Avionics

IFR 6000 Ramp Test Set

The IFR 6000 is a compact, lightweight and weatherproof unit designed for testing transponder modes A/C/S, TCAS I and II as well as DME.

- One main user screen for each test mode
- Detachable antenna
- Large display
- Simple user interface
- Lightweight and compact <8 lbs. (3.6 kg)
- Battery 6 hours plus duration
- Fully FAR part 43 appendix F compliant
- European Elementary and Enhanced Surveillance

The IFR 6000 features an extremely easy to use interface where every parameter the user commonly needs to view is displayed on screen.

Controls

Dedicated Mode keys for XPDR, DME and TCAS allow quick selection of the operational mode.

The application dependant softkeys and data select/slew keys provide an intuitive man machine interface.

DME mode is provided with dedicated keys for frequency/channel selection and RF level control. For frequently varied parameters in DME and TCAS modes, such as Range and Rate, dedicated keys are provided.

Operational Modes

Each operational mode has one main user screen. The operational modes are:

XPDR (Sub-Modes: ADS-B MON, ADS-B GEN & GICB)
DME
TCAS 1, 2 (Sub-Modes: TIS)

Most tests can be completed without leaving the main user screens. This simplifies the line technician’s testing task.
Mode S and ATCRBS Transponder

**XPDR Auto-Test:**

Every parameter the user commonly needs to view is displayed on one screen.

The auto-test performs all tests defined by FAR Part 43 Appendix F, including the proposed Eurocontrol additional tests.

The tests are tailored automatically according to reported transponder level to avoid erroneous failures.

The test list is selected from the auto-test screen. This provides an easy means of selecting any of the individual tests that comprise the auto-test.

Tests on the 2nd screen (not shown) include:

13 UF21
14 UF24
15 ELEMENTARY SURVEILLANCE 1
16 ELEMENTARY SURVEILLANCE 2
17 ENHANCED SURVEILLANCE

The test list is selected from the auto-test screen. This provides an easy means of selecting any of the individual tests that comprise the auto-test. Tests on the 2nd screen (not shown) include:

- 13 UF21
- 14 UF24
- 15 ELEMENTARY SURVEILLANCE 1
- 16 ELEMENTARY SURVEILLANCE 2
- 17 ENHANCED SURVEILLANCE

The selected config parameters may be displayed by pressing the INFO softkey.

Eight predetermined configs are provided to meet the currently fielded transponder test needs.

The Eurocontrol Elementary Surveillance DAP’s (Downlink Aircraft Parameters) are displayed on two screens.

Eurocontrol Enhanced Surveillance DAP’s are displayed on one screen.

User selects config required for test.

If the class of the transponder is unknown, the generic config may be selected which applies to the widest limits.

The test set will automatically determine the Mode S transponder level.

The selected config parameters may be displayed by pressing the INFO softkey.

Eight predetermined configs are provided to meet the currently fielded transponder test needs.

The Eurocontrol Elementary Surveillance DAP’s (Downlink Aircraft Parameters) are displayed on two screens.

Eurocontrol Enhanced Surveillance DAP’s are displayed on one screen.

Individual tests may be reviewed for failures which are identified by an arrow symbol.
No more HEX data field interpretation!
All Mode S Format tests display parameter in engineering units.

Comprehensive II / SI code and lockout timer test

**DME**

All the user needs are on one screen.
- RF level control for track sensitivity tests
- Supports all DME/TACAN channels selectable in VOR paired channels
- Full UUT measured parameters are displayed.

The Auto-Altitude feature interrogates Mode S XPDR of A/C under test to obtain current altitude.
Select pre-stored named scenarios directly from the auto-test screen.

**ADS-B and GICB**

**ADS-B MON:** Used to monitor DF17 extended squitter from transponders and DF18 extended squitter from 1090 MHz ADS-B emitters.

**ADS-B GEN:** Used to generate DF17/DF18 extended squitter, simulating transponders and 1090 MHz ADS-B emitters.

**GICB:** Used to monitor DAP’s (all fields).

The ADS-B MON LIST shows BDS formats supported.
The BDS status is annunciated to indicate if the squitter has been captured, not available or not seen.
The BDS DATA key displays the BDS DATA screen for the selected BDS number.

---

**For the very latest specifications visit [www.aeroflex.com](http://www.aeroflex.com)**
**ADS-B MON:**

The BDS DATA screen displays full content of selected BDS format being received via DF17 or DF18 extended squitters.

The BDS ENABLE/DISABLE key enables or disables the selected BDS number for squittering via DF17 or DF18 extended squitters. The BDS DATA key displays the BDS DATA screen for the selected BDS number.

**ADS-B GEN:**

BDS DATA screens display full content of the selected BDS format in RTCA/ICAO engineering units.

The NEXT & PREV PARAM keys select data fields for editing via the data slew keys.

**GICB:**

BDS DATA screens display full content of the selected BDS format being received via GICB DF20 or DF21 in RTCA/ICAO engineering units.

**TIS**

Up to 5 static intruders may be simulated relative to the A/C (UUT).

**General**

**Radiated Testing:**

The IFR 6000 is supplied with a lightweight fully sealed directional antenna that may be test set mounted, hand held or tripod mounted.

**Direct Connect Testing:**

The IFR 6000 may be directly connected to the UUT via a supplied RF coax cable via the RF I/O port.
Transit Case:
The IFR-6000 is supplied in a rugged plastic transit case which provides stowage for the test set, directional antenna, RF coax cable, antenna shield, breakout box, and power supply/charger.

**SPECIFICATION**

**DME MODE SPECIFICATIONS**

**SIGNAL GENERATOR**
A 3-minute warm-up period is required for all specifications.

**OUTPUT FREQUENCY**

**REPLY FREQUENCY**
- Range: 962 to 1213 MHz
- Accuracy: ±10 kHz

**ANTENNA PORT**
- Range: -67 to -2 dBm at Antenna port
- Resolution: 1 dB
- Accuracy: ±2 dB
- Distance to UUT antenna: 6 to 300 ft with supplied antenna

**RF I/O PORT**
- Range: -115 to -47 dBm
- Resolution: 1 dB
- Accuracy: -95 dBm to -47 dBm: ±1 dB
- Accuracy: -115 dBm to <-95 dBm: ±2 dB

**REPLY PULSE SPACING**
- P1 to P2: 12 µs (±100 ns) (X Channel) @ 50% peak
- P1 to P2: 30 µs (±100 ns) (Y Channel) @ 50% peak

**REPLY PULSE WIDTH**
- P1/P2: 3.5 µs (±0.5 µs)

**ECHO REPLY**
- Control
  - On/Off
- Position
  - 30 nmi (±1 nmi)
- Amplitude
  - -11 dB (±1 dB) relative to reply level

**REPLY PULSE RISE AND FALL TIMES**
- ALL PULSES
  - Rise Time: 2.5 µs (±0.25 µs) (10% to 90%)
  - Fall Time: 2.5 µs (±0.25 µs) (90% to 10%)

**REPLY DELAY**
- X CHANNEL
  - Fixed Reply Delay: 50 µs (±100 ns)
- Y CHANNEL
  - Fixed Reply Delay: 56 µs (±100 ns)

**RANGE DELAY**
- X AND Y CHANNEL
  - Range: 0 to 450.00 nmi
  - Resolution: 0.01 nmi
  - Accuracy: ±0.01 nmi

**RANGE RATE**
- X AND Y CHANNEL
  - Range: 10 to 6500 kts
  - Resolution: 1 kts
  - Accuracy: ±0.01% typical, tested to ±0.5%

**SQuitter**
- PRF: 2700 Hz
- Accuracy: ±2%
- Distribution: Per ARINC 568

---

For the very latest specifications visit [www.aeroflex.com](http://www.aeroflex.com)
**REPLY EFFICIENCY**

Range
0 to 100%

Resolution
1% increments

Accuracy
±0.5%

**IDENT TONE**

Selection
Selectable three letter code

Frequency
1350 Hz

Accuracy
±2 Hz

**UUT MEASUREMENTS**

**ERP**

Range
+47 to +64 dBm

Resolution
0.1 dB

Accuracy
±2 dB

**DIRECT CONNECTION PEAK PULSE POWER**

Range
+47 to +64 dBm

Resolution
0.1 dB

Accuracy
±1 dB

**FREQUENCY**

Range
1025.00 to 1150.00 MHz

Resolution
10 kHz

Accuracy
±10 kHz

**INTERROGATION PRF**

Range
1 to 300 Hz

Resolution
1 Hz

Accuracy
±2 Hz

**TRANSPONDER MODE SPECIFICATIONS**

**SIGNAL GENERATOR**

**RF OUTPUT FREQUENCY**

Interrogation Frequency
1030 MHz

Accuracy
±10 kHz

**RF OUTPUT LEVEL**

**ANTENNA CONNECTOR**

MTL + 6 dB typical, automatically controlled for a MTL range of -83 to -68 dBm

**Range**
-67 to -2 dBm at antenna connector

Resolution
0.5 dB

Accuracy
±2 dB

Distance to UUT antenna
6 to 200 ft with supplied antenna

**RF I/O CONNECTOR**

MTL + 6 dB typical, automatically controlled

**Range**
-115 to -47 dBm

Resolution
0.5 dB

Accuracy
-95 to –47 dBm, ±1 dB

Accuracy
-115 to <-95 dBm, ±2 dB

**ATCRBS/MODE S INTERROGATION PULSE SPACING**

**MODE A**

P1 to P2
2.00 µs (±25 ns)

P1 to P3
8.00 µs (±25 ns)

**MODE C**

P1 to P2
2.00 µs (±25 ns)

P1 to P3
21.00 µs (±25 ns)

**MODE S**

P1 to P2
2.00 µs (±25 ns)

P1 to P6
3.50 µs (±25 ns)

P1 to SPR
4.75 µs (±25 ns)

P5 to SPR
0.40 µs (±50 ns)
### Intermode Interrogation Pulse Spacing

**MODE A**
- **P1 to P3**: 8.00 µs (±25 ns)
- **P1 to P4**: 10.00 µs (±25 ns)

**MODE C**
- **P1 to P3**: 21.00 µs (±25 ns)
- **P1 to P4**: 23.00 µs (±25 ns)

### Interrogation Pulse Widths

**MODE A,C,S,INTERMODE**
- **P1,P2,P3**: 0.80 µs (±50 ns)

**MODE S**
- **P6 (Short DPSK Block)**: 16.25 µs (±50 ns)
- **P6 (Long DPSK Block)**: 30.25 µs (±50 ns)
- **P5**: 0.80 µs (±50 ns)

**INTERMODE**
- **P4 (Short)**: 0.80 µs (±50 ns)
- **P4 (Long)**: 1.60 µs (±50 ns)

### Interrogation Pulse Rise and Fall Times

**ALL MODES**
- **Rise Time**: 50 to 100 ns
- **Fall Time**: 50 to 200 ns

### Phase Modulation

**ALL MODES**
- **Transition Time**: ≤80 ns
- **Phase Shift**: 180° (±10°)

### SLS Levels

**ATCRBS**
- **SLS Level (P2)**: -9 dB, -1 to +0 dB relative to P1 level
- **0 dB, -0 to +1 dB relative to P1 level**
- **OFF**

**MODE S**
- **SLS Level (P5)**: -12 dB, -1 to +0 dB relative to P6 level
- **+3 dB, -0 to +1 dB relative to P6 level**
- **OFF**
  
  Note: SLS level is automatically controlled in the SLS LEVEL test.

### Interrogation Test Signals

**MODE S**
- **PRF**: 50 Hz (±5 Hz)
- **ATCRBS**
  - **PRF**: 235 Hz (±5 Hz)

### UIJT Measurements

**ERP (@ 1090 MHz)**
- **Range**: +45.5 to +59 dBm (35.5 to 800 watts)
- **Resolution**: 0.1 dB
- **Accuracy**: ±2 dB
- **Direct Connection Peak Pulse Power (@ 1090 MHz)**
  - **Range**: +46.5 to +59 dBm (45 to 800 watts)
  - **Resolution**: 0.1 dB
  - **Accuracy**: ±1 dB

### Receiver Sensitivity, Radiated MTL

- **Range**: -79 to -67 dBm into 0 dBi antenna
- **Resolution**: 0.1 dB
- **Accuracy**: ±2 dB, typical

### Receiver Sensitivity, Direct Connection MTL

- **Range**: -79 to -67 dBm
- **Resolution**: 0.1 dB
- **Accuracy**: ±2 dB

### Reply Delay

**ATCRBS**
- **Range**: 1.80 to 7.00 µs
- **Resolution**: 10 ns
- **Accuracy**: ±50 ns
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REPLY DELAY, MODE S AND ATCRBS MODE S ALL-CALL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>0.00 to 6.00 µs</td>
<td></td>
<td>1 ns</td>
<td>±20 ns</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>1 ns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>±20 ns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ATCRBS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>0.00 to 2.30 µs</td>
<td></td>
<td>1 ns</td>
<td>±20 ns</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>1 ns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>±20 ns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PULSE AMPLITUDE VARIATION</strong></td>
<td><strong>Range, Mode S (Relative to P1)</strong></td>
<td>-3 to +3 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Range, ATCRBS (Relative to F1)</strong></td>
<td>-3 to +3 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>0.1 dB (0.01 dB via RCI)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>±0.5 dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DF 11 SQUITTER PERIOD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>0.10 to 4.88 sec</td>
<td></td>
<td>10 ms</td>
<td>±10 ms</td>
</tr>
<tr>
<td></td>
<td><strong>MODE S PREAMBLE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Range, P1 to P2</strong></td>
<td>0.8 to 1.2 µs</td>
<td></td>
<td>1 ns</td>
<td>±20 ns</td>
</tr>
<tr>
<td><strong>Range, P1 to P3</strong></td>
<td>3.3 to 3.7 µs</td>
<td></td>
<td>1 ns</td>
<td>±20 ns</td>
</tr>
<tr>
<td><strong>Range, P1 to P4</strong></td>
<td>4.3 to 4.7 µs</td>
<td></td>
<td>1 ns</td>
<td>±20 ns</td>
</tr>
<tr>
<td><strong>DIVERSITY ISOLATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>0 to &gt;20 dB (Depending on Test Distance)</td>
<td></td>
<td>0.1 dB</td>
<td>±3 dB</td>
</tr>
<tr>
<td><strong>Test Distance</strong></td>
<td>1.83 m (6ft) to 28.96 m (95 ft)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TCAS MODE SPECIFICATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output Frequency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REPLY FREQUENCY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1090 MHz</td>
<td></td>
<td>10 kHz</td>
<td>±10 kHz</td>
</tr>
<tr>
<td><strong>Output Level (Simulated ERP)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Antenna Connector</strong></td>
<td>Radiated power at 0dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UUT antenna</td>
<td>-68 dBm typical @ 10 Nmi Range, automatically controlled</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>-67 to -2 dBm at Antenna connector</td>
<td></td>
<td>0.5 dB</td>
<td>±2 dB</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>0.5 dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>±2 dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Distance to UUT antenna</strong></td>
<td>6 to 300 ft with supplied antenna</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RF I/O Connector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Automatic mode</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Manual mode Range</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>-95 to -47 dBm, ±1 dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-115 to &lt;-95 dBm, ±2 dB</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Reply Pulse Spacing

#### Mode C

<table>
<thead>
<tr>
<th>Pulse Pair</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 to F2</td>
<td>20.30 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to C1</td>
<td>1.45 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to A1</td>
<td>2.90 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to C2</td>
<td>4.35 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to A2</td>
<td>5.80 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to C4</td>
<td>7.25 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to A4</td>
<td>8.70 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to B1</td>
<td>11.60 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to D1</td>
<td>13.05 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to B2</td>
<td>14.50 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to D2</td>
<td>15.95 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to B4</td>
<td>17.40 µs (±25 ns)</td>
</tr>
<tr>
<td>F1 to D4</td>
<td>18.85 µs (±25 ns)</td>
</tr>
</tbody>
</table>

#### Mode S

<table>
<thead>
<tr>
<th>Pulse Pair</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1 to P2</td>
<td>1.00 µs (±25 ns)</td>
</tr>
<tr>
<td>P1 to P3</td>
<td>3.50 µs (±25 ns)</td>
</tr>
<tr>
<td>P1 to P4</td>
<td>4.50 µs (±25 ns)</td>
</tr>
<tr>
<td>P1 to D1</td>
<td>8.00 µs (±25 ns)</td>
</tr>
<tr>
<td>D1 to Dn (n=2 to 112)</td>
<td>1.00 µs times (n-1) (±25 ns)</td>
</tr>
</tbody>
</table>

### Reply Pulse Amplitudes

#### ATCRBS

- ±1 dB relative to F1

#### Mode S

- ±1 dB relative to P1

### Reply Pulse Rise and Fall Times

#### All Modes

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rise Time</td>
</tr>
<tr>
<td>Fall Time</td>
</tr>
</tbody>
</table>

### Percent Reply

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
</tr>
<tr>
<td>Resolution</td>
</tr>
<tr>
<td>Accuracy</td>
</tr>
</tbody>
</table>

### Reply Delay

#### ATCRBS

- 3.0 µs (±50 ns)

#### Mode S

- 128 µs (±50 ns)

### Range Delay

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
</tr>
<tr>
<td>Resolution</td>
</tr>
<tr>
<td>Accuracy</td>
</tr>
</tbody>
</table>

### Range Rate

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
</tr>
<tr>
<td>Resolution</td>
</tr>
<tr>
<td>Accuracy</td>
</tr>
</tbody>
</table>

### Altitude Range

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
</tr>
<tr>
<td>Resolution, Mode C</td>
</tr>
<tr>
<td>Resolution, Mode S</td>
</tr>
</tbody>
</table>

### Altitude Rate

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
</tr>
<tr>
<td>Resolution</td>
</tr>
<tr>
<td>Accuracy</td>
</tr>
</tbody>
</table>
SQUITTER

Control
On/Off

Rate
0.8 to 1.2 seconds, randomly distributed

RECEIVER

PULSE SPACING

ATCRBS (Mode C All Call)
S1 to P1 2.0 µs
Accepts ≤ ±200 ns
Rejects ≥ ±1.0 µs
P1 to P3 21.0 µs
Accepts ≤ ±200 ns
Rejects (<10% Replies) ≥ ±1.0 µs
P1 to P4 23.0 µs
Accepts ≤ ±200 ns
Rejects (<10% Replies) ≥ ±1.0 µs

Mode S
P1 to P2 2.0 µs
Accepts ≤ ±200 ns
Rejects (<10% Replies) ≥ ±1.0 µs
P1 to SPR 4.75 µs
Accepts ≤ ±200 ns
Rejects (<10% Replies) ≥ ±1.5 µs

SUPPRESSION

ATCRBS (P2 or S1)
>0.5 dB above level of P1 <10% Replies

UIUT MEASUREMENTS

ERP (@ 1030 MHz)

ATCRBS
Range +43 to +58 dBm (20 to 631 watts)
Resolution 0.1 dB
Accuracy ±2 dB

MODE S
Range +43 to +58 dBm (20 to 631 watts)
Resolution 0.1 dB
Accuracy ±2 dB

DIRECT CONNECTION PEAK PULSE POWER (@ 1030 MHz)

ATCRBS
Range +43 to +58 dBm (20 to 631 watts)
Resolution 0.1 dB
Accuracy ±1 dB

FREQUENCY

Range 1029.900 to 1030.100 MHz
Resolution 1 kHz
Accuracy ±10 kHz

TCAS BROADCAST INTERVAL

Range 1.0 to 12.0 sec
Resolution 0.1 sec
Accuracy ±0.2 sec

MISCELLANEOUS INPUT/OUTPUTS

RF I/O
Type Input/Output
Impedance 50 Ω typical
Maximum Input Level 4 kW peak
10 W average
VSWR <1.3:1

ANTENNA
Type Input/Output
Impedance 50 Ω typical
Maximum Input Level 10 W peak
0.5 W average

VIDEO
Type Output
Impedance 50 Ω typical
Generate Video Level 1.1 Vpp (±0.4 V) into 50 Ω
Receive Video Level Proportional to IF level
Baseline ±0.5 V referenced to ground

TEST ANTENNA
VSWR <1.5:1
Gain
6 dB, Typical

TIME BASE (TCXO)
Temperature Stability
±1 ppm
Aging
±1 ppm per year
Accuracy
±1 ppm
Test Limit
±0.3 ppm

BATTERY
Type
Li Ion
Duration
>4 hrs continuous operation
>6 hrs, Typical

INPUT POWER (TEST SET)
Input Range
11 to 32 Vdc
Power Consumption
55 W Maximum
16 W Nominal at 18 Vdc with charged battery
Fuse Requirements
5 A, 32 Vdc, Type F

INPUT POWER (SUPPLIED EXTERNAL AC TO DC CONVERTER)
Input Range
100 to 250 VAC, 1.5 A Max, 47 to 63 Hz
Mains Supply Voltage Fluctuations
≤10% of the nominal voltage
Transient Overvoltages
According to Installation Category II

ENVIRONMENTAL (TEST SET)
Use
Pollution Degree 2
Altitude
≤4800 meters
Operating Temperature
MINUS 20°C to 55°C
Storage Temperature
MINUS 20°C to 71°C
Relative Humidity
95% (±5%) from 5° to 30°C
75% (±5%) from 30° to 40°C
45% (±5%) from 40° to 55°C

ENVIRONMENTAL (SUPPLIED EXTERNAL AC TO DC CONVERTER)
Use
Indoors
Altitude
≤10,000 meters
Operating Temperature
0° to 40°C
Storage Temperature
-20°C to 71°C

PHYSICAL CHARACTERISTICS
DIMENSIONS
Height
11.2 inches (28.5 cm)
Width
9.1 inches (23.1 cm)
Depth
2.7 inches (6.9 cm)
Weight (Test set only)
<8 lbs. (3.6 kg)

SUPPLEMENTAL INFORMATION
Test Set Certifications
Altitude, operating MIL-PRF-28800F Class 2
Altitude, not operating MIL-PRF-28800F Class 2
Bench Handling MIL-PRF-28800F Class 2
Blowing Dust MIL-STD-810F Method 510.4, Procedure I
Drip-proof MIL-PRF-28800F Class 2
Explosive Atmosphere MIL-STD-810F Method 511.4, Procedure 1
Relative Humidity MIL-PRF-28800F Class 2
Shock, Functional MIL-PRF-28800F Class 2
Vibration Limits MIL-PRF-28800F Class 2
Temp, operating NOTE 4 MIL-PRF-28800F Class 2
Temp, not operating NOTE 5 MIL-PRF-28800F Class 2
Transit Drop MIL-PRF-28800F Class 2
Safety Compliance UL-61010B-1
EN 61010-1
EC 61326
External AC-DC Converter Certifications
Safety Compliance UL 1950 DS
VDE EN 60 950
EMI/RFI Compliance FCC Docket 20780 Curve "B"
EMC EN 61326
Transit Case Certifications
Drop Test FED-STD-101C Paragraph 6.3, Procedure A, Level A
Falling Dart Impact ATA 300 Category I
Vibration, Loose Cargo FED-STD-101C Method 5019
Vibration, Sweep ATA 300 Category I
Simulated Rainfall MIL-STD-810F Method 506.4 Procedure II of 4.1.2
Immersion MIL-STD-810F Method 512.4
VERSIONS AND ACCESSORIES

When ordering please quote the full ordering number information.

Ordering Numbers  Versions
6000-110    IFR 6000 Mode A/C/S Transponder and DME
            Ramp Test Set, with US Mains Leads
6000-220    IFR 6000 Mode A/C/S Transponder and DME
            Ramp Test Set, with European Mains Leads
6000OPT2    TCAS (TIS)
6000OPT3    ADS-B

Extended Standard Warranties with Calibration for 6000
W6000/203C  Extended standard warranty 36 months with
            scheduled calibration
W6000/205C  Extended standard warranty 60 months with
            scheduled calibration

Accessories for 6000
AC0820      Desk Top Stand
AC0826      Tripod
AC24006     Tripod, Dolly, Stand
AC0824CD    IFR 6000 Maintenance Manual - CD
AC0825CD    IFR 6000 Operation Manual - CD
AC0829      25ft TNC/TNC COAX
AC0830      50ft TNC/TNC COAX

Notes
NOTE 1  Simulates a 50.5 dBm XPDR ERP at 10 nMi range.
NOTE 2  Battery charging temperature range: 5°C to 40°C (controlled by internal
        charger).
NOTE 3  Li Ion Battery must be removed below -20°C and above 60°C.
NOTE 4  Temperature range extended to -20°C to 55°C.
NOTE 5  Temperature range reduced to -30°C to 71°C.