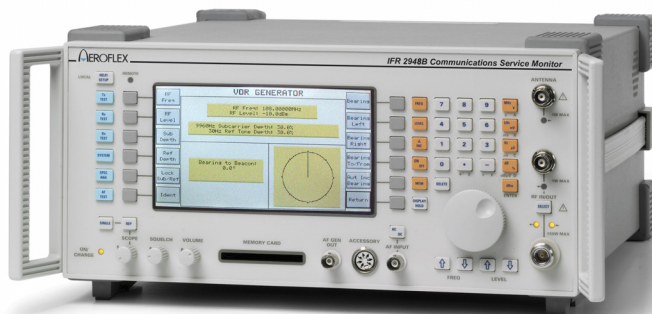


# Avionics

## Option 25 Avionics option for the 2948B Low Phase Noise Communications Service Monitor

**AEROFLEX**  
A passion for performance.



Communication and ramp testing of military and commercial aircraft in one instrument

- Avionics modes for ILS, VOR, marker beacons and SELCAL
- Displays in avionics terms: SDM, DDM, Bearing and TO and FROM
- Extensive pre-sets for avionics functions DDM and Bearing
- Auto-increment of VOR Bearing for aircraft display testing
- DC operation from aircraft power supplies or batteries
- Avionics testing in both Direct and 'Off Air' configurations

*The datasheet covers only the specific option 25 Avionics capability. For full details of the 2948B host platform functionality and capabilities refer to the 2948B data sheet 46891/212.*

*Aeroflex is a leader in the design, manufacture and marketing of Avionics test systems.*

*The 2948B Communications Service Monitor is the lightest, most rugged service monitor available with a full performance spectrum analyzer as standard. For field work, the 2948B provides an excellent combination of instruments for all types of maintenance work. In the workshop, it provides all of the performance you would expect for exacting measurements.*

### AVIONICS (OPTION 25)

Enables communication and ramp testing of military and commercial aircraft in one instrument.

The option provides an impressive range of features for the aircraft and avionics maintenance industry.

In addition to the features provided by the general purpose 2948B, the dedicated Avionics system provides signals for testing the following: ILS receivers for localizer, glidescope (including identification and markers), VOR beacon receivers with identification, and SELCAL selective calling receivers.

The 2948B screen gives a representation of the aircraft's display in each mode, with the effective test signal parameters clearly indicated both diagrammatically and numerically.

### SPECIFICATION

#### Avionics Systems

*The Avionics feature provides amplitude modulated signals suitable for testing of Instrument Landing Systems (ILS) and VHF Omnidirectional Radio Range (VOR) receivers.*

#### ILS MODE

##### Sum of Depth of Modulation (SDM)

*0% to 90% glideslope, 0% to 50% localizer in 0.1% steps representing the arithmetic sum of each tone depth*

##### Selection

*Keyboard entry*

##### Accuracy of SDM

*±5% of setting for carrier frequencies up to 400 MHz*

## Difference of Depth of Modulation (DDM)

0% to 45% glideslope, 0% to 25% localiser in 0.1% steps limited by SDM

## Selection

Keyboard entry and variation of rotary control

## Localiser Presets

0%, 4.6%, 9.3% and 15.5% DDM

ILS GENERATOR		SDM
RF Freq	RF Freq: 108.10000MHz	DDM
RF Level	RF Level: -10.0dBm	Preset DDM
	SDM: 40.0%	Supp Tone
Ident	LOCALISER	Fly Lft/Rt
Loc	DDM: 0.0% Loc: 00A	Return
G.S.	90Hz Dominant FLY RIGHT	

## Glideslope Presets

0%, 4.5%, 9.1% and 17.5% DDM

## Accuracy of DDM

0.001 DDM (20% depth) at 0 dBm

## Tone Frequencies

90 Hz and 150 Hz (either tone can be suppressed)

## Additional Modulation

1020 Hz ident signal available on 0 DDM on ILS from an internal modulation source

## VOR MODE

9.96 kHz Sub-Carrier Range

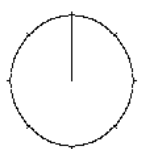
0.0% - 99.0% in 0.1% steps

## Modulation

FM by a 30 Hz tone with 480 Hz deviation

## 30 Hz Tone Range

0.0% to 99.0% in 0.1% steps

VOR GENERATOR		Bear ins
RF Freq	RF Freq: 108.00000MHz	Bear ins Left
RF Level	RF Level: -10.0dBm	Bear ins Right
	9960Hz Subcarrier Depth: 30.0%	Bear ins To/From
	30Hz Ref Tone Depth: 30.0%	Aut Inc Bear ins
Cal UOR	Bear ins to Beacon: 0.0°	Return
Bear ins	Cal UOR: 10.5°	
Store Cal		

## Bearing Control

Relative phase of the 30 Hz tone and sub-carrier modulation adjustable from 0 to 360° in 0.1° steps by entering VOR bearing. Bearing can be entered as TO or FROM the beacon.

## Automatic VOR Test

Bearing automatically increments in 0.1° steps

## Bearing Accuracy

±0.5°

## Additional Modulation

Ident signal (1020 Hz) available on 0° bearing from an internal source

## SELCAL MODE

Provides amplitude modulation with SELCAL tones

## Data Entry

By table selection of 2 pairs of characters labeled 'A' to 'S'

## Timing

1 s tone duration, 250 ms gap

## MARKER BEACON MODE

Provides default modulation of 95% AM depth on a 75 MHz carrier at the rate of 400 Hz (outer beacon), 1.3 kHz (middle beacon) or 3 kHz (inner beacon). AM depth, carrier frequency and modulation frequencies can be changed from default values.

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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.