

CE Electronics

VOICE ANNUNCIATOR WITH MICRO COMM INPUT (VM3541)

TEST EQUIPMENT NEEDED

- Micro Comm Test Box (test box)
- 3-Wire Test Cable
- Message Module
- 8-ohm speaker
- Engineering Checksum Codes for Software and for Standard Voice File(s)
- Micro Comm PC Simulator Software, 3280 Board, and 3-Wire Test Cable (for Custom Voice Files)

Test procedure for Voice Annunciator with Micro Comm Input (VM3541)

- 1) Get the sales order number and pull the job folder from the Open Orders drawer of the file cabinet.
- 2) **Test Equipment Setup** – Check the sales order to find out if it requires Standard or Custom voice files.
 - a) **Standard Voice Files**
 - i) Turn *ON* power to the test box and verify the self-test switch is *OFF*. Go to step three.
 - b) **Custom Voice Files**
 - i) Turn *ON* power to the test box and verify the self-test switch is *OFF*.
 - ii) On the 3280 board, connect the output of the test box to J2 and the 3-wire test cable to J1.
 - iii) Open the 'Micro Comm PC Simulator' software on the tech bench computer.
 - iv) Set up the Simulator software with the floors and messages from the sales order. NOTE: If the voice files require scan slots instead of ASCII characters to trigger them to play, use "Q1-XX" as the floors, where XX is the total number of floor messages the sales order requires.
 - v) Connect the USB cable from the computer to J3 of the 3280 board.
 - vi) In the Simulator software, select the **RED** ball icon (Strobe and Stop) and use the *Simulate Mode* icon to connect to the 3280 board.
- 3) **VM3541 Test Setup**
 - a) Verify all DIP switches of the unit under test (UUT) are *OFF*.
 - b) Connect a message module to J4 of the UUT.
 - c) Connect an 8-ohm speaker to J2 of the UUT and set the volume pot (R63) to midrange.
- 4) **VM3541 Operational Test**
 - a) Watch the two-digit display and the LEDs beside it on the UUT as you connect the output of the test box or 3280 board to J1.

At power up, the UUT flashes one of the four LEDs along with four two-digit numbers at one-second intervals. Verify that all four LEDs light up in turn and that the code version is correct. Note that the right decimal point on the display lights along with each part of the code version.

For example, if the code version is A103.1.0, the UUT flashes | UP LED - A1 |, | DOWN LED - 03 |, | STROBE LED - 01 |, |PLAY LED - 00 |.

- b) Verify the green (D12) and red (D11) LEDs near the USB port light at power up and that the green LED flashes during normal operation.
- c) When the power up routine finishes, the display will show the current ASCII character from the test box. If the display shows *NC*, it isn't receiving the Micro Comm signal.
- d) Plug the USB stick into USB connector J5 on the unit.
- e) When the unit detects the stick, the green status LED will go out and the red status LED (D11) will begin blinking slowly.
- f) The display (DPLY1) will alternate between "*RD*" and a percent that shows the load progress.
- g) When loading is complete, the display will show "*LC*" and the PLAY LED (D8) will light to indicate the voice file loaded.
- h) Remove the USB stick to allow the unit to reboot and complete the update. The display cube shows "*RB*" for about five seconds and then the unit will restart. The green and red status LEDs will both be on. After the unit startup process finishes, the green status LED will begin blinking and the red status LED will turn off.
- i) Turn on S1, DIP switch 1 to start self-test. Verify voice clips play through the speaker and that the audio is clear.
- j) Verify the function of the volume pot through its entire range, and then set it to a comfortable level.
- k) **DIP Switch Test** – Turn *ON* each DIP switch in turn, beginning with S1-DS2 and continuing through S3-DS8, verifying the display changes as you activate each switch.
- l) Activate an input on the message module connected to J4 and verify the display changes. If the message module is shipping with the unit, activate and verify all of the inputs. The display changes with each input.
- m) If the sales order requires discrete inputs for direction, strobe, and/or s-button inputs, test each input in turn and verify that the display changes and that the associated input LED lights.
- n) Turn *OFF* all of the DIP switches except S1-DS2 and S1-DS3. The display begins cycling the four status LEDs and the four, two-digit segments of the voice file checksum.
 - i) **For Standard Voice Files:**
 - (1) Engineering provides a checksum to match against the UUT display. The checksum parts display in the same order as the software checksum (i.e. UP, DOWN, STROBE, PLAY). Write the engineering checksum on the sales order and verify the two checksums match.
 - (2) Go to step five.
 - ii) **For Custom Voice Files**
 - (1) Write down the checksum value as it displays on the first unit you test. The segments display in the same order as the software checksum (i.e. UP, DOWN, STROBE, PLAY).
 - (2) Turn *OFF* S1-2 and S1-3 of the UUT.
 - (3) If using a MAMM1 to play messages, and the message format is binary, turn *ON* S3-DS6.
 - (4) Use the *NEXT* button in the Simulator software to step through the floors and messages, and verify the correct floor, direction, and message clips play.

- (5) **For additional units that use the same custom voice file**, use the checksum value from the first unit to match against the additional units. If the checksums match, skip to step iii) below and continue the procedure. If they don't match, use steps (2), (3), and (4) above to determine what the difference is. Contact your supervisor with any questions.
 - iii) If the sales order calls for other custom voice files, click the *RESET* button in the Simulator software to prepare for the new files.
- 5) Remove all connections from the UUT. Testing is complete.
- 6) On switch S3, DS1 and DS2 determine which voice set the UUT uses. Check the sales order for the information and set these two switches accordingly.
- 7) Set the remaining DIP switches according to sales order requirements, and insert the Phoenix plug(s) into the correct socket(s). Leave S3-DS6 *ON* for shipping if you set it during testing.
- 8) Mark all tested units with the Personal Identity Number (PIN) issued to the tester. Put a "TESTED OK" sticker on each unit near the job label.
- 9) Repeat steps 3 – 8 for any additional units.
- 10) After testing and marking all units, mark the sales order Tech copy next to units tested (PIN and date).
- 11) Fill in all required information on the diagram, make copies, and send them with the order. See your supervisor with any questions regarding the diagrams.
- 12) **Shipping Instructions:** Verify that all parts are with the order and put it on the shelf for shipping. If the order has a HOLD tag or open yellow shortage sheet, put the order on the HOLD shelf.