

## IFF and TACAN Test Set Calibration Source

### 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**



### 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.

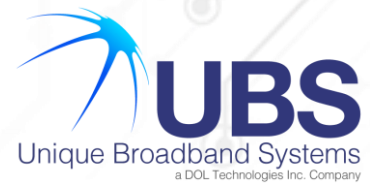
The UBS' SCITTS Calibration Source provides military aircraft service technicians with such capabilities. The SCITTS is a modern, solid-state bench top power source that produces the same type and shape of RF pulses as the aircraft's RF transmitter for IFF and TACAN.

**SOURCE SELECTION INFORMATION--SEE FAR 2.101 and 3.104  
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# IFF and TACAN Test Set Calibration Source



## Product Specifications

<b>Frequency Range</b>	960 - 1215 MHz (TACAN) 1025 - 1035 and 1085 - 1095 MHz (IFF)
<b>RF Output Connectors</b>	Type-N Female (high power port has interlock protection)
<b>High Power Port Duty Cycle</b>	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).
<b>Pulse Width (specified @ 50% voltage amplitude)</b>	Variable from 0.20 - 1.3 $\pm$ 0.025 $\mu$ sec (IFF) 3.5 $\pm$ 0.5 $\mu$ sec (TACAN)
<b>Pulses per Group</b>	2 or 4 (IFF); 1 or 2 (TACAN) with variable spacing
<b>Pulse Spacing:</b>	
<b>IFF 2 Pulse</b>	1.3 to 23 $\mu$ sec $\pm$ 0.025 $\mu$ sec in 0.05 $\mu$ sec steps
<b>IFF 4 Pulse: (high power only)</b>	P2: 1.5 - 2.5 $\mu$ sec $\pm$ 0.025 in 0.05 $\mu$ sec steps P3: 3.5 to 4.5 $\mu$ sec P4: 5.5 to 6.5 $\mu$ sec
<b>TACAN: (high power only)</b>	8 to 50 $\mu$ sec $\pm$ 0.1 $\mu$ sec to 0.5 $\mu$ sec steps
<b>Frequency Control</b>	Selectable with 0.1 MHz resolution, accurate to $\pm$ 50 kHz
<b>Pulse Group Repetition Rate</b>	Variable from 5 to 200 pps (TACAN) 25 to 1000 pps (IFF)
<b>Synch Out</b>	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 $\mu$ sec. A delay of up to 100 $\mu$ sec between the synch out signal and the pulse group can be set in 0.1 $\mu$ sec increments. Synch out pulse is present in both internal and external synch modes.
<b>External Synch</b>	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 $\mu$ sec in width. Duty cycle limiting in external synch mode is automatic.
<b>Video Monitor</b>	A video monitor signal proportional to the RF level at the low power output is provided. The amplitude is 1 Vpp $\pm$ 15% for a low power output of +20 dBm.

<b>High Power Output</b>	(TACAN, IFF (2 pulse), IFF 4 pulse)
<b>Maximum Peak Power</b>	At least 2.3 kW over the frequency range of 960 - 1215 MHz
<b>Power Control (high power port is intended to be used with an external peak power meter serving as an absolute power reference)</b>	Variable from 10 to 2300 Watts, resolution of 0.1 dB or better
<b>Low Power Output</b>	(IFF(2 pulse) with or without SLS pulse)
<b>Peak Power (P1 and P3 pulses)</b>	+10 dBm to +20 dBm
<b>Power Control</b>	Variable in 0.5 dBm steps
<b>SLS Pulse Level Control</b>	Variable +3 to -12 dB relative to main (P1) pulse in 0.5 dB steps
<b>SLS Pulse Width</b>	0.20 to 1.3 $\mu$ sec $\pm$ 0.025 $\mu$ sec in 0.05 $\mu$ sec steps
<b>SLS Pulse Spacing</b>	1.5 - 2.5 $\mu$ sec $\pm$ 0.025 $\mu$ sec in 0.05 $\mu$ sec steps (subject to 0.4 $\mu$ sec min between P1 and SLS pulses)

### Operating Environment

<b>Temperature</b>	+17 °C to +28 °C
<b>Relative Humidity</b>	0 to 80% (non-condensing)
<b>Altitude</b>	0 to 15,100 feet above sea level
<b>Power Input</b>	103.5 to 126.5 V, 50-60 Hz, single phase

### Non-Operating Environment

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

### Mechanical

<b>Width</b>	19" EIA standard RS-130 (48.3 cm)
<b>Height</b>	19" (48.3 cm)
<b>Depth</b>	23" (behind panel) (58.4 cm)
<b>Weight</b>	90 pounds (41 kg)

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