

Installation Instructions

P/N 1-960475-00
Edition 1
May 2000

EasyLAN 100i Ethernet Interface Board

 **ntermec**
Technologies Corporation

A **UNOVA** Company

1. Introduction

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*Intermec EasyLAN 100i
Installation Instructions
Edition 1, May 2000
Part No. 1-960475-00*

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Description

Attaching your EasyCoder 501XP, 601XP, F2 & F4 label printers to the network has just become easier with Intermec's EasyLAN 100i Ethernet interface. In addition, the EasyLAN 100i interface board provides you with the most advanced network management capabilities ever offered. The EasyLAN 100i interface is designed to accommodate your network. With the most robust network systems support ever offered your label printers will be up and running on your network in minutes.

Save time, space and money by putting the printer where you need it. No need for a dedicated PC work-station or long serial or parallel cables. Simply locate your label printer in the most efficient place for your business, connect your RJ-45 network cable to the printer and begin printing. Now you can print from workstations or servers anywhere across the LAN, WAN, Intranet, or Internet. In addition, you can monitor the status of print jobs from your Intranet or Internet, any place any time using your favorite web browser.

Now you can take full advantage of the incredible bandwidth of your 100baseTX Fast Ethernet network infrastructure. When you combine the EasyLAN ETRAX 100 network processor with the EasyCoder 501XP, 601XP, F2, or F4's 32 bit RISC processor, print jobs, including complex labels with bar codes, text and graphics, are sent to the printer at lightning speed providing you with full rated printer performance.

When your business depends on your label printer, you can depend on the Intermec EasyLAN 100i Ethernet network interface board to provide you with dependable service and advanced management capabilities.

Printer Firmware

The printer must be fitted with Intermec Fingerprint v. 7.31 or later. The Ethernet port is addressed as device "net1:" (communication channel #5).

Installation Kit

The EasyLAN 100i kit contains:

- One EasyLAN 100i Ethernet interface board.
- One cover plate (used in EasyCoder XP-series printers only).
- One flat cable (used in EasyCoder F-series printers only)
- One CD-ROM with software and manuals
- This Installation Instruction booklet

The only tools required for the installation are #T10 and #T20 Torx screwdrivers.

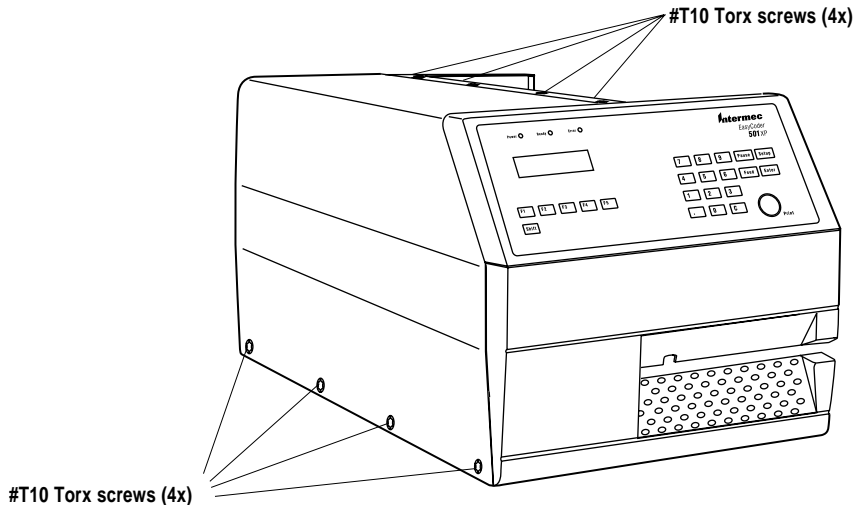
2. Physical Installation

If the EasyLAN 100i interface board already is installed in your printer, please bypass this chapter and continue at chapter 3.

EasyCoder XP-Series

This description applies to Intermec EasyCoder 501 XP and Intermec EasyCoder 601 XP only.

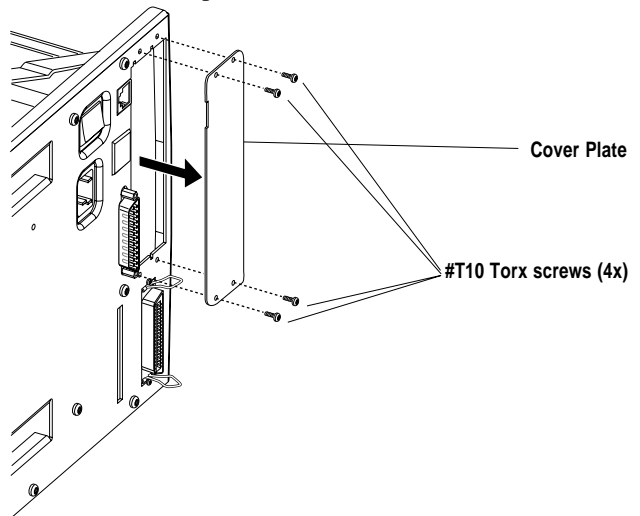
- **Important!** Turn off the power and disconnect the power cord. *The electronics compartment contain high voltage components and wires. Do not open the electronics compartment before the printer is safely disconnected from any mains supply.*
- Open the right-hand door.
- Remove the four #T10 Torx screws along the lower edge of the cover over the electronics compartment.
- Remove the four #T10 Torx screws that hold the upper edge of the same cover.



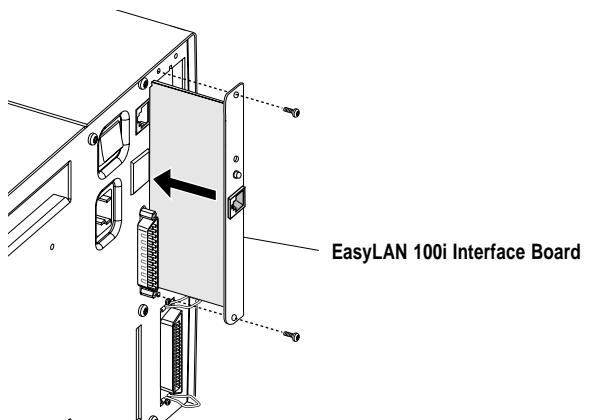
- Remove the cover and put it aside e.g. on a soft cloth to avoid scratches.

EasyCoder XP-Series, cont'd.

- Remove the four #T10 Torx screws that hold the interface cover plate above the Centronics connector on the printer's rear plate. Remove the cover plate.



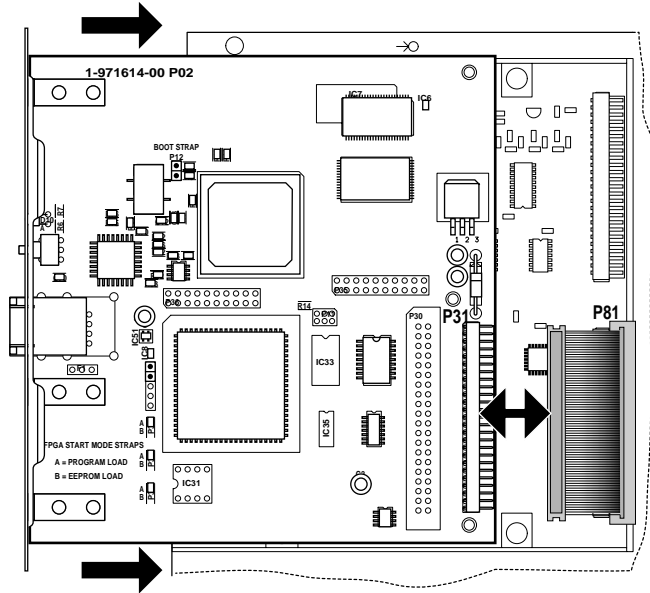
- Save the cover plate for possible later use. Keep the screws.
- Insert the EasyLAN 100i interface board with the components side facing right, as seen from behind. Check that the board fits into the two square cut-outs on the left side of the slot.



- Attach the EasyLAN 100i interface board to the printer's rear plate by means of two of the screws left over when you removed the original cover plate.

EasyCoder XP-Series, cont'd.

- Using the remaining two screws, attach the narrow cover plate included in the delivery so it covers the right side of the slot.
- Connect the cable running from **P81** on the CPU board to connector **P31** on the Ethernet Interface Board.



- Put back the cover over the electronics compartment. Press firmly to compress the leaf springs along the front and rear edges of the electronics compartment.

Now you have one physical network connection on the printer's rear plate in addition to the standard serial interface "uart1:" and the standard parallel interface "centronics:". Please continue at chapter 3 for instructions on how to establish communication with the TCP/IP network.

EasyCoder F-Series

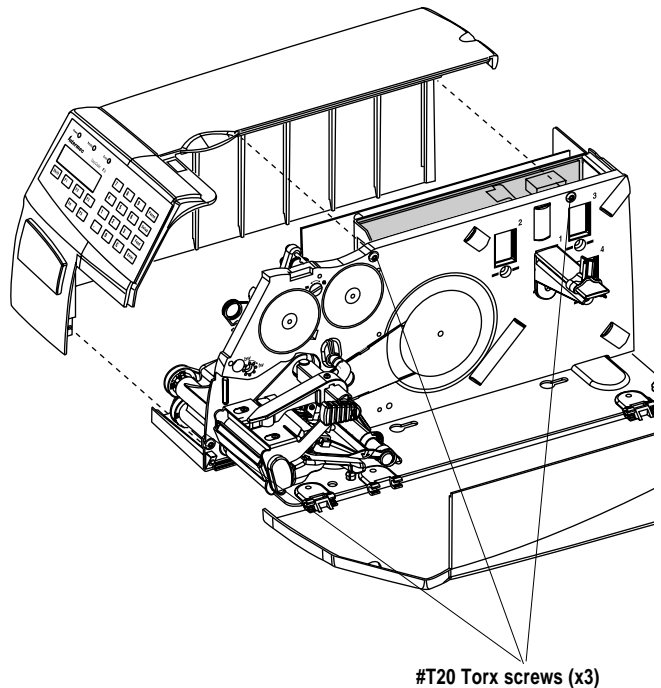
This description applies to Intermec EasyCoder F2 and Intermec EasyCoder F4 only.

- Open the electronics compartment by removing the front/left-hand cover, which is held by three (3) #T20 Torx screws from the paper compartment side of the centre-line wall.

- **Important!**

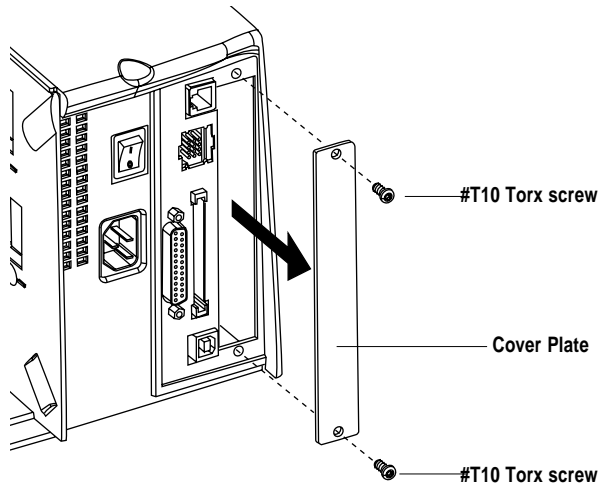
Turn off the power and disconnect the power cord.

The electronics compartment contain high voltage components and wires. Do not open the electronics compartment before the printer is safely disconnected from any mains supply.

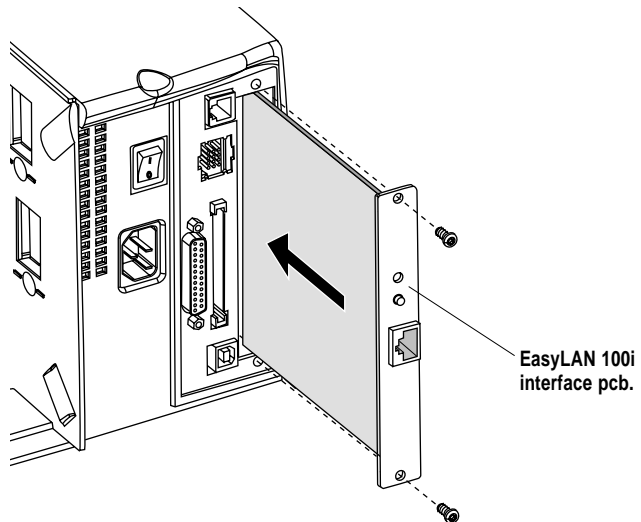


EasyCoder F-Series, cont'd.

- Remove the two #T10 Torx screws that hold the interface cover plate on the printer's rear plate. Remove the cover plate.

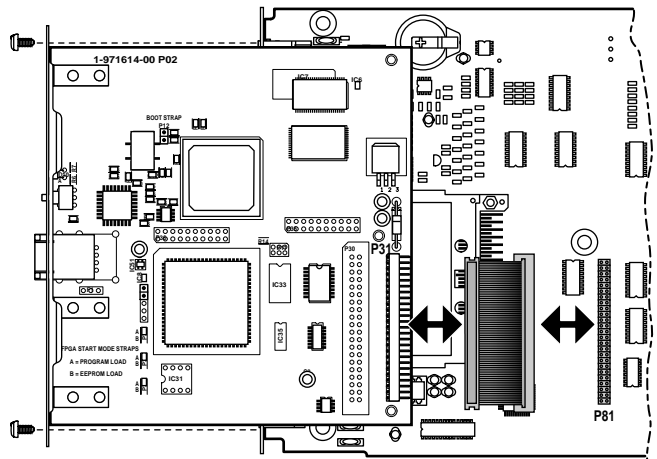


- Save the cover plate for possible later use. Keep the screws.
- Insert the EasyLAN 100i interface board with the components side facing right, as seen from behind.
- Attach the EasyLAN 100i interface board to the printer's rear plate by means of the two screws left over when you removed the original cover plate.

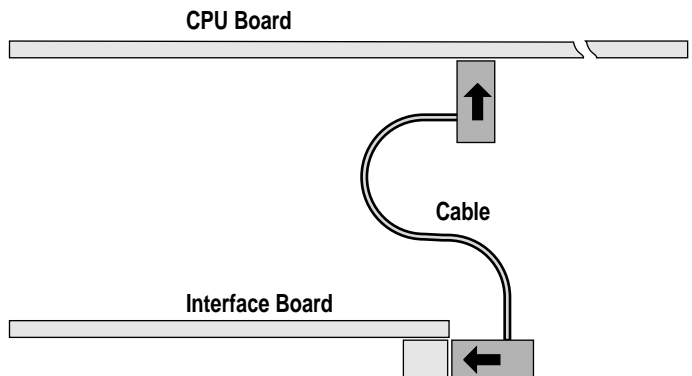


EasyCoder F-Series, cont'd.

- Connect the flat cable included in the kit between connector **P81** on the CPU board and connector **P31** on the interface board.



- Make sure the cable runs as illustrated below.



- Put back the cover over the electronics compartment.

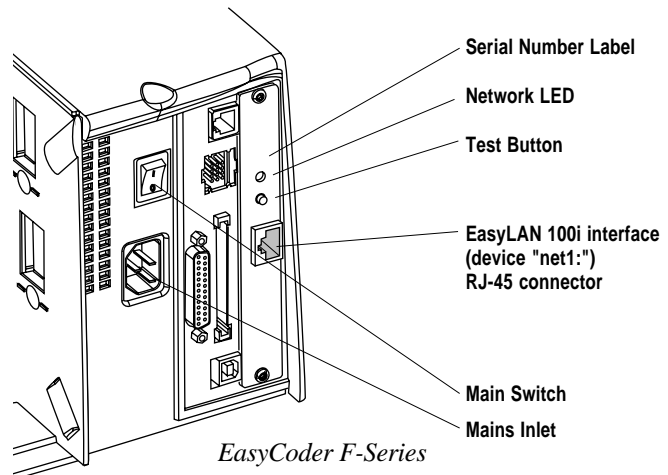
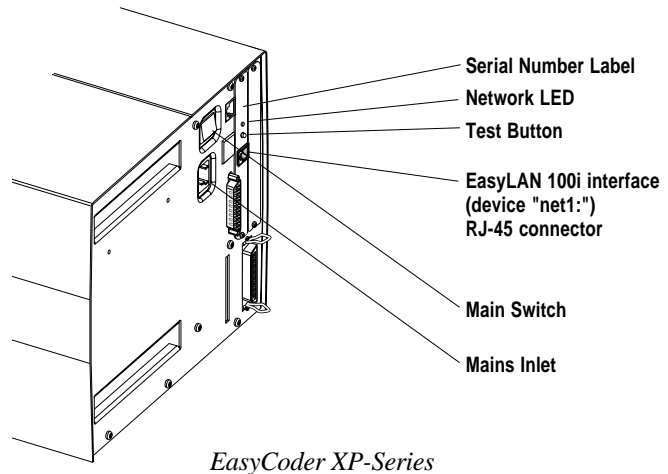
Now you have one physical network connection on the printer's rear plate in addition to the standard serial interface "uart1:". Please continue at chapter 3 for instructions on how to establish communication with the TCP/IP network.

3. Connection

Connecting Printer to Network

Follow the instructions below to connect the printer to the network via the EasyLAN 100i interface board:

- Using a category 5 unshielded twisted pair cable (or better), connect the EasyLAN 100i interface board to your Local Area Network (LAN).
- Connect the power cord and turn on the power to the printer.



4. Communication Setup

Assigning an IP Address

Always consult your network administrator before setting the IP address!

There are two main methods for assigning an IP address:

- Via the printer's built-in keyboard and the Setup Mode.
This method is described in this chapter.
- Remotely from the host computer.
This method is described in the Intermec EasyLAN 100i User's Manual, which can be found in the CD-ROM included in the kit.

Setting the IP address manually from the Setup Mode

Before starting this procedure, ask your network administrator for the following settings:

- IP address
- Netmask
- Default router

- Press the **Setup** key on the printer's built-in keyboard. This message appears in the display window:

SETUP :
SER-COM, UART1

- Press the **F4** key and the following message appears:

SETUP :
NETWORK

- Press the **Enter** key. The display shows:

NETWORK :
IP SELECTION

- Press the **Enter** key. The display shows one of the following messages:

IP SELECTION :
DHCP

BOOTP

RARP

MANUAL

Use the **F4** or **F5** key to scroll in this loop of options. When **Manual** is displayed, press the **Enter** key. The option you have selected will appear first next time you enter this loop.

Assigning an IP Address, cont'd.

- The display shows:

```
NETWORK :  
IP ADDRESS
```

- Press the Enter key. The display shows for example:

```
IP ADDRESS :  
192.168.1.79
```

- Use the numeric keys and the period key to enter the desired IP address. (The **C** key clears the last entered digit.) When finished, press the **Enter** key.

```
NETWORK :  
NETMASK
```

- Press the **Enter** key. The display shows for example:

```
NETMASK :  
255.255.255.0
```

- Similar to the IP address, enter the desired netmask, then press the **Enter** key.

```
NETWORK :  
DEFAULT ROUTER
```

- Press the **Enter** key. The display shows for example:

```
DEFAULT ROUTER :  
192.168.1.1
```

- Similar to the IP address and netmask, enter the address of the default router (gateway), then press the **Enter** key.

```
SETUP :  
NETWORK
```

- Press the Setup key to leave the Setup Mode. Now the printer is logically connected to your local network (LAN).

Assigning an IP Address, cont'd.

Setting the IP address automatically from the Setup Mode

In addition to setting the IP address manually, as described above, there are three methods for making the network server automatically assign an IP address for your EasyLAN 100i printer.

- DHCP
- BOOTP
- RARP

Method	UNIX	Windows	Comments
DHCP	X	X	Automatic but temporary assignment of IP addresses from a central pool. IP address may change unexpectedly, e.g. after a power off.
BOOTP	X		Similar to RARP, although can operate on the entire network.
RARP	X		Downloads the IP address automatically.

- Press the **Setup** key on the printer's built-in keyboard. This message appears in the display window:

```
SETUP :
SER-COM, UART1
```

- Press the **F4** key and the following message appears:

```
SETUP :
NETWORK
```

- Press the **Enter** key. The display shows:

```
NETWORK :
IP SELECTION
```

- Press the **Enter** key. The display shows one of the following messages:

```
IP SELECTION:
DHCP
  BOOTP
    RARP
      MANUAL
```

Use the **F4** or **F5** key to scroll in this loop of options. When **DCHP**, **BOOTP**, or **RARP** is displayed, press the **Enter** key. By selecting DCHP, BOOTP, or RARP, that option will be enabled, which you can see if you open the printers home page (*Configuration; Network Interface; TCP/IP*). The option you have selected will appear first next time you enter this loop.

Choosing the "Manual" option will disable DHCP, BOOTP, or RARP.

Assigning an IP Address, cont'd.

- The display shows:

```
IP SELECTION:  
IP ADDRESS
```

- Press the **Enter** key. The display shows for example:

```
NETWORK :  
IP ADDRESS
```

- Press the **Enter** key. The display shows for example:

```
IP ADDRESS :  
192.168.1.79
```

- Read the automatically assigned IP address. When ready, press the **Enter** key.

```
NETWORK :  
NETMASK
```

- Press the **Enter** key. The display shows for example:

```
NETMASK :  
255.255.255.0
```

- Read the automatically assigned netmask address. When ready, press the **Enter** key.

```
NETWORK :  
DEFAULT ROUTER
```

- Press the **Enter** key. The display shows for example:

```
DEFAULT ROUTER :  
192.168.1.1
```

- Read the automatically assigned default router address. When ready, press the **Enter** key.

```
SETUP :  
NETWORK
```

- Press the Setup key to leave the Setup Mode. Now the printer is logically connected to your local network (LAN).

Refer to next page for an overview of the parts of the Setup mode used in connection with setting up the EasyLAN 100i interface board. A full description of the Setup Mode can be found in the Installation & Operation manual for the printer model in question.

Reading an Assigned IP Address

If you want to read an IP address that has already been assigned – either manually or automatically – without changing any settings, proceed as follows:

- Press the **Setup** key on the printer's built-in keyboard. This message appears in the display window:

```
SETUP :
SER-COM, UART1
```

- Press the **F4** key and the following message appears:

```
SETUP :
NETWORK
```

- Press the **Enter** key. The display shows:

```
NETWORK :
IP SELECTION
```

- Press the **F5** key. The display shows:

```
NETWORK :
IP ADDRESS
```

- Press the **Enter** key. The display shows for example:

```
IP ADDRESS :
192.168.1.79
```

- Read the IP address. When ready, press the **Enter** key.

```
NETWORK :
NETMASK
```

- Press the **Enter** key. The display shows for example:

```
NETMASK :
255.255.255.0
```

- Read the netmask address. Then, press the **Enter** key.

```
NETWORK :
DEFAULT ROUTER
```

- Press the **Enter** key. The display shows for example:

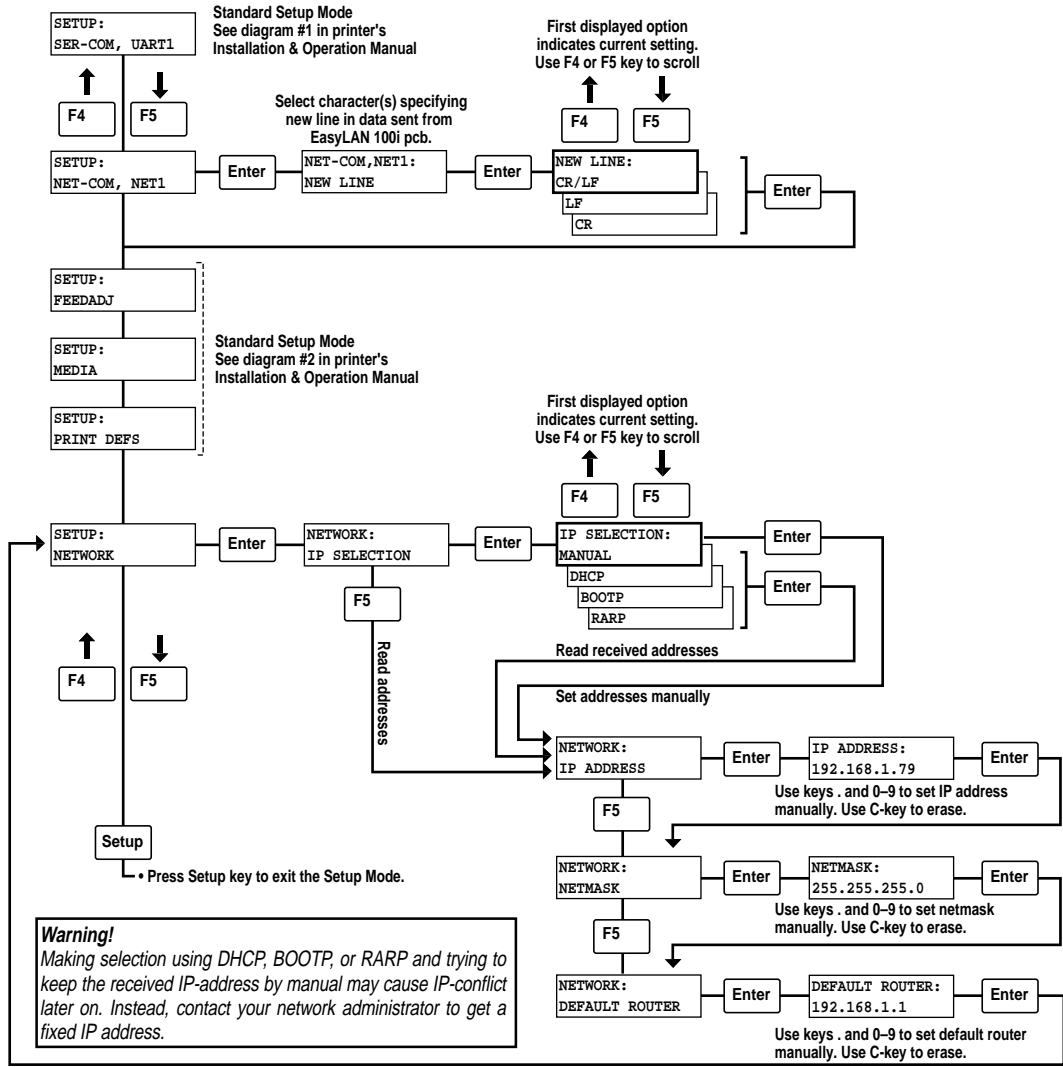
```
DEFAULT ROUTER :
192.168.1.1
```

- Read the default router address. Then, press the **Setup** key to leave the Setup Mode.

Setup Mode Overview

The diagram below illustrates the hierarchy of setup options that are added to the Setup Mode when an EasyLAN 100i interface board is installed in the printer.

Like most other options in the Setup Mode, these options can be changed using setup strings and files or read using SETUP WRITE statements.



Printing Test Label #6

You can easily check the IP address and other network setup parameters by printing a test label. When an EasyLAN 100i interface board is fitted, a sixth test label becomes available. You can print test label #6 either via the Setup Mode or via a Fingerprint application.

Setup Mode

- Enter the Setup Mode by pressing the **Setup** key on the printer's built-in keyboard. The display shows:

```
SETUP
SER-COM, UART1
```

- Press the **F5** key repeatedly until the following menu appears:

```
SETUP :
PRINT DEFS
```

- Press **Enter**. The display shows:

```
PRINT DEFS :
HEAD RESIST
```

- Press the **F5** key. The display shows:

```
PRINT DEFS :
TESTPRINT
```

- Press **Enter**. The display shows:

```
<ENTER> = PRINT :
<F5> = NEXT #1
```

- Press the **F5** key repeatedly until the display shows:

```
<ENTER> = PRINT :
<F5> = NEXT #6
```

- Press the test button on the rear plate of the EasyLAN 100i interface board and keep it depressed while pressing **Enter** on the printer's keyboard. The test label is printed.
- Press the **Setup** key to leave the Setup Mode.

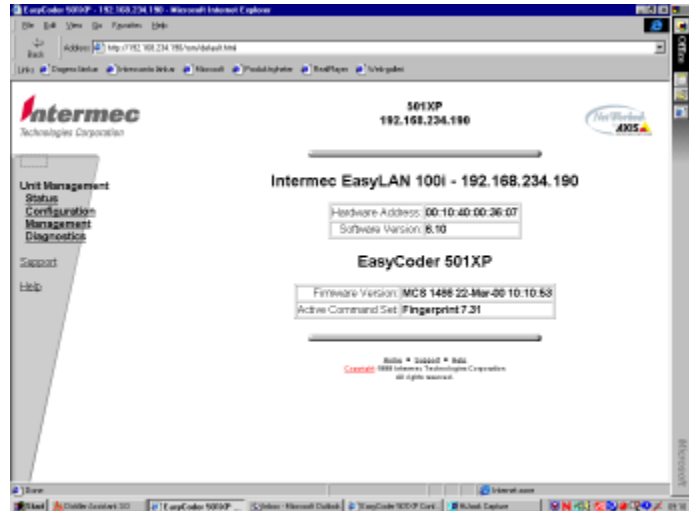
Fingerprint application

```
IMMEDIATE ON
OPEN "status:" FOR INPUT AS #1
IF LOC(1)<>0 THEN SETUP "PRINT_DEFS,<ENTER>=_PRINT,<F5>=_NEXT_#6"
IMMEDIATE OFF
RUN
```

Checking the Communication

When the printer has been physically and logically connected to the network, the LED control lamp above the RJ-45 connector on the EasyLAN 100i interface board will flash indicating network activity.

You can now use your favourite web browser to call up the home page of the printer by means of the its IP address. It will, for example, look like this:



Refer to the Intermec EasyLAN 100i User's Manual included on the CD-ROM that comes with the kit for explanations of how to use the home page to set up the printer, control the communication, and manage the printing.

Note:

The standard home page is stored as a number of files in the printer's permanent memory ("rom:"). It is also possible to create a custom-made home page as described in separate documentation to be published shortly.