

# Aviônicos

## IFR 6000 Equipamento de Testes de Rampa

**AEROFLEX**  
A passion for performance.



O IFR 6000 é um equipamento compacto, leve e resistente à intempéries projetado para testes de transponder modos A/C/S, TCAS I e II e DME.

- Uma tela principal de usuário para cada modo de testes
- Antena removível
- Display grande para maior facilidade de operação
- Interface de usuário simples
- Leve e compacto, cerca de 3,6 kg (8 lbs).
- Autonomia de bateria superior a 6 horas
- Simulação de VOR com direção variável
- Totalmente compatível com FAR part 43 appendix F
- Totalmente compatível com DO-260A/B
- European Surveillance, Elementary e Enhanced

seleção de frequência/canal e controle de nível de RF. Para parâmetros alterados frequentemente nos modos DME e TCAS, tais como Range (distância) e Rate (velocidade), teclas dedicadas também são usadas.



*O IFR 6000 apresenta uma interface extremamente fácil de usar, onde todos os parâmetros normalmente necessários para o usuário estão disponíveis na tela.*

### Controles

Teclas dedicadas para XPDR, DME e TCAS permitem rápida seleção do modo de operação.

Teclas de menu (softkeys) variáveis com a aplicação e teclas de seleção/alteração de dados proporcionam uma interface intuitiva.

O modo DME utiliza teclas dedicadas para

### Modos de Operação

Cada modo de operação tem uma tela principal para o usuário. Os modos de operação são:

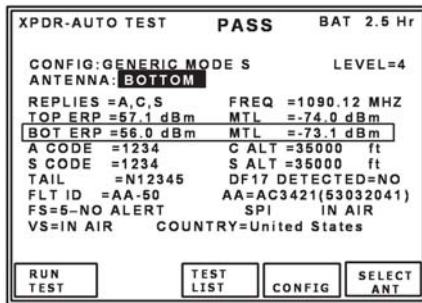
XPDR (Sub-Modos: ADS-B MON, ADS-B GEN e GICB)

DME

TCAS 1, 2 (Sub-Modo: TIS)

A maioria dos testes pode ser realizada sem se deixar a tela principal do modo em uso. Isto simplifica bastante a tarefa do operador do

equipamento.



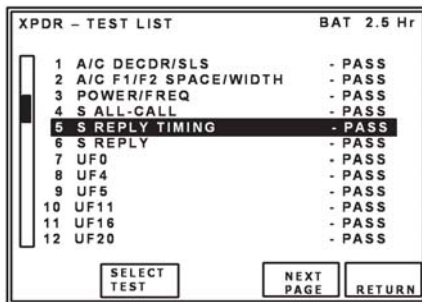
## Modo S e Transponder ATRCBS

### XPDR Auto-Test:

Todos os parâmetros que o usuário normalmente necessita visualizar são mostrados em uma só tela.

O auto-teste executa todos os testes definidos pelo FAR Part 43 Appendix F, incluindo os testes adicionais Eurocontrol propostos.

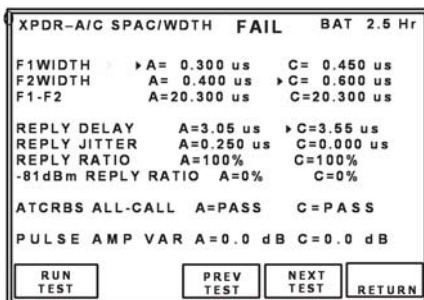
Os testes são adaptados automaticamente de acordo com as capacidades anunciadas pelo transponder (transponder level), para evitar resultados falsos de falha.



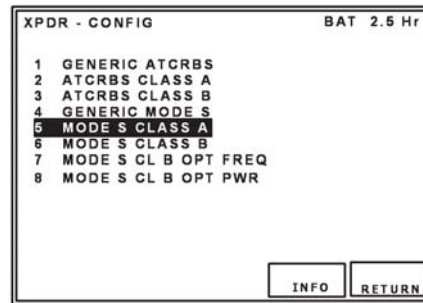
A lista de testes é selecionada da tela de auto-teste, oferecendo uma maneira fácil de se selecionar qualquer dos testes individuais que compõem o auto-teste.

Testes na segunda tela (não mostrado) incluem:

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



Testes individuais podem ser verificados quanto a falhas, que são identificadas por um símbolo de seta.



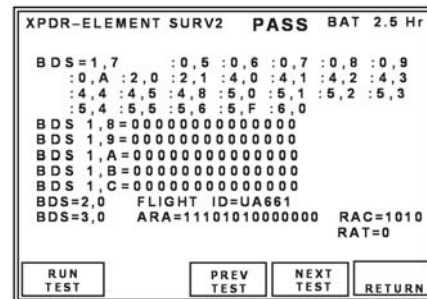
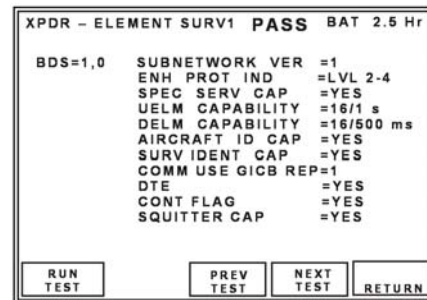
O usuário seleciona a configuração necessária para o teste.

Se não se conhece a classe do transponder, uma configuração genérica pode ser selecionada, que se aplica aos limites mais tolerantes.

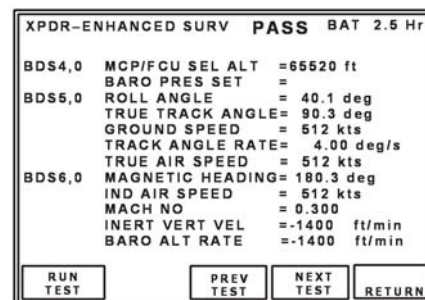
O equipamento de teste automaticamente determinará o nível de transponder Mode S.

Os parâmetros de configuração da configuração selecionada podem ser apresentados pressionando-se a tecla de menu INFO.

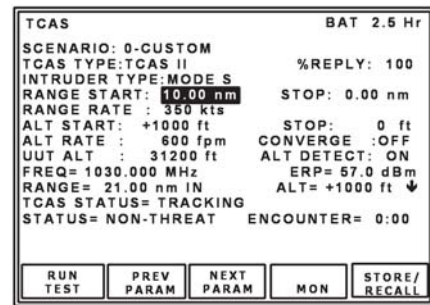
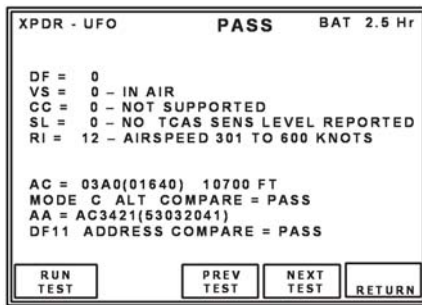
Oito configurações predeterminadas estão disponíveis para suprir as necessidades de testes dos transponders atualmente em campo.



Os parâmetros do Eurocontrol Elementary Surveillance DAP (Downlink Aircraft Parameters) são apresentados em duas telas.

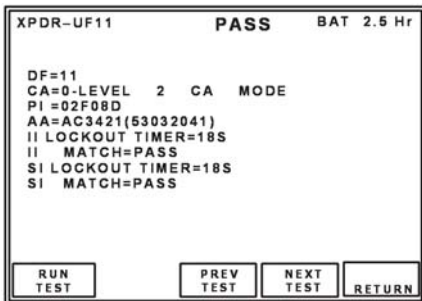


Parâmetros do Eurocontrol Enhanced Surveillance DAP são mostrados em uma tela.

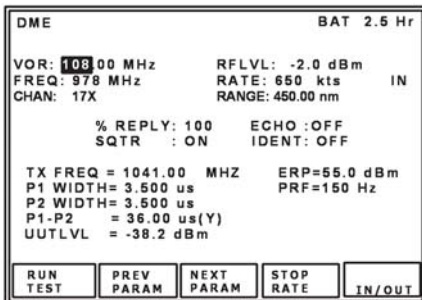
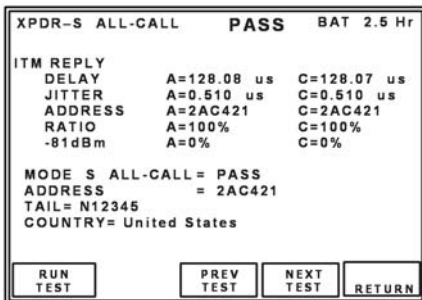


Não é necessário interpretar parâmetros em hexadecimal!

Todos os testes de Formato Mode S mostram os parâmetros em unidades de engenharia.



Teste abrangente de código e lockout timer II / SI.



## DME

Tudo que é necessário para o usuário em uma só tela.

- Controle de nível de RF para testes de sensibilidade de track
- Suporta todos canais DME/TACAN selecionáveis em canais pareados com VOR
- Apresentação completa dos parâmetros medidos da unidade em teste (UUT - Unit Under Test)

## TCAS

Tipos de testes TCAS...

TCAS 1 MODE C

TCAS 2 ATCRBS

TCAS 2 MODE S

O recurso de Auto-Altitude interroga o transponder Mode S da aeronave em testes para obter a altitude atual.

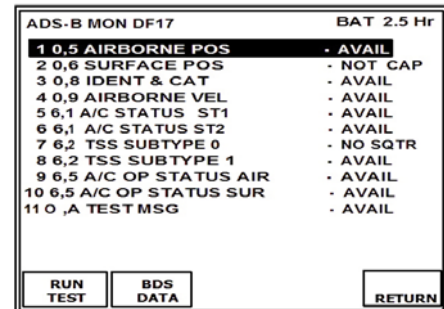
Cenários de testes pré-armazenados com nomes podem ser selecionados diretamente da tela de auto-teste.

## ADS-B e GICB

ADS-B MON: Usado para monitorar o extended squitter DF17 de transponders e o extended squitter DF18 de emissores ADS-B 1090 MHz.

ADS-B GEN: Usado para gerar extended squitters DF17/DF18, simulando transponders e emissores ADS-B 1090 MHz.

GICB: Usado para monitorar DAP (todos os campos).

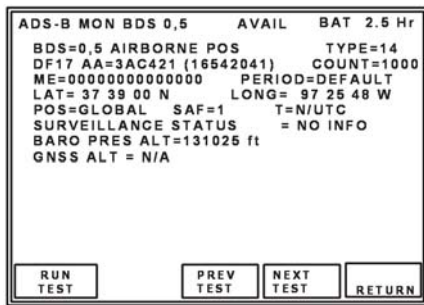


## ADS-B MON:

A lista na tela ADS-B MON mostra os formatos BDS suportados.

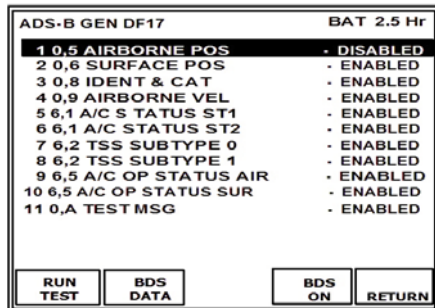
O status do BDS indica se o squitter foi capturado, não está disponível, ou não foi recebido.

A tecla de menu BDS DATA mostra a tela de informações do BDS para o número de BDS selecionado.



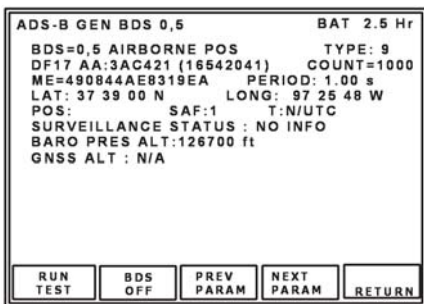
### ADS-B MON:

A tela de informações do BDS DATA mostra o conteúdo completo do formato BDS sendo recebido via extended squitters DF17 ou DF18.



Na tela de ADS-B GEN, a tecla de menu BDS ON/OFF habilita ou desabilita a transmissão do BDS selecionado via extended squitters DF17 ou DF18.

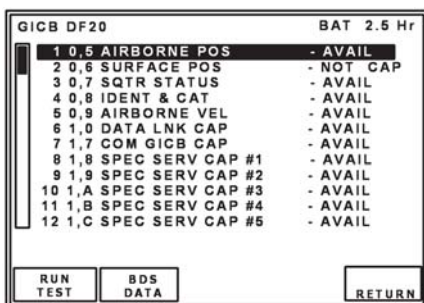
A tecla de menu BDS DATA mostra a tela de informações do BDS para o número de BDS selecionado.



### ADS-B GEN:

As telas de BDS DATA mostram o conteúdo completo do formato BDS em unidades de engenharia RTCA/ICAO.

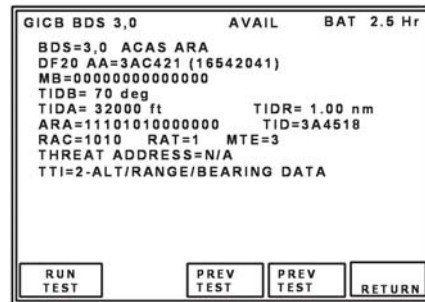
As teclas NEXT e PREV PARAM selecionam os campos de dados para edição através das teclas de edição;



### GICB:

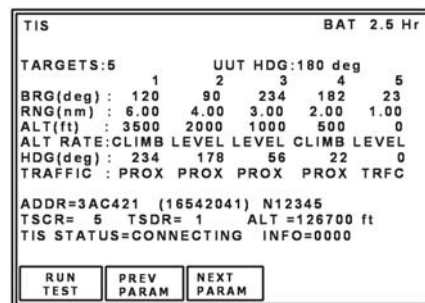
A lista de BDS mostra os formatos BDS suportados.

A tecla de menu BDS DATA mostra a tela de informações de BDS para o BDS selecionado.



### GICB:

As telas de informações de BDS mostram o conteúdo completo do BDS selecionado sendo recebido via GICB DF20 ou DF21, em unidades de engenharia RTCA/ICAO.



### TIS

Até 5 intrusos estáticos podem ser simulados em relação à aeronave (UUT - Unit Under Test).

### Geral

#### Testes via antena:

O IFR 6000 é fornecido com uma antena direcional leve e totalmente selada que pode ser utilizada manualmente, montada diretamente no equipamento de teste ou em um tripé.

#### Testes com conexão direta:

O IFR 6000 pode ser conectado diretamente ao equipamento em teste (UUT) com um cabo coaxial de RF incluso, através do conector RF/O.





## Estojo de transporte:

O IFR-6000 é fornecido com um robusto estojo de transporte que permite o acondicionamento do equipamento de testes, antena direcional, cabo coaxial de RF, blindagem para antena, módulo de conexões (breakout box) e a fonte/carregador.



## ESPECIFICAÇÕES

### DME MODE SPECIFICATIONS

#### SIGNAL GENERATOR

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

#### OUTPUT FREQUENCY

##### REPLY FREQUENCY

###### Range

962 to 1213 MHz

###### Accuracy

$\pm 10$  kHz

#### OUTPUT LEVEL

##### ANTENNA PORT

###### Range

-67 to -2 dBm at Antenna port

###### Resolution

1 dB

###### Accuracy

$\pm 2$  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  $\pm 1$  dB

###### Accuracy

-115 dBm to <-95 dBm  $\pm 2$  dB

## REPLY PULSE SPACING

### P1 to P2

12  $\mu$ s ( $\pm 100$  ns) (X Channel) @ 50% peak

### P1 to P2

30  $\mu$ s ( $\pm 100$  ns) (Y Channel) @ 50% peak

## REPLY PULSE WIDTH

### P1/P2

3.5  $\mu$ s ( $\pm 0.5$   $\mu$ s)

## 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  $\mu$ s ( $\pm 0.25$   $\mu$ s) (10% to 90%)

#### Fall Time

2.5  $\mu$ s ( $\pm 0.25$   $\mu$ s) (90% to 10%)

## REPLY DELAY

### X CHANNEL

#### Fixed Reply Delay

50  $\mu$ s ( $\pm 100$  ns)

### Y CHANNEL

#### Fixed Reply Delay

56  $\mu$ 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

## RANGE RATE

### X AND Y CHANNEL

#### Range

10 to 6500 kts

#### Resolution

1 kts

#### Accuracy

$\pm 0.01\%$  typical, tested to  $\pm 0.5\%$

## SQUITTER

### PRF

2700 Hz

### Accuracy

$\pm 2\%$

### Distribution

Per ARINC 568

## REPLY EFFICIENCY

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### Range

0 to 100%

### Resolution

1% increments

### Accuracy

±0.5%

## IDENT TONE

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### Selection

Selectable three letter code

### Frequency

1350 Hz

### Accuracy

±2 Hz

## UUT MEASUREMENTS

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### ERP

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### 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  $\mu$ s

### Resolution

1 ns

### Accuracy

±50 ns

## INTERROGATION PULSE SPACING

---

### P1 to P2 Spacing

10 to 14  $\mu$ s (X Channel)

### P1 to P2 Spacing

34 to 38  $\mu$ s (Y Channel)

### Resolution

10 ns

### Accuracy

±20 ns

## INTERROGATION PRF

---

### Range

1 to 300 Hz

### Resolution

1 Hz

### Accuracy

±2 Hz

## TRANSPONDER MODE SPECIFICATIONS

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## SIGNAL GENERATOR

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## RF OUTPUT FREQUENCY

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### Interrogation Frequency

1030 MHz

### Accuracy

±10 kHz

## RF OUTPUT LEVEL

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### ANTENNA CONNECTOR

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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

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### MODE A

#### P1 to P2

2.00  $\mu$ s (±25 ns)

#### P1 to P3

8.00  $\mu$ s (±25 ns)

### MODE C

#### P1 to P2

2.00  $\mu$ s (±25 ns)

#### P1 to P3

21.00  $\mu$ s (±25 ns)

### MODE S

#### P1 to P2

2.00  $\mu$ s (±25 ns)

#### P1 to P6

3.50  $\mu$ s (±25 ns)

#### P1 to SPR

4.75  $\mu$ s (±25 ns)

#### P5 to SPR

0.40  $\mu$ s (±50 ns)

## INTERMODE INTERROGATION PULSE SPACING

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### MODE A

#### P1 to P3

8.00  $\mu\text{s}$  ( $\pm 25$  ns)

#### P1 to P4

10.00  $\mu\text{s}$  ( $\pm 25$  ns)

### MODE C

#### P1 to P3

21.00  $\mu\text{s}$  ( $\pm 25$  ns)

#### P1 to P4

23.00  $\mu\text{s}$  ( $\pm 25$  ns)

## INTERROGATION PULSE WIDTHS

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### MODE A,C,S,INTERMODE

#### P1,P2,P3

0.80  $\mu\text{s}$  ( $\pm 50$  ns)

### MODE S

#### P6 (Short DPSK Block)

16.25  $\mu\text{s}$  ( $\pm 50$  ns)

#### P6 (Long DPSK Block)

30.25  $\mu\text{s}$  ( $\pm 50$  ns)

#### P5

0.80  $\mu\text{s}$  ( $\pm 50$  ns)

### INTERMODE

#### P4 (Short)

0.80  $\mu\text{s}$  ( $\pm 50$  ns)

#### P4 (Long)

1.60  $\mu\text{s}$  ( $\pm 50$  ns)

## INTERROGATION PULSE RISE AND FALL TIMES

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### ALL MODES

#### Rise Time

50 to 100 ns

#### Fall Time

50 to 200 ns

## PHASE MODULATION

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### ALL MODES

#### Transition Time

$\leq 80$  ns

#### Phase Shift

180° ( $\pm 10^\circ$ )

## SLS LEVELS

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### 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

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### MODE S

#### PRF

50 Hz ( $\pm 5$  Hz)

#### ATCRBS

#### PRF

235 Hz ( $\pm 5$  Hz)

## UUT MEASUREMENTS

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### ERP (@ 1090 MHz)

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#### Range

+45.5 to +59 dBm (35.5 to 800 watts)

#### Resolution

0.1 dB

#### Accuracy

$\pm 2$  dB

#### Direct Connection Peak Pulse Power (@ 1090 MHz)

#### Range

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

#### Resolution

0.1 dB

#### Accuracy

$\pm 1$  dB

## TRANSMITTER FREQUENCY

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#### Range

1087.000 to 1093.000 MHz

#### Resolution

10 kHz

#### Accuracy

$\pm 50$  kHz

## RECEIVER SENSITIVITY, RADIATED MTL

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#### Range

-79 to -67 dBm into 0 dBi antenna

#### Resolution

0.1 dB

#### Accuracy

$\pm 2$  dB, typical

## RECEIVER SENSITIVITY, DIRECT CONNECTION MTL

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#### Range

-79 to -67 dBm

#### Resolution

0.1 dB

#### Accuracy

$\pm 2$  dB

## REPLY DELAY

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### ATCRBS

#### Range

1.80 to 7.00  $\mu\text{s}$

#### Resolution

10 ns

#### Accuracy

$\pm 50$  ns

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

### Range

125.00 to 131.00  $\mu$ s

### Resolution

10 ns

### Accuracy

$\pm$ 50 ns

## REPLY DELAY JITTER

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### ATCRBS

### Range

0.00 to 2.30  $\mu$ s

### Resolution

1 ns

### Accuracy

$\pm$ 20 ns

## MODE S AND ATCRBS MODE S ALL-CALL

### Range

0.00 to 6.00  $\mu$ s

### Resolution

1 ns

### Accuracy

$\pm$ 20 ns

## PULSE SPACING

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### F1 TO F2

### Range

19.70 to 21.60  $\mu$ s

### Resolution

1 ns

### Accuracy

$\pm$ 20 ns

## MODE S PREAMBLE

### Range, P1 to P2

0.8 to 1.2  $\mu$ s

### Range, P1 to P3

3.3 to 3.7  $\mu$ s

### Range, P1 to P4

4.3 to 4.7  $\mu$ s

### Resolution

1 ns

### Accuracy

$\pm$ 20 ns

## PULSE WIDTHS

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### F1 AND F2

### Range

0.25 to 0.75  $\mu$ s

### Resolution

1 ns

### Accuracy

$\pm$ 20 ns

## MODE S PREAMBLE

### Range

0.25 to 0.75  $\mu$ s

### Resolution

1 ns

### Accuracy

$\pm$ 20 ns

## PULSE AMPLITUDE VARIATION

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### 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

$\pm$ 0.5 dB

## DF 11 SQUITTER PERIOD

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### Range

0.10 to 4.88 sec

### Resolution

10 ms

### Accuracy

$\pm$ 10 ms

## DIVERSITY ISOLATION

---

### Range

0 to >20 dB (Depending on Test Distance)

### Test Distance

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

### Resolution

0.1 dB

### Accuracy

$\pm$ 3 dB

## TCAS MODE SPECIFICATIONS

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## SIGNAL GENERATOR

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## OUTPUT FREQUENCY

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### REPLY FREQUENCY

1090 MHz

### Accuracy

$\pm$ 10 kHz

## OUTPUT LEVEL (SIMULATED ERP)

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### ANTENNA CONNECTOR <sup>Note 1</sup>

### Radiated power at 0 dBi UUT Antenna

-68 dBm typical @ 10 Nmi Range, automatically controlled

### Range

-67 to -2 dBm at Antenna connector

### Resolution

0.5 dB

### Accuracy

$\pm$ 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,  $\pm$ 1 dB

### Accuracy

-115 to <-95 dBm,  $\pm$ 2 dB



## REPLY PULSE SPACING

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### MODE C

#### F1 to F2

20.30  $\mu$ s ( $\pm$ 25 ns)

#### F1 to C1

1.45  $\mu$ s ( $\pm$ 25 ns)

#### F1 to A1

2.90  $\mu$ s ( $\pm$ 25 ns)

#### F1 to C2

4.35  $\mu$ s ( $\pm$ 25 ns)

#### F1 to A2

5.80  $\mu$ s ( $\pm$ 25 ns)

#### F1 to C4

7.25  $\mu$ s ( $\pm$ 25 ns)

#### F1 to A4

8.70  $\mu$ s ( $\pm$ 25 ns)

#### F1 to B1

11.60  $\mu$ s ( $\pm$ 25 ns)

#### F1 to D1

13.05  $\mu$ s ( $\pm$ 25 ns)

#### F1 to B2

14.50  $\mu$ s ( $\pm$ 25 ns)

#### F1 to D2

15.95  $\mu$ s ( $\pm$ 25 ns)

#### F1 to B4

17.40  $\mu$ s ( $\pm$ 25 ns)

#### F1 to D4

18.85  $\mu$ s ( $\pm$ 25 ns)

### MODE S

#### P1 to P2

1.00  $\mu$ s ( $\pm$ 25 ns)

#### P1 to P3

3.50  $\mu$ s ( $\pm$ 25 ns)

#### P1 to P4

4.50  $\mu$ s ( $\pm$ 25 ns)

#### P1 to D1

8.00  $\mu$ s ( $\pm$ 25 ns)

#### D1 to Dn (n=2 to 112)

1.00  $\mu$ s times (n-1) ( $\pm$ 25 ns)

## REPLY PULSE WIDTHS

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### MODE C

#### All Pulses

0.45  $\mu$ s ( $\pm$ 50 ns)

### MODE S

#### P1 through P4

0.50  $\mu$ s ( $\pm$ 50 ns)

#### D1 through D112

0.50  $\mu$ s ( $\pm$ 50 ns), 1  $\mu$ s chip width

#### Reply Modes

TCAS I / II Mode C (with altitude reporting)

TCAS II Mode S formats 0, 11, 16

## REPLY PULSE AMPLITUDES

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### ATCRBS

$\pm$ 1 dB relative to F1

### Mode S

$\pm$ 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

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### Range

0 to 100%

### Resolution

10%

### Accuracy

$\pm$ 1%

## REPLY DELAY

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### ATCRBS

3.0  $\mu$ s ( $\pm$ 50 ns)

### Mode S

128  $\mu$ s ( $\pm$ 50 ns)

## RANGE DELAY

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### Range

0 to 260 nmi

### Resolution

0.1 nmi

### Accuracy

$\pm$ 0.02 nmi

## RANGE RATE

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### 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 $\mu$ s
Accepts	$\leq \pm 200$ ns
Rejects	$\geq \pm 1.0$ $\mu$ s
P1 to P3	21.0 $\mu$ s
Accepts	$\leq \pm 200$ ns
Rejects (<10% Replies)	$\geq \pm 1.0$ $\mu$ s
P1 to P4	23.0 $\mu$ s
Accepts	$\leq \pm 200$ ns
Rejects (<10% Replies)	$\geq \pm 1.0$ $\mu$ s

#### Mode S

P1 to P2	2.0 $\mu$ s
Accepts	$\leq \pm 200$ ns
Rejects (<10% Replies)	$\geq \pm 1.0$ $\mu$ s
P1 to SPR	4.75 $\mu$ s
Accepts	$\leq \pm 200$ ns
Rejects (<10% Replies)	$\geq \pm 1.5$ $\mu$ s

## SUPPRESSION

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#### ATCRBS (P2 or S1)

>0.5 dB above level of P1 <10% Replies

## UUT MEASUREMENTS

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### ERP (@ 1030 MHz)

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#### ATCRBS

##### Range

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

##### Resolution

0.1 dB

##### Accuracy

$\pm 2$  dB

#### MODE S

##### Range

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

##### Resolution

0.1 dB

##### Accuracy

$\pm 2$  dB

### DIRECT CONNECTION PEAK PULSE POWER (@ 1030 MHz)

---

#### ATCRBS

##### Range

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

##### Resolution

0.1 dB

##### Accuracy

$\pm 1$  dB

#### MODE S

##### Range

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

### Resolution

0.1 dB

### Accuracy

$\pm 1$  dB

## FREQUENCY

---

### Range

1029.900 to 1030.100 MHz

### Resolution

1 kHz

### Accuracy

$\pm 10$  kHz

## TCAS BROADCAST INTERVAL

---

### Range

1.0 to 12.0 sec

### Resolution

0.1 sec

### Accuracy

$\pm 0.2$  sec

## MISCELLANEOUS INPUT/OUTPUTS

---

### RF I/O

#### Type

Input/Output

#### Impedance

50  $\Omega$  typical

#### Maximum Input Level

4 kW peak  
10 W average

#### VSWR

<1.3:1

### ANTENNA

#### Type

Input/Output

#### Impedance

50  $\Omega$  typical

#### Maximum Input Level

10 W peak  
0.5 W average

### VIDEO

#### Type

Output

#### Impedance

50  $\Omega$  typical

#### Generate Video Level

0.2 V to 1.5 V peak to peak into 50  $\Omega$

#### Receive Video Level

Proportional to IF level

#### Baseline

$\pm 0.5$  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

<sup>NOTE 2</sup> -20°C to 55°C

### Storage Temperature

<sup>NOTE 3</sup> -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)

## INFORMAÇÃO SUPLEMENTAR

### Certificações do equipamento

Altitude, operação	MIL-PRF-28800F	Class 2
Altitude, fora de operação	MIL-PRF-28800F	Class 2
Utilização em bancada	MIL-PRF-28800F	Class 2
Exposição à poeira	MIL-STD-810F	Method 510.4, Procedure I
Exposição à respingos	MIL-PRF-28800F	Class 2
Atmosfera explosiva	MIL-STD-810F	Method 511.4, Procedure 1
Umidade relativa	MIL-PRF-28800F	Class 2
Choque, Funcional	MIL-PRF-28800F	Class 2
Limites de vibração	MIL-PRF-28800F	Class 2
Temp, operação <sup>NOTA 4</sup>	MIL-PRF-28800F	Class 2
Temp, fora de operação <sup>NOTA 5</sup>	MIL-PRF-28800F	Class 2
Transit Drop <sup>(queda em transporte)</sup>	MIL-PRF-28800F	Class 2
Normas de segurança	UL-61010B-1 EN 61010-1 CSA 22.2 No 61010-1	
EMC	EN 61326	

### Certificações do conversor AC/DC externo

Normas de segurança	UL 1950 DS CSA 22.2 No. 234 VDE EN 60 950	
EMI/RFI	FCC Docket 20780	Curva "B"
EMC	EN 61326	

### Certificações do estojo de transporte

Teste de queda	FED-STD-101C	Method 5007.1 Paragraph 6.3, Procedure A, Level A
Impacto (Falling Dart)	ATA 300	Category I
Vibração (Loose Cargo)	FED-STD-101C	Method 5019
Vibração (Sweep)	ATA 300	Category I
Chuva simulada	MIL-STD-810F	Method 506.4 Procedure II of 4.1.2
	FED-STD-101C	Method 5009.1 Sec 6.7.1
Imersão	MIL-STD-810F	Method 512.4

## VERSÕES E ACESSÓRIOS

Ao fazer o pedido, por favor use a informação completa do código para pedidos

### Códigos para

Pedidos	Versions
72422	IFR 6000 Mode A/C/S Transponder and DME Ramp Test Set, com cabo para tomadas padrão americano
83410	6000OPT2 TCAS (TIS)
83411	6000OPT3 ADS-B

### Garantias padrão estendidas com calibração para 6000

84366	Garantia padrão estendida 36 meses com calibração programada
84368	Garantia padrão estendida 60 meses com calibração programada

### Acessórios para 6000

63656	Suporte para bancada (AC0820)
67474	Tripé (AC0826)
82553	Tripé, dolly, suporte (AC24006)
6095	Manual de manutenção IFR 6000 - CD (AC0824CD)
6093	Manual de operação IFR 6000 - CD (AC0825CD)
62462	Cabo coaxial TNC/TNC 25 pés (7,6 m) (AC0829)
86336	Cabo coaxial TNC/TNC 25 pés (15,2 m) (AC0830)
86931	UC-584 Universal Transponder Antenna Coupler

### Notas

NOTA 1 Simula um XPDR com ERP de 50,5 dBm XPDR a uma distância de 10 milhas náuticas

NOTA 2 Faixa de temperatura de carga da bateria: 5°C to 40°C (controlado pelo carregador interno).

NOTA 3 A bateria de Li Ion deve ser removida abaixo de -20°C e acima de 60°C.

NOTA 4 Faixa de temperatura estendida para -20°C a 55°C.

NOTA 5 Faixa de temperatura reduzida para -30°C a 71°C.

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