

Operational Description for Type TF02 Model B07D transmitting unit

1 Identification of the unit

Type	TF02
Model	B07D
Configuration	M08
Equipment	remote control transmitting unit
Trasmitting radio module	E16STXUS1
Used frequency band	902 - 928 MHz
Trade name	MJ
FCC Identifier	OQA-TF02B07D
Manufacturer	AUTEC srl Via Pomaroli, 65 I-36030 CALDOGNO (VI)

where:

TYPE: identifies type of unit (transmitting, receiving or transceiving), type of casing and used electronic modules.

MODEL: differentiates power supply, type of actuators and radio frequency band

CONFIGURATION: refersto the specific set of components and accessories of the unit

TRADE NAME: commercial reference

2 Difference between the units

There are some Configurations which differ each other for the type of the actuators used in the unit:

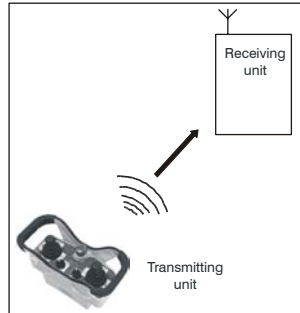
- Configuration M08 has 2 joystick type Gessmann with double contacts
- Configuration M09 hasn't joysticks (only toggle switch, pushbutton and rotary switch)
- Configuration M10 has 2 joystick type Euchener
- Configuration M11 has 3 joystick type Euchener
- Configuration M12 has 2 joystick type Gessmann with single contacts

3 Operational description

Industrial radio remote controls are used to command machines from a distance.

Each industrial radio remote control is made up of a portable transmitting unit, from which the user can remotely control the machine, and a receiving unit installed on board the machine itself.

The MJ transmitting unit is a handheld unit.



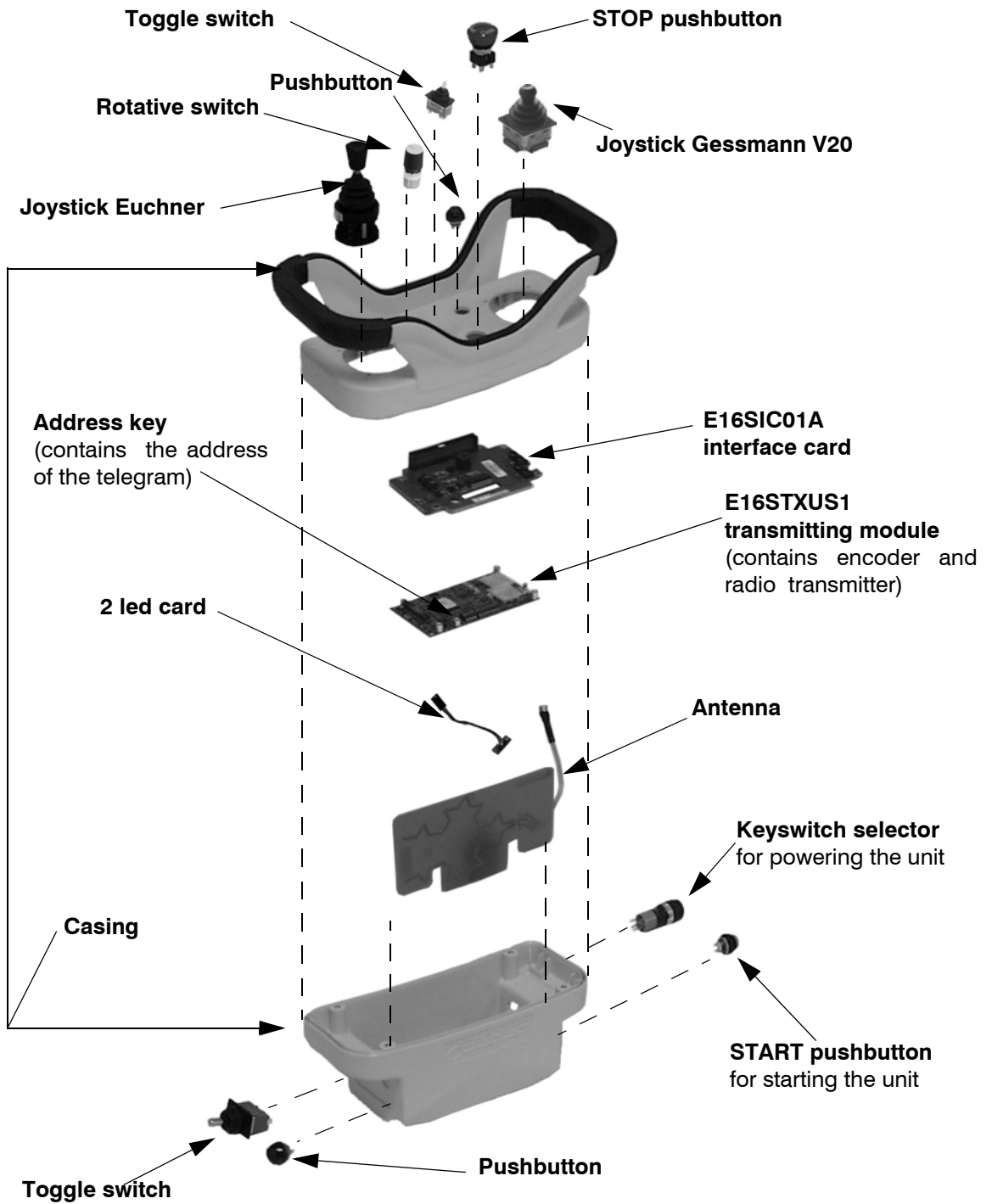
The MJ contains E16STXUS1. It is the radio transmitting module.

A logic section collects commands coming from various actuators (joysticks and or pushbuttons and switches present in the E16SIC01A interface card) and combines them with an address code stored in an EEPROM memory ("address Key"); a serial data telegram at 2200-2600 baud is so obtained. After a Gaussian spectrum shaping filter, the telegram is frequency modulated on a carrier generated by a PLL synthesizer and then transmitted over a 25kHz channel in the 902-828 MHz band; 32 different frequencies may be chosen, so as to allow coexistence of multiple units on the same location (*for details see relative block diagrams*).

Transmission is continuous (100% duty cycle) even with no command activated, since the receiver is expected to monitor continuously the presence of a valid radio signal.

A receiving unit will decode only messages coming from a transmitter with the same address code. This excludes the possibility of an interference activating any function unwantedly.

4 Exploded view



5 Technical data E16STXUS1 trasmitting radio module

Used frequency band	902 - 928 MHz
Type of modulation	2200 - 2600 Baud GFSK
Channel spacing	25 kHz
Designation of emission (ITU code)	16K5F1D
Strenght field	see relative Test Report
Duty cycle	up to 100 % (continuous duty), depends on user's need
Duplex direction	simplex
Antenna type	dedicated
Data telegram	132 bit
Hamming distance	> 8
Probability of non-recognition of error	<10 exp-11

6 Power supply: MBM06MH battery pack



number of NiMH elements	6
nominal voltage of 1 element (V)	1,2
total nominal voltage of the battery (V)	7,2
battery voltage after discharge (V)	6
voltage of the charged battery (V)	8,4
capacity (mAh)	750
number of cycles in average life	400
autonomy (hours)	up to 15
recharge time	(approx) 3

MBM06MH batteries must only be recharged using MBC___ battery chargers.

Use the battery until it is totally discharged (the led of the transmitting unit flashes quickly when the battery used is discharged).