MILITARY PRODUCTS

IFF and TACAN Test Set Calibration Source

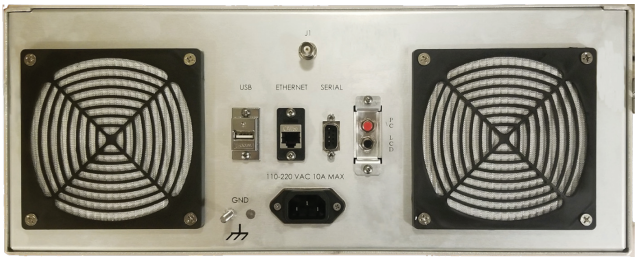
Model: 2770

Product Features

- *Field Alignment Option*
- *High and Low Power Amplitude*
- *Pulse Shaping Control*
- *Portable Package*
- *Variable Replacement for Vacuum Equipment*
- *Delivers Reliability and Product Longevity*
- *Includes Transit Case*

Description and Application

Military Aircraft technicians use various Test Sets to check and certify proper operation of the aircraft's TACAN and IFF pulsed RF transmitters. To avoid errant aircraft transmitter operation, these Test Sets must be calibrated with a high accuracy, stable source of properly shaped RF pulses. The UBS Calibration Source provides military aircraft service technicians with such capabilities. The unit is a modern, solid-state bench top power source that produces the same type and shape of RF pulses as the aircraft's RF transmitter for IFF and TACAN.



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IFF and TACAN Test Set Calibration Source

Model: 2770

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a DOL Technologies Inc. Company

Product Specifications

Frequency Range	960 - 1215 MHz (TACAN) 1025 - 1035 and 1085 - 1095 MHz (IFF)
RF Output Connectors	Type-N Female (high power port has interlock protection)
High Power Port Duty Cycle	0.002 maximum automatically enforced (limits some of the combinations of widths, repetition frequencies, and number of pulses per group that, individually, are within spec).
Pulse Width (specified @ 50% voltage amplitude)	Variable from 0.20 - 1.3 ±0.025 µsec (IFF) 3.5 ±0.5 µsec (TACAN)
Pulses per Group	2 or 4 (IFF); 1 or 2 (TACAN) with variable spacing
Pulse Spacing:	
IFF 2 Pulse	1.3 to 23 µsec ±0.025 µsec in 0.05 µsec steps
IFF 4 Pulse: (high power only)	P2: 1.5 - 2.5 µsec ±0.025 in 0.05 µsec steps P3: 3.5 to 4.5 µsec P4: 5.5 to 6.5 µsec
TACAN: (high power only)	8 to 50 µsec ±0.1 µsec to 0.5 µsec steps
Frequency Control	Selectable with 0.1 MHz resolution, accurate to ±50 kHz
Pulse Group Repetition Rate	Variable from 5 to 200 pps (TACAN) 25 to 1000 pps (IFF)
Synch Out	A synch output pulse of +4 V into 50 ohms coincident with the start of each pulse group is provided for synchronizing external equipment. The pulse width is 1.5 µsec. A delay of up to 100 µsec between the synch out signal and the pulse group can be set in 0.1 µsec increments. Synch out pulse is present in both internal and external synch modes.
External Synch	The 2770 normally operates in internal synch mode. However, operation from an external synch input is accommodated. The external synch requires a 1 to 30 volt pulse of 0.3 to 25 µsec in width. Duty cycle limiting in external synch mode is automatic.
Video Monitor	A video monitor signal proportional to the RF level at the low power output is provided. The amplitude is 1 Vpp ±15% for a low power output of +20 dBm.

High Power Output (TACAN, IFF (2 pulse), IFF 4 pulse)

Maximum Peak Power	At least 2238 W over the frequency range of 960 - 1215 MHz
Power Control (high power port is intended to be used with an external peak power meter serving as an absolute power reference)	Variable from 10 to 2238 Watts, resolution of 0.1 dB or better

Low Power Output (IFF(2 pulse) with or without SLS pulse)

Peak Power (P1 and P3 pulses)	+10 dBm to +20 dBm
Power Control	Variable in 0.5 dBm steps
SLS Pulse Level Control	Variable +3 to –12 dB relative to main (P1) pulse in 0.5 dB steps
SLS Pulse Width	0.20 to 1.3 µsec ±0.025 µsec in 0.05 µsec steps
SLS Pulse Spacing	1.5 - 2.5 µsec ±0.025 µsec in 0.05 µsec steps (subject to 0.4 µsec min between P1 and SLS pulses)

Operating Environment

Temperature	+17 °C to +28 °C
Relative Humidity	0 to 80% (non-condensing)
Altitude	0 to 15,100 feet above sea level
Power Input	90V to 210 V, 50-60 Hz, single phase

Non-Operating Environment

Storage Temperature	-40 °C to 71°C
Altitude	15,100 feet above sea level

Mechanical

Width	19" EIA standard RS-130 (48.3 cm)
Height	7" (17.8 cm)
Depth	21" (behind panel) (53.3 cm)
Weight	46 pounds (21kg)

A transit case with integral shock mounting and snap off front and rear covers, that permits operation from within the case, is included.

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