



## TRA 6020

V/UHF ECCM AIRBORNE TRANSCIVER SERIES

- > **SATURN**
- > **Proprietary ECCM**
- > **Have Quick II**
- > **30 - 400 MHz**
- > **10 W AM - 15 W FM**
- > **External or embedded COMSEC**
- > **ARC 164 Form and Fit**
- > **8.33 and 25 kHz channel spacing**
- > **Voice and data**
- > **Under 5 kg**
- > **Panel-mounted or remote controlled**

# TRA 6020

## DEVELOPED FOR CUSTOMIZED AIR-TO-GROUND AND AIR-TO-SURFACE COMMUNICATION NETWORK

- > TRA 6021:
  - Fixed Frequency, Have Quick, SATURN, etc.
- > TRA 6025:
  - Fixed Frequency, Have Quick, Proprietary ECCM, etc.
- > System integration components:
  - ECCM management system
  - IDM compatibility
- > Improved cosite operation
- > Full range of ancillaries:
  - Remote Control Unit
  - Frequency indicator
  - Agile filters / booster
  - Mounting tray (with chock absorber)
  - Multicouplers
  - External booster
  - Tuned antennas

## GENERAL CHARACTERISTICS

<b>Frequency range</b>	30 to 87.975 MHz 108 to 173.975 MHz 225 to 399.975 MHz
<b>Channel spacing</b>	25 kHz, 8.33 kHz
<b>Frequency accuracy</b>	± 0.5 ppm, - 40° C to + 70° C
<b>Modulation type</b>	AM, FM, MSK, FSK
<b>Functions</b>	<b>Fixed frequency</b> Voice: clear / secure Data: L11 (L22)
	<b>ECCM</b> Voice: clear / secure Data: point-to-point, option (TDMA, L22), SATURN synchronous / asynchronous data
<b>ECCM</b>	Have Quick I and II (Stanag 4246) * SATURN (Stanag 4372) * Fast Frequency Hopping (FFH)
<b>COMSEC</b>	External KY 58 - KY 100 Proprietary embedded COMSEC
<b>Operation</b>	Panel-mounted or remote controlled
<b>Remote control</b>	MIL-STD 1553B, ARINC 429 or RS 422
<b>Built-in-test</b>	Yes
<b>Power supply</b>	+ 28 VDC, (MIL-STD-704 D)
<b>Power consumption</b>	<b>Operating receive</b> 50 W <b>Operating transmit</b> 150 W
<b>MTBF</b>	2.000 hrs

\* NATO Clearance required for Non-NATO customer

## PHYSICAL

<b>Dimensions</b>	<b>(W x H x D)</b>	4.97 x 4.85 x 6.4 inches 127 x 124 x 183 mm
<b>Weight</b>		4.3 kg

## ENVIRONMENT

<b>Class</b>	MIL-STD 810 C, D, E
<b>Operating temperature range</b>	- 40° C to + 71° C
<b>Storage temperature range</b>	- 40° C to + 85° C
<b>Altitude</b>	50,000 ft
<b>Shock/Vibration</b>	MIL-STD 810 E
<b>EMC</b>	MIL-STD 461 C

## MAIN RECEIVER

<b>Sensitivity</b>	<b>AM</b>	- 103 dBm, 30 % modulation
	<b>FM</b>	- 106 dBm, ± 2.4 kHz deviation
	<b>SATURN</b>	- 100 dBm, 0.1 % BER
	<b>FFH</b>	- 100 dBm, 0.1 % BER
<b>Selectivity at 6 dB</b>	<b>NB 1</b>	± 3 kHz min (ATC 8.33)
	<b>NB 2</b>	± 10.5 kHz min (clear voice / NB secure voice, telegraphy, HQ)
	<b>WB 1</b>	± 20 kHz min (SATURN)
	<b>WB 2</b>	± 28 kHz min (WB secure voice, link 11, telegraphy, FFH)
	<b>Squelch / Adjustment range</b>	<b>AM</b>
	<b>FM</b>	13 to 16 dB

## GUARD RECEIVER

<b>Input</b>	Common to main receiver
<b>Channel frequency</b>	<b>VHF</b> 121.500 MHz <b>UHF</b> 243.000 MHz
<b>Sensitivity</b>	- 95 dBm, 30 % modulation
<b>Selectivity at 6 dB</b>	± 12.5 kHz min
<b>Squelch</b>	Independent of main receiver

## TRANSMITTER

<b>Carrier output</b>	<b>AM</b> 10 W <b>FM</b> 15 W LPI power
<b>Modulation characteristics</b>	<b>AM - Modulation depth</b> > 80 % <b>AM Tone</b> up to 80 % <b>FM - Frequency deviation</b> up to ± 5.6 kHz <b>Distortion</b> 5 %
<b>Wideband noise</b>	< - 150 dBc / Hz ± 10 MHz from carrier frequency
<b>Self protection</b>	VSWR, temperature Power reduction (automatic)

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