

TX 6000

Installation

INSTRUCTIONS

INSTALLATION INFORMATION

TX KEY

When pressed and released the transmitter will send an Engineer test at reduced efficiency. If this signal is received, it will ensure that all normal signals from the transmitter will be received with a reliable safety margin.

1. EMERGENCY input

This input is programmable as follows :

[Positive trip] The input is activated by applying voltage.

[Negative trip] The input is activated by removing voltage.

2. ALARM input

This input is programmable as follows :

[Positive trip] The input is activated by applying voltage.

[Negative trip] The input is activated by removing voltage.

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 5 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 information and operates as follows when programmed as:

[Positive trip] lock up signal is sent if voltage is applied.
open up signal is sent if voltage is removed.

[Negative trip] open up signal is sent if voltage is applied.
lock up signal is sent if voltage is removed.

4. TELEMETRY 1 or MAINS FAIL / RESTORE input

The input may be programmed to be Telemetry 1 or Mains fail / mains restore.

Programmed as TELEMETRY 1 (DEFAULT)

This input is programmable as follows:

[Positive trip] The input is activated by applying voltage.

[Negative trip] The input is activated by removing voltage.

Programmed as MAINS FAIL / RESTORE

The input is wired directly from one leg of the 16 Volt AC alarm transformer or a 12 volt DC alarm panel output.

This input requires a latched voltage to report the input Information and operates as follows when programmed as:

[Positive trip] mains restore signal is sent if voltage is applied.
mains fail signal is sent if voltage is removed.

[Negative trip] mains fail signal is sent if voltage is applied.
mains restore signal is sent if voltage is removed.

The delay time for the input as mains fail / mains restore is programmed by the Keypad programmer. The delay time may be set from 1 to 250 minutes. If the delay time is set to [0] then the input will operate as TELEMETRY 1.

NOTE : Any input programmed for **negative trip**, must have a **pull-up resistor** connected from the input to 12 volt positive.
The value of this resistor must be between 1K ohm to 10 K ohm.

Auto test time

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

Battery low / restore delay.

Battery low / restore delay may be set from 1 to 250 seconds.

HELPFUL INSTALLATION HINTS

12 Volt power connections

- During transmission the transmitter draws up to 3 ampere from the battery. Using thin wire between the battery and the transmitter will restrict the RF power on transmission and prevent it from working reliably.
- Always use a minimum of 0.5 stranded wire for the 12 Volt input.
- Four core wire is definitely NOT recommended.
- Maximum recommended wire length for a high power transmitter is 6 meters, and for a low power transmitter, the maximum length is 12 meters.
- Remember, for maximum performance, always use the thickest possible wire, and keep it as short as possible.

Antenna installation

- The antenna must be mounted vertically .
- The antenna must not be mounted less than 2 meters from any large metal object .
- The transmitter generates a very strong RF field around the antenna. This RF field can effect other electronic equipment, such as computers, television sets, music systems, and alarm equipment, especially passives.
- Always mount your antenna far from other electronic equipment.
- When mounting an antenna against a wall, always check for metal objects or other electronic equipment, on the other side of the wall .
- NOTE : When connecting a Black Max to the internal RF connector, ensure that none of the braided screen wires are shorting to the center connection terminal.
- To test your installation, first select low power by removing the power jumper. Then press the TX KEY button. This will ensure a reliable safety margin when normal signals are sent.

Remember to replace the jumper to the high power setting.

INPUT DEFINITIONS

TX 6000T	
1	Emergency
2	Alarm
3	Lock / open
4	Telemetry 1 or mains fail / mains restore

TX 6600T	
5	Telemetry 2
6	Telemetry 3

DEFAULT SETTINGS

All inputs	Positive trip
Input 4	Telemetry 1
Alarm input delay	Disabled
Auto test	Disabled
Mains fail / restore	Disabled
Battery low / restore	Disabled

All features are programmable with the RadioNet Monitoring keypad programmer.

Read the TX 6000T programmer manual on the reverse side for programming instructions.

RF POWER SELECTION ON TX 6000

Jumper	ON	High power
Jumper	OFF	Low power

FEATURES

- Transmitter features are programmable with a portable handheld programmer.
- Four programmable inputs.
- All inputs may be individually programmed to trip by applying voltage (positive trip) or removing it (negative trip), to simplify connections to control panels.
- Programmable ALARM input delay to allow bell annunciation.
- Battery low and restore reporting with programmable delay.
- Programmable mains fail / restore input delay, that may be wired from 12 volt DC or 16 volt AC.
- Input 4 programmable as Telemetry 1 or Mains fail / restore.
- Prioritized inputs with "EMERGENCY" having highest priority.
- All inputs are constantly scanned and any additional inputs which may have been tripped, are memorized and transmitted in order of priority after present transmission is completed.
- 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 to 250 hour testing with LOCK and OPEN status reporting.
- All programmable data stored on non-volatile onboard EEprom.
- Technician test signal which transmits at reduced efficiency to prevent marginal signal problems.
- High reliability surface mount component technology.
- Improved lighting protection.
- Transmission time only 270 mS.
- Standby current 10 mA.
- Staggered transmission times according to code number.
- Transmitter low and over voltage indication on LED.
 - Normal operation LED flashing.
 - Low voltage indication LED off.
 - Over voltage indication LED permanently on.
- High and low RF power selection.
- Clip or screw on lid with connectors and test button exposed for ease of connection.
- Multi-user facility . This allows up to 20 users to operate on the same radio frequency , and utilize the same repeater network , without interfering with each other.

TX 6000 PROGRAMMERS MANUAL

The new RadioNet Monitoring TX 6000T synthesized transmitter is fully programmable. The following features may be programmed on site using the programmer:

- Input trip polarity.
- Input definitions.
- Timers and delays.

Notes on using the programmer.

To change the programmable features the programmer must be connected to the TX 6000T programming pins, then programming can continue.

The keypad lights will indicate the programmer status to the user. They are defined as follows:

When the programmer is plugged onto the transmitter the ready light will flash. When the [.] key is pressed the Ready, Armed and System lights will flash. If the programmer does not recognize the transmitter channel information, the system light will not flash.

When programming, the keypad zone lights will indicate the digit count necessary to continue programming.

When a password is required, all four zone lights will flash.

When a 1-digit entry is required, zone 1 light will flash.

When a 2-digit entry is required, zone 2 light will flash.

When a 3-digit entry is required, zone 3 light will flash.

Please note

Due to the additional features, the input definitions are not the same as the TX-5000. They are as follows:

INPUT DEFINITIONS

Input number	Input definition
1	Panic
2	Alarm
3	Lock / open
4	Telemetry 1 or mains fail / mains restore

Setting input trip polarity.

[.] [1] Followed by the number key of the input to be changed followed by [#].

Example. To make input number 2 negative trip, and all the other inputs positive trip, press the following keys:

Press [.] [1] :

Press the [1] key until **zone one** light is on.

(Panic input is **positive** trip)

Press the [2] key until **zone two** light is off.

(Alarm input is **negative** trip)

Press the [3] key until **zone three** light is on.

(Lock / open input is **positive** trip)

Press the [4] key until **zone four** light is on.

(Telemetry 1 or mains fail input is **positive** trip)

Press the [#] key to save settings.

Remember:

If the zone light is **on**, the input will be **positive trip**. (Default)

If the zone light is **off**, the input will be **negative trip**.

Zone lights	Input represented	Function
1	1	Panic
2	2	Alarm
3	3	Lock / open
4	4	Telemetry 1 or mains fail / restore

SETTING UP TIMERS AND DELAYS

To set up the time delays we first enter [*] [2] and then the number of the delay to be set.

Setting up alarm input delay

[.] [2] [2] [Delay]

The time delay may be set from 5 to 20 seconds. To make the alarm input respond instantly, set this value to zero.

Example: To set the alarm input delay to 10 seconds, press [*] [2] [2] [010].

An easy way to remember is that [2] sets alarm delay, which is input number 2.

Setting auto test period

[.] [2] [3] [Period]

Note: This function is sometimes called self-test or 24 hour test.

The auto test period may be set from 1 to 250 hours. Setting the time period to zero disables the auto-test function.

Example: To set the auto test period to 24 hours, press [.] [2] [3] [024].

Setting mains fail / mains restore delay or telemetry-1 input

[.] [2] [4] [Delay]

This input is programmable as **telemetry-1** or as **mains fail / mains restore**.

To program this input as **Telemetry-1**, set this value to 0.

To program this input as **mains fail / mains restore**, set this value between 1 to 250 minutes.

Example: To set the mains fail input delay to 90 minutes, press the following keys:
Press [.] [2] [4] [090].

Example: To set the number 4 input to telemetry-1 input, press [.] [2] [4] [000].

An easy way to remember is that [4] sets mains fail delay, which is input number 4.

Setting battery low / battery restore delay

[.] [2] [5] [Delay]

The time delay may be set from 1 to 250 seconds. Setting this delay to zero disables the battery low and battery restore function.

Example: To set the low battery delay to 250 seconds, press [*] [2] [5] [250].

Setting factory defaults

[.] [5]

This sets the transmitter to work with the following defaults:

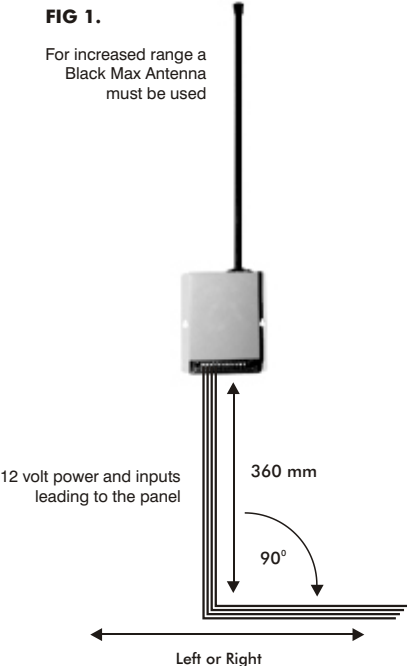
Functions and features	Value	Default
All inputs	Zone light on	Positive trip
Input 4	0	Telemetry 1
Alarm input delay	0	Disabled
Auto test delay	0	Disabled
Mains fail/mains restore reporting	0	Disabled
Battery low/battery restore reporting	0	Disabled

INTERNAL RF CONNECTION INSTRUCTIONS

The TX 6000T is supplied with an internal tamper proof antenna. The antenna is already mounted and wrapped 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).
- 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 to proceed to the alarm panel. See fig. 1.
- 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 OR LENGTHEN THE ANTENNA.



The internal connector is also designed to connect to the Black Max antenna with RG 58 cable. Following are the installation instructions for this antenna.

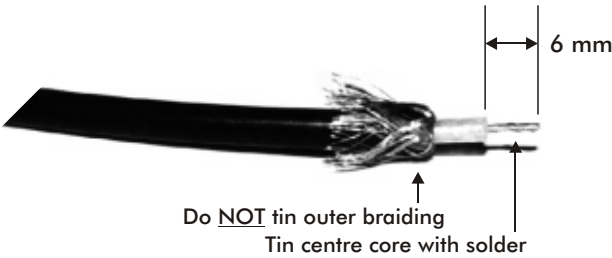
- Measure 12 mm from the end and cut the black outer insulation, exposing the braiding under it.



- Fold the braiding back over the Black insulation.



- Measure 6 mm from the end and cut off the white insulation to expose the braided core.



- Slide the cable through the grommet hole in the transmitter chassis, into the connection and tighten the screws firmly.

