UTC Fire & Security
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TS0099 Enhanced Challenger TCP/IP Interface Installation and Programming Guide

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Compliance

N4131

When installed as directed, this product conforms to the standards set by Standards Australia on behalf of the Australian Communications and Media Authority (ACMA).

UTC Fire & Security recommend enclosure covers remain fitted to comply with C-Tick.

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.

Contact information

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

Content

Important information

Limitation of liability

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Product overview

The TS0099 Enhanced Challenger TCP/IP Interface (Figure 1 below) provides Challenger V8 panels with an RJ-45 Ethernet port connection and a simplex serial RS-232 printer port connection.

Figure 1: TS0099 Enhanced Challenger TCP/IP Interface

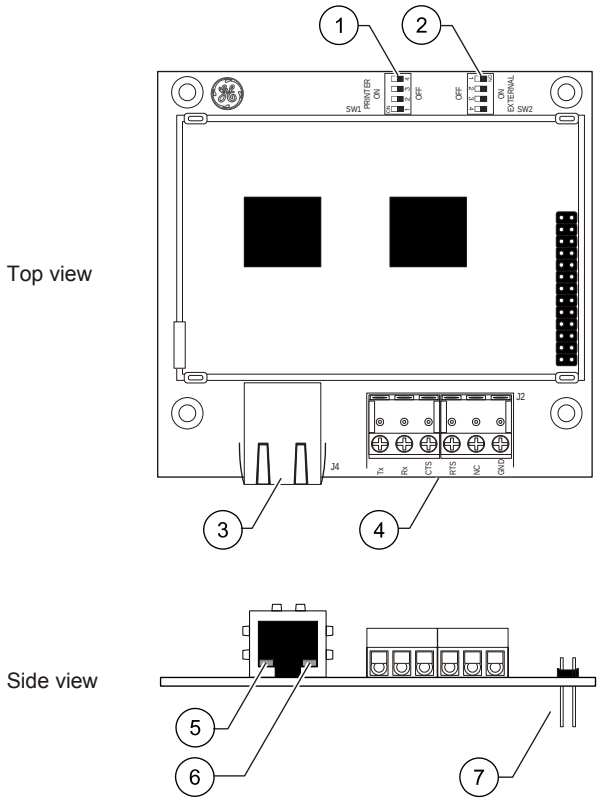


Figure 1 Legend

Item	Description
1.	SW1 DIP switches. Set all to ON.
2.	SW2 DIP switches. Set all to OFF.
3.	RJ-45 Ethernet port for 100 Mbps or 10 Mbps communications (auto-sensed).
4.	Serial RS-232 printer terminals.
5.	Green LED, ON to indicate that there is an active connection between the TS0099 and the hub.
6.	Orange LED, flickers to indicate data transmission or reception.
7.	Connecting pins to TS0816 Challenger PCB.

Packing list

The following parts are provided with the TS0099:

Quantity	Item	Checklist
1	This document	☐
1	TS0099 board	☐
2	3-way (blue) screw terminal block	☐
2	8 mm M3 screws	☐

Note: Printer cable, printer connector, and Ethernet cable, are not supplied.

Installation requirements

This document contains information for a technician to install and program a TS0099 module for a Ethernet LAN/WAN connection. It also contains program planning sheets and programming instructions to enable communications to the management software and/or SecureStream IP Receiver.

Only trained Challenger Integration technicians should plan the programming of Challenger TS0099 IP data. Technicians must comply with and be trained in security and electrical industry installation regulations. An example qualification is the ACMA Cabler for Cat 5 structured cabling. In Australia, the TS0099 must be installed in accordance with Australian Communications and Media Authority (ACMA) cabling requirements. In other locations check local regulatory requirements.

Before you begin

Correct installation of TS0099 requires consultation with the client's Network Administrator. Failure to gain the essential information from the client may result in the TS0099 not communicating with the management software or introducing data collisions with parts of the client's existing IP network and possibly a total network shutdown. Refer to the "TS0099 Planning Sheet" on page 15 to ensure that you have collected all the information you need.

Compatible Challenger panels include:

- TS0816 Challenger V8 panel motherboard PCB 1069K or later
- Challenger V8 firmware 8.98 or later

Compatible management and reporting software include:

- Security Commander
- TITAN V1.08.01 or later
- Forcefield
- Ares 4.5 or later
- SecureStream IP Receiver

Serial printer cable requirements

A four-core shielded RS-232 data cable (such as Belden 9534) must be used if connecting to a printer. Use either a DB-25 connector or a DB-9 connector (not supplied). Make the following connections:

- Connect the TS0099's TX terminal to a DB-25's RX terminal (pin 3), or to a DB-9's RX terminal (pin 2).
- Connect the TS0099's CTS terminal to a DB-25's DTR terminal (pin 20), or to a DB-9's DTR terminal (pin 4).
- Connect the TS0099's GND terminal to a DB-25's GND terminal (pin 7), or to a DB-9's GND terminal (pin 5).
- If using a DB-25, link RTS (pin 4) to CTS (pin 5).
- If using a DB-9, link RTS (pin 7) to CTS (pin 8).

C-Tick compliance

The TS0099 installation must comply with the Australian Communications and Media Authority (ACMA) C-Tick regulations. TS0099 meets C-Tick requirements *only* where the TS0099 is connected in an approved Challenger enclosure in such a manner as to prevent excessive RF emissions.

To avoid excessive noise emissions, ensure that the Challenger enclosure cover remains fitted and your IP connection is installed in accordance with this manual.

Installation

To install the TS0099 hardware:

1. Disconnect power from the Challenger panel before installing the TS0099. Remove the existing printer interface if one is installed.
2. Plug the TS0099 Enhanced Challenger TCP/IP Interface into the black J18 connector on the main Challenger panel PCB. Secure it with the two M3 screws supplied.
3. If the Challenger panel's firmware is not V8.98 or later, then you must replace the Challenger firmware EPROM (not supplied) to upgrade the firmware. The position of the EPROM is labelled on the Challenger PCB.

   Note: If your Challenger panel has firmware version V8-C-MFX.864 or earlier, you'll need to upgrade your Challenger PCB to accept a 2 MB EPROM. Refer to the Challenger V8 panel technical bulletin 0816-011 available on our Web site www.utcfs.com.au.
4. Connect the Ethernet cable to the RJ-45 connector on the TS0099, and the other end of the cable to your LAN connection point.
5. Repower the Challenger panel.
6. If you are using management software, make sure it is on.
7. Refer to "Programming" on page 7 for instructions on how to program the TS0099 via a remote arming station (RAS).

Programming

This section describes only the programming required to establish communications with the management software. Additional programming is required to, for example, configure the printing options provided by TS0099.

For detailed descriptions of Challenger programming, refer to the *Challenger V8 & V9 Programming Manual*.

You must initially use an LCD RAS keypad to program the TS0099 to communicate with the management software. After communication has been established, the management software may be used for programming. This section describes the programming steps using a RAS.

In the following sections, RAS keypad button presses are indicated within [and] characters. Multi-digit options are combined, for example menu option 19 is shown as [19] even though the 1 key and the 9 key are pressed in sequence. The value of [code] is the installer PIN code.

The TS0099 is typically programmed to communicate in event-driven mode, which uses User Datagram Protocol (UDP/IP) to communicate with management software, as well as to SecureStream IP Receiver. TS0099 may also be programmed to communicate in polled mode, which uses Transmission Control Protocol (TCP/IP).

In event-driven mode, the Challenger uses UDP/IP with Extended Event protocol to report events only as they occur. This prevents the management software and SecureStream IP Receiver software from continuously polling Challengers and therefore minimises network bandwidth requirements.

Polled mode typically consumes greater bandwidth than event-driven mode. However this can be useful for panels that deliver little event-driven activity. Some networks require a certain amount of activity in order to maintain an active communications path. The following programming instructions are based on event-driven communications, with notations regarding polled communications, where needed.

To program the TS0099 for event-driven communications:

1. Press [*]-[code]-[Enter]-[19]-[Enter]-[14]-[Enter] to display the **Defaults** option.
2. Press [4]-[Enter] to set the Challenger record for the TS0099 to the default values (option 4 is not displayed on the RAS).
3. Press [47]-[Enter] to display the **Enable Extended Event protocol** option.
4. Press [*]-[Enter] to change the default setting of the Enable Extended Event protocol option to Yes.

   Note: Polled mode requires the Enable Extended Event protocol option to be set to No.
5. Press [*]-[Enter] to change the default setting of the **Enable TCP/IP UDP/IP Support** option from No to Yes.

6. Press [nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter] to program the **Challenger IP address** provided by the network administrator. nnn represents a portion of the assigned address from 000 to 255.
7. Press [nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter] to program the **first Contact ID Station** (main SecureStream IP Receiver) IP address provided by the network administrator. nnn represents a portion of the assigned address from 000 to 255.

   Skip this option for polled mode.
8. Press [nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter] to program the **second Contact ID Station** (backup SecureStream IP Receiver) IP address provided by the network administrator. nnn represents a portion of the assigned address from 000 to 255.

   Skip this option for polled mode.
9. Press [nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter] to program the **third Contact ID Station** (disaster SecureStream IP Receiver) IP address provided by the network administrator. nnn represents a portion of the assigned address from 000 to 255.

   Skip this option for polled mode.
10. Press [nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter] to program the **first management software IP address** provided by the network administrator. nnn represents a portion of the assigned address from 000 to 255.
11. Press [Enter] to skip the **second management software IP address**. This address will be programmed automatically if the management software is Forcefield.

    Skip this option for polled mode.
12. Press [nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter]-[nnn]-[Enter] to program the **Gateway (Router) IP address** provided by the network administrator. nnn represents a portion of the assigned address from 000 to 255.

    Not all TS0099s require a gateway address.
13. Press [nn]-[Enter] to program the number of **host bits** to create the subnet mask (host bits is a number in the range 0 through 31).

    Note: The subnet mask is assigned by the client's network administrator. For example, if the subnet mask is 255.255.255.0, then the host bit value is 8. See *Glossary* for details.
14. Press [nnnnn]-[Enter] to program a number from 3001 to 65535 for the **Challenger IP port** address (default = 3001). The TS0099 port number is assigned by the Challenger Integration Technician.

15. Press [nnnn]-[Enter] to program the **Heartbeat Timeout** period in either seconds (default) or minutes. Do not program 0 (zero). Press [*] to toggle between seconds and minutes. If programming in seconds, enter a value in the range 1 to 9999. If programming in minutes, enter a value in the range 1 to 166.

    If a connection is not established in the defined interval, then the panel sends a heartbeat failure event to the next available monitoring station.

16. Press [nnn]-[Enter] to program the **Event Ack Timeout** period, which is the number of seconds that the Challenger panel should wait for an acknowledgement to be received. Do not program 0 (zero). nnn represents the time in seconds from 001 to 255.

    If an acknowledge is not received in the defined interval, then a fail message will be generated.

17. Press [nnn]-[Enter] to program the event flag number assigned to report **Ethernet Link Fail** events. nnn represents the assigned event flag from 000 to 255.

    If the Ethernet Link fails, then this event flag number will be set.

18. Press [nnn]-[Enter] to program the event flag number assigned to report **Heartbeat Fail** events. nnn represents the assigned event flag from 000 to 255.

    If the Heartbeat fails, then this event flag number will be set.

19. Press [nnn]-[Enter] to program the event flag number assigned to report **CID Station Fail** events. nnn represents the assigned event flag from 000 to 255.

    If the SecureStream IP link fails, then this event flag number will be set.

    Skip this option for polled mode.

20. Press [nnn]-[Enter] to program the event flag number assigned to report **Ethernet Hardware Fail** events. nnn represents the assigned event flag from 000 to 255.

    If the Ethernet Hardware fails this Event Flag number will be set and CID event code E706 is sent. The Event Flag will reset if the Ethernet Hardware restores and the CID event code R706 is sent.

21. Examine the LCD display to see the status of the Encryption, CID Stn#, Ethernet Hardware, and Link conditions. Press [0] to enrol the TS0099 for all connected SecureStream IP Receivers, press [*] to refresh the display or press [#] to exit.

    The Enrol option only applies to SecureStream IP Receiver applications and event-driven mode (not applicable to polled mode). Press [0] to force the Challenger to send data to the programmed SecureStream IP Receiver addresses. The Dialler option will be active only if the technician programs the dialler to function.

The diagnostics option may display the following messages:

- Hw Err — a hardware error is present
- Hw OK — the hardware is healthy
- Lnk Err — no Ethernet link is detected
- Lnk OK — Ethernet Link is healthy
- Encryption — the encryption option is enabled
- CID # 00x — station number the TS0099 is communicating to
- Dialler — the TS0099 is unable to communicate with the CID Station (SecureStream IP Receiver) via the Ethernet link and the dialler is active (if programmed).

22. Press [*]-[Enter] to change the **Suspend REPORT Fail** option to Yes. This stops “report fail” messages from appearing on the RAS after communication from CID site 1 is lost.
23. Press [*]-[Enter] to change the **Suspend Management SW #2 Events** option to Yes. This stops event delivery to the second Forcefield management software station (requires Challenger firmware version 8.106 or later). Events are transmitted to only the first management software station.

    Skip this option for polled mode.
24. Press [Enter] to skip the **Telnet protocol** option. This option does not apply to TS0099.
25. Press another Install menu option number if required, or press [0]-[Enter] to exit the Install menu.

Troubleshooting

If you encounter problems using a TS0099, typical causes include:

- Incorrect Challenger firmware
- Incorrect Challenger computer address and/or security password
- Incorrect IP address allocation
- Networking failures
- TS0099 module failure
- Different MAC address (see “Replacing TS0099” on page 14)
- Incorrect DIP switch settings can cause the Challenger panel to repeatedly reset. See “Product overview” on page 1 for correct DIP switch settings.

LED indications

TS0099 has LEDs to assist in diagnosing faults (Table 1 below)

Table 1: TS0099 LEDs

LED label and colour	Function	Normal operation
Activity (Orange)	Flickers during data transmission or reception	Flickering
Link (Green)	Indicates whether there is an active connection between the TS0099 and the hub.	On

Diagnostic actions

Reset TS0099

Before replacing a TS0099 that is suspected to be faulty, reset the module by disabling and then re-enabling (toggling) the following programming options:

- Extended Event Protocol
- Enable TCP/IP UDP/IP Support

To reset a TS0099 (event-driven mode):

1. Navigate to menu option 47 Extended Protocol Configuration (see step 1 in “Programming” on page 7), and then change the Enable Extended Event Protocol option to NO.
2. Change the Enable TCP/IP UDP/IP Support option to NO, and then exit from menu option 47.
3. After 30 seconds, navigate to menu option 47, change the two options back to YES, and then exit from menu option 47.

To reset a TS0099 (polled mode):

1. Navigate to menu option 47 Extended Protocol Configuration (see step 1 in “Programming” on page 7), and then change the Enable Extended Event Protocol option to YES.
2. Change the Enable TCP/IP UDP/IP Support option to NO, and then exit from menu option 47.
3. After 30 seconds, navigate to menu option 47, change the Enable Extended Event Protocol option back to NO, change the Enable TCP/IP UDP/IP Support option back to YES, and then exit from menu option 47.

Check IP addresses and data

Only qualified Challenger Integration technicians should alter IP addresses.

To check IP addresses and data:

1. Request a copy of the original IP data provided by the client’s network administrator.
2. Ensure the Challenger panel firmware is the correct version (V8.98 or later).

   Enhanced Challenger TCP/IP Interface (TS0898) could be used with Challenger panel firmware V8.83 or later. TS0099 requires V8.98 or later.
3. Open the Challenger programming windows in the management software. Check the programmed IP data corresponds with the original data provided by the network administrator.
4. If applicable, open the Challenger programming windows in the SecureStream IP Receiver software. Verify the programmed IP data corresponds with the original data provided by the network administrator.

Ping Challenger IP addresses

Only qualified Challenger Integration technicians should use ping commands. Ask the client’s network administrator to conduct this test if you are unsure.

To ping a Challenger IP address:

1. Open a command shell on the server (management software or SecureStream IP Receiver).
2. At the command prompt type: ping nnn.nnn.nnn.nnn
   where n represents the digits that make up the Challenger TS0099 IP address.
3. Observe the server’s attempt to receive acknowledgements from the Challenger IP address.
4. After approximately 30 seconds press the [Ctrl]+[C] keys together to end the ping command.
5. Read the ping statistics results. Lost packets above 20% represent an unsatisfactory result. A ‘Destination host unreachable’ message indicates 100% loss, and the server could not reach the Challenger TS0099 module.

6. Alternatively type: path ping [IP address] command to display which of the network routers the ‘ping’ command successfully passes through.
7. Advise the network administrator of the path ping or ping command results and wait until the network administrator resolves the failure.
8. On advice from the network administrator that the failure is recovered, repeat the ping command and recheck the ‘Packet Lost’ statistics to verify a satisfactory result.

Ethernet Init Fail message

If an ‘Ethernet Init Fail’ message appears on the RAS after the TS0099 is programmed, the cause is likely to be a duplicate IP address. Alternatively, the Challenger programming for the TS0099 may be faulty or the TS0099 module itself may be faulty. Refer to the following sections in the order they appear.

Duplicate IP

This occurs when the Challenger IP is the same as another device on the network. You can check for this by pinging the IP address with the Ethernet cable unplugged from the TS0099. If another device responds to the ping, then you need to assign a different IP address to the TS0099.

Only qualified Challenger Integration technicians should alter IP addresses.

To change the IP address:

1. Arrange with the network administrator to have a new IP address assigned to the Challenger.
2. Unplug the Ethernet cable from TS0099.
3. Cycle power to the Challenger.
4. In step 4 of the TS0099 programming, program the Challenger IP address to the new one provided by the network administrator. This step is described on page 8.
5. Plug the Ethernet cable into TS0099.

Faulty Challenger programming

The Challenger record for the TS0099 may be incorrectly programmed, or the record may have been corrupted because the programming was interrupted.

You should step through each programming option and check that the values are correct. If you do not see any errors to resolve, you may need to initialise (set to default) the Challenger’s TS0099 programming and then reprogram all values (see “Programming” on page 7).

Use Install menu 14, Defaults, option 4 to restore the Challenger record for the TS0099 to the default values (option 4 is not displayed on the RAS).

To initialize the TS0099 from a RAS:

1. Press [*]-[code]-[Enter]-[19]-[Enter]-[14]-[Enter]-[4]-[Enter] to restore the default values of the panel's TS0099 Enhanced Challenger TCP/IP Interface.

Faulty TS0099 module

If the IP address is not duplicated, there appears to be no problem with the Challenger programming, and an 'Ethernet Init Fail' message still displays on the RAS there may be a problem with the module. Contact Technical Support for details. For contact information see our Web site: www.utcfs.com.au.

Additional notes

Common Ademco Contact ID (CID) error codes

The following table lists the common default CID codes sent to the monitoring station by SecureStream IP Receiver for programmed Ethernet event flags.

Table 2: CID codes for TS0099 Enhanced Challenger TCP/IP Interface

CID code	Explanation
E703	Ethernet link failed
E704	Ethernet heartbeat failed
E705	Ethernet CID site failed (SecureStream IP Receiver)
E706	Ethernet hardware init failed (TS0099)

Replacing TS0099

If the TS0099 module is being installed on a Challenger that has already been programmed for a TS0898 or a TS0099, the new module must be configured with the Challenger's programming . See "To initialize the TS0099 from a RAS" on page 14.

Note: The client's network may need to be reconfigured to recognize the replacement module's MAC address.

Multiple SecureStream IP Receivers (main and backup)

If a new Challenger is programmed to report back to more than one SecureStream IP Receiver, the Challenger must be enrolled in those SecureStream IP Receivers.

In step 19 of the TS0099 programming, press [0] to enrol the TS0099 for all connected SecureStream IP Receivers programmed as CID #1, CID #2, and CID #3. This step is described on page 9.

Upgrading TS0099 firmware

The TS0099 module's firmware may be upgraded in future. If so, a firmware upgrade file may be installed by technicians on site. Contact Technical Support for details. For contact information see our Web site: www.utcfs.com.au.

TS0099 Planning Sheet

Standard installation data

Facility

- Building Address _____
- Room/Location _____

Challenger panel

Number _____ Computer Address _____ Security Password _____

Installation options (cross out unneeded items)

TS0099 Enhanced Challenger TCP/IP Interface:

- Enable Extended Event Protocol? Yes or No
- Enable TCP/IP UDP/IP Support? Yes or No
- IP Address* _____
- Gateway IP Address* _____
- Host Bits* _____ (__)
- Port Number ____

SecureStream IP Receiver:

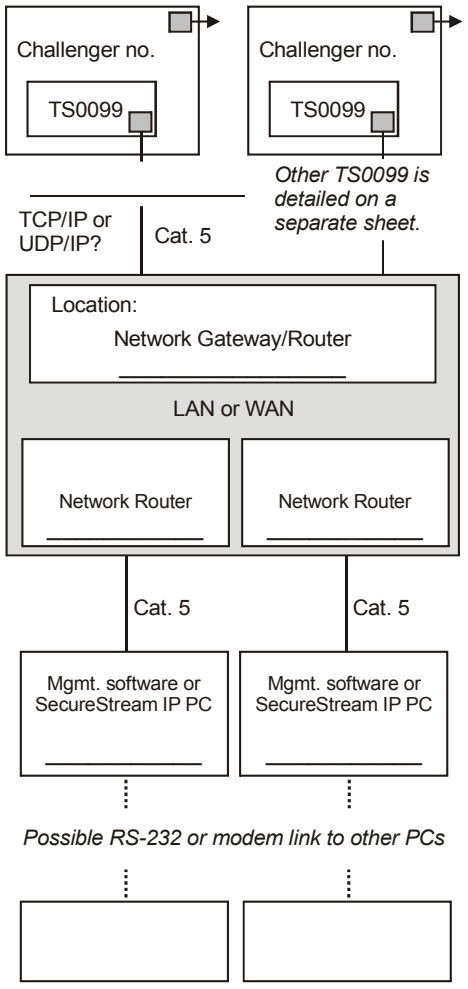
- CID Stn 1 IP Address* _____
- CID Stn 2 IP Address* _____
- CID Stn 3 IP Address* _____
- Gateway IP Address* _____
- Encryption (16 bytes) __.__.__.__.__.__.__.__ __.__.__.__.__.__.__.__
- Heartbeat Timeout (min.) ____
- Event Ack Timeout (sec.) ____

ARES / Forcefield / TITAN management software:

- Node ____
- MSW IP Address* _____
- MSW Gateway IP Address* _____
- MSW Netmask* _____

Challenger Event Flags:

- Ethernet Link Fail No. ____
- Heartbeat Fail No. ____
- SecureStream IP Fail No. ____
- Ethernet Hardware Fail No. ____



*** Contact the network administrator for details.**

NOTE: For Ares or Forcefield, enter the node number. For TITAN, always enter node number 1.

Case studies

1. One TS0099 to TITAN

This case study provides an example of how a TS0099 may be configured. Data shown in the case study is for demonstration purposes only. This data must not be used unless specified by a network administrator.

Standard installation data

Facility

- Building Address: Melbourne Office Supplies, 22A Elizabeth St. Melbourne
- Room/Location: Ground floor — Store Room

Challenger panel

Number 01 Computer Address 05 Security Password 0125434599

Installation options (cross out unneeded items)

TS0099 Enhanced Challenger TCP/IP Interface:

- Enable Extended Event Protocol? Yes or ~~No~~
- Enable TCP/IP UDP/IP Support? Yes or ~~No~~
- IP Address* 16.5.144.12
- Gateway IP Address* 16.5.144.1
- Host Bits* 255.255.255.128 (7)
- Port Number 3001

~~SecureStream~~ IP Receiver:

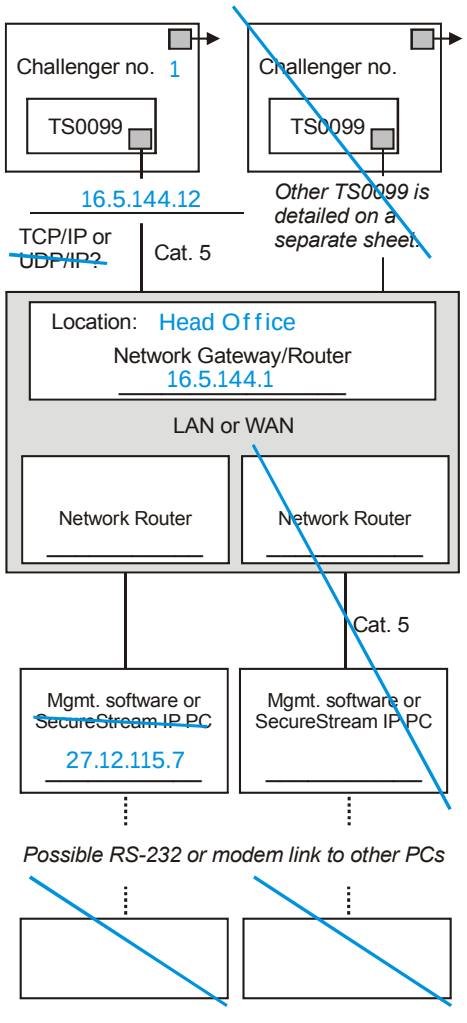
- ~~CID~~ Stn 1 IP Address*
- ~~CID~~ Stn 2 IP Address*
- ~~CID~~ Stn 3 IP Address*
- Gateway IP Address*
- Encryption (16 bytes) __.__.__.__.__.__.__.__ __.__.__.__.__.__.__.__
- Heartbeat Timeout (min.)
- Event Ack Timeout (sec.)

~~ARES / Forcefield /~~ TITAN management software:

- Node 01
- MSW IP Address* 27.12.115.7
- MSW Gateway IP Address* 27.12.115.1
- MSW Netmask* 255.255.255.128

Challenger Event Flags:

- Ethernet Link Fail No. 200
- Heartbeat Fail No.
- SecureStream IP Fail No.
- Ethernet Hardware Fail No. 202



*** Contact the network administrator for details.**

2. One TS0099 to one SecureStream IP Receiver

This case study provides an example of how a TS0099 may be configured. Data shown in the case study is for demonstration purposes only. This data must not be used unless specified by a network administrator.

Standard installation data

Facility

- Building Address: National Tyres, 112 Moore St Nth Sydney NSW
- Room/Location: Manager's Office

Challenger panel

Number 01 Computer Address 12 Security Password 0123456789

Installation options (cross out unneeded items)

TS0099 Enhanced Challenger TCP/IP Interface:

- Enable Extended Event Protocol? Yes or ~~No~~
- Enable TCP/IP UDP/IP Support? Yes or ~~No~~
- IP Address* 10.5.144.12
- Gateway IP Address* 10.5.144.1
- Host Bits* 255.255.255.128 (7)
- Port Number 3001

SecureStream IP Receiver:

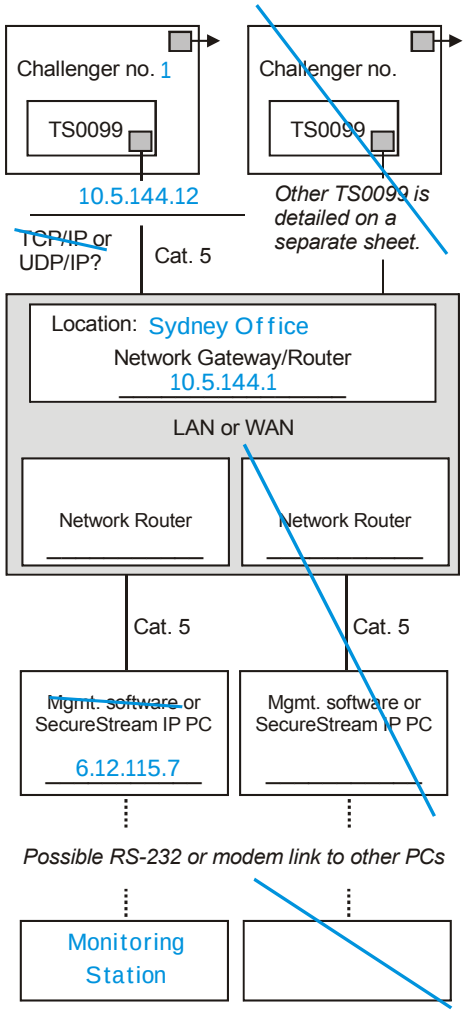
- CID Stn 1 IP Address* 6.12.115.7
- ~~CID Stn 2 IP Address*~~ _____
- ~~CID Stn 3 IP Address*~~ _____
- Gateway IP Address* 6.12.115.1
- Encryption (16 bytes) __.__.__.__.__.__.__.__ __.__.__.__.__.__.__.__
- Heartbeat Timeout (min.) 90
- Event Ack Timeout (sec.) 15

~~ARES~~ / Forcefield / TITAN management software:

- Node ____
- MSW IP Address* _____
- MSW Gateway IP Address* _____
- MSW Netmask* _____

Challenger Event Flags:

- Ethernet Link Fail No. 255
- Heartbeat Fail No. 254
- SecureStream IP Fail No. 253
- Ethernet Hardware Fail No. 252



*** Contact the network administrator for details.**

3. Two TS0099s to Forcefield and SecureStream IP Receiver

This case study provides an example of how a TS0099 may be configured. Data shown in the case study is for demonstration purposes only. This data must not be used unless specified by a network administrator.

Standard installation data

Facility

- Building Address: BBA Bank, 22 High St Meadow Heights, Vic
- Room/Location: Ground floor — Computer Room

Challenger panel

Number: 01 Computer Address: 24 Security Password: 1122334455

Installation options (cross out unneeded items)

TS0099 Enhanced Challenger TCP/IP Interface:

- Enable Extended Event Protocol? Yes or ~~No~~
- Enable TCP/IP UDP/IP Support? Yes or ~~No~~
- IP Address*: 3.17.209.21
- Gateway IP Address*: 3.17.209.20
- Host Bits*: 255.255.255.128 (7)
- Port Number: 3001

SecureStream IP Receiver:

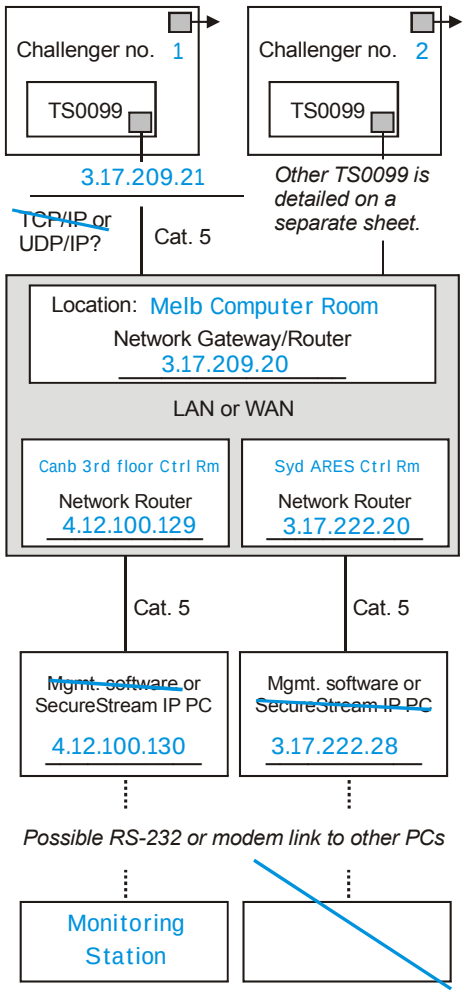
- CID Stn 1 IP Address*: 4.12.100.130
- ~~CID Stn 2 IP Address*~~
- ~~CID Stn 3 IP Address*~~
- Gateway IP Address*: 4.12.100.129
- Encryption (16 bytes): __.__.__.__.__.__.__.__ __.__.__.__.__.__.__.__
- Heartbeat Timeout (min.): 20
- Event Ack Timeout (sec.): 15

~~ARES~~ / Forcefield / ~~TITAN~~ management software:

- Node: 01
- MSW IP Address*: 3.17.222.28
- MSW Gateway IP Address*: 3.17.222.20
- MSW Netmask*: 255.255.255.128

Challenger Event Flags:

- Ethernet Link Fail No.: 255
- Heartbeat Fail No.: 254
- SecureStream IP Fail No.: 253
- Ethernet Hardware Fail No.: 252



*** Contact the network administrator for details.**

Glossary

ACMA	Australian Communications and Media Authority governs the regulations for telecommunications and data communication cabling standards.
Address	A unique number that allows a device to communicate on a shared communication link.
Ares	See Management software.
Bandwidth	The total number of bytes a network (LAN/WAN) can handle at any given time.
Challenger Integration Technician	A Technician who is competent in all Challenger database programming and has been trained to integrate Challenger with 3rd party systems.
CID	Contact ID: the security industry standard for receiving alarm events into a centralised monitoring station.
CID Station	A general term for a computer that collects CID event data from the field, for example, a SecureStream IP Receiver.
Encryption	A process by which data is concealed during transmission. It is recommended that encryption is not enabled until after you have established communication.
Event	A message sent to a monitoring computer with alarm or site activity information.
Event-driven mode	TS0099 operating mode where the Challenger uses UDP/IP protocol to report events to management software only as they occur.
Extended Event Protocol	An engineering term for UDP/IP protocol. Treat both terminology identically for TS0099 applications.
Ferrite	A cable clamp designed to block/reject frequency emissions from passing into or leaving an enclosure.
Forcefield	See Management software.
Gateway	The device on a network that collects multiple IP connections from dissimilar networks and translates the data into a single data stream. Also known as a router.
Heartbeat	A message sent to a Challenger at a predetermined time to verify that the Challenger remains connected and is healthy. Allows the system to minimise bandwidth utilisation.
Host bits	The number of 0 (host) bits contained in the subnet mask (in binary notation).
IP	Internet Protocol: an IT industry standard for sending data via the internet.
IP port	The software port number the TS0099 module permits external communications to directly access the module. User definable number should start at 3001, and onwards.
SecureStream	SecureStream IP Receiver — The product name given to software that collects all Challenger alarm event messages in IP format and converts into serial format to be sent to a CID formatted monitoring station computer.

LAN	Local Area Network: a hardware configuration of computers that share server resources or need to communicate within a given physical area or restricted to a group of people.
Management software	Forcefield, Ares 4.5 (or later), TITAN, or Security Commander software to monitor and administer Challenger security systems.
Network Administrator	A person who has been trained to administer hardware and operating system software, network systems, provides networking diagnostics and OS maintenance services. May also be called an IT Manager.
OS	Operating System: The software loaded onto a server or desktop computer that controls the functionality of the computer. Typical systems are Novell, Windows, etc.
PCB	Printed circuit board: All electronic components are soldered to a PCB.
Ping	A command entered into a networked PC to determine the addressing of other network devices is connected and programmed correctly. Path Ping command can be used to identify the functional devices as the ping message attempts to reach its destination.
Polled mode	TS0099 operating mode where the Challenger uses TCP/IP to continuously poll the management software.
RAS	Remote Arming Station
Shell	A window permitting a technician to enter commands to diagnose and maintain the computer's OS.
Simplex	A data circuit that can transmit in one direction only.
Subnet mask	The number derived from the network class IP address to determine the size of a sub network. Assigned by the network administrator.
TITAN	See Management software.
TCP/IP	Transmission Control Protocol/Internet Protocol: the IT industry standard for continuous data transmission. See also UDP/IP
UDP/IP	User Datagram Protocol/Internet Protocol used for event-driven communication, and does not require the receiver to acknowledge receipt. It uses less bandwidth for transmission than polled communication.