



Watt
6 / 10

ETSI

RoIP

TG660

VHF Ground Station

Overview

Air traffic control services depend on reliable and robust communication systems to ensure safe flight operations. With the TG660 VHF base station, Becker Avionics offers an efficient product for air traffic management applications intended to respond requirements and the needs of ATM operators.

In continuation of the very successful ground station, TG460, the TG660 is ideally suited for control tower installations.

The TG660 provides 6 to 50 W RF output power depending on the variant, and is suitable for medium and large range communication requirements. It can be installed in 19 inch racks or in ATC desks as a main or as a standby transceiver for ground to air communication purposes. Designed for operations at airports in a very demanding environment, the TG660 offers high quality and supports all frequency channels in the aeronautical frequency range, adjustable in 25 kHz steps as well as in 8.33 kHz steps.

Features

- 4 power variants available with the same footprint
 - RF Power: 6, 10, 25 and 50 W power variants
- Channel spacing: 25 and 8.33 kHz
- Frequency range: 118-136.990 MHz
- Power supply 100-230 VAC or 24 VDC
- Emergency power supply via internal battery (option for 6 W and 10 W variants)
- LEDs for operating status indication
- Direct or remote operation
 - Radio over IP operation (RoIP)
 - Remote control and monitoring capabilities via web browser
- User-friendly operation, all main components located on the front panel
- Protected against stuck PTT
- Protected against antenna mismatch
- Robust and field-proven design
- Maintenance-free
- Compliant with ETSI standards and type approved for ATM applications





Technical Data

TG660	Specification
Supply voltage	AC-Power supply: 90...264V / 47...63 Hz DC-Power supply (external): 24...29.8 VDC
Frequency range	118.000...136.990 MHz
Channel spacing	25 kHz / 8.33 kHz, automatically selected
Modulation type	AM, A3EJN
RF Antenna connection	N-Connector female
Warm up time	5 s
Duty cycle	RX : TX= 4 : 1
Voice recorder output	-3 dBm, +/-12 dB @ 600 Ω, balanced
AF-Response	350...2500 Hz (8.33 kHz), 2 dB ≥ ripple ≥ -4dB, reference 0 dB @ 1 kHz 300...3400 Hz (25 kHz), 2 dB ≥ ripple ≥ -4 dB, reference 0 dB @ 1 kHz
Temperature range	Operating: -20...55 °C Storage: -55...85 °C
Humidity	48 h, 50 °C, 95% RH, without condensation
Dimensions (H x W x D)	Case: 86.5 x 428 x 280 mm 19" rack: 88.1 x 482.6 x 280 mm
Regulations	Compliant to ETSI EN 300 676
Type approval (TG660-05/10)	BAF (Federal Supervisory Office for Air Navigation Services), Germany: D-0046/2017
Transmitter Data	
Carrier power	6 W, 10 W, 25 W, 50 W
Frequency stability	±1 ppm
Protection of the transmitter	VSWR = 6 without any damage
Modulation depth	≥ 85%
Modulation distortion	≤ 10%
Adjacent channel power	50 dB (8.33 kHz), 60 dB (25 kHz)
AF-line input level	-20...10 dBm adjustable
AF-line input impedance	600 Ω ± 10%, balanced
Locale mike sensitivity (dyn.)	2...10 mV @ 200 Ω balanced
Receiver Data	
Sensitivity (mod. depth 30%)	-107 dBm for 6 dB SINAD
Effective bandwidth	± 2.8 kHz for 8.33 kHz ± 8.5 kHz for 25 kHz
Adjacent channel rejection	≥ 60 dB
Spurious response rejection	≥ 70 dB
Intermodulation	≥ 70 dB
Blocking or desensitisation	≥ 99 dB
Cross modulation rejection	≥ 95 dB
Squelch operation	6 dB (S+N) N up to 12 dB, software adjustable, override level -85 dBm
Audio noise	≥ 40 dB (S+N) N
RF-input level range	-101 dBm up to 10 dBm
RF-dynamic range	6 dB AF variation for 100 dB RF variation
AF-AGC for 30% m 90%	max. 1.5 dB AF-level variation
AF-line output level	-20...10 dBm, adjustable
AF-line output impedance	600 Ω ± 10%, balanced
Local headphone output power	≥ 1.5 V @ 600 Ω, unbalanced, volume control via front panel
Ext./int. speaker power	≥ 4 W sinus @ 4 Ω, volume control via front panel