

TG660 VHF Ground Station

FEATURES

- 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
- LEDs for operating status indication
- Direct or remote operation
- Radio over IP operation (RoIP)
- Protected against stuck PTT
- Protected against short circuit on the PTT line
- Protected against antenna mismatch
- Compliant with ETSI standards and type approved for ATM applications



Watt
6-50

ETSI

RoIP



AIR TRAFFIC MANAGEMENT



OVERVIEW

Air traffic control services depend on reliable and robust communication systems to ensure safe flight operations. With the TG660 VHF base station, Becker offers an efficient product for air traffic management applications intended to respond to the latest requirements and the needs of ATM operators. In continuation of the very successful ground station, TG460, the TG660 offers latest standards and 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 latest technology and support all frequency channels in the aeronautical frequency range, adjustable in 25 kHz steps as well as in 8.33 kHz steps.

BENEFITS

- ▶ Radio over IP capabilities
- ▶ 4 power variants available with the same footprint
- ▶ Robust and field-proven design
- ▶ Maintenance-free
- ▶ User-friendly operation, all main components located on the front panel
- ▶ Emergency power supply via internal battery (option for 6 W and 10 W variants)
- ▶ Remote control and monitoring capabilities via web browser



TECHNICAL DATA

General data

Frequency range	118.000...136.990 MHz
Channel spacing	25 kHz / 8.33 kHz, automatically selected
Modulation type	AM, A3EJN
AC-Power	90 V...264 V 47 Hz...63 Hz
DC-Power external	24 VDC ... 29,8 VDC
RF Antenna connection	N-Connector female
Warm up time	5 sec.
Duty cycle	RX:TX= 4 : 1
Voice recorder output	-3 dBm, +3 / -12 dB @ 600 Ω, balanced
Environmental data	
Temperature range	Operating -20°C...55°C Storage -55°C...85°C
Humidity	48h, 50°C, 95% RH, without condensation
Dimensions (H x W x D)	
Case	86,5 x 428 x 280 mm
19" Unit:	88,1 x 482,6 x 280 mm
AF-Response	350...2500 Hz (8.33 kHz) 2 dB ≥ ripple ≥ -4 dB, reference 0 dB @ 1 k Hz 300 Hz 3400 Hz (25 kHz) 2 dB ≥ ripple ≥ -4 dB, reference 0 dB @ 1kHz

Transmitter data

Carrier power	6 W, 10 W, 25 W or 50 W
Frequency stability	±1 ppm
Protection of the transmitter	VSWR = 6
Strich löschen	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	
Strich löschen	≥ 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% 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 Ohm, unbalanced, Volume control via front panel
Ext./Int. speaker power	≥ 4 W sinus @ 4 Ω, Volume control via front panel
Compliant to ETSI EN 300 676	Regulations
Type approval (TG660-05/10)	BAF (Federal Supervisory Office for Air Navigation Services), Germany: D-0046/2017