

```
** SCENARIO TEST - RUNNING **
INTRUDER TYPE: ATCRBS    TIME: 0:23;1:02
RANGE: 3.95 nm           RATE: +350 kt
ALT: 10,000 ft           RATE: +0 fpm
STATUS: PROXIMITY
W-S SEQUENCE INTERVAL: 1.00 sec
```

Mode S Reply Test

The Mode S Reply Test can be used to evaluate the ability of the TCAS interrogator to receive, decode and respond to Mode S replies. In this mode the TCAS-201 simulates a Mode S transponder replying with formats DF0, DF11 and DF16. The message fields allow the user to program capability information and various advisories into the replies.

```
** MODE S REPLY TEST - RUNNING **
RANGE: 11.00 nm ALTITUDE: 8300 ft
VS:0 SL:0 R1a:8 R1t:3 CA:0
ARA:0000 RAC:0 CLI:0 VDS:30
AA:01FF37
SURVEILLANCE INTERVAL: 1.00 sec
```

Whisper-Shout Monitor

The Whisper-Shout Monitor screen provides information used to verify whisper-shout steps and Side Lobe Suppression (SLS). By conducting several tests from different points around the aircraft, the TCAS coverage (directional and/or omni-directional), whisper-shout sequence operation and interrogation timing may be evaluated.

```
** WHISPER SHOUT MONITOR - RUNNING **
- MONITOR ONLY -
ATTN: 0.0 dB NO SUPP: 1
S1: 0 P2: 0 BOTH: 0
SPACING: 4.3 ms
W-S SEQUENCE INTERVAL: 1.01 sec
```

SPECIFICATION

REPLY GENERATOR

Output

1090 MHz DCXO controlled (± 10 kHz)

Level

Set for operation over an antenna to antenna distance of 5 to 500 feet (1.5 to 152.4 meters)

Test Antenna

Remote antenna

VSWR <1.5:1, 9.5 gain typical

OUTPUT TEST SIGNALS

Reply Modes

Mode C (with altitude reporting), Mode S (Formats 0, 11, 16)

Pulse Spacing

Accuracy ± 50 ns

Pulse Widths

Accuracy ± 50 ns

PULSE CHARACTERISTICS

All Pulses

± 1 dB relative to P_1

Percent Reply

Range 0% to 100%

Resolution 10%

Accuracy $\pm 1\%$

Range Delay

Range 0.3 to 30 nautical miles

Resolution 50 ns steps

Accuracy ± 0.02 nautical miles

Altitude

Range -1000 to +126,000 feet

Resolution 100 feet

Mode S Address

Selectable

Reply Delay

ATCRBS 3.0 μ s (± 50 ns)

Mode S 128.0 μ s (± 50 ns)

Range Rate

Range -1200 to +1200 kts

Resolution 10 kts

Accuracy $\pm 10\%$

Altitude Rate

Range -10,000 to +10,000 fpm

Resolution 100 fpm

Accuracy $\pm 10\%$

Squitter

Control ON/OFF

Rate 1.0 seconds (± 10 ms)

UUT MEASUREMENTS

Effective Radiated Power (Mode S Interrogations)

Range +43 to +57 dBm (20 to 500 W)

Accuracy ± 2 dBm

Frequency

Range 1029.9 to 1030.1 MHz

Accuracy ± 10 kHz

Resolution 1 kHz

Detectable Modes

ATCRBS only All Call (Mode C)

Mode S Downlink (Formats 0, 11, 16)

GENERAL

Calibration Interval

1 Year

Battery Operation

Duration: 1.5 hours before recharge at 25°C

Automatic shut off after 10 minutes of non-use

AC Supply

103.5 to 129 VAC, 207 to 253 VAC, 47.5 to 420 Hz, 45 W (used to recharge battery)

ENVIRONMENTAL**Temperature**

-20° to +55°C

Relative Humidity

*≤80% for temperatures up to 31°C, decreasing linearly to 50% at 40°C
(Non-condensing)*

Altitude

≤4000 m (13,124 ft.)

Dimensions

284 mm wide; 361 mm deep; 279 mm high

11.2 in. wide; 14.2 in. deep; 11 in. high

Weight

13.7 kg (30 lbs.)

Electromagnetic Compatibility

Complies with the limits in the following standards:

EN 55011 Class B

EN 50082-1

Safety

Complies with EN 61010-1 for class 1 portable equipment and is for use in a pollution degree 2 environment. The instrument is designed to operate from an installation category 1 or 2 supply.

VERSIONS AND ACCESSORIES

When ordering please quote the full ordering number information.

Ordering

| Numbers | Versions |
|---------|---|
| 201-110 | TCAS-201 Traffic Alert & Collision Avoidance, 110 VAC operation |
| 201-220 | TCAS-201 Traffic Alert & Collision Avoidance, 220 VAC operation |

Accessories (Supplied)

- Line Cord
- RF Coaxial Cable
- Antenna Shield
- Operation Manual
- Operator’s Guide
- Directional Antenna
- Tripod
- Omni-Directional Antenna

All Aeroflex Avionics products delivered with Factory Certificate Of Calibration