PRODUCT MANUAL

ELECTRONIC DISPLAYS INC.

135 S. CHURCH STREET
ADDISON, ILL. 60101

ED012 - 2005 – N1- SR2

DESCRIPTION :

- **Indoor, static 1.2 in. high message sign**
- **Two lines of red A/N text ; 20 characters / line**
- **NEMA 1 enclosure; black powder coat finish**
- **POWER REQUIREMENTS:120 VAC@60 HZ; 6 ft. line cord provided**

OPERATION :

This indoor, static marquee is 20 characters long. Serial input via a PC / PLC is RS422 @ 1200BPS; no parity: 8 data bits ; 1 or 2 stop bits. Standard ASCII text is used for communication. Message Pro Software provided to communicate to the display. See software operation later in this manual.

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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 mounting brackets attached to the rear of the unit.The unit is designed to hang from a support or attached to a wall or support.

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 for this unit (at 120 VAC) is _2.0_ Amperes.

Signal Requirements:
If your unit has serial input (either RS-232, RS-422, RS-485, etc.), 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'.

Product Components:
See appendix A.

Wiring Diagram:
See appendix B.

Label Definitions:
The following page shows some commonly used labels and their definitions. Not all of these labels will be found in your unit.

LABEL	DEFINITION
RX+	Positive side of balanced data line for RS-422 or RS-485 serial input signals
RX-	Negative side of balanced data line for RS-422 or RS-485 serial input signals
DATA	Positive side of balanced data line for RS-232 serial input signals
GND	Negative side of balanced data line for RS-232 serial input signals
AC	Typically 10 to 12 VAC from EDI supplied transformer

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Power-up Response:

When power is first applied to this unit, the display will show "a = XX b = YYYY" on each line until a message is sent. Where "XX" is the two digit address and "YYYY" is the baud rate.

Addressing:

These signs were set to address '01', '02', and '03' at the factory.

Software Operatrion:

See Appendix E for details on protocol.

Message Pro 2.XX Static Operation

INSTALLATION:

Insert CD into your CD-ROM drive.
Browse the drive letter of the CD-ROM drive.
Double click on SETUP.EXE.
The installation wizard will guide through the rest of the process of installation.

COMMUNICATIONS SETUP:
   COMPORT SETUP:

After software is installed, open it then go to the options tab. A drop down menu will appear and select Communications Setup. Select the COM port that your PC is using and set the Baud Rate to 1200. Then click OK. See Figure 1.
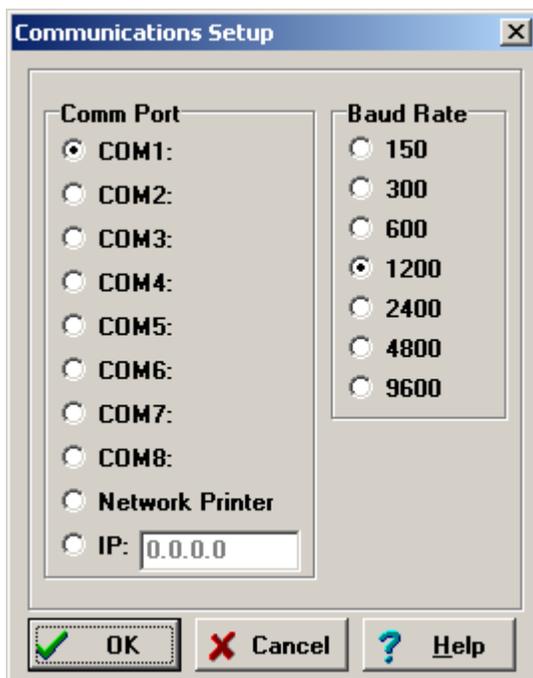

FIGURE 1:

IP SETUP:

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After software is installed, open it then go to the options tab. A drop down menu will appear and select Communications Setup. Select the IP address of the unit and type it in to the IP: box. See Figure 2.
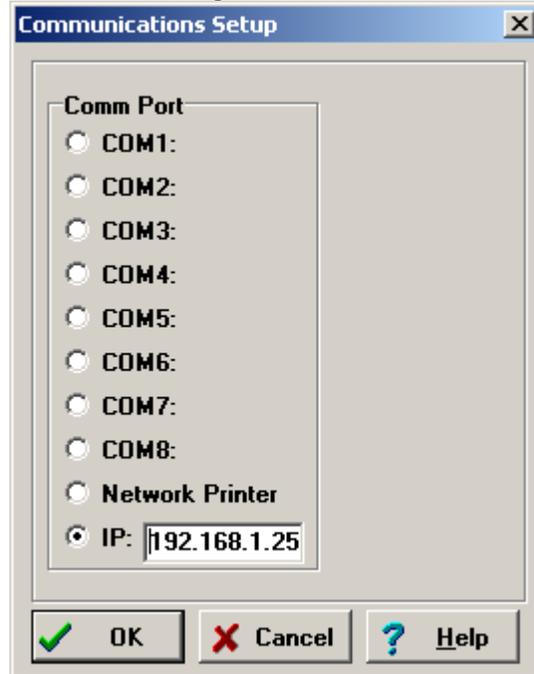

FIGURE 2:

OPERATION:
Next, go to the Static tab on top of the screen. Select the length of your display, the starting address of display (usually 1), and the number of lines to send. If you want the program to automatically center the text, select the Center Display Box. Otherwise leave this box unchecked and the all the text in the fields will be right justified on the display. See FIGURE 3 on the following page.

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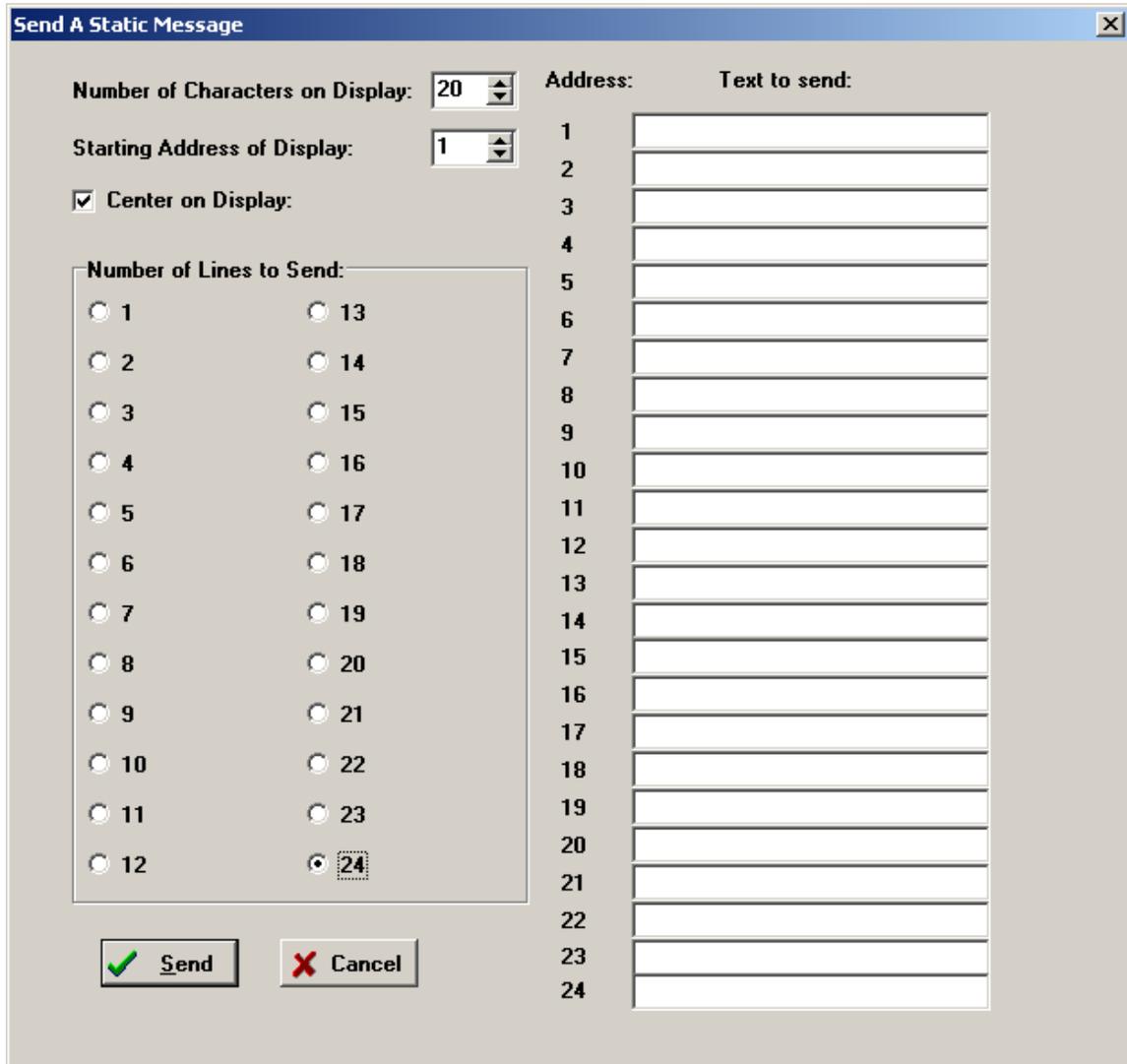
Send A Static Message ☒

Number of Characters on Display: `20` ⬍   Address: Text to send:

Starting Address of Display: `1` ⬍

☑ Center on Display:

Number of Lines to Send:

○ 1	○ 13
○ 2	○ 14
○ 3	○ 15
○ 4	○ 16
○ 5	○ 17
○ 6	○ 18
○ 7	○ 19
○ 8	○ 20
○ 9	○ 21
○ 10	○ 22
○ 11	○ 23
○ 12	⦿ 24

1
2
3
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24

✓ **Send**   ✗ **Cancel**

After the text is typed in the text fields, click on the Send button or press ALT-S, and the data in the text fields will be sent to the display.

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

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Addison, Ill. 60101
Attn: Repair department

Our telephone number is:
   **(630) 628-0658**
Our FAX number is:
   (630) 628-0936

PROUDLY MADE IN THE U.S.A.

Appendixes:

Appendix C:

The CPU used for this program has two 8-section DIP switches as shown in Figure 1 below. The switch labeled 'FUNCTION' DIP is used to set the type of display and baud rate. The switch that is labeled 'ADDRESS' DIP in the figure is used for selecting address. In order for changes to take effect, the sign must be powered down and then powered back up again after the switches have been changed.
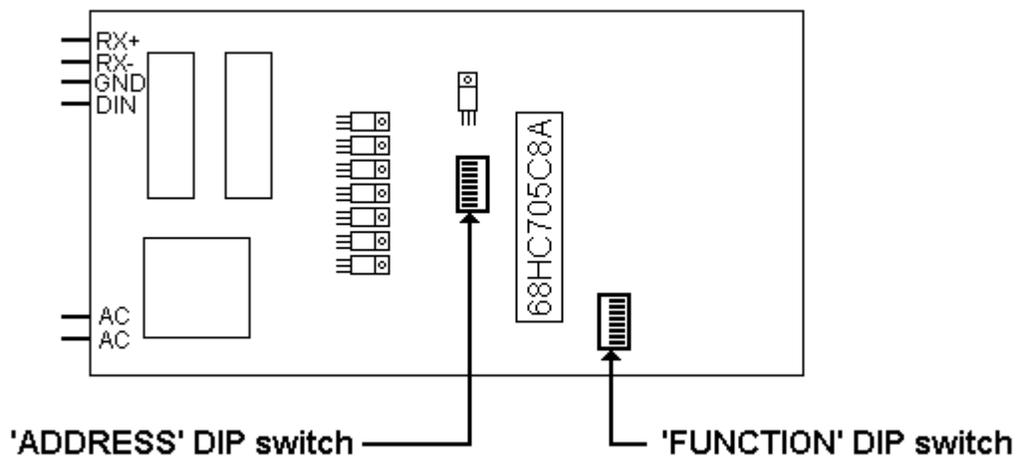
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Figure 1

Address:

Switches 1 through 7 on the 'ADDRESS' DIP switch are read in a binary fashion to specify the display address from '01' to '99' (if all six switches are 'OFF', the address is set to non-addressable mode). Some example address settings are shown in Table 1 below.

'ADDRESS' DIP SWITCHES						ADDRESS
DIP 6	DIP 5	DIP 4	DIP 3	DIP 2	DIP 1	
OFF	OFF	OFF	OFF	OFF	OFF	64
OFF	**OFF**	**OFF**	**OFF**	**OFF**	**ON**	**01**
OFF	OFF	OFF	OFF	ON	OFF	02
OFF	OFF	OFF	OFF	ON	ON	03
OFF	OFF	ON	OFF	ON	OFF	10
ON	ON	ON	ON	ON	OFF	62
ON	ON	ON	ON	ON	ON	63

Table 1

Baud Rate:

Switches 7 and 8 on the 'ADDRESS' DIP switch are used to specify the baud rate as shown in Table 2 below.

'ADDRESS' DIP SWITCHES		BAUD RATE
DIP 8	DIP 7	
OFF	OFF	1200
OFF	ON	2400
ON	**OFF**	**600**
ON	ON	9600

Appendix G:

PC Com Port - RS-232 pin out DB-9 pin

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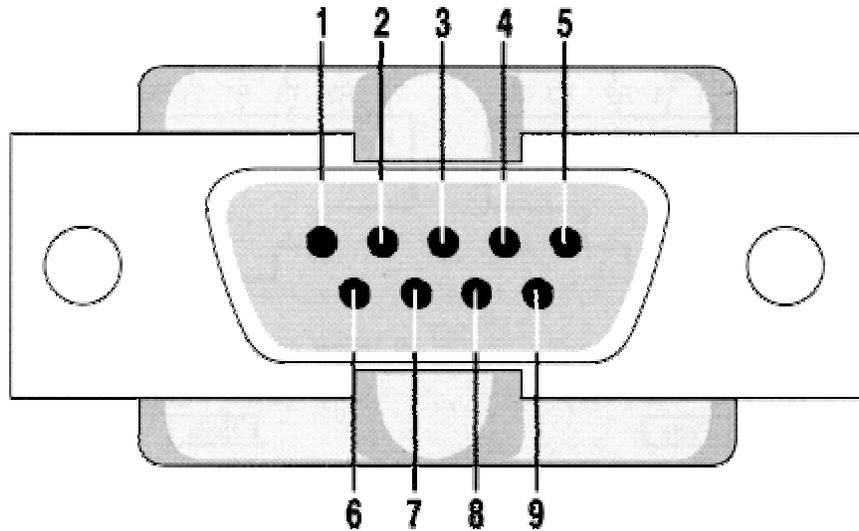
Pin	Signal	Pin	Signal
1	Data Carrier Detect	6	Data Set Ready
2	Received Data	7	Request to Send
3	Transmitted Data	8	Clear to Send
4	Data_Terminal Ready	9	Ring Indicator
5	Signal Ground		

Pin 3 from your PC to Pin 3 on our DB-25 or DATA on our terminal block.
Pin 5 from your PC to Pin 7 on our DB-25 or GND on our terminal block.

PC Com Port - RS-232 pin out DB-25 pin
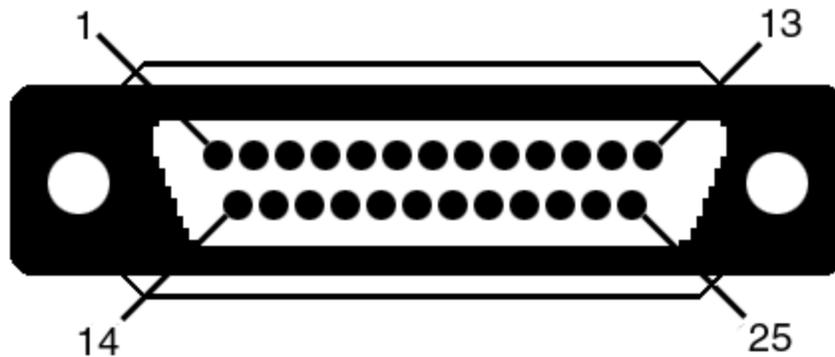
RS232 Cable - DB25 Male
(on Cable)

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RS232 – 25 Pin

1	GND	Chassis / Frame Ground
2	TD	Transmitted Data
3	RD	Receive Data
4	RTS	Request to Send
5	CTS	Clear to Send
6	DSR	Data Set Ready
7	GND	Signal Ground
8	DCD	Data Carrier Detect
9	TD+	Transmit +
11	TD-	Transmit -
18	RD+	Receive +
20	DTR	Data Terminal Ready
22	RI	Ring Indicator
25	RD-	Receive -

Pin 2 from your PC to Pin 3 on our DB-25 or DATA on our terminal block.
Pin 7 from your PC to Pin 7 on our DB-25 or GND on our terminal block.

Appendix E:

ASCII CODE	VALUE (Decimal)	FUNCTION
STX	2	'Start of text', also known as a 'control B', this character must be the first character of each message
AD1 AD2	48-57 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
DATA	32-126	Alpha/Numeric data to be displayed in ASCII 'printable' characters. **NOTE:** All text will be right justified. To move the text over to the left, you must supply trailing 'space' characters.

ETX   3   'End of text', also known as a control C, this character must be the last character of each message

Example:

To display "Hello World" at the right end of a display that has an address of '01', the following character sequence should be sent:

<STX>01Hello World<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.

'control B' "01" "Hello World" 'control C' (a total of 15 characters)

PC/PLC/Ethernet card interface: 1200/9600BPS; 8 data bits; 1 stop bit; no parity;

Two- wire transmission