

# Hearing Testing Audiometers

## RA 300 & RA 300+ Digital Screening Audiometer

- Built to Tremetrics high quality standards
- Meets ANSI/OSHA requirements
- Automatic daily biological check with OSCAR™
- RS232C computer/printer interface
- Internal talk-over microphone (RA 300+)
- Flexible reporting formats
- Automatic power compatibility, worldwide
- “Multimedia” ready (RA 300+)

### Automated testing at an affordable price

In smaller hearing screening programs, manual audiometry costs you money every day — it's time consuming for you as well as those you test. Now there's a better choice, the new RA300 digital screening

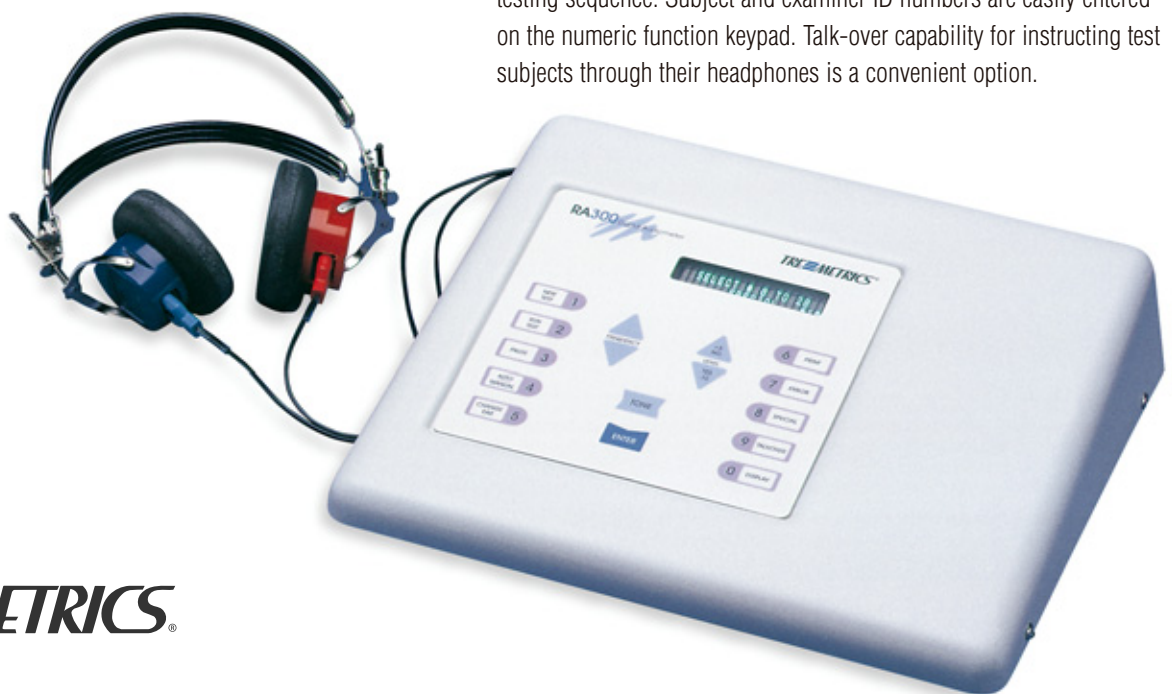
audiometer from Tremetrics. The unit is affordable, requires minimal operator training and provides valid hearing test results automatically. Are you conducting comprehensive pre-employment physicals? The RA300 provides reliable audiometric testing for hospital/community health programs, family practice physicians and occupational health clinics.

### Innovative software for faster results

Time-saving hearing testing is guaranteed. Every Tremetrics audiometer contains propriety programming which dramatically cuts test time while maintaining the accuracy and validity of the results. The audiometer continuously analyzes responses, then presents tones at levels closer to a subject's hearing threshold levels. Tests can be completed in as little as three minutes. Have hard to test subjects? An “adaptive” mode allows a longer response window and minimizes the need to switch to manual testing.

### Easy operation, built-in validity

The RA300's clearly labeled keyboard guides the operator through the testing sequence. Subject and examiner ID numbers are easily entered on the numeric function keypad. Talk-over capability for instructing test subjects through their headphones is a convenient option.



**TREMETRICS**

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Once the test has been started, response levels read out on the bright, backlit display. Automatic validity checks are built in. Random tone intervals and threshold level agreement between the 1000 Hz pretest/main test deter anticipated response patterns. Error conditions which require operator attention are noted on the readout and signaled by an audible tone.

After the test has been completed, results can be reviewed and written on an audiogram form, printed or transferred to a computer through the RS232 computer interface.

## Computer compatible, multimedia ready

The RA300 is truly versatile – it can emulate the data format of the Tracor/Tremetrics RA400 or RA500 audiometer when used with many of the popular PC-based hearing conservation software programs. In addition, the RA300 Plus package\* interfaces with the latest software programs that offer PC-control and monitoring of test results. This is the very first audiometer that is “multimedia” ready — for interactive, computer-voice instructed testing (patented).

## Versatile output/storage choices

Menu selections, from hard copy output to digital computer files, provide a choice of formats for reporting/data transfer. The RA300 may be interfaced to most types of serial (RS232C) printers through an easy to use “Specials” function. A selection of 20-column, 40-column and standard 8 1/2” x 11” or A4 paper formats accommodates your portable label printer as well as dot matrix and laser models. For computer-based testing programs, an optional 64-audiogram auto-store function conveniently saves test data in the audiometer.

\*The RA300 Plus includes multimedia, talk-over and 64-audiogram storage.

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

**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.

## Specifications

Exceeds ANSI 3.6 - 1989, qualifies as a microprocessor audiometer under OSHA.

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

Test modes: Automatic, semi-automatic and manual.

Frequency accuracy: Better than 1%, crystal controlled.

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

HL attenuator: 0 dB to 100 dB in 5 dB steps, accuracy  $\pm 1$  dB.

Electronic calibration: Through keyboard; or through computer with compatible software program (optional).

Rise/Fall time: Meets ANSI specifications.

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

Mechanical: High impact plastic housing, sealed membrane keyboard with two-line backlit vacuum fluorescent display, internal talk-over microphone (optional).

Physical: Width 13”, Depth 11 1/4”, Height 4 1/2”  
(33 cm x 28.6 cm x 11.4 cm); weight 6 lb. (2.7 kg).

Power: Auto-selectable 90 - 240V with transient suppression for power line spikes.

Computer/printer interface: RS232 port.

Data output: 600 - 19200 baud, selectable.

Multiple data output formats: 20-column, 40-column, 8 1/2” x 11”, A4 or computer file.

Clock: Real-time, battery backed; time of day printout.

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RA300 AUDIOMETER
TREMETRICS INC.
(C) 1989, 1990,
1995, 1996
DATE 04/17/96
TIME 14:29
TEST# 15 - 00014
SUBJECT:
X.....
SSW/IDW 99999
CURRENT AUDIOGRAM
DAILY BIOLOGICAL
FREQ. L/DB R/DB
1KHZ TEST 75 75
500HZ 70 70
1000HZ 75 75
2000HZ 70 70
3000HZ 70 70
4000HZ 70 70
6000HZ 75 80
8000HZ 70 70
MODE PULSED
SERIAL # 0002
VER 2.0 REU A
CAL. ANSI 1989 STD
CAL. DATE 04/96
EXAMINER SSW/IDW
454502101
X.....
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*Convenient record  
of daily biological  
check with Oscar™*

**TREMETRICS**

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