ATTS 5000

AUTOMATED TELEMETRY TEST STATION

- Automated Dual and Quad Channel Receiver Combiner System Testing
- Automated Pre-Mission Testing
- Fully Documented Test Data Records
- Ideal for Ground Station Pre-Mission and Periodic Maintenance Testing
- Ideal Depot Level Maintenance

Automation provides optimum preventative maintenance and pre-mission telemetry receiver system testing. This is particularly important when faced with cuts in manning levels, coupled with increased ground station complexity. SEMCO has drawn from its expertise in automated test system design to develop and provide a user-friendly test platform called the Automated Telemetry Test Station (ATTS 5000). The ATTS 5000 is currently used to optimize SEMCO's telemetry receiver factory acceptance testing and is an ideal product for performing periodic maintenance and pre-mission checkout of ground station and mobile telemetry receiving systems.

Telemetry ranges can greatly benefit from an automated approach to RF testing. As new modulation techniques become more complex, as data rates increase, and as the telemetry industry moves into higher RF bands, the Test Ranges face new challenges to insure that their RF systems are performing properly and collecting the highest quality data. Coupled with these technological challenges is the requirement to do more with less...support additional, complex mission workload with fewer people and in less time.

The ATTS 5000 greatly facilitates achieving these goals. An ATTS 5000 dramatically reduces the man-hours and time required for daily ground station pre-mission testing and operation. Further, the ATTS 5000 provides consistent, error-free testing of both legacy telemetry requirements as well as current and emerging complex telemetry RF and modulation requirements.

The ATTS 5000 is also an ideal solution for depot maintenance and repair of telemetry receivers. It provides for complete automated testing in dramatically less time, thereby reducing the overall skill-level and manning requirements while providing documented test records.

- **Complete Automated Ground Station Testing** - All ground station pre-mission and periodic maintenance testing can be performed, from the antenna front-end through the telemetry data processing back-end. ATTS instrumentation and switching provides the ability to inject a modulated RF signal at the receiving antenna and perform all required tests including antenna testing, front-end RF switching and fidelity, BER performance and full receiver combiner performance, as well as pre-d recording and playback.
- **Ease of Use** - The ATTS 5000 is designed for use by range personnel with low to high levels of technical experience.
- **Reduced Manpower and Cost** - Manpower, test time and operational costs are greatly reduced. One ATTS 5000 operator can perform the tasks now performed by several individuals in less time. The operator merely selects the test or sequence of tests to be performed from an on-screen display, clicks the Start Key and can pursue other required activities while the ATTS 5000 automatically performs the preset testing sequence.
- **Test Consistency and Documented Test Results** - The ATTS 5000 ensures that every test is performed the same way every time, with documented test results for reporting ground station status.
- **Depot maintenance Application** - The ATTS 5000 provides an automated depot maintenance test capability that substantially reduces telemetry receiver repair and out-of-service time and overall costs.

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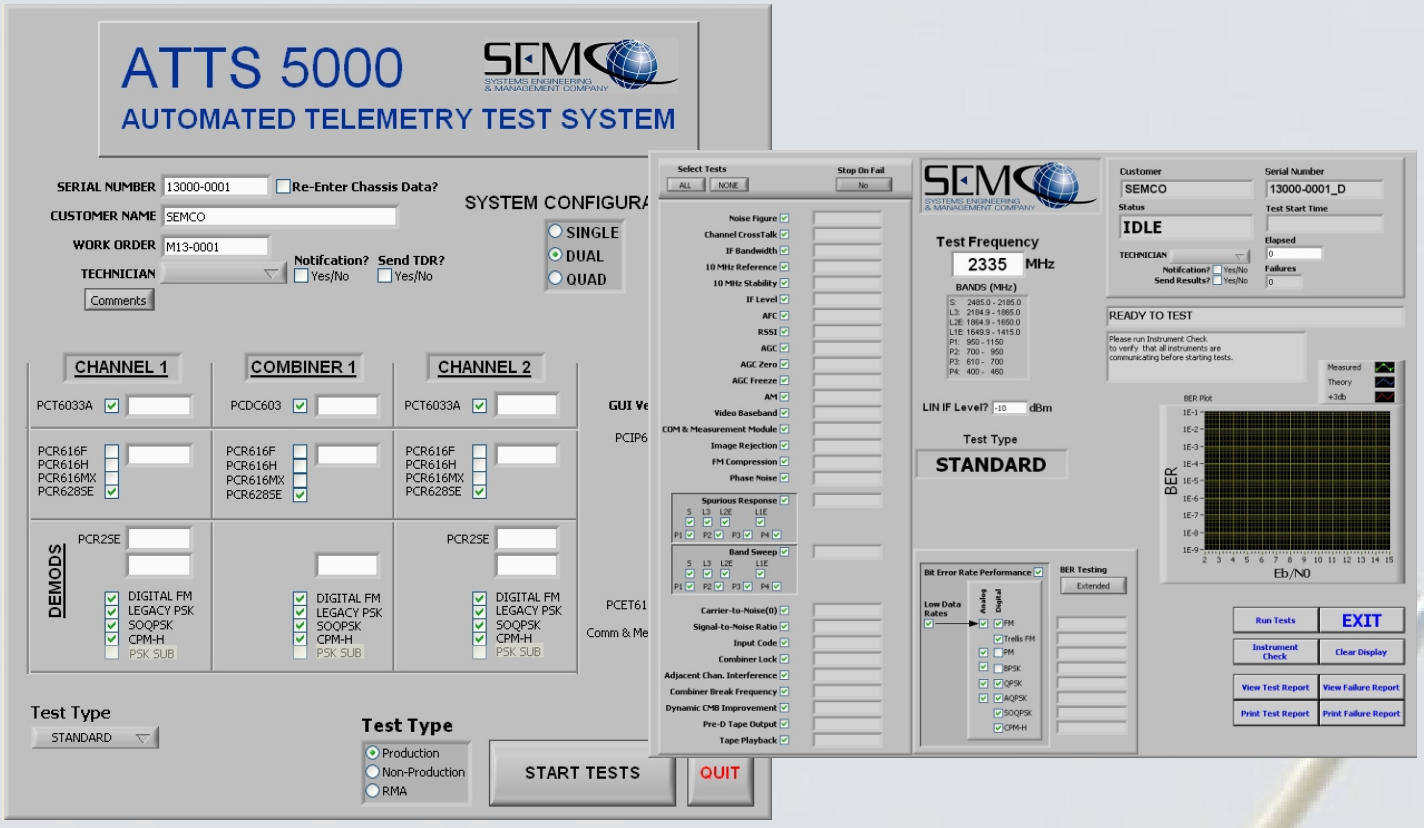

Intuitive Graphical User Interface (GUI)

Operator Interface: The operator uses intuitive Graphical User Interface (GUI) displays for ATTS operation. The desired tests and various options are selected from the screen display. An "Instrument Check" selection is available that tests the ATTS to insure that all instrumentation and cabling are fully operational. Once the required system configuration information and desired tests are selected, the operator simply selects "Run Tests."

ATTS 5000 Test Capabilities: The ATTS 5000 is delivered with standard automated test capabilities that span the majority of all telemetry test requirements identified in IRIG 106-11. Additional customer-specified tests can be added. Please contact your local SEMCO representative or the factory, if you wish to discuss your test requirements in more detail.

Standard ATTS 5000 Automated Tests

RF Frequency Tuning
IF Bandwidths
LO Stability
RSSI Accuracy (Absolute, Relative, Antenna)
AGC Slope, Scale & Linearity
AGC Freeze
Maximum RF Input
AM Outputs
AFC
Manual Frequency Offset Accuracy
Noise Figure
Spurious Signal Response
Image Rejection
Phase Noise
IF SNR
Video Baseband Outputs
FM Capture Ratio
FM Compression

Pre-d Tape Out and Playback
Static and Dynamic Diversity Combiner Test
- AGC Noise Floor Balance
- Combiner Lock Test
- Combiner Improvement @ Equal Signal Levels
- Combiner Break Frequency
- Combiner Fade/Phase Tests
- Combiner Best Source Select Mode

Adjacent Channel Interference
PCM/FM, PM, BPSK, QPSK, and A/UQPSK BER Curves
IRIG 106-11 Tier 0, Tier I and Tier II BER Curves
IF Output Levels
IF Frequency
Channel Crosstalk
Video Vp-p Outputs and Read-Out Accuracy
C/N = 0 Measurements
Transmitter Deviation Index Accuracy
Transmitter Frequency Offset Accuracy

Specifications are subject to change without notice.

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