

# **USER GUIDE**

**SE1822 INTERFACE**

**& REMOTE CONTROL**

**MODULES**

Version 1.5

For use with the Endec model 1822 Emergency Alert System Encoder/Decoder

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## 1. Theory of Operation

- 1.1 The DME SE1822 Interface Module is a microprocessor controlled interface that generates the required RS232 command set codes used by the Endec Model 1822 E.A.S. Encoder/Decoder. The Interface Module is connected to the DB9 “COM 2” port on the rear of the Endec and uses the 5 or 8 VDC provided by the Endec for all power requirements of the Interface Module and the associated Remote Control. Upon contact closure across the “RWT”, (Required Weekly Test), terminal block on the Interface Module, or by depressing the Transmit RWT buttons on the Remote Control, the proper codes are transmitted in the correct order to activate the transmission of the RWT. A “PEND RLY” terminal block is provided on the Interface Module for connecting the Endec “Decoder Active” relay contacts to the Module when the SE1822 Remote Control is used. This will notify the operator of a pending alert by a flashing “Alert Pending” LED on the Remote Control. A 6 wire modular jack (RJ12) is provided to interface the SE1822 Remote Control or user defined custom interface connections, such as an automation system or other normally open switch contacts, to the Interface Module. RFI protection for the system is included as a part of the Interface Module and cable design for operation in areas where an RF environment may be encountered.
- 1.2 The DME 1822 Remote Control is a passive device containing switches and indicators to remotely activate the RWT and/or to relay a pending RMT, (Required Monthly Test). LED indicators are provided for the following functions. The “Alert Pending” LED flashes yellow while an alert is pending and a green “Sending Data” LED is activated when the proper buttons are pushed to initiate either the RWT or to relay the RMT. An RJ12 modular connector is provided for interface to the SE1822 Interface Module using the supplied 50 ft. connecting cable.
- 1.3 Familiarization with the sections 5.4 and 5.7 of the Endec User Guide and Reference Manual dealing with filters and relay programming is recommended for assurance that the Endec is properly programmed to operate with this system

## 2. Connections

- 2.1 The Interface Module is attached to the “COM 2” DB9 connector on the rear of the Endec. Secure the Module to the Endec using the captive screws provided as a part of the Module. If the supplied Remote Control is to be used with no other user connections please skip to 2.7.

- 2.2 If the SE1822 Interface Module is being used only for RWT activation by an automation system or other customer supplied contact closure, connect Normally Open contact closure wires to the “RWT” terminal block on the Module.
- 2.3 For simultaneous operation using the Remote Control and an external contact closure, such as automation, for initiating the RWT, connect the Normally Open contact wires to the “RWT” terminal block on the Module as well as connecting the RJ12 modular connecting cable to the connector.
- 2.4 For simultaneous operation using the Remote Control and user defined external contact closures, such as an automation system or push buttons, for initiating an RWT, relay of an RMT, and/or using the LED drivers and power, the use of a 6 circuit dual modular adapter may be used. This adapter may be purchased at your local supply store.
- 2.5 All connections required to relay a pending RMT, initiate a RWT, access the LED driver lines, access power and ground may be found at the RJ12 modular connector on the Interface Module. The pin-out is as follows when viewed looking from left to right with pins 1-5 of the DB9 on the opposite end of the Module in the up position:
1. Initiate RWT (momentary to ground)
  2. Initiate RMT relay (momentary to ground)
  3. Ground
  4. “Sending Data” LED anode, cathode to ground
  5. 5-8 VDC current limited with a 100 ohm, 1/10 watt series resistor
  6. “Alert Pending” LED cathode, Anode to +5-8 VDC
- 2.6 End of message information for an automation system may be provided by connection to the “Encoder Active” relay contacts on the rear of the Endec. These contacts are closed while the Endec is encoding a message and open at the conclusion of the message transmission. (See section 5.7 of the Endec User Guide)
- 2.7 Remote Control operation of the interface module requires that the “Decoder Active” terminals on the rear of the Endec be connected to the Interface Module “Pend Rly” terminal block. Polarity of the connection is not a factor. Use the supplied twisted pair wire.
- 2.8 Connect the 50 ft. connecting cable to the Interface Module RJ12 jack with the ferrite RFI core at the Module end. Connect the other end of the cable to the modular RJ12 jack under the removable

cover of the Remote Control. The cover is removed by pressing on the arrow on the bottom panel and sliding the panel off of the Remote Control box.

- 2.9 Note that the modular connecting cable is a “reversing” type of cable, and use of a “non-reversing” type of cable may damage the Interface module. This type of damage will not be covered under warranty.
- 2.10 End of message information for an automation system may be provided by connection to the “Encoder Active” relay contacts on the rear of the Endec. See section 2.6 above.

### 3. Programming the Endec for use with the SE1822 Interface Module

- 3.1 The following areas of the Endec must be programmed for proper interface with the SE1822 Interface Module. Depending on whether or not you are using the Remote control, certain areas of programming may or may not need to be addressed.
- 3.2 The “COM 2” port must be configured for remote control operation. To do this go to **menu.device.port.type.hand control**, where “*port*” is “COM 2”. (Note: the only allowable ports for this device are COM 2, 3, & 6. COM 4 & 5 have baud rate issues.)
- 3.3 **The User password must be 1111**, the factory default password. There can be no exceptions without custom programming of the Interface Module. Custom programming is available at an additional charge. Please contact DME if custom programming is desired.
- 3.4 To change the User password to 1111, use the **menu.change password** command on the Endec. You will need the administrator’s password to do this change, and if it is not available consult section 14.3 of the Endec user manual. If the SE1822 Interface Module is only being used for RWT functions there is no further programming required.
- 3.5 To assure that the default filter “pending” relay program controls the “decoder active” relay, and to check the current setting and/or change the setting, go to **menu.relay** command on the Endec. Scroll to the “decoder active” relay and press the **pick** key. The currently assigned relay program will be displayed first. If it is other than “pending”, you may scroll up or down to select the “pending” program. Note that all alerts handling automatic relay, timed relay, timed ignore, or manual relay will activate the “decoder active”

relay. If you have any of these actions programmed, the alert pending light on the SE1822 remote will flash upon receipt of the alert.

- 3.6 To assure that the desired filter is properly setup see section 5.4 of the Endec user manual. Proper settings of the RMT are discussed as well as setting the hold time for release of the RMT. The default filter settings are normally adequate and only the hold time may need to be adjusted to suit the users individual needs.
- 3.7 Open the printer cover plate and lift the printer slider plate up (rather than pulling it forward). Locate the JP16 terminals underneath the metal cup that holds the paper (near the right hand edge). Make sure there is a jumper placed on JP16 as this enables power to pin 9 of the Com ports. This 5-8 VDC is used to power the SE1822. Refer to section 12 of your Endec user manual.

#### **4. Operation**

- 4.1 If the SE1822 Interface Module is to be operated without the remote control the only necessary action is to supply a set of normally open contacts to the "RWT" terminal block on the rear of the module. The RWT will be broadcasted immediately upon contact closure. For more complex user defined connections for operations such as RMT relay and remote LED signaling see section 2.5 above.
- 4.2 If the SE1822 Remote Control is to be used, either by itself or in conjunction with the external contact closure for initiation of the RWT, operation is simple. Depressing the two "Transmit RWT" buttons simultaneously initiates the RWT. The "Sending Data" LED momentarily lights green to verify the command has been recognized.
- 4.3 When an RMT is received by the Endec, the proper filter has been installed, relay activation programming has been done, and wiring between the Endec and Interface Module has been performed as described, the flashing "Alert Pending" LED will announce the presence of a pending alert. The LED will flash for the duration of the hold time or until the pending alert has been relayed. Depressing the two "Relay Pending RMT" buttons simultaneously does this. The "Sending Data" LED momentarily lights green to verify the command has been recognized.

## **5.0 Supplied Materials**

- SE1822 Interface Module
- SE1822RC Remote Control
- 50' Modular connecting cable with ferrite
- 12" twisted pair wire for connection between the Interface Module and the Endec "decoder active" terminals
- Velcro mounting materials
- This User Manual

## **6.0 Warranty**

6.1 All materials and workmanship are warranted for a period of one year from the date of purchase. Damages incurred by misapplication, carelessness, introduction of foreign materials into the enclosures or circuitry, or damages caused by natural disaster are not covered under this warranty.

## **7.0 Technical Support**

If you have questions, experience difficulties with the product or require further information please contact DME at:

805-987-7881

Or

Contact technical support at:

[www.DMEngineering.com](http://www.DMEngineering.com)

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