

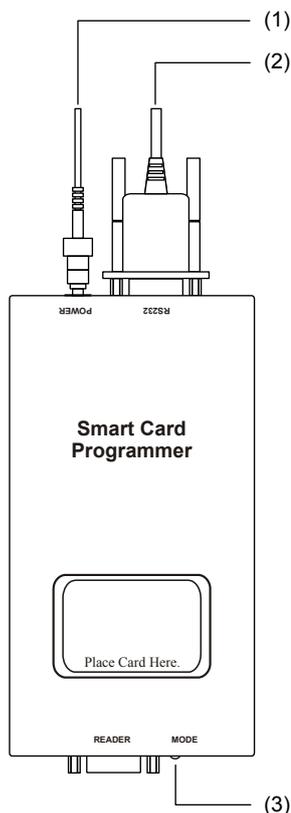
TS0870P Smart Card Programmer Installation Sheet

Description

The Smart Card Programmer, model TS0870P, in conjunction with appropriate software, is used to program smart cards and fobs for use with Challenger intrusion detection and access control systems.

In this document, “smart cards” applies to proximity cards, photo ID proximity cards, and proximity fobs; and “software” applies to management software or dedicated Smart Card Programmer software, as applicable.

Figure 1: Smart Card Programmer



- (1) Cable to 9 VDC power supply
- (2) Serial cable to computer COM port
- (3) Mode LED

The Smart Card Programmer provides a variety of functions related to managing smart cards and smart card readers. You can use the Smart Card Programmer to:

- Program user access cards. See “Programming cards for access and alarm control” on page 3.

- Program user credit cards. See “Programming cards for credit applications” on page 3.
- Erase or “blank” programmed smart cards. See “Erasing programming from cards” on page 3.
- Program reader configuration cards. See “Programming reader configuration cards” on page 4.
- Program reader default cards. See “Programming reader default cards” on page 4.

Product contents

Quantity	Item
1	Smart Card Programmer
1	Installation sheet
1	9 VDC power supply
1	Serial cable

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.

Security features

Smart cards can be used to gain access to a building and to disarm the security system. As a result, it can be vital that smart cards, smart card readers, and Smart Card Programmers are appropriately protected.

Card security password. This option is located on the programmer properties window or customer site details window, depending on the software. It provides the following functionality:

- **Unsecured mode.** If the card security password is not used, then a smart card reader can use only blank (unprogrammed) cards via the card’s serial number.
- **Secured mode.** If the card security password is used, then a smart card reader can use only cards programmed with the same password. A reader configuration card or a reader default card from one system cannot be used to reprogram readers in another system.

Card password lock. This option is located on the programmer properties window or customer site details window, depending on the software. When checked, the card security password cannot be deleted from user cards and prevents a card being blanked completely, used as a reader configuration card, or a reader default card.

Connection password. This option is located on the programmer setup window. The optional connection password of up to ten digits helps to ensure that the Smart Card Programmer can be used only with the authorised computer. **Note:** If the connection password is lost, the computer can no longer connect to the Smart Card Programmer. The Smart Card Programmer must be returned to the authorised reseller to be restored to the default state.

Master overwrite password. This option is located on the programmer setup window (not applicable to Forcefield). When used, the operator is required to enter the password of up to ten digits when writing a card for a user who already has a card, or writing to a card that has previously been programmed.

Card Site Code Range. This option is located on the programmer properties window or customer site details window, depending on the software. Use the site code range to restrict the Smart Card Programmer to be used only within the Challenger system's site codes.

Operation

Different software applications vary in their Smart Card Programmer user interfaces. Refer to the software's help and user documentation for specific instructions.

When powered and connected to a computer, the Smart Card Programmer's mode LED (Figure 1, item 3, on page 1) indicates the following states:

- Red indicates that the Smart Card Programmer is powered but not online (not being polled by its software).
- Amber indicates that the Smart Card Programmer is online and ready to read or write to a card.
- Green indicates that the Smart Card Programmer is performing a card operation such as reading or writing.

When the mode LED is amber you can perform a card operation. Place a blank card onto the Smart Card Programmer where it says "Place Card Here", and then select the operation from the software's user interface.

The Smart Card Programmer has an internal beeper to indicate the following:

- One beep indicates that the programmer has recognized the presence of a compatible card.
- Two beeps indicate a successful operation, such as writing to a card.
- Three beeps indicate a failed operation, such as no card detected when attempting to write.
- Seven beeps indicate a writing operation has been denied by the card's current programming or that the site code for the card doesn't fall within the programmer's site code range.

Installation

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

The installation process varies depending on whether management software (such as TITAN or Forcefield) or dedicated Smart Card Programmer software is used.

If using management software, you need to create a serial port record for the Smart Card Programmer.

If using dedicated Alliance 8700 Smart Card Programmer software, the port record exists by default.

All other installation tasks are similar regardless of the type of software.

Refer to the following sections, and then see "Configuring the Smart Card Programmer" below.

To install the Smart Card Programmer hardware:

1. Connect the power and RS-232 cables (supplied) to the Smart Card Programmer (see Figure 1, items 1 and 2, on page 1).
2. Connect the RS-232 cable to an unused COM port on the management software computer.
3. Connect the power supply to mains power.

The mode LED displays red.

To create a serial port record (if required):

The following steps are based on TITAN management software. If using other software, refer to the help or user documentation.

1. Select Admin > Ports.
2. Click the New button to create a new record.
3. Type a description, such as "Card Programmer".
4. Click the Card Programmer radio button.
5. Click the Comms Port arrow and then select the COM port.
6. Click Save.

To connect software to the Smart Card Programmer:

The following steps are based on TITAN management software. If using other software, refer to the help or user documentation.

1. Select Admin > Card Programmer > Setup.
2. Type the port record number created in "To create a serial port record", above.
3. Click to check the Activate Programmer check box.
Ignore the other fields at this stage.
4. Click Save.

The mode LED displays amber. In the software's user interface, an LED-like indicator at the bottom of the work area flashes green.

After connecting to the Smart Card Programmer, the software can be used to configure the Smart Card Programmer.

Configuring the Smart Card Programmer

To configure a Smart Card Programmer in TITAN:

1. Select Admin > Card Programmer > System Properties.

The mode LED displays amber.

2. Click the Upload From Programmer button to upload the current programming (if any) into TITAN.
3. Program the card security password, if secured mode operation is required.

Each of the four bytes in the card security password may be in the range 0 to 127, providing over 268 million combinations. For higher security, we can issue a unique security password using values in the range of 128 to 255 (requires a TS0870PSC Configuration Card).
4. Program the card site code range.

The site codes programmed for the Challenger system must be within the card site code range or it will be impossible to write user cards.
5. Enable the card password lock, if required.

Note: the card password lock prevents the card security password from being deleted from user cards, and may limit your ability to reuse cards.
6. Click Save.
7. If required, select Admin > Card Programmer > Setup to program a connection password and/or a master overwrite password. See "Security features" on page 1 for details.
8. Click Save.

Using the Smart Card Programmer

Programming cards for access and alarm control

The most common use for smart cards is to provide user authentication for a Challenger intrusion detection and access control system.

The data programmed into the smart card (or at least the card's serial number) links a smart card to a Challenger user record. As a result, a user can, for example, unlock a door by presenting the smart card to a smart card reader instead of entering their PIN code on a keypad.

The process of linking a smart card to a Challenger user record is similar, regardless of the software.

Prior to programming a user card, you will need to know the Challenger panel's site code or the raw card data (RCD) to be programmed onto the card.

Note: The process of creating photo ID smart cards is described in the relevant management software help and user documentation.

To program a user card in TITAN:

1. Select Users > Users.

The mode LED displays amber.
2. Create and save a user record or select an existing user record.
3. Click the Card Issue tab.
4. Place an unprogrammed card onto the Smart Card Programmer where it says "Place Card Here".
5. Click Write.

The Smart Card Programmer beeps twice to indicate a successful operation.

Programming cards for credit applications

Smart cards can be used to allocate resources such as photocopies, lighting control, dispensing machines, and so on.

Smart card readers are programmed with an access level in the range 1 to 16, a configurable location name, a configurable credit account name (typically to identify the device to be operated), a token value, and a relay time factor (if applicable). Users are assigned an access level in the range 1 to 16, up to four locations, and up to four credit accounts (devices).

For each account (device) a user may be assigned a credit value in the range 1 to 65,534. Each time the user presents the card at a corresponding reader, the reader's token value is deducted from the account. If the account balance is less than the reader's token value, then the transaction is refused.

If the user's account is assigned a credit value of 65,535 then the credits will never be deducted by a reader.

The access levels assigned to the user and the reader determine the user's permission to operate the device. For example, a smart card reader at a photocopier that has an access level of 4 may be operated only by users with access levels of 4 through 16.

Location names are used to partition the system. The smart card reader's programmed location must match one of the user's four programmed locations in order for the transaction to occur.

To program a credit card in TITAN:

1. Select Users > Users.

The mode LED displays amber.
2. Create and save a user record or select an existing user record.
3. Click the Card Security tab.
4. Type a number in the range 1 to 16 in the Access Level field, and then select one to four locations.
5. Click the Credit Issue tab.
6. For each account type a number in the range 1 to 65,534.

Tip: If you are adjusting the credit balances of an existing card, put the card on the Smart Card Programmer, and then click the Read Card button to see the current balances.
7. Place an unprogrammed card onto the Smart Card Programmer where it says "Place Card Here".
8. Click Write.

The Smart Card Programmer beeps twice to indicate a successful operation.

Erasing programming from cards

Erasing or "blinking" programmed smart cards has the following effect:

- If the card password lock was off when the card was programmed, then all card data is removed and the card is restored to its factory default state.
- If the card password lock was on when the card was programmed, then the card password is retained and all other card data is removed. The card can be reprogrammed only for another user.

To erase a user card in TITAN:

To erase a user card, it must have a status of void or reassigned.

1. Select Users > Users.
The mode LED displays amber.
2. Create and save a user record or select an existing user record.
3. Click the Card Issue tab.
4. Place a card onto the Smart Card Programmer where it says "Place Card Here".
5. Click Erase.
The Smart Card Programmer beeps twice to indicate a successful operation.

To blank a user card in TITAN:

The following steps assume the card password lock was off when the card was programmed.

1. Select Admin > Card Programmer > Tools.
The mode LED displays amber.
2. Click Blank Card.
The Smart Card Programmer beeps twice to indicate a successful operation.

Programming reader configuration cards

Reader configuration cards are used to configure smart card readers for either access use or credit use. This is the only means by which the optional card security password can be programmed into a smart card reader (secured mode). Smart card readers that are programmed via RAS do not have a card security password (unsecured mode).

Reader configuration cards may be programmed with the reader's required RAS address in the range 1 to 16. Alternatively, if you don't program a RAS address, the reader configuration card can program a RAS at any addresses (the RAS address would be set using the reader's built-in beeper).

Some reader configuration card options apply to access use, and others apply to credit use. Depending on the reader's role (access or credit) you can ignore the options that don't apply.

The reader configuration options token value, access level, credit account number, location number, and relay time factor apply only to credit use. Refer to the relevant smart card reader's installation and programming instructions for details.

To program a reader configuration card in TITAN:

1. Select Admin > Card Programmer > Write Reader Config Card.
The mode LED displays amber.
2. Select or specify the options to be programmed into the reader.
3. Place an unprogrammed card onto the Smart Card Programmer where it says "Place Card Here".
4. Click Write.
The Smart Card Programmer beeps twice to indicate a successful operation.

Programming reader default cards

Reader default cards are used to restore configured smart card readers to their factory default state. (If the optional card security password is used, then the password on the card and the reader must match.)

To program a reader default card in TITAN:

1. Select Admin > Card Programmer > Write Reader Config Card.
The mode LED displays amber.
2. Place an unprogrammed card onto the Smart Card Programmer where it says "Place Card Here".
3. Click Default.
The Smart Card Programmer beeps twice to indicate a successful operation.

Specifications

Voltage	9 VDC
Current	75 mA max
Operating environment	
Temperature	0 to 50°C
Relative humidity	0 to 95% noncondensing

Regulatory information

Manufacturer	UTC Fire & Security Australia Pty Ltd Level 1, 271–273 Wellington Road, Mulgrave, VIC, 3170, Australia
Year of manufacture	The first two digits of the product serial number (located on the product identification label) are the year of manufacture.
Compliance	 N4131

NOTICE! This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Disclaimer

The customer is responsible for testing and determining the suitability of this product for specific applications. In no event is UTC Fire & Security Pty Ltd (trading as Interlogix) responsible or liable for any damages incurred by the buyer or any third party arising from its use, or their inability to use the product.

Contact information

For contact information, see www.utcfs.com.au.