

ANALYZING SCALER RATEMETER

Model # FS-5T

FEATURES:

- LINE OR BATTERY OPERATION
- PRESET TIME 1-99 SEC. AND 1-99 MIN.
- AUTO (REPEAT) MODE
- CALIBRATED SETTABLE HIGH VOLTAGE 0-2500V
- AUTO BATTERY STANDBY IF POWER FAILURE 48 HRS.
- BRIGHT-7 DIGIT LED DISPLAY
- CONTINUOUSLY ADJUSTABLE ALARM 0-500K CPM
- THREE INDEPENDENT SINGLE CHANNEL ANALYZERS SWITCH SELECTABLE
- CRYSTAL CONTROLLED
- ANY T/A GM, PROPORTIONAL, SOLID STATE, DIGITAL, ION OR SCINTILLATION ALPHA, BETA, GAMMA, X-RAY, POSITRON, NEUTRON PROBE
- ALL PLUG-IN CIRCUIT CARDS ESSENTIALLY NO WIRES



Figure 1: FS-5T

APPLICATION: The FS-5T Automatic Scaler is a line operated instrument with battery standby. Uses include sample or wipe counter. "Frisker" monitor and lab monitor. It includes a digital ratemeter operating mode in which it presents 7 full decades of accurate readout without switching. The FS-5T is also used as an area monitor, again making use of the digital ratemeter modes covering seven decades and also utilizing the preset alarm that is built into the instrument. An extra safety feature of the FS-5T when it is used as an area monitor is that a switch is automatically made to battery operation in event of power failure.

DESCRIPTION: The FS-5T is a multi-purpose lightweight Scaler with internal chargeable battery. All GM and scintillation probes are usable with the FS-5T as are digital ion chamber and gas proportional probes. The FS-5T is a sturdy table top or portable instrument incorporating both scaler and ratemeter functions, three independent single channel analyzers, switch selectable and variable high voltage 0-2500V. The panel meter is a taut band type for maximum ruggedness.

Pulses are seen via a red LED for visual service in dark areas and the time base for the scaler operation is indicated by a flashing green LED. High voltage is settable to accommodate for all types of scintillator, proportional and GM detectors. Four ranges are incorporated into the ratemeter. Gate times for the scaler may be set from 1 to 99 seconds and 1 to 99 minutes. The scaler has an auto cycle capability particularly useful for increasing the accuracy of rate measurements. Power switch and HV pot and other controls are designed to prevent inadvertent change. The output of the "beeper" is varied by a volume control from completely silent to loud enough to be used in noisy environments. Standard features include output jack for optional chart recorder. Readings directly in mR/hr or other units can be made by choosing correct recycling time on the scaler or with transparent meter overly card on the ratemeter. Optional digital printer, strip chart recorder and RS-232. IEEE 488 and other interfaces make FS-5T fully system compatible.

TA TECHNICAL ASSOCIATES
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\$Revision: 1.3 \$

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SPECIFICATIONS:

- Digital:** Readout: 7 Digit LED-High Visibility
Time Base: Crystal controlled 1-99 sec., 1-99 min.
Run Modes: Single Shot, Auto-cycle
Display Modes: Latched, Continual Update
Gate Monitor: Green LED
- Analog:** Meter: 0-500 cpm, 3-1/2 inch linear scale
Ranges: x1; x10; x100; x1,000 (0-500, 5k, 50k, 500k, cpm)
Time Constant: Fast, Slow (2 or 11 seconds)
Pulse Monitor: Red LED one flash per pulse
Range: Usable probes cover range 1 μ R/h to 5000 R/h; 1 cpm to 500,000 cpm; 0.1 mR/h to 10 R/h.
Audio Indicator: Piezo electric sound maker with volume adjust.
Output for Strip-Chart Recorder: Standard feature 0 to 1 Volt.
- Single Channel Analyzer Mode:** 2 Preset (resettable) window positions plus "variable"
10-turn, 1,000 division pot for threshold
10-turn, 1,000 division pot for window width
- Discriminator Mode:** 10-turn, 1,000 division pot for threshold (same as above)
- Alarm:** Settable at any point on scale. A "push-to-display" button displays alarm set point.
- Alarm Indicators:** Red lamp plus Sonalert
- Detector:** Mates with T/A Probes, any pulsed ion chamber or GM, proportional, solid state, or scintillation detector.
Detector connector: MHV
Detector Bias Supply: 300 V to 2500 V regulated and filtered.
High Voltage is displayed on meter by pushing a button.
- Power:** AC Operation: 120V AC-60 Hz (optionally 115 or 230V AC-50 or 60 Hz).
Batteries: Built-in rechargeable battery and charger.
Battery Life: 48 hours between charges.
Battery Check: On main range switch and meter marking.
- Construction:** All plug in circuit cards, essentially no wires.
- Dimensions:** 35cm H x 30cm W x 30cm D (14" x 12" x 12") includes handle and tilt stand, both in folded position.
- Weight:** 4.5 Kg (10 lbs.)
- Options:** FS-5T23, RS-232 and other standard interfaces FS-5TW-ACW-AC only. No battery backup.
- Accessories:** Strip chart Recorder, Digital Printer.
Over 50 different TA probes and sample counter detectors.
Probe holder supplied no charge if probe and FS-5T are purchased together.
Transparent meter overlay for ratemeter to read mR/h or Sv/h with various probes.

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