

TD-600/SAT-6

Universal Standalone Radio Communicator



Installation Guide

PIMA
FOR BETTER PROTECTION
PIMA Electronic Systems Ltd.

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Signs in this guide



Warning



Note

Default Codes

Master: 5555

Installer: 1234

Preface

This guide will help you through the installation and configuration of the TD-600/SAT-6, a PIMA universal standalone radio communicator, designed to allow any alarm system to relay transmissions to the CMS (Central Monitoring Station), via our long range VHF/UHF radio transmitters (TRV/TRU-100).

The TD-600/SAT-6 can be programmed via a PIMA LCD keypad and the COMAX software.

The TD-600/SAT-6 is supplied in a special enclosure, with a transformer and a tamper switch.

Features

- The control panel is based on PIMA's Captain 6 system, with 6 dry contact inputs.
- Support in two radio frequencies
- Support in two ID accounts.
- Integrated PSTN dialer.
- Quick transmit time saves air time and reduces the chance for jamming.
- Support in PAF/NPAF protocols, as well as other protocols.
- Secured connection against cut and short.
- Programming via any PIMA LCD keypad and the COMAX program.

Safety instructions

- Make sure the SAT-6 is not connected to power (AC & DC) before installation.
- Do not mount the TD-600 near a metal wall or ceiling.
- Make sure the radio antenna is not mounted in parallel or too near the detectors' wires.
- Mount the antenna only after installing the radio transmitter.
- Make sure the antenna is vertically mounted.
- Before performing transmission tests, close the enclosure.

Tech specifications

AC power	14VAC/2A
TRV/TRU-100	10mA/1A
Battery	Lead-acid, 12VDC, up to 7.5A/h
Temperature (Celsius)	-10° to +50°
Humidity	75% (non-condensed)

The SAT-6 module

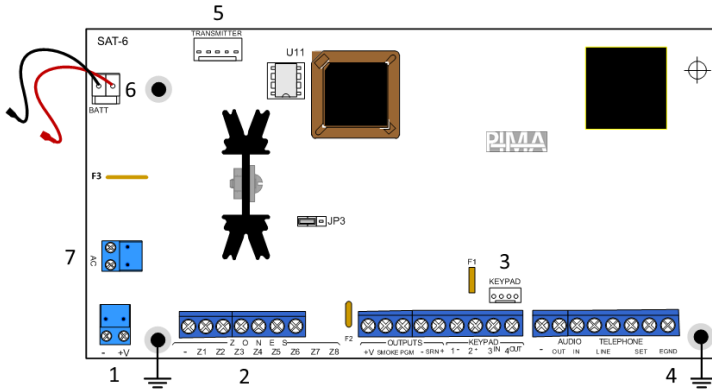


Figure 1. The SAT-6 diagram

No.	Terminal/ Connector	Description
1	(+)/(-)	Power supply for PIR/ultrasonic/etc., detectors
2	Z1-Z6	6 inputs for dry contact detectors & (-) terminal
3	KEYPAD	A Molex connector for quick connection of the technician keypad
4	EGND	<ul style="list-style-type: none"> • Earth Ground terminal. Can be used in areas of severe electrical activity (abnormal levels of lightning or electrical discharge). • When using PIMA's integrated transformer, earth ground is not required. Only when using external transformer and lightning conditions are severe, the EGND terminal can be used. • Connect the terminal to earth grounds, such as metal cold water pipe or AC power outlet ground
5	Transmitter	A connector to the TRV/TRU-100 long range radio transmitters and the GSM-200 cellular module
6	Backup Battery wires	<ul style="list-style-type: none"> • Red: (+) • Black : (-)
7	AC	<ul style="list-style-type: none"> • 14-16 VAC Voltage input • The cross-section area of the AC cable must be at least 0.75mm²

Installation



Make sure the TD-600 is not connected to AC and battery power.

Mounting guidelines

Follow the next guidelines before mounting the TD-600 box:

- Do not mount the box close to metal wall or ceiling.
- Do not pass the zone wires next to the antenna.
- Install the antenna only after installing the box.
- Make sure the antenna is vertically mounted.
- Before performing transmission tests, close the box.

Mounting the box

To mount the box, follow the next steps:

1. Use the next diagram to make 2 holes to hang the box.
2. For plaster wall, use 2 matching anchors and screws (not supplied).
3. For wood wall, use 2 matching screws (not supplied).
4. For brick wall, drill two holes, insert anchors and fasten screws (not supplied).

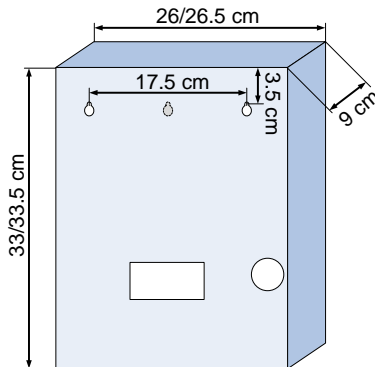


Figure 2. The TD-600, back view

Battery jump-start

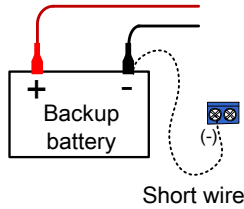
During AC power loss, if the battery's voltage drops below 10.5V, it is disconnected to prevent full battery discharge. This feature extends the battery life cycle.

Because of this, the control panel cannot be powered up using only the battery, and must be connected to AC voltage first.

When AC voltage is not available, you can power up the panel by following the next steps:

- a) Connect the SAT-6 to the Battery.

- b) Briefly short the Battery's (-) terminal to the control panel's (-) terminal. See the diagram.
- c) The control panel will now power up.



Connecting to power



- **AC voltage must be supplied from a transformer (2A/16VAC). Do not connect the SAT-6 to direct power source!**
- **The system should be connected to an automatic circuit breaker.**
- **If earth grounding is required, connect it to the EGND terminal on the PCB.**

Connect the AC and battery wires using the next instructions and diagram:

1. Connect the AC input wires to the connection block in the box. Note the red marks.
2. Check continuity between the SAT-6 grounding holes and real ground. The resistance must be less than 1Ω.
3. Connect the transformer's wires to the AV terminal on the SAT-6.
4. Place a battery (not supplied) in the box and connect it to the SAT-6 with the supplied wires.



Make sure to connect the battery by its proper polarity.

5. Close the box. If you secure it with a screw, make sure it doesn't touch the battery.

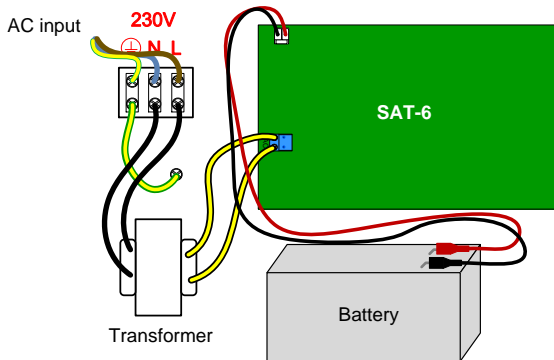


Figure 3. AC and battery wiring diagram



- The cross-section area of the AC wires must be at least 0.75mm² (18 AWG).
- The wires must be tied together with a cable tie. The flammability of the cable tie must be UL 94 V-2 or better.
- The cable hole on the box should have a grommet or bushing.

Initializing and setting the time

To program the TD-600, you will need a PIMA technician keypad or LCD keypad, such as the RXN-400, and a special 4-wire cable with Molex connector (P/N 3411007).

Connect the keypad to the KEYPAD terminal on the SAT-6¹. See Figure 1 on page 4. Upon connecting the TD-600 to power, a long tone is sounding and the red Fault LED is blinking, followed by the next screen series:

```
Keypad Ver. 1.15   .... Starting   .... Clock   00:00
Keypad ID:0       Please wait...
```

Accurate system time is essential for the routine operation of the TD-600. To set the time, follow the next sequence:

```

┌ Master code (default: 5555) ──┐ ┌ CLOCK ──┐ ┌ HOUR ──┐
└────────────────────────────────┘ └── 8 ───┘ └── 0 : 0 ─┘
┌────────────────────────────────┘ ┌ current time (HH:MM)
└────────────────────────────────┘
┌ ENTR ──┐ ┌ YEAR MONTH DAY ──┐ ┌ current date (YY:MM:DD) ──┐ ┌ ENTR ──┐ ┌ END ──┐
└── 16 ──┘ └── 1 1 ───────────┘ └──────────────────────────┘ └──  ───┘ └──  ───┘

```

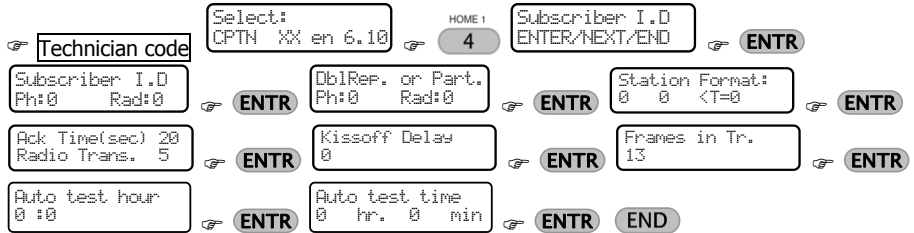
To correct data, SERVICE **NEXT** / TEST **BACK**.

¹ If you use the RXN-400/410/800 keypads, you will need to open the back cover to access the PCB.

Programming the SAT-6

Because the SAT-6 is based on Captain 6 PCB, you can find the complete programming instructions in the Captain 6 installation guide. Here we detailed several parameters which relate to the radio transmitter of the TD-600.

The next diagram describes the CMS parameters menu and is followed by details.



Radio subscriber ID

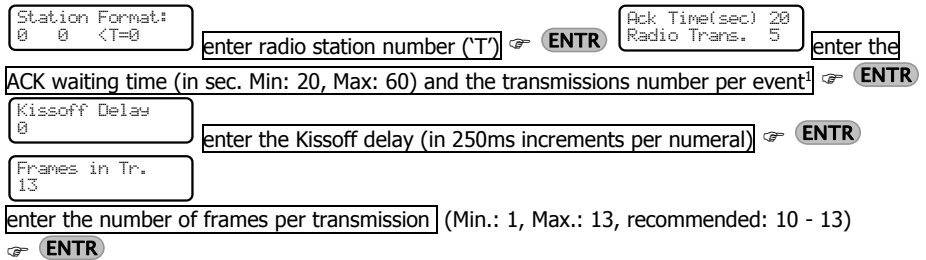


The ID can have up to 4 digits. The largest allowed number on PIMA formats is 8000.



If the I.D. is set to zero, no subscriber number is programmed.

Central Monitoring Station format



¹ The delay between the transmissions is 10 sec. and is not programmable.

Auto test

Auto test hour
0 : 0

enter the time of the day in HH:MM format, for sending test reports

ENTR

Auto test time
0 hr. 0 min

enter an interval for the test reports in HH:MM format (in addition to the time of the day)

ENTR

Report codes

Select: CPTN XX en 6.10

ZONE 5

Report codes <P> ENTER/NEXT/END

SERVICE NEXT

Technician code

Report codes <R> ENTER/NEXT/END

ENTR

Report codes <R> Z 1:FF Z 2:FF

ENTR

Report codes <R> RS1:FF RS2:FF

ENTR

Report codes <R> Zone Fail: FF

ENTR

Report codes <R> AC:FF RESTR:FF

ENTR

Report codes <R> LB:FF RESTR:FF

ENTR

Report codes <R> LB:FF RESTR:FF

ENTR

Report codes <R> PF:FF RESTR:FF

ENTR

Report codes <R> PH:FF RESTR:FF

ENTR

Report codes <R> TST:FF PNC:FF

ENTR

Report codes <R> FUS:FF RESTR:FF

ENTR

Report codes <R> ONG:FF OFG:FF

ENTR

Report codes <R> ON1:FF OF1:FF

ENTR

Report codes <R> BPS:FF RSR:FF

ENTR

Report codes <R> ENTER/NEXT/END

ENTR

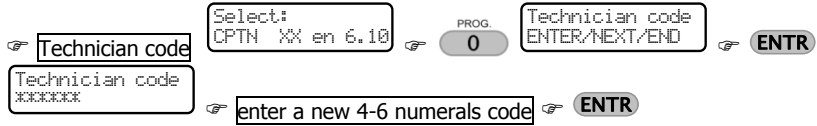
The default "FF" codes can be used with the following formats: ContactID, PAF, and NPAF. All other formats require specific other than "FF" codes.

The codes are hexadecimal: 0 - 15 and A-F (press ^{CHIME} * repeatedly to enter a character).

The default codes are listed in the following table:

Code	Event
Z1, Z2... Z6	Alarm in zones 1-6.
RS1, RS2... RS6	Restore codes for zones 1-6.
Zone Fail	Zone fail
AC/RESTR	AC fault/Restore
LB/RESTR	Low battery/Restore
PF/RESTR	Low PCB voltage (less than 9V)/Restore. Check the battery!
PH/RESTR	Telephone fault/Restore
TST	Test report
PNC	Panic code
FUS/RESTR	Zone voltage fault/Restore
ONG/OFG	Arm/disarm using a code other than a user code
ON1-8/OFF1-8	Arm/disarm using user codes 1-8
BPS/RST	Zone bypassed/Restore

Changing the Technician code



If the code is lost, disconnect the SAT-6 from any power for 10 seconds and re-connect it. Wait for the 'Clock not set' message to appear. You now have a 30 seconds window to enter the default codes (Master - 5555, Technician - 1234).

If the lost code begins with zero, it cannot be defaulted and you should contact your vendor.

Limited Warranty

PIMA Electronic Systems Ltd. does not represent that its product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. The User understands that a properly installed and maintained equipment may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

Read this manual in its entirety before attempting to program or operate your system. Should you misunderstand any part of this manual, please contact the supplier or installer of this system.

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Version: A, XX en, Dec 2015