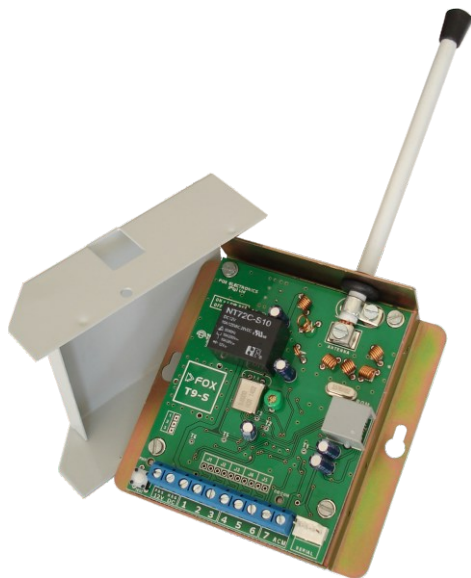


T9

VHF TRANSMITTER



Installation

INSTRUCTIONS

VER 3.0

T9 INPUT DEFINITIONS

INPUT NUMBER	INPUT DESCRIPTION
1	Emergency
2	Burglary
3	Lock/Open
4	Telemetry 1
5	Telemetry 2
6	Telemetry 3 or [CID - RING]
7	Telemetry 4 or [CID - TIP]
8	AC fail / AC restore

FEATURES

- Transmitter features are programmable with a portable handheld programmer.
- 8 programmable inputs.
- Full Contact ID alarm reporting.
- Bidirectional Serial port with selectable panel interface.
- Prioritized inputs with "EMERGENCY" having highest priority.
- Programmable ALARM input delay to allow bell annunciation.
- All inputs are memorized and transmitted in order of priority after the present transmission is completed.
- Battery low and restore reporting .
- Programmable mains fail / restore input delay, that may be wired from 12 volt DC or 16 volt AC.
- Intelligent signal repetition, where Low priority signals, such as Lock, Open only transmit twice. Medium priority signal such as Alarm is repeated three times, and a high priority signal, such as Emergency will repeat four times.
- Self test programmable for 1 – 250 hour testing with LOCK and OPEN status reporting.

INSTALLATION HINTS

12 Volt power connections

- During transmission the transmitter consumes up to 2.5 ampere from the battery. Using thin wire between the battery and the transmitter will limit the current flow and restrict the RF output power on transmission, resulting in unreliable communication.
- Always use a minimum of 0.5 mm stranded wire for the 12 Volt input and connect it **DIRECTLY** to the battery.
- Six core alarm cable **MUST NOT** be used for the 12 Volt supply.
- Maximum recommended wire length is approximately 6 meters.

Antenna Installation

- The antenna must be mounted vertically.
 - Avoid antenna installation near any large metal objects.
 - the RF field generated by the transmitter antenna can affect other electronic equipment, such as computers, television sets, Hifi systems and alarm equipment, especially passives and keypads.
 - Always mount your antenna as far as possible from other electronic equipment.
 - When mounting the antenna against a wall, always check for metal objects or passives on the other side of the wall.
 - NOTE : When connecting a Dipole Antenna to the internal RF connector, ensure that none of the braided screen wires are shorting to the center connection terminal.
 - To test your installation , select LOW power by inserting the power jumper. Then press the TX KEY button. This will ensure a reliable safety margin when normal signals are sent .
- REMEMBER** to remove the jumper after testing.

WHIP ANTENNA INSTALLATION

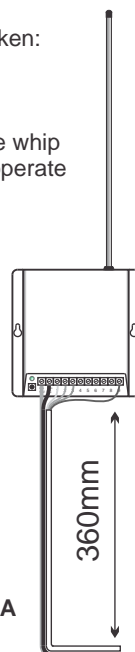
The T9 is supplied with an internal tamper proof antenna, mounted and folded under the transmitter when purchased. To install the transmitter the following steps have to be taken:

- Remove the transmitter from the box.
- Straighten the whip antenna as straight as possible. The whip antenna and transmitter must be vertically installed to operate correctly.
- Mount the transmitter on the wall, keeping it at least 2 meters away from all metal objects or electronic equipment (geysers, alarm panels, passives, keypads).
- For the antenna to work effectively, the 12 volt power and input wires must be strapped straight down for about 360 mm then turned at a 90 degree angle and proceed to the alarm panel.
- Ensure that the antenna is straight when mounted with no bends in it as this will change the performance of the transmitter RF power output.

NOTE: The whip antenna is cut to the correct length.

DO NOT CUT, LENGTHEN OR CHANGE THE ANTENNA WITH ANOTHER TRANSMITTER ANTENNA.

For extended range always use a dipole antenna.



FACTORY DEFAULT SETTINGS

All inputs	Positive trip / Serial input OFF
Alarm input delay	Disabled
Auto test delay	Disabled
Mains fail / restore	60 seconds
Battery low / restore	60 seconds

All features are programmable with the FX LCD programmer.

T-9 RF POWER SELECTION

Jumper	ON	LOW Power
Jumper	OFF	HI Power

A high level of lightning protection is incorporated on all inputs.

The latest surface mount component technology is used to manufacture the very compact and versatile T-9 transmitter.

INSTALLATION INFORMATION

TX KEY

When pressed and released the transmitter will send an Engineer test to the control room. With low RF power selected it will ensure that all normal signals from the transmitter will be received with a reliable safety margin.

1 - EMERGENCY input

When activated with a positive voltage, EMERGENCY will be transmitted to the base station. This input has priority 1 and will send 4 transmissions.

2 - ALARM input

When activated with a positive voltage, ALARM will be transmitted to the base station. This input has priority 2 and will send 3 transmissions.

The input may be programmed with a delay to allow siren annunciation if connected to the siren output. The delay time may be set from 1 to 20 seconds. If the delay time is programmed to [0] the input delay is disabled.

3 - LOCK / OPEN input

This input requires a latched voltage to report the input status. With +12V on the input a lock up signal is sent, if the voltage is removed an open up signal is sent.

4 - TELEMETRY 1 input

When activated with a positive voltage, TELEMETRY 1 will be transmitted to the base station. This input has priority 2 and will send 3 transmissions.

5 - TELEMETRY 2 input

When activated with a positive voltage, TELEMETRY 2 will be transmitted to the base station. This input has priority 2 and will send 3 transmissions.

6 - TELEMETRY 3 (CID1) input

When activated with a positive voltage, TELEMETRY 3 will be transmitted to the base station. This input has priority 2 and will send 3 transmissions.
If defined as a DATA input CID1 then follow programming under DATA CONNECTION header.

7 - TELEMETRY 4 (CID2) input

When activated with a positive voltage, TELEMETRY 4 will be transmitted to the base station. This input has priority 2 and will send 3 transmissions.
If defined as a DATA input CID2 then follow programming under DATA CONNECTION header.

8 - MAINS FAIL / RESTORE input

The input is wired directly from one leg of the **16 Volt AC** alarm transformer or a programmable DC alarm panel output.

This input requires a latched voltage to report the input status.

With +12V on the input a mains restore signal is sent if the voltage is removed a mains fail signal is sent.

The time delay for the input as mains fail / mains restore is programmed by the Keypad programmer. The delay time may be set from 1 to 249 minutes.

Programming the delay to 250 minutes will enable the AC Fail auto repeat feature. The AC Fail signal will be repeated randomly between 5 and 90 minutes during an AC failure.

Startup signal.

A startup signal is sent on power up to inform the control room if a new transmitter is being installed or if a system was powered down.

Auto test period.

Auto test period may be set from 1 to 250 hours. The signal sent will report the lock / open input status.

DATA CONNECTION

DATA CID connection is done from the alarm panel Ring & Tip to input 6 and 7. The RED LED behind input 7 is ON when the communicator has connected to the T9. The green status LED will flash OFF every time a data digit is communicated.

The following communicator programming is needed on the alarm panel:

Onboard communicator	: Enabled
Phone number	: 55
Protocol	: Contact ID
DTMF Dialling	: Enabled
Blind Dialling	: Enabled
Account number	: 4 digit account number - <i>never use 0000</i>

Only enable the reporting events needed and disable zone restorals to increase the reporting speed of active events.

SERIAL PORT

To enable the Serial Port, enter *Input Polarity programming (1)*:

6	= ON -Serial port Disabled	OFF -Serial port Enabled
7	= ON - Arm reporting Disabled	OFF - Arm reporting Enabled

To select Alarm Manufacturer Port Protocol and CID report level enter *Input 2 Delay programming(2)*:

Enter prefix 00 = Limited CID or 01 = Full CID reporting.

Enter last digit for Manufacturer select : 0 = IDS
1 = Paradox
2 = Texecom
3 =

*NOTE: Only use the correct serial cable supplied by Fox Electronics.
Panel compatibility may change with future software updates.*

Battery low / restore.

Battery low is reported at 11.5V and battery restore at 12.6V. A delay of 60 seconds is set to determine accurate voltage reporting.

TX shutdown .

If the voltage on the transmitter drops to 9.5V the transmitter will shut down and wait for the voltage to go above 9.6V before continuing operation. The LED will stop flashing and stay off.

TX over voltage.

If the voltage on the transmitter reaches 15.5V the transmitter will report an ERROR message. The LED will stop flashing and stay on until the voltage drops below 15V when it will flash normally.

TX transmission indication.

In standby mode the LED will flash on only for a ¼ of a second. If the mains has failed then the LED will flash on for ½ a second. During a transmission the LED will flash on for ¾ of a second.

Signals are sent in priority order with emergency being the highest, followed by alarm then telemetry 1 to 5 then lock open and mains fail restore.

All transmissions are staggered between 10 and 40 seconds changing the time randomly for every transmission.

The Engineer test signal allows the technician to test without interrupting the control room staff by sending repeated panic or alarm activation's.

Signal transmission time is only 100 ms with low standby current of only 10 mA.

DISCLAIMER

The user (The Company) monitoring and installing the equipment indemnifies Fox Electronics (Pty) Ltd from any claims whatsoever, whether it relates to equipment failure or failure to transmit or receive radio frequency signals. Fox Electronics (Pty) Ltd advises that only trained qualified technicians should install the equipment. Training on the equipment and network systems are provided for free at the offices of Fox Electronics (Pty) Ltd. It is recommended that technicians test all connected triggers to ensure that they are reporting to the control room with the correct description. Programmable system auto tests provided should be monitored. The failure to receive the test should be investigated and rectified.

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