



*Communication and
flightline testing of
military and commercial
aircraft in one instrument*

- Comprehensive Radio Communication Test Set
- Full span Spectrum Analyzer with offset tracking generator
- 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 internal batteries
- Avionics testing in both Direct and 'Off Air' configurations

Avionics Systems Test Facility

The 2946A provides an impressive range of features for the aircraft and avionics maintenance industry.

In addition to the features provided by the general purpose 2945A, the dedicated 2946A Avionics Communications Service Monitor provides signals for testing the following: ILS receivers for localizer, including identification, glideslope and markers; VOR beacon receivers, with identification; SELCAL selective calling receivers.

The 2946A screen gives a representation of the aircraft's display in each mode, with the effective test signal parameters clearly indicated both diagrammatically and numerically. Parameters can be altered in steps or continuously.

2946A Avionics Communications Service Monitor



Specification

Avionics Systems

The Avionics feature provide 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)

0-90% glideslope, 0-50% 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 Hz

Difference of Depth of Modulation (DDM)

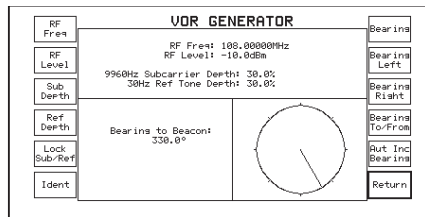
0-45% glideslope, 0-25% localizer in 0.1% steps limited by SDM.

Selection

Keyboard entry and variation of rotary control

Localiser Presets

0, 4.6, 9.3 and 15.5% DDM



Glideslope Presets

0, 4.5, 9.1 and 17.5% DDM

Accuracy of DDM

At 0 DDM typically 0.003 DDM (0.1% depth)

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
0-99.0% in 0.1% steps

Modulation

FM by a 30 Hz tone with 480 Hz deviation

30 Hz Tone Range

0-99% in 0.1% steps

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

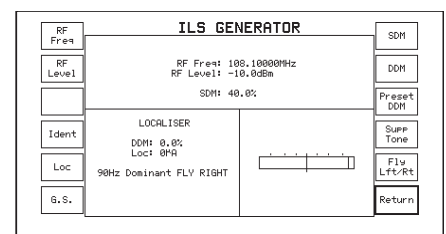
Bearing automatically increments in 0.1° steps

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 labelled '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.

Versions and Accessories

See 2945A for ordering numbers, options and accessories