



Installation Manual

TPU_WISMOQ24X6A-10C / HA88

CAN Controlled GSM Telephone Unit with handset HA88

MODIFICATION	NATURE OF ALTERATION	DATE	SIGNATURE
Released Specification		2004-11-01	RI



Notice:

This TPU (telephone unit) device contains 900/1800 MHz GSM (Q2406 version) or 850/1900MHz PCS (Q2426 version) functions, the Q2406 version is not operational in U.S. Territories. This filing is only applicable for 850/1900 MHz PCS operations.

The TPU generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

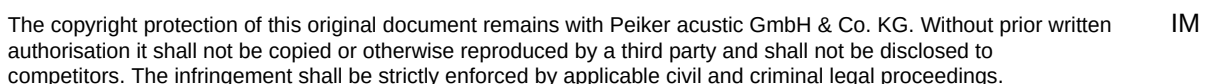
To ensure that the TPU complies with current FCC regulations and safety requirements limiting both maximum RF output power and human exposure to radio frequency radiation, use an antenna with a maximum gain of 2dBi and a separation distance of at least 20 cm must be maintained between the unit's antenna and the body of the user and any nearby persons at all times and in all applications and uses.

Caution: (pertaining to FCC part 15.21)

Modifications not expressly approved by this company could void the user's authority to operate the equipment



- directly to the GSM antenna via a HIROSE connector, the length of the coax cable is 3m
- directly to the handset HA88 via western plug (the TPU supplies the Handset)
- the SIM card reader is placed in the command unit
- the TPU will be supplied via an AMP connector, this connector interfaces also the CAN bus system and to a microphone (via connector 11)
- the loudspeakers are connected to a sound module and interfaces to the TPU via the command unit.





Antenna Specification

Connector: HIROSE

Coax Cable: 3m

ELECTRICAL CHARACTERISTICS

Frequency	AMPS: 824 - 894 ETACS-GSM: 870 - 960 MHz DCS: 1710 - 1880 MHz PCS: 1850 - 1990 MHz
Nominal Impedance	50 Ω
VSWR AMPS (824 - 894 MHz)	< 2
VSWR GSM (880 - 915 MHz)	< 1,6
VSWR GSM (930 - 960 MHz)	< 2
VSWR DCS (1710 - 1880 MHz)	< 2
VSWR PCS (1850 - 1990 MHz)	< 2
Power Handling	10 W
Peak Gain (in relation to $\lambda/4$)	0 $\pm$ 2 dB



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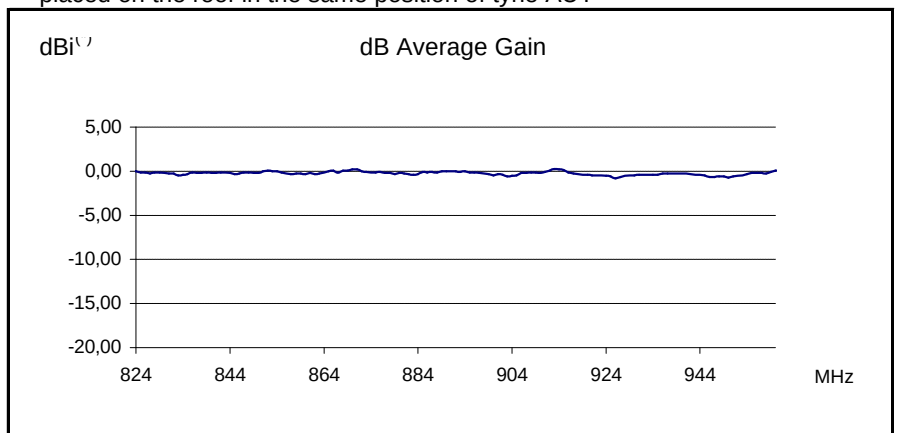
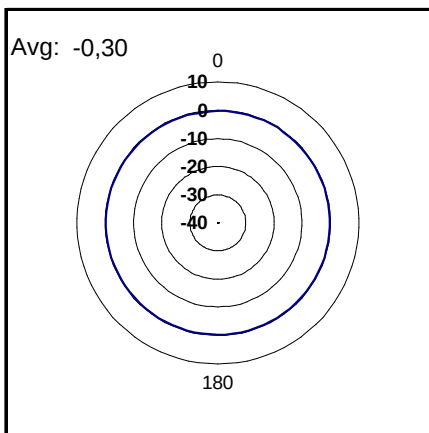
RADIATION PATTERN: AMPS and GSM Frequencies

Polarization: Vertical

Test Department

antenna: RTZ
location: Roof-Center
model: Alfa 164
date: 14/01/02

⌚ The "0 dBi" level is the level received by the reference antenna ($\lambda/4$) placed on the roof in the same position of tyhe AUT



DCS and PCS frequencies

Polarization: Vertical

Test Department

antenna: RTZ
location: Roof-center
model: Alfa 164
date: 14/01/02

⌚ The "0 dBi" level is the level received by the reference antenna ($\lambda/4$) placed on the roof in the same position of tyhe AUT

