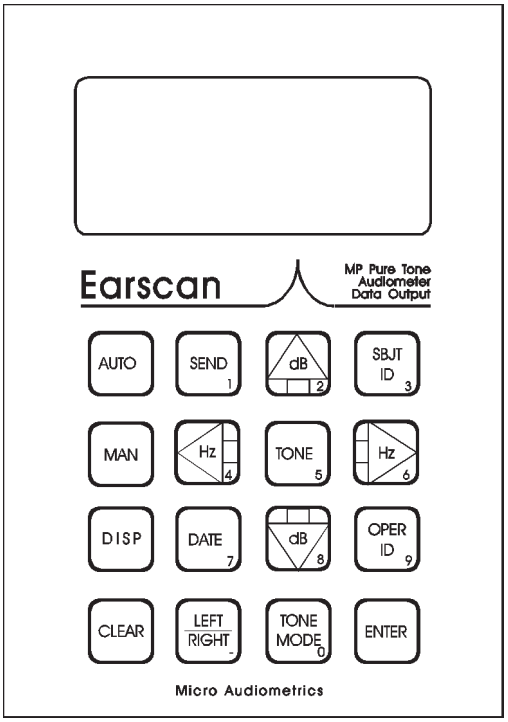
Earscan®

Microprocessor Pure Tone Audiometer with Data Output

OPERATING GUIDE



START UP

1. Insert headphone plug into side panel "phone" location.
2. Insert patient response button plug into side panel "button" location.
3. Plug unit into grounded outlet.
4. Press rocker switch on back panel to "on" position. After Earscan does a brief system check you are ready to begin testing.

SETTING PARAMETERS

Allows frequency and stimulus selection. Test parameters will default to factory pre-set levels when power is shut off.

1. Press **<MAN>** and hold until "AUDIOMETER SET-UP MODE" appears on LCD.
2. Press **<DISP>** to observe keys operating function.
3. Press **<DISP>**. Use **<Hz⇐>** and **<Hz⇒>** to select frequency.
   Press **<TONE>** to include frequency.
   Press **<CLEAR>** to exclude frequency.
   Press **<AUTO>** to set starting frequency.
4. Press **<DISP>** to access stimulus range programming.
   Press **<Hz⇐>** to select minimum stimulus range.
   Toggle **<dB⇓>** and **<dB⇑>** to set the desired minumum dB level.
   Press **<Hz⇒>** to select maximum stimulus range.
   Toggle **<dB⇓>** and **<dB⇑>** to set the desired maximum dB level.
5. Press **<MAN>** to save parameters; exit programming mode.

INITIALIZATION

Date	Press **<DATE>**. Enter numbers for (DD)(MM)(YY) Press **<ENTER>**.
Operator ID	Press **<OPER ID>**. Enter up to 12 digits or dashes to identify person doing testing. Press **<ENTER>**.

PATIENT SET-UP

1. Seat patient so the front panel of the audiometer cannot be seen by the patient.
2. Place headphones securely over ears, making sure red phone covers right ear and blue phone covers left ear.
3. Instruct the patient to listen for either a continuous tone or a series of beeping sounds. He should raise his hand on the same side the sound is coming from. If the patient response button is used, the patient should press and release the button whenever a sound is heard.

MANUAL TESTING

1. Press **<DISP>**, then press and hold **<CLEAR>** until NEW TEST appears.
2. Press **<LEFT/RIGHT>** to select test ear.
3. Increase and decrease frequency using the Hz keys.
4. Increase and decrease dB level using the dB keys.
5. Press **<TONE>** to present stimulus.

AUTOMATIC TESTING

1. Follow steps 1 and 2 of manual testing.
2. Press **<AUTO>**.
3. Earscan will determine and store thresholds for each frequency. Earscan will signal the completion of testing by presenting a series of tones.

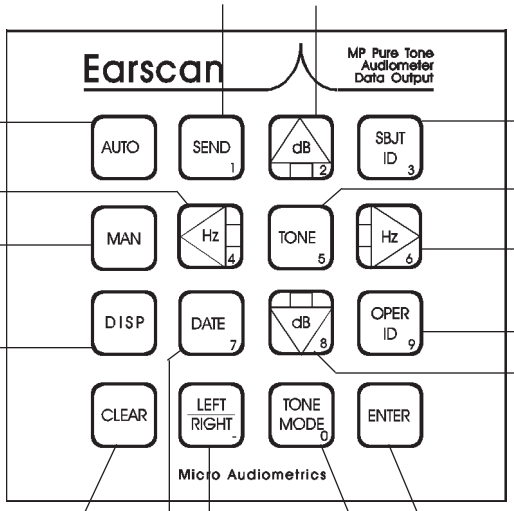
OUTPUTTING RESULTS

1. For data output, connect cable of printer or computer to serial port on rear panel of Earscan.
2. Press **<SBJT ID>**. Enter up to 12 digits or dashes to identify who is being tested. Press **<ENTER>**.
3. Press **<SEND>**.

IMPORTANT NOTES

1. Rerun any test if the results are in question.
2. DO NOT swap headsets among units. Each Earscan is calibrated to match a particular headset. The last digits of the Earscan serial number are engraved on each headphone label.

KEYPAD SUMMARY



Output report to printer or computer.

Increment stimulus level in manual audiometry.

Automatic audiometry.

Load/display subject ID.

Decrement stimulus frequency in manual audiometry.

Present stimulus tone in manual audiometry.

Manual audiometry. Stop automatic, revert to manual audiometry mode.

Increment stimulus frequency in manual audiometry.

Load/display operator ID.

Display audiometric thresholds. Exit automatic audiometry test to "Display Thresholds" mode. Used in conjunction with the (CLEAR) key to start a new test; (DISP)(CLEAR) clears all.

Decrement stimulus level in manual audiometry.

Reset/erase/abort key. Clear user-entered information; Subject ID, Operator ID, and Date. Clear single thresholds in manual audiometry mode. Exit error condition during "automatic" testing.

Select earphone.

Enters Subject ID, Operator Id, and Date into memory.

Load/display date.

Toggle between "pulsed" and "continuous" tone in manual audiometry.

SCALE OF HEARING LOSS

Reporting the degree of hearing loss is somewhat subjective in that not all hearing tests are conducted in the same manner. Test results may vary from person to person depending on ambient noise levels present at the same time of testing. If testing conditions are optimal, the following scale may be helpful in understanding or reporting results.

0dB - 20dB	Hearing within normal limits
25dB - 40dB	Slight to mild hearing loss
45dB - 55dB	Moderate hearing loss
60dB - 70dB	Moderately severe hearing loss
75dB - 90dB	Severe hearing loss
90dB+	Profound hearing loss

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