TS0825E Wireless Data Gathering Panel Installation & Programming Guide

P/N MAINST-TS0825E • REV 5.1 • 10JAN25

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N4131

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Contents

Preface

This is the TS0825E Installation & Programming Guide. This document includes an overview of the product and detailed instructions explaining:

- how to install a TS0825E
- how to program the required options.

Note: A qualified service person, complying with all applicable codes, should perform all required hardware installation.

Conventions used in this document

The following conventions are used in this document:

Bold	Menu items and buttons.
Italic	Emphasis of an instruction or point; special terms.
	File names, path names, windows, panes, tabs, fields, variables, and other GUI elements.
	Titles of books and various documents.
Blue italic	(Electronic version.) Hyperlinks to cross-references, related topics, and URL addresses.
`Monospace`	Text that displays on the computer screen.
	Programming or coding sequences.

Safety terms and symbols

These terms may appear in this manual:

CAUTION: *Cautions* identify conditions or practices that may result in damage to the equipment or other property.

WARNING: *Warnings* identify conditions or practices that could result in equipment damage or serious personal injury.

Chapter 1 Installing the TS0825E

This chapter provides an overview of your TS0825E WDGP and the steps you need to perform before you begin installing, configuring, and using your TS0825E.

In this chapter:

Product overview

The TS0825E Wireless Data Gathering Panel (WDGP) is a special purpose DGP integrated with an Inovonics high performance EchoStream® wireless receiver. The TS0825E WDGP and antenna are contained within an IP55 plastic enclosure.

Note: The TS0825E is a wireless receiver only. It is not a transmitter.

The TS0825E receives signals from the Inovonics range of EchoStream ES12xx Transmitters, providing up to 32 virtual inputs and 1024 duress inputs. The TS0825E has a built-in programmer for registering ES12xx transmitters into the TS0825E database. The operating frequency is 915 to 928 MHz.

The TS0825E WDGP may be installed up to 1.5 km from the Challenger panel (greater if LAN Isolation Interfaces are used to extend the distance) to provide cable-free installation of devices such as PIRs, smoke detectors, wide gap and universal transmitters, single and multi-button pendants and glass break detectors. The TS0825E is used to expand the Challenger by up to 16 or 32 inputs. See *Menu option 6—16/32 Inputs* on page 26 for details regarding changing the number of inputs.

Note: The range and performance of any wireless product depends on the structure and environment in which it operates.

The TS0825E differs from the TS0825 in the following aspects:

- The TS0825E will not respond to the FA400 transmitters used with the TS0825.
- Each EchoStream transmitter ID is registered into a database held in the TS0825E WDGP (in the TS0825, the unique ID is programmed to the FA400 transmitters and not the WDGP).
- The TS0825E does not require a programming cable to connect transmitters to WDGP for programming.

As a result of these differences, the installation and programming instructions for the TS0825 cannot be used for the TS0825E.

Figure 1. TS0825E external and internal features (see also Figure 2 on page 9)

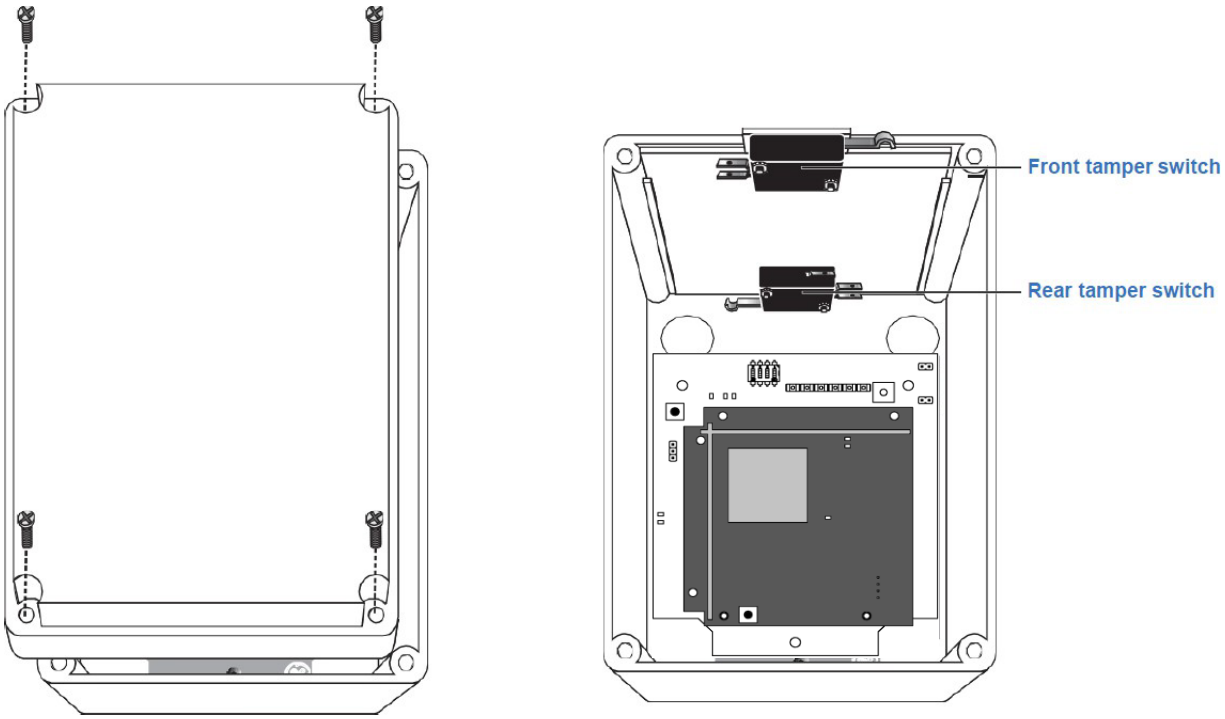
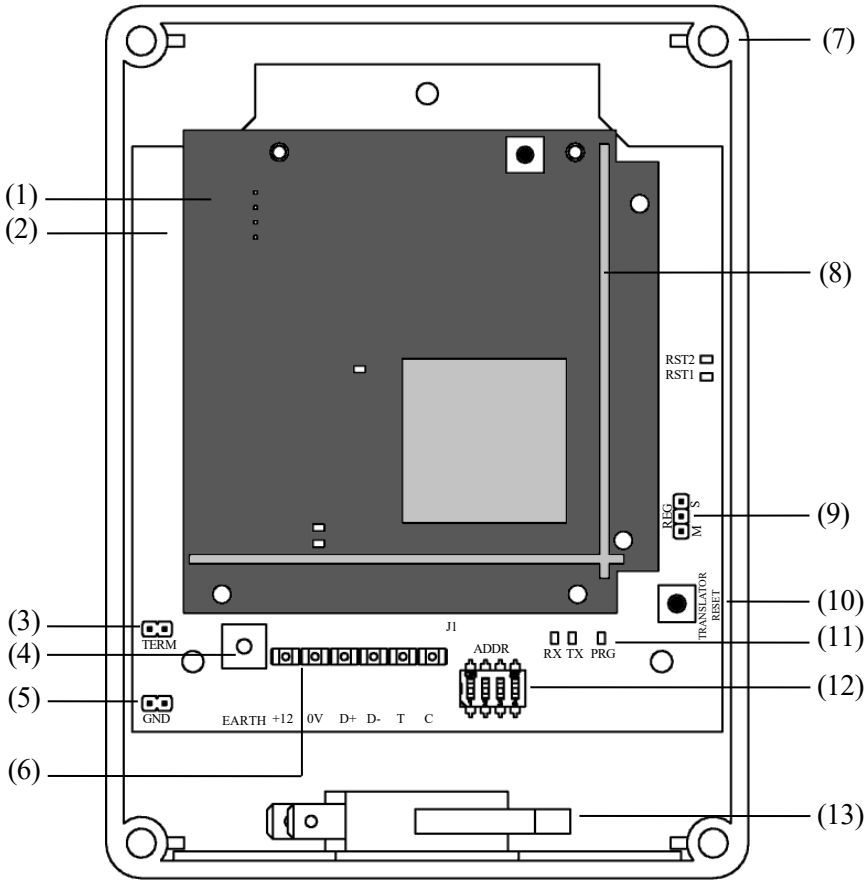


Figure 2. TS0825E features of interest to installers



(1) Inovonics receiver mod

(2) WDGP module

(3) TERM link. See *LAN termination* on page 15.

(4) Earth terminal. Connection to earth is not typically required for this unit.

(5) GND (Ground) link must be removed (not fitted)

(6) J1 terminals for power, LAN, and tamper connections.

(7) IP55 enclosure

(8) Antenna

(9) Reset option links. See *Configuring the reset/ programming option* on page 14.

(10) Translator reset button. See *Configuring the reset/ programming option* on page 14.

(11) Communication, programming and reset LEDs. See *LED indications* on page 14.

(12) DIP switches. See *DIP switches* on page 11.

(13) Front tamper switch (rear tamper switch not shown).

Before you begin

Product contents

The TS0825E system consists of the following:

- 1 x TS0825E Wireless DGP in an IP55 plastic enclosure
- 1 x Installation and Programming guide
- 2 x 3-way plug-on screw terminals
- 4 x jumper links
- 4 x lid screws
- 4 x IP55 mounting screw caps
- 3 x 20 mm conduit adaptor
- 3 x adaptor locking ring

Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If you need to return the unit, you must ship it in the original box.

Installing the TS0825E

General installation guidelines

- As this is a radio-receiving device, all considerations given to locating a receiving antenna should be observed in order to obtain maximum effectiveness. The location of the TS0825E will be dependant on the coverage required and the type of building construction. A building of high metal content for example, may give a reduced coverage; therefore additional WDGPs or repeaters may be necessary to cover the total area.
- A general recommendation is to locate the TS0825E central to all transmitters. Orientation of the antenna may have an effect of the most distant transmitters.
- The Inovonics EN5000 Intelligent Repeater may be used to solve range or reception problems.
- Ensure that the TS0825E enclosure is mounted on a solid, flat non-metallic surface remotefrom large metal objects.
- More detailed information regarding the availability and location of receivers, transmitters, and repeaters is available through Direct Alarm Supplies.

Cover

The cover may be removed by removing the four corner screws.

Note: When removing the cover after the system is installed, be aware that tamper alarms may be fitted to detect cover removal.

Mounting

The unit is mounted via screws through the four holes provided in the base. The IP55 rating can be maintained only if the four plastic plugs are installed over the mounting screw heads. Proper cable gland entries must be used to maintain the IP55 rating.

Power, data, & tamper connections

Use the J1 terminals (7 in *Figure 2* on page 9) as follows:

+12 Positive connection to the LAN 12 volt supply or external power supply.

0V Negative connection to the LAN 12 volt supply or external power supply.

D+ RS-485 data positive connection.

D– RS-485 data negative connection.

T Input connection for the panel tamper switches.

C Common connection for the panel tamper switches.

Power connections (+12 and 0V)

Maximum current drawn by the TS0825E is 90mA @ 13.8 VDC.

Note: Use a separate power supply if the WDGP is located more than 100 meters from the Challenger panel.

RS-485 LAN connections

The length of the LAN cable run should not exceed 1.5 km, unless LAN Isolation Interfaces are used to extend the distance.

Tamper connections (T and C)

Short circuit for seal or open circuit for unseal. Must be sealed if front and rear tamper switches are not used. The tamper switches may only be used with closed contacts, when the enclosure is sealed.

DIP switches

Use DIP switches 1 to 4 (13 in *Figure 2* on page 9) to assign a DGP address. The DGP address determines the input number range (subject to *Menu option 6—16/32 Inputs* on page 26), and relay number range. The first relay number may be used to enable or disable supervision (see *Menu option 11—Supervision Options* on page 28). Set the DIP switches according to the type of Challenger panel, as follows:

- If connected to a Challenger V8 LAN, addresses in the range 1 to 15 may be used. See *Table 1* on page 11.
- If connected to a Challenger10 LAN, addresses in the range 1 to 15 may be used on LAN 1, and 1 to 16 may be used on LAN 2. See *Table 2* on page 12.

Note: Changing the address DIP switches will clear all TS0825E inputs to the Open state, and set the number of inputs to 16.

Table 1. Address DIP switch settings when used with Challenger V8

Address	SW1	SW2	SW3	SW4	Input number range	Relay number range
DGP 1	I	O	O	O	17 to 32 (or 48*)	17 to 32
DGP 2	O	I	O	O	33 to 48 (or 64*)	33 to 48
DGP 3	I	I	O	O	49 to 64 (or 80*)	49 to 64
DGP 4	O	O	I	O	65 to 80 (or 96*)	65 to 80
DGP 5	I	O	I	O	81 to 96 (or 112*)	81 to 96
DGP 6	O	I	I	O	97 to 112 (or 128*)	97 to 112

Table 1. Address DIP switch settings when used with Challenger V8

Address	SW1	SW2	SW3	SW4	Input number range	Relay number range
DGP 7	I	I	I	O	113 to 128 (or 144*)	113 to 128
DGP 8	O	O	O	I	129 to 144 (or 160*)	129 to 144
DGP 9	I	O	O	I	145 to 160 (or 176*)	145 to 160
DGP 10	O	I	O	I	161 to 176 (or 192*)	161 to 176
DGP 11	I	I	O	I	177 to 192 (or 208*)	177 to 192
DGP 12	O	O	I	I	193 to 208 (or 224*)	193 to 208
DGP 13	I	O	I	I	209 to 224 (or 240*)	209 to 224
DGP 14	O	I	I	I	225 to 240 (or 256*)	225 to 240
DGP 15	I	I	I	I	241 to 256	241 to 255 (256 is not available)
Legend: I = ON, O = OFF						

* A DGP address with more than 16 zone inputs makes the next DGP address unusable.

For LAN 1 the DGP is polled by the same number as the address DIP switch settings. For LAN 2 the DGP is polled starting from 17 (the first DGP on LAN 2 is configured as DGP 1, but must be polled as DGP 17). *Table 2* indicates both the DGP address and polling number for both LANs.

Table 2. Address DIP switch settings when used with Challenger10

LAN	Address	Polled as	SW1	SW2	SW3	SW4	Input number range	Relay number range
LAN 1	DGP 1	DGP 1	I	O	O	O	17 to 48	17 to 32
LAN 1	DGP 2	DGP 2	O	I	O	O	49 to 80	33 to 48
LAN 1	DGP 3	DGP 3	I	I	O	O	81 to 112	49 to 64
LAN 1	DGP 4	DGP 4	O	O	I	O	113 to 144	65 to 80
LAN 1	DGP 5	DGP 5	I	O	I	O	145 to 176	81 to 96
LAN 1	DGP 6	DGP 6	O	I	I	O	177 to 208	97 to 112
LAN 1	DGP 7	DGP 7	I	I	I	O	209 to 240	113 to 128
LAN 1	DGP 8	DGP 8	O	O	O	I	241 to 272	129 to 144
LAN 1	DGP 9	DGP 9	I	O	O	I	273 to 304	145 to 160
LAN 1	DGP 10	DGP 10	O	I	O	I	305 to 336	161 to 176
LAN 1	DGP 11	DGP 11	I	I	O	I	337 to 368	177 to 192
LAN 1	DGP 12	DGP 12	O	O	I	I	369 to 400	193 to 208
LAN 1	DGP 13	DGP 13	I	O	I	I	401 to 432	209 to 224
LAN 1	DGP 14	DGP 14	O	I	I	I	433 to 464	225 to 240
LAN 1	DGP 15	DGP 15	I	I	I	I	465 to 496	241 to 256
LAN 2	DGP 1	DGP 17	I	O	O	O	497 to 528	257 to 272
LAN 2	DGP 2	DGP 18	O	I	O	O	529 to 560	273 to 288
LAN 2	DGP 3	DGP 19	I	I	O	O	561 to 592	289 to 304

Table 2. Address DIP switch settings when used with Challenger10

LAN	Address	Polled as	SW1	SW2	SW3	SW4	Input number range	Relay number range
LAN 2	DGP 4	DGP 20	O	O	I	O	593 to 624	305 to 320
LAN 2	DGP 5	DGP 21	I	O	I	O	625 to 656	321 to 336
LAN 2	DGP 6	DGP 22	O	I	I	O	657 to 688	337 to 352
LAN 2	DGP 7	DGP 23	I	I	I	O	689 to 720	353 to 368
LAN 2	DGP 8	DGP 24	O	O	O	I	721 to 752	369 to 384
LAN 2	DGP 9	DGP 25	I	O	O	I	753 to 784	385 to 400
LAN 2	DGP 10	DGP 26	O	I	O	I	785 to 816	401 to 416
LAN 2	DGP 11	DGP 27	I	I	O	I	817 to 848	417 to 432
LAN 2	DGP 12	DGP 28	O	O	I	I	849 to 880	433 to 448
LAN 2	DGP 13	DGP 29	I	O	I	I	881 to 912	449 to 464
LAN 2	DGP 14	DGP 30	O	I	I	I	913 to 944	465 to 480
LAN 2	DGP 15	DGP 31	I	I	I	I	945 to 976	481 to 496
LAN 2	DGP 16	DGP 32	O	O	O	O	977 to 1008	497 to 512
Legend: I = ON, O = OFF								

Tamper switches

The TS0825E enclosure is fitted with a front tamper and a rear tamper switch. If tamper functionality is not used, you must connect a jumper across the T and C tamper connections at J1. If only the front tamper switch is to be used, connect the Normally Open contacts into the tamper input at J1.

Note: Drilling a hole in the enclosure for the rear tamper switch actuator is not compatible with the IP55 rating.

Perform the following steps if the rear tamper switch is required to operate:

1. Drill an 8 mm hole (minimum size) in the base of the enclosure as shown by the drilling template (*Figure 5* on page 17). The rounded end of the tamper switch arm must nest freely in the hole.
2. Install a small screw into the mounting surface on which the enclosure is to be mounted. This should protrude through the hole and be 8mm ±1mm above the enclosure mounting surface (*Figure 6* on page 17). Note that when the enclosure is mounted, the protruding screw head will hold the rear tamper switch closed.
3. If both tamper switches are to be used, connect both Normally Open contacts in series and then connect them into the tamper input at J1.

Operating frequency

The operating frequency is pre-programmed for Australia use.

Configuring the reset/programming option

The WDGP can be configured to register (program) the transmitter into the WDGP via either one press (default) or two presses of a transmitter's internal reset button.

- For single-press operation, set the REG link (10 in *Figure 2* on page 9) to 'S' and press the press the TRANSLATOR RESET button (11 in *Figure 2* on page 9). In this mode, press the transmitter's internal reset button once to register (program) the transmitter into the WDGP.
- For two-press operation, set the REG link (10 in *Figure 2* on page 9) to 'M' and press the press the TRANSLATOR RESET button (11 in *Figure 2* on page 9). In this mode, press the transmitter's internal reset button once and after two seconds, press the reset button again to register (program) the transmitter into the WDGP.

LED indications

Light emitting diodes (LEDs) (12 in *Figure 2* on page 9) are used to indicate programming and communication status, as follows:

Rx The yellow Rx LED flashing or dimly lit indicates polling data is being received on the LAN from the Challenger panel. No flashing Rx LED indicates the LAN is not connected, a LAN fault (usually cabling), or the Challenger panel is not operating.

Tx The red Tx LED flashing indicates the unit is replying to polling from the Challenger panel.

Rx LED flashing but no Tx LED flashing indicates the unit is not being polled by the Challenger panel.

PRG The green PRG LED illuminates for five seconds when the transmitter device has been programmed correctly.
See *Menu option 4—Program Device* on page 23.

RST1 The red RST1 LED flashes twice on power-up and reset. Is used for selecting programming modes.

RST2 The yellow RST2 LED Is used for programming mode.

Upon powering the WDGP, the receiver module (top PCB) will power-up independent of the WDGP communications. The two red RX and TX LEDs on the receiver will flash a few times followed by a single flash of the RST1 LED on the bottom PCB. The receiver is now ready for programming andoperation.

If the Inovonics receiver module (1 in *Figure 2* on page 9) is faulty, or not fitted correctly, then the RST 1 LED will flash continuously once per second.

LAN cabling

The cabling requirements for the RS-485 system LAN are:

- Use 2-pair twisted shielded data cable such as Belden 8723.
- Provide power to LAN devices as described in *LAN power supply* on page 14.
- Terminate the LAN as described in *LAN termination* on page 15.
- The length of the LAN cable run should not exceed 1.5 km, unless LAN Isolation Interfaces are used to extend the distance.

LAN power supply

The LAN may be used to power devices up to 100 m from the control panel (or other powered device). See 3 in *Figure 3* on page 15 for example.

Use a separate 12 V power supply when the distance is greater than 100 m, or when electrical isolation is required. Refer to the *TS0073 Power Supply Installation Guide* for details.

LAN cable shield

In each segment of the LAN cable, connect one end only of the shield to a LAN earth terminal. See *Figure 3* on page 15 for examples.

A device that does not have an earth point (such as a plastic-bodied arming station) and is not at the end of a LAN will have in and out LAN segments. Join (2 in *Figure 3* on page 15) the LAN cable shields for the in and out segments to make, in effect, one continuous shield that is connected at one end only to a LAN earth terminal.

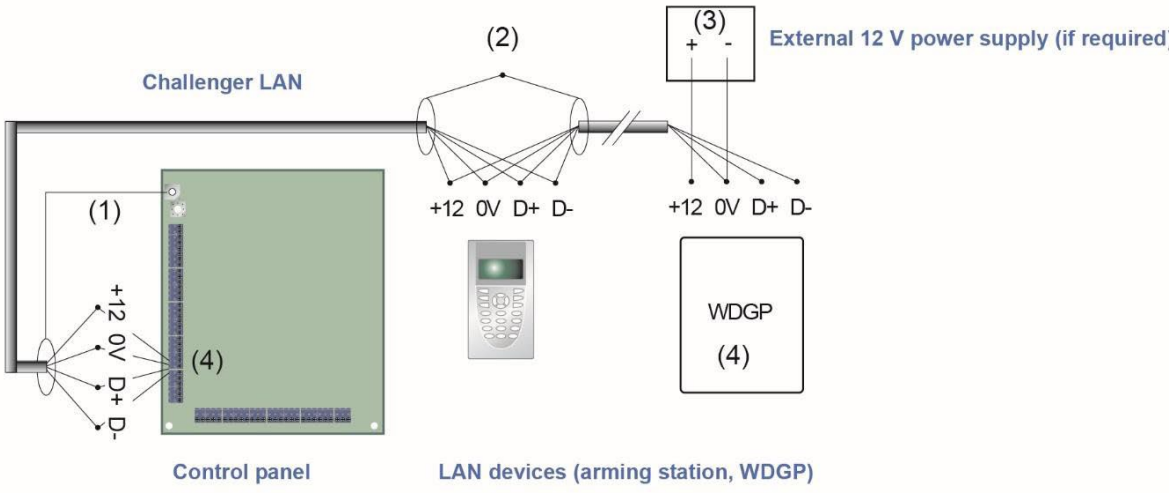
LAN termination

The WDGP has an end-of-line resistor connected via the TERM link (see *Figure 2* on page 9, item 4). Set the TERM link to **on** when termination is required.

The correct placement of LAN termination depends on whether the LAN is:

- **In a series configuration**—See *Figure 3* on page 15. There are only two ends, one of which is the control panel. Terminate the control panel and the most distantdevice.
- **In a star configuration**—See *Figure 4* on page 16. There are more than two branches of the LAN cable. Terminate the most distant devices of the two longest cable runs. A TS0844 Power Distribution Board may be used to facilitate connections. Refer to the *TS0844 Power Distribution Board Installation Guide* for details.

Figure 3. LAN connections and termination in a series configuration



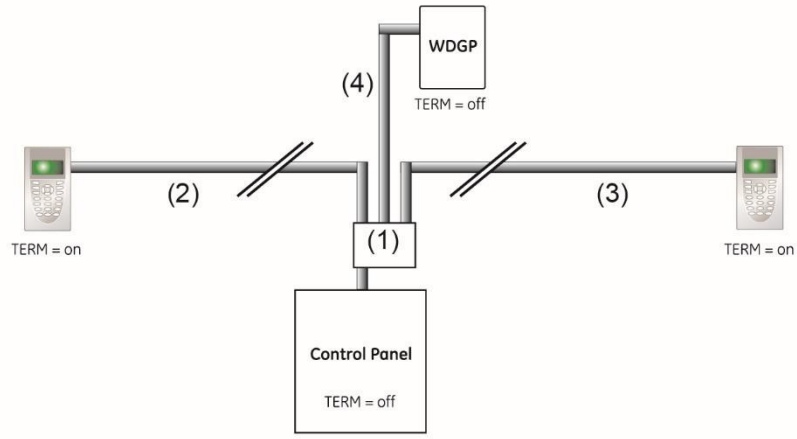
(1) LAN earth connection for data cable shield

(2) Join data cable shield where cable extends pasta device that doesn't have a LAN earth connection

(3) Use a separate 12 V power supply when the data cable length is greater than 100 m, or when electrical isolation is required.

(4) LAN termination set to "on" at the control panel and the most distant device

Figure 4. LAN termination in a star configuration



(1) TS0844 Power Distribution Board (optional) to facilitate connections

(2) Longest branch of LAN

(3) Second longest branch of LAN

(4) Shortest branch of LAN

Mounting diagrams

Figure 5. WDGP enclosure rear tamper switch drilling template

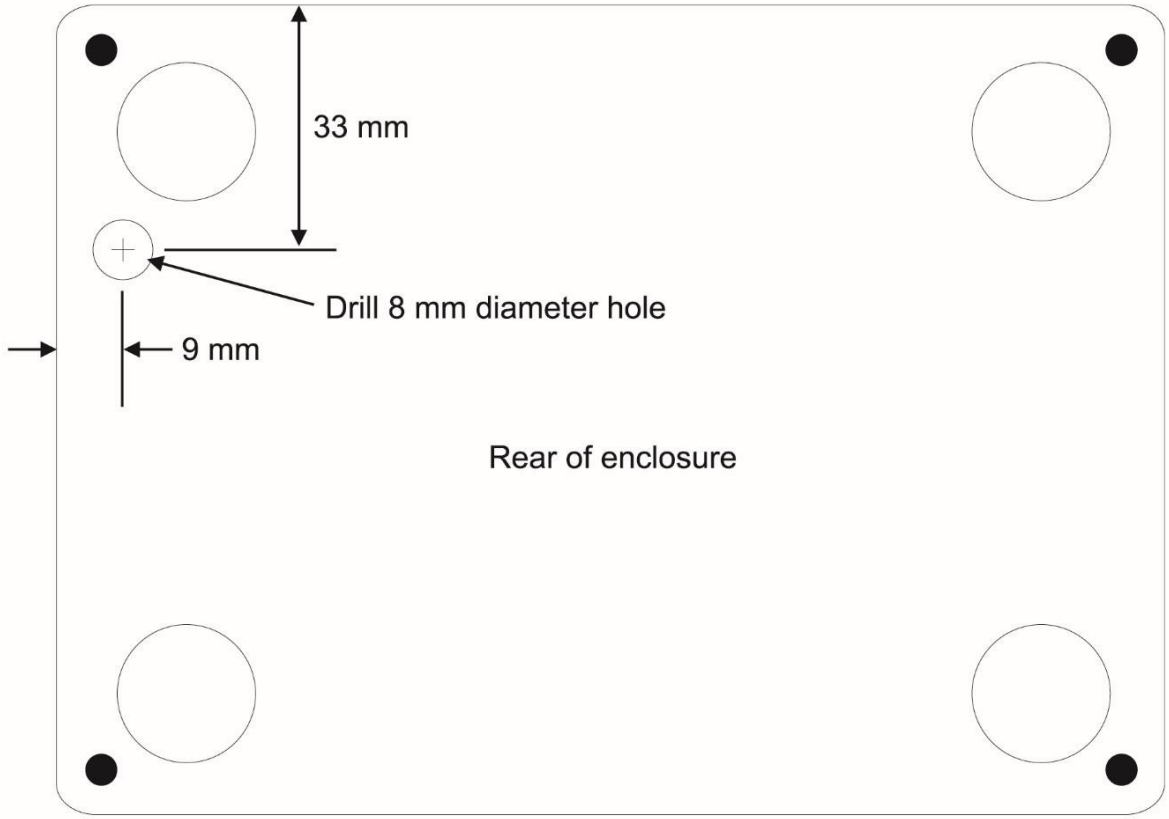
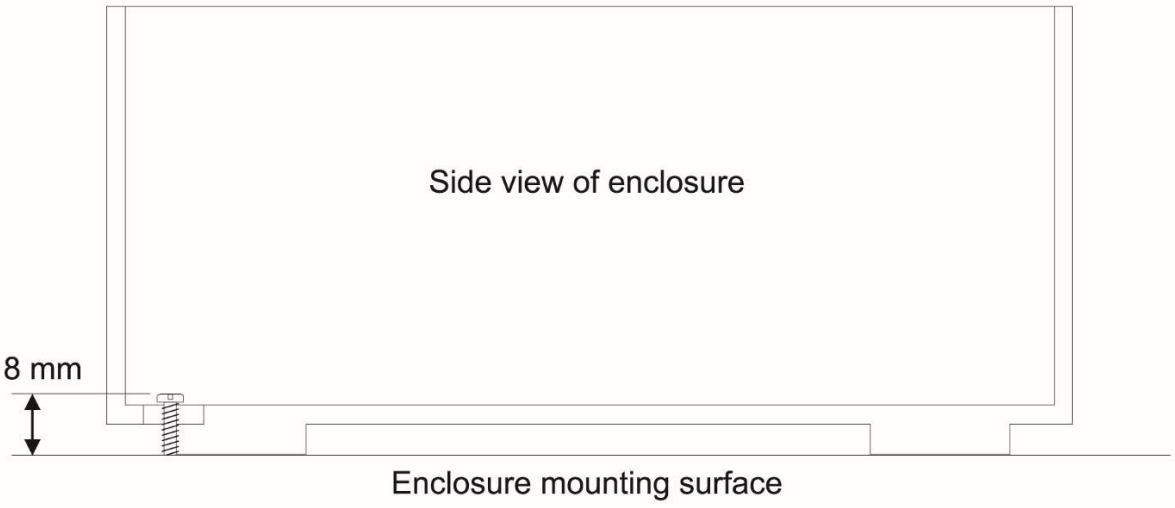


Figure 6. Rear tamper switch screw location



Chapter 2 Programming the TS0825E

In this chapter:

Programming

Programming (configuring) of the TS0825E WDGP is done via an LCD RAS on the Challenger LAN, via menu option **19-Install Menu** (unless otherwise noted) when the WDGP is powered and connected to the Challenger LAN.

Prior to programming do the following:

- Use the address DIP switches (see *DIP switches* on page 11) to set the required DGP address for the TS0825E WDGP.
- Use the 19-Install Menu option 4-DGP Database to initiate polling at the DGP address. If the WDGP is used on a Challenger10 panel's LAN 2, refer to *Table 2, Address DIP switch settings when used with Challenger10* on page 12 for the polling address.

The following sections describe the required programming tasks. Perform the tasks in the sequence listed.

All programming changes are saved to non-volatile RAM on exit from each menu selection.

Compatibility with Challenger10

The TS0825E WDGP has firmware designed for use with Challenger V8. This firmware is compatible with Challenger10, and up to 32 inputs can report via each DGP address. However, input numbers displayed on an LCD RAS are incorrect for any DGP address higher that DGP 1.

Issue

When programming a WDGP via RAS, the 16 or 32 input numbers are based on Challenger V8 numbering. This affects DGP addresses higher than 1 because of the following:

- Challenger V8 has a default value of 16 inputs per DGP address, with an option of 32 inputs (at the expense of the next higher DGP address). A WDGP at address 1 can have 32 inputs numbered 17 to 48, as long as DGP 2 is not polled. Input 49 would be on DGP 3.
- Challenger10 has a default value of 32 input numbers per DGP address. A WDGP at address 1 can have 32 inputs numbered 17 to 48. Input 49 would be on DGP 2. Refer to *Table 2, Address DIP switch settings when used with Challenger10* on page12.

Note: This issue affects only the display of input numbers via LCD RAS when programming a WDGP. The reporting of WDGP inputs to the Challenger10 panel is not affected.

Solution

If programming a WDGP at address 2 or higher, ignore the input number range displayed on the LCD RAS.

Accessing the DGP options

Use the Install Menu option 28-Remote Control to configure the TS0825E programming options described in this section. The display shows:

```
Remote Type: 1-DGP, 2-RAS
Type No: __
```

Key in 1 for DGP and press Enter. The display shows:

```
Remote DGP Setup
DGP No: __
```

Key in the WDGP address and press Enter. The display shows:

```
KGS Fire & Security,
TS0825E.Vxx 0-Exit Menu:
```

Press the Enter or Next keys to navigate the WDGP menu.

Refer to the following TS0825E programming options:

Menu option 1—Inputs Active

This option displays the fixed input number assigned to each device for which communications have been received by the WDGP.

Key in 1 for Inputs Active and press Enter. If no inputs are active the display shows:

```
No Inputs Active
#-Exit
```

Alternatively, if inputs are active, the display shows something similar to:

```
17, 18, 19, 20, 21
*-More, #-Exit
```

Press '*' (More) to view more devices or press '#' (Enter) to exit the menu option.

Menu option 2—Input Status

This option displays the status of each of the 32 WDGP fixed inputs.

Key in 2 for Input Status and press Enter. In the case of DGP 1, where 17 to 32 is the range of available input numbers, the display shows:

```
Select Input (17-32)
No: __
```

Key in the input number required and press Enter to view the status of the selected input (alternative states are indicated by '/'):

```
Contact Type / Push Button Type
*-Next, #-Exit
```

Press '*' to view the next item or press '#' to exit menu option 2:

```
Input Sealed/Unsealed
*-Next, #-Exit
```

Press '*' to view the next item or press '#' to exit menu option 2:

```
Device Battery OK/Low
*-Next, #-Exit
```

Press '*' to view the next item or press '#' to exit menu option 2:

```
Tamper Sealed/Unsealed
*-Next, #-Exit
```

Press '*' to view the next item or press '#' to exit menu option 2:

```
Supervision OK/Failed/Disabled
*-Next, #-Exit
```

Press '#' to exit menu option 2.

Menu option 3—Signal Margin

This option displays the signal margin for the last received message of each fixed input transmitter device.

Signal margin is the difference between the radio signal strength and the signal noise as seen by the WDGP receiver and is expressed in decibels(dB).

Key in 3 for Signal Margin and press Enter. In the case of DGP 1, where 17 to 32 is the range of available input numbers, the display shows:

```
Select Input (17-32)
No: __
```

Key in the input number required and press Enter to view the signal margin determined by the receiver for the last transmission of the selected input transmitter:

```
Input 25, 30dB
*-Next, #-Exit
```

As a rule of thumb, the signal margin should be 18 dB or greater. If it is below 18 dB, refer to *General installation guidelines* on page 10.

Press '*' to view the next input's signal margin or press '#' to exit menu option 3:

```
Input 26, 42dB
*-Next, #-Exit
```

Press '#' to exit menu option 3.

Menu option 4—Program Device

This option is used to program (register) fixed or duress transmitter devices into the TS0825E WDGP database. The following procedures may be used only to register EchoStream ES12xx Transmitters for the TS0825E WDGP and not for any other WDGP.

Note: This section applies only to TS0825E and not TS0825. If you need to program a TS0825, refer to the *TS0825 Programming Guide*.

Before you begin, check the setting of the REG link to see whether one press or two presses of a transmitter's internal reset button is required to reset the WDGP. See *Configuring the reset/programming option* on page 14 for details.

Key in 4 for Program Device and press Enter. The display shows:

```
1-Fixed, 2-Duress
No: __
```

Refer to the following sections for further instructions:

- *Programming a Fixed device* on page 23.
- *Programming a Duress device* on page24.

Programming a Fixed device

Key in 1 for Fixed and press Enter. The display shows:

```
Input Number XX
(xx-xx) No: __
```

Key in the input number of the device to be registered and press Enter. The display shows (alternative types are indicated by '/'):

```
Contact Type:Contact/Push Button
*-Change, 0-Skip
```

Some transmitters are fitted with contacts while others are fitted with push buttons. While the EchoStream push button devices transmit both activate and restore information, the restore information may not be as reliable as the activate information. We recommend that you select the Push Button option to cause the restore function to be performed by the WDGP.

Note: Ensure that Push Button is not selected for any non-push button device as erroneous operation may occur.

Select the required option and press Enter. The display shows:

```
Input XXX, Ready to Program
*-Change, #-Exit
```

Perform the following steps to register the device:

1. Remove the cover of the ES12xx transmitter (no cable connection between the transmitter and TS0825E is required).
2. Press the transmitter's internal reset button once or twice, as required. See *Configuring the reset/ programming option* on page 14 for details.
3. Check the green PRG LED on the TS0825E's PCB. The LED illuminates for five secondsif programming is successful. If the PRG LED does not illuminate, refer to *Troubleshooting programming* on page 25.

When a fixed device is registered, the menu automatically shows the next input number to be programmed. Perform the registration steps for the next fixed device, or press Enter to program a duress device. The display shows:

```
1-Fixed, 2-Duress
No: __
```

Programming a Duress device

Key in 2 for Duress and press Enter. The display shows:

```
User Number: XXXXX
(0-1024) No:__
```

Key in a user number in the range 0 to 1024 and press Enter. Press Enter again to proceed to the next menu item. The display shows:

```
User Number 1 Ready to Program
*-Change, #-Exit
```

Perform the following steps to register the device:

1. Remove the cover of the ES12xx transmitter (no cable connection between the transmitter and TS0825E is required).
2. Press the transmitter's internal reset button once or twice,as required. See *Configuring the reset/ programming option* on page 14 fordetails.
3. Check the green PRG LED on the TS0825E's PCB. The LED illuminates for five secondsif programming is successful. If the PRG LED does not illuminate, refer to *Troubleshooting programming* on page 25.

Use the *-Change key to select a different user number or press Enter to end the duress type programming.

Each time a device is registered or a RAS key is pressed, the menu timer is reset. The WDGP remains in programming mode for the time that WDGP menu 4 is active. The last programmer setup will be retained on exit from menu 4.

Troubleshooting programming

LEDs (12 in *Figure 2* on page 9) are used to indicate programming and communication

status. If the PRG LED does not illuminate check the following items:

- Check the REG selector for the number of transmitter reset button presses.
- Wait at least five seconds between programming of eachdevice.
- Check if a new transmitter battery is installed and is at the required voltage.
- Check that the WDGP menu is still active.

Menu option 5—Clear Input

This option is used to temporarily clear the status of one fixed input or all fixed inputs.

Key in 5 for Clear Input and press Enter. The display shows:

```
1-Clear Input,2-Clear All Inputs
No:__
```

Refer to the following sections for further instructions:

- *Clearing single inputs* on page 25.
- *Clearing all inputs* on page 26.

Clearing single inputs

Select 1 to clear the status of selected inputs to default. In the case of DGP 1, where 17 to 32 is the range of available input numbers, the display shows:

```
Select Input (17-32)
No: __
```

Key in the input number required and press Enter. The display shows (for example):

```
Clear Input 17?
*-Yes, #-No
```

Press '*' to clear the selected input. The display shows the next input number (for example):

```
Clear Input 18?
*-Yes, #-No
```

If the next input is not to be cleared, press # key to exit menu option 5.

Clearing all inputs

At menu option 5-Clear Input, select 2 to clear the status of all inputs in the WDGP database to default. The display shows:

```
Clear All Inputs?
*-Yes, #-No
```

Press '*' to clear all inputs or press # key to exit menu option 5.

Note: When an input is cleared and a transmitter remains active, the cleared input will return active with the next event or check-in, however its setup conditions may be changed.

Menu option 6—16/32 Inputs

This option is used to change and view the size of the currently active WDGP database.

Key in 6 for 16/32 Inputs and press Enter. The display shows one of the alternative options:

```
16 Inputs Maximum
*-Change, #-Exit
```

—or—

```
32 Inputs Maximum
*-Change, #-Exit
```

Press '*' to toggle between 16 and 32 active database inputs. Press '#' to exit menu option 6.

Menu option 7—Input Number Range

This option is used to display the range of input numbers for the WDGP.

Key in 7 for Input Number Range and press Enter. In the case of DGP 3, where the number of database inputs is set to 32 at menu option 6, the display shows:

```
DGP 3, Inputs 49-80
#-Exit
```

Press '#' to exit menu option 7.

Note: When a WDGP with firmware designed for use with Challenger V8 is used on a Challenger10 system, input numbers displayed on an LCD RAS will be incorrect for any DGP address higher that DGP 1. Refer to *Compatibility with Challenger10* on page 20 for details.

Menu option 8—Factory Defaults

This option returns the WDGP to factory default state.

Key in 8 for Factory Defaults and press Enter. The display shows:

```
Set Factory Defaults
*-Default, #-Exit
```

Press '*' to:

- Clear the input and device database.
- Set the supervision timer to 1 hour.
- Return the programmer to the default settings.

Press '#' to exit menu option 8. The display will return to the main menu without change.

Menu option 9—User Offset

This option registers a user offset value to be added to duress device user numbers when a duress message is sent to Challenger.

Note: A sum greater than 65535 will roll over through zero. Negative user offsets are not permitted.

Key in 9 for User Offset and press Enter. The display shows:

```
User Offset: 0
(0-65535): __
```

To change the user offset, key in the required value in the range 1 to 65535 and press Enter.

Menu option 10—Supervision Timer

Supervision time specifies the interval at which the WDGP checks that it has received a check-in message from a registered fixed input device. Duress devices do not transmit check-in messages and are therefore not supervised.

Use this option to view or change the supervision timer value. Key in 10 for Supervision Timer and press Enter. The display shows:

```
Supervision Time: 1 Hour
* = -, # = +, 0-Exit
```

Press '*' to decrease or '#' to increase the supervision times from 10 minutes to 150 hours. Press 0 to exit from the menu option 10.

Note: The default supervision time is one hour.

Note: EchoStream transmitters check in to the WDGP every three minutes. For technical reasons, the check-in time of each device may vary widely. Therefore, the WDGP requires a wide tolerance on this time to receive the device check-in. As a general rule, a small number of devices will function normally with the WDGP set to a 20 minute supervision time. However, as the number of devices increase, temporary supervision failures may be experienced. In this event, the WDGP supervision time should be increased.

Menu option 11—Supervision Options

This option is used to enable or disable the supervision of individual fixed inputs. Supervision may also be enabled or disabled remotely via the virtual relay #1 of the WDGP.

Key in 11 for Supervision Options and press Enter. In the case of DGP 3, where the number of database inputs is set to 32 at menu option 6, the display shows:

```
Select Input (49-80)
No:__
```

Key in the input number required (say 55) and press Enter. The display shows one of the following alternative options:

```
Input 55 Enabled
 *-Change, #-Exit
```

—or—

```
Input 55 Disabled
 *-Change, #-Exit
```

—or—

```
Input 55 Relay Controlled
 *-Change, #-Exit
```

Note: Relay is the first relay assigned to the WDGP, which depends on the DGP address (for example, relay 17 for DGP 1). Refer to *Table 1* on page 11 *or Table 2* on page 12 for details, depending on type of Challenger panel.

Note: The Relay Controlled option enables supervision of an input to be enabled or disabled. For example, when relay 17 (the first relay assigned to DGP 1) is inverted, the supervision of all inputs with the Relay Controlled option selected will be disabled.

Press '*' to toggle between Enabled, Disabled, and Relay Controlled, or press '#' to exit menu option 11.

Menu option 12—Change Contact State

This option may be used to invert the transmitter device's fixed input contact state as received by the WDGP.

Contact state non-inverted is the default setting, and most devices will function normally with this setting. However, some devices may need the contact state to be inverted to function correctly. For example, if a transmitter device has external contacts set to Normally Closed (NC) instead of normally open (NO), this may be corrected in the WDGP by selecting the Inverted option for that point.

Key in 12 for Change Contact State and press Enter. In the case of DGP 3, where the number of database inputs is set to 32 at menu option 6, the display shows:

```
Select Input (49-80)
No:__
```

Key in the input number required (say 62) and press Enter. The display shows one of the following alternative options:

```
Contact 62 Non-Inverted
 *-Change, #-Exit
```

—or—

```
Contact 62 Inverted
 *-Change, #-Exit
```

Press '*' to toggle between Non-Inverted and Inverted, or press '#' to exit menu option 12.

Menu option 13—Last Device Received

This option displays the status of last received change of state transmission from a fixed or duress type device received by the WDGP (check in transmissions are not used for this option).

Key in 13 for Last Device Received and press Enter. The display shows one of the following alternative options.

In the case where there have been no device transmissions received since the last WDGP reset:

```
No Device
*-Refresh, #-Exit
```

In the case where a fixed type transmitter was received for DGP 1:

```
Fixed, Input 17
*-Refresh, #-Exit
```

In the case where a duress type transmitter was received from user 3:

```
Duress, User 3 (103)
*-Refresh, #-Exit
```

In the example shown, the number in brackets represents the user number that is reported to the panel, calculated by the device number (3) plus the offset in menu 9 (100).

Press '#' to exit menu option 13.

Note: The data in this option will not be updated until *-Refresh or #-Exit is pressed.

Appendix A Reference

In this appendix:

Application notes

Alarm and restoral notes

Transmitter devices registered as duress types provide the following types of alarm information to the Challenger panel:

- Duress alarm.
- Tamper alarm (not applicable to transmitters without tamper, or push button duresstransmitters).
- Low battery alarm.

EchoStream push button transmitters on fixed inputs provide restore information to the WDGP. However, restore information from devices registered as duress types is not processed by the panel.

Transmissions from duress and fixed type devices will be received by *any* WDGP that has the device registered in its database. Each WDGP will pass the message to Challenger, which can result in multiple events (alarms) with a common time stamp.

If the Inovonics receiver fails to communicate with the WDGP, a Receiver Fail message is sent to the Challenger panel.

If the Inovonics receiver detects that it is jammed by a strong RF signal, an RF Jam message is sent to the Challenger panel.

Transmitting device notes

Transmitter contacts are selected for Normally Open (NO) or Normally Closed (NC) under the cover of the transmitter device. Refer to the EchoStream device installation instructions for details.

The transmitter operating frequency is set under the cover of the transmitter device. Ensure the device is set to AUS or NZ as appropriate. Failure to do this may result in interference with mobile phones or other similar devices. See EchoStream device installation instructions for details.

Default input state

All WDGP fixed inputs default to the open state.

Event reporting

Table 3 lists the Contact ID (CID) format or Tecom Direct Line - Large format messages that may be generated.

Table 3. CID event messages

CID code	Classification	Point or User	Description	Restoral
121	Panic alarm	1 to 999	Duress code entered	No
381	Sensor trouble	1 to 999	Detector supervision fail	Yes
383	Sensor trouble	1 to 999	Fixed input tamper	Yes
702	User defined	1 to 999	Duress tamper	No
701	User defined	1 to 999	Duress battery low	No
384	Sensor trouble	1 to 999	Detector battery low	Yes