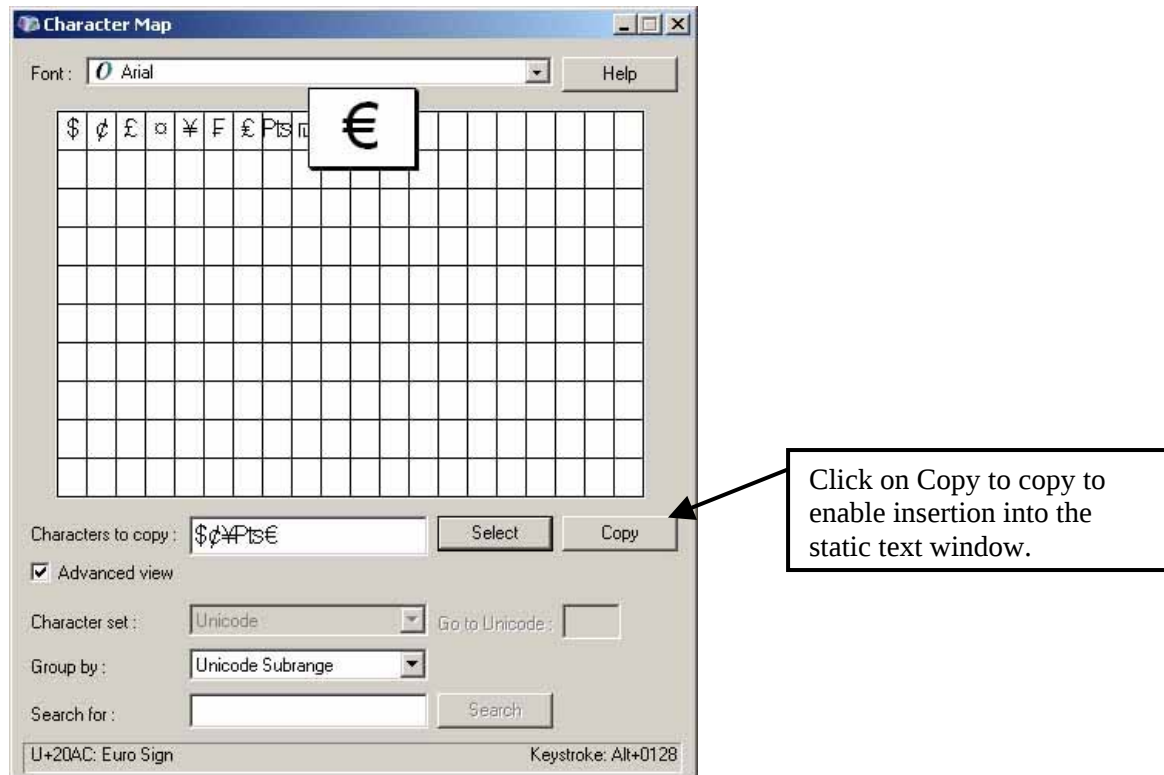


Figure 74 Copying Characters

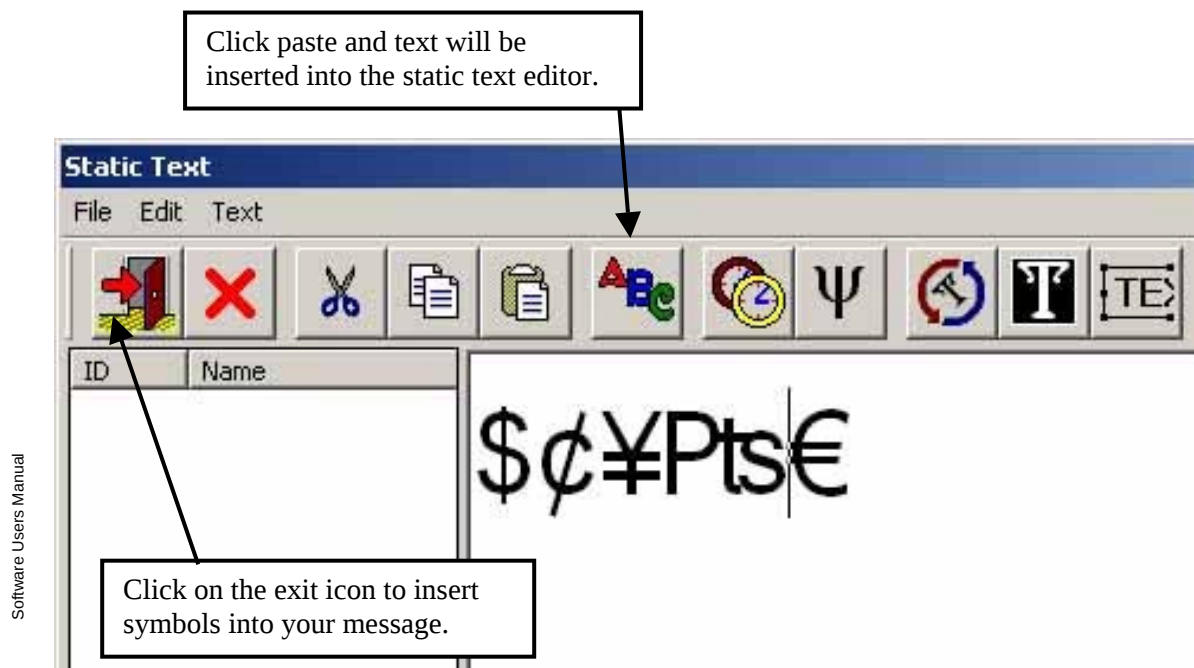
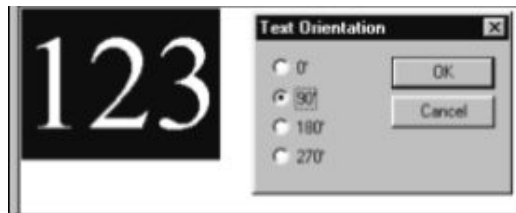


Figure 75 Inserting characters into your message

4. Advanced



The rotate text option



CLICK on the rotate text option or CLICK on text orientation in the text menu to rotate text. In this example the text is highlighted and rotated 90 degrees. Rotation does not occur until the text is inserted in the message.



Figure 76 Rotating Text

The invert text option



This option inverting the background and text colors. Highlight the your text and click the icon.

Your text colors will be inverted when you click the save and exit icon. This is an example of text rotation and inversion.

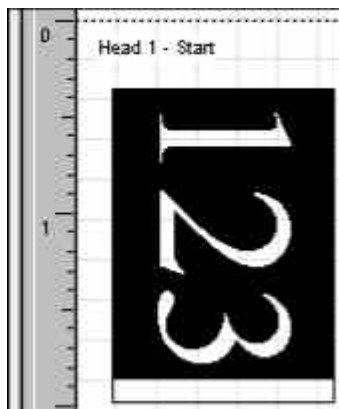
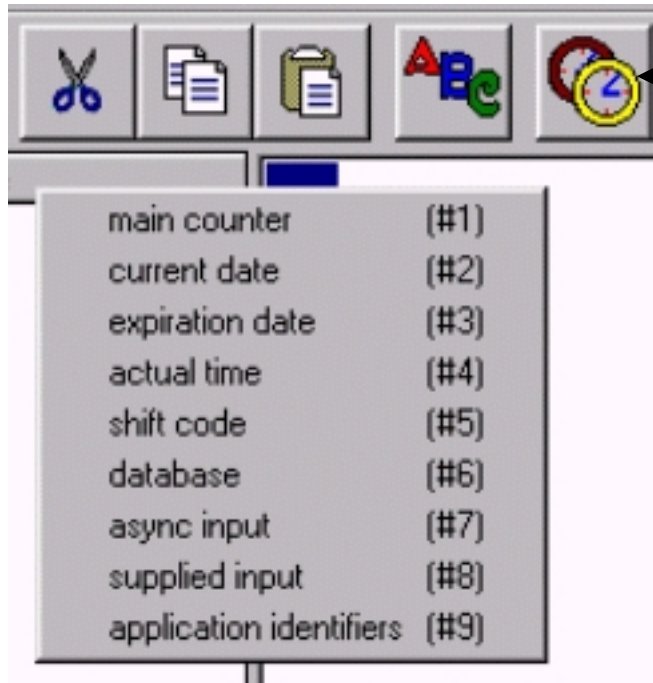


Figure 77 Inverting text

4. Advanced



You may also insert dynamic objects by clicking on the dynamic objects icon. Refer to sections later in this chapter to explain dynamic objects more fully. Once dynamic objects have been inserted, they are listed in the Dynamic properties window by ID number. If you do not see your dynamic object, click refresh. You may select the dynamic object you wish to modify and click properties. This will allow you for example to change the actual time format to include or not include seconds.



Bar Codes

Available Bar Code Formats

The NetJet system is equipped with the ability to create and print UPC (Universal Product Code) bar codes like those found in the grocery industry and EAN (European Article Numbering) a barcode number system implemented to provide uniformity of the barcode system across international borders. Bar code printing was conceptualized in the 1930's and by the 1970's its use expanded and enabled rapid receipt and distribution of the products in an extremely accurate method. The use of the bar code will enable tracing of inventory, manufacturing and transport cycles of a given product. The use of bar coding will reduce the level of errors during data entry, when product is received.

Before attempting to insert a bar code the following conditions must exist:

- A Message must be open
- A Layout must be in view
- A Print Head should be installed in the Layout

The creation of a Bar Code will require the use of both the keypad and the movement of the cursor. Use the cursor to select various options and fields. Use the keypad to enter alphanumeric text into this text field.

4. Advanced



Type Field

Interleaved 2-of-5:
 Numeric only bar code. Requires even number of digits, otherwise leading zero is added.
 Check digit is not required.
 SCC14 variant encodes 14 numeric characters.

Interleaved 2-of-5

- No blank spaces
- Text string 11 numbers or more
- No punctuation allowed
- Qzone 10 x narrow bar
- Built in Check Digit



Figure 78 Interleaved 2-of-5 Bar Code

Code 39:
 Alphanumeric bar code that can encode decimal numbers, the upper case alphabet, and the following special symbols: _ . SPACE \$ / % +
 Check digit is not required.

Code 39

- Letters and Number allowed
- Text string can vary in size
- Blank spaces allowed
- Qzone 10 x narrow bar
- Check Digit optional



Figure 79 Code 39 Bar Code

This UPC code is generally used for counting, packaging, retail and data processing.



4. Advanced

UPC-A

UPCA:
Numeric only bar code. Expecting 11 characters on input.
The first digit identifies the numbering system being used. The next group of 5 digits identifies the manufacturer. This number is assigned by the Uniform Code Council (UCC). The next 5 digits identify the particular product and are assigned by the manufacturer.
The last digit is an automatically added control digit.

- Number values only
- Text string must be 11 numbers
- No blank spaces
- Bi-directional scan
- Built in Check



Figure 80 UPC-A Bar Code

EAN 128

Code 128:
The Code 128 character set includes the digits 0-9, the letters A-Z (upper and lower case), and all standard ASCII symbols and control codes. Character set A encodes uppercase characters, punctuation, numbers and several special functions such as a return or tab. Character set B encodes upper and lower case letters, punctuation, numbers and a few select functions. Character set C encodes only numbers. Check digit is mandatory.



Figure 81 EAN 128 Bar Code

- Number, blank spaces allowed
- Letters, punctuation
- Subsets A,B,C
- Built in Check Digit allowed
- Text length can vary allowed
- Alphanumeric

Code 128 provides excellent density for all-numeric and alphanumeric data. It is often selected over Code 39 in new applications because it offers a much larger selection of characters. The Code 128 standard is maintained by AIM (Automatic Identification Manufacturers).

EAN 13

EAN 13:
Numeric only bar code. Expecting 12 characters on input: the first two characters are the flag characters that identify the country of origin, the next ten characters are the data characters.
The last digit is an automatically added control digit.

- Number, blank spaces
- Letters, punctuation
- Start character
- Stop character



Figure 82 EAN 13 Bar Code



4. Advanced

EAN 8

EAN 8:
Numeric only bar code. Expecting 7 characters on input: two flag characters and five data characters. Check character is required and is added automatically.

- Number, blank spaces
- Start character
- Letters, punctuation
- Stop character



Figure 83 EAN 8 Bar Code

POSTNET:

POSTNET:
The POSTNET (POSTal Numeric Encoding Technique) barcode was developed by the Postal Service to encode ZIP Code information on letter mail for rapid and reliable sorting by barcode sorters (BCSs). The POSTNET barcode can represent a five-digit ZIP Code (32 bars), a nine-digit ZIP+4 code (52 bars), or an eleven-digit delivery point code (62 bars).

Only digits may be used
(5,9 or 11 digits)



Figure 84 POSTNET Bar Code

SCC14 (ITF-14)

SCC14 :
Numeric only bar code. Expecting 13 characters on input. Check character and frame are required and are added automatically.



Figure 85 SCC14 12of5 Bar Code.



Changing Height and Narrow Bars Option

The height adjustment will adjust how tall the bar code will appear, this adjustment may be required to improve scan ability. The height can be adjusted in two (2) different ways. First double click anywhere on the barcode and click cancel on the “Bar Code Control Properties” box. Look for a small square in the middle of a horizontal line surrounding the bar code. Click the square -- the pointer will change to an arrow (see to the left) With the cursor as a double arrow; click the drag on/off button on the controller touch pad. Drag the arrow to change the height. Click the drag on/off again to complete the change. If you are using a mouse, simply click and drag the squares. Use the same method to change the width or resize your bar code. You may also change the height, or narrow bar width in the “Bar Code Control Properties” box. (see below)

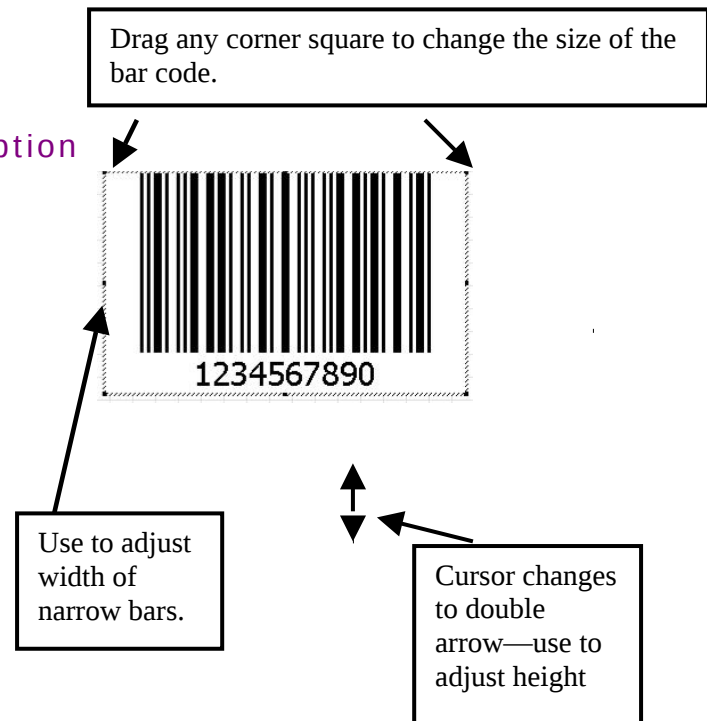


Figure 86 Changing bar code size

Ratio Option

When you insert a bar code the “Bar Code Control Properties” box will appear. A list of the available ratio options will appear in form of a pull down list; CLICK on desired ratio. To view the changes return to the message view by clicking on the “OK” button. The available ratio options are 2:1, 5:2 and 3:1. Adjusting the Ratio will affect the scanning devices ability to the read the bar code, ensure that the Ratio you select will work for the receiving application. The higher the Ration the more difficult it might be to scan the product, a lower Ratio might be required when product is scan on a conveyer or high speed platform.

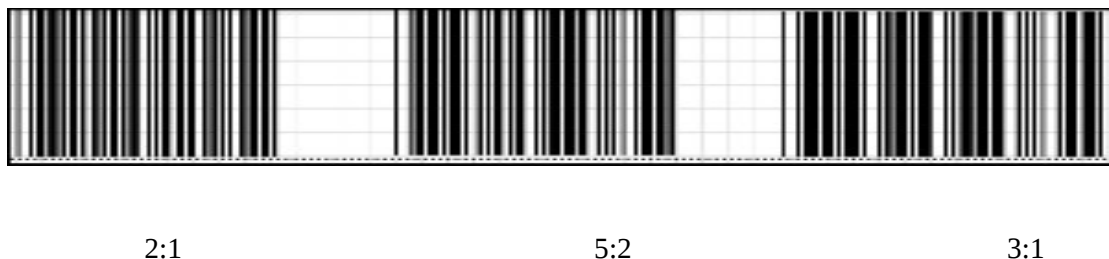


Figure 87 Available Bar Code Ratio's



4. Advanced

Enter the desired text message here. Special attention should be paid to the limitations of the bar code format being use to ensure proper alphanumeric data entry.

main counter	(#1)
current date	(#2)
expiration date	(#3)
actual time	(#4)
shift code	(#5)
database	(#6)
async input	(#7)
supplied input	(#8)
application identifiers	(#9)

Clicking on this arrow allows adding dynamic objects (see above).

Select type of bar code by selecting pull down arrow—menu above will pop down.

Places a check digit at the beginning and at the end of bar code.

The dialog box has three tabs: Bar Code, Rotation, and Font. The Bar Code tab is active. It contains the following fields and controls:

- Text:** A text box containing "0123".
- Barcode type:** A pull-down menu set to "Interleaved 2-of-5".
- Height:** A spinner box set to "2" inches.
- Narrow bar width:** A spinner box set to "0.03" inches.
- Thick to narrow ratio:** A pull-down menu set to "2 : 1".
- QZone:** A spinner box set to "0.3" inches.
- Default data:** A text box containing "1234567890".
- Ink bleeding:** A spinner box set to "0" inches.
- Check digit:** A checkbox that is checked.
- Show coded text:** A checkbox that is checked.
- Barrer bar:** A checkbox that is unchecked.
- Invert:** A checkbox that is unchecked.
- Buttons:** OK, Cancel, Apply, and Set As Default.

Clicking on icon will tell what type of data this bar code type will accept and other information (example above)

Display Text under bar code.

Allows removing 1 or 2 lines from bar code to compensate for ink bleeding (see below).

Completes the Bar Code setup process.

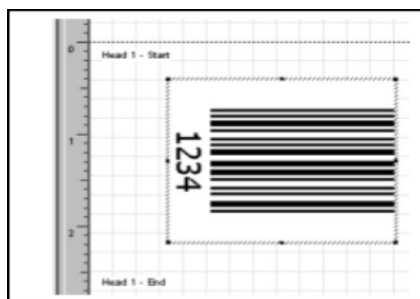
Place a frame around the Bar Code.

Prints background instead of bars (example white ink on black box).

The dialog box has three tabs: Bar Code, Rotation, and Font. The Rotation tab is active. It contains the following controls:

- Rotation:** A group box containing four radio buttons: None, 90°, 180°, and 270°. The 90° button is selected.
- Buttons:** OK, Cancel, and Apply.

Allows bar code rotation



Example of Rotated Bar Code

Figure 88 Bar Code Properties Window



4. Advanced

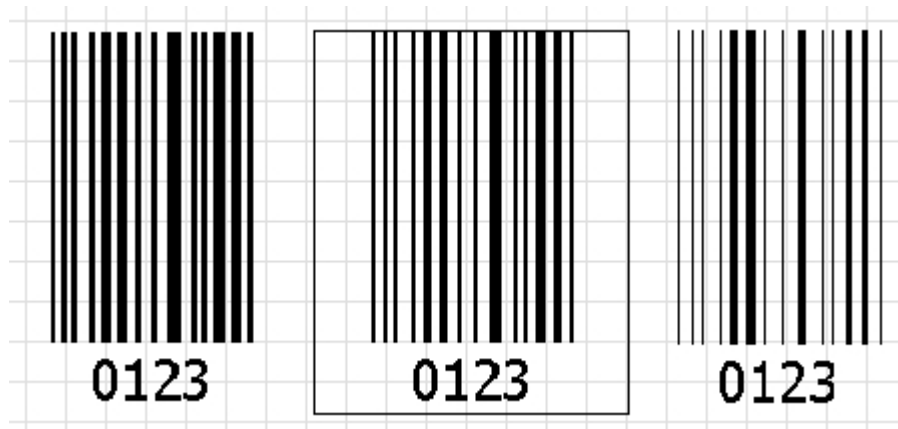


Figure 89 Ink Bleed Compensation

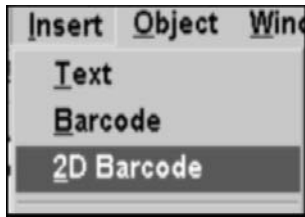
The above illustration shows the effect of ink bleed compensation. The bars are printed with just one or two lines less. The screen illustration is greatly exaggerated for in order to make the difference visible on the screen. This option will improve barcode readability when printing on material where ink bleeds and makes the bars wider.

4. Advanced



Insert a 2D Bar Code in NJ Editor

Select 2D Bar Code from the insert menu



This tab will allow rotation of you bar code. Selections are 0, 90, 180, and 270.

Use keypad to enter text data here.

Enter the number or rows and column or simply enter element height and width.

PDF 417

- Over 8 thousand characters
- 256 international characters
- Bi-directional scan
- Built in Check Digit characters

This bar code could be called a portable data file, it allows for the encoding of large amounts of data. The most common use of this type of bar coding is shipping because of its ability to encode large amounts of information.

Select Bar Code types:

Default
0
1
2
3
4
5
6
7
8

Use the pull down arrow to select the desired correction level.

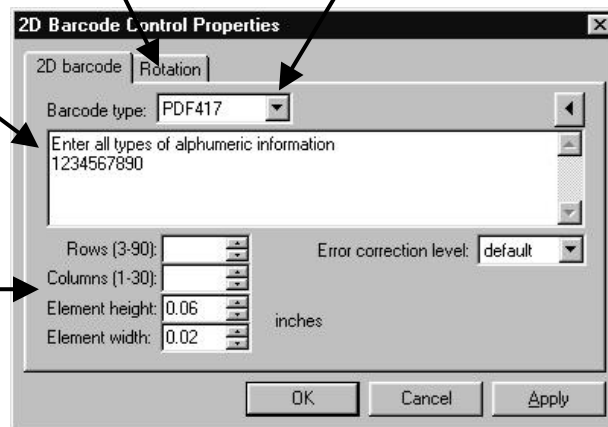
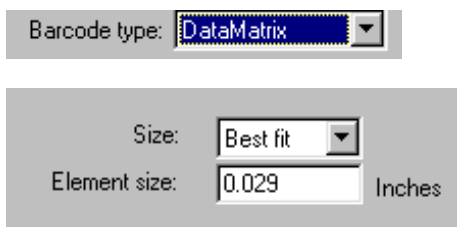


Figure 90 2D Bar Code Window



Figure 91 PDF 417 Bar Code

The above bar code image represents the settings displayed in Figure 90 2D Bar Code Window



When the “Data Matrix” option is selected the bar code will appear as shown in Figure 92 Data Matrix Bar Code. NetJet will allow for 31 different “Size” setting or the size can be adjusted in “inches”.

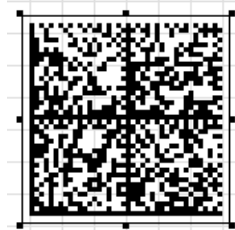


Figure 92 Data Matrix Bar Code



Reduced Space Symbology (RSS) Bar Codes

This family of Bar Codes will allow the use of bar code where space has previously prevented bar code use.

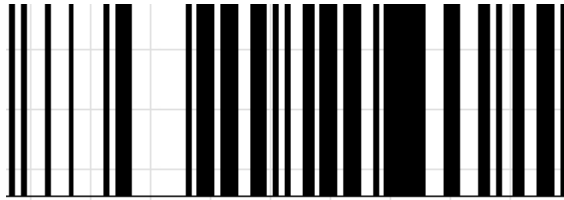


Figure 93 RSS 14 Barcode

RSS-14 is a linear symbology that facilitates omnidirectional scanning. Expecting 13 digits of numerical data on input. The last digit is an automatically added control digit. RSS-14 is dimensioned as 96X wide by 33X high (X= "X" dimension width).



Figure 94 RSS-14 Truncated Bar code

RSS-14 Truncated allows truncation (shortening the height of a RSS14 bar code) of the height to 13 times the nominal printing density ("X" dimension multiplied by 13). The normal RSS-14 symbol has a height of 33X ("X" dimension multiplied by 33). Expecting 13 digits of numerical data on input. The last digit is an automatically added control digit.

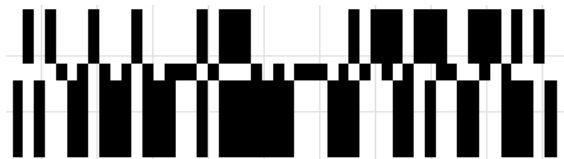


Figure 95 RSS-14 Stacked Bar code

RSS14 Stacked is form of RSS allows the truncated RSS-14 to be printed in two rows of two segments each. It has the same application as RSS-14 Truncated but is used where a narrower symbol is needed. The separator pattern between the two rows is designed to eliminate cross-row scanning errors. Expecting 13 digits of numerical data on input. The last digit is an automatically added control digit. RSS-14 Stacked is dimensioned as 50X wide by 13X high.



Figure 96 RSS-14 Stacked Omni directional Bar code

RSS14 Stacked Omnidirectional is form of RSS allows the full height RSS-14 to be printed in two rows of two segments each, which reduces the overall length of the linear bar code so it can fit better on certain packaging configurations. The separator pattern between the two rows is designed to eliminate cross-row scanning errors. Expecting 13 digits of numerical data on input. The last digit is an automatically added control digit. RSS-14 Stacked Omnidirectional is dimensioned as 50X wide by 69X high (X= "X" dimension width).



Figure 97 RSS Limited Bar code

RSS Limited
 Numeric only bar code.
 Expecting 13 digits on input, but number must be lower than 1 999 999 999 999. This form can be printed very small and is not generally intended for omnidirectional scanning. RSS Limited contains two large data characters and a Mod 89 symbology check character. RSS Limited is dimensioned as 71X wide by 10X high.(X= "X" dimension width).



Figure 98 RSS Expanded Bar code

RSS Expanded
 This symbology allows up to 74 numeric or 41 alphabetic characters. This form of RSS can be printed at densities that can be omnidirectionally scanned. The last digit is an automatically added control digit.

2D Barcode Control Properties

2D barcode | Rotation

Barcode type: **RSS Expanded** ?

123456789012

Enter data

Elem. X width: 0.02 inches Sep. row height: 0.02 inches

Ink bleeding X: 0 inches Max seg. per row: 22

Ink bleeding Y: 0 inches

Invert: ☐

Set As Default

OK Cancel Apply

Select type of bar code.

Click for information.

It may be possible to adjust row height and maximum segments per row depending on the type of barcode selected.

Prints background—use with white ink on black.

Save your defaults for next time.

Enter element with to size bar code.

Reduce x width to compensate for ink bleeding.

Reduce y width to compensate for ink bleeding.

Figure 99 Setting RSS Bar code Properties



Insert a Logo

From a File

To insert a Logo the following conditions must exist.

- A Message must be open
- A Layout must be in view
- A Head should be displayed

To insert a Logo, move the cursor to the “Insert Logo” icon, and CLICK. Or move the cursor to the “Insert” menu option and “CLICK”. Then move the cursor to the “Logo” option and CLICK. After clicking, move the cursor to the message area and click again. The cursor will change with to a small cross with a small face in the lower right hand corner. Insert the bitmap in the message area by CLICKING. The logo properties box will appear.

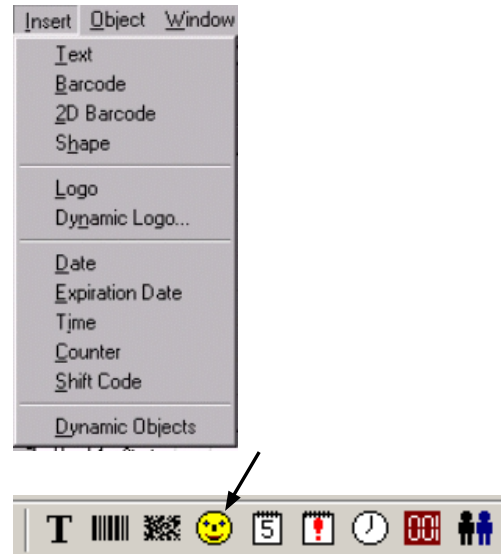


Figure 100 Logo Pop-up Menu and Icon

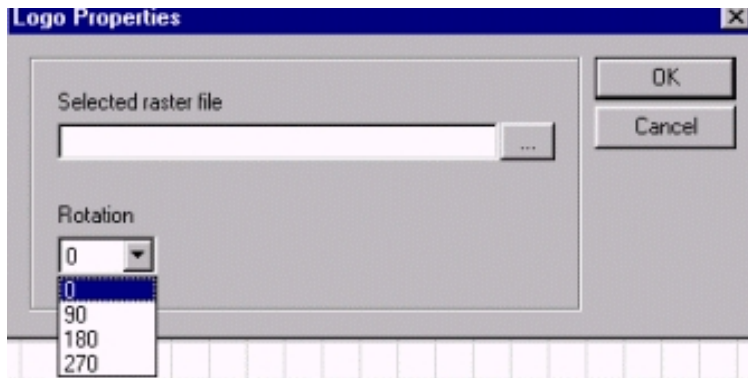


Figure 101 Logo Properties Box

Note the small area with 3 small dots to the right of the box below Selected raster file. CLICK on the box with the 3 dots to reveal the open dialog box. Also note that you may rotate you logo file 90, 180 or 270 degrees when you insert it.



Figure 102 Open Window

Find the directory Logos are stored in. Select directories using the pull down arrow on the “Look in:” dialogue box. Images may be obtained from a variety of locations such as a removable zip drive, USB stick, or USB drive. Double click on the correct directory to display Logo files. Double click on the Logo file and the map you have selected will appear in your message.



Figure 103 Logo file types

You may insert any of the file types listed. To look for a specific file type select Click on the down arrow in the Files of type box and only the files type selected will appear in the open window.

Note: If you notice speed is an issue with your messages, may want to convert color logo files into monochrome files. Special graphic utilities may be necessary to accomplish this without changing the appearance of your graphic file.

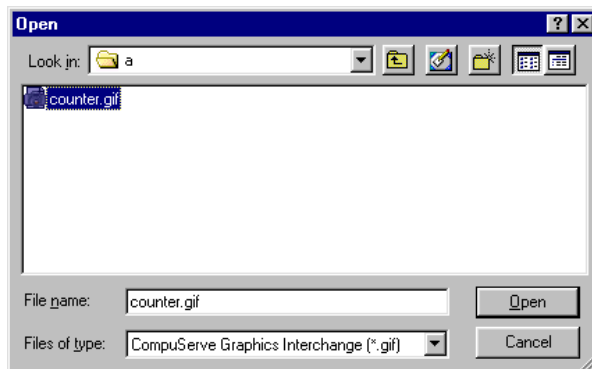


Figure 104 Open dialog box

Select the file you wish to insert and click open—The logo properties box would reappear with your selected file listed

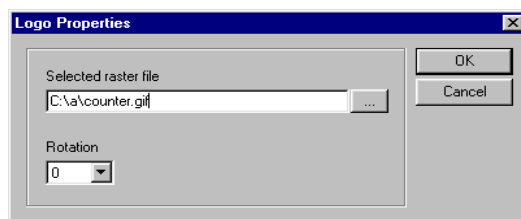


Figure 105 Selecting Logo File

CLICK OK and your logo file will be inserted.

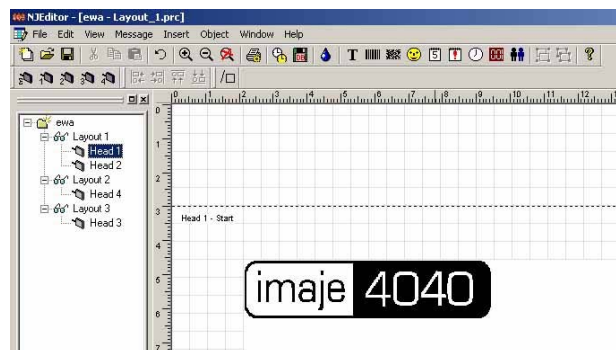


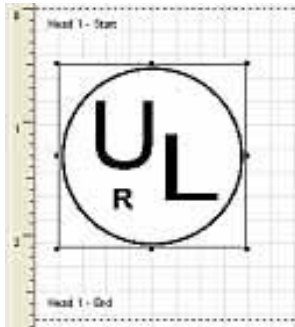
Figure 106 Logo Inserted



Moving a logo

Move a logo by **CLICKING** on it and selecting it. When the cursor is in the Logo area, it will change to a cross with 4 arrows. You can then move the Logo to the desired location holding down the left mouse button and dragging the **DRAGING** the image to the desired location. Release the button to complete the move.

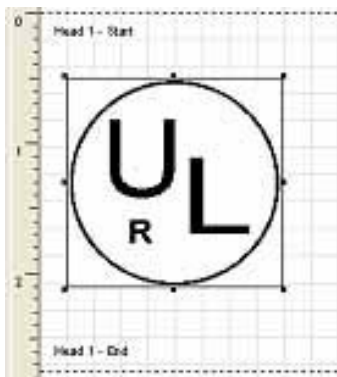
Dragging and enlarging a Logo in NJEditor



First insert a Logo

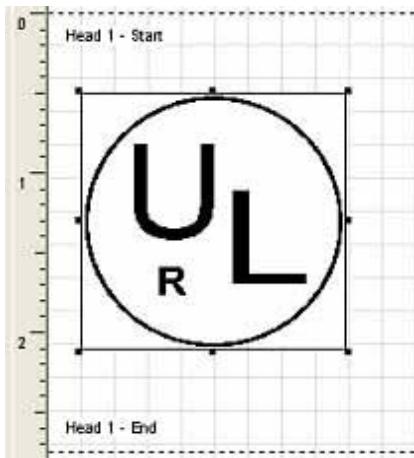
Then double click on the object and click cancel on a dialogue box if it comes up.

Figure 107 Logo inserted



Note when an object is selected, a box is displayed around the Logo with 8 small squares 4 on the corners and 4 in the middle. Position the arrow over the logo and the cursor will change from a single arrow to a four-pointed arrow. When this happens, **DRAG** your Logo to the desired position.

Figure 108 Selecting Logo



Now grab the lower right-hand small square and the cursor will change to a double pointed arrow at a 45 degree angle. **CLICK** and hold the left mouse button and Drag the mouse to enlarge or shrink the Logo to a desired size. In a like manner you may grab the small squares in the middle of the lines to change the height or width by clicking on the arrow when it changes to a vertical or horizontal line to change the height or with of the object.

Figure 109 Changing logo size



Resize a Logo image

In order to resize a Logo, it must be selected. When a Logo is selected, a frame appears around the Logo. The frame will have eight (8) square dots located around its border. Each of the square dots is a sizing point. Move the cursor to the desired sizing point. The cursor will change from the normal one (1) point arrow to a two (2) point arrow. Notice the direction the two (2) arrow points as you select different sizing points, the direction of the two (2) arrow point will change depending on which sizing point the cursor is located at. Remember, that when the cursor is not on the selected Logo, it will appear as a single point arrow. When the cursor is on the selected Logo but not at a resizing point, it will appear as a four (4) pointed arrow.

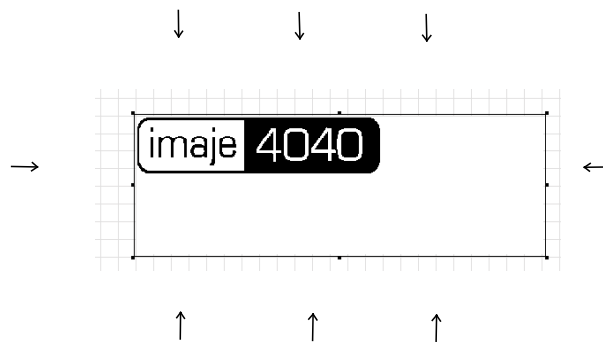


Figure 110 Resizing Points

The arrows in the figure above are pointing to the eight-(8) resize points located around the frame.

Once the cursor is located at the desired frame resizing point “DRAG” the cursor in the desired direction to alter the Logo frame. If the object frame needs to be taller select one (1) of the resizing points in the center (top or bottom) of the frame. If the object frame needs to be wider, select one (1) of the four (4) resizing points located at the corners of the frame. An important fact to remember when using the corner sizing points is that they can be used to resize both the height and width of the frame at the same time; depending on the direction you move your finger.

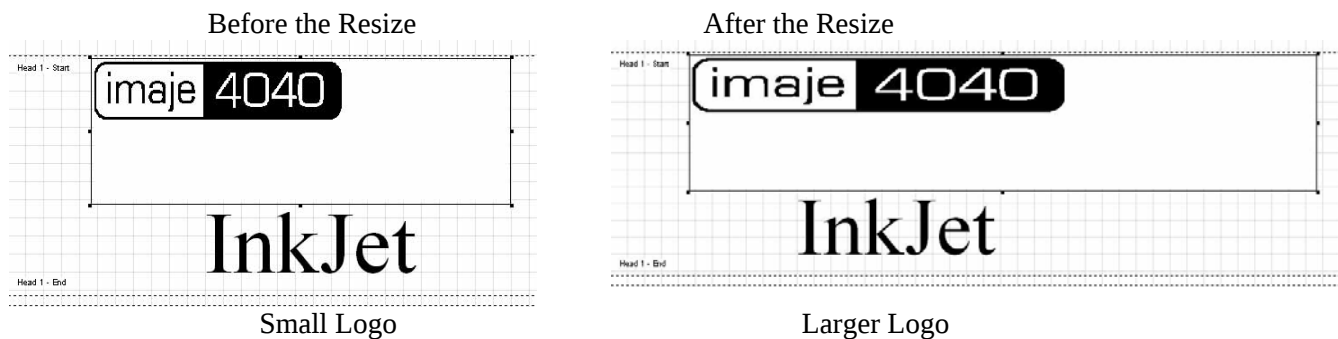


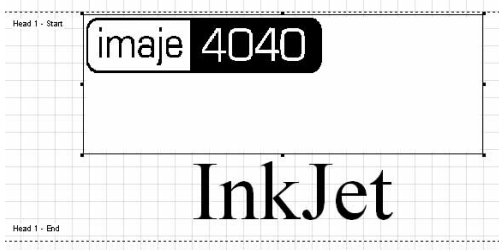
Figure 111 Resizing Logo



Moving an object

Or, if you are using a mouse, move the cursor to the desired object and **CLICK** the left button. Once the object has been selected press and hold the left mouse button, then use the track ball on the hand held mouse to move the object to the desired location and release the left button.

Before the move



After the move

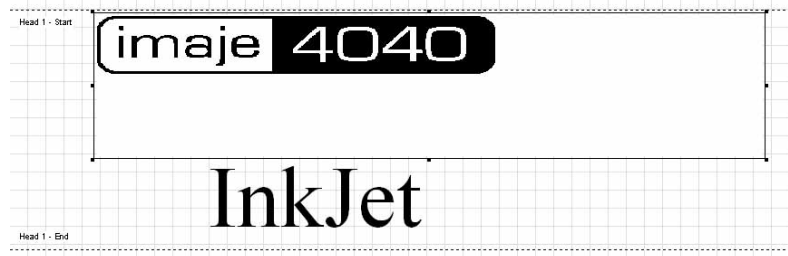


Figure 112 Move Object from Center to Left Corner



Preview Zoom

Preview Zoom allows the user to zoom in or out of the message layout within NJEditor/NJProcessor.
Preview Zoom IN/OUT:

1. Click Layout from the main menu and select Zoom IN/OUT.

Additionally the Zoom In icon and the Zoom Out icon found in the toolbar can be used.



Using the zoom option

You may zoom out to get a wider view and increase the size of the work area. To zoom out select Zoom Ot to get a wider view of the Layout. To Zoom out select “View | Zoom Ot” from View Pull-down menu. Or click on the Zoom Out icon.



Move the cursor to the “Paste” icon and
CLICK.

Figure 113 Zoom Option



4. Advanced

Grouping and ungrouping objects

Hold down the control key or shift key to group objects for moving or alignment.

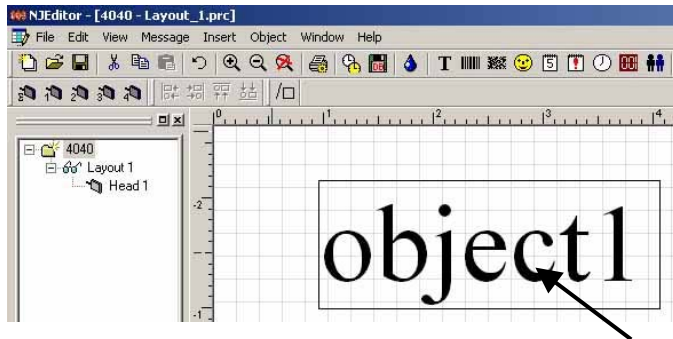


Figure 114 Grouping object

To ungroup objects, simply click in unused space.

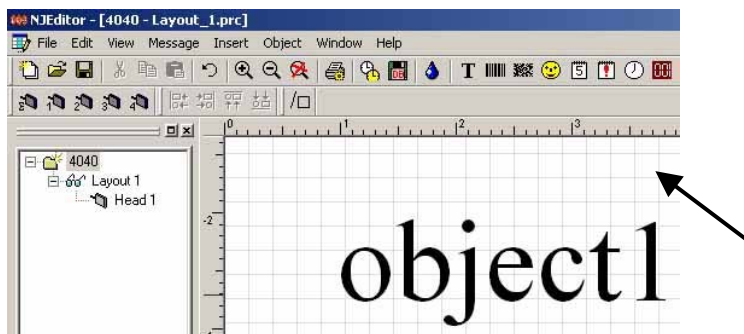


Figure 115 Ungrouping object

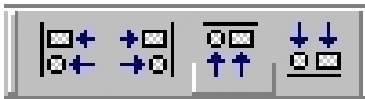
Once objects are grouped they may be moved with arrow keys, a pointing device, or they may be aligned.



Alignment of objects

You may wish to align my objects in your layout vertically. Hold down the control key and select the objects you wish to align on the alignment tool bar.

Note: Objects will be aligned to the last object selected.



You may align your objects in 4 directions.

Figure 116 Alignment Tool Bar

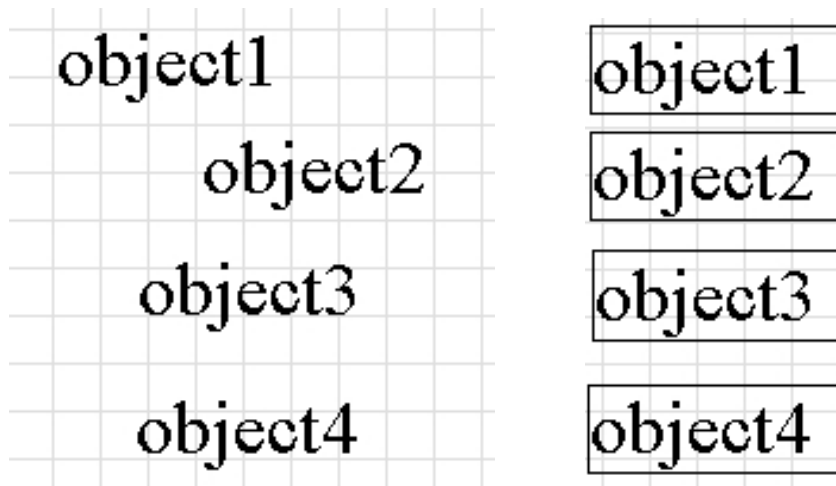


Figure 117 Before and after alignment

You may also select an individual item and align it using your arrow keys. Note all four objects in the figure above are selected—they have a box around them.

You could move all these objects in the desired direction with arrow keys.



Date Options

The Date option is a very useful part of the NetJet system allowing for the placement of date code information on to the media or packaging. The Date option provides many different formats allowing for flexibility in the identification of the Date. This function makes tracking and accountability of manufacturing, packaging and distribution of product much easier. The many different Date formats and unique features like “Offset days” and “Auto data rollover” enable the NetJet system to perform a wide variety of Date applications. To change the date formats refer to section 4 Message menu, current date and expiration date

Insert Date

To insert the Date, the follow conditions must exist:

A Message must be open

A Layout must be in view

A Head should be displayed

Move the cursor to the Insert Date icon and CLICK, or move the cursor to “Insert” menu option, and CLICK. Move the cursor to “Date”, CLICK. Then CLICK in the message area to open the current date window (below)



← Insert Date Icon on toolbar

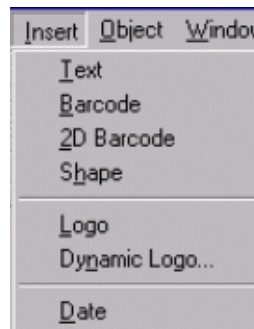


Figure 118 Insert Menu

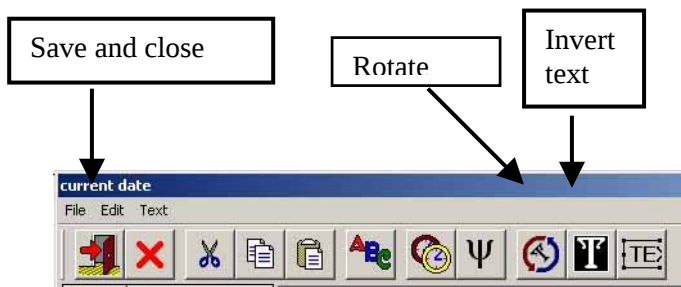


Figure 119 Current date window

After completing the Font, selections move the cursor to the save and close icon, located at the top left-hand corner of the current date window. The message view window will appear. The date will be displayed where you clicked in the message area.

The current date window will appear. There is no need to type any information in the Test Properties Text tab, when inserting a Date. The controller programming software will automatically select the current date.



Change font options with the icon or the font option in the text menu.

Note: The text must be highlighted by either CLICKING and dragging or using the text menu to select all text. After you have selected the text you may change to font or invert, rotate, etc.

For more information on the “Font” tab, refer to “Selecting a Font”



Properties for Date

You may change the format of your date or time by clicking the properties on the dynamic objects box in the date of time window.

Dynamic object properties

Dynamic object: **current date** ID: #2

Dynamic Object: **Date**

Date Settings

Format: **MMMMdd**

Separator: **None**

Align Horizontally: **Left**

Offset (days): **0**

Autodate rollover time: **00:00**

Sample: **OCTOBER.23.2003**

Buttons: **OK** **Cancel**

Callouts:

- Click to open date or time properties window.
- Click down arrow and select appropriate date format. Note you may select from additional options by sliding the slider bar. A sample will be displayed below.
- You may select a . - / or no separator.
- Select right of left horizontal alignment.
- Set positive or negative days to offset date.
- The time date will roll over to the next day.
- Click ok to complete changes and close.

Example Date formats

mmm	Oct
MMM	OCT
MMMdd	OCT.18
MMMddyy	OCT.18.05
mmmddyyyy	OCT.18.2005
MMMM	OCTOBER
MMMMyy	OCTOBER.05
MMMMyyyy	OCTOBER.2005

Figure 120 Date and Time Properties



Expiration Date

To insert an expiration date, the following conditions must exist:

- A Message must be open
- A Layout must be in view
- A Head should be displayed

Move the cursor to the Insert Expiration date icon and CLICK, or move the cursor to “Insert” menu option, and CLICK. Move the cursor to “Expiration date”, CLICK. Then CLICK in the message area to open the current expiration date window (below).



← Insert Expiration Date Icon



Figure 122 Expiration Date Window

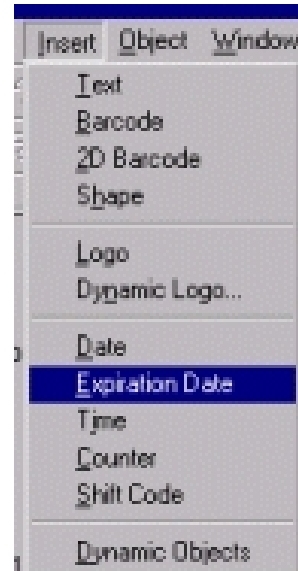
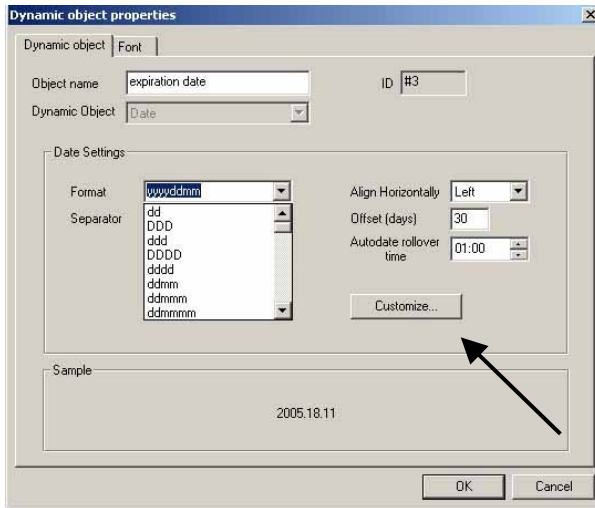


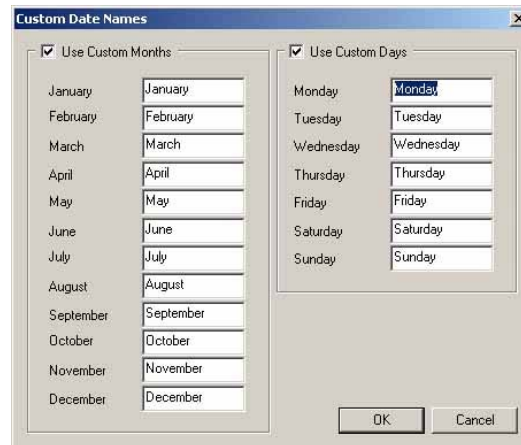
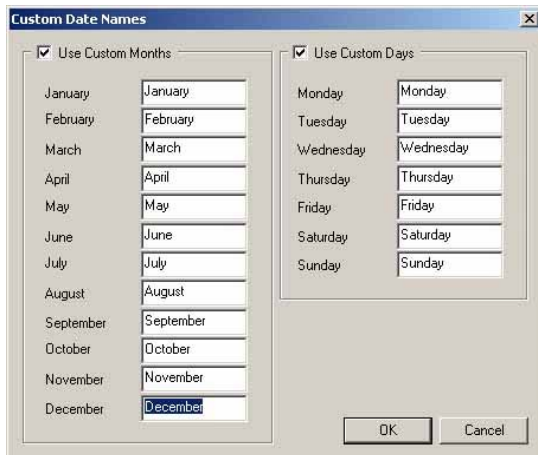
Figure 121 Insert Menu

The Expiration Date will be automatically inserted. From this window, Font properties can be adjusted. For more information on the “Font” tab refer to “Selecting a Font”.

4. Advanced



Click to open Custom Date Names menu



The Expiration Date will appear at the point you inserted it in the message view window. Move the cursor to the Expiration Date and DRAG the Expiration Date object to the desired location.

Example Date formats

dd	18
ddd	fri
DDDD	FRIDAY
ddmmm	18.Oct
ddmmmyyyy	18.Oct.2005
MMMM	OCTOBER
MMMMddyyyy	OCTOBER.18.2005
MMMMyyyy	OCTOBER.2005

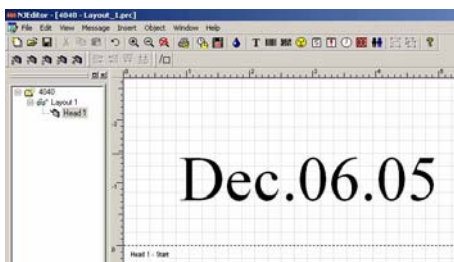


Figure 123 Expiration Date Inserted

The expiration date properties may be adjusted in the same way as the date format was in the preceding section.



4. Advanced

Time Options

Insert time

To insert the Time, the following conditions must exist:

- A Message must be open
- A Layout Must be in view
- A Head decomposition should be displayed

Move the cursor to the Insert Time icon and CLICK, or move the cursor to Insert menu option, and CLICK. Then move the cursor to the “Time” option, and CLICK. Move the cursor to the message area and CLICK to open the actual time window.

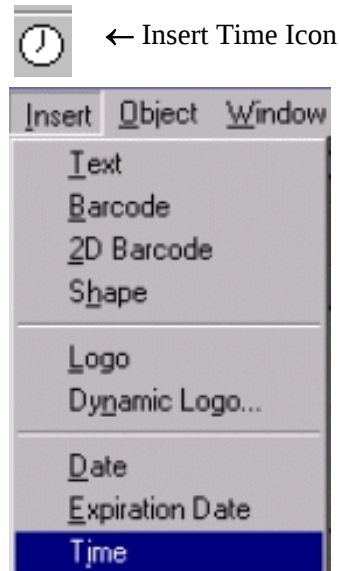


Figure 124 Insert Window

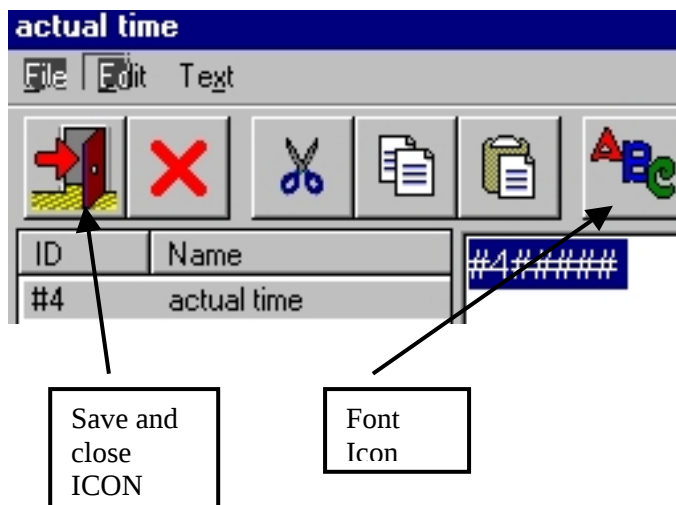


Figure 125 Actual Time Window

CLICK the save and close icon to enter the actual time into the message.

Actual time format may be adjusted in the same manner as date format by clicking properties at the bottom of the actual time window.



Move the cursor to the Time object and DRAG to the desired location.

Figure 126 Time properties

Example Time formats	
hhmm	12:13
HHmm	12:13
hhmm tt	12:13PM
hhmm ss	12:13:28
HHmm ss	12:13:28
hhmm ss tt	12:13:28 PM

4. Advanced

The Actual Time will appear at the point you inserted it in the message view window. Move the cursor to the Actual Time and DRAG the Actual Time object to the desired location.

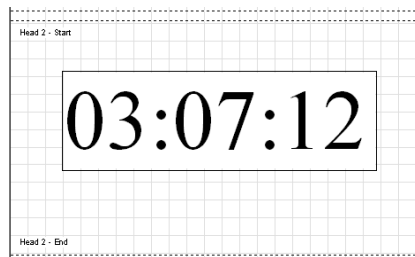


Figure 127 Time Inserted

Counter Option

Insert a Counter



Insert Counter Icon

To insert a Counter, the follow conditions must exist:

- A Message must be open
- A Layout must be in view
- A Head decomposition should be displayed

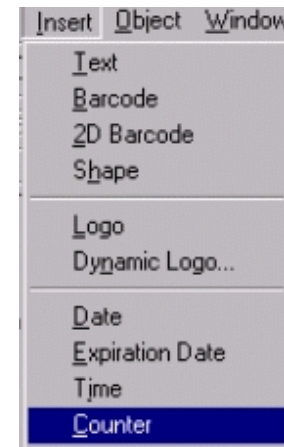


Figure 128 Insert counter

Move the cursor to the Insert Counter icon and CLICK, or move the cursor to Insert menu option, and CLICK. Then move the cursor to the “Time” option, and CLICK. Move the cursor to the message area and click to open the Main Counter window.



Figure 129 Counter Text Window

The Text Properties window will appear. There is no need to type any information in the Text Properties tab when inserting a Counter.

Note: To select fonts and side refer “Selecting a Font” During normal production, you may be required to adjust the Counter start value. To change the start value, click on properties at the bottom of the main counter window.





The dynamic object properties window will appear

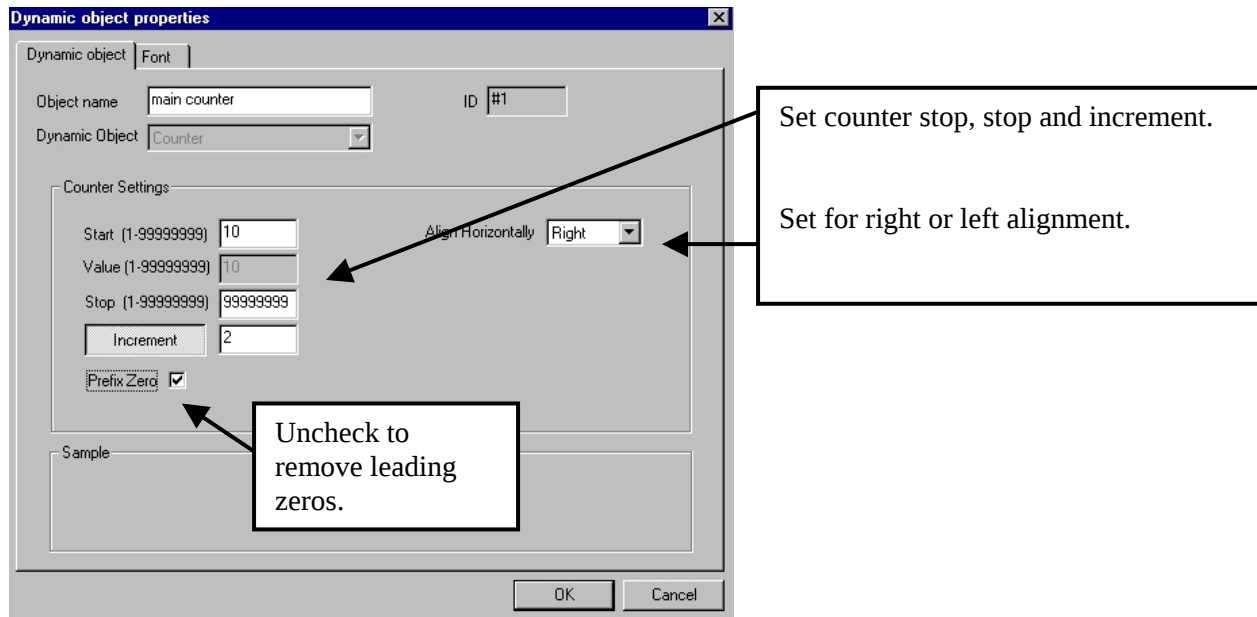


Figure 130 Counter Properties

The Counter will appear at insertion point in the message view window. Move the cursor to the Counter object and DRAG the counter object to the desired location.

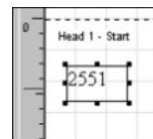


Figure 131 Counter Inserted



Shift Code Option

Accountability is essential to quality control; an essential function of accountability is determining when a process has been preformed. The shift Code option provides a way for tracking when product has passed through the production line. The flexibility of the Shift Code option can be used as an identifying marker to distinguish which shift processed the product or media or the Shift Code option could be used to determine which employee was operating the NetJet system during the processing of the media.

Insert a Shift Code



Figure 132 Shift Code Icon

To insert a Shift Code, the follow conditions must exist:

- A Message must be open
- A Layout must be in view
- A Head should be displayed,

CLICK on the Icon of the menu option, and then CLICK in the message area. The “Shift Code window will appear.

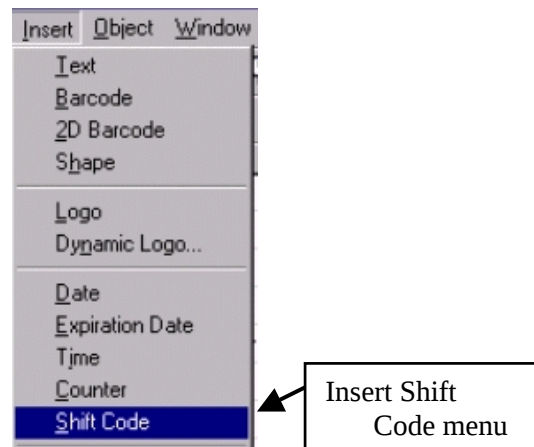
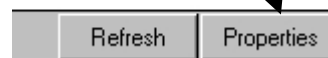


Figure 133 Insert / Shift Code Menu

To change shift code properties, click on the properties box at the bottom the shift code window.



Figure 134 Shift code window



4. Advanced

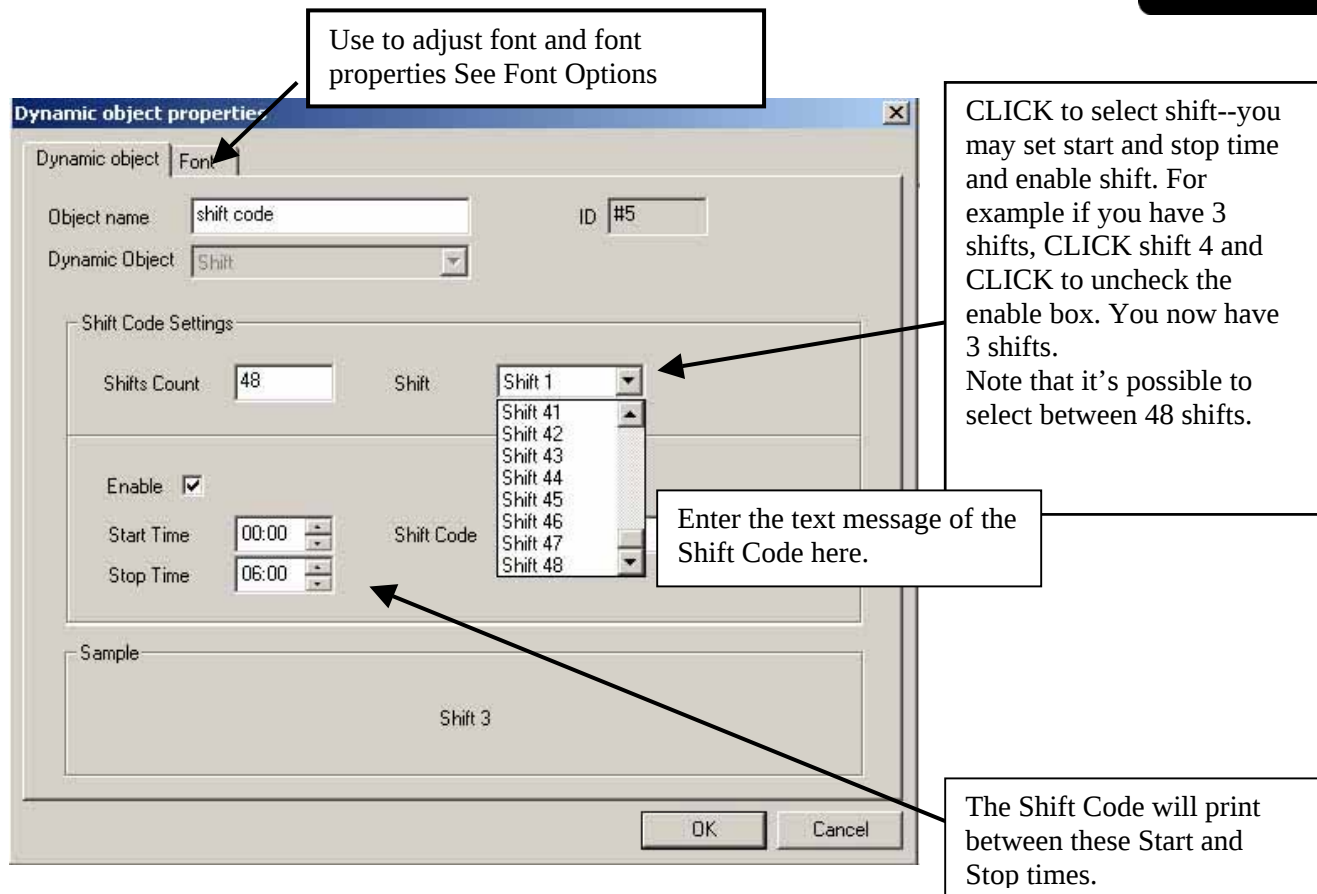


Figure 135 Shift code properties

When a ✓ mark appears in the box to the right of the “Enable” option the settings for the Shift number currently selected as seen in will apply. If the box does not have a check mark then the settings will be disabled and the Shift Code will not print. When establishing Start/Stop Times it is important to note that the Shift Codes being setup for a time frame that does not include the current hour the Shift Code image may not appear blank in the text Shift Code text image.

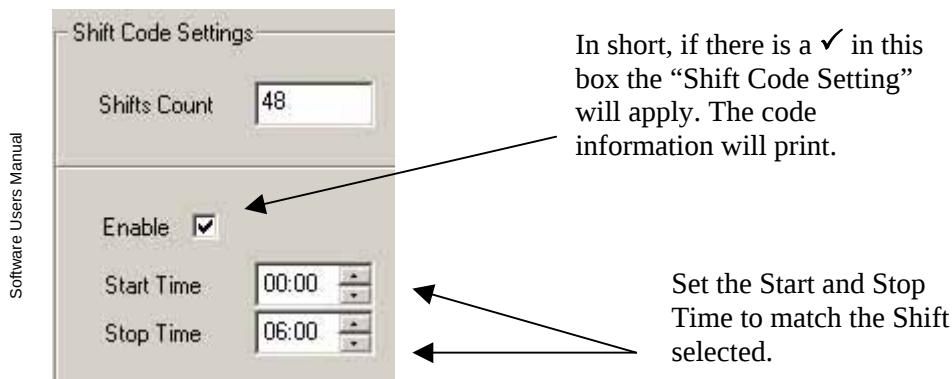


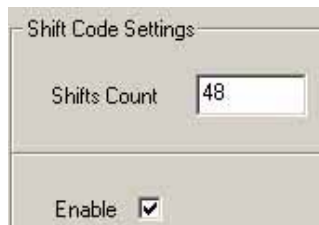
Figure 136 Shift code enable



4. Advanced

Troubleshooting Shift Codes

If the Shift Code appears blank, there could be any number of reasons. In this section, we will address the more common possible causes. Follow the instructions for the three areas listed below to determine which area might need to be adjusted.



Make sure the Enable box is checked. If there is not a ✓ in this box the “Shift Code Setting” will not apply. The Shift Code information will not print.

Make sure the Start and/or Stop times incorrect. Setting the Start/Stop times can be tricky, ensure that they are set for the appropriate “shift time”. The “shift time” is the actual time the message is to print. Keep in mind that if the current time does not fall within the “shift time” the Shift Code image will not display in the code message. If none of the Shift Codes setup in the controller has a Start/Stop Time that incorporates the current time, none of the messages will appear until the current time falls within a Start/Stop Time.

The message will appear starting at nine in the morning and will not display after five in the evening.



Has text been entered into the Shift Code field? In a multi-tasking environment, it is possible to be pulled from one task to another. When this happens at some point a field maybe accidentally left blank. Simply CLICK on each of the Shifts, and verify that the Shift Code field is filled in.

If the current time falls within the Shift Time and everything else checks out ok but the problem persist, contact your dealer for more assistance.

The Shift Code font size can be adjusted through font option in the



text menu or by clicking the icon

Hint: Adjust the Shift Code font so that it does not detract for the current Message, but is easily recognizable by staff. For more information on fonts go to Font Options.

Close the shift code window by CLICKING on the Exit and save Icon. The shift code will be inserted into the message.



Figure 137 Shift code inserted into message



Database

Setting up Database connections in NetJet

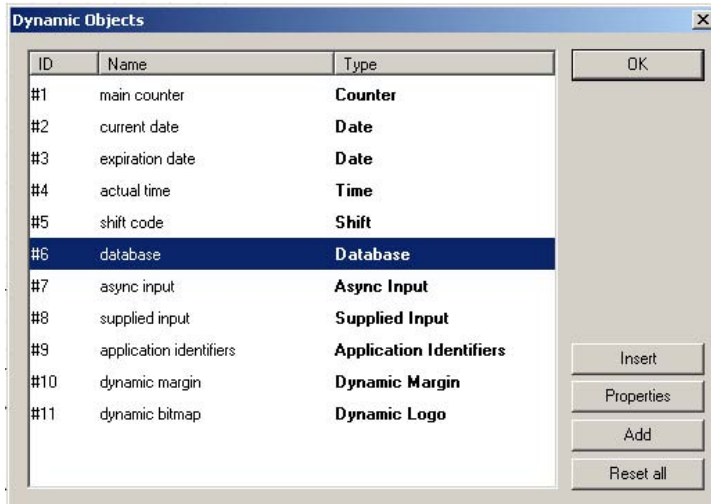
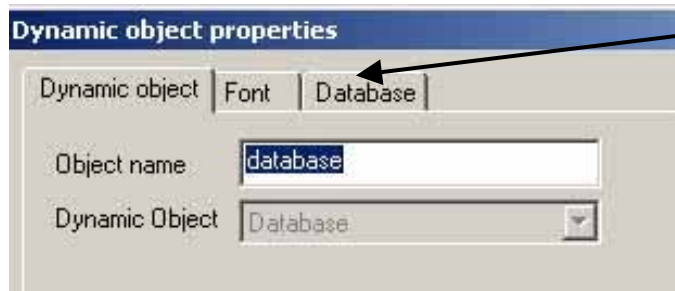


Figure 138 Setting up database connection

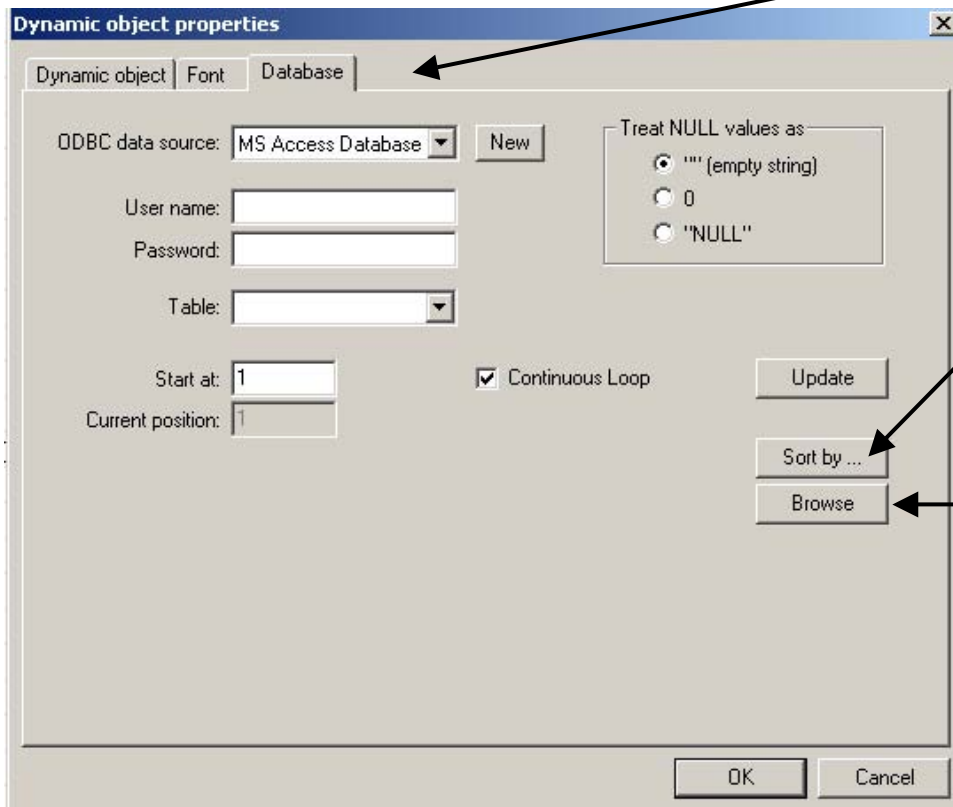
Once you have completed setting up Windows database connections, you are ready to set options in the message menu so you can insert a database object into your message. First go to the insert menu and select dynamic objects, database.

DOUBLE-CLICK on the database dynamic object and the dynamic properties window will appear.



CLICK on database tab to access information for setting connecting to the database connection you named in the previous step. You may first want to CLICK on the font tab to set your font and font size.

Figure 139 Database Properties Tab



Select the database connection you have made by clicking on the arrow at the end of the ODBC data source field. Check the connection by clicking on the browse button.

Select Browse to view data from within the database file.

Figure 140 Database properties

4. Advanced



The system will prompt you to select a type of data source

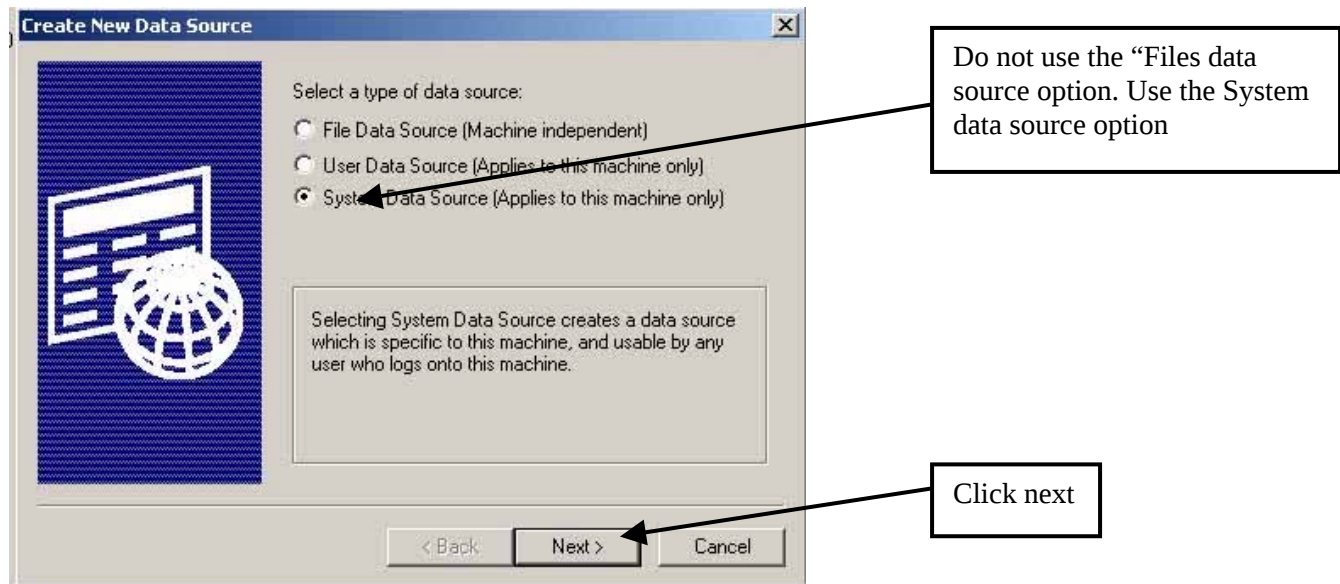


Figure 141 Selecting proper data source

The "Create New Data Source" window will be displayed on the screen. In this example we are using database information created in Microsoft Access, thus we will select the "Microsoft Access Driver (*.mdb)". DOUBLE CLICK on the driver. If your database was created in a different application CLICK on the driver, which represents the software application, from which your database was created.



Figure 142 Selecting proper database driver

4. Advanced

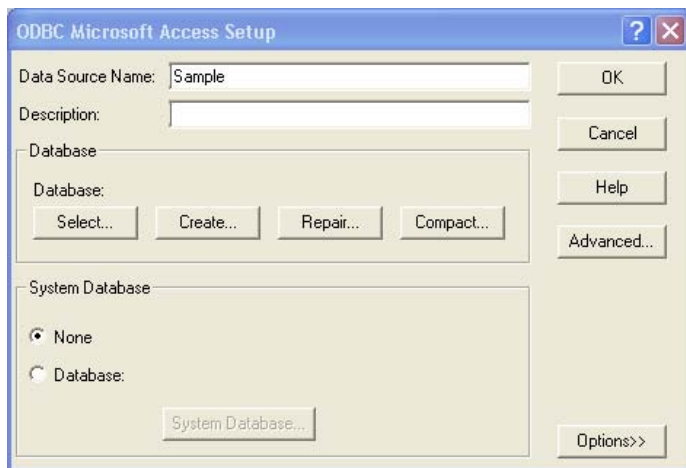


Figure 143 Entering database name

The Select Database window will appear, in this window move the cursor to the “C:\” option in the Directories Column and DOUBLE CLICK. At this point, it is necessary to understand where the database you will be using is located. If you are uncertain where the data is stored contact your local IT or in-house computer person. For the purpose of this sample exercise, we will use the database stored in the “Ink Jet” directory, titled db1.mdb.

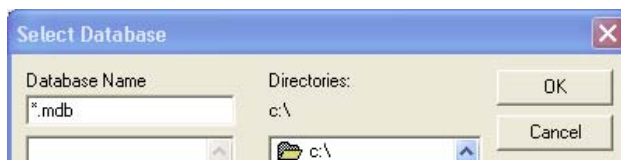
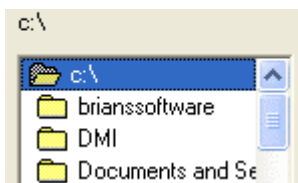
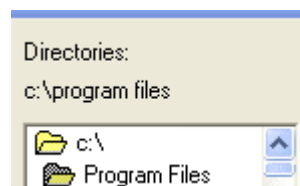


Figure 144 Selecting Database

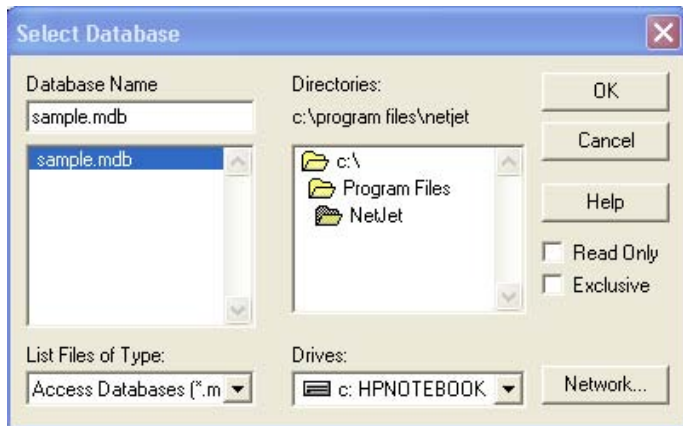


Double clicking on the “C:\” option will cause the Select Database window to display the directory contents of the “c” or “root” drive. Notice the “Directories” information displayed in the Select Database window will change.

Use the vertical slide located in the “Directories” column of the window to locate the “Program Files” directory folder. Once the Program File directory is in view, move the cursor to it and DOUBLE CLICK.



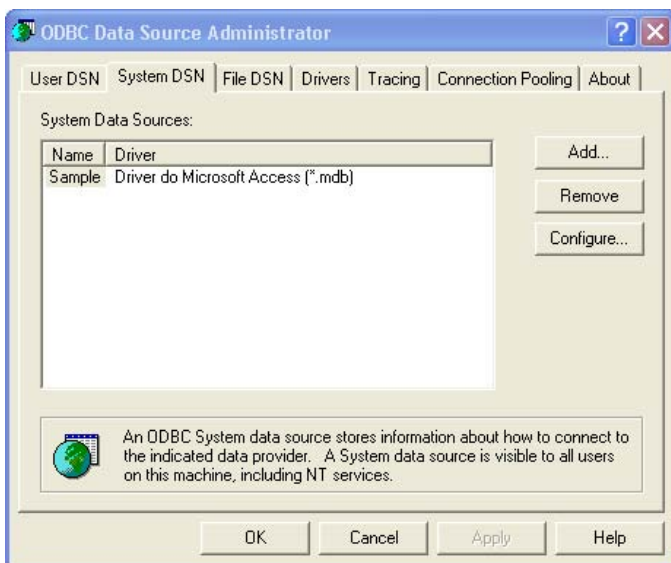
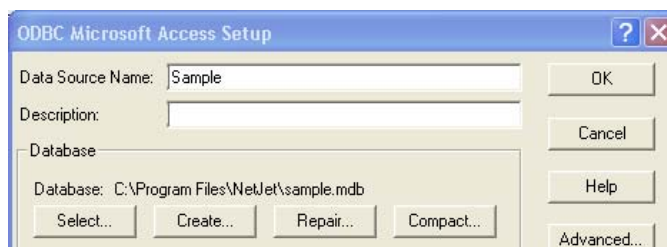
4. Advanced



Use the vertical slide located in the “Directories” column to locate the “NetJet” directory folder. DOUBLE CLICK on the NetJet directory folder, this will open the directory folder and display the directory contents in the file listing column located under the Database Name field on the left side of the window. In our example there is only one database file displayed, this file name will also appear in the Database Name field. CLICK on the “OK” button.

Note: If your system has more than one database store in the desired location, you will have to CLICK on the desired file to cause the file to appear in the Database Name field.

The NetJet programmer will return to the ODBC Setup window. The Data Source Name and Description will contain the information previously entered. The Database section of this window will now display the location of the database source file. At this point, CLICK the OK button.



The Ink Jet program will return to the ODBC Source Administrator window. Move the cursor to the OK button and CLICK.

Lastly, you will have to close the “Control Panel”. To close the “Control Panel” move the cursor to the “X” in the upper right corner of the window and CLICK, or select “File” then “Close”.

This concludes the exercise on linking / connecting the Net Jet program to the desired database information file. This process must be completed before creating a new Database Message to ensure that the correct database information is printed in the Database Message.



Database browser

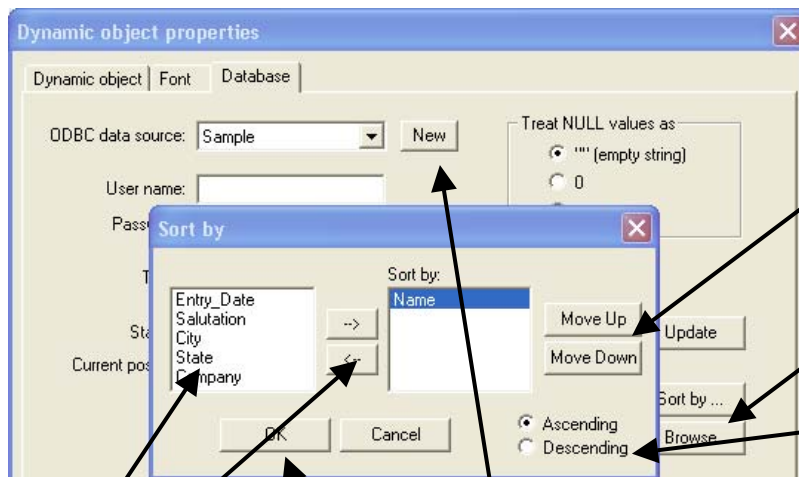
Data source: Sample Table: sample_

Find: Find

Entry_Date	Name	Salutation
1999-12-15 0...	Dave Rehbe...	Mr. Rehbehn
1999-03-01 0...	Mark Tally	Mr. Tally
1998-06-08 0...	Martin Kubik	Mr. Kubik
1999-11-29 0...	Edward We...	Mr. Weber
1998-03-24 0...	Oscar Alma...	Mr. Almaguer
1999-10-22 0...	Roy Ashworth	Mr. Ashworth
1998-03-04 0...	Solman Basir	Mr. Basir

A Window should appear allowing you to look at the data you will be inserting in your message. You may also use the sort by button to sort the database by name for example.

Figure 145 Browsing a database



Here we are sorting by first Salutation then by name.

The move up and move down arrows allow you to determine what to sort by first.

The sort by box will bring up the Sort by window, which will enable you to arrange your data in the order you desire.

The ascending descending buttons choose sorting order—for instance Names sorted from A-Z or from Z-A.

Choose the items for sorting your data and add or remove them by using.

The new database box will allow you to create a new database connection as described in the previous section “Setting up Database Connections in Windows”.

The OK box completes the sorting operation.

Figure 146 Completing database properties

Once you have completed sorting your data and adding the ODBC Data Source CLICK OK to create the Dynamic Objects Properties Window. You are now ready to insert a database object into your message.

4. Advanced



Inserting a database object

Important: Before inserting a database object, you need to set up windows ODBC functions. Select dynamic objects on the insert menu the dynamic objects window will appear.

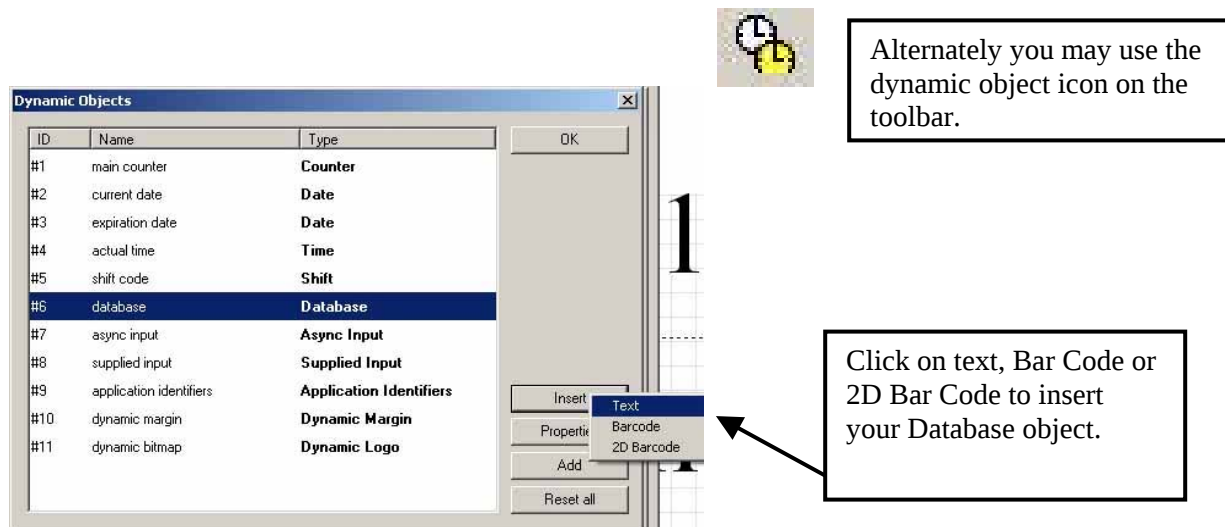


Figure 147 Inserting a database object

If your database connections have been properly set up, when you click Dynamic Data, and then database a window will appear listing the information from your database you may insert in your message.

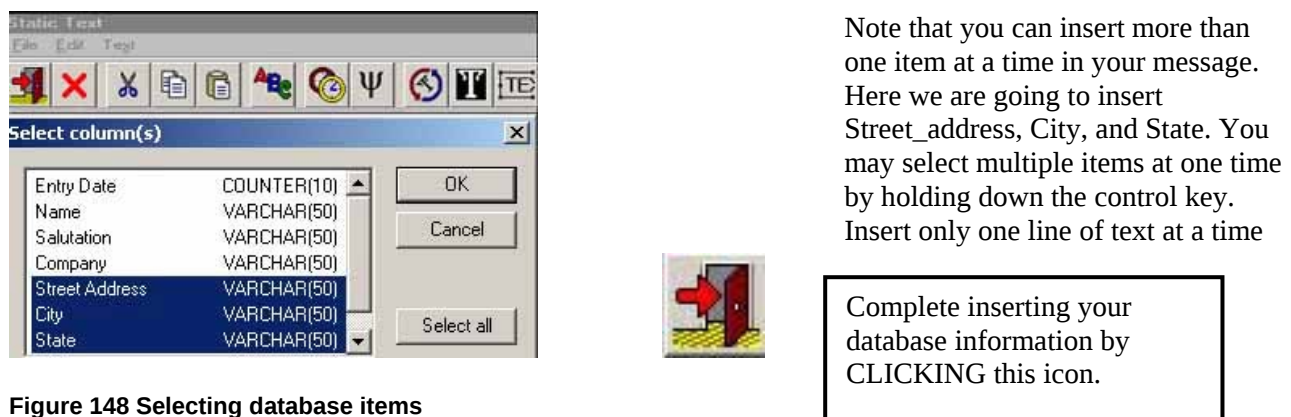


Figure 148 Selecting database items

4. Advanced



Here is what the text will look like after inserting it into your message.

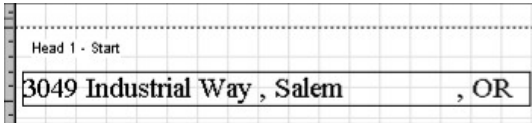


Figure 149 Database object inserted

If the text in your message has incorrect size, double click where you inserted your message to reopen the text editor. Select all the text by using select all in the edit menu, and click this icon to change the font size.



If your text did not appear recheck your database setup. Refer to section “Setting up a database connection in windows” and “Setting up database connections in NetJet.” Be sure to use the browse function to be sure you can connect to your database.



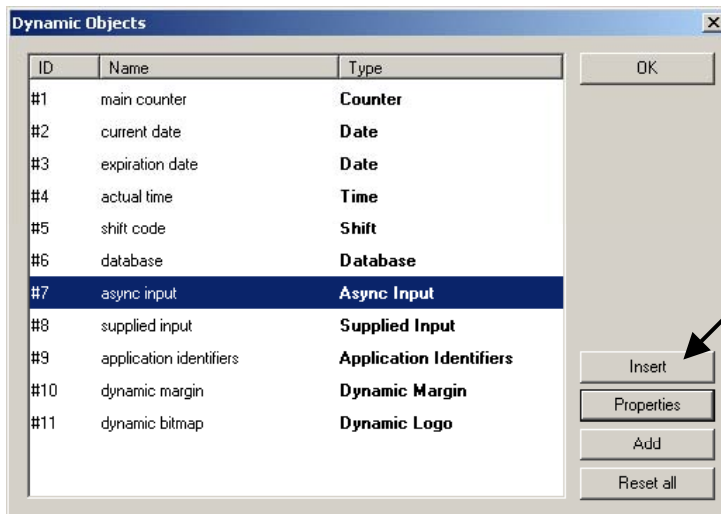
4. Advanced

Using other Advanced Dynamic Objects In NetJet

Async Input

The Async input dynamic object allows the use of devices such as barcode readers to control printing by using information from a database or directly input data for printing.

Click on the insert menu click on the async input dynamic object. Click on properties.

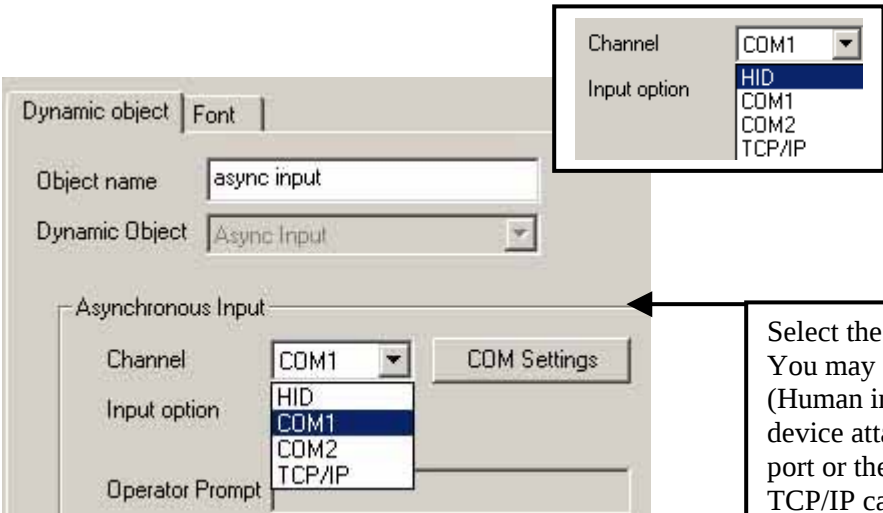


In NJEditor go click on dynamic objects in the insert menu. The following dialogue box will appear. Click on async input then click on properties to set up the necessary options.

Figure 150 Async Object Properties



Setting up COM ports for ansync input



Dynamic object | Font

Object name: async input

Dynamic Object: Async Input

Asynchronous Input

Channel: COM1

Input option: HID

Operator Prompt

COM Settings

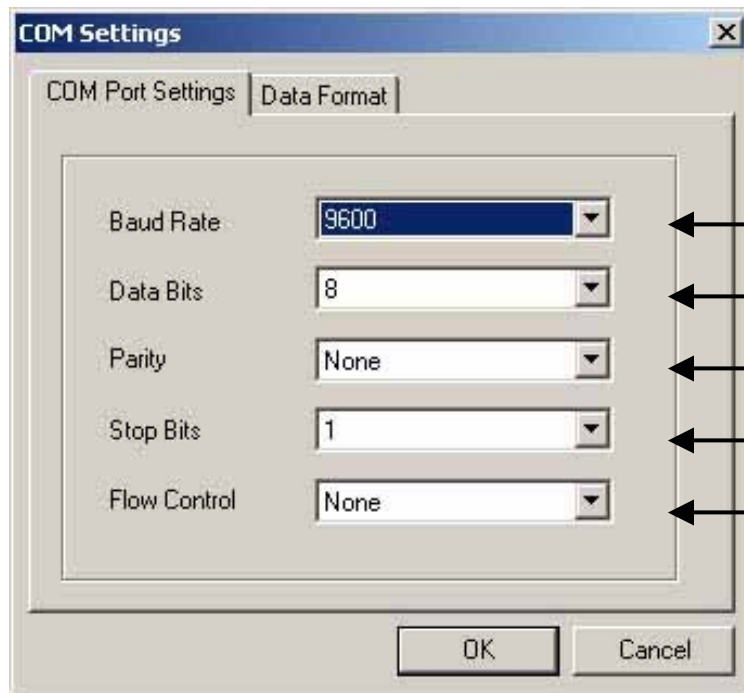
Channel: COM1

Input option: HID, COM1, COM2, TCP/IP

Select the physical input you are going to use. You may select COM1 or COM2 or a HID – (Human interface device) which could be a device attached to the USB port or keyboard port or the keyboard port of the controller. TCP/IP can be used for sending data over a network.

Note: If you select a COM1, COM2 or TCP/IP, you must setup correct settings to match the device specifications along with correctly wired cables. There are no standard serial cables. For TCP/IP a CAT5 networking cable must be used. An optional wireless network can be set up using standard WIFI equipment via the 4040 USB port. See your Network Administrator to set up this feature. The rules are the same as if setting up a standard PC.

Figure 151 Select Async Channel



Note: All parameters must be correct or Async Input will not function. You need to know the exact settings for the input device before entering this information. Also be sure your cabling is correct. There is no standard serial cable. Contact the manufacture of the device for proper cable specifications.

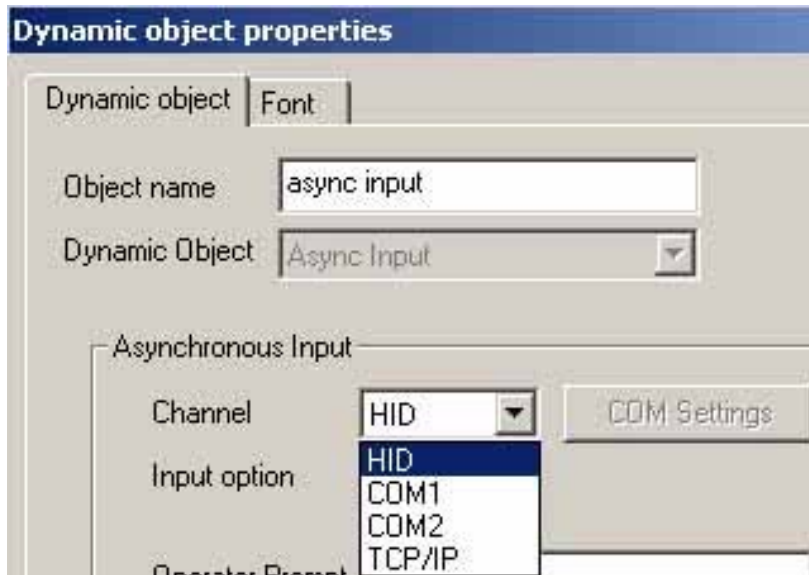
Figure 152 COM Settings



4. Advanced

Setting up HID devices

There is no setup for HID devices. Simply select HID and then use your keyboard, scanner or other device attached to your keyboard or USB port. Be sure the HID device is able to send data to your computer by testing it with an application such as word processor for proper cable specifications.



First you must select the input channel for your Async input object. Select HID if you are going to use a keyboard, barcode device, scanner or other device attached to your keyboard connector on your computer or to a USB port. TCP/IP can be used with custom written applications that send information over your network. COM1 and 2 are used to input data from devices attached to your serial ports. If you are setting up devices on your serial ports you the settings for the serial port used must be exactly the same as the serial device you use. Also the cabling must be correct. There is no standard serial cable.



TCP/IP input

A third part software developer must provide TCP/IP communications.
An AI tester is available to provide a test output for testing an application.

The AI Tester is available from the web SW download area.

Set up the tester using the same settings as you COM port or TCP/IP custom program. If you use the AI tester on com ports, you must use a different COM port to send data—either on another computer or use COM2 on your controller to send data to COM1. You must use a null modem cable to send data between COM ports. (See the illustration below for a null modem cable.) Sending data through the AI tester to the controller will allow you to find out whether you are having problems with your async input or if the problem is in a software setting or somewhere else.

This tool allows for sending test strings to NetJet, simulating an RS232 or TCP/IP input.

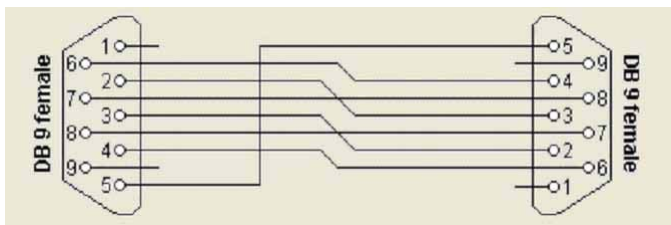
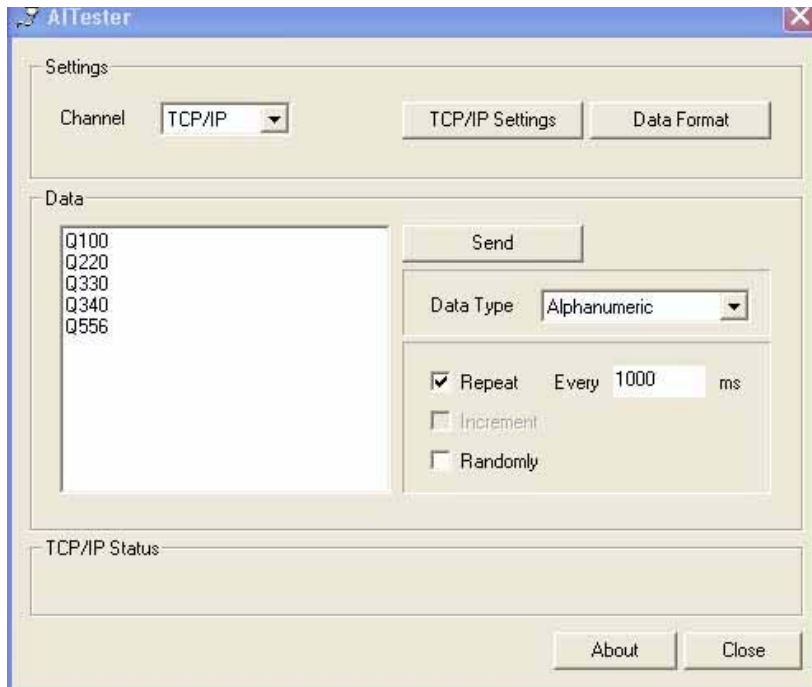


Figure 153 RS232 Null Modem Cable with Full Handshaking



Input Options for Async Input Objects

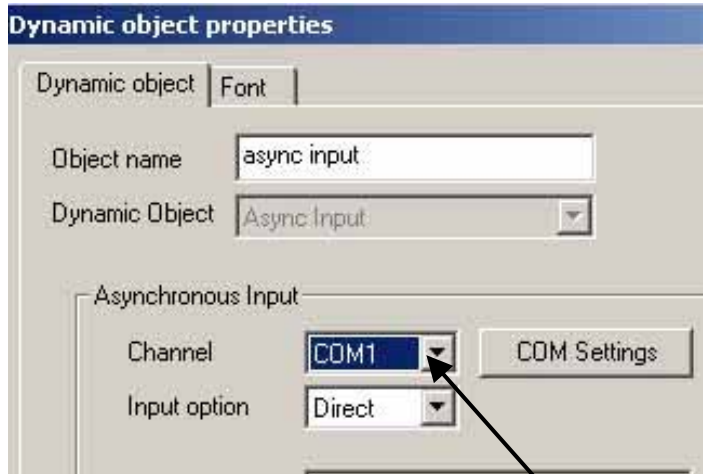
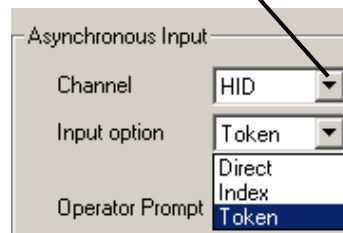


Figure 154 Async Input Option



Direct: Prints exactly what is sent to the async input. Ex. the string “John” is sent to the async input and is now going to print the name John.

Index: Prints sequentially from a database specified.

Token: Prints information from a database based on the token (Primary Key) supplied. Example: If a customer name is set as a token and supplied to the async input, the customer address could be printed.

Operator Prompt: Message that will prompt an operator for data once print is enabled.

Data Sample: Text string that is a placeholder for async data to be printed. This string will print at print time if no data is supplied to the async input.

Note: If using the index or token option, a database tab will appear. Refer to the previous section, inserting a database object for information on this tab.



ASync & Supplied input print preview

When an ASync input is set to a database through ASync input options, Token or Index, actual data from the first row in the database is used for sample data.

Ex. Inserting Product Name as the database field to print will use “Chai” as the data sample in the layout. If Product ID were also inserted to print, ‘1’ would be used as sample data for that field.

Product ID	Product Name	Supplier
1	Chai	Exotic Liquids
2	Chang	Exotic Liquids
3	Aniseed Syrup	Exotic Liquids
4	Chef Anton's Cajun Seasoning	New Orleans Cajun Delights

Head 1 - Start	Chai
Head 1 - End	

Ex. Inserting “Test” as a data sample with the ASync input option set to direct would automatically create a text field placeholder in the layout with “Test” as the example.

Data Sample	Test
-------------	------

Head 1 - Start	Test
Head 1 - End	



4. Advanced

Until an input is received, NJProcessor will show what was typed in the data sample box (See the properties of you Async input dynamic object in NJEditor). Note the red light at the lower right hand corner of NJProcessor. The async input COM port will change to white as data is received. This will help you know if you are receiving data from your async input source.

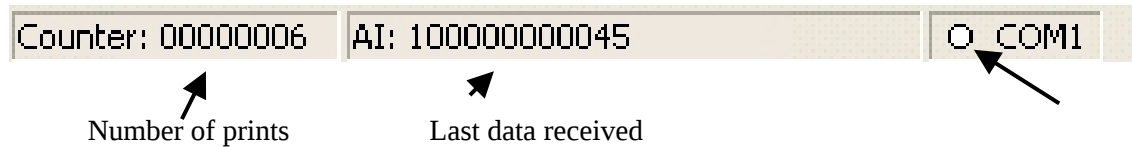


Figure 155 Status bar -- async dynamic object

Note that the first time you print the counter will not increment but data will be printed. To reset the counter see the counter section.

No data will appear on the NJProcessor data area, but when NJProcessor needs data to print a message such as below will appear.

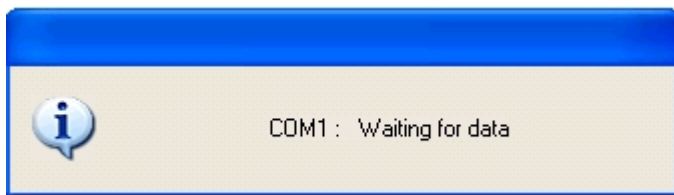


Figure 156 Waiting for data

If you use a HID device you will receive see this dialogue box asking for input.



Figure 157 HID input dialog box

Using other Advanced Dynamic Objects In NetJet



Explanation of batch print, Instant Print, and Disable FIFO

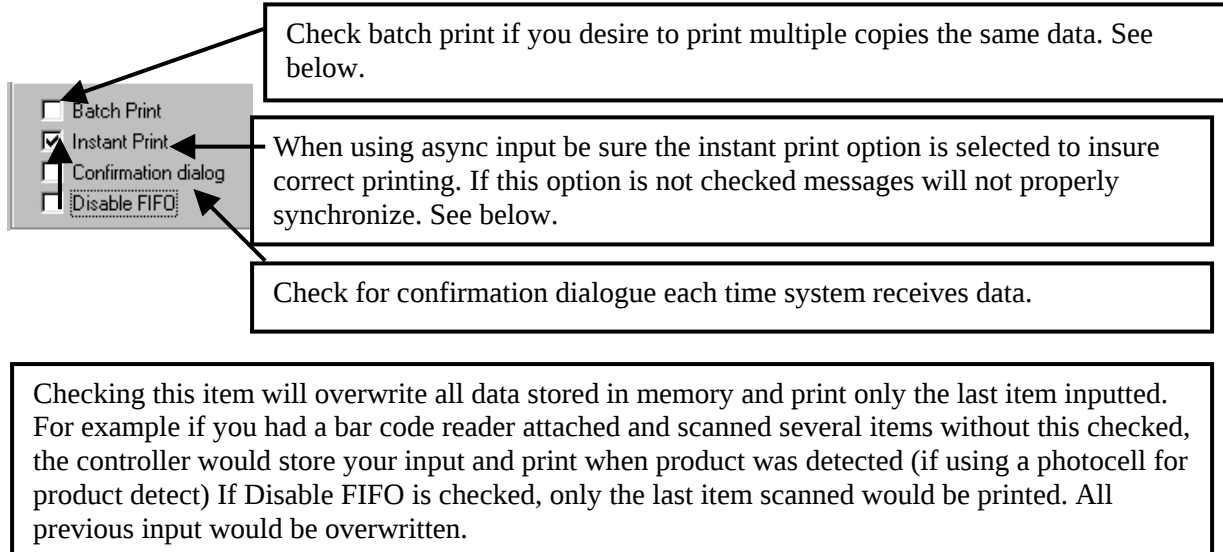


Figure 158 Batch & Instant Print, Dialog, FIFO

Instant Print

If the NetJet printer is used in instant print mode with async input, image memories are empty and NetJet requests an image load. The controller waits for a product detect signal and several sets of data may be in memory waiting to be printed. If a product is removed from a production line because it is defective, then data may for this product may already be in memory, waiting to be printed.

Disable FIFO

If the disable FIFO selection is enabled, the controller will be rest and erase the image memory, so when there is a new async input data and the image was not printed, the controller will request a new image and the correct image will be printed.



Example of Sending Data by Async Input Through a COM Port

Click the Dynamic Objects Icon In NJEditor  to display the Dynamic Objects box
Click on Async Input and click on insert. In this case we will select text to insert.

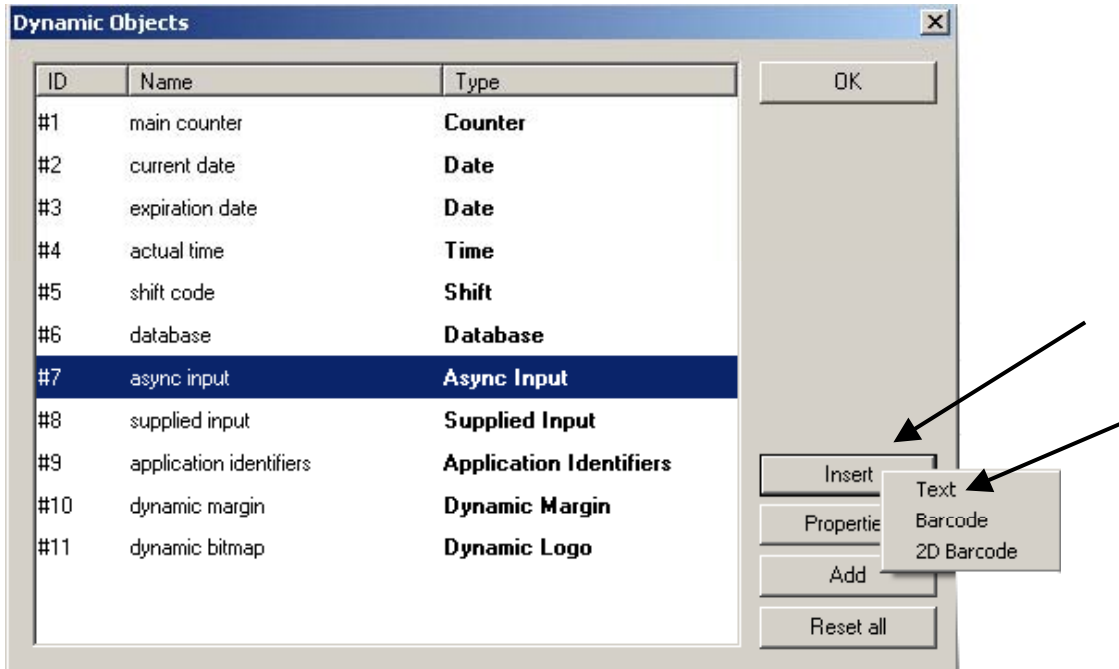
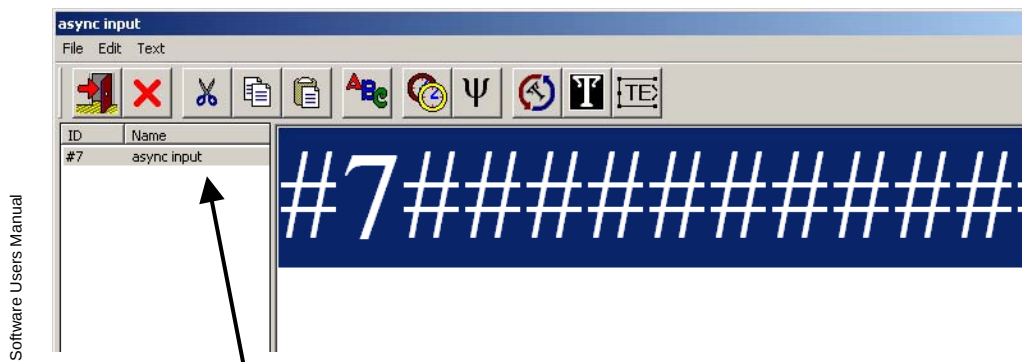


Figure 159 Inserting Async Object

A small cross with a T in the lower right corner will appear. Hold down the right mouse button and drag to insert the async input object in your message. When you insert the object the async input text box will appear.



Double click on async input to display the dynamic object properties box. Alternately you may click on async click on properties at the bottom of the column. (not shown).

Figure 160 Inserting Async Object (continued)

4. Advanced

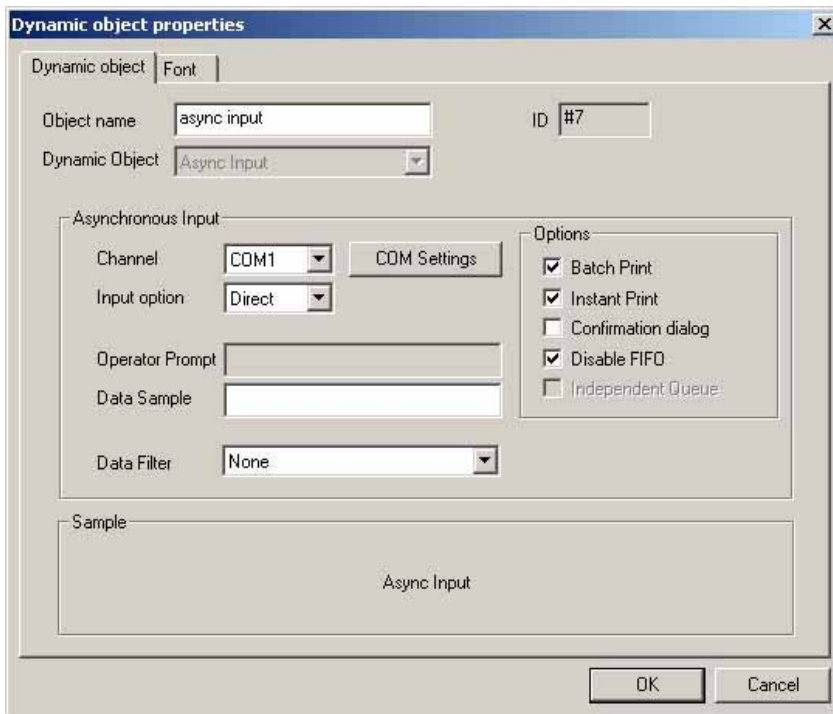
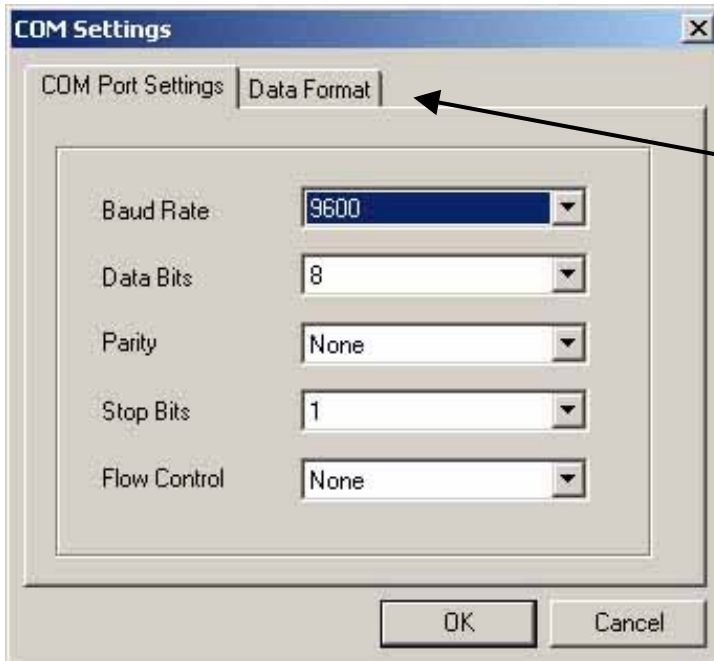


Figure 161 Setting Async Input Properties

In this case we select the batch print mode since we desire to print the async input several times. The instant print mode must be used to insure proper synchronization. We are also using the Disable FIFO mode to insure than any data in computer memory is erased. Click COM settings to set com settings. These must be correct for proper printing. Be sure the proper COM port is selected.

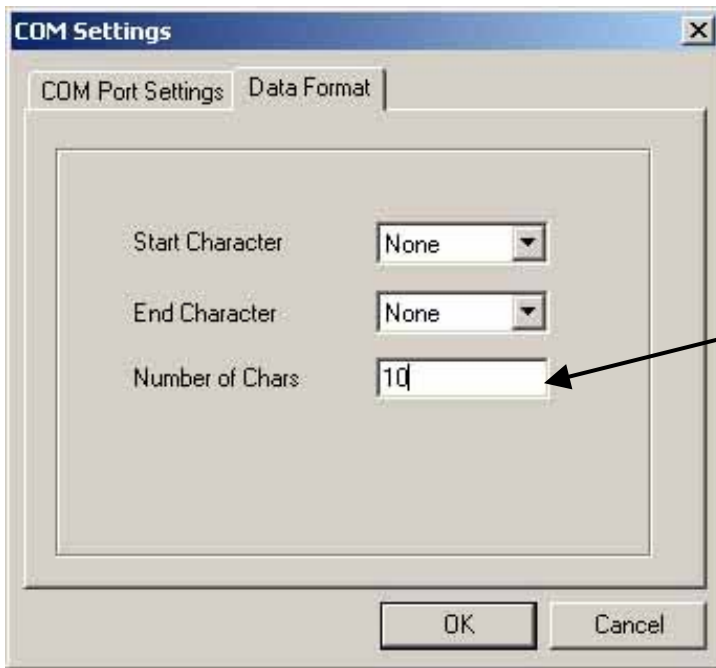
Since we are using direct input—what comes into the COM port will be printed.



All off these settings should be matched to the device settings of the device attached to the COM port. Also the settings on the data port tab must be correct.

Figure 162 COM Settings

4. Advanced



In this case we are not using software data flow control so the number of characters must be specified. An STX start character may be used with ETX CR or CRLF. for an end character. Use the arrows to select start and end characters.

Figure 163 AI Data Format



When all this settings are correct, click  (close) on your async input text box and you are ready to print your from your async input. Click the print button in NJ Editor and the Async Input waiting for data prompt will appear.

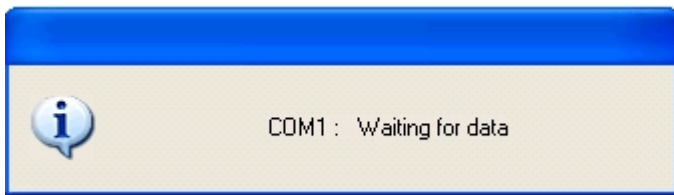


Figure 164 Async Input Waiting for data



4. Advanced

Click the refresh button to see your data—be sure the data is correct. Check your COM settings if data is not correct.

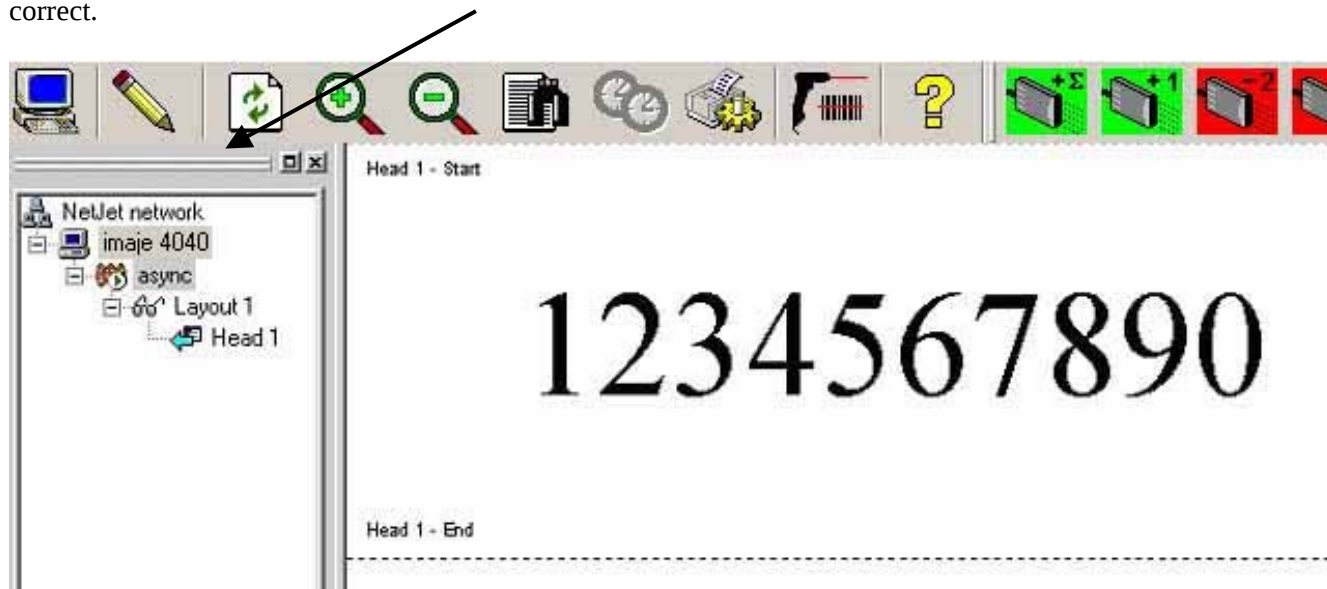


Figure 165 Printing by Async Input



4. Advanced

Example of Selecting Data to print from a database with an Async Input

Create and insert a database connection. (Note you must have a database created that NetJet is able to recognize, such as a Microsoft access database.



Click on dynamic objects to open the dynamic objects box. Click on async input and then click on properties.

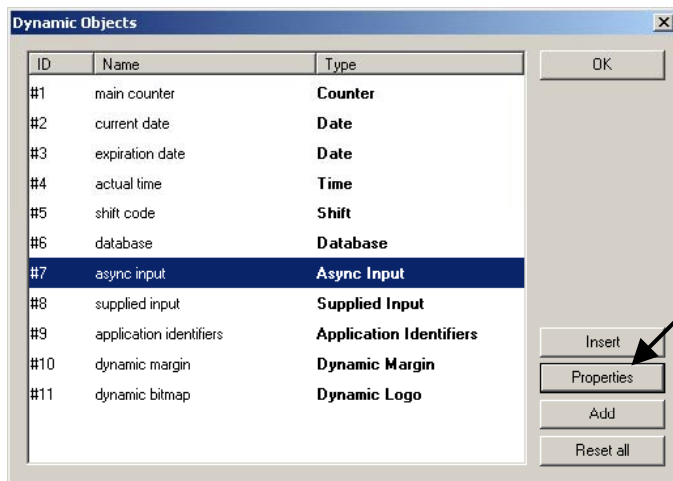
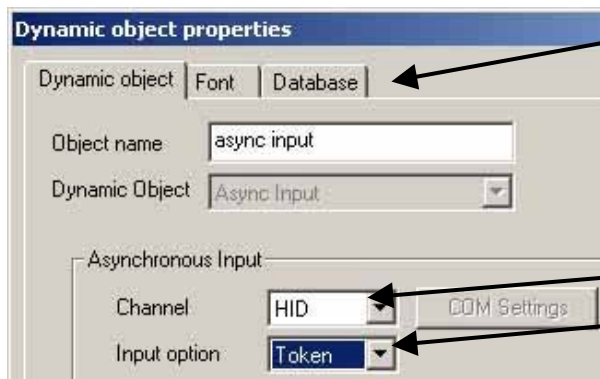


Figure 166 Inserting Async Object



Using the drop down arrows, select the HID input channel and the Token input option. This means that the async input data will be used to select data from your database.

After you select the token input option below, the Database option tab will appear.

We set the async input options to batch print so that data will be printed continuously after it is selected.

Figure 167 Selecting Async Input Options

4. Advanced

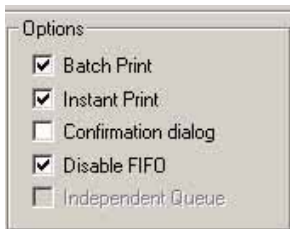


Figure 168 Selecting Async Input Options

After you have selected your input, click on the database tab as shown above and click on NEW.



Figure 169 Creating New Data Source

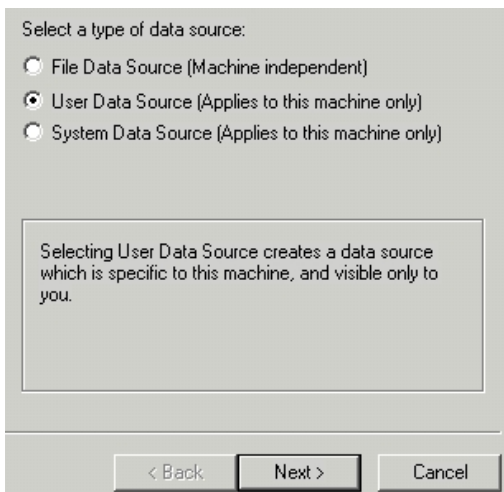


Figure 170 Selecting Data Source Type

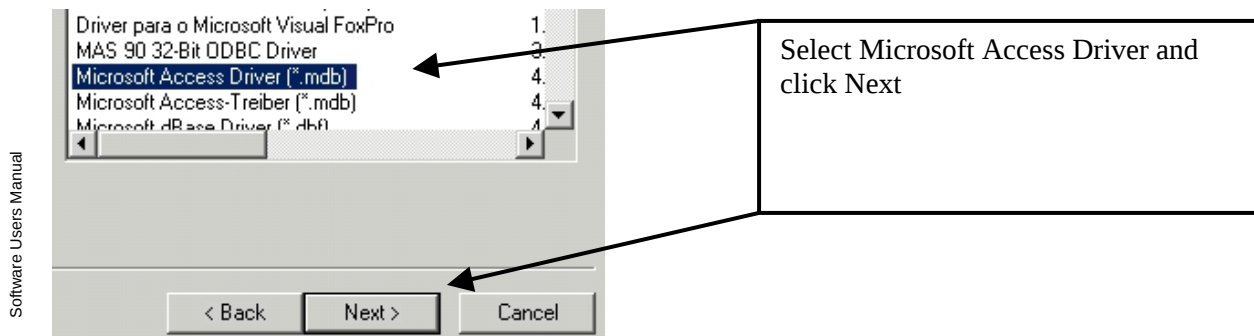


Figure 171 Selecting type of Database

Click finish on the next screen.

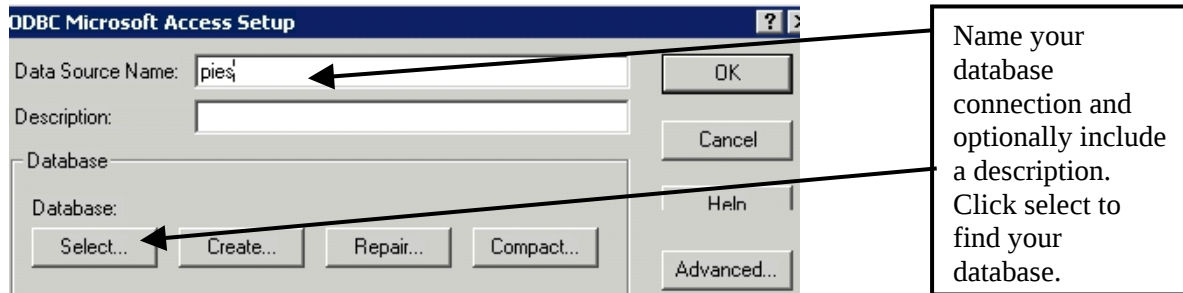


Figure 172 Naming ODBC Source

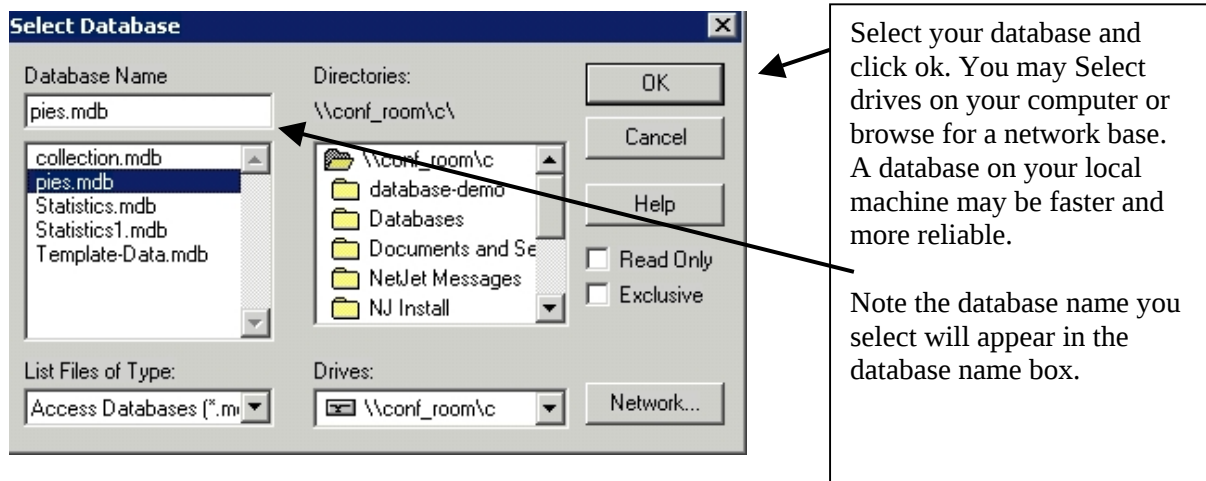


Figure 173 Selecting a database file

After you select your database click OK to close the next dialog box.

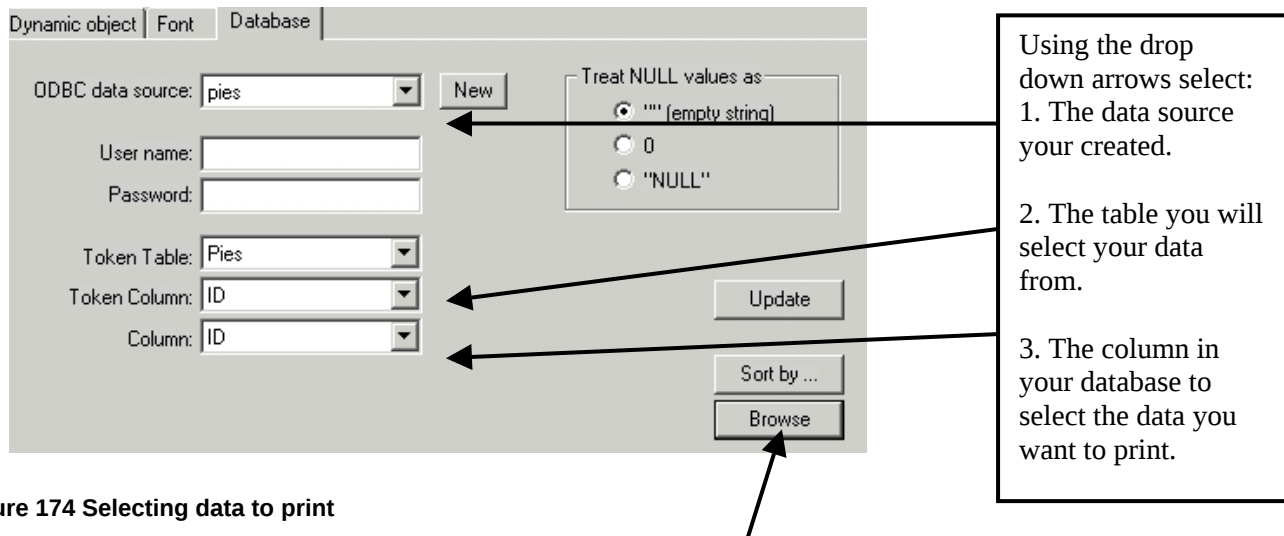


Figure 174 Selecting data to print

Click ok at the bottom of the box when your are through (not shown). Test you database connections by clicking on the Browse button.

4. Advanced



Database browser			
Data source: pies		Table: Pies	
Find:		Find	
ID	Product name	Item #	Label
1	8" DEEP DISH APPLE PIE	8014	LABEL 1
2	8" DEEP DISH DUTCH APPLE PIE	8054	LABEL 2
3	8" DEEP DISH APPLE RAISIN PIE	8034	LABEL 3
4	8" DEEP DISH BLUEBERRY PIE	8404	LABEL 4
5	8" DEEP DISH CHERRY PIE	8204	LABEL 5
6	8" DEEP DISH COCONUT CUSTARD PIE	8414	LABEL 6
7	8" DEEP DISH CUSTARD PIE	8134	LABEL 7
8	8" DEEP DISH MARIONBERRY PIE	8254	LABEL 8
9	8" DEEP DISH N5 APPLE PIE	7014	LABEL 9

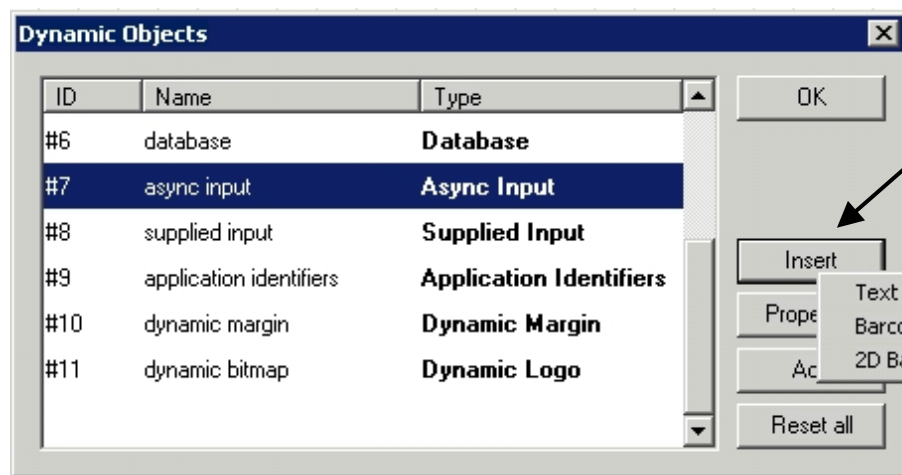
Note the ID column. This will be used to select the data you want to print. We selected this field in the database to select data when we selected the "Token Column above. We will need to know the values in the ID column when we print.

Figure 175 Browsing a database

Now we are ready to create our message. First we will insert a bar code



Click on the dynamic objects icon in NJEditor and Select Async Object.



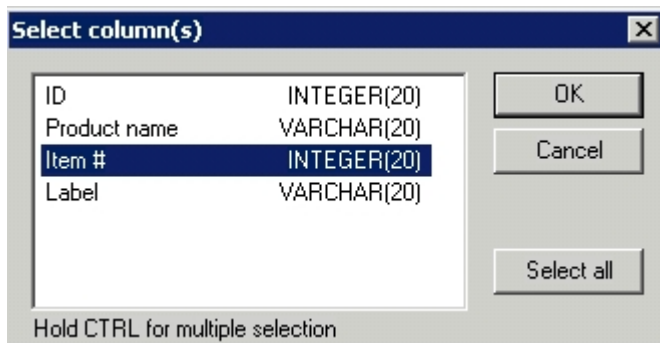
Then click on insert A box will pop up as shown. Click on bar code to insert a bar code.

Figure 176 Inserting database data from bar code

If your database was set up correctly, a box will pop up to allow you to select what you want to print.



4. Advanced



In this case we will use the item number for bar code data. Click on item and click ok.

Figure 177 Selecting the column to insert

When you click ok, a small cross will appear on the screen with a small bar code in the lower right corner. Hold down the right mouse button and insert the bar code at the desired location. When you release the right mouse button your bar code will be inserted and the Bar Code control properties box will appear.



Note the display in the text box. #7 is an async dynamic object (Item #) refers to the column you are printing in your database. Also be sure you have enough # characters to print the largest item in the column of data you are printing.

Figure 178 Bar Code properties

Also be sure the data you are printing matches the bar code type you are using click on the ? for info

Interleaved 2-of-5:
Numeric only bar code. Requires even number of digits, otherwise leading zero is added.

Clicking on the ? tells us that this type of bar code accepts only digits. Because this bar code accepts only numeric data no spaces are allowed. For example use 0001 instead of 1. If you only printed 1 there would be spaces in your data and you would get an error.

Next we will select some text to print using an async object. Again click on the dynamic objects icon as above and click on the async input object, click insert as you did before only this time select Text.



4. Advanced

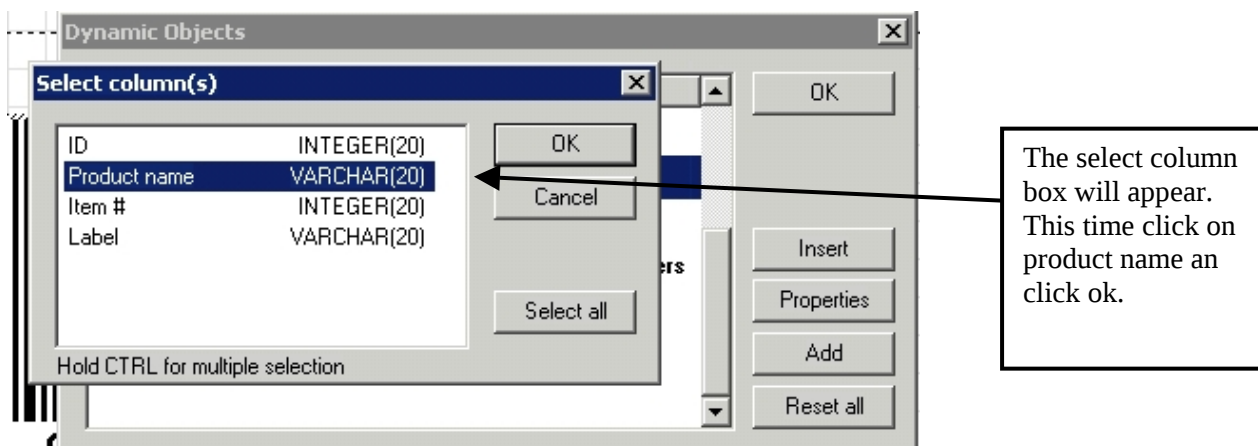


Figure 179 Selecting column

A small cross will appear with a T in the lower left hand corner. Hold down the right mouse button and drag and release. The async input text box will appear.



Figure 180 Async input text box

Note that again you are inserting a async dynamic object this time using the Product Name Column. Count the Number of # signs to insure all of the data is printed. Too many # signs will make the text longer than

necessary—using up space that could be used to print something else. You may click the  icon after

selecting text to change the size or font of you text. Click on the  to complete inserting database text into

your message. You are now ready to print. Click on the  icons in NJ editor to print your message.

NJEditor will launch NJProcessor and the HID input box will be displayed.



Figure 181 HID input box

In this case we are just using the keyboard to for in input. A scanner attached to the keyboard, or a USB scanner could also be used. Since the ID column in the database was used to select data, we must type a number that is in the ID column, 1 or 2 or 3 for example.



4. Advanced

Type 1 and hit the enter key. If you hit close, you must start and stop print in order to enter data. In this case we have set NJProcessor to print continuously by setting the print interval in print head properties to .2 seconds and disabling the encoder and product detect. This is a useful procedure for troubleshooting to check printing without encoder and product detect input.

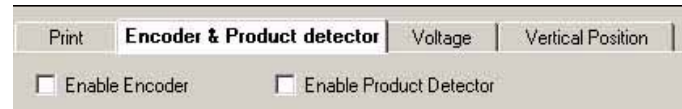
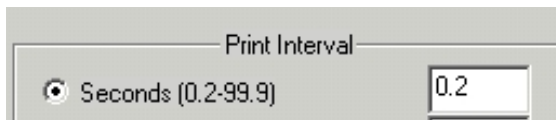


Figure 182 Items printed from database

The product code and description were printed from the database. In this case we had set the async input options for batch printing. That in combination with the print head properties setting will print continuously. You must



click the refresh icon to see your data. If you were not printing in continuous mode you would have to click quickly in order to see what was printed.



4. Advanced

Download Speed Diagnostics

This tool is useful for determining the maximum printer speed to minimum gap ratio between products or print triggers. It is accessible via menu Printer->Diagnostics->Download Speed. If a database is used, the diagnostics will give the data base access time.

	Print Time (ms)	Margin Time (ms)	Image Creation (ms)	Image Load (ms)	DB Access (ms)	Minimal Gap (cm)
Printhead 1	112.6	228.8	24.4	0.1	0	1.42
Printhead 2	0	0	0	0	0	0
Printhead 3	0	0	0	0	0	0
Printhead 4	0	0	0	0	0	0
Total	112.6	228.8	24.4	0.1	0	1.42

Print Speed (m/min): 32 Print Mode: Instant

Number of measurements: 10 Message Length Alignment: Yes

Buttons: Calculate, Stop, Close

During this test the printer runs the **Number of measurements** defined, and calculates average values.

Print speed is taken from the message properties but can be overridden by entering a print speed manually. (Note: The printer will switch to no encoder and no product detect mode during this test. The heads are active during this test and will fire ink until the test process is completed.)

The most important figure, when running the Download Speed test, is the minimal gap. This is a distance between product or print triggers needed to insure proper print. Improper print gap can cause unexpected results.

Example: A message 10cm long with a print speed of 35-40 may require a minimal gap of 4cm. If the gap is less than 4cm unexpected results in print may occur.



4. Advanced

The information given in Print Diagnostics are described as follows:

- Margin Time – time between a product detect (edge of the box) to the start of the image
- Image Creation – time required to create the image for print
- Image Load – time required to load the image data to a printer memory
- DB Access – time needed to retrieve data from a database (if applicable). It is part of the image creation time.
- Minimal Gap – distance between two boxes. It is actually a distance between an end of the printed image on processed box and the leading edge (detection) of the next box.

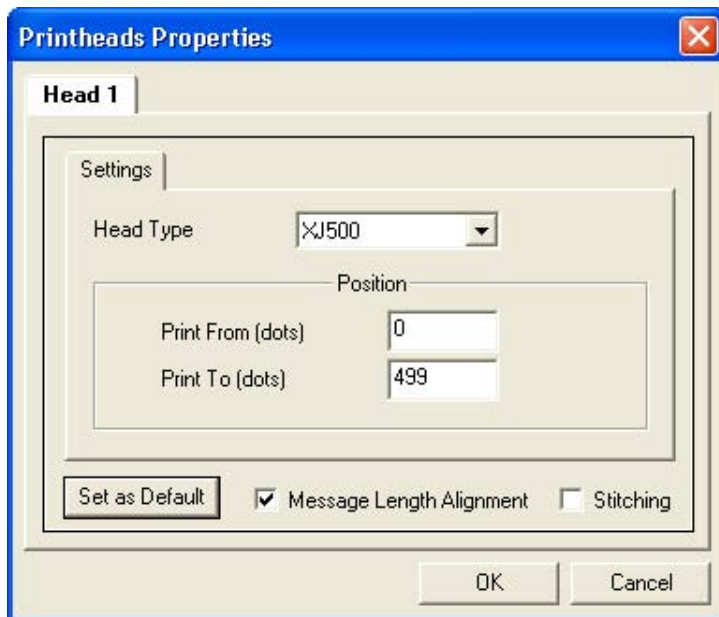
The times are calculated for all active heads separately and then added together, so the relevant minimal gap is on the Total line. Printing is performed in the back to back fashion.

There are another two information fields displayed, reflecting the settings in the message:

- Print mode:

- a) Normal – the printer uses two image memories, so the time to create and load one memory is increased by the time for the margin and print from the other memory.
- b) Instant – the printer uses only one memory so the time to create and load image is equal to the minimal gap only.

Message Length Alignment – means that the portions of the image printed by the particular heads are aligned, so the print time are the same for all heads, otherwise some heads can print longer than others. This makes both messages the same length so that all messages are properly aligned.



The message length alignment field is enabled by clicking the print head icon for print heads properties in NJEditor.

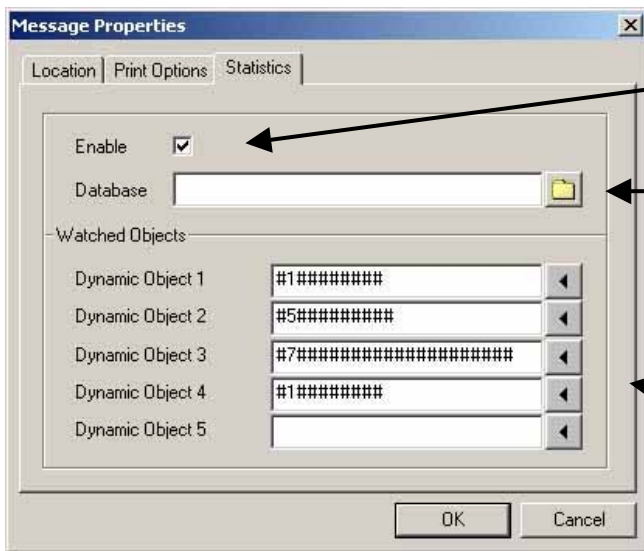
Figure 183 Message length alignment



4. Advanced

Statistics Reporting

Up to five dynamic objects can be selected for export into a Microsoft Access 2000 database. This is done in two steps. The selected dynamic objects are exported into a collection access database and then exported into a main database. When the dynamic objects are exported into the main database, the collection database is emptied. To begin the process of creating a report of dynamic objects, first go to NJEditor and click message properties. When the Message properties dialog box appears click on Statistics.



Click on enable to allow reporting of statistics.

The name of the temporary access file used for reporting. A new file will be created if none exists. See example below in NJProcessor export. You may use the file ICON to browse.

Click on the arrow in the dynamic object box to select the dynamic object to be exported to the temporary database. When you do this you may select the desired dynamic object in the box shown below.

Figure 184 Statistics Export in NJEditor

main counter	(#1)
current date	(#2)
expiration date	(#3)
actual time	(#4)
shift code	(#5)
database	(#6)
async input	(#7)
supplied input	(#8)
application identifiers	(#9)

After you have set up your message to for statistics reporting go to NJProcessor and print your message. The final step is to export data into your collection database. Select Statistics export from the message menu.

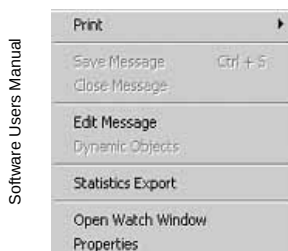
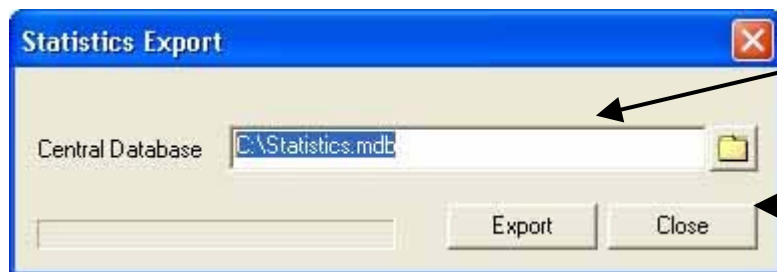


Figure 185 Selecting Statistics Export in NJProcessor



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Type the name of and path of the database to export the temporary data to. You may use the file icon to browse.



Note that if the database does not exist, NJProcessor will create it with all the proper fields.



Using the Async Input Data Filter

The async data filter is provided so that you may send data to various parts of your message and set margin and print direction. This option is used with the direct input option. If using a database, there is no need for this option because data from the database fields are used for your message. This option enables you to send print direction, dynamic margin and a number or text strings in one input.

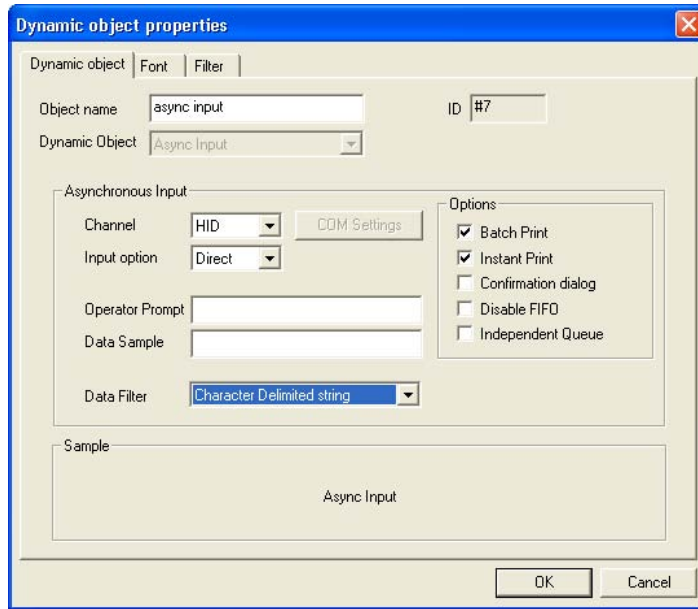


Figure 186 Enabling the async data filter

Enable Data Filter

1. Choose between “Character Delimited string” or “Position Delimited string” and a Filter tab should appear.

The options you set will depend on if you have selected “Position delimited string” or “Character delimited string”.

(When you are using HID input the dynamic margin and print direction options are not available for use. You may check these options if you select the HID channel but they will not function. The dynamic print direction option works only with a data filter when using the com1 or com2 input channel and the direct input option.)

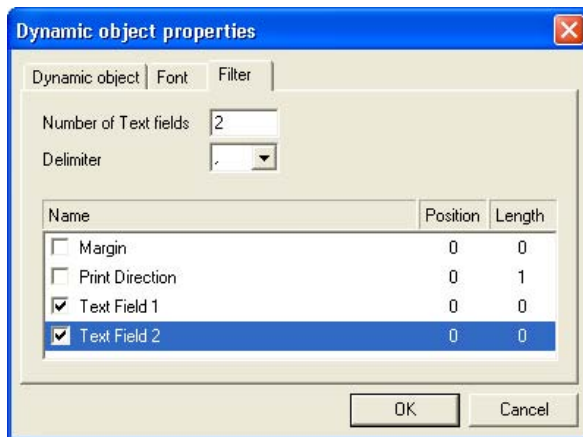


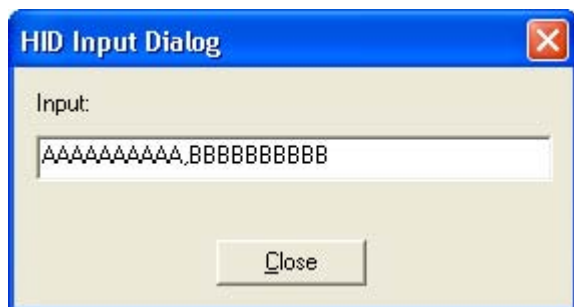
Figure 187 Setting data filter options

2. For character delimited strings select the number of text fields, and the delimiter. If you use position-delimited data, you must select the position and the length in as shown above.
3. Enable each Text Field name by using the check boxes next to each one.



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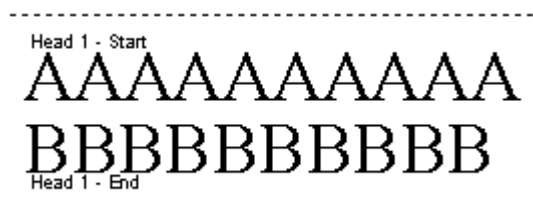
Example



When print is enabled, the HID will prompt for the input. The data supplied should be in the format shown to the left, where a comma separates two different strings. This same process or protocol is used for COM and TCP/IP data as well.

String data:

“AAAAAAAAAAAA,BBBBBBBBBBBB”



The example to the left shows the data supplied into the canvas at print time. “AAAAAAAAAAAA” represents Text Field 1 and “BBBBBBBBBBB” represents Text Field 2.



User Prompts

The supplied input will take a one- time input and print the same message from then on. An example might be a lot number that is the same for all messages. The data source may direct from a keyboard, or from a database or async input. If the Database or Async inputs are selected as a Data Source, a tab to set up the Database or Async Input will appear. Set them as explained in the previous sections.

The 'Dynamic object properties' dialog box for 'supplied input' (ID #8) shows the following settings:

- Object name:** supplied input
- ID:** #8
- Dynamic Object:** Supplied Input
- Supplied Input:**
 - Data Source:** Keyboard
 - Data Type:** Keyboard (selected), Database
 - Must enter data:** ☐ (unchecked)
 - Operator Prompt:** Insert Data
 - Default Data:** Default Data
 - Sample:** Default Data

Annotations:

- If this box is checked NJProcessor must have data input before printing. (points to 'Must enter data' checkbox)
- The prompt that will be displayed for the operator when must enter data is checked. (points to 'Operator Prompt' field)
- This is the data that will be printed if no data is received. (points to 'Default Data' field)

The 'Data Type' dropdown menu shows the following options:

- Alphanumeric (selected)
- Alpha
- Numeric

Annotation:

- This is the type of data that will be inserted. Here an operator can select Alphanumeric for Numbers and letters, Alpha for only letters or Numeric for numbers only.

When a Supplied input is used once the print is enabled a “Supplied Input” dialog box will appear waiting for a data input. Enter the data string and click “OK”.

The 'Supplied Input' dialog box shows the following settings:

- Insert Data:** Default Data
- OK** button

Figure 188 Supplied Input

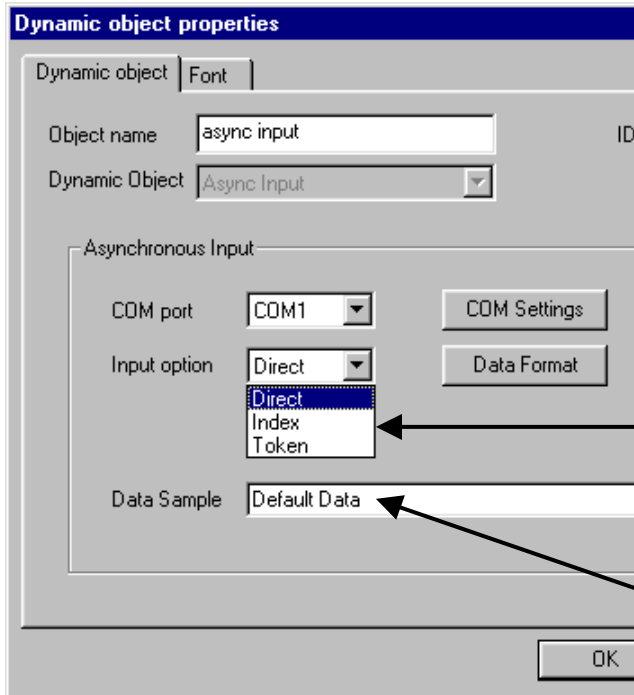


Figure 189 Async Input Option

Direct Prints whatever comes in via the async input.

Index Prints information in a database sequentially.

Token Prints-- information from a database looked up from the information supplied. For example—If the customer name was supplied the address could be printed.

NOTE If you use the index or token options, a database tab will appear. Refer to the previous section, inserting a database object for information

Data printed if no information received.

Selects what characters, if any, are used in the async input to mark the start and end of text. (STX and none for start character; ETX, CR or none for end character.

Until an input is received, NJProcessor will show what was typed in the data sample box (See the properties of you Async input dynamic object in NJEditor). Note the red light at the lower right hand corner of NJProcessor. The async input COM port will change to white as data is received. This will help you know if you are receiving data from your async input source.



Application Identifiers

Standardization of product identification codes is the key to successful communication between and within companies. An application identifier is a UCC/EAN prefix that unambiguously defines the meaning and purpose of the data element that follows, as defined in ANSI/UCC4, UCC/EAN-128 Application Identifier Standard. UCC/EAN-128 is a standard that consists of both bar code symbology and a data structure. The symbology used is a subset of Code 128. The data structure is designed so that the meaning of each data field within the bar code is unambiguously defined by a prefix called an Application Identifier (AI). An AI is two, three or four digits in length and is always numeric; however the actual data is encoded in UCC/EAN-128 can contain any of the full ASCII character set.

These are UCC/EAN standard identifiers that are needed for specific industries.

Inserting Application Identifiers into Your Message

To use application click on the  (dynamic objects) menu and select “application identifiers” and click on the Insert box. A box will be displayed with 3 selections. In this case we will insert a barcode so select barcode.

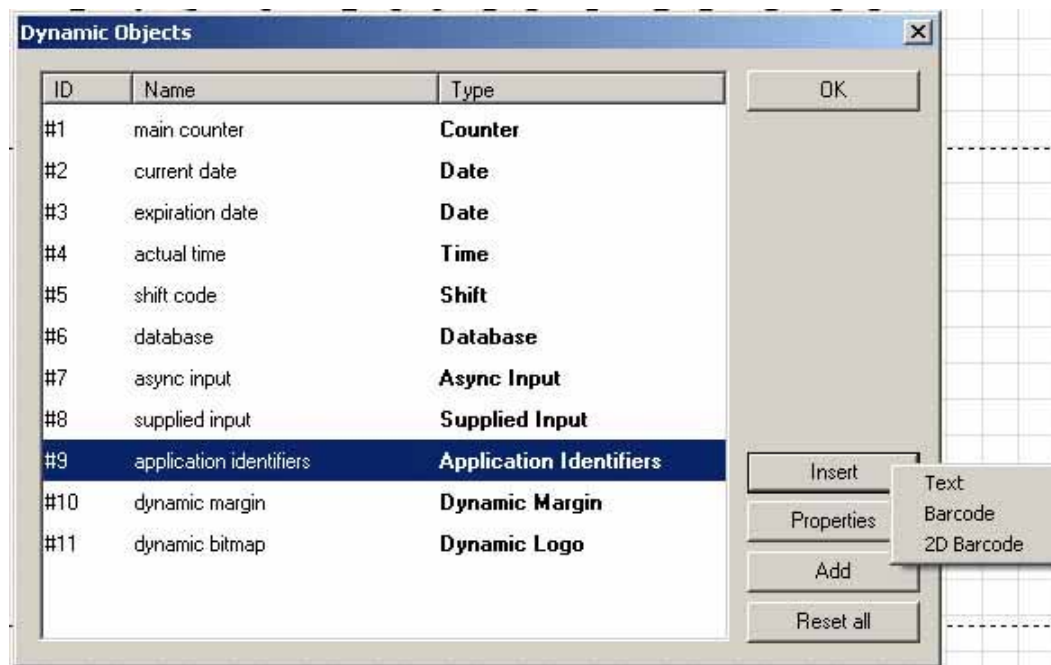


Figure 190 Inserting Application Identifiers



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The select application identifier dialog will pop up. In this case we will select production date and click OK.

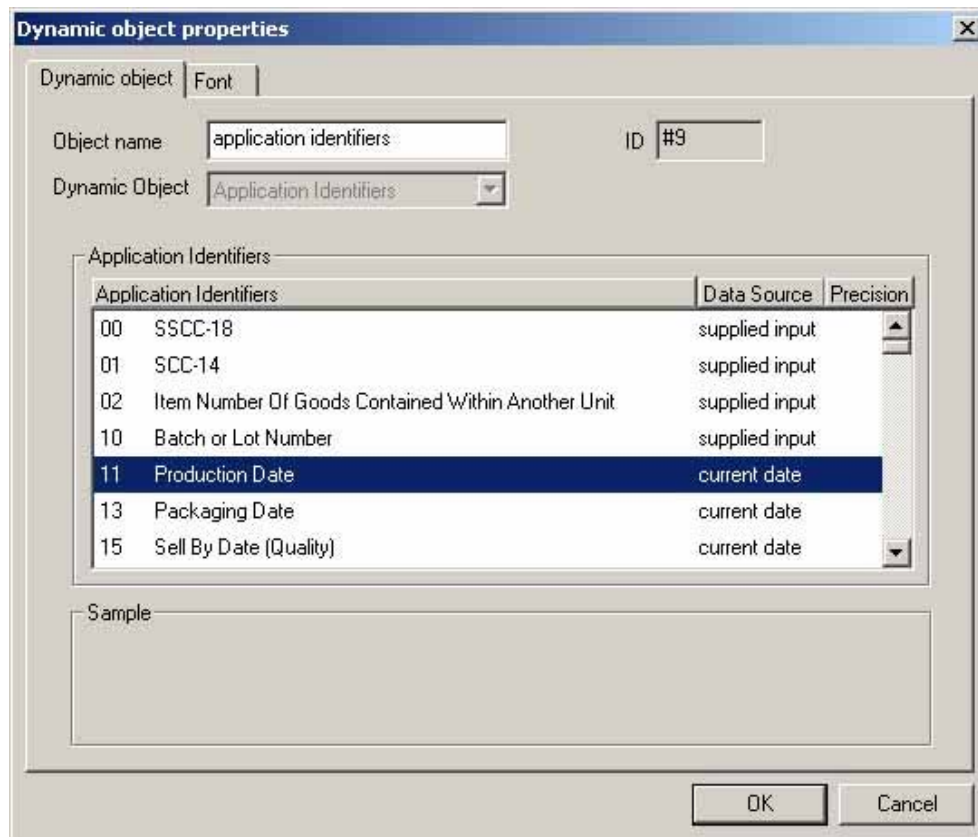


Figure 191 Application Identifiers

Both of boxes will disappear and you will see a small cross with a barcode in the bottom right corner. Hold down the left mouse and make a box at the location you wish to the bar code for your application identifier. A bar code with default data and the barcode properties dialog box will appear.

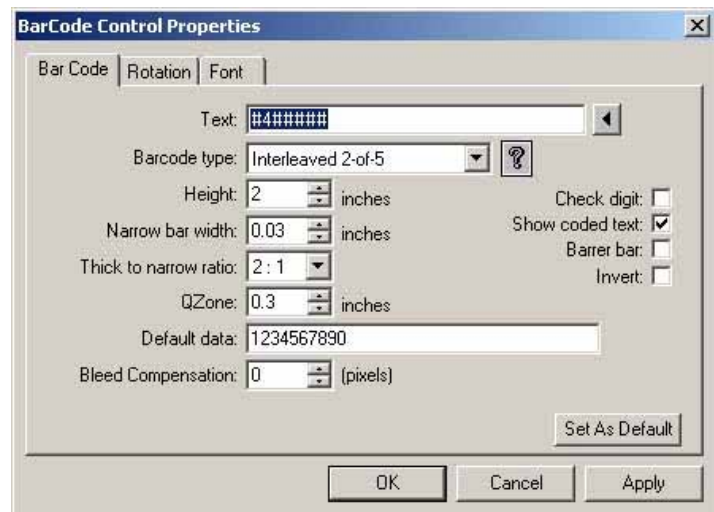


Figure 192 AI Bar Code Properties

Select EAN 128 barcode type—The AI format check box will appear. Check this box to keep the application identifier from being included in your barcode. It will only show in the text below.

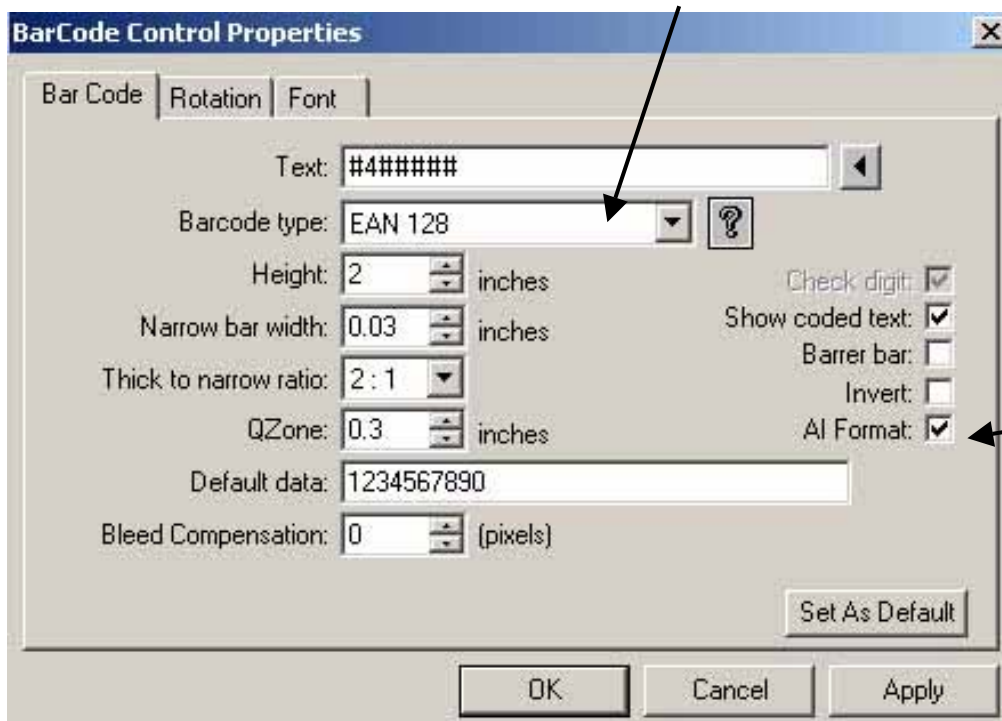


Figure 193 Selecting barcode type and AI Format

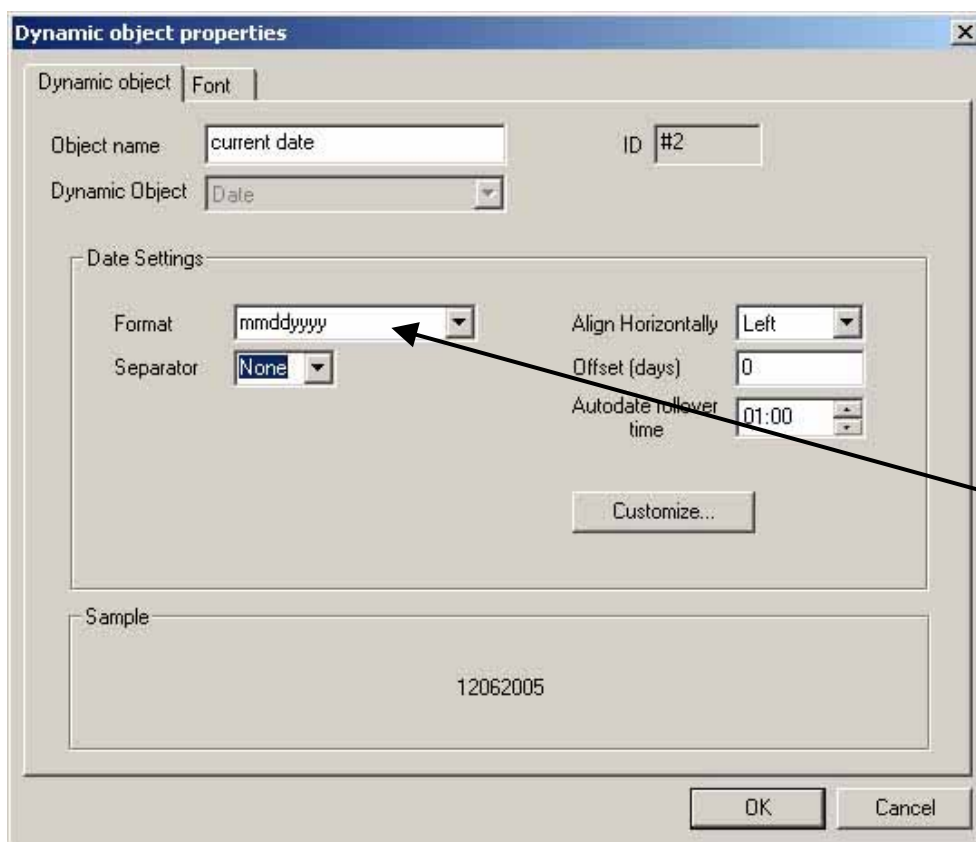


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A bar code will appear. Find the proper date format (YYMMDD) for the application identifier in the table above and check the date format. If the format is wrong double click on the barcode and select current date and click on properties.



Figure 194 Changing the date format



Type in the proper date format found in the application identifier table, which is YYMMDD.

Figure 195 Changing date format (continued)



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Click OK on both dialog boxes and your message will display the production date Application identifier in the proper format.



Note that the application identifier number in this case is not in the barcode (it could be in the barcode if the AI Format option was not checked in barcode properties) but only in the text below. (11) is the application identifier number.

Figure 196 Completed Production Date Barcode AI



Dynamic Margin

Dynamic margin is used when printing a message requires different margins. For example it may be necessary to print the same message on different size boxes. To center the printed message, different margins would be required. It is not necessary to insert a dynamic margin in your message. Simply enable it and it will be used. Dynamic margin must be enabled and set for each message. To use dynamic margin: Click on dynamic objects in the insert menu and click on properties.

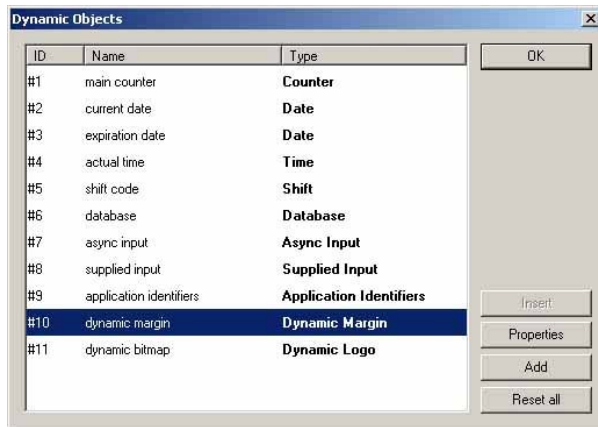
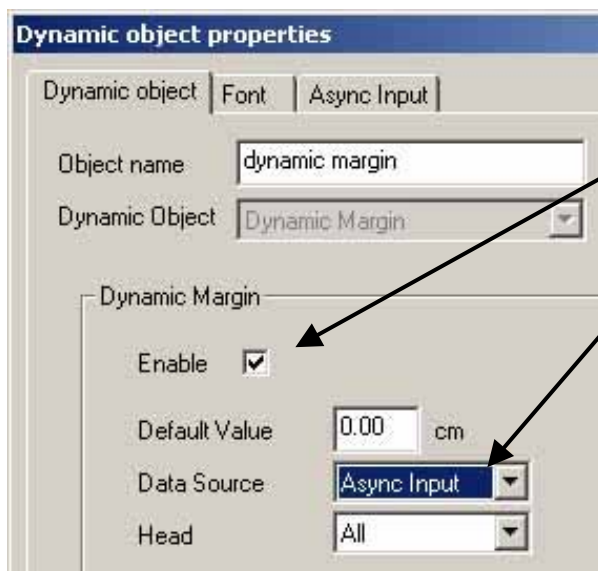


Figure 197 Dynamic margin

The dynamic properties window will appear.



Click Enable to enable dynamic margin.

The Default Value will be added or subtracted to margin message if no other input is received.

Data Source may be none or async input.

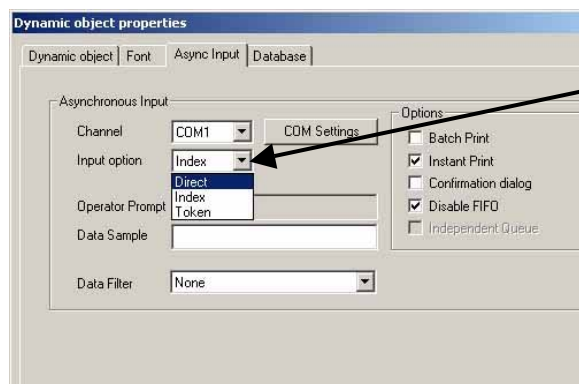
You may select an individual head or all heads.

The Async and Database tabs have been explained in previous sections with the exception of the data filter in the async input tab. See below for explanation.

Figure 198 Dynamic Margin Properties

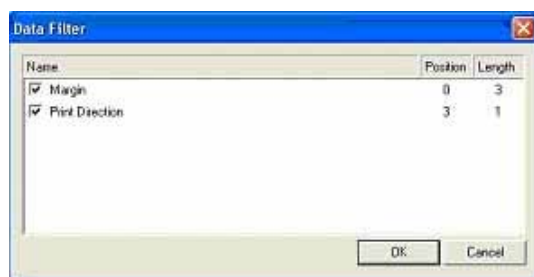


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Note that Input options allow the use of a database as explained previously.

Figure 199 Dynamic Margin Input



The input for dynamic margin may also change print direction. In this case the margin is a 3-digit number followed by the print direction. Note that the position begins with 0. Digits 0,1,2 would be the margin and 3 would be the Print Direction. Click on position and length to change the values.

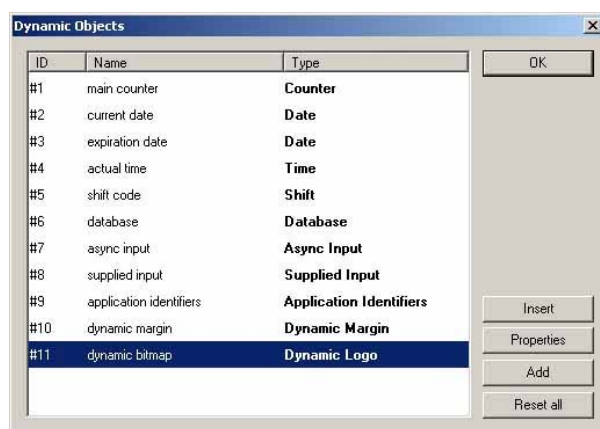
Figure 200 Data Filter



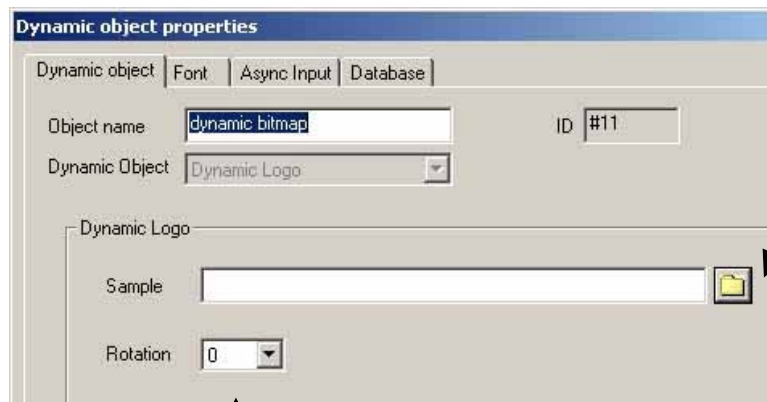
Dynamic Logo

A dynamic Logo may be used to insert a changeable logo. The path to the filename for the logo may be entered by a async input from a COM port or HID (keyboard port or USB device). The input may also reference file names in a database.

To Insert a dynamic Logo use the insert menu and select dynamic objects (Note once you have defined a dynamic object you may insert it directly from the menu. In this example you define the properties of your dynamic logo so it is useable.)



Select Dynamic logo and click on properties.



Insert the path to a sample logo—only to show position on screen—does not print. You may click the folder to browse for you file. Remember to select the type of file you are looking for.

Rotate your logo if desired

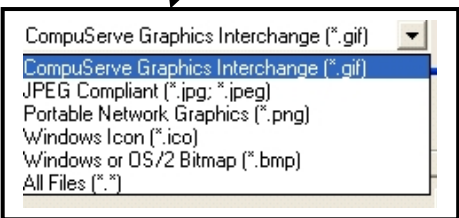


Figure 201 Dynamic Logo

Set the options Async Input and database as previously described in the Async Input section.



Barcode Control and Properties



Figure 202 Bar Code Control and Properties

The Bar Code Control is a feature, which gives the user or integrator greater flexibility over NetJet during runtime. This feature allows for sending a list of commands in a string to NetJet for controlling basic functionality or using predefined parameters for most common applications.

The primary function of Bar Code Control is to easily reference external data such as databases, referred to by NetJet as “Async Input” or AI.

Barcode Control Toggle

The toggle button for the Bar Code Control allows the user to open or close the Bar Code Control window.

Bar Code Control Open/Closed:

1. Click on the Bar Code Control icon in the toolbar to open the Bar Code Control window.
2. Click on the Bar Code Control icon a second time to close the control window.





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Predefined Options

- o **“Scan or enter Work Order # to populate data fields only”** is used for populating async input data fields. The data entered can either be send directly to the AI field as text, as a barcode number using the /D command, or the scanned data can be used as a Token look-up field from a database. Use this option if only one message template is being used, requiring variable data. The table below specifies the command sequence used.

/S0	/D1234	/P0
1. If print is enabled on the current message, disables print.	2. Uses 1234 above as the token to the database.	3. Enable print on all heads

“Scan or enter Work Order # to open new message template and populate data fields” Use this option if you need to use multiple message templates and each template requires variable database information. This option works in conjunction with an async input object tied to a database. Each record in this database must have a column, which contains the name of each template (message) associated with that row of data. A sample copy of a database is shown below. Once that relationship is established, the Object setting needs to point to the async input in which the database is connected. The Message Column in the Barcode Control properties must then point to the column in the database that contains the template names. At print time, enabling the Barcode Control and typing or scanning in the Work Order number or primary key, referred to as a Token, a new template will open, the print will be enabled, and data from the database will populate the async input data fields in one operation. At that time if Product_Name and Category were used as the async input objects, those fields in the database that matched 1234 would print “Northwoods Cranberry Sauce” and “Condiments”. The table below specifies the command sequence used. (Note: message names in the database need to exclude the .nkj file extension. Example; condiment_template.nkj would look like condiment_template in the database as shown below.)

/S0	/T1234	/P0
1. If print is enabled on the current message, disables print.	2. Opens template condiment_template and uses 1234 above as the token to the database.	3. Enable print on all heads

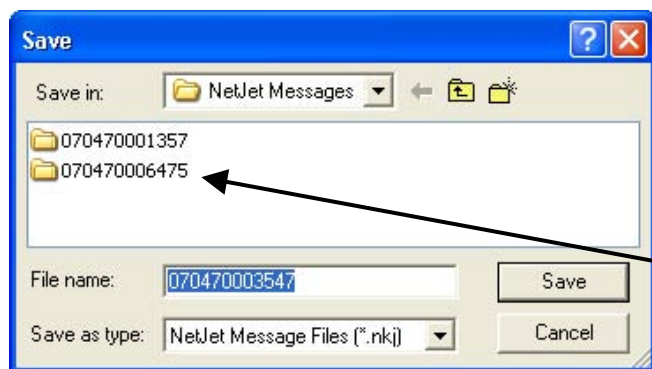
Sample database

	Work_Order	Product_Name	Category	Template
	1234	Northwoods Cranberry Sauce	Condiments	condiment_template
	1235	Uncle Bob's Organic Dried Pears	Produce	produce_template
	1236	Aniseed Syrup	Condiments	condiment_template
▶				



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- o **“Scan or enter Work Order # to open new message template only”** Use this feature to limit operator intervention and errors. Once the message templates are set up, the operator can simply call up a new message by scanning the work order, product barcode, or by typing in the barcode/work order number to load the corresponding message. Message names require a naming convention that indicates the bar code, product code, or work order number exactly matching the number indicated on the product. An example is shown below on naming a message when using this option. A table below specifies the command sequence used. *Use of a database is not required for this.



/S0	/O070470001357	/P0
1. If print is enabled on the current message, disables print.	2. Opens template 070470001357	3. Enable print on all heads

Barcode Control command list and definitions.

Commands	Command Definitions
/Pn	Enables print, 'n' = print head number 1, 2, 3, 4. n = 0 Enables print on all heads.
/Sn	Disables Print, 'n' = print head number 1, 2, 3, 4. n = 0 Enables print on all heads.
/Omsg	Opens a message where msg is the message name.
/C	Closes current message.
/D	Sends data to the ASYNC input object that is defined in the Barcode Control properties. The data will be used directly.
/T	Sends data to the ASYNC input that is defined in the barcode control properties. The data will be used as a token.
/G	Starts the Download Speed Diagnostics.
/E	Closes the ASYNC input (HID) dialog and changes focus back to the Barcode Control. <i>Note: This command can only be used from the HID dialog.</i>



Prefix and Suffix commands can be mixed and matched in logical order depending on their definitions. If an integrator wanted to send these commands as part of a string then the Prefix and Suffix boxes would be cleared out of any commands and these commands would then be sent to the Bar Code Control in a string either from HID, TCP/IP/COM1 or COM2.

ASync Input parameters

There are seven settings under Async Input within the Barcode Control properties. Enable, Async Input dialog, Open new message, Object, Message Column, Download Speed Diagnostics and Input.

Enable

Enables input dialogs prompt of the Object property for a selected Async input.

Disable Async Input Dialog:

The property disables the input dialog from prompting once the print is enabled.

Open new message:

Enables the Message Column drop down where the user can select the column in the database, which is assigned to a template.

Object

A drop down box, which allows the user to specify which Async input, the Barcode Control is going to be associated with.

Message Column

A drop down box, which allows the user to specify the column in the database that template/message names, are stored.

Download Speed Diagnostics

By enabling this feature the command /G will be added to the command suffix. Once print is enabled and data is sent to the Barcode Control, the Download Speed Tester will execute.

(Reference Download Speed Diagnostics under the Using Other Advanced Dynamic Objects in NetJet section of the manual.)

Input

The input allows the user to specify what type of input NetJet needs to expect data from. There are four options here; HID, TCP/IP, COM1, and COM2.



Printing A Message with NJProcessor

Set up your Net Jet Network as described in Section 2 “Printing a message with NJProcessor.” Here are options you may use in the NJProcessor message to help you print:

Icons for NJ Processor

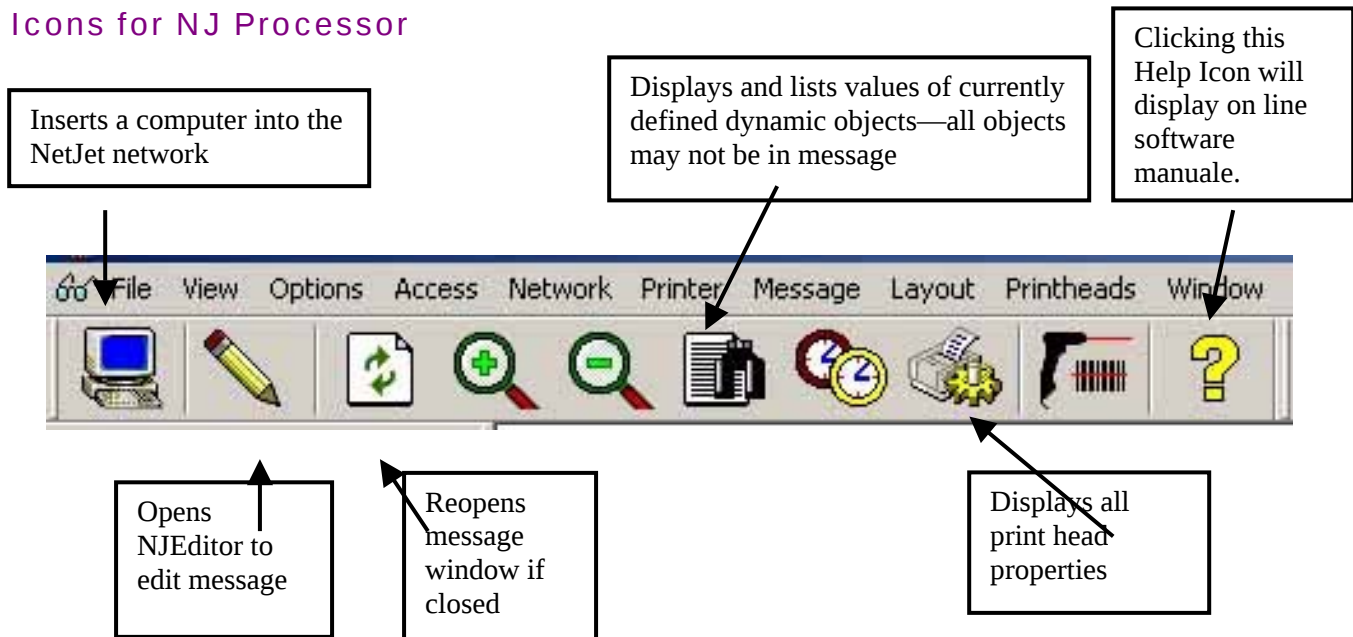


Figure 203 NetJet Processor Icons

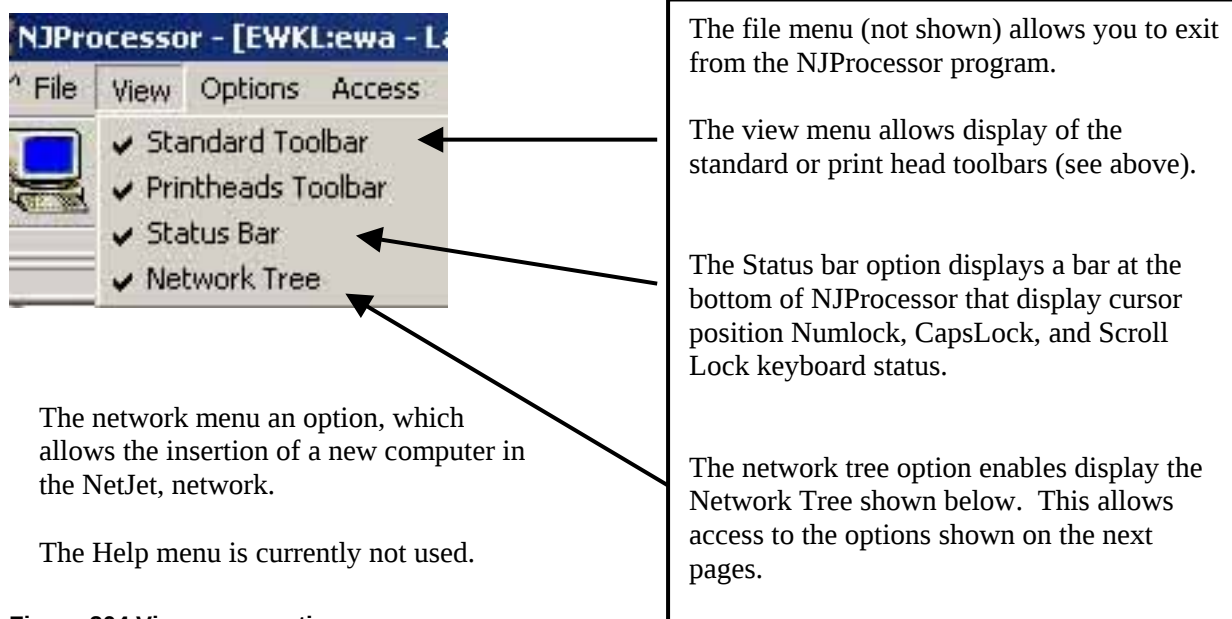


Figure 204 View menu options



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Popup Menu for Computer

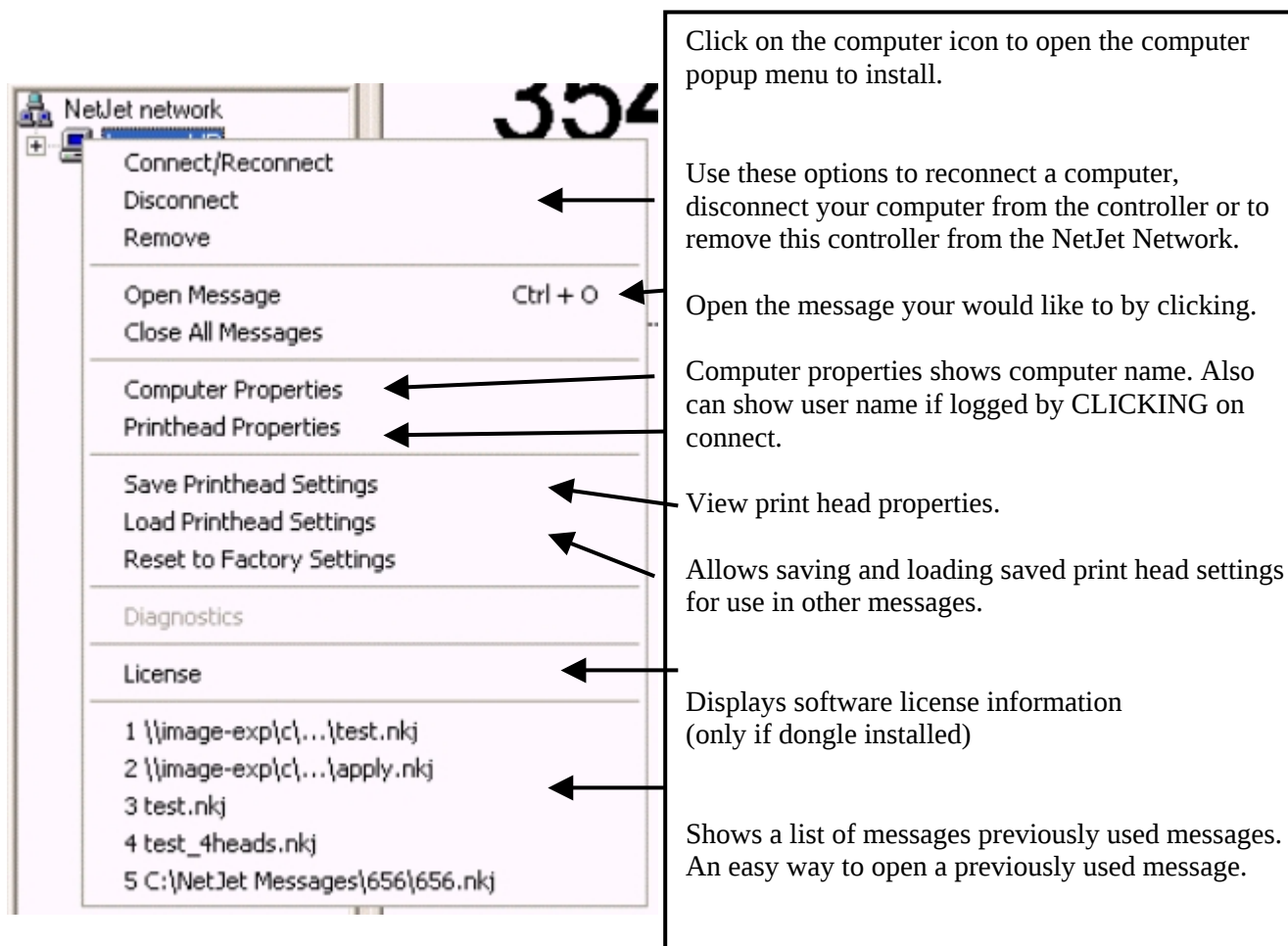
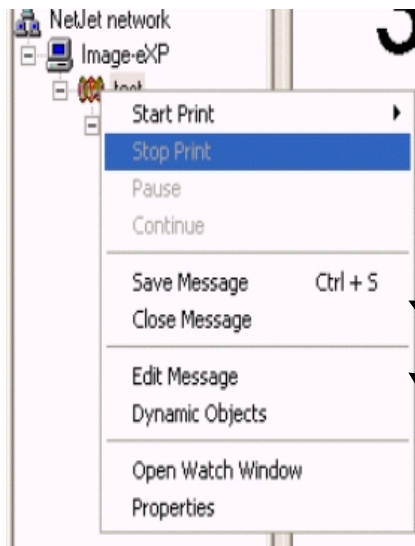


Figure 205 Computer Popup menu



Popup Menu for message



CLICKING on the message will allow you to select these options:

Clicking on Start Print will allow you to print to one or all heads.

After your have started printing, The, Pause and Continue options will allow stopping the printing without changing dynamic objects (example –resetting a counter). Stop, pause and continue print are not available until printing is started.

Allows saving or closing the message.

Edit your message.

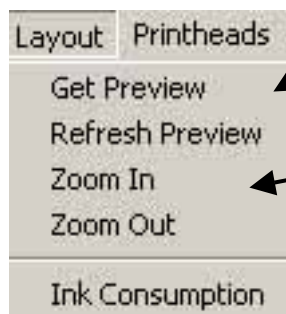
Allows viewing dynamic object properties.

Lists dynamic objects in your message.

Shows file location of your message.

Figure 206 Message Popup Menu

Popup Menu for Layout



Get preview allows reopening of message preview if message area is closed.

Refresh preview updates dynamic objects.

Zoom In and Zoom Out.

Gives an estimate of ink consumptions for this layout. This estimate makes no allowance for ink use due to head priming and spit and is not an exact estimate. There is no guarantee implied or intended by the ink consumption calculator. This can only be used as a guideline. For a realistic benchmark, divide the number in half.

Figure 207 Layout Popup menu

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Popup Menu for Print heads

The print head only has a properties menu. Click on this option to bring up the Print head properties menu.

Finally there are many print head properties that need to be set. Refer to the instructions in Section 5 –Print head options for NJ processor for instructions on how to set up these settings. Once you have set these settings you may save them by **CLICKING** on your computer in the message tree and saving your print head settings. Then you will be able to use these print head settings for other messages.

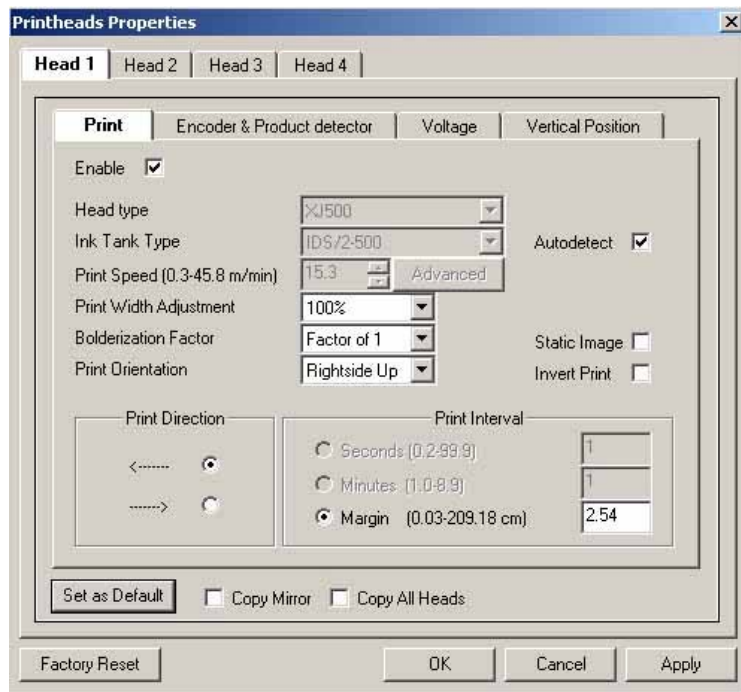


Figure 208 Print head properties

Now you can print by clicking on the all heads icon or clicking on individual heads.



Remember that you can stop printing without affecting dynamic objects such as counters by clicking on the message in the network tree and selecting pause (see above).



Watch Window

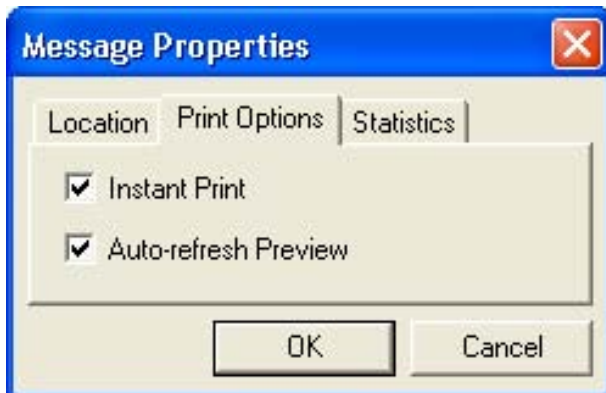


The Watch Window button allows the user to toggle a watch window open or close.

Watch Window Open/Closed:

1. Click the Watch Window icon in the toolbar to open the Watch Window.
2. Clicking the Watch Window icon a second time will close the window.

Auto-Refresh Preview



The Auto-Refresh Preview option allows on-screen ASYNC input data to automatically update on screen each time data is received.

By default Auto-Refresh Preview is disabled and requires the operator to use the Refresh button within NJProcessor to refresh the screen in order to view updated ASYNC input data.

(Note: There must be at least one ASYNC input used and the ASYNC input Option must be set to Batch Print for this option to apply.)

Enabling Auto-Refresh Preview:

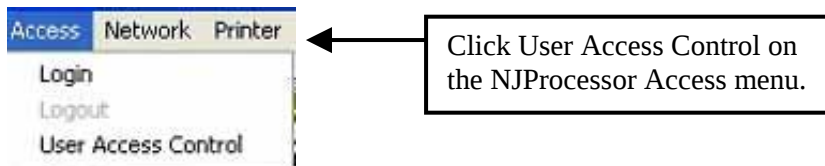
1. Click Message from the menu and select Properties.
2. When the Message Properties dialog opens, select the Print Options tab.

Check the Auto-Refresh option and click OK.



5. User Access

It is possible to control what a user may access in NetJet. This is not intended to make the system completely secure, but to simplify operation by limiting the number of functions that may be accessed.



To change the user access control type **admin** And click OK

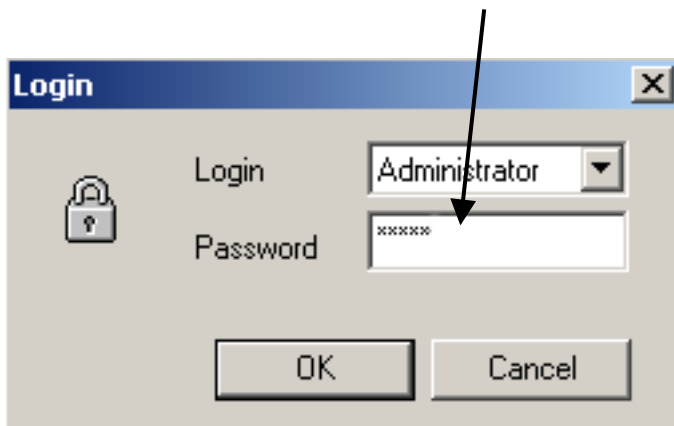
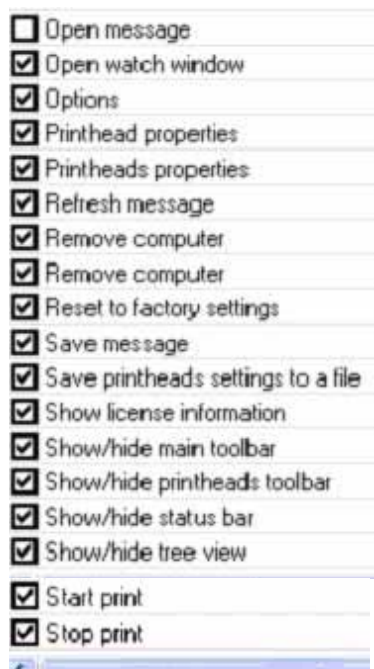
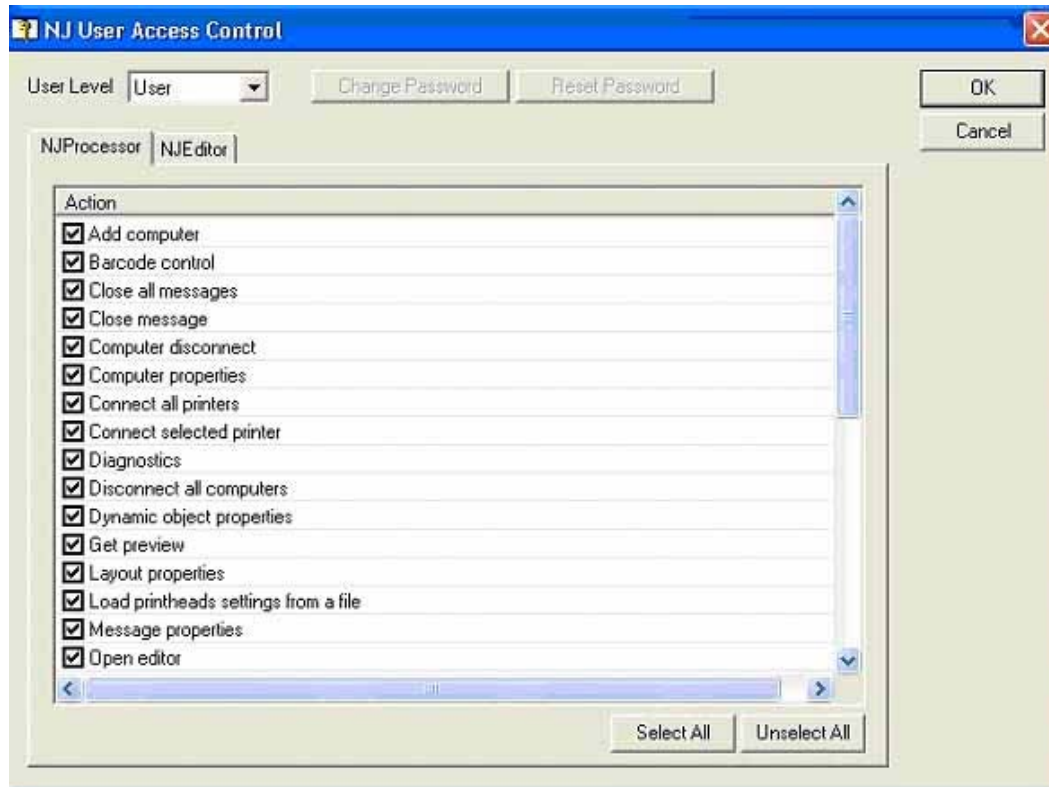


Figure 209 User access control

5. User Access



The “User Access Control Menu” will appear.



Many functions may be disabled in NJProcessor as shown but the only option for NJEditor. Is to run or not run the application. Select all will allow all functions to be enabled. Unselect all will disable all options. Click OK to save options. Note there is no option for a password on the user level user. The option to set a password is grayed out.

Figure 210 Access Options



5. User Access



Options for the supervisor may be changed. The default password for the supervisor is “super” The password for the supervisor may be reset to “super” by clicking reset password.

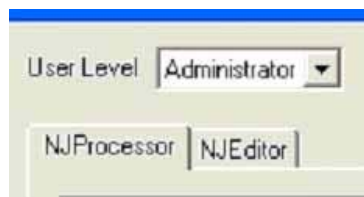


Figure 211 Access Passwords

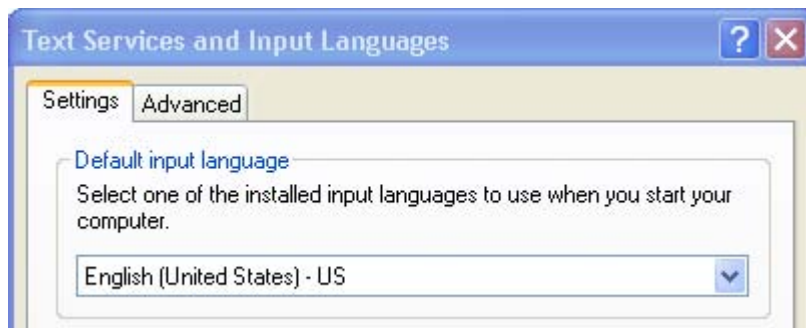
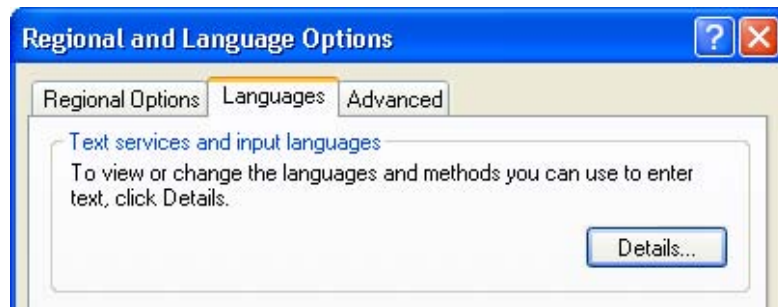
Again the password for the administrator may not be reset. It is **admin** and it may not be changed. The master password is 4805457500 and will always override any password if forgotten or loss. Then, a new password may be generated. No options for the administrator may be changed. The administrator has access to all functions.



Changing the keyboard input

In some cases it may be necessary to switch to a different keyboard input other than English (United States)[default input].

In some cases it may be helpful to have a keyboard layout that looks the same as the keyboard assigned to your local language. All special characters that are on a keyboard in your local language can be set in Imaje 4040 with Microsoft XP Pro.



Setting keyboard input

In Windows XP, click on Start → Settings → Control Panel.

Double click on Regional and Language Options.

Select the Languages tab.

Click on the Details icon.

Click on Add and select your language. Click Ok when finished.

Use the dropdown list under Text Services and Default Languages to select the windows default input language.

Once a default language is selected, Click Apply on Ok

The Imaje 4040 will need to be shut down and restarted before the changes will take affect.



Inserting special characters with controller keyboard

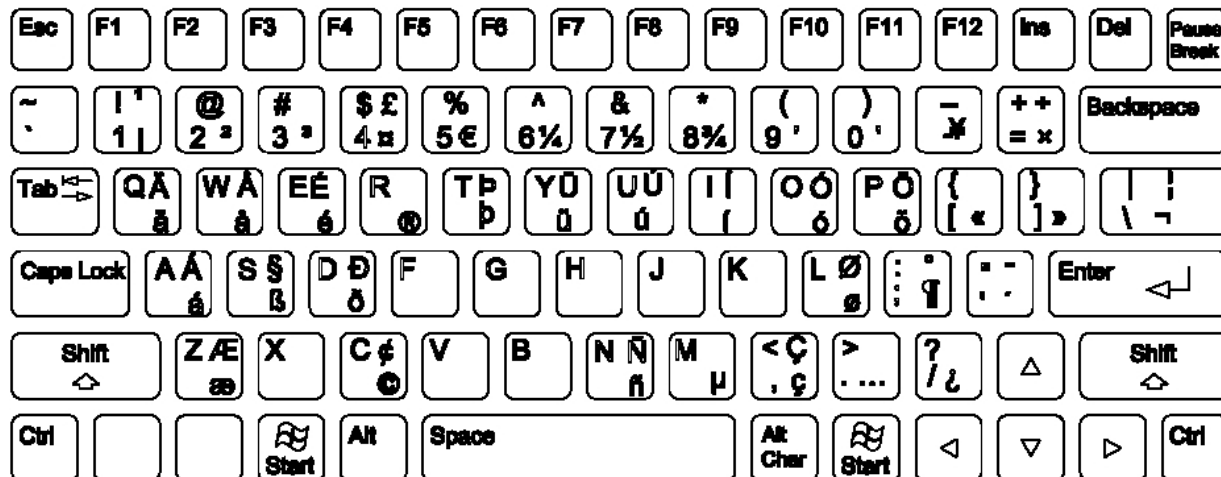


Figure 212 Special characters on controller keyboard

Obtaining characters on a key

Alt Char: Use this key to type the lower right character of each key. *Ex. while holding the Alt Char and pressing the 8 keys would type 3/4.*

Alt Char + Right Shift: Use both these keys together to type the upper right character of each key. *Ex. while holding down Alt Char + Right Shift and pressing the A key would type Á.*

Examples

Pressing with shift: \$
 Pressing with no shift: 4
 Press right shift key and Alt-Char: £
 Press Alt-Char key: ¤



Figure 213 Obtaining characters on a key



General Notes

1. Competent personnel should design and complete network wiring. Improper wiring can cause unnecessary problems. Follow Ethernet networking standards closely. Avoid routing twisted pair wiring near florescent lights, motors or any source of electrical noise.
2. Have an electrician check all electrical grounds. No computer or networking system will work properly with improper electrical grounds.
3. At the present time the Controller uses Windows XP Embedded. Familiarity with Windows networking is required.
4. TCP/IP should be the only protocol used on the NetJet network. NETBUI and IPX/SPX protocols do not have the functionality required for NetJet
5. If you are using a peer-to-peer network, set the primary network logon to windows logon. Also be sure the properties for the Client for Microsoft Networks are not set to log on to a Windows NT domain. This will enable the computer to reboot by simply turning it back on.
6. Do not install a peer-to-peer network on a computer that has had multiple users (profiles) set up. If you have set up multiple profiles, set up you NetJet network using a server.
7. Do not use zeros in network names.
8. If you move the print controller to a different network, the computer may act like it is locked up. This is because it is looking for a message that is no longer available on the network. Wait for the hourglass to go away, then create and save a new message in the editor. Open your message in the processor. The next time the controller starts it will find the message you created.
9. NetJet requires the TCP/IP network protocol, the client for Microsoft Networks and file and print sharing for Microsoft Networks. See your IT professional to insure that name resolution (DNS) is set up properly. You may create a network peer-to-peer network using only static IP addresses. However a host's file is required for all computers and controllers. **If your controller is connected to a network with other computers on it, be sure the static IP addresses you set up do not conflict with other addresses on the network. Be sure to contact your network administrator before setting up static IP addresses on a corporate network.**
10. If you have problems finding other computers, be sure all computers are in the same workgroup. If no server is on your network, it is helpful to map network drives to all other computers on the NetJet network. This insures that each computer will find each other. Alternately, if you cannot find the desired computer, use the find tool on the Windows start menu.
11. When setting up a NetJet network you must use a hub or a crossover cable. A crossover cable will allow you to connect 2 computers. If you have network problems, a crossover cable will allow you to hook up a laptop or other computer to your controller for testing.



Setting up an Imaje 4040 Network

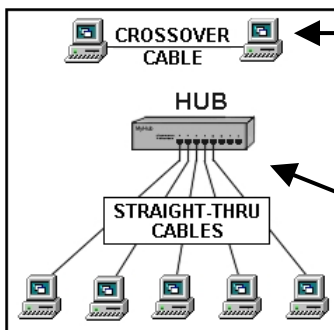
In order for Imaje 4040 to work over a network, you must have a valid IP address. It is recommended that you use a router or server that provides IP addresses. Small inexpensive routers that use DHCP will set IP addresses. They are often used in conjunction with high-speed Internet connections. If you use such a device you do not have to set up IP addresses but can let your router or other device set up the IP addresses automatically. If you buy one of the small inexpensive routers, you may need to set it up according to the manufacturers instructions.

The Importance of IP addresses

If you do not set up IP addresses properly the printer cannot function with other computers. If you are using Imaje 4040 on an established network, be sure to contact your network administrator or other knowledgeable person to be sure IP addresses will not conflict with other addresses on the network. If you have duplicate or improperly set up IP address your Imaje 4040 will not work and you may cause problems on an established network."

Wiring to connect computers and controllers

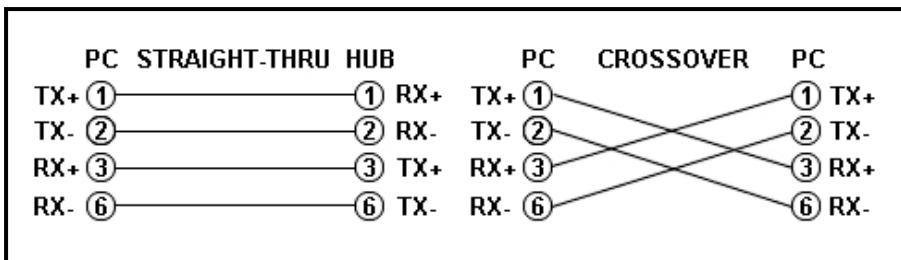
Often small routers previously referred to have a hub built into them. You may also use a hub with regular straight through patch cables or use a crossover cable to connect your controllers and computers as shown below.



If you have network problems, a crossover cable will allow you to hook two up a laptop or other computer to your controller for testing. However, you must set up IP addresses on both the computer and the controller.

In place of a hub here you could us a device that provided IP addresses. (Then you would not have to set IP addresses.) If you do use a regular hub, you will have to set up IP addresses.

This is how a crossover cable is wired



A crossover cable is a special cable that allows you to connect two computers or controllers without any other hardware. A straight-thru cable cannot be used to connect two computers or controllers. You must use a hub or other device or a crossover cable to connect computers and controllers.



6. Networking Notes

Setting up IP addresses manually

Each computer or controller on the network must have a unique IP. If you do not have a device on your network that assigns IP addresses, you must assign IP addresses manually. Each IP address must be the same subnet. Also each IP address must be different. If you have any duplicate IP addresses this will cause problems on your network. Example: with subnet mask “255.255.255.0”. One example of IP addresses you could use would be 192.168.1.1 thorough 192.168.1.254.

Example

Note: All IP addresses and computer names below are only examples. Talk to your Network Administrator before changing any IP addresses or domain names.

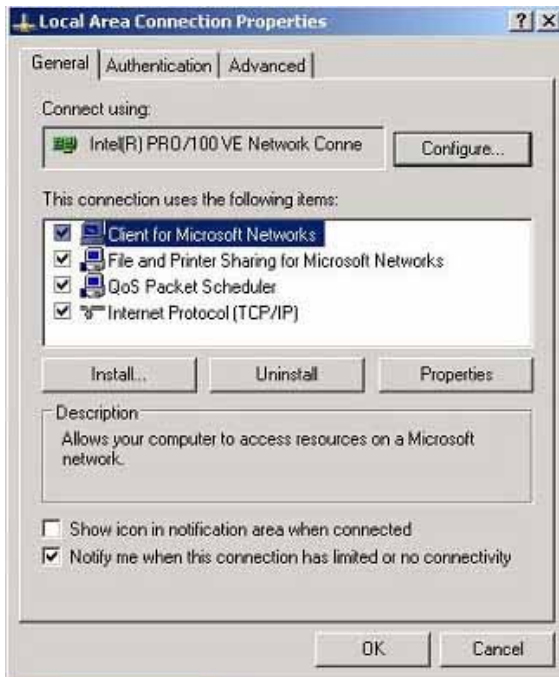


1. On the desktop of your computer, right click on “**My Network Places**”.

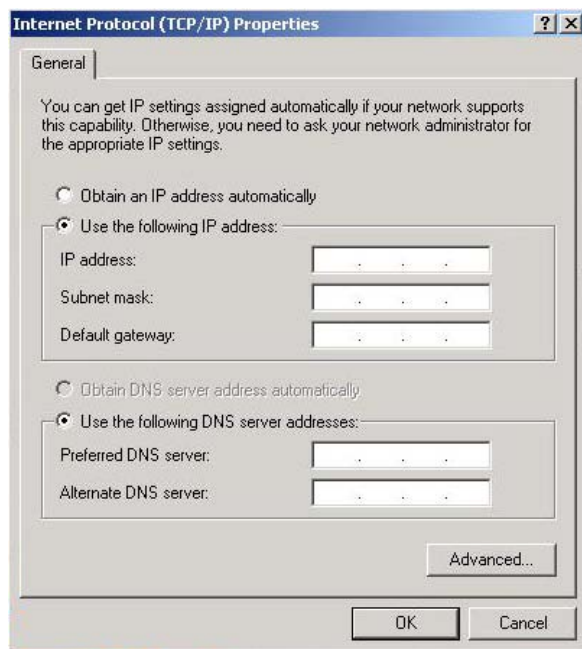


6. Networking Notes

2. Click on Properties.
3. Right click on **“Local Area Connection”**.
4. Click on Properties.
5. Double click on **“Internet Protocol (TCP/IP)”**.



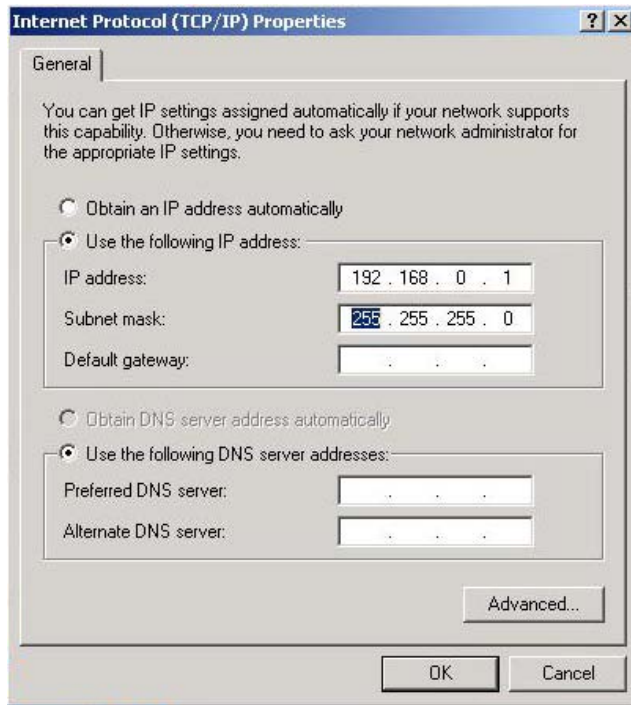
6. Select **“Use the following IP address”**.





6. Networking Notes

7. Type the **IP Address** and **Subnet mask** you want to set (see below).
8. Click on “OK”.
9. Repeat the procedure on the Imaje 4040 Controller.



Laptop

192.168.0.1
255.255.255.0
Domain: MPGOTSE
Name: HEPA

Test connection (see figures below)

[ping 192.168.0.2 OK]
[\\192.168.0.2\c\$ OK]

Imaje 4040

192.168.0.2
255.255.255.0

Test connection (see figures below)

[ping 192.168.0.1 OK]
[\\192.168.0.1\c\$ OK]

6. Networking Notes



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

H:\>ping 127.0.0.1_
```

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

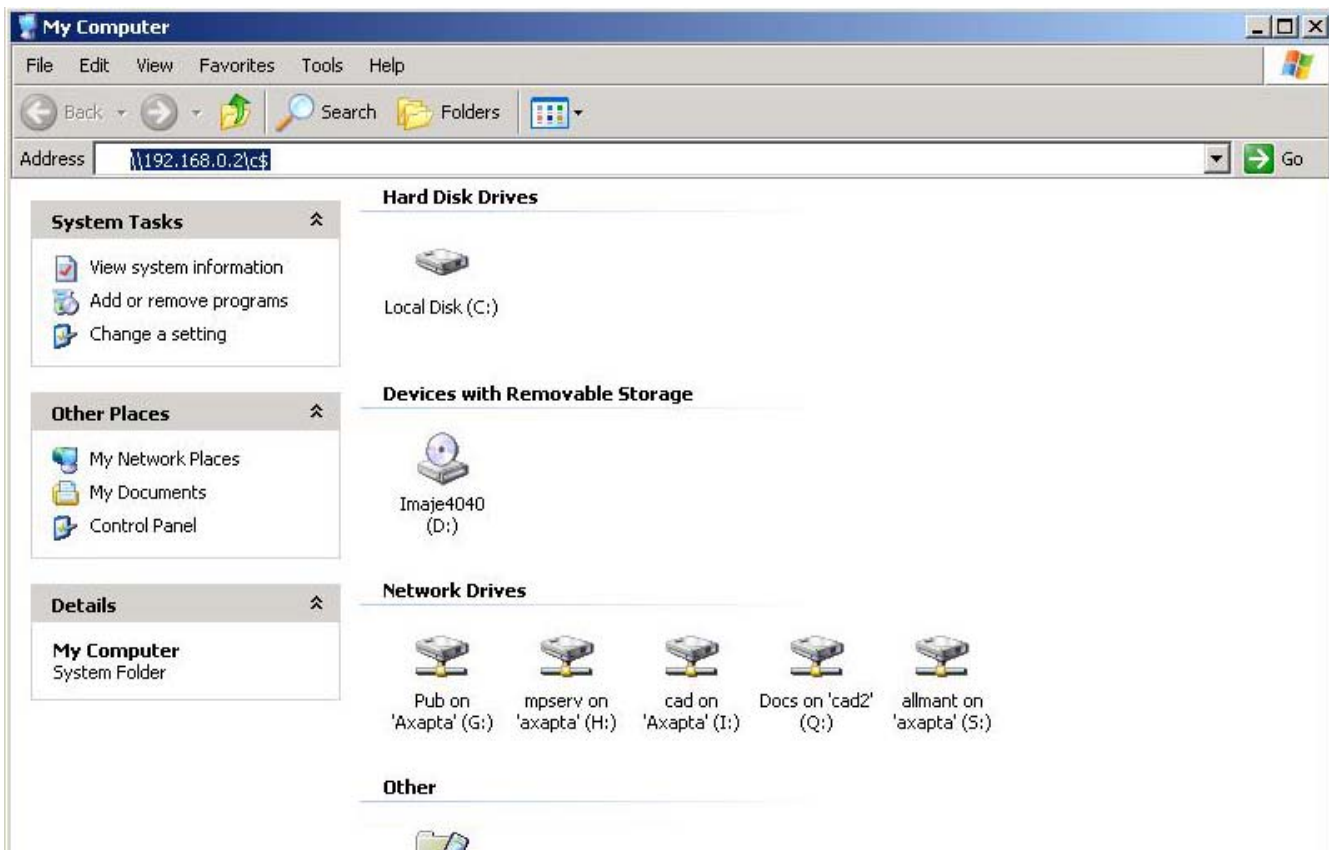
H:\>ping 127.0.0.1

Pinging 127.0.0.1 with 32 bytes of data:

Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128

Ping statistics for 127.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

H:\>
```



On your Laptop to connect to Imaje 4040

NJ Processor: add computer

Computer name: 192.168.0.2

Connect as:

This user:

Username: imaje

Password:

Domain: MPGOTSE

Note: You must connect two times. Use no host names, only IP address. The workgroup and domain names must be the same.

6. Networking Notes

Creating a simple network with Windows XP

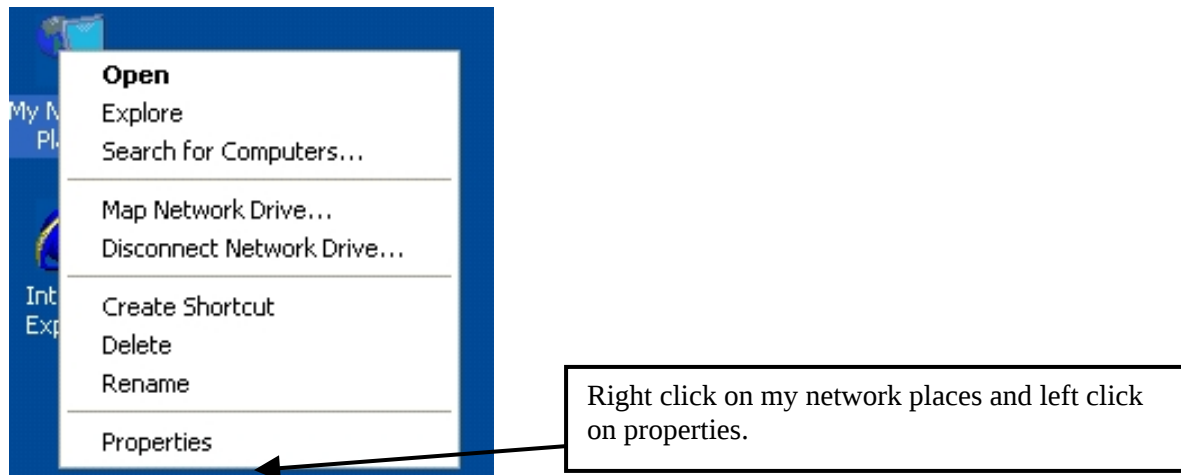


Figure 214 Network Places Properties

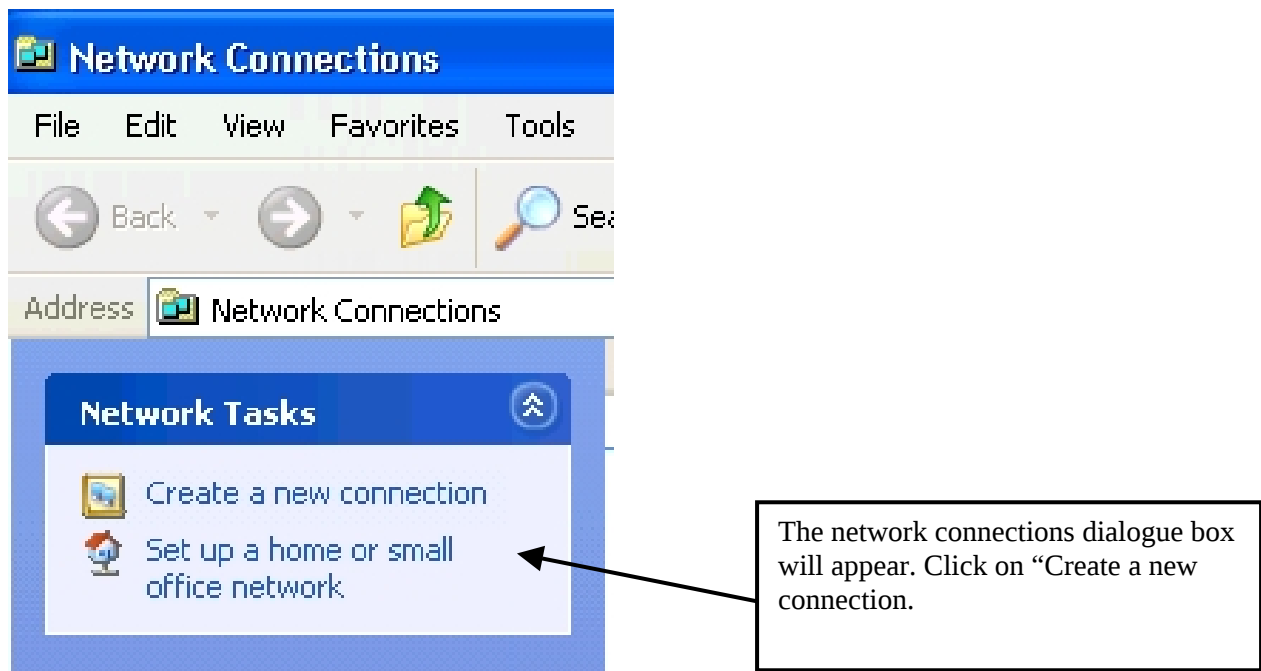
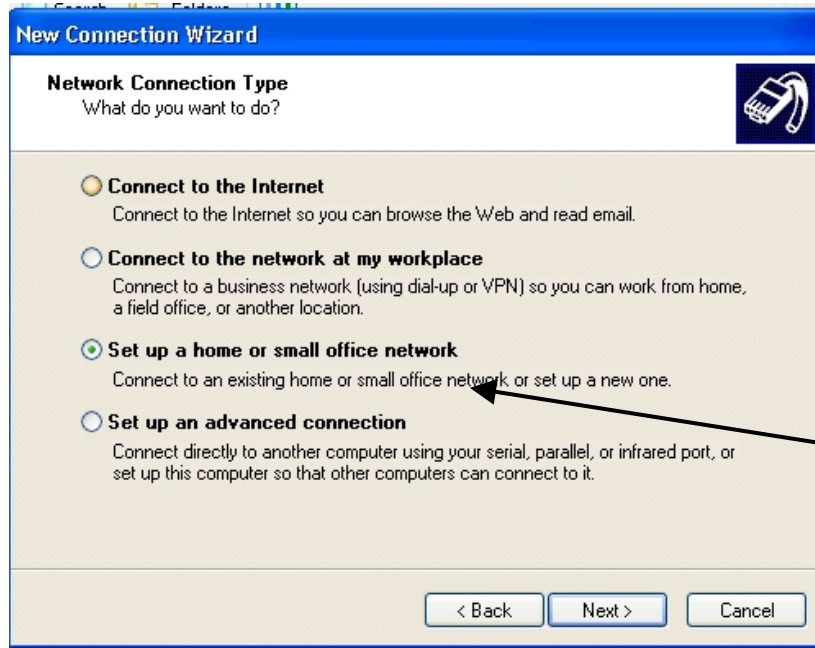
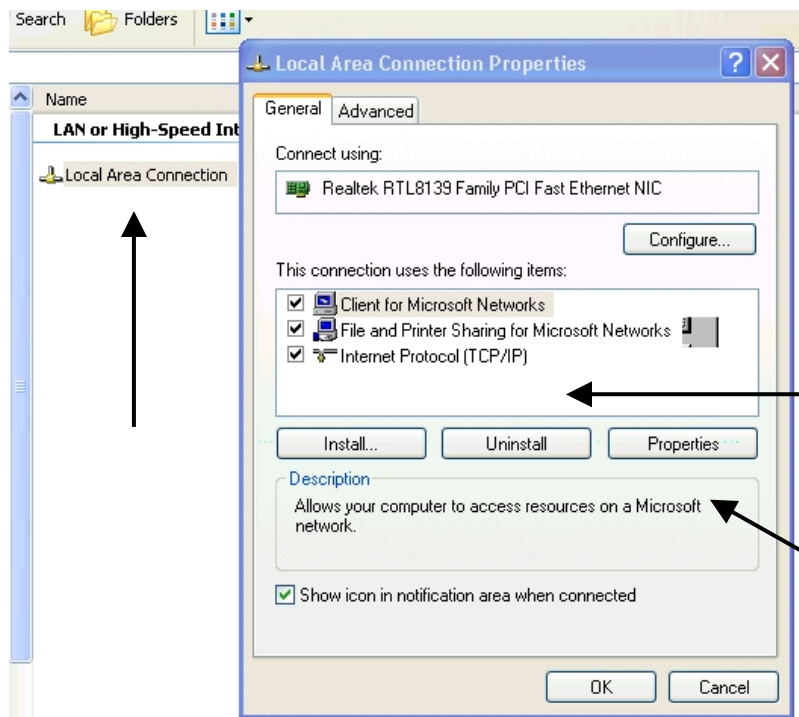


Figure 215 Creating a new connection

6. Networking Notes



The Network Connection Wizard will appear. Click on set up a home or small office network. Then click Next >.

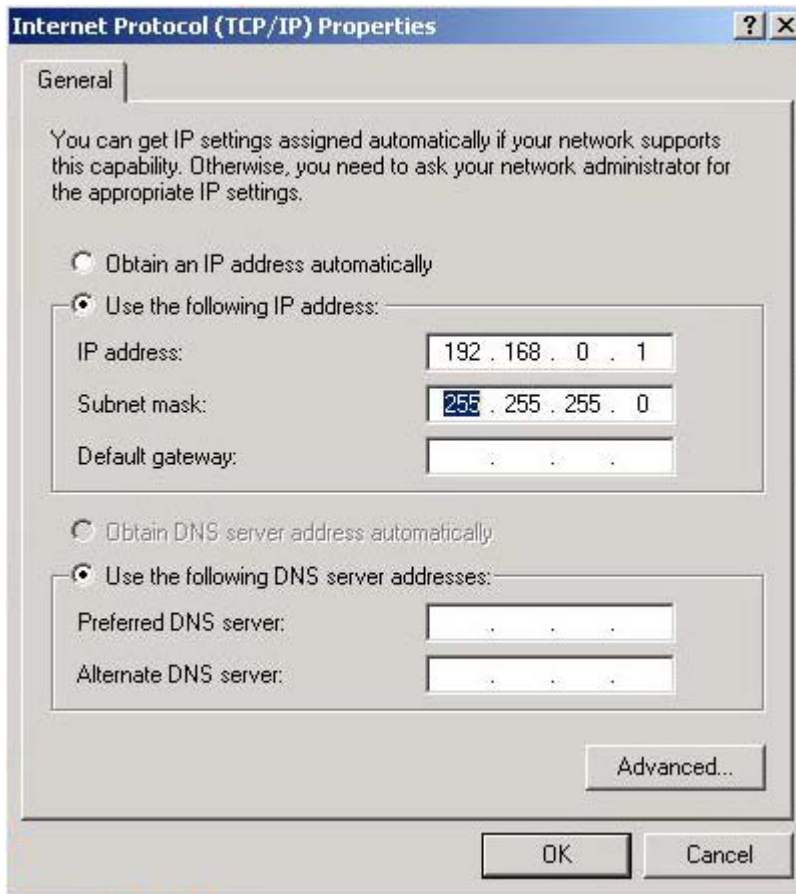


Right click on your local area connection and insure that the following items are available. Click on the Internet Protocol and click Properties.

Figure 216 Network connection wizard

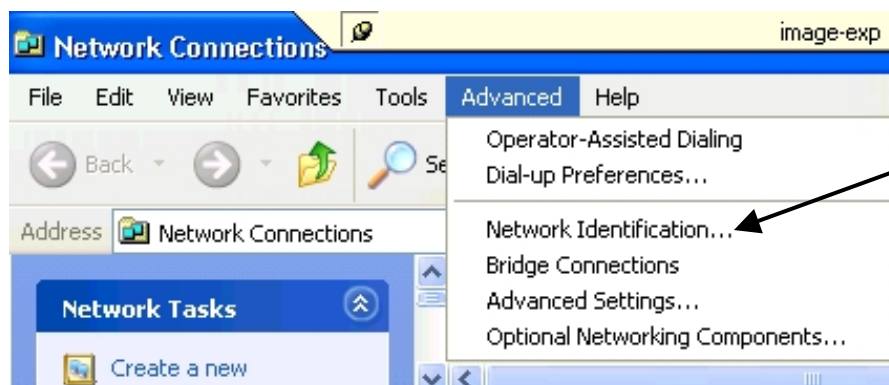


6. Networking Notes



Click “use the following IP address and set up an IP address. Each controller must have a unique IP address. If there are other devices on the network, consult your network administrator to be sure you do not use an IP address that is already in use on the network. In this example a local only IP address is used. Add a subnet mask that corresponds with your IP address.

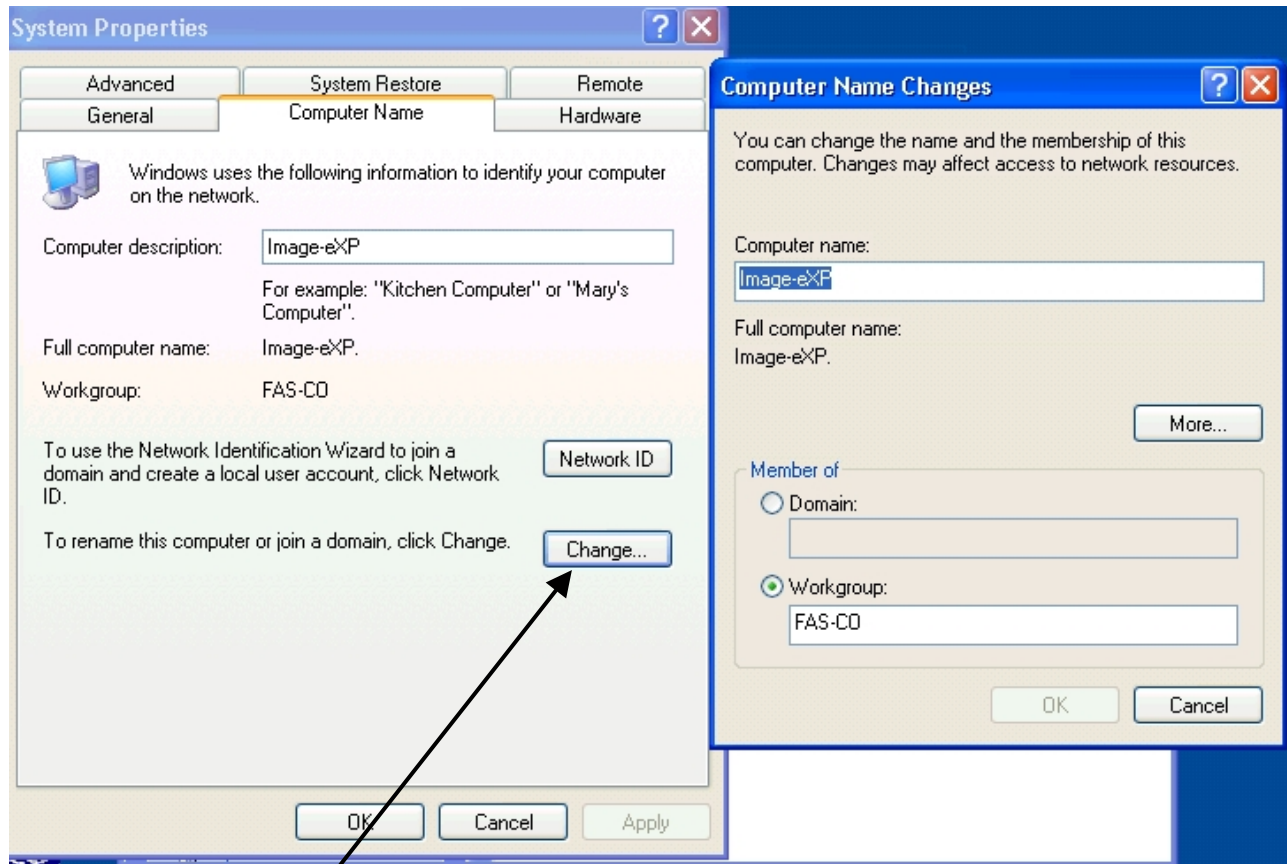
Figure 217 TCP/IP Properties



Click on the Advanced pull down menu and click Network Identification to bring up the System Properties.

Figure 218 Network Identification

6. Networking Notes



Click on change and to bring up the computer name change box.

DO NOT JOIN A DOMAIN. The embedded version of WINDOWS XP will crash if you try it You may access a domain if you use your domain or for the workgroup. Be sure use a password and user name that matches your domain.

Be sure each computer or controller on the network has a unique name. Change the name if necessary. Workgroup name must be the same for all computers in the network.

Figure 219 Changing computer name and workgroup

Click ok on all dialogue boxes and restart your computer.



6. Networking Notes

Adding a computer to your NetJet Network



Figure 220 Add computer Dialogue boxes

In order to print a message created with NJEditor you must open it with NJ processor. Follow the steps below to print your message.

<u>Instruction</u>	<u>Action</u>	<u>Result</u>
1.	Click on the NetJet network icon.	A dialogue box will appear (see above)
2.	Click on the <u>A</u> dd computer selection	The add computer dialogue box will appear (Figure 104A)
3	Enter the Computer name of the print controller you will use. If you are printing from the controller, use the computer name of your controller. The computer name is found in the Identification tab of in START Control Panel network. of the controller you are trying to connect to. Contact your network administrator if your are not sure of a controller name to connect to. After you have entered the computer name, Click OK.	A computer symbol will appear with the name of the computer next to it Note: If you wish to connect to the same computer the next time you start up, click the "Connect at startup" box. The default is to connect as the current network user—be sure you are logged in. It may be necessary to connect as a different user to access some messages. If you desire to connect as another user, Click on the "Connect as" box and enter your password, username and domain.



6. Networking Notes

Using the Ping command in Windows 98 for network testing

Note: As of 11/03/2003 TCP/IP utilities are not available in Windows XP Embedded

Open a DOS window. In Windows 98 you may do this by selecting Start—Run—and then typing “command” in the open box and clicking on OK.

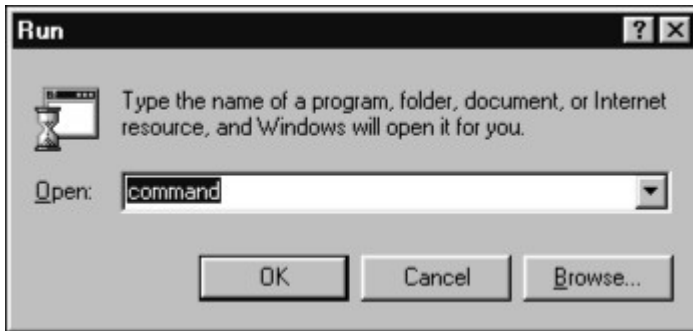


Figure 221 Opening a DOS window in Windows 98

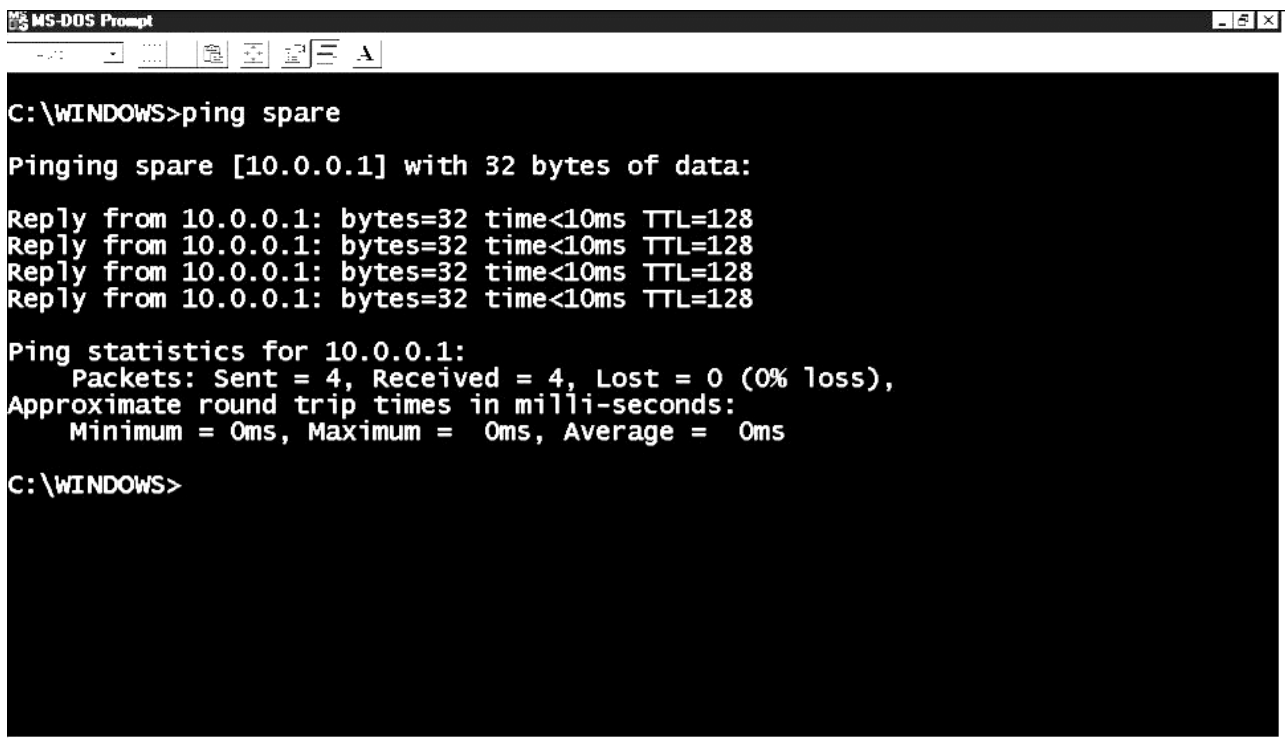


Figure 222 Using the Ping command

You may use the ping command to check your TCP/IP network. Type the computer name or TCP/IP address of the computer you are checking.—starting with your own computer. If you are able to ping the IP address but not the name check your hosts and Lmhosts files. If you are not able to ping the TCP/IP address recheck you TCP/IP installation as shown above. Remember these instructions are only for setting up an independent network. DO NOT set up this type of network on a network connected to the Internet or other computers without expert advise.



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