

Avionics

IFR 6000 Ramp Test Set

AEROFLEX
A passion for performance.



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 for 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:

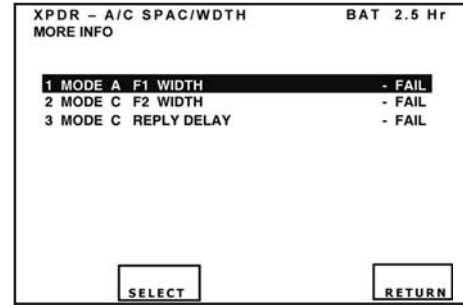
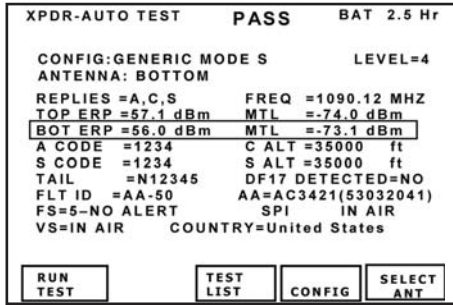
XPDR (Sub-Modes: ADS-B RX, ADS-B TX & GICB)

DME

TCAS 1,2 (Sub-Modes: TIS & TIS-B)

Most tests can be completed without leaving the main user screens.

This simplifies the line technician's testing task.



Mode S and ATRCBS Transponder

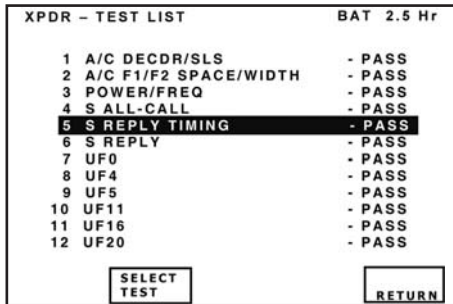
Xpdr Auto Test:

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.

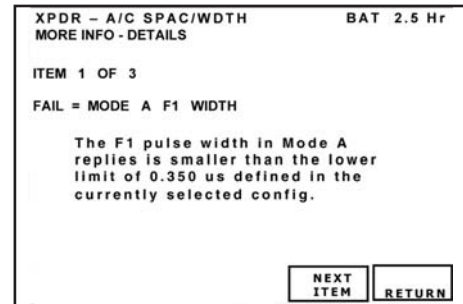
Individual failure items are then displayed and may be selected for display of details.



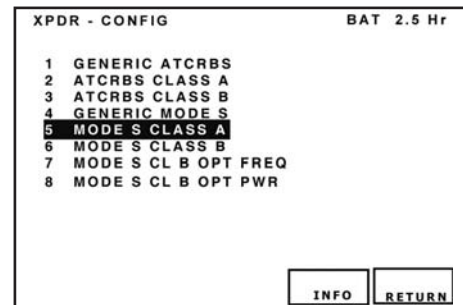
The test list is selected from the auto test screen. This provides an easy means of selecting any of the individual tests that comprise the auto test.

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

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



Individual failure details are displayed in easy to understand terms.



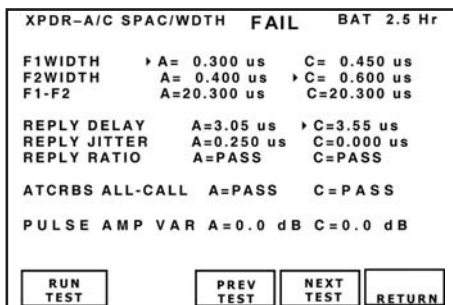
User selects config required for test.

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 field-ed transponder test needs.



Individual tests may be reviewed for failures which are identified by an arrow symbol.

If more failure information is required the user can press the MORE INFO softkey.

```

XPDR-ELEMENT SURV2 PASS BAT 2.5 Hr
DF=20
BDS=1,7 :0,5 :0,6 :0,7 :0,8 :0,9
:0,A :2,0 :2,1 :4,0 :4,1 :4,2 :4,3
:4,4 :4,5 :4,8 :5,0 :5,1 :5,2 :5,3
:5,4 :5,5 :5,6 :5,F :6,0

BDS 1,8=0000000000000000
BDS 1,9=0000000000000000
BDS 1,A=0000000000000000
BDS 1,B=0000000000000000
BDS 1,C=0000000000000000

RUN TEST PREV TEST NEXT TEST RETURN

```

```

XPDR-S ALL-CALL PASS BAT 2.5 Hr
ITM REPLY
DELAY A=128.08 us C=128.07 us
JITTER A=0.510 us C=0.510 us
RATIO A=PASS C=PASS
ADDRESS A=2AC421 C=2AC421

MODE S ALL-CALL= PASS
ADDRESS = 2AC421
TAIL= N12345
COUNTRY= United States

RUN TEST PREV TEST NEXT TEST RETURN

```

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

```

XPDR-ENHANCED SURV PASS BAT 2.5 Hr
DF=20
BDS4,0 MPU/FCU SEL ALT =65520 ft
BDS5,0 ROLL ANGLE = 40.1 deg
TRUE TRACK ANGLE= 90.3 deg
GROUND SPEED = 512 kts
TRACK ANGLE RATE= 4.00 deg/s
TRUE AIR SPEED = 512 kts
BDS6,0 MAGNETIC HEADING= 180.3 deg
IND AIR SPEED = 512 kts
MACH NO = 0.300
INERT VERT VEL =-14000 ft/min

RUN TEST PREV TEST NEXT TEST RETURN

```

```

DME BAT 2.5 Hr
VOR: 108.00 MHz RF LVL: -100 dBm
FREQ: 978 MHz RATE: 650 kts IN
CHAN: 17X RANGE: 450.00 nm

% REPLY: 100 ECHO: OFF
SQTR : ON IDENT: OFF

TX FREQ = 1041.00 MHZ ERP=55.0 dBm
P1 WIDTH= 3.500 us PRF=150 Hz
P2 WIDTH= 3.500 us
P1-P2 = 36.00 us(Y)

RUN TEST PREV PARAM NEXT PARAM STOP RATE IN/OUT

```

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

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.

```

XPDR - UFO PASS BAT 2.5 Hr
DF = 0
VS = 0 - IN AIR
CC = 0 - NOT SUPPORTED
SL = 0 - NO TCAS SENS LEVEL REPORTED
RI = 12 - AIRSPEED 301 TO 600 KNOTS

AC = 03A0(01640) 10700 FT
MODE C ALT COMPARE = PASS
AA = AC3421(53032041)
DF11 ADDRESS COMPARE = PASS

RUN TEST PREV TEST NEXT TEST RETURN

```

```

TCAS: 2 MODE S TEST RUNNING BAT 2.5 Hr
FREQ= 1030.00 MHz ERP= +54.0 dBm
THREAT STATUS = PROXIMITY
TIME TO ENCOUNTER = 0:00
TIME FROM SCENARIO START= 0:00
RANGE: 1.0 nm RATE: 0 kt IN
ALT: 20000 ft (AUTO) RATE: +fpm
% REPLY: 100 TCAS STATUS: TRACKING

SCENARIO: TA RUN IN

RUN TEST PREV PARAM NEXT PARAM MON IN/OUT

```

No more HEX data field interpretation!

All Mode S Format tests display parameter in engineering units.

TCAS

- TCAS types...
- TCAS 1 MODE C
- TCAS 2 ATCRBS
- TCAS 2 MODE S

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.

```

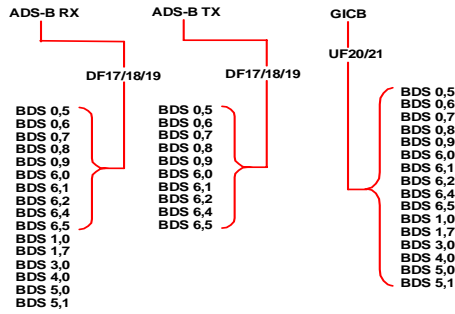
XPDR-UF11 PASS BAT 2.5 Hr
DF=11
CA=0-LEVEL 2 CA MODE
PI =02F08D
AA=AC3421(53032041)

II MATCH=PASS
SI LOCKOUT TIMER=16S
SI MATCH=PASS

RUN TEST PREV TEST NEXT TEST RETURN

```

Comprehensive II / SI code and lockout timer test

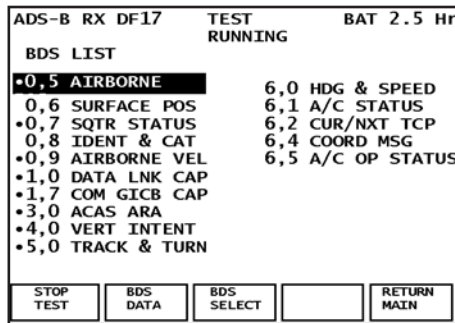


ADS-B and GICB

ADS-B RX: Used to monitor extended squitter from transponders and 1090 MHz ADS-B emitters.

ADS-B TX: Used to generate extended squitter, simulating transponders and 1090 MHz ADS-B emitters.

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



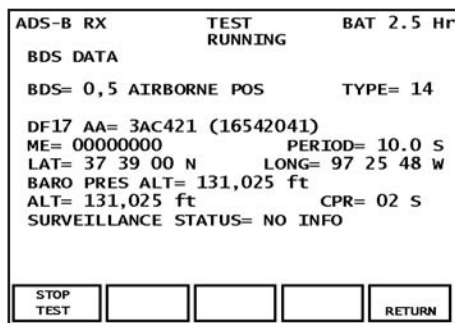
ADS-B RX:

The BDS LIST shows BDS formats supported.

A symbol preceding the BDS number indicates that extended squitter has been captured.

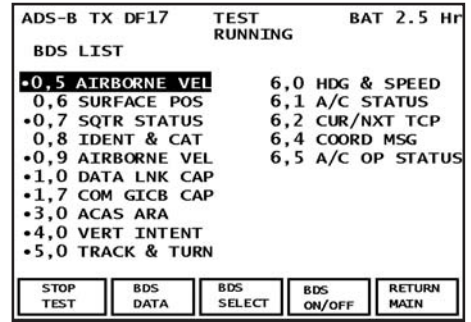
The BDS SELECT key selects individual BDS numbers.

The BDS DATA key displays the BDS DATA screen for the selected BDS number.



ADS-B RX:

The BDS DATA screen displays full content of selected BDS format being received via DF17, DF18 or DF19 extended squitters.



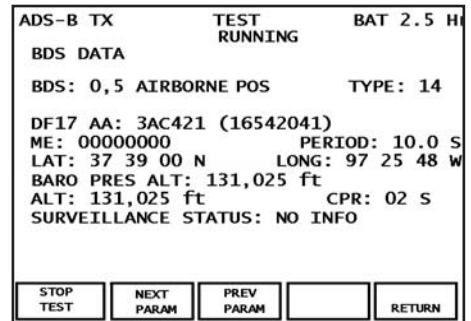
ADS-B TX:

The BDS LIST shows BDS formats supported.

The BDS SELECT key selects individual BDS numbers.

The BDS ON/OFF key sets a symbol preceding the selected BDS number and enables the BDS format for squittering via DF17, DF18, OR DF19 extended squitters.

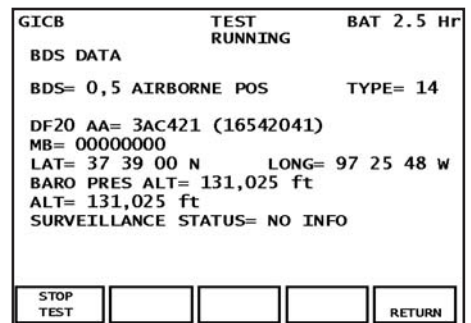
The BDS DATA key displays the BDS DATA screen for the selected BDS number.



ADS-B TX:

BDS DATA screens display full content of the selected BDS format in RTCA DO-260A 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	TEST	BAT 2.5 Hr
	RUNNING	
FREQ= 1090.00 MHz	ERP= +54.0 dBm	
INTR	BRG	RNG
1:	240 deg	10 nm
2:	10 deg	20 nm
3:	90 deg	7 nm
4:	120 deg	15 nm
5:	312 deg	8 nm
STOP TEST	PREV PARAM	NEXT PARAM

TIS

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

TIS-B	TEST	BAT 2.5 Hr
	RUNNING	
FREQ= 1090.00 MHz	ERP= 54.0 dBm	
DF18 PERIOD= 10 S		
UUT LAT: 37 39 00 N	LONG: 97 25 48 W	
UUT HEADING: 120 °		
INTR	BRG	RNG
1:	240 deg	10 nm
2:	10 deg	20 nm
3:	90 deg	7 nm
4:	120 deg	15 nm
5:	312 deg	8 nm
STOP TEST	PREV PARAM	NEXT PARAM

TIS-B:

The user enters the A/C (UUT) LAT/LONG & heading.

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

A 5-minute warm-up period is required for all specifications.

OUTPUT FREQUENCY

REPLY FREQUENCY

Range

962 to 1213 MHz

Accuracy

± 10 kHz

OUTPUT LEVEL

ANTENNA PORT

Range

-65 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 \pm 1 nmi

Amplitude

-11 dB \pm 1 dB relative to reply level

REPLY PULSE RISE AND FALL TIMES

ALL PULSES

Rise Time

2.5 μ s \pm 0.25 μ s (10% to 90%)

Fall Time

2.5 μ s \pm 0.25 μ s (90% to 10%)

REPLY DELAY

X CHANNEL

Fixed Reply Delay

50 μ s \pm 100 ns

Y CHANNEL

Fixed Reply Delay

56 μ s \pm 100 ns

RANGE DELAY

X AND Y CHANNEL

Range

0 to 450.00 nmi

Resolution

0.01 nmi

Accuracy

\pm 0.01 nmi

SQUITTER

PRF

2700 Hz

Accuracy

\pm 2%

Distribution

Per ARINC 568

REPLY EFFICIENCY

Range

0 to 100%

Resolution

1% increments

Accuracy

\pm 0.5%

IDENT TONE

Selection

Selectable three letter code

Frequency

1350 Hz

Accuracy

\pm 2 Hz

UUT MEASUREMENTS

ERP

Range

+47 to +64 dBm

Resolution

0.1 dB

Accuracy

\pm 2 dB

DIRECT CONNECTION PEAK PULSE POWER

Range

+47 to +64 dBm

Resolution

0.1 dB

Accuracy

\pm 1 dB

FREQUENCY

Range

1025.00 to 1150.00 MHz

Resolution

10 kHz

Accuracy

\pm 20 kHz

INTERROGATION PULSE WIDTH

P1 AND P2 PULSE WIDTHS

Range

2.00 to 5.00 μ s

Resolution

1 ns

Accuracy

\pm 50 ns

INTERROGATION PULSE SPACING

P1 to P2 Spacing

10 to 14 μ s (X Channel)

P1 to P2 Spacing

34 to 38 μ s (Y Channel)

Resolution

10 ns

Accuracy

\pm 20 ns

INTERROGATION PRF

Range

1 to 300 Hz

Resolution

1 Hz

Accuracy

\pm 2 Hz

TRANSPONDER MODE SPECIFICATIONS

SIGNAL GENERATOR

RF OUTPUT FREQUENCY

Interrogation Frequency

1030 MHz

Accuracy

± 10 kHz

RF OUTPUT LEVEL**ANTENNA PORT**

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

Range

-65 to -2 dBm at antenna port

Resolution

0.5 dB

Accuracy

± 2 dB

Distance to UUT antenna

6 to 200 ft with supplied antenna

RF I/O PORT

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

UUT 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 (@1090MHz)**Range**

+ 46.5 to + 59 dBm (45 to 800 watts)

Resolution

0.1 dB

Accuracy

± 1 dB

TRANSMITTER FREQUENCY

Range

1087.000 to 1093.000 MHz

Resolution

10 kHz

Accuracy

± 50 kHz

RECEIVER SENSITIVITY, RADIATED MTL

Range

-67 to -79 dBm into 0 dBi antenna

Resolution

0.1 dB

Accuracy

± 2 dB, typical

RECEIVER SENSITIVITY, DIRECT CONNECTION MTL

Range

-67 to -79 dBm

Resolution

0.1 dB

Accuracy

± 2 dB

REPLY DELAY

ATCRBS**Range**

1.80 to 7.00 μ s

Resolution

10 ns

Accuracy

± 50 ns

REPLY DELAY, MODE S AND ATCRBS MODE S ALL-CALL**Range**

125.00 to 131.00 μ s

Resolution

10 ns

Accuracy

± 50 ns

REPLY DELAY JITTER

ATCRBS**Range**

0.00 to 2.30 μ s

Resolution

1 ns

Accuracy

± 20 ns

MODE S AND ATCRBS MODE S ALL-CALL**Range**

0.00 to 6.00 μ s

Resolution

1 ns

Accuracy

± 20 ns

PULSE SPACING

F1 TO F2**Range**

19.70 to 21.60 μ s

Resolution

1 ns

Accuracy

± 20 ns

MODE S PREAMBLE**Range, P1 to P2**

0.8 to 1.2 μ s

Range, P1 to P3

3.3 to 3.7 μ s

Range, P1 to P4

4.3 to 4.7 μ s

Resolution

1 ns

Accuracy

± 20 ns

PULSE WIDTHS

F1 AND F2**Range**

0.25 to 0.75 μ s

Resolution

1 ns

Accuracy

± 20 ns

MODE S PREAMBLE**Range**

0.25 to 0.75 μ s

Resolution

1 ns

Accuracy

± 20 ns

PULSE AMPLITUDE VARIATION

Range, Mode S (Relative to P1)

+3 to -3 dB

Range, ATCRBS (Relative to F1)

+3 to -3 dB

Resolution

0.1 dB (0.01 dB via RCI)

Accuracy

± 0.5 dB

DF 11 SQUITTER PERIOD

Range

0.10 to 4.88 sec

Resolution

10 µs

Accuracy

± 10 µs

DIVERSITY ISOLATION

Range

0 to >20 dB (Depending on Test Distance)

Test Distance

1.83m (6ft) to 28.96m (95ft)

Resolution

0.1 dB

Accuracy

± 3 dB

TCAS MODE SPECIFICATIONS

SIGNAL GENERATOR

OUTPUT FREQUENCY

REPLY FREQUENCY

1090 MHz

Accuracy

± 10 kHz

OUTPUT LEVEL (SIMULATED ERP)

Antenna Port

^{Note 1} **Radiated power at 0dBi UUT antenna**

-68 dBm typical, automatically controlled

Range

-65 to -2 dBm at Antenna port

Resolution

0.5 dB

Accuracy

± 1 dB

Distance to UUT antenna

6 to 300 ft with supplied antenna

RF I/O PORT**Automatic mode**

-68 dBm

Manual mode Range

-115 to -47 dBm

Resolution

0.5 dB

Accuracy

-95 to -47 dBm, ± 1 dB

Accuracy

-115 to <-95 dBm, ± 2 dB

REPLY PULSE SPACING

MODE C**F1 to F2**

20.30 µs ± 25 ns

F1 to C1

1.45 µs ± 25 ns

F1 to A1

2.90 µs ± 25 ns

F1 to C2

4.35 µs ± 25 ns

F1 to A2

5.80 µs ± 25 ns

F1 to C4

7.25 µs ± 25 ns

F1 to A4

8.70 µs ± 25 ns

F1 to B1

11.60 µs ± 25 ns

F1 to D1

13.05 µs ± 25 ns

F1 to B2

14.50 µs ± 25 ns

F1 to D2

15.95 µs ± 25 ns

F1 to B4

17.40 µs ± 25 ns

F1 to D4

18.85 µs ± 25 ns

MODE S**P1 to P2**

1.00 µs ± 25 ns

P1 to P3

3.50 µs ± 25 ns

P1 to P4

4.50 µs ± 25 ns

P1 to D1

8.00 µs ± 25 ns

D1 to Dn (n=2 to 112)

1.00 µs times (n-1) ± 25 ns

REPLY PULSE WIDTHS

MODE C**All Pulses**

0.45 µs ± 50 ns

MODE S**P1 through P4**

0.50 µs ± 50 ns

D1 through D112

0.50 µs ± 50 ns, 1 ms chip width

Reply Modes

TCAS I / II Mode C (with altitude reporting)

TCAS II Mode S formats 0, 11, 16

REPLY PULSE AMPLITUDES

ATCRBS

± 1 dB relative to F1

Mode S

± 1 dB relative to P1

REPLY PULSE RISE AND FALL TIMES

ALL MODES

Rise Time

50 to 100 ns

Fall Time

50 to 200 ns

PERCENT REPLY

Range

0 to 100%

Resolution

10%

Accuracy

± 1%

REPLY DELAY

ATCRBS

3.0 μ s ± 50 ns

Mode S

128 μ s ± 50 ns

RANGE DELAY

Range

0 to 99 nmi

Resolution

0.1 nmi

Accuracy

± 0.02 nmi

RANGE RATE

Range

-1200 to +1200 kts

Resolution

10 kts

Accuracy

10%

ALTITUDE RANGE

Range

-1000 to 126,000 ft

Resolution, Mode C

100 ft

Resolution, Mode S

25 ft

ALTITUDE RATE

Range

-10,000 to +10,000 fpm

Resolution

100 fpm

Accuracy

10%

SQUITTER

Control

On/Off

Rate

1.0 second

Accuracy

± 10 μ s

RECEIVER

SENSITIVITY (SIMULATED MTL)

RADIATED

Note 2 Automatic mode

-72 dBm at 10 nMi range using supplied antenna

Accuracy

± 2.0 dB

RF I/O PORT

Range (Level Controlled Automatically)

-72 dBm

Range (Level Controlled Manually)

-85 to -40 dBm in 0.5 dB steps

Accuracy

± 1.0 dB

UUT MEASUREMENTS

ERP

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 (@1030MHZ)

ATCRBS

Range

+43 to +58 dBm (20 to 631 watts)

Resolution

0.1 dB

Accuracy

± 1 dB

MODE S

Range

+43 to +58 dBm (20 to 631 watts)

Resolution

0.1 dB

Accuracy

± 1 dB

3.3.3 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

WHISPER-SHOUT INTERVAL

Range

0.53 to 1.27 Sec

Resolution

10 μs

Accuracy

± 20 μs

WHISPER-SHOUT STEP SPACING

Range

0.1 μs to 1.27 sec

Resolution

0.1 μs

Accuracy

± 0.2 μs

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 W typical

Maximum Input Level

10 W peak

1/2 W average

TEST ANTENNA

VSWR

< 1.5:1

Gain

10 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 VDC 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, 47-63 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

^{NOTE 3} -20°C to 55°C

Storage Temperature

^{NOTE 4} -30°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
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 5}	MIL-PRF-28800F	Class 2
Temp, not operating ^{NOTE 6}	MIL-PRF-28800F	Class 2
Transit Drop	MIL-PRF-28800F	Class 2
Safety Compliance	UL-61010B-1 EN 61010-1 CSA 22.2 No 61010-1	
EMC	EN 61326	

EXTERNAL AC-DC CONVERTER CERTIFICATIONS

Safety Compliance	UL 1950 DS CSA 22.2 No. 234 VDE EN 60 950
EMI/RFI Compliance	FCC Docket 20780 Curve "B"
EMC	EN 61326

TRANSIT CASE CERTIFICATIONS

Drop Test	FED-STD-101C	Method 5007.1 Paragraph 6.3, Procedure A, Level A
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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
	FED-STD-101C	Method 5009.1 Sec 6.7.1
Immersion	MIL-STD-810F	Method 512.4

Notes

^{NOTE 1} Simulates a 50.5 dBm XPDR ERP at 10 nMi range.

^{NOTE 2} Level automatically controlled based on actual distance to UUT antenna.

^{NOTE 3} Battery charging temperature range: 5°C to 40°C (controlled by internal charger).

^{NOTE 4} Li Ion Battery must be removed below -20°C and above 60°C.

^{NOTE 5} Temperature range extended to -20°C to 55°C.

^{NOTE 6} Temperature range reduced to -30°C to 71°C.

VERSIONS AND ACCESSORIES

When ordering please quote the full ordering number information.

Ordering Numbers

6000-110

Versions

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, TIS-B)

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

AC0825PP

IFR 6000 Operation Manual - Paper

AC0825CD

IFR 6000 Operation Manual - Cd

AC24007

Tripod Dolly

AC24006

Tripod Stand

4TECT

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.

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