The ST 3000A has the following exclusive features:

- **MANUAL MODE.** Use the system *manually* when troubleshooting.

- **INTERNAL-PROGRAMMING MODE.** Store and chain up to 80 different front panel set-ups into 16 different "proof" locations. Perform automated check-outs without computers!

- **EXTERNAL COMPUTER AUTOMATION.** You can automate the ST 3000A using any computer having GPIB or RS-232 capability! Or, simplify your automation task by utilizing our IBM®/Compatibie bundled software modules.

- **COMPREHENSIVE HARD COPY.** Obtain complete *tabular and graphic* printout directly from the ST 3000A to an inexpensive Epson™ compatible dot matrix printer.

- **INDUSTRY-LEADING SPECIFICATIONS.** Will test the best 16-bit digital systems!
3000A PROGRAMMABLE AUDIO TEST SYSTEM

COMPREHENSIVE WAVEFORM SELECTION.

DISPLAYS PRESENT TWO PARAMETERS SIMULTANEOUSLY.

ANALYZER PERFORMS TEN DIFFERENT TESTS.

ANALOG METER.

EXCLUSIVE ELECTRONICALLY BALANCED, TRUE-FLOATING TRANSFORMERLESS OUTPUTS.

TWO BALANCED INPUT CHANNELS.

PRINT-OUT GRAPHIC AND TABULAR TEST RESULTS ON ANY STANDARD DOT MATRIX PRINTER.

COMPUTER INTERFACE PARKING:
- GPIB
- RS-232C
- CENTRONICS

Both the Generator and Analyzer sections of the 3000A test system have printfault capability through their respective Centronics parallel ports.

The Generator can download a printout of all programming contained in its memory section.

The Analyzer automatically stores test results in its battery-backed memory section. Test results can be printed out in Tabular or Graphic (option) formats. Analyzer test results also include Generator ID information, as well as time and date.

The Sound Technology 3000 Series, the NEW generation in audio testing. The ST3000 Series design philosophy combines the "best of all worlds" for audio testing in one package. You can use the instruments manually, use automation or externally automate using one of the 3000 series industry standard interface buses!

AUTOMATED BENCH-TOP TESTING

Simple bench-top automation results from Sound Tech's unique use of FSK (frequency-shift-keying) generator-to-analyzer communication. The use of FSK, which is transmitted through the audio lines, lends itself to bench-top testing. Allows for automation without external computer! Up to 16 proofs or test sequences can be built into the Generator's programming section. Running a test is as easy as recalling a two-digit number and pushing "start!"

MANUAL MODE

Up until now, when purchasing an audio test system you had to make a choice. A choice between manual or automated testing. The conflict exists because Engineers naturally prefer a manual "mode" of operation when troubleshooting, and they prefer automation when they want to get an overall performance picture.

The solution is the 3000 Series. It excels in both manual use and under automated control. Easy to understand and use front panels make manual troubleshooting easy. Exclusive two LED displays on both the Generator and Analyzer give you twice the information of competitive systems.

And, the Analyzer's exclusive memory storage section is continuously storing away test results for your later use.

COMPREHENSIVE WAVEFORMS AND ANALYSIS

More than just a sinewave generator, the 3000A is a low distortion function generator having the following waveform capabilities:

- Sinewave: 1Hz to 102.39kHz
- Squarewave: 1Hz to 30kHz
- SingleStep: 1Hz to 102.39kHz
- Triangular: 1Hz to 102.39kHz
- "Denotes an option.

All of the above waveforms are generated by the world's best generator: a transformerless, electronically balanced--true floating two-channel output generator. This digitally controlled, analog oscillator runs "RF cool" as the electronic oscillator is isolated from the multi-layered pcb board digital control section using opto-isolators. There is no electrical connection between the digital control circuits and the analog oscillator--therefore, no RF or digital "hash" path to the oscillator. Engineers are amazed to sweep either the Generator or Analyzer out into the MHz regions and find no digital hash or clock frequencies in the spectrum.

Because the balanced outputs are truly floating and transformerless, you can single-end either side to ground without loss of level. Also, you can output a clean (-90dBm) signal in order to test well below mic-level levels: the oscillator attenuates the noise as well as the signal (over 100 dB of attenuation after the power amplifier).

The 3000A Analyzer is no less comprehensive. The analyzer measures the following:

- Frequency to 500kHz
- Flat Level to 350kHz
- Filtered Level to 350kHz
- Total Harmonic Distortion (THD) to 300kHz
- THD+N to 300kHz
- Noise (over 102.39kHz) to 500kHz
- Channel Separation to 100kHz

All measurements are fully automatic. Merely select the test and press "Start." Two LED displays autoconfigure and show two parameters simultaneously. For example, "A" channel Level will show the incoming frequency on the left display and Level on the right display. The LED readings will keep updating in real-time until the "stop" button is depressed. No range changing or scaling is necessary.

INDUSTRY-LEADING SPECIFICATIONS

The 3000 Series was designed for testing 16-bit digital audio systems. The 3000 Series specifications are some of the best to be found. We welcome competition to any other audio test system regardless of where manufactured. Beware of confusing specification claims when shopping for a new audio test system.

BENCH-TOP TESTING

FSK automation lends itself to bench-top testing. Auto-sequences can be designed entirely for audio equipment check-out purposes. Also, FSK automation can be recorded on audio and video tape recorders such that automated 2-head type testing can be accomplished without external computer control.

EXTERNAL COMPUTER AUTOMATION

The 3000 Series can also be controlled using external personal computers. The 3000 series is controlled using standard interface buses (GPIB and RS-232C). By using a standard interface we allow you to configure the 3000 series with other automated test systems. Sound Technology also sells hundred 8-bit compatible software modules for use with our automated systems. With these modules, no software experience is necessary to automate ST equipment.
**SPECIFICATIONS**

**GENERATOR**

- **Sinewave, Toneburst, Sine/Step**
  - Minimum Frequency: 1 Hz
  - Maximum Frequency: 102.39 kHz ± 4% Vernier
  - Frequency Resolution: 0.01% at 10 Hz to 102.39 kHz
  - Frequency Accuracy: 0.03% fixed parameters, 0.1% automatic sweep
  - Frequency Resolution: 0.01% at 10 Hz to 102.39 kHz

- **Level Sweep**
  - User selected end points in dBm (600 or 150). dB/STEP key-in 0.05 dB to 20.00 dB. Sweeps up or down.

- **Squarewave**
  - Minimum Frequency: 1 Hz
  - Maximum Frequency: 50 kHz
  - Risetime: less than 1 µsec, controlled by 3-pole, linear phase filter.

- **SMPTE IMD (option 004)**
  - IMD Residual Distortion: < 0.001%

- **Toneburst (option 005)**
  - Toneburst Time On/Off adjust: 5 msec to 9,999.9 sec.
  - Toneburst OH adjust: burst offset from 5 to 60 dB in 5 dB increments

- **Sine/Step (option 005)**
  - Sine/step Sine On/Step On adjust: 5 msec to 9,999.9 sec.

**ANALYZER, cont'd.**

- **Ratio**
  - Measures against user set reference level
  - Units: dB
  - Filters: Hi Pass, Lo Pass and Weighting selectable

- **THD**
  - Units: % or dB
  - Range: 0.01% to 100% full scale
  - Residual Distortion: < 0.001% to 10 kHz
  - Residual Noise: < 4 µV with 80 kHz B.W.
  - Measurement bandwidth: > 300 kHz
  - Fundamental Rejection: > 10 dB below residual noise + Distortion
  - Accuracy: ± 1 dB to 20 kHz, ± 2 dB to 100 kHz

- **Notch Lock (option 010)**
  - Same as ratio except Notch Filter used. Notch auto-nulls with signals above 0.1 V, then locks-up when signal drops below 0.1 V. Time for ensuing measurement of noise in the presence of a low level signal (e.g., quantization noise): approx. 30 sec.

- **IMD (SMPTE - option 004)**
  - Residual Noise + Distortion: < 0.002%

- **Phase**
  - Range: ± 180.0°
  - Frequency: 10 Hz to 40 kHz
  - Level: 50 mV to 100 V
  - Accuracy: ± 0.8°
  - Resolution: 0.1°

- **Channel Separation**
  - Measures cross-talk into selected channel
  - Residual cross-talk: 100 dB to 20 kHz
  - 80 dB to 100 kHz

**SYSTEM**

- **Power:**
  - 100, 120, 220, 240 V, 48-66 Hz, 140 W
- **Dimensions:**
  - HW: 8.0 × 18.5 × 17.4" (20 × 47 × 44 cm)
- **Weight:**
  - Net/Ship: 52 lbs (24 kg) / 59 lbs (27 kg)
  - Environmental: 90% RH, 50 to +104°F (+10 to +40°C).

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