

PRODUCT MANUAL

**Electronic Displays Inc.
135 South Church Street Unit A
Addison , IL 60101**

Addressable Serial Interface 5 Digit Display

PRODUCT PART NUMBER :

**ED402 – ETH – 5D – N14.0” HIGH DIGITS
ED202 – ETH – 5D – N12.25” HIGH DIGITS**

DESCRIPTION :

- **2.25” or 4.0”, Five-digit, 10 Base T Ethernet display.**
- **NEMA 1 aluminum enclosure.**

OPERATION :

This model is designed to receive serial data from the Ethernet to serial card located inside the display. The display is factory set to 1200-Baud; no parity; 1stop bit and 8 data bits with address 01. See appendix E for more details.

**If there are any questions or comments regarding this order , please call
our toll-free number : 1 - 800 - 367 - 6056**

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Unpacking Instructions:

A copy of these instructions is packed with each unit. Open carefully to avoid scratching the unit's paint and plastic lens or cutting the line cord.

Mechanical Mounting Instructions:

This unit is equipped with two rivnuts in the top of the unit for mechanical mounting purposes. The bolts that are screwed into these rivnuts are standard 5/16 by 1 1/4" bolts. To avoid damaging the rivnuts, do not tighten these bolts more than 10 ft/lbs.

Power Requirements:

This unit is equipped with a standard, eighteen-gauge, three-wire line cord that is designed to be plugged into a standard, 120 VAC, 60 Hertz, grounded outlet. The maximum current draw at 120 VAC for ED400-111-4D-N1 is 1 Ampere and for ED225-111-4D-N1 is 3/4 ampere.

Signal Requirements:

Your unit has serial input interface RS-232, the standard communication format for this unit is 1200 bits per second (baud rate) with one start bit, eight data bits, no parity, and one stop bit per character. The expected sequence of characters is specified in a later section of this manual entitled 'Protocol'.

Label Definitions:

The following page shows some commonly used labels and their definitions.

LABEL	DEFINITION
DATA	To connect data wire from your RS-232 signals
GND	To connect ground wire from your RS-232 signals

Power-up Response:

Upon power up, the display will show a test pattern until data is received. This pattern will show the address, baud rate and data parameters (no parity, 8 data bits, 1 or 2 stop bits.) See appendix C for power up descriptions.

Addressing:

Factory set @ 01 unless multiple units were shipped (address 02, 03 ...nn). (In order to communicate always use 2 digit address – 01)

See appendix C for address switch settings.

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IP Addressing: INSTALLATION:

WARNING – SHOCK HAZARD

Always completely disconnect power from the display before opening the unit. Do not reapply power to the display until the unit has been securely closed.

I: Initial Setup:

NOTE: DURING THIS PROCEDURE, DO NOT POWER UP UNIT UNTIL INSTRUCTED TO DO SO!

1. Place unit on table near a PC or Laptop used only for initial configuration.
NOTE: PC must have a 10 base T or 10/100 base T network card installed and must be configured for Auto Detect or 10 Megabits only. (Please refer to your Network Card Manual if you need to change this.) This PC should be running Windows 98/ME/2000, /XP/NT 4.0.
2. Attach one end of the supplied crossover cable the Ethernet device located on the right endplate.
3. Connect the other end to the network in the PC (See Diagram in Figure 1).
4. Power up the unit with 110 VAC.
5. Insert the 3.5" floppy disk into your floppy drive. Navigate to the floppy drive and you will find IPUTIL.EXE. Double click on the IPUTIL.EXE
6. Run IPUTIL and you should see all the network settings that were set to the EDI Ethernet device.
7. Highlight the Device you would like to change and Click Change IP Address...(See Figure 2)
8. This screen allows you to enter the Subnet Mask, the IP address, and the Gateway. (These settings will have to be obtained from your IT department). **NOTE: THE SAME IP ADDRESS CANNOT EXIST MORE THAN ONCE ON THE SAME NETWORK!**
9. Enter the settings and click OK. The Ethernet device will reset in 5 seconds.
10. Remove power and all cables.

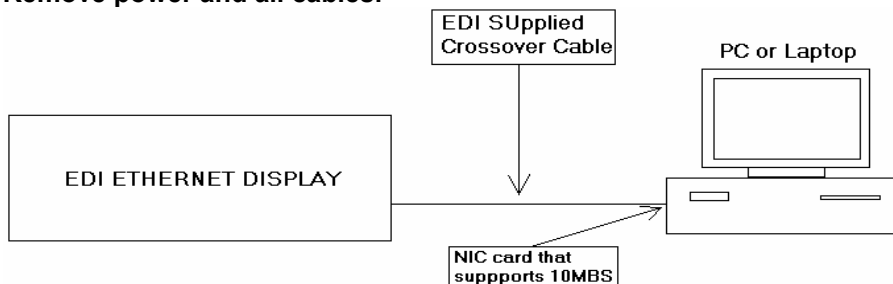


FIGURE 1:

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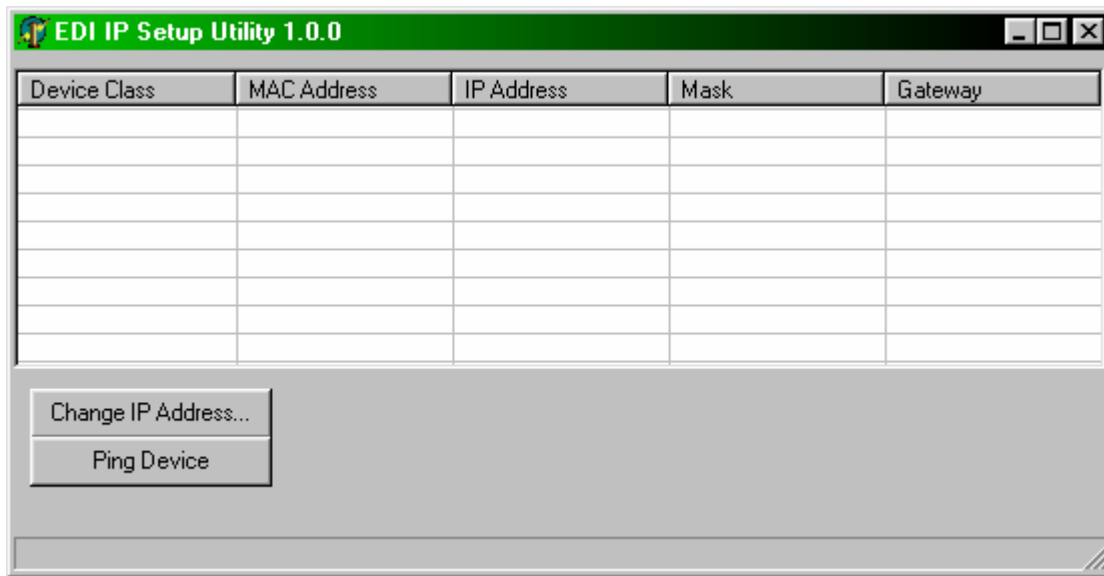


FIGURE 2

II. Final Configuration:

1. Connect one end of a CAT5E cable to our display's RJ-45, Ethernet connection.
2. Run the other end to a Hub on your network. Plug the RJ-45 into the hub that supports 10MBPS.
NOTE: The wire positions on this end must be the same as the other end to create a "Pass Through" cable.
3. The unit is now ready to be mounted.
4. Mount to a structure using one of the following methods:
 - Wall mount
 - Hang mount

This Ethernet device is equipped with RS485 serial output to the display.

Other Important Notes:

These Ethernet adapters were tested on a Windows N.T. 4.0 server network. The actual workstations operating systems these devices would communicate to were as follows:

- Windows 98/NT/2000/ME/XP

All other operating systems have not been tested.

Disclaimer.

Although our Ethernet units will support gateways, we cannot provide technical support due to the amount and variety of network configurations when using gateways. Please contact your IT department for technical support when using gateways.

Protocol:

See Appendix E.

Appendixes:

APPENDIX E

PROTOCOL FOR NUMERIC DISPLAYS

ASCII CODE	VALUE (Decimal)	FUNCTION
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STX	2	'Start of text', also known as a 'control B', this character must be the first character of each message
AD1	48-57	These two ASCII decimal digits represent the address of the display as set on the display. See appendix C for address setting information
AD2	48-57	
DATA	48-57	Numeric value to be displayed in ASCII decimal digits. It is also permissible to include space characters (character value 32 decimal), minus sign characters (character value 45 decimal), and one decimal point character (character value 46 decimal) with the digits.
ETX	3	'End of text', also known as a control C, this character must be the last character of each message

Example:

To set the display that has an address of '07' to a value of "1234", the following **<STX>071234<ETX>**

NOTE: the <>'s are not to be included in the message.

or from a terminal program such as PCPLUS, Hyper-terminal, or a TELNET screen if the display has the Ethernet Option.

character sequence should be sent:

'control B' "01" "1234" 'control C' (a total of eight characters)

The leading zeros will remain blank in all cases.

Factory set @ 1200BPS ; No parity ; 8 Data bits ; 1 or 2 Stop bits.

Service:

There are no parts in your unit classified as 'user serviceable' parts. The plastic or glass cover can be cleaned using a soft cloth and a gentle glass cleaning solution.

Warranty:

The standard warranty for all products is one year on all parts and labor at our facilities. All products are designed and manufactured by Electronic Displays Inc. If you need assistance, please call or FAX us and we will be happy to provide technical assistance. If you feel that your unit needs repair, please call us first and then ship the unit to:

Electronic Displays Inc.
135 South Church Street
Unit A
Addison, Ill. 60101

Attn: Repair department

Our telephone number is: (630) 628-0658

Our FAX number is: (630) 628-0936