

Avionics

IFR 6000 Ramp Test Set



The IFR 6000 is a compact, lightweight and weatherproof unit designed for testing transponder modes A/C/S, 1090 MHz ADS-B and 978 MHz UAT, TCAS I and II, and 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
- Optional ADS-B capabilities are DO-260A/B compliant



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 (Modes A/C/S))

DME

TCAS I and II, TIS*

1090 MHz ADS-B (Monitor/Generate/GICB)*

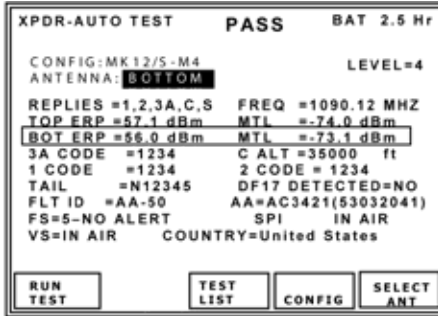
978 MHz UAT (ADS-B/FIS-B/TIS/B)*

**Optional*

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

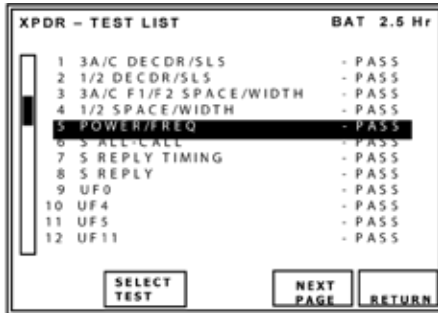


Every parameter the user commonly needs to view is displayed on one screen.

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.

XPDR Test List



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

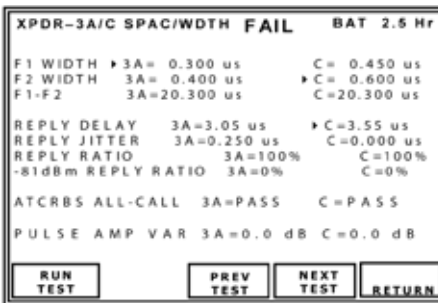
14 UF24

15 ELEMENTARY SURVEILLANCE 1

16 ELEMENTARY SURVEILLANCE 2

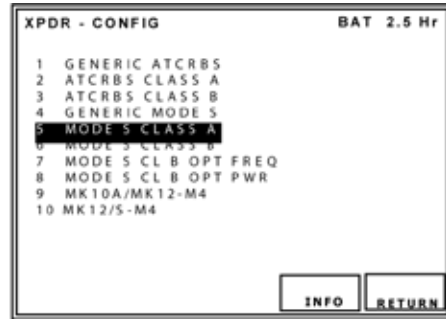
17 ENHANCED SURVEILLANCE

XPDR Individual Test



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

XPDR Config



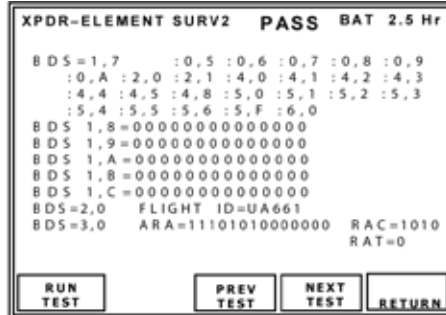
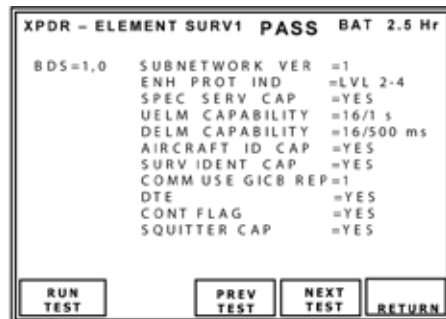
User selects configuration required for test. If the class of the transponder is unknown, the generic config may be selected which applies to the widest limits.

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

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

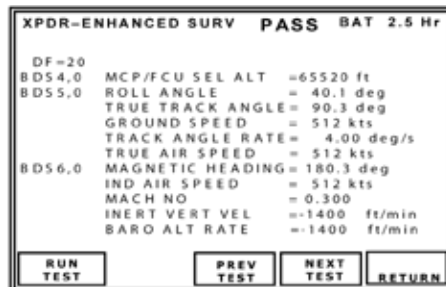
Eight predetermined configs are provided to meet the currently fielded transponder test needs.

XPDR Elementary Surveillance

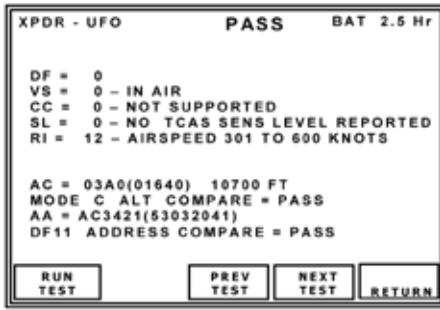


The Eurocontrol Elementary Surveillance DAP's (Downlink Aircraft Parameters) are displayed on two screens.

XPDR Enhanced Surveillance

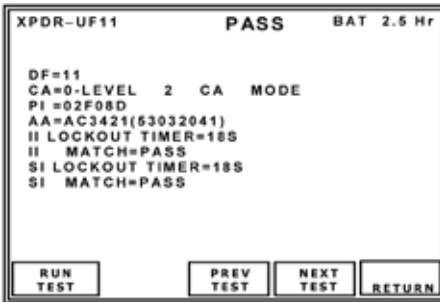


Eurocontrol Enhanced Surveillance DAP's are displayed on one screen.

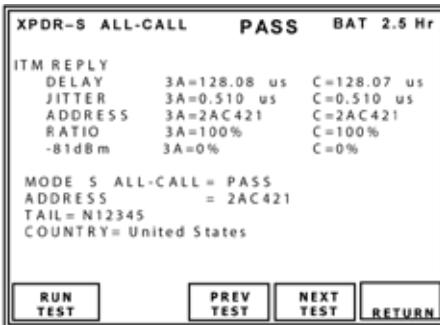


No more HEX data field interpretation!

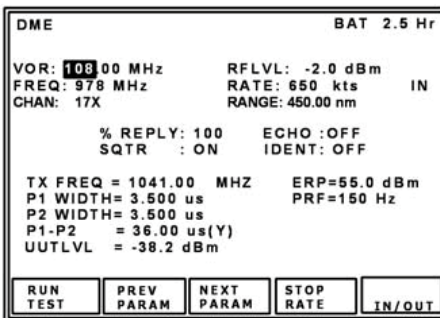
All Mode S Format tests display parameter in engineering units.



Comprehensive II / SI code and lockout timer test



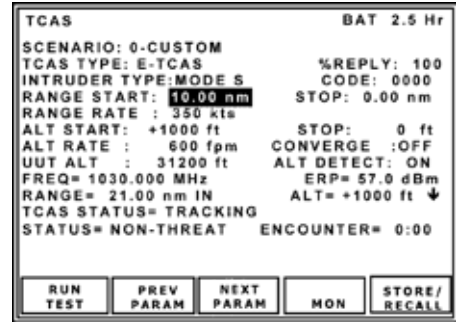
DME



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.

TCAS

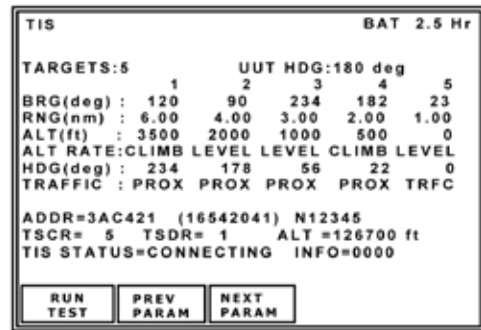


- TCAS 1 MODE C
- TCAS 2 ATCRBS
- TCAS 2 MODE S

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.

TIS



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

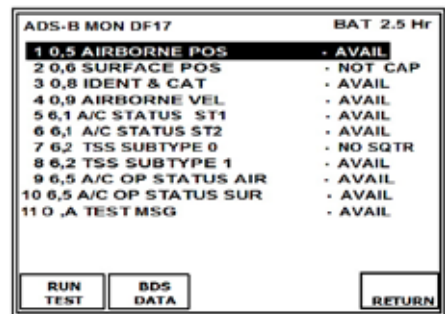
ADS-B and GICB

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).

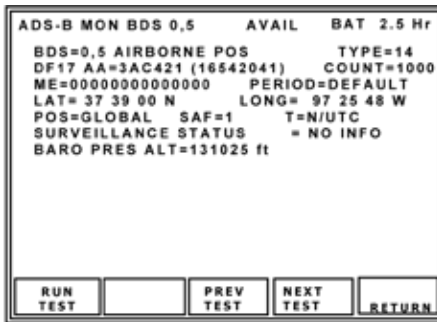
ADS-B MON



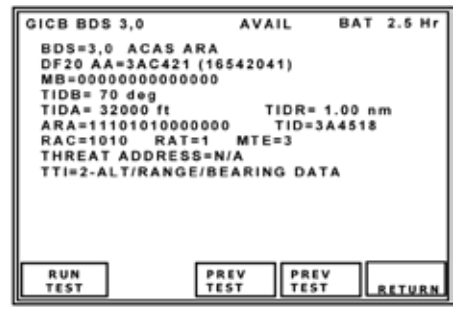
The ADS-B MON LIST shows BDS formats supported.

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.

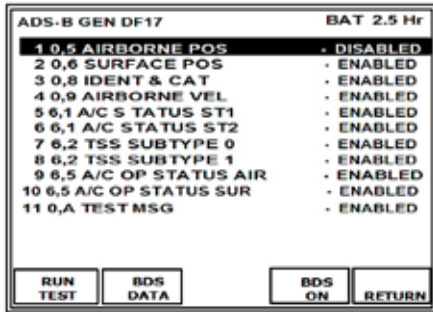


The BDS DATA screen displays full content of selected BDS format being received via DF17 or DF18 extended squitters.



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

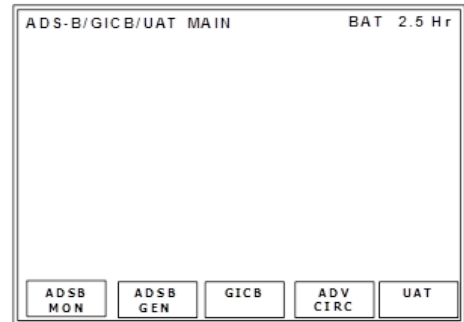
ADS-B GEN



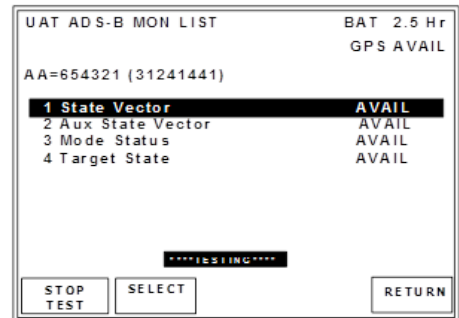
The BDS ENABLE/DISABLE key enables or disables the selected BDS number for squittering via DF17 or DF18 extended squitters. The BDS DATA key displays the BDS DATA screen for the selected BDS number.

978 MHz UAT

The 978 MHz UAT Option allows the user to generate and monitor 978 MHz UAT tests.

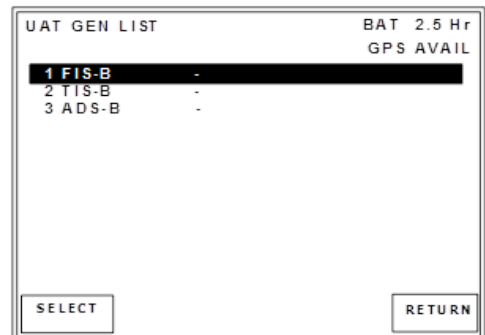


UAT MON List

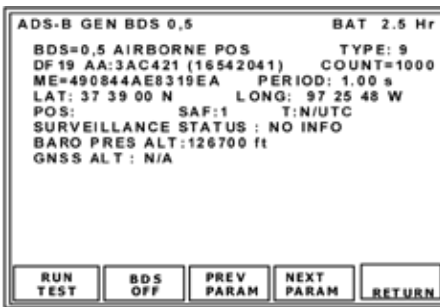


Monitors State and Auxilliary State Vectors, Mode Status and Target State, displaying field-relevant information broadcast from the UUT.

UAT GEN



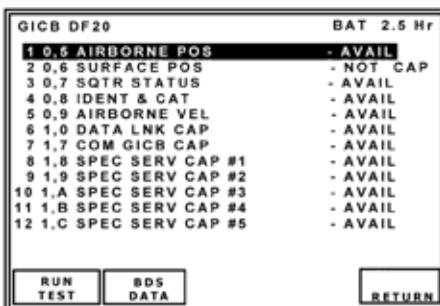
Generates ADS-B, TIS-B and FIS-B details. The ADS-B and TIS-B pages generate up to 5 targets, with each target generating independent bearing, heading, ranges, altitudes and altitude rates. The FIS-B page allows teh user to confirm receipt of proper METER/TAF details.



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



The BDS LIST shows BDS formats supported.

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

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 storage for the test set, directional antenna, RF coax cable, antenna shield, breakout box, and power supply/charger.



SPECIFICATIONS

DME MODE SPECIFICATIONS

SIGNAL GENERATOR

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

OUTPUT FREQUENCY

REPLY FREQUENCY

<i>Range</i>	962 to 1213 MHz
<i>Accuracy</i>	±10 kHz

OUTPUT LEVEL

ANTENNA PORT

<i>Range</i>	-67 to -2 dBm at Antenna port
<i>Resolution</i>	1 dB
<i>Accuracy</i>	±2 dB
<i>Distance to UUT antenna</i>	6 to 300 ft with supplied antenna

RF I/O PORT

<i>Range</i>	-115 to -47 dBm
<i>Resolution</i>	1 dB
<i>Accuracy</i>	-95 dBm to -47 dBm, ±1 dB
<i>Accuracy</i>	-115 dBm to <-95 dBm, ±2 dB

REPLY PULSE SPACING

<i>P1 to P2</i>	12 μs (±100 ns) (X Channel) @ 50% peak
<i>P1 to P2</i>	30 μs (±100 ns) (Y Channel) @ 50% peak

REPLY PULSE WIDTH

<i>P1/P2</i>	3.5 μs (±0.5 μs)
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ECHO REPLY

<i>Control</i>	On/Off
<i>Position</i>	30 nmi (±1 nmi)
<i>Amplitude</i>	-11 dB (±1 dB) relative to reply level

REPLY PULSE RISE AND FALL TIMES

ALL PULSES

<i>Rise Time</i>	2.5 μs (±0.25 μs) (10% to 90%)
<i>Fall Time</i>	2.5 μs (±0.25 μs) (90% to 10%)

REPLY DELAY

X CHANNEL

<i>Fixed Reply Delay</i>	50 μs (±100 ns)
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Y CHANNEL

<i>Fixed Reply Delay</i>	56 μs (±100 ns)
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RANGE DELAY

X AND Y CHANNEL

<i>Range</i>	0 to 450.00 nmi
<i>Resolution</i>	0.01 nmi
<i>Accuracy</i>	±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

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	±20 kHz

INTERROGATION PULSE WIDTH

P1 AND P2 PULSE WIDTHS

Range	2.00 to 5.00 µs
Resolution	1 ns
Accuracy	±50 ns

INTERROGATION PULSE SPACING

P1 to P2 Spacing	10 to 14 µs (X Channel)
P1 to P2 Spacing	34 to 38 µs (Y Channel)
Resolution	10 ns
Accuracy	±20 ns

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)
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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)
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ATCRBS

PRF	235 Hz (±5 Hz)
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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 (@ 1090 MHz)

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	-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

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

Range	125.00 to 131.00 μs
Resolution	10 ns
Accuracy	±50 ns

REPLY DELAY JITTER

ATCRBS

Range	0.00 to 2.30 μs
Resolution	1 ns
Accuracy	±20 ns

MODE S AND ATCRBS MODE S ALL-CALL

Range	0.00 to 6.00 μs
Resolution	1 ns
Accuracy	±20 ns

PULSE SPACING

F1 TO F2

Range	19.70 to 21.60 μs
Resolution	1 ns
Accuracy	±20 ns

MODE S PREAMBLE

Range, P1 to P2	0.8 to 1.2 μs
Range, P1 to P3	3.3 to 3.7 μs
Range, P1 to P4	4.3 to 4.7 μs
Resolution	1 ns
Accuracy	±20 ns

PULSE WIDTHS

F1 AND F2

Range	0.25 to 0.75 μs
Resolution	1 ns
Accuracy	±20 ns

MODE S PREAMBLE

Range	0.25 to 0.75 μs
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 ms
Accuracy	±10 ms

DIVERSITY ISOLATION

Range	0 to >20 dB (Depending on Test Distance)
Test Distance	1.83 m (6ft) to 28.96 m (95 ft)
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 CONNECTOR NOTE 1

Radiated power at 0dBi UUT antenna	
	-68 dBm typical @ 10 Nmi Range, automatically controlled
Range	-67 to -2 dBm at Antenna connector
Resolution	0.5 dB
Accuracy	±2 dB
Distance to UUT antenna	6 to 300 ft with supplied antenna

RF I/O CONNECTOR

Automatic mode	-68 dBm @ 10 Nmi Range, automatically controlled
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)
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MODE S

P1 through P4	0.50 μs (±50 ns)
D1 through D112	0.50 μs (±50 ns), 1 μs 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 μs (±50 ns)
Mode S	128 μs (±50 ns)

RANGE DELAY

Range	0 to 260 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	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 μ s
Accepts	$\leq \pm 200$ ns
Rejects (<10% Replies)	$\geq \pm 1.0$ μ s
P1 to SPR	4.75 μ s
Accepts	$\leq \pm 200$ ns
Rejects (<10% Replies)	$\geq \pm 1.5$ μ s

SUPPRESSION

ATCRBS (P2 or S1)

>0.5 dB above level of P1	<10% Replies
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UUT 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

MODE S

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

UAT MODE SPECIFICATIONS

SIGNAL GENERATOR

RF OUTPUT FREQUENCY

Transmit Frequency	978 MHz
Accuracy	± 10 kHz

OUTPUT LEVEL

ANTENNA PORT

Radiated power at 0 dBi UUT antenna

	-85 dBm, automatically controlled
Range	-67 to -2 dBm at Antenna port
Resolution	0.5 dB
Accuracy	± 2 dB
Distance to UUT antenna	6 to 150 ft with supplied antenna

RF I/O PORT

Automatic mode	-85 dBm
Accuracy	± 1 dB

MODULATION

Type	BPFASK per RTCA DO-282B
Deviation	± 312.5 kHz typical

UUT MEASUREMENTS

ERP (@978MHz)

Range	+35 to +57 dBm (3.16 to 500 watts)
Resolution	0.1 dB
Accuracy	± 2 dB

DIRECT CONNECTION POWER (@978 MHz)

Range	+35 to +57 dBm (3.16 to 500 watts)
Resolution	0.1 dB
Accuracy	± 1 dB

FREQUENCY

Range	977.96 to 978.04 MHz
Resolution	1 kHz
Accuracy	± 10 kHz

MISC. INPUTS/OUTPUTS SPECIFICATIONS

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	500 mV peak to peak typical into 50 Ω
Receive Video Level	Proportional to IF level
Baseline	± 0.5 V referenced to ground

GPS ANT

Type	Output
Impedance	50 Ω typical, DC short

TEST ANTENNA

VSWR	<1.5:1
Gain	7.5 dB, Typical

TIME BASE (TCXO)

Temperature Stability	± 1 ppm
Aging	± 1 ppm per year
Accuracy	± 1 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	$\leq 10\%$ of the nominal voltage

Transient Overvoltages

According to Installation Category II

ENVIRONMENTAL (TEST SET)

Use	Pollution Degree 2
Altitude	≤ 4800 meters
Operating Temperature ^{NOTE 2}	-20°C to 55°C
Storage Temperature ^{NOTE 3}	-30°C to 71°C
Relative Humidity	95% ($\pm 5\%$) from 5° to 30°C 75% ($\pm 5\%$) from 30° to 40°C 45% ($\pm 5\%$) from 40° to 55°C

ENVIRONMENTAL (SUPPLIED EXTERNAL AC TO DC CONVERTER)

Use	Indoors
Altitude	$\leq 10,000$ 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 1
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 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
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 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.

VERSIONS AND ACCESSORIES

Order Number	Version
72422	IFR 6000 Mode A/C/S Transponder and DME Ramp Test Set NSN: 6625-01-069-5582
83410	6000OPT2 TCAS (TIS)
83411	6000OPT3 ADS-B 1090 MHz
112795	6000OPT5 UAT 978 MHz

Extended Standard Warranties with Calibration

84366	Extended standard warranty 36 months with scheduled calibration
84368	Extended standard warranty 60 months with scheduled calibration

Standard Accessories

10241	Transit case
62302	Power cord, 110 V
64020	Power cord set, 220 V
62401	TNC/TNC COAX, 72 in.
62402	TNC/TNC COAX, 12 in.
56080	Fuse, 5 Amp, 32 V
91771	Antenna
64749	Antenna shield
64580	Breakout box
67366	Power supply
6096	Getting Started Manual
6093	IFR 6000 Operation Manual - CD

Optional Accessories

63656	Desk Top Stand
67474	Tripod
82553	Tripod, Dolly, Stand
62462	25 ft TNC/TNC COAX
86336	50 ft TNC/TNC COAX
86931	UC-584 Universal Transponder Antenna Coupler
112349	UC-584 Coupler Kit, dual antenna
112350	UC-584 Coupler Kit, single antenna
6095	IFR 6000 Maintenance Manual - CD

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