

# USER GUIDE

## The "ULTIMATE MINI & MINI-LP" REMOTE CONTROLS AND AUTOMATION INTERFACE MODULE

FOR THE SAGE-ENDEC MODEL SE1822 and 3644 Digital E.A.S. ENCODER/DECODER

Software Version 3.0  
Rev. 1



**Ultimate Mini-LP**



**Ultimate Mini**

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## **Overview:**

The “Ultimate Mini.” and “Ultimate Mini-LP” EAS remote Controls and Automation Interface for the Sage-Endec SE1822 and 3644 Digital E.A.S. encoder/decoder have the following features:

- An easy to read backlit LCD scrolling display showing date, time and alert details, just like an expensive LED sign display. The unit has a small 6.3 X 3.75 X 1.15 inch footprint for hand held use, and is supplied with loop and hook fasteners to allow placement on almost any surface.
- An attention getting strobe to catch your eye when an alert is pending, and the color is tailored to the severity of the alert.
- Single push buttons to initiate an RWT, relay a pending alert or RMT, kill a pending alert, and reset the LED sign. The Mini-LP has the additional functions of sending an RMT header and RMT EOM.
- An Automation Interface that will allow contact closures from your automation, or any normally open contact or switch to initiate an RWT.
- LED indicator that shows “sending Data” status and “Pending Alert” status.
- Single Cat 5 connection at the Remote Control\LCD Display for easy installation. Power is connected at the Interface Module.
- 4KB display memory for stations with large header information containing multiple service areas.

## **Operation:**

The Ultimate Mini and Mini-LP EAS Remote Controls are self contained microprocessor based devices that interface with the Ultimate Mini Interface Module via a supplied Category 5e cable, 50' in length. This can be extended to hundreds of feet if required. RFI protection is included in the design to assure proper operation in both AM and FM RF environments. The unit “talks” to the Sage-Endec 1822 or Digital 3644 Encoder/Decoder by means of a proprietary code, and connects to the Endec using two Endec COM ports. Please note that it may take 2-5 seconds for the Sage-Endec to decode the various commands and react. A tri-color “Sending Data-Alert Pending” LED indicator is provided to let the operator know if there is an alert pending or that data is being sent to the Endec following a button push.

Power for the Ultimate Mini Remote Controls is provided by the supplied power module, and may be left on indefinitely with no adverse reactions. RWT control input to the Interface Module may be either isolated dry contacts or logic low signals. A pull-up voltage (5VDC, current limited) is internally provided between the control terminals. The Interface Module transmits and receives data via the Endec COM

ports. The other required connection is the "Decoder Active" or "Dec Rly" connection on the rear of the Sage Endec.

## **The Ultimate Mini Remote Control:**

### ***Front panel***

The Ultimate Mini Remote control front panel has 4 operator controlled functions:

1. RWT: Pressing this button initiates a Required Weekly Test.
2. RLS PEND: Pressing this button will release the alert that is shown active and pending on the LCD display.
3. KILL PEND: Pressing this button will deactivate the alert and return the Sage-Endec to its menu mode without relaying the alert. Date and time will again be displayed.
4. CLR SIGN: Pressing this button will return the LED sign to the time and date mode as well as reset the flashing strobe.

The Ultimate Mini-LP has the following additional control functions:

1. RMT HDR: Pressing this button will send an RMT header.
2. RMT EOM: Pressing this button will send the EOM command.

It is important to note that the RLS PEND and KILL PEND functions are only enabled when there is a pending alert active on the Sage-Endec. This prevents commands being sent in error resulting in a lock-up of the Sage-Endec, and avoids waiting for the automatic time-out cycle on the Endec to take effect. Random button pushing or issuing a command before the unit has completed decoding a previous command will also lock-up the unit until the pre-set reset time-out occurs. The green Sending Data led must be out and/or displaying the red "Alert Pending" status before another command may be sent.

It is recommended that the automatic reset time of the Sage-Endec menu be set to a low number, like 10-15 seconds or less to avoid long waits if errors are made. This is done by entering *menu.config.menu timeout*, and use the more or less keys to adjust the number of seconds. The default is 30 seconds.

Please note that the command language is similar to pushing the front panel buttons on the Sage-Endec and takes approximately the same time as pressing the sequence manually. (Of course, we go as fast as the Sage-Endec will allow but it has data speed restrictions.) The reaction time of the Endec is slow and several seconds may elapse between the Remote Control button push and the decoding and actual operation of the Endec. A green "Sending Data" LED is provided as feedback to the operator that his command is being sent.

Simultaneous pressing of the Remote Control pushbuttons and the Sage-Endec front panel controls are disallowed. Once commands are issued either by the Remote Control or the front panel of the Endec, the other is locked out for the duration of that command set. Note that the CLR SIGN button may not be pushed

until the pending operation has been completed and the green “Sending Data” LED has gone out.

Note that if an alert is pending, the “Alert Pending” LED will be red to signify that there is a pending event. If you issue a command from the Remote Control, the “Alert Pending/Sending Data” LED will turn amber instead of green to signify that data is being sent to the Endec.

### ***Side panel***

The Ultimate Mini Remote Controls have the following side panel connections and control:

1. Data I/O: an RJ45: 8 station modular connector.
2. LCD Contrast Control: User screwdriver adjustable LCD contrast control. This may be adjusted to accommodate the user viewing angle if required. Excessive contrast will cause distorted characters or jerky scrolling.

### **The Ultimate Mini Interface Module:**

The Interface Module has the following interface connections:

1. DB9 on the Interface Module: This DB9 connector connects to an available COM port on the Sage-Endec. The selected COM port must be set up for Hand Held Remote Operation and the baud rate must be set to 9600 on the selected port. (See installation section)
2. Auxiliary DB9 pig-tail: This DB9 connector connects to an available COM port on the Sage-Endec. The selected port must be set up for LED sign operation and the baud rate must be set to 9600 on the selected port. (See installation section)
3. DEC ACTIVE INPUT: This pair of inputs must connect to the “Decoder Active” or “Dec Rly” terminals of the Sage-Endec using the supplied twisted pair of wires. Polarity is not important.
4. RWT: This is a user input pair that will initiate a Required Weekly Test from any normally open contact pair, be it an isolated automation system relay, logic low signal, switch or pushbutton.
5. RJ45 Data I/O: This 8 station modular connector interfaces with the Category 5 cable to the Ultimate Mini Remote Control. The Ferrite RFI suppressor should be on the Interface Module end.

### **Installation:**

The following menu Items must be set on the Sage-Endec prior to connection of the Ultimate Mini System. Prevent damage to the Ultimate Mini System by avoiding ground loops between the Ultimate Mini Interface Module RWT input and the station equipment by using only isolated relays, isolated logic low circuits or pushbuttons for control devices.

### **Sage-Endec Model SE1822:**

1. The Interface Module may be attached to the COM 2, 3 or 6 DB9 connectors on the rear of the SE1822 Endec. Secure the Module to the Endec using the captive screws provided as a part of the Module. The Ultimate Mini and Mini-LP operate at 9600 baud. Endec COM ports 2 and 6 are set to 9600 baud by default and cannot be changed. If the COM 3 port is used, you may have to configure the port to 9600 baud as the default setting is 1200 baud. Configure the ports using *menu.devices.port.baud*. Assign this COM port as a Hand Held Device selecting; *menu.devices.port.device.type.hand held*. Select another available COM port for LED sign operation by selecting; *menu,devices.port.device.type.LED sign* and connect the DB9 pigtail to this port. If the COM 3 port is selected, you may have to configure the port to 9600 baud as the default setting is 1200 baud. Configure the port using *menu.devices.port.baud*.

### **Sage-Endec Model 3644 Digital:**

1. The Interface Module may be connected to COM 3, 4, 5, or 6 on the rear of the Endec. Secure the Module to the Endec using the captive screws provided as a part of the Module. You may have to configure the selected port to 9600 baud as the default settings for all ports is 1200 baud. Configure the selected port using *menu.devices.port.baud*. Assign this COM port as a Hand Held Device selecting; *menu.devices.port.device.type.hand held*.
2. The DB9 pigtail may be connected to any remaining available port other than COM 3. You may have to configure the selected port to 9600 baud as the default settings for all ports is 1200 baud. Configure the selected port using *menu.devices.port.baud*. Assign this port as an LED sign by selecting; *menu,devices.port.device.type.LED sign*.

### **General:**

1. Connect the supplied red and black pair of wires from the Endec “Decoder Active” or “Dec Rly” terminals to the DEC ACT input terminals on the Interface Module. Polarity does not matter.
2. Connect any auxiliary RWT control wiring you desire to the RWT input. The RWT input should interface with isolated contacts or logic circuits to avoid ground loops between equipment.
3. Run the CAT5 data cable to the desired locations with the ferrite RF suppressor at the Interface Module end. Connect the RJ45 modular connector to the Interface Module.

4. Install the Ultimate Mini or Mini-LP Remote Control at its desired location. Power up the system by connecting the power supply to the Interface Module and then the Cat 5 data cable to the Remote Control. The backlight will come on and after several seconds, "DM Engineering V3.0" will be displayed and the strobe may light amber for a few moments. This will remain on the display until the Remote Control receives a date and time update from the Endec at the next minute.
6. **The User password must be 1111**, the factory default password. There can be no exceptions
7. 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 SE1822 Endec User Guide or section 12.11 in the 3644 Digital Endec User Guide.
8. Assure that the "Decoder Active" or "Dec Rly" relay is set to either the default "Pending" or to the "Pending Done" (preferred) relay program. Go to *menu.relay*, and scroll to the "Decoder Active" relay, and press *pick*. Then scroll to the "Pending Done" or "Pending" choice and select it. See table 5-7 and section 5.7.2 of the SE1822 Sage-Endec User Guide or Table 3-2 and sections 4.7 and 5.7 or the Digital 3644 User Guide for assistance.

**Operational Testing notes:** It is advised that you remove the Sage-Endec from the audio chain before proceeding to avoid on air transmissions from the unit. Just connect the XLR audio inputs to the XLR outputs temporarily.

After the LCD sign is displaying date and time you are ready to test the equipment. Remember...if you have the Sage-Endec in the audio chain it will broadcast alerts!

Try an RWT from the Ultimate Mini or Mini-LP. Remote Control. The green "Sending Data" LED will light and then the LCD sign will display that the station has sent an RWT and the strobe will flash green. The Sage-Endec will output an RWT. Clear the sign on the Ultimate Mini Remote after the RWT has completed.

Initiate a warning of some type (Tornado, Earthquake, Etc.) from the Sage-Endec front panel. (This cannot be done from the Ultimate Mini Remote Control). Again the LCD sign will display the warning message and the strobe will flash orange. Clear the sign on the Remote Control after the alert has completed.

Initiate an Alert (CAE, etc.) from the Sage-Endec front panel. (This cannot be done from the Ultimate Mini Remote Control). Again the LCD sign will display the warning message and the strobe will flash red. Clear the sign on the Remote Control after the alert has completed.

In order to test the Pending Alert functions it will take receipt of an actual alert and the inputting of alert information from another EAS encoder. This is done by

connecting the MAIN/ALERT XLR output from another EAS unit to either the "Monitor 1" or "Monitor 2" input and the audio common terminals of the Sage-Endec under test and initiating an alert from the other unit. You will then be able to release the pending or kill the pending alert.

Testing of the RMT portion of the Ultimate Mini-LP is done by pressing the "RMT HDR" button. The Endec will send the appropriate digital header information and wait for the "console" audio to be sent. Instructions for the set-up of the Sage-Endec RMT template and Audio Source selections are contained in sections 5.5, 5.6 and 6.3 of both the SE1822 and Digital 3644 Manuals. At the end of the body of the RMT transmission press the "RMT EOM" button to complete the RMT.

### **Warranty Information:**

The Ultimate Mini and Mini-LP Remote Control and Automation Interface Module are warranted for a period of one year from the date of purchase. This warranty covers materials and workmanship only. Any misapplication, physical or electrical damage from outside sources or by the customer is not covered. The customer must pay shipping costs to the factory, and DME will pay shipping costs to return the warranted equipment to the customer. Any priority shipping costs are to be the responsibility of the customer as ground service is standard. Please contact the factory for an RMA number prior to any returns. Items returned without an RMA may be sent back to the customer unopened.

### **Technical Support :**

If you have questions, experience difficulties with the product or require further information please contact DME at: 805-987-7881 or 800-249-0487, Contact technical support at: [support@dmengineering.com](mailto:support@dmengineering.com) or visit [www.DMEngineering.com](http://www.DMEngineering.com) for the latest User Guide.

### **Specifications:**

Case Dimensions (Remote Control): 6.3" wide X 3.75" deep X 1.15" high  
Remote Control Case Material and Color: High Impact ABS plastic, bone grey  
LCD Display Dimensions: 6 1/16 X 5/8  
Character Size: .25 X .125  
LCD Display: Yellow Backlight, 1X20  
Connection Method: 50' Category 5e cable with RJ45 connectors, supplied  
DB9 Interface Module with DB9 pigtail and Endec/Automation and control interface screw terminal connections  
Sage-Endec Interface: Serial RS232, 2 Endec ports required  
Power: Power module (supplied), Input:120VAC 50-60Hz, Output: 9VDC @ 500ma  
Power Cord Length: approx. 6 ft. total  
Mounting: Hand held, desktop or any surface that the customer desires  
Operating temperature: 32 to 120F  
Humidity: 0 to 95% non-condensing  
Shipping Weight: 4 lbs. (approximate)

Trademark Information:

"Endec" is a trademark of Sage Alerting Systems, Inc.