

# Hearing Testing Audiometers

## RA650

### Group Audiometric Testing

- Integrated Windows®-based software/ audiometer package\*
- Increased productivity – one operator can simultaneously manage eight tests
- Fewer retests – advanced software adapts automatically when testing difficult subjects
- Patented multimedia feature for computer-voice instructed testing and monitoring
- Individual and group audiogram printouts
- Interfaces with popular Hearing Conservation database software programs

### RA650 saves time and money

Tremetrics RA650 can test as many as 48 people per hour (with an 8-channel system). It can be easily operated by one person which substantially reduces overhead costs.

In this compact system, audiometer modules are linked together by an RA650 group controller. Tests can be started and stopped simultaneously.

Talk-over communications with any or all subjects can be initiated through the PC interface software.

After the test begins, the individual audiometer channels control the testing. With the multi-tasking feature, the RA650 can

then be switched to FOSHM™ or other PC data management software for entering demographics, developing management reports or verifying data on file.

### Advanced testing process minimizes retests

The computerized test presentation process ensures faster testing. The RA650 includes the advanced testing paradigm used in Tremetrics RA500, RA300 and HT Wizard audiometers.

The testing methodology is designed to automatically adjust to the person being tested. Checking test results and retesting frequencies which appear abnormal or in error is done automatically. Retesting is kept to an absolute minimum.

\*Data management software and computer required.

U.S. Patents #5,811,681; #6,416,482; #6,644,120



# RA650 Group Audiometric Testing System

## Proven reliability and support

The RA600 series has a proven track record in both the military and civilian group testing market. Systems are backed by a nationwide dealer network and factory support group. Both are committed to quality customer service and fast response.

## System Features

- Windows-based program software requires minimal operator training
- PC monitors progress of test and automatically instructs subject as required
- Flexible group testing – audiometer modules can be added as needed
- Full automatic, semi-automatic or manual operation
- Independent error checking with automatic test restart
- Selectable retest criteria. Automatic retest if HTLs vary 15 dB or more from baseline
- Intercom – talk-over communication with any or all test subjects
- Distinctive graphic symbols and color coding for quick and accurate set up
- Automatic pre-test instructions
- Power supply indicator
- Automatic sound room monitor with OSCAR 7

## Specifications

### RA650 CHASSIS, POWER SUPPLY/CONTROLLER

Audio Channels: Accepts up to a maximum of four (4) RA650 audiometer channels. Two RA650 chassis can be used to test up to eight subjects.

Control Channel: One control model per chassis

Power: Auto-selectable 90-240 VAC  $\pm$  10%, 50-60 Hz

Dimensions: Width 6 1/2", Depth 12 1/2", Height 9"

Weight: 6 1/2 lbs. (1-station without earphones or handswitch)

Communications: RS232C at 19200 Baud

Software interface: Manages up to eight (8) audiometer modules

### AUDIOMETER MODULE

Calibrated to ANSI S3.6-1996

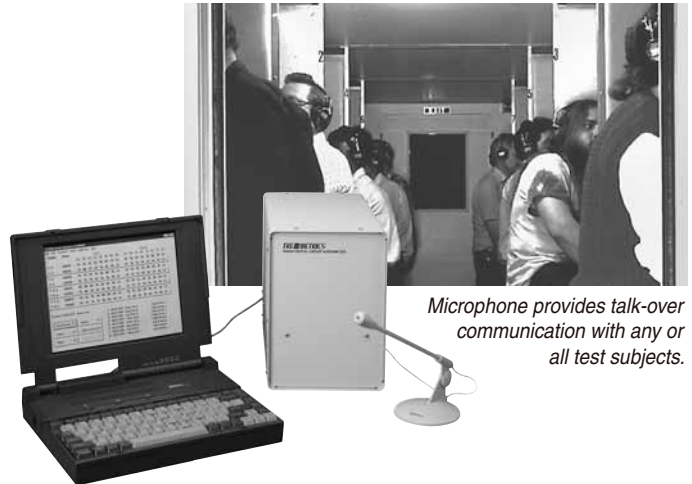
Test frequencies: 500, 1000, 2000, 3000, 4000, 6000, 8000 Hz. (8000 Hz selectable)

Frequency accuracy: Better than 1%, crystal controlled

Distortion: Total harmonic distortion below -40 dB (1%)

HL attenuator: -10 to 100 dB in 5 dB steps

HL accuracy:  $\pm$  1 dB



*Microphone provides talk-over communication with any or all test subjects.*

Calibration: EEPROM calibration, frequency requires no adjustment; calibration date entered at time of calibration

Rise/Fall time: Meets ANSI specifications

Earphones: Telephonics TDH-39, 10 ohm earphones in Model 41 cushions

Dimensions: Width 1", Depth 11 1/4", Height 6 1/4", Weight 1/2 lb

Power: Supplied by mainframe

### COMPUTER REQUIREMENTS

The RA650 must be used with a PC Data Management System. The PC and database management software are not included in the price of the RA650. Tremetrics can provide pricing for the FOSHM PC Data Management System upon request.

PC running Windows® 98, ME, XP, NT or 2000 with a minimum of 40 MB available space on the hard disk for program and storage, minimum 256 MB of RAM, CD-ROM drive (CD-RW is recommended for data back-up).

600 x 800 minimum color monitor.

Multimedia requirements: sound card, microphone, speaker(s) and 1/8" stereo cable (male connector on each end).

Input/Output: one serial port (RA232C) and one parallel port for printer.

### PRINTER REQUIREMENTS

Windows compatible, laser or inkjet recommended

### OPTIONS

FOSHM – Windows based hearing conservation data management software

Audiocups – Noise attenuating enclosures

OSCAR 6 – Electro-acoustic ear

**ONE YEAR LIMITED WARRANTY:** This warranty is extended to the original purchaser of the instrument, by Tremetrics, through the distributor or manufacturer from whom it was purchased. The warranty covers defects in material and workmanship for a period of one year from date of delivery of the instrument to the original purchaser. Accessories which are purchased from Tremetrics at the same time as the instrument are warranted for one year from the date of purchase. For additional information, contact Tremetrics.



Tremetrics 7625 Golden Triangle Drive, Eden Prairie, MN 55344 [www.tremetrics.com](http://www.tremetrics.com)

Toll Free (800) 825-0121 Fax (952) 903-4100