

# Challenger Version 8

## Camera Control & Monitoring. AN13

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This document provides details of the facilities available and the programming requirements for controlling and monitoring security cameras and CCTV systems.

A programming flow chart is provided at the end of this document for reference.

### Camera Facilities Available

1. 8 special input types are available for camera frame counting.
2. 8 special input types are available for "Film Out" reporting.
3. Camera testing is available utilizing the frame counting feature.
4. Special input types are available for "Suspicion" buttons with a timing feature.
5. Installer has the ability to specify which inputs will activate cameras.
6. Cameras can also be activated and/or inhibited via timezones.
7. Cameras can be programmed to be activated and/or inhibited by virtually any event in the system.  
e.g. keypad duress, DGP Offline, Report Fail, etc.
8. Camera event flags to activate relays are programmed for each individual area in the system.  
i.e. Inputs can trigger cameras in a single area only, or in multiple areas.
9. "Film Out" is reported to the Remote Monitoring Station in ALL reporting formats.  
(Some formats also report "Film Low")

### Accessing the Install Menu:

To display menu option 19 (Install Menu) in the User menu, the alarm group of the user code must allow it. The Master Installer is User Number 50. The default master PIN code (User 50) = 4346. The master PIN code should be changed. The Alarm Group assigned to User 50 should never be changed.

The Installer menu is accessed via the User menu and is User menu option 19.

The system must be disarmed before it is possible to use the Installer Menu.

To disarm the system:

**4 3 4 6** (Master PIN code) **<OFF>** then **0** (Select all areas) **<ENTER>**

To access the Install Menu:

**<MENU>** **4 3 4 6** (Master PIN code) **<ENTER>** Accesses User Menu.  
then **1 9** **<ENTER>** Selects Install Menu

### **1. Determine the camera control & monitoring requirements and fill out the programming sheets.**

Blank programming sheets are found at the rear of the Version 8 Programming guide.

In a basic alarm system you will need to consider the following Installer Menu databases:

1. Input Database
2. Area Database
5. Alarm Groups
6. Timers
7. System Options
10. Text Words
13. Time Zones
16. Relay Mapping
35. Summary Event Flags

## 2. Program the **SYSTEM OPTIONS** to specify general system operational parameters.

Following is a list of the Options relevant to camera control features which you may wish to select or change. Disregard other options at this stage.

### Film Low

The "Film Low" number **MUST NOT** be set to 0, even if frame counting is not used

### Film Out

The "Film Out" number **MUST NOT** be set to 0, even if frame counting is not used

### System Test Mode

Camera Testing facilities are available, which utilize the frame counting feature. To provide automatic camera testing when area 1 is disarmed, select one of the system test options incorporating the Access test. e.g. 1 or 3. Other options will also need to be set to enable this feature.

### Relay Controllers

If one or more TS0841 8 Way relay cards or TS0842 16 Way Open Collector cards are connected to The Challenger Panel to activate cameras, CCTV etc., the number of Relay Controllers must be entered here.

### Disable "0 <ENTER>" for camera reset.

When an alarm occurs that activates the camera event flag/s, the cameras may normally be reset by pressing <Enter> <Enter> for quick alarm history, followed by 0 <Enter> to reset the cameras.

### Financial Institution Options.

Note that setting this option to YES will also increase the minimum PIN code length to 5 digits when programming users.

## 3. Program any **TEXT WORDS** required for inputs, area names, alarm group names, etc. that are not already provided in the extensive word library.

Up to 100 custom words can be added to the library.

SYSTEM OPTIONS are programmed in Installer Menu Option 7: - System Options.

From the Install Menu select Option 7.

Use the **<ENTER>** key to scroll through the available options.

If camera frame counting is utilized a frame count number is specified here that will cause a "Film Low" report to be sent to the remote monitoring station when any of the frame counts reaches that number.

If camera frame counting is utilized a frame count number is specified here that will cause a "Film Out" report to be sent to the remote monitoring station when any of the frame counts reaches that number.

### Test Mode options

- 0 = No automatic testing.
- 1 = Enable automatic Access test and Secure test.
- 2 = Enable automatic Secure test.
- 3 = Enable automatic Access test.

A value of 1 is entered for every 8 Relays.  
e.g. 3 x TS0841 = 3 Relay Controllers

1 x TS0842 = 2 Relay Controllers.

This option does not apply to relay cards connected to DGPs etc. which are enabled with DIPswitches on the DGPs.

If cameras are required to continue operating until the alarm is reset with a PIN code entry, set this option to YES.

To enable the camera testing facility during Access Test mode, this option must be set to YES.

TEXT WORDS are programmed in Installer Menu Option 10: - Text Words.

From the Install Menu select Option 10.

Use **<\*>** to scroll through the list of programmable words.

**4. Program any TIMEZONES that may be required in order to limit the functions of particular Users or Arming Stations to specific time periods via their Alarm Group/s or to control relays.**

## TIMEZONES 1 to 24

There are 24 "Real-time" timezones in the system, based on the built-in real-time clock.

Each Timezone may have up to 4 segments, each programmed with a Start time, End time and Days.

Timezone 0 is always valid 24 hours every day. It may be used wherever a 24 hr Timezone is required.

TIMEZONES 1 to 24 are programmed in Installer Menu Option 13.

From the Install Menu select Option 13.

Select a Timezone number to program.

e.g.

<u>TIMEZONE 1:</u>		<u>STAFF</u>		(Normal trading hours)	
		START		END	
Tz 1.1	— Mo	08:30	Tu We Th	18:00	— — —
Tz 1.2	— — — — —	08:30		21:30	Fri — —
Tz 1.3	— — — — —	08:30		13:00	Sat —
Tz 1.4	— — — — —	00:00		00:00	— — —

**5. Specify the "Camera Event Flag" number in the AREA DATABASE/S for the area/s in the system where cameras will be used.**

The areas determine how the system is partitioned, and therefore provides the ability to limit users to performing functions only in the area/s relevant to their role.

The Area Database enables certain timing and event parameters to be specified for each individual area used in the system.

AREA EVENT FLAGS can be programmed to provide an indication of a particular condition that exists in the area.

The Camera Event Flag is activated when an input that has the area assigned to it, and the option "Camera Event Flag" set to YES on the input database, is in alarm.

AREA DATABASE PARAMETERS are programmed in Installer Menu Option 2.

From the Install Menu select Option 2.

Select an Area number to program.

Scroll through the options to locate the "Camera Event Flag" record.

Program any event flag number between 17 & 256 as long as it is not used elsewhere in the system. For convenience you may wish to use the same number as the relay number that will activate the camera.

## **6. Program or modify the ALARM GROUPS required for Users and any Arming Stations in your system that require any facilities relating to camera control and/or testing.**

An Alarm Group defines the area/s, Alarm control functions and User menu options available to the User or Arming Station to which it is assigned.

Alarm Groups 1 to 10 are Hard Coded and cannot be modified. They are intended for LCD Arming Stations and the Master Installer Code.

Alarm Groups 11 to 13 are "All Area Masters" with different levels of User Menu Access.

Alarm Groups 14 to 29 are intended for Arming Stations that control a single Area and offer a low level of User Menu Access.

Alm Grp 14 = Area 1

Alm Grp 15 = Area 2 etc.

(Refer to V8 Programming Guide:- Appendix 1, Table 4 for more specific details)

Alarm Groups 30 to 138 have no default programming and are intended to be programmed for Users or Arming stations according to the system requirements.

Program an appropriate name for the Alarm Group

Specify the Area/s assigned to this Alarm Group.

Specify whether the Alarm Group is going to be assigned to Users.

The remaining alarm system control records are programmed according to requirements. See AN1-Basic Alarm System Programming for details.

Specify the USER MENU OPTIONS that this Alarm Group will allow Access to.

User Menu Options relevant to camera functions.

5. History

6. Test Report

8. Film Counters

ALARM GROUPS are programmed in Installer Menu Option 5.

From the Install Menu select Option 5.

Select an Alarm Group to program.

Select a word from the Word Library

Enter the area numbers required

Set YES or NO

Set YES or NO for each option in the list as required.

Set YES or NO for each option in the list as required.

Set to YES to allow access to the history which can provide information on when any alarms relating to cameras (Film Low, Film out, tamper alarms etc.) occurred.

Set to YES to allow access to the test report which will provide data on the results of camera testing if enabled.

Set to YES to allow the film counter levels to be viewed.

## 13. Start Auto Access Test

Set to YES to allow the Access Test to be run. The Access Test will test cameras if programmed to do so. See "Financial Institution Options"

## 18. Reset Cameras

Set to YES to allow the camera frame counters to be reset to 0 when new film is installed.

An Alarm Group can be restricted to be valid only during a specific time period. To achieve this a TIMEZONE is assigned to the Alarm Group.

Enter a Timezone number if required.

"No Timezone" specifies the Alarm Group is ALWAYS valid.

If a Timezone restriction has been specified for an Alarm Group, you may assign an ALTERNATE ALARM GROUP that will take effect when the Timezone on this Alarm Group is not valid.

Enter an alternate Alarm Group number if required

You must then program the alternate Alarm Group to specify the new Area/s, functions, options etc. that will be relevant.

## 7. Program the INPUTS.

Inputs can now be programmed to provide any of the special input facilities for cameras; or as alarm inputs that will activate the cameras.

INPUTS are programmed in Installer Menu Option 1.

From the Install Menu select Option 1.

Existing inputs can be modified to activate cameras when in alarm.

Enter the number of the input to be programmed.

Select an INPUT NUMBER from 1 to 256 to be programmed. The input number is determined by the physical location of the input. i.e. The address of the DGP that the input is connected to.

PANEL	1-16	DGP 8	129-144
DGP 1	17-32	DGP 9	145-160
DGP 2	33-48	DGP 10	161-176
DGP 3	49-64	DGP 11	177-192
DGP 4	65-80	DGP 12	193-208
DGP 5	81-96	DGP 13	209-224
DGP 6	97-112	DGP 14	225-240
DGP 7	113-128	DGP 15	241-256

**Camera Frame Count Inputs can only be connected to the Challenger Panel. i.e. Inputs 1 to 16.**

Program a suitably descriptive INPUT NAME, using words from the text word library (including any custom text words you have programmed) and numerical variables.

Enter the Text word number/s and numerical variable values required.

e.g. Building 3 Area 2 Office 5 Door 2  
Perimeter South Gate 3  
Strongroom Door  
Cash Office Antimask PIR  
Teller 3 Holdup Button  
Office Suspicion Button  
Camera 7 Frame Count  
Camera 3 Film Out  
VCR Tape Ending

Select an appropriate INPUT TYPE to suit the purpose of the input.

There are 58 input types available.

See table at the rear of this document for details of Input Types specifically relevant to cameras.

If the Panel is going to report to the Remote Monitoring Station using the **Contact ID** format or **Tecom Direct Line** format, then it is necessary to program a REPORT ID for each input.

See Challenger Vers 8 Programming Guide for a complete list of Contact ID messages.

To relate the input to particular area/s you must program the AREA ASSIGNMENT.  
An input **must** have at least one area assigned.

If the input is programmed to activate cameras; only cameras in the area/s assigned to the input will be activated.

**No more input programming is required for Camera "Frame Count input" types or "Camera Film Low input" types.**

If you selected one of the Test Options when programming the System Options, or if the user wishes to use the Access Test option in the User Menu then you may need to program a TEST TYPE for certain inputs.

See: Challenger Version 8 Programming guide or AN2 for more details.

If you require the input to activate the Siren, Strobe, or Camera outputs, or if you require the input to activate a relay etc. then it is necessary to assign the appropriate EVENT FLAGS to the input.

Selected Event Flag

Siren (Event Flag no. assigned in Area D'base)

**Camera (Event Flag no. assigned in Area D'base)**

Enter a suitable input type number  
e.g.

Type 1: Access Alarm (Holdup button)  
Type 2: Secure Alarm (PIRs, Int.Doors)  
Type 7: Camera Suspicion Input (Suspicion button)  
Type 8: Delayed Access Alarm/Holdup at Night (Holdup button)  
Type 9: Reset Delayed Inputs (Button for quick reset & to stop cameras)  
Type 23: Camera 1 Count input.  
Type 48: Camera 1 Film Out input.

Enter an appropriate Report ID number

It will only be necessary to change the default setting if the report ID "25-140, General Alarm" is not suitable.

Enter the number/s of the Area/s to be assigned.

Where there is more than one area assigned, the input is regarded as being in access if one or more of the areas assigned is disarmed, and in secure only if all the areas assigned are armed.

Enter the Test type required.

- 0 No testing required:
- 1 Test during access test:  
e.g. Holdup button
- 2 Test during secure test and when in access:  
e.g. PIRs, Doors.
- 3 Test during secure test:  
e.g. Any device which needs to be auto tested.
- 4 Set Event Flag 13 during Access test:
- 5 Set Pre-Alarm Event Flag during Access test:

Set to YES or NO or Enter an Event Flag number as required

Unique Event Flag number programmed to be activated by the input.

**Set to YES to enable the input to activate the Event flag number specified in the Area Database/s for the area/s assigned to the input.**

Console Warning (No Event Flag number required)

Set to YES to activate the console beepers

Secure Alarm Event Flags 2-5 & 9-12)  
Access Alarm (Event Flag 6, 7 & 13)  
24 Hr Alarm (Event Flag 8)

If the input is to activate an event flag common to other inputs, one or more of these "Pre-defined" Event Flags are selected.

"Siren" and "Event 2 Secure Alarm" are typically set to YES to activate the Siren and Strobe output/s.

If you require all of the Event Flags assigned to the input to be active 24 Hours whenever the input is in alarm, then MAKE ALL EVENTS 24 HOUR must be set to YES.

Set to YES or NO as required

If you require an event to be recorded in history and printed (If printer connected) whenever the input unseals or reseals regardless of alarm condition, then the option PRINT INPUT WHEN UNSEALED must be set to YES.

Set to YES or NO as required

## 8. Program the TIMERS. There are several timing functions which may need the time period changed from the default values.

TIMERS are programmed in Installer Menu Option 6.

Program the relevant timers. Options not relevant to this application are not described here and should be disregarded at this stage.

From the Install Menu select Option 6.

Enter time period as required

User Category Times

See AN16 or Vers 8 Programming guide

Access Test Time (minutes)

-The maximum amount of time that an access test runs

Warning Time (minutes)

-before a test procedure expires

Suspicion Time (seconds)

-Time that cameras continue to operate after a suspicion type input (7, 40 & 47) is resealed.

## 9. If an output is required for a buzzer or lamp etc. to indicate the "film out" condition, program the appropriate SUMMARY EVENT FLAG.

FILMOUTEVENTFLAG is programmed in Installer Menu Option 35: - Summary Event Flags.

Scroll through the options to locate the "Film Out Event Flag" record.

From the Install Menu select Option 35.

The Film Out Event Flag is activated when the frame count for a camera exceeds the programmed "Film Out" level.

Program any event flag number between 17 & 256 as long as it is not used elsewhere in the system.

For convenience you may wish to use the same number as the relay number that will provide the output.

**10. Work out the "Relay Number/s" of the relay/s you wish to program.**  
The relay numbers allocated for the panel and each DGP address are listed in the table opposite.

## RELAY NUMBERING

Challenger Panel	1 to 255
DGP 1	17-32
DGP 2	33-48
DGP 3	49-64
DGP 4	65-80
DGP 5	81-96
DGP 6	97-112
DGP 7	113-128
DGP 8	129-144
DGP 9	145-160
DGP 10	161-176
DGP 11	177-192
DGP 12	193-208
DGP 13	209-224
DGP 14	225-240
DGP 15	241-255

**11. To program the details for each of the relays in your system that will be used to activate cameras, access the Installer Menu Option, "RELAY MAPPING"**

RELAYS are programmed in Installer Menu Option 16: - Relay Mapping.

From the Install Menu select Option 16.

Select a relay number to program.

Enter a Relay Number

Record the Camera Event Flag number that was assigned in the area database that will activate the relay. (if required)

Enter an Event Flag Number

Program the Timezone that will control the relay. (if required)

Enter a Timezone number

If a Timezone has been assigned, select whether the relay is to be held ACTIVE or INACTIVE during the timezone.

Select Active or Inactive

If the relay is required to operate in INVERTED mode.

Select Inverted or Non-Inverted



Input Types for Camera Monitoring

<u>INPUT TYPES</u>		<b>Function when Unsealed</b>		<u>NOTES</u>
		<u>IN ACCESS</u>	<u>IN SECURE</u>	
<b>CAMERA MONITORING</b>				
48 to 55.	CAMERA 1 to 8 FILM OUT INPUTS	Alarm	Alarm	
		<b>Function when Shorted</b>		
		<u>IN ACCESS</u>	<u>IN SECURE</u>	
23 to 26.	CAMERA 1 to 4 FRAME COUNT INPUTS.	Increments Frame count.	Increments Frame count.	No end-of-line resistors necessary. Transition from Open to Short increments frame count by 1. i.e. A Normally Open contact is wired across the input. Camera count inputs <b>MUST</b> be wired to the Challenger Panel and not to DGPs.
36 to 39.	CAMERA 5 to 8 FRAME COUNT INPUTS.			

## SUGGESTED PROGRAMMING SEQUENCE

