

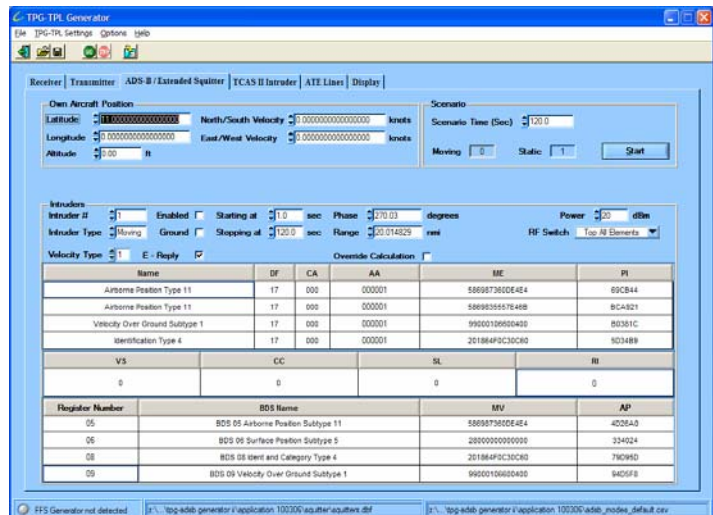
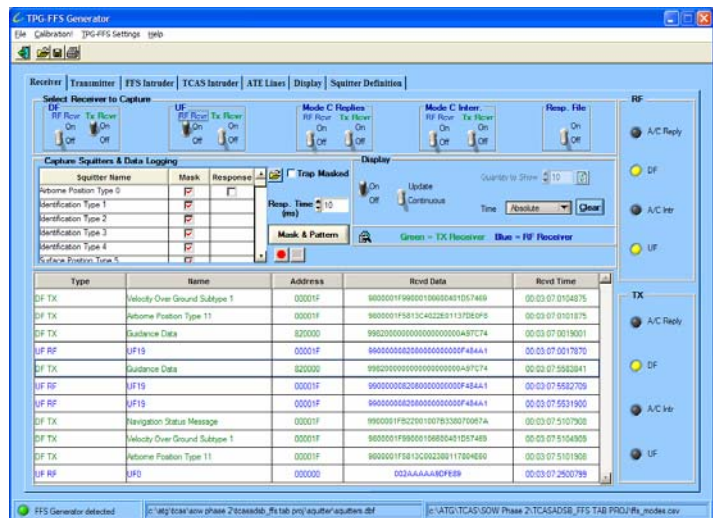


TPG-TPL TCAS TRANSPONDER TEST SET



The TPG-TPL TCAS/Transponder Test Set is a RF Signal Generator designed for testing of TCAS/XPDR Hardware and Software. The Test Set with the associated Windows based application software provides an Engineering Tool for software and hardware developers and validation and verification testing.

- Simulates 28 Dynamic Intruders
- Simulates 400 Static Intruders
- ADS-B Squitters
- TX/RX Downlink/Uplink Formats ATCRBS and Mode S
- Four Port Antenna Simulation
- Hybrid Surveillance



Transmitter Specifications:

Frequency

Range: 1030 +/- 10 MHz
1090 +/- 10 MHz

Resolution: 100 KHz

Accuracy: +/- 10KHz

Power

Range: -20 to -90 dBm per Element

Resolution: 1 dB

Accuracy: +/- 0.5 dB

Port: Top (4 Elements)
Bottom (4 Elements)
Any Individual Element

Pulse Modulation

Accuracy: +/- 0.05 uSec

On/Off Ratio: > 80 dB

Phase Simulation

Range: 0 to 359 °

Resolution: 1°

Accuracy: +/- 0.5 °

Range Simulation

Range: 0 to 150 NMI

Resolution: 12.5 Feet

Accuracy: +/- 25 Feet

Velocity Simulation

Range: 0 – 1023 Kt/Hr

Resolution: 1 Kt/Hr

Accuracy: +/- 1 Kt/Hr

Vertical Speed Simulation

Range: 0 – 32608 Ft/Min

Resolution: 64 Ft/Min

Accuracy: +/- 64 Ft/Min

Altitude Simulation

Range: -1000 to 126700 Feet

Resolution: 25 Feet upto 50175 Ft
100 Feet above 50175 Ft

Receiver Specifications:

VSWR: < 1.4

Max Input Power: +49 dBm

Internal Antenna Simulation

1030 Receiver with BPSK Demod

1090 Receiver

Dynamic Range: 30 dB

Software Interface:

USB 2.0

Ethernet

GPIB

RS-232

Application Software:

Receiver Screen

UUT and Test Set Signals:

UF Interrogations
DF Replies
ATCRBS Interrogations
ATCRBS Replies

Data Logging Capability

Timestamp: 100 nSec Resolution

Signal Trapping Capability

User and Pre-Defined Trap Mask

Transmitter Screen

Signals: UF Interrogations
DF Replies
ATCRBS Interrogations
ATCRBS Replies

Transmit Sequence

Reply File Sequence

TCAS ADSB Screen

Dynamic Intruder: 28

Static Intruder: 400

ADS-B Intruder Simulation

Intruder Information Entry:

Range/Bearing/Altitude
Latitude/Longitude/Altitude

Range Offset

Phase Noise and BIAS

Own Aircraft Information

Hybrid Surveillance/BDS Register

TCAS Screen

Mode C/Mode S Simulation

Range, Bearing, Direction, Altitude

Display Screen

Displays Intruders

ATE Line Screen

Display decoded ATE Line Messages

Interfaces:

Suppression Bus

ATE Lines

429 Tx/Rx

Two Scope BNC Outputs:

Suppression
1030/1090 Log Video
TX Mod

Physical Characteristics:

Power: 115/230 VAC, 50/60 Hz

Height: 10.5 inches

Width: 19 inches

Depth: 16.5 inches

Weight: 28 lbs



14046 NW 82 Avenue
Miami Lakes, Florida 33016
Phone: (305)556-1957
FAX: (305) 556-6510

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www.a-tg.com