



# **Fire Fighter Communication System FFU-10**



Fig. 1: The FFK-10 and FFP-10 units

The TeleTech FFU-10 systems conforms to EN 81-72.

The FFU-system connects to the TeleTech TSA5100 and TSA5110-GSM Auto-Dials. For more details see: www.abp-teletech.com.

## 1. Overview

A standard FFU-system (Fig. 1) represents a three point local communication system consisting of three units:

- 1. A FFK-10 unit for placement at the fire fighter landing place (Fig.1, left).
- 2. A FFP-10 unit for placement in the control room. (Fig.1, right)
- 3. The third point is a TSA5100 (Autodial) Telealarm installed on the lift

The FFK-10 and the FFP-10 unit are available for either SURFACE mount or FLUSH mount.

Fig. 2 shows two different back cover plates, where the left is meant for flush mount and the right is meant for surface mount. Further the picture shows the KEY for the

FFK-10 to be used for activating the system. The FFP-10 features a PUSH BUTTON switching from talk to listen (simplex) defined by the Regulation. The FFK-10 Features two-way speech (half duplex).

The back cover for surface mounts (right) and flush mounts (left). Note: Grommets and cord grip bushes are included in a FFUsystem package.



Note: It is possible to add another FFP unit in order to establish a four point communication system. Remove the Jumper J5 in the extra FFP-10 unit (see chapter 8: Settings).

#### 2. Placement of the TSA5100 (Autodial) unit

The TSA5100 must be placed minimum 1 metres from any shaft wall containing a landing door in order to respect EN 81 72, 2003 part. 5.3.1. If this is impossible then place the TSA5100 in an enclosure classified to at least IPx3.

#### 3. TSA5100 installation recommendations

Fire fighter lifts mostly represent an acoustic challenge to the TSA5100 "Drop and Go" concept because of the massive metal structure of the lift car. Use therefore the optional external loudspeaker (see accessories in the TSA5100 manual). Place it together with the microphone in the lift control panel.

In order to get a maximum of backup time from the backup battery it is recommended not to use the emergency light backup optional feature.

Further general guide lines for TSA5100 installation see: www.apb-teletech.com.



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# 4. Cable connections (for cabling requirements details see: EN 81 72 part 5.8.1 and 5.8.2)

The FFU units are capable for both 230VAC and 10 - 30VDC:

- Fig. 3 shows the AC Single Supply Version (230VAC supplied to FFK-10)
- Fig. 3a shows the AC Dual Supply Version (230VAC supplied to both FFK-10 and FFP-10)
- Fig. 4 shows the DC version (10 30VDC supplied to both FFK-10 and FFP-10).

The terminal point succession is identical on the FFK-10 and the FFP-10.

**Caution:** If 230VAC is supplied to both FFK-10 and FFP-10 (Fig. 3a) then the DC power supply cable on pin 4 and 5 must be open (disconnected).

Note I: To respect EN 81-72 the power supply needs to be backed up.

Note II: If the DC version is supplied by 10VDC (or around minimum voltage) wire length and core diameter need to be taken into consideration due to voltage drop. In such cases use core size of 0.25 square millimetres as a minimum.

## 5. Installation of the FFK-10 at the fire fighter landing place

The FFK-10 is (as previously explained) delivered with a back cover for surface or flush mount. Most popular is the flush mount variant of the FFK-10 for safety and cleaning reasons.

Installation of the FFK-10 (normally flush mount)

- 1. Cut a hole for it with the dimensions: Height: 235 mm, Width: 115 mm
- 2. Prepare 6 screw holes for the FFK-10 assembly (use the 6 holes in the front plate as a "jig")
- 3. Unscrew the four nuts to release the back cover and remove it
- 4. Put the wires though the cord grip bushes either in the cover end plate or in the back (2x2 holes alternatives)
- 5. Replace the back cover
- 6. Install the FFK-10 with suitable screws (if the cord grip bushes are placed in the back cover end, then "twist" this end in the hole firstly).



Fig. 4b: SURFACE mounting holes (metric)







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If the installation hole depth fits to the depth of the back panel an alternative could be to install the back cover in the hole by use of foam. Take the cable(s) out and connect them before placing the units in the hole. In this case the threaded pins for the back plate are only used as positioning guiding pins.

If the FFP-10 is delivered as flush mount use the above mentioned installation method.

Refer to Fig. 2: A surface mount FFP-10 is mounted on a wall by four screws (minimum two screws).

#### 6. Terminals

The five terminal points shown in Fig. 3, 3a and Fig. 4 have the following functions:

Terminal 1 and 2:	Communication lines
Terminal 3:	Activate or deactivate FFP-10 (activate = line high)
Terminal 4:	+ 10 to 30VDC (Power supply)
Terminal 5:	System ground, Power Supply ground.

#### 7. Indicators

The FFK-10 and FFP-10 feature two LEDs, one Green and one Red:

Green LED on:	Power on
Red LED on:	Unit active (ready for communication)

# 8. Settings

#### General

The communication set up for the FFP-10 and the FFK-10 is not identical due to the EN 81-72 Regulation. Accordingly to this Regulation the FFP-10 must be default set in SIMPLEX mode. SIMPLEX mode means that switching between listen and talk is operated manually by means of the push button on the panel. The FFK-10 operates in HALF-DUPLEX (factory default) which means that the communication direction automatically switches (voice dependent).

#### Jumpers

Ref. Fig. 5, the FFK-10 and the FFP-10 both feature three Jumpers on the printed circuit board:

**J3** operates SIMPLEX or HALF DUPLEX mode. If the FFP-10 is used in the Control Room it must, as described, be in SIMPLEX mode. Therefore J3 must be in position 2 + 3. If the FFK-10 is set to SIMPLEX it can only be used as a "listen" unit.

J4 operates the voice output power of the FFK-10 and the FFP-10:

J4 set in position $1 + 2$ :	Medium output power (factory default)
J4 set in position $2 + 3$ :	Low output power
J4 missing:	High output power

J5 is only needed in one of the units in the system. Consequently leave it as it is in one of the units in the FFU-system and remove it in the other.

#### Programming of TSA 5100 / TSA 5110

Referring to AutoDial TSA5100 / TSA5110 Quick Installation Guide section B) PRO-GRAMMING: Enable Motor Room Handset (which in this case is the Fire Fighter Communication System) and enter \* \* 7 \* N # where N is recommended to be set at a minimum of 2 (seconds).



#### 9. FFU-System test

When the FFU-system is powered up the Green LED on the FFK-10 and FFP-10 are lit. Similar for the optional extra FFP-10. When the triangular key switch is activated on the FFK-10 the red LED is lit. This indicates that the communication is activated and ready.

The communication test basically requires two persons to talk to each other to verify that the communication is O.K. If the sound level is unsatisfactory the output power can be selected in three steps (ref. chapter 8 jumper 4)

If only *one* person is testing the FFU-system it is recommended to use an audio equipment (a tone generator or a portable radio or similar). Place it by turns in front of the different FFU-10 units and the TSA5100 and listen for the sound level and quality on the other communication places. Try to place the audio equipment in a realistic place in front of the communication point and adjust output power to normal human talk level. To test the sound from the FFP-10 from one of the other communication points you need to accomplish a way to force the push button constant active.





#### **10. Technical specifications**

**Mechanical** Dimensions (L x W x D): Weight: Material:

**Environment** Operation temperature: Relative Humidity:

Electrical

Power Supply: Supply current (standby): Supply Current active (average): Activation Voltage: (Terminal 3): 75 x 98,5 x 40 mm 0,8 Kg Stainless steel front plate

0 - 65°C 0 - 100 % non condensing

230VAC or 10 - 30VDC 20 mA @ 12VDC 100 mA @ 12VDC 5 - 30VDC

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