DCJ

OPERATING INSTRUCTIONS

INDEX

The manufacturer declines all responsibility for any damage caused by an improper use of the appliances mentioned in this manual; furthermore, the manufacturer reserves the right to modify its contents without any prior notice. The documentation contained in this manual has been collected with great care: the manufacturer, however, cannot take any liability for its use. The same thing can be said for any person or company involved in the creation and production of this manual.

1 Opening and checking the package

 The following procedures should be carried out before connecting to the power supply, unless indicated otherwise.

 Installation should only carried out by skilled technical personnel.

1.1 Contents of the package

When the product is delivered, make sure the package is intact and has no obvious signs of dropping scrapes or scratches. If the package is damaged contact the supplier immediately.

- 1 DCJ keyboard
- 1 external power supply
- 6 telephone cables 6/6 point-to-point, length 150 cm approx.
- 6 RJjack shunt boxes
- this user's manual

Make sure the contents correspond to the materials listed above.

1.2 Opening the package

If the package has no obvious defect due to dropping or abnormal scrapes and scratches, check the materials it contains with the list supplied in the previous paragraph.

The technician will be responsible for disposing of the packaging material by recycling or, in any case, according to the current legislation in the country of use.

1.3 Checking the markings

 Before proceeding with the installation, check the marking labels to make sure the supplied material corresponds to the required specifications as described in the next paragraph. Never, under any circumstances make any changes or connections that are not described in this manual: the use of inappropriate equipment may be very dangerous for the safety of personnel and the system itself.

1.4 Marking Data

 A label, conformed to CE markings, is placed on the lower side of the DCJ keyboard.
It contains the identification code of the model (Barcode EXT3/9).and indicates the serial number of the model (Barcode EXT3/9).
When you are ready to install, check if the characteristics of the keyboard's power supply correspond to the requested ones. The use of unsuitable equipment can be cause of safety hazards to personnel and to the system itself.

2 Description

2.1 Specifications

The DCJ keyboard is a product for professional use in applications for security and surveillance.

In a security system the keyboard is used to control video switching, to manage alarm conditions should they occur and for remote control of digitally controlled receivers.

2.1.1 Keyboard

Backlighted LCD with 4 lines of 20 characters for controlling operations

Ergonomic key configuration

Easy to use: the most commonly used operations are activated by pressing a single key

Telemetry control by joystick

2.1.2 Set up

Complete keyboard on display setup

National language selection

Control of a wide range of high speed domes and receivers

Input and output enabling/disabling can be controlled by each keyboard

Enabling/disabling of groups of keys

Autotest of communication channels

RS485 communication lines.

2.1.3 Security

Buzzer for breaks in communication and alarm

3 password levels, which can be set up individually within each keyboard:

- connection password: requested when the keyboard is switched on, to prevent use by unauthorised personnel;
- alarm reset password: requested when alarm is cleared from the keyboard;
- setup password: requested when setup is required (of either the keyboard or the matrix).

Every password consists of a series of 5 digits and can be disabled if set to 00000.

2.2 Equipment that can be connected to the DCJ keyboard

2.2.1 Video matrix

SM42A, SM82A

SM84A, SM164A

SW328

SW164OSM (with RS232 - RS485 line adapter)

LXRPS42A, LXRPS42TA

LXRPS82A, LXRPS82TA

LXRPS84A

LXRPS164A

2.2.2 Video multiplexer

SP16C

Javelin/Hitron color and B/W model

2.2.3 Telemetry receivers and domes

DTRX1

DTRX3

DTMRX1

DTRXDC

MICRODEC485

Dome Elmo D7720B

Dome Ernitec Saturn

Dome Jvc TK-C675

Dome Panasonic 600 e Panasonic 850

Dome Pelco Spectra e Spectra Lite

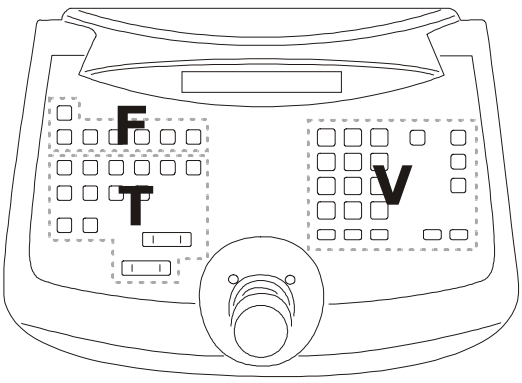
Dome Samsung SCC64-1P

Dome Sensormatic DeltaDome

Dome Star

Dome Vcl VC5S-ORBM.

2.3 Keys and connectors

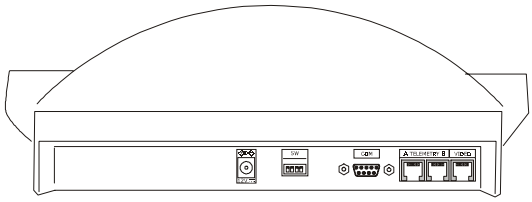


The keys are grouped according to their function:

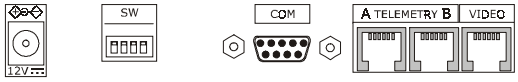
keys for video management ***V***

keys for telemetry management ***T***

function keys ***F***



The DCJ keyboard has three RJ11 connectors on the back of the mechanical part, a power supply connector, dip-switches for setup and a DB9 connector to update the firmware when necessary.



The VIDEO line controls the video system connected to the keyboard. Lines A and B control the first and second telemetry channel respectively.

The dip switches are used to insert or remove the 120 ohm termination load for each of the RS485 lines (*see § RS485 and system types, page 9*)

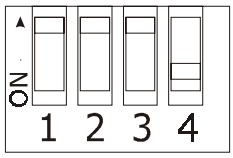
2.4 Second function keys

Some keys (SHIFT, SET, END) can be used to activate second functions if pressed simultaneously with other keys.

For example, SHIFT MENU means: press the SHIFT key followed by the MENU key, keeping SHIFT pressed down. The keys can be released in any order.

2.5 Dip switch

The back of the keyboard has a set of dip-switches that are used to insert/remove the load of the RS485 lines and block keyboard programming from the PC. Refer to *§3.1* Video and telemetry lines*, page 9*, for further information about inserting the line loads.



DIP4: load on Video line	ON: load inserted OFF: load removed
DIP3: load on Telemetry B line	ON: load inserted OFF: load removed
DIP2: load on Telemetry A line	ON: load inserted OFF: load removed
DIP1: internal firmware update	ON: update is possible OFF: update is not possible

3 Communication lines and connections

3.1 Video and telemetry lines

The DCJ keyboard can be used to control a wide range of products, for both video control (video matrixes and multiplexers) and telemetry control (receivers and domes). It is therefore necessary to define the system structure at the keyboard level to achieve efficient communication between the connected devices.

“Video line” means the communication channel intended to control the video devices; “telemetry lines” means the two channels available for telemetry control.

We advise starting with the setup of the single “video line” and after that passing to the setup of the “telemetry lines”.

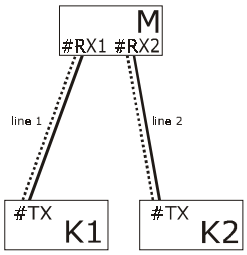
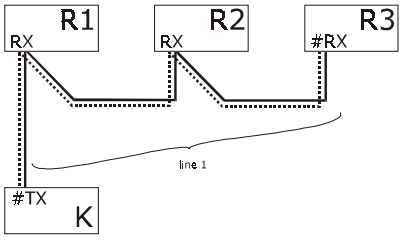
3.2 RS485 and system types

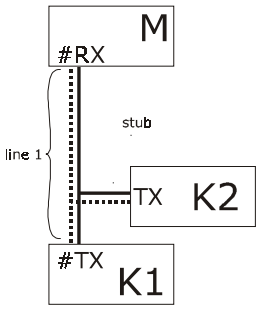
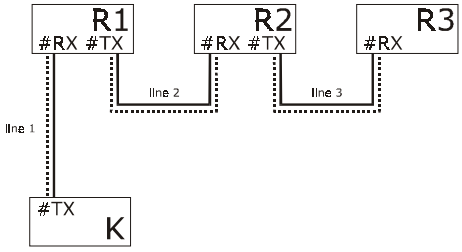
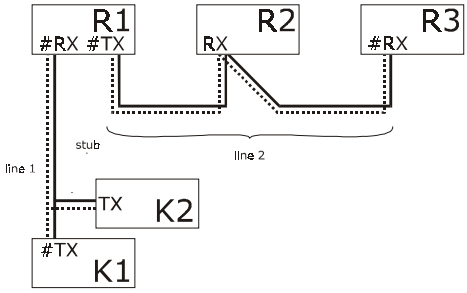
The RS485 communication channels are 2-wire lines whose maximum length from end to end is 1200m.

The termination of the RS483 lines prevents signal reflection along the cable and should be inserted in each of the devices that forms the end of a connection.

Systems can be of different types, therefore the way of terminating the lines will also be different.

In the diagrams shown below, the devices requiring termination are indicated by the # symbol.

Setup	Description	Example
Star / Single lines	For each connection between two devices there should be a separate communication line, with a maximum length of 1200m. All devices should be terminated, since each device is connected to an end of the line	
Backbone	A single line is used, and the transmitters can be placed in any position along it. The two ends of the line (keyboard K and receiver R3 in the example) are terminated; the other devices (R1 and R2) are not terminated. The maximum length of the line is 1200m. The specifications for the RS485 standard allow at least 32 devices to be connected along the same line.	

Setup	Description	Example
Line with stub	A certain number of stubs can be shunted in parallel to the normal RS485 line, for connection to other devices. Since the stubs are not at the ends of the line, they should not be terminated and they should be very short in length (of the order of a couple of metres). The specifications for the RS485 standard allow at least 32 devices to be connected along the same line.	
Devices in a chain	The devices are connected in pairs using single lines. These should be terminated at the ends. This type of setup can only be made when the devices have a separate input (reception) and output (transmission) channel, like the Videotec DTRX1 and DTRX3 receivers. The received signal is sent “clean” to the next device. If one device is blocked, communication is cut off to the devices later in the chain. The maximum total length is equal to the number of lines multiplied by 1200m for each distance.	
Mixed setup	It is possible to set up mixed configurations, always bearing in mind the limits given above: each line can have a maximum length of 1200m each line should be terminated at the ends the stubs should be very short (max. 2m)	

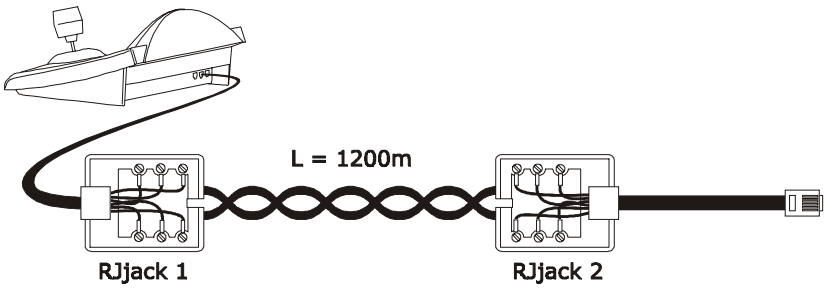
3.3 Standard connection cable

The connection between the DCJ keyboard and the various controlled devices is made only and exclusively using a RS485 serial channel.

When the controlled device does not provide this channel it will be necessary to insert a signal converter (e.g. RS486-RS232 or RS485- Current loop) between the keyboard and the device itself.

Connection with the latest generation of Videotec products (video switchers SM42A, SM82A, video matrix SW328, SM84A, SM164A, etc.) can be made directly using a serial 1.5m telephone cable, which is supplied.

A pair of telephone cables with a pair of RJjack shunt boxes can be used to arrive at distances of up to 1200m using the following connection diagram:



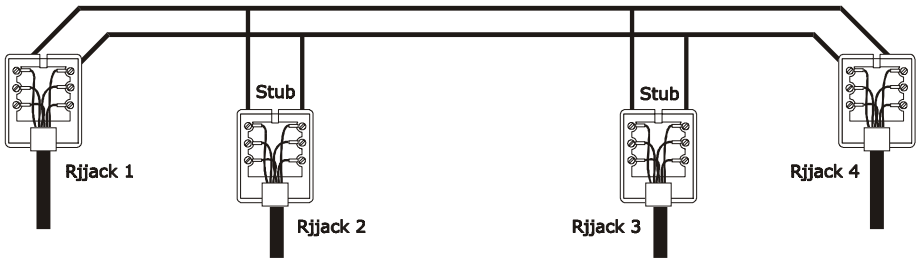
DCJ	RJjack 1	RJjack 2	Device
RS485A	White	Blue	RS485A
RS485B	Yellow	Black	RS485B

3.4 One control keyboard per line

Connection is performed by means of one standard connection cable, which is described in the previous paragraph.

3.5 More than two devices on the same line

The presence of more than one keyboard on the same communication line requires the use of Rjjack boxes, to be connected in the correct way. As specified in *§ 3.2* RS485 and system types*, page 9*, identify the two devices which represent the line ends and correctly terminate them (to terminate the DCJ keyboard, see *§ 2.5* - Dip switch*, page 8*).
Particular attention must be paid for the length of the stubs.



Transmitters (keyboards)		Receivers (video matrixes, telemetry)
White	***RS485A***	Blue
Yellow	***RS485B***	Black

4 Keyboard setup

Programming is carried out on the keyboard display. The following is a description of the procedure to start programming the various menu items shown on the display.

4.1 Keys

To enter setup: SET MENU

To move the cursor within the menus:

choose the line with the joystick

change the value with the joystick

ENTER enter the submenu indicated by the cursor

ESC exit to previous menu

To exit setup: press ESC repeatedly.

4.2 Selecting and inserting values

When a menu allows multiple choices, the selected item is indicated by the * symbol.

If a numeric value is to be inserted, it should be confirmed by ENTER. CLEAR can be used to erase the last digit inserted, and ESC to exit without saving. If the numeric value is invalid, an acoustic signal will warn the operator of the error.

The individual menu items are not displayed when the previous choices make them unnecessary.

4.3 Menu items

Shown on display	Submenu	Description
MAIN MENU		
Language	LANGUAGE Italiano English Francais Deutsch	Choice of menu and message language. The selected language is indicated by the * symbol.
Communications	COMMUNICATIONS Video Telemetry line A Telemetry line B	Definition of devices connected to the keyboard, see *§ 2.2 - Equipment that can be connected to the DCJ keyboard, page 6*
	VIDEO LINE COMMUNICATION Type: xxx Protocol: xxx Badurate: xxx	Parameters for video line; *see § 5* - Video management*, page 22*

Shown on display	Submenu	Description
	TELEM.LINE A COMMUN. Protocol: xxx Connect.: xxx Baudrate: xxx	Parameters for telemetry line A; *see § 6.3* - Communication problems between keyboard and receiver, *page 44*
	TELEM.LINE B COMMUN. Protocol: xxx ConneCt.: xxx Baudrate: xxx	Parameters for telemetry line B; *see § 6.3* - Communication problems between keyboard and receiver, *page 44*
Telemetry lines	TELEMETRY LINES ▶ Change Assignement All on line A All on line B	Assignment of receiver lines; *see § 4.4* - Assigning the telemetry lines, *page 15*
Accepted values	ACCEPTED VALUES Cameras Monitors Functions Multiplexer	Acceptance of requests for cameras, monitors, functions and multiplexers. Acceptance is a very practical way of limiting keyboard operations, without having to make use of further system passwords
	ACCEPTED CAMERAS Set Default Modify list	Accepting the request for individual cameras; *see § 4.5* - Accepting requests for cameras, *page 16*
	ACCEPTED MONITORS Set Default Modify list	Accepting the request for individual monitors *see § 4.6* - Accepting the request for monitors, *page 18*
	ACCEPTED FUNCTIONS Prev./Next : xx Monitor Chg : xx Video Setup : xx Receiv.Setup: xx Alarm Reset : xx Joystick : xx Lenses : xx Autopan/Scan: xx Receiver Chg: xx Relays : xx Wiper/Washer: xx	Accepting the request for functions; *see § 4.8* - Accepting requests for functions, *page 18*
	ACCEPTED MULTIPLEXER Set default Modify list	Accepting the request for individual multiplexers; *see § 4.7* - Accepting the request for multiplexers, *page 18*
Keyboard Number	KEYBOARD ID-NUMBER Number: _ (1/xx)	System identification number of keyboard. Each keyboard in the system should be identified by a different number: the presence of more than one keyboard with the same number could cause communication problems.
Joystick Calibr.	JOYSTICK CALIBRAT.1 Release the joy and press Enter to continue...	Joystick calibration and test *see § 4.9* - Joystick calibration and test, *page 19*
Buzzer	BUZZER Activation Click on keyPress	Activation of warning buzzer; *see § 4.10* - Buzzer, *page 20*

Shown on display	Submenu	Description
	BUZZER Not used On Alarm On Com Fault On Alarm/Com F.	
	KEY CLICK Not used Short Long	
Password	PASSWORD CHANGE Connection Pwd Alarm Reset Pwd Setup Pwd	Definition of keyboard passwords; *see § 4.11* - Password*, page 20*
	CONNECTION PASSWORD Input password: [**]	Concealed password insertion
	CONNECTION PASSWORD Confirm password: [***]	Concealed password confirmation
Other parameters	OTHER PARAMETERS Powersaving Error Messages Lines Autotest Joystick Test Memory Test Display Contrast Setup Reset	
	POWERSAVING Not used Enabled	Power saving puts the keyboard in low consumption mode after one minute of inactivity.
	ERROR MESSAGES Not shown Autom. no Buzzer Autom. with Buzzer With Confirmation	Management of warning and error messages; *see § 4.12* - Warning and error messages*, page 20*
	SERIAL COMMUNIC.TEST ? ----- ? V:OK B:OK A:OK ESC to end	Autotest of serial channels *see § 4.13* - Autotest of serial channels*, page 21*
	JOYSTICK TEST X:0 min:OK max:OK Y:0 min:OK max:OK Z:0 min:OK max:OK	Joystick operation test. The test is described at *§ 4.9* - Joystick calibration and test*, page 19*
	MEMORY TEST Page: xxx/511 ESC to end	Internal memory test, useful in the case of faulty operation and telephone assistance.
	DISPLAY CONTRAST xxx INC/DEC.Change 1.Default 0.Previous ESC.Exit	Changes display contrast: press **INC** and **DEC** to alter contrast. **0** recalls the previous contrast value and **1** recalls the default value.
	KEYBOARD SETUP RESET Do you want to reset to default config? [YES] [NO]	Resets factory default values. The reset operation should be confirmed by the operator.
Save and exit		Saves new settings and exits menu.

4.4 Assigning the telemetry lines

Since two telemetry lines, A and B, are present, it is necessary to determine which is the line (and hence also protocol) of reference when a receiver is requested.

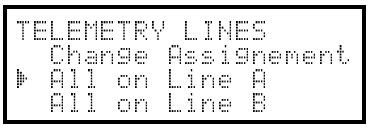
The distinction between lines A and B only has any sense if both lines are used; if at least one is unused any telemetry line assignment setup will be ignored

4.4.1 Default setting

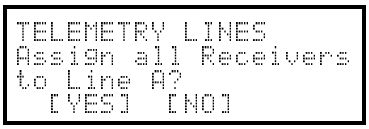
The default setting assigns all receivers to line A: line B is not used.

4.4.2 Assigning all receivers to a single line

It is possible to assign all receivers to a single line in the submenu
TELEMETRY LINES / All on line A - B:



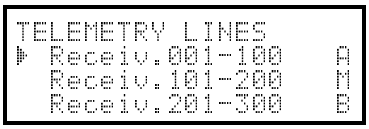
Recall the menu by selecting it with the joystick, and press ENTER.



Select YES with the joystick and confirm with ENTER.

4.4.3 Modifying the list

The modify list menu displays the various sets of receivers to be set up:



It is important to note the three specific symbols on the right of the display:

A indicates that all receivers in the group are connected to line A

B indicates that all receivers in the group are connected to line B

M indicates that some receivers in the group are connected to line A, and some to line B.

There are 999 receivers available, although probably only a smaller number will be present in the system.

The display in the example shows three sets of receivers: the first from number 1 to number 100; the second from number 101 to 200, the third from 201 to 300.

The other groups of receivers can be selected by moving the joystick ▲▼.

The cursor ▶ shows the set of receivers being set up:

- to assign all receivers in the set to ***line B*** press 1
- to assign all receivers in the set to ***line A*** press 0.

- If the set of receivers is to be defined more precisely (some receivers in the set are to be assigned to line A and some to line B), press **ENTER** to subdivide the set shown into smaller sets.

- Press **ESC** to return to the previous display menus.

4.5 Accepting requests for cameras

Accepting requests for cameras allows keyboard use to be limited solely to authorised input videos without having to use further system passwords. We recommend defining the accepted input video groups for each keyboard only after clearly defining the system configuration.

Accepted cameras makes use of a two-level menu:

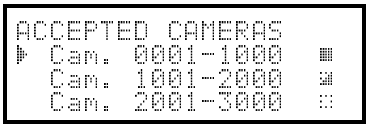
4.5.1 Default setting

The default setting allows control of all cameras, erasing any previously defined setting.

4.5.2 Modifying the list

Modify list allows more precise definition of the list of cameras that can be requested from the keyboard.

The modify list menu displays the various sets of cameras to be set up:



It is important to note the three special symbols on the right of the display:

⁞ indicates that no camera in the corresponding set is accepted

▟ indicates that some cameras in the set are accepted and some are not

▩ indicates that all cameras in the set are accepted.

There are 9999 cameras available: normally a much smaller set of cameras will be used but the possibility of selection over a wide interval is useful for video management with large sized devices where the “zone” feature is available.

The display in the example shows three sets of cameras: the first from number 1 to number 1000; the second from number 1001 to 2000, the third from 2001 to 3000.

The other groups of cameras can be selected by moving the joystick ⬮.

The cursor ▶ shows the set of cameras being set up:

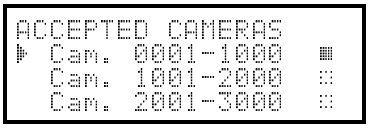
- to ***accept the request for all the cameras*** in the set press **1**.

- to ***disable all the cameras*** in the set press **0**.

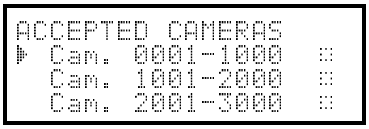
- if the set of accepted cameras is to be defined more precisely (some cameras in the set should be accepted and others not), press **ENTER** to subdivide the set shown into smaller sets.

- press **ESC** to return to the previous display menus.

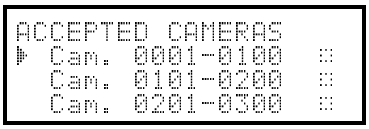
The following example shows how to accept cameras 1 to 7, and at the same time disable access to all the others:



All cameras in the 1-1000 set are accepted, while those from 1001 to 3000 are not. Select the 1-1000 set with the joystick ▲▼ and press **0** to completely disable all cameras.

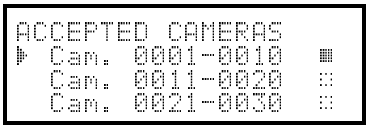


The icons on the right of the display show that none of the cameras in the sets from 1 to 3000 are now available on request. Select the 1-1000 set with the joystick ▲▼ and press **ENTER** to pass to a more precise definition level.



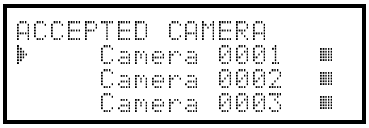
The sets shown on the display are now of 100 cameras each. None of the cameras in the sets are accepted.

Select the 1-100 set with ▲▼ and press **ENTER** to pass to a more precise definition level.



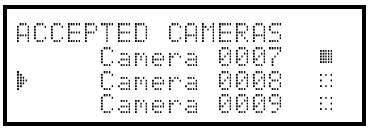
Select the 1-10 set and press **1** to accept all cameras in the set from 1 to 10.

Then press **ENTER** to define acceptance at the individual camera level.

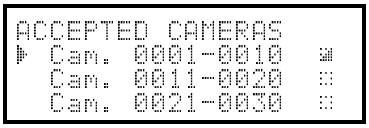


Since all cameras from 1 to 10 are now accepted, it is necessary to run through the list with the joystick to disable cameras 8,9,10, so as to satisfy the requirements of the example.

Scroll the list with ▲▼ until camera 8 is reached.



Press **0** to disable camera 8. Continue in the same way to disable cameras 9 and 10.



After completing modification, pressing **ESC** will return to the previous menu and then again on up to the main menu.

The icon of the 1-10 set has now been changed to ▟ to show that only some of the cameras in the group are now accepted.

4.5.3 Warning message

If a disabled camera is requested, the display will show a message warning the operator that the request is not authorised:

4.6 Accepting the request for monitors

Accepting the monitors is used to prevent an unauthorised operator from operating monitors that are not within his duties.

4.6.1 Default setting

The default setting allows control of all monitors, erasing any previously defined setting.

4.6.2 Modifying the list

The procedure for accepting and disabling the monitors is the same as that just described for the cameras (*see § 4.5 - Accepting requests for cameras, page 16*).

Usually 99 monitors can be selected from the keyboard.

4.7 Accepting the request for multiplexers

Accepting the multiplexers is used to prevent an unauthorised operator from operating multiplexers that are not within his duties.

4.7.1 Default setting

The default setting allows control of all multiplexers, erasing any previously defined setting.

4.7.2 Modifying the list

The procedure for accepting and disabling the multiplexers is the same as that just described for the cameras (*see § 4.5* - Accepting requests for cameras*, page 16*).

Usually 39 multiplexers can be selected from the keyboard.

4.8 Accepting requests for functions

Each operator can be enabled (or not) to carry out specific operations from the keyboard.

These are divided into groups of functions and are:

Prev/Next: enabling camera selection with the **DEC** and **INC** keys; since these keys are able to cause a break in the automatic sequence it may be necessary to disable them if this likelihood is to prevented.

Monitor Chg.: enabling monitor change; if an operator has a single monitor, this can be frozen so that it cannot be changed any more.

Video Setup: enabling video device (switcher or matrix) setup; even if enabled this can be subject to insertion of a password

Receiv.Setup: enabling dome or telemetry receiver setup; if enabled this can also be subject to a password

Alarm Reset: enabling reset of video device alarms; if enabled this can also be subject to a password

Joystick: enabling use of joystick

Lenses enabling control of lens functions in telemetry receivers

Autopan/Scan: enabling changes to pan & tilt /dome movement by sending autopan and scan type commands

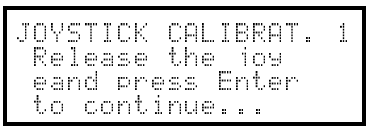
Receiver Chg: enabling change to receiver number associated with a camera

Relays: enabling relays control

Wiper/Washer: enabling wiper and washer control.

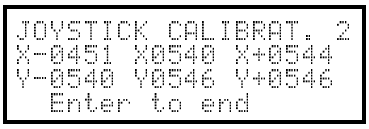
4.9 Joystick calibration and test

Joystick calibration is process which allows correct operation of the device. Normally it is only done at the production stage and recalibration by the operator should never be necessary. If the joystick behaves incorrectly (if, for example, a pan or tilt direction stays active when the joystick is at rest) it may be necessary to carry out the calibration procedure.



First stage: with the joystick at rest (released) press **ENTER**. This will specify the point at rest. Pressing **ESC** will pass to testing without continuing with calibration.

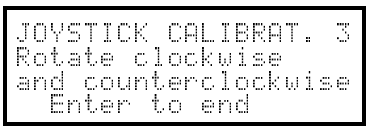
After pressing **ENTER**, move the joystick without forcing it until it reaches its maximum extension upwards, downwards, to the right and to the left.



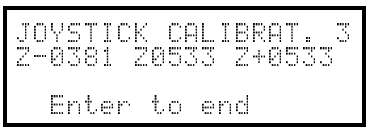
During movement the values for certain readings will appear on the display. These are of no interest to the operator unless there is faulty operation, in which case they may be useful for telephone assistance. The joystick should be moved until the values given for X−, X+, Y− and Y+ (values that show the limit points to the left, right, bottom and top) do not change when the joystick is moved. The values shown in the centre of the display change continually when the joystick is moved.

Pressing **ENTER** will pass to the next stage of setup.

Pressing **ESC** will pass to testing without completing calibration.



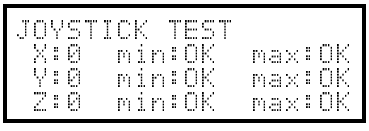
During normal operation, activation of the zoom will correspond to rotation of the joystick.



Rotate the joystick until the two extremes are reached several times, until the values shown by Z− and Z+ (limit points for the counterclockwise and clockwise directions) do not change.

Pressing **ENTER** will complete setup and pass to testing, pressing

ESC will pass to testing without recalibrating the zoom.



Joystick test: after calibration this enables the operator to check whether calibration was successful.

With the joystick at rest the values shown by X:, Y: and Z: should be equal to 0. Move the joystick until the limit is reached in the four directions and rotate it to the limit in the clockwise and counter-clockwise directions. If, after these operations, the three min: parameters and the three max: parameters show OK calibration was successful.

Otherwise it is advisable to recalibrate the joystick since a setup error in the joystick will affect its operation.

4.10 Buzzer

The keyboard is equipped with a buzzer for acoustic signals when abnormal situations occur.

The buzzer can be enabled to:

- recognise video device (switcher or matrix) alarm status
- recognise a break in communications with the video device
- give a small warning click when a key is pressed.

It should be noted that alarm status and breaks in communication are only available for some of the video devices available for connection: SM42A, SM82A, SM84A, SM164A, SW164OSM, SW328.

4.11 Password

Keyboard security is managed by three password levels:

- connection password: requested when the keyboard is switched on, it is used to prevent improper use of the keyboard by unauthorised personnel
- setup password: requested whenever it is necessary to carry out a setup. For connection with certain video devices (switchers SM42A / SM82A and matrix SM84A / SM164A) the password is not requested since it is managed directly at the video device level: in this case it should be inserted as described in the manual for the controlled device
- reset alarm password: requested when an alarm has to be cleared.

Passwords are defined at the individual keyboard level, and may therefore differ for each operator.

They can be disabled (default status, when leaving the factory) by setting to 00000.

 Warning: it is not possible to retrieve a setup password that is lost or forgotten.

4.12 Warning and error messages

The keyboard will advise the operator of a requested operation failure by messages on the display. These messages can be set up in four different ways:

- disabled messages: messages are not shown
- automatic message without warning beep: the message will be shown for about 3 seconds and will then disappear automatically without the acoustic signal; it can be removed in advance by pressing ESC.
- automatic message with warning beep: the message will be shown for about 3 seconds and is accompanied by a beep; it will disappear automatically and can be removed by pressing ESC.
- message with confirmation: the message is accompanied by a warning beep and only disappears when the operator presses ESC.

4.13 Autotest of serial channels

In the case of faulty operation or to check the keyboard, it is possible to carry out a simple test to make sure the communication channels to the video device and the telemetry are working perfectly.

Disconnect any devices connected to the V, A and B lines and make up the following test cable, using two telephone cables and two RJjack boxes supplied with the keyboard:

Phone cable	RJjack 1	RJjack 2	Phone cable
RS485A	White	White	RS485A
RS485B	Yellow	Yellow	RS485B

Warning: this cable is different from the standard connection cable described in *§ 3.3 - Standard connection cable, page 10*

4.13.1 Autotest procedure

1) Connect the cable to connectors A and B
2) Connect the cable to connectors A and V
3) Connect the cable to connectors B and V.

```
SERIAL COMMUNIC.TEST
    A <---> B
 V:?? B:OK A:OK
ESC to end
```

The display shows A <---> B.
This means that input and output communication lines for the two lines are functioning correctly.

```
SERIAL COMMUNIC.TEST
    A ----> B
 V:OK B:?R A:T?
ESC to end
```

Other types of message mean that the connecting cable is incorrect or that the test lines are not working. In the example channel A is able to transmit and B receives correctly, but communication is only in one direction.

```
SERIAL COMMUNIC.TEST
    V <---> B
 V:OK B:OK A:OK
ESC to end
```

The third line shows the results of the test: V:, B: and A: stand for the three lines - Video, Telemetry B and Telemetry A respectively.

For each line, A, B and V, one of the following messages will be shown:

??: the line is not working and is unable to transmit or receive data

T?: the line is able to transmit but not receive

?R: the line receives but is unable to transmit

OK: the line transmits and receives correctly.

5 Video management

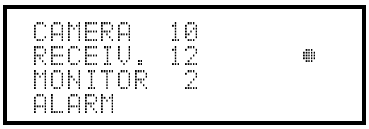
The back of the keyboard has a VIDEO connector to control the video devices. It is necessary to set up both the keyboard and the controlled device correctly, since both the chosen communication protocols and speeds (baud rate) should be the same.

If these parameters are set up incorrectly, communication between the devices is impossible.

5.1 Description of the display

The DCJ keyboard display shows all the information required by the operator.

A typical display is as follows:



The four rows show, respectively:

CAMERA: the last camera selected by the operator.
If an icon appears, and not a number, this means that specific functions have been requested:

- icon : next camera expected by the sequence
- icon : previous camera expected by the sequence
- icon : automatic sequence

RECEIVER: telemetry receiver associated with camera; all telemetry operations are directed to this receiver

MONITOR: active monitor; all video operations are directed to this monitor

Message line (ALARM in the example): alarm messages and the keys pressed are shown on this line.

The symbol stands for the joystick position at rest and changes as the joystick moves.

5.2 Video: fundamental concepts

The DCJ keyboard allows two fundamental types of operations for controlling the video signal:

- selection of a camera on the active monitor
- starting a preset automatic sequence on the active monitor

All operations requested by the keyboard refer to the active monitor, which is always shown on the display.

Camera selection is subject to the setup of accepted cameras. If a camera is not accepted for the request, the selection attempt is accompanied by an error message; *see § 4.5.3* - Warning message*, page 17*.

Note that not all the functions are accepted by the different video devices (switchers and matrix). When a requested function is not allowed for a video device, an error message warns the operator that it is impossible to carry out the command.

5.2.1 Direct selection of a camera

Press **CAM** followed by the camera number and confirm with **ENTER**.

For example: **CAM** **1** **2** **ENTER** selects camera 12 on the active monitor.

When possible, insertion is completed automatically without waiting for the **ENTER** key.

5.2.2 Selecting the previous/next camera

The **DEC** and **INC** keys select, respectively, the previous and next cameras as set up in the automatic sequence preset at the video device level. If the automatic sequence is in progress, the first time the **DEC** and **INC** keys are pressed, it will be halted.

The **DEC** and **INC** keys can be disabled and are managed the most recent versions of the video devices (switchers SM42A, SM82A and matrix SM84A, SM164A).
If the keys are pressed for the other video devices, they will be ignored.

5.2.3 "Views"

Views can be used to carry out a series of four operations by pressing only one key:

- selection of a new active monitor
- selection of a camera on the new active monitor
- selection of the receiver associated with the camera
- scan operation on a pan & tilt position that is already stored in the receiver.

If the views are set up correctly this will speed up operations by making 10 preset camera/monitor/receiver/scan operations available to the operator.

The use of views is especially useful in alarm situations: if key **1** is associated with camera 12 (which usually corresponds to receiver 12), monitor 3 and scan 5, just pressing key **1** will replace the sequence

MON **3** **ENTER** **CAM** **1** **2** **ENTER** **RECEIV** **1** **2** **ENTER** **SCAN** **5** **ENTER**.

By pressing the key the operator will therefore be able to quickly recall a preset position defined on a monitor.

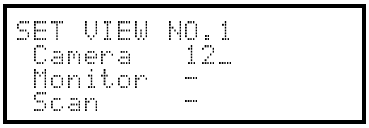
Defining the views

Views are set up by pressing three keys simultaneously, from **SHIFT** **SET** **0** to **SHIFT** **SET** **9**, if the operator is authorised to set up the views.

The display shows the current setup of the view for about one second, and then passes to the request for new parameters:

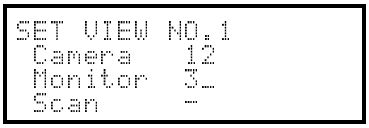
```
SET VIEW NO.1
 Camera   1
 Monitor  -
 Scan     -
```

The display in the example illustrated here shows that when key 1 is pressed, this is a request for camera 1 on the active monitor (the - symbol means that no monitor in particular is requested for the operation) and there is no request for a scan for the pan & tilt associated with the camera (the - symbol next to the word Scan).



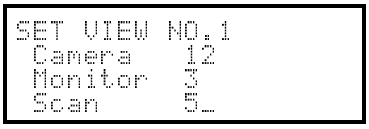
Inserting the camera.

Insert a number or press **ENTER** to confirm the previously defined number.



Inserting the monitor.

Insert a number or press **ENTER** to confirm the previously defined number. If the number 0 is inserted this means the active monitor will not be changed when the view is requested.



Inserting the scan position.

Insert a number or press **ENTER** to confirm the previously defined number. If the number 0 is inserted this means no scan operation will be requested when the view is requested.

Requesting the views

Press a key from **0** to **9** to request the corresponding view.

Erasing the customised views

Press keys **SHIFT** **SET** **CLEAR** simultaneously.

The default settings for the views can be used to recall cameras 1 to 9 directly without changing the active monitor and without making scans. The **0** recalls camera 10.

5.2.4 Receivers associated with the cameras

To each camera is associated a telemetry receiver.

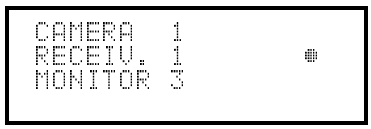
It is possible for one receiver to be present for each camera and this receiver is assigned permanently at the system installation stage. When the camera-receiver association has been defined it should never be changed unless there are changes to the system itself.

The installation procedure normally expects the assignment of a receiver number corresponding to that of the video input (for example, camera number 10 is controlled by receiver number 10), but the assignment may be more flexible.

Every time a camera has been requested and following this selection a new receiver number is requested, this receiver number will be “remembered” by the keyboard. If requesting a different receiver number from the pre-assigned number is not to be allowed, we advise disabling the setup menu option: `Accepted values / Functions / Receiv.chg`

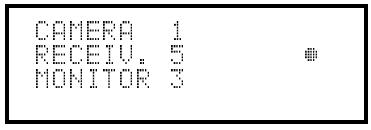
For example:

CAM **1** **ENTER**



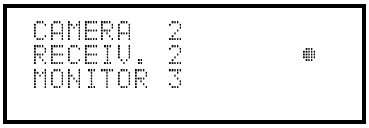
Camera 1 has been requested. The display shows that the receiver currently associated with this camera is number 1.

RECEIV **5** **ENTER**



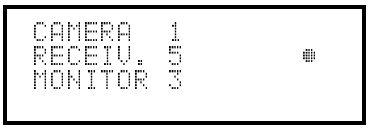
If the operator is authorised to do so, he can assign another receiver number to the camera; if not the display shows an error message.

CAM 2 ENTER



Camera 2 has been requested, and the display shows that it is currently associated with receiver 2.

CAM 1 ENTER



Following the new request for camera 1 the last receiver associated with camera 1 is shown.

5.3 Video matrix SM84A and SM164A

5.3.1 Description

Matrix SM84A and SM164A are products for professional use in applications for security and surveillance and dedicated to the management of video signals. The SM84A and SM164A models differ only in the number of possible video input connections, 8 and 16 respectively; there are four video outputs, one of which can be managed directly by a VCR.

As well as the usual switching, alarm management and on screen menu programming operations, the SM84A / SM164A matrix is equipped with an optional auxiliary line that can be used to control the telemetry or multiplexer units. Refer to the matrix manual for further information on this subject.

5.3.2 Connexion

Cable

The communication cable is standard, as described in *§ 3.3* - Standard connection cable*, page 10*.

Matrix settings

The new generation matrix SM84A / SM164A can be controlled by different types of keyboard and therefore emulates the respective protocols: to control the switcher with the DCJ keyboard the MACRO protocol with baud rate 38400 should be used.

Set the dip switches in the matrix as required (all dips are OFF, with the exception of Macro Protocol, baud rate 38400, programming).

Keyboard settings

While the keyboard is being set up, the `COMMUNICATION / VIDEO LINE` submenu should be set as follows:

```
VIDEO LINE COMMUNIC.
  Type:      8/4
  Protocol: Macro
  Baudrate: 38400
```

Control of a SM84A matrix

```
VIDEO LINE COMMUNIC.
  Type:     16/4
  Protocol: Macro
  Baudrate: 38400
```

Control of a SM164A matrix

The presence of a maximum of four keyboards connected to the matrix means it is necessary to define a different identification number for each one (from 1 to 4).

Operational test

If the keyboard is connected directly with the switcher set up in this way using the telephone cable supplied, it should be possible to switch the input videos immediately:

- press **MON** **1** **ENTER** to select monitor 1
- press **CAM** **1** **ENTER**, **CAM** **2** **ENTER**, to select the cameras.

5.3.3 Video device setup

The setup procedure is described in the video device's instruction manual.

Press SET MON to enter setup, and insert setup password if it has been enabled.

5.4 Switchers SM42A and SM82A

5.4.1 Description

Switchers SM42A and SM82A are products dedicated to the management of video signals. The SM42A and SM82A models differ only in the number of possible video input connections, 4 and 8 respectively; there are two video outputs, one of which can be managed directly by a VCR.

As well as the usual switching, alarm management and on screen menu programming operations, the SM42A / SM82A switcher is equipped with an optional auxiliary line that can be used to control the telemetry or multiplexer units. Refer to the switcher manual for further information on this subject.

5.4.2 Connection

Cable

The communication cable is standard, as described in *§ 3.3* - Standard connection cable*, page 10*

Switcher settings

The new generation switcher SM42A / SM82A can be controlled by different types of keyboard and therefore emulates the respective protocols: to control the switcher with the DCJ keyboard the MACRO protocol with baud rate 38400 should be used.

Set the dip switches in the switcher as required (all dips are OFF, with the exception of Macro Protocol, baud rate 38400, programming).

Keyboard settings

While the keyboard is being set up, the COMMUNICATION / VIDEO LINE submenu should be set as follows:

```
VIDEO LINE COMMUNIC.
  Type:      4/2
  Protocol: Macro
  Baudrate: 38400
```

Control of a SM42A switcher

```
VIDEO LINE COMMUNIC.
  Type:      8/2
  Protocol: Macro
  Baudrate: 38400
```

Control of a SM82A switcher

The presence of two keyboards connected to the switcher means it is necessary to define two different identification numbers (from 1 to 4).

Operational test

If the keyboard is connected directly with the switcher set up in this way using the telephone cable supplied, it should be possible to switch the input videos immediately:

- press MON 1 ENTER to select monitor 1
- press CAM 1 ENTER, CAM 2 ENTER, to select the cameras.

5.4.3 Video device setup

The setup procedure is described in the video device's instruction manual.

Press SET MON to enter setup, and insert setup password if it has been enabled.

5.5 Video matrix Linxs LXRPS84A and LXRPS164A

5.5.1 Description

Matrix LXRPS84A and LXRPS164A are products for professional use in applications for security and surveillance and dedicated to the management of video signals. The LXRPS84A and LXRPS164A models differ only in the number of possible video input connections, 8 and 16 respectively; there are four video outputs, one of which can be managed directly by a VCR. They are used to control the usual switching, alarm management and on screen menu programming operations. Refer to the matrix manual for further information on this subject.

5.5.2 Connection

Cable

The communication cable is standard, as described in *§ 3.3* - Standard connection cable*, page 10*.

Matrix settings

The baud rate of the matrix can be selected by the dip switch SW1 inside the matrix:

- dip 6 off: 9600 baud (default status)
- dip 6 on: 1200 baud

Operations to modify the baud rate should be carried out after disconnecting the power supply to the matrix. Refer to the respective manual.

Keyboard setting

While the keyboard is being set up, the COMMUNICATION / VIDEO LINE submenu should be set as follows:

```
VIDEO LINE COMMUNIC.
  Type:      8/4
  Protocol: Linxs
  Baudrate: 9600
```

Control of a LXRPS84A matrix

the baud rate is normally 9600 baud

```
VIDEO LINE COMMUNIC.
  Type:     16/4
  Protocol: Linxs
  Baudrate: 9600
```

Control of a LXRPS164A matrix

the baud rate is normally 9600 baud

Even in the presence of more than one keyboard connected to the matrix, the identification number of each keyboard is of no importance.

Operational test

If the keyboard is connected directly with the matrix set up in this way using the telephone cable supplied, it should be possible to switch the input videos immediately:

- press MON 1 ENTER to select monitor 1
- press CAM 1 ENTER, CAM 2 ENTER, to select the cameras.

5.5.3 Video device setup

Connect a camera to input no.1 and a monitor to output no.1, as specified in the video device's instruction manual.

Press SET MON to start the setup then insert the setup password if it has been enabled.

Keyboard's display shows the mode change:

Key ESC: setup end

Joystick ▲●▼: choice of a menu line

Joystick ◄●►: enter submenus and change of values

Key SEQ: confirm choice when this is necessary

Keys 1 .. 8: direct value (ie. during password change)

5.6 Switchers Linxs LXRPS42A and LXRPS82A

5.6.1 Description

Switchers LXRPS42A and LXRPS82A are products for professional use in applications for security and surveillance and dedicated to the management of video signals. The LXRPS42A and LXRPS82A models differ only in the number of possible video input connections, 8 and 4 respectively; there are two video outputs, one of which can be managed directly by a VCR. They are used to control the usual switching, alarm management and on screen menu programming operations. Refer to the switcher manual for further information on this subject.

5.6.2 Connection

Cable

The communication cable is standard, as described in *§ 3.3* - Standard connection cable*, page 10*.

Switcher settings

The baud rate of the switcher can be selected using the bump contact JP1 inside the switcher:

- bump contact open: 9600 baud (default status)
- bump contact shorted: 1200 baud

Operations to modify the baud rate should be carried out after disconnecting the power supply to the switcher. Refer to the respective manual.

Keyboard settings

While the keyboard is being set up, the `COMMUNICATION / VIDEO LINE` submenu should be set as follows:

```
VIDEO LINE COMMUNIC.
  Type:      4/2
  Protocol: Linxs
  Baudrate: 9600
```

Control of a LXRPS42A matrix

the baud rate is normally 9600 baud

```
VIDEO LINE COMMUNIC.
  Type:      8/2
  Protocol: Linxs
  Baudrate: 9600
```

Control of a LXRPS82A matrix

the baud rate is normally 9600 baud

Even in the presence of more than one keyboard connected to the switcher, the identification number of each keyboard is of no importance.

5.6.3 Operational test

If the keyboard is connected directly with the switcher set up in this way using the telephone cable supplied, it should be possible to switch the input videos immediately:

- press **MON** **1** **ENTER** to select monitor 1
- press **CAM** **1** **ENTER**, **CAM** **2** **ENTER**, to select the cameras.

5.6.4 Video device setup

Connect a camera to input no.1 and a monitor to output no.1, as specified in the video device's instruction manual.

Press SET MON to start the setup then insert the setup password if it has been enabled.

Keyboard's display shows the mode change:

Key ESC: setup end

Joystick ▲●▼: choice of a menu line

Joystick ◄●►: enter submenus and change of values

Key SEQ: confirm choice when this is necessary

Keys 1 .. 8: direct value (ie. during password change)

5.7 Video matrix SW328

5.7.1 Description

Matrix SW328 is a product for professional use in applications for security and surveillance and dedicated to the management of video signals. It can be used to control 32 input videos; there are eight video outputs, one of which can be managed directly by a VCR. It is used to control the usual switching and alarm management operations. Refer to the matrix manual for further information on this subject.

5.7.2 Connection

Cable

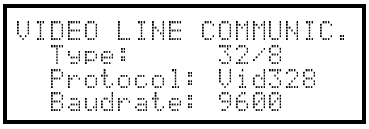
The communication cable is standard, as described in *§ 3.3* - Standard connection cable*, page 10*.

Matrix settings

No setting is necessary.

Keyboard settings

While the keyboard is being set up, the COMMUNICATION / VIDEO LINE submenu should be set as follows:



Control of a SW328 matrix

The baud rate is fixed at 9600 baud.

The presence of more keyboards connected to the switcher means it is necessary to define a different identification number for each (from 1 to 8).

Operational test

If the keyboard is connected directly with the switcher set up in this way using the telephone cable supplied, it should be possible to switch the input videos immediately:

- press MON 1 ENTER to select monitor 1
- press CAM 1 ENTER, CAM 2 ENTER, to select the cameras.

Warning! Matrix SW328 can be set up so as to exclude control by the keyboard during certain periods of the day or in specific situations. In this case switching will be impossible. Refer to the respective manual.

5.7.3 Matrix setup

A remote keyboard can only set date and time on matrix SW328

To change date and time press SET MON.

Key ENTER: move the cursor to the next position

Key CLEAR: move the cursor to the previous position

Keys INC / DEC: increase/decrease the value.

5.8 Video matrix SW164OSM

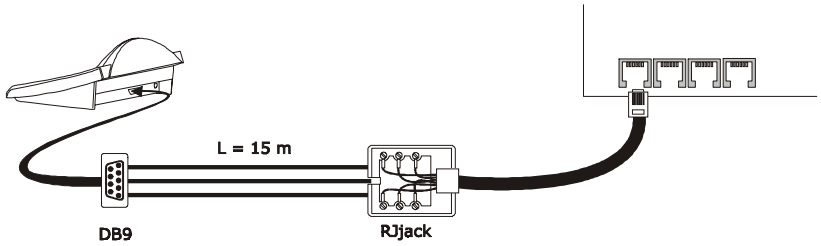
5.8.1 Description

Matrix SW164OSM is a product for professional use in applications for security and surveillance and dedicated to the management of video signals. It can be used to control 16 input videos; there are four video outputs, one of which can be managed directly by a VCR. It is used to control the usual switching and alarm management operations. Refer to the matrix manual for further information on this subject.

5.8.2 Connection

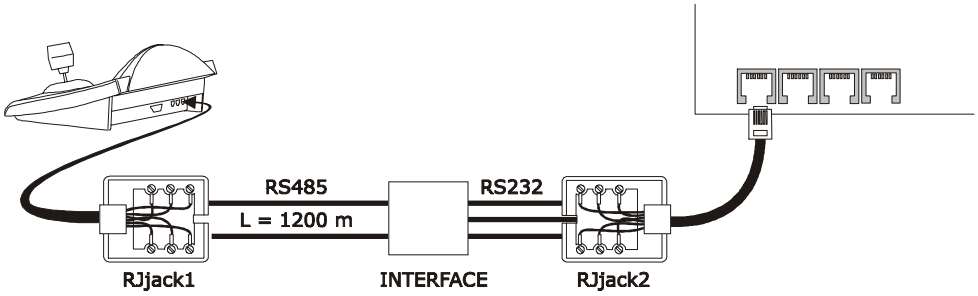
Cable

The connection between the matrix and the keyboard is made using an RS232 channel, which limits its length to about 15 metres. It is necessary to create a connection cable, which is inserted between DB9 on the back of the keyboard and one of the RJ11 connectors on the back of the matrix.



DCJ	DB9	RJjack	SW164OSM
RX	2	yellow	TX
TX	3	white	RX
GND	5	red	GND

Alternatively, it is possible to use RS485-RS232 interfaces, which allow a maximum distance between keyboard and matrix of 1200 metres. In this case the connection diagram is as follows:



DCJ	RJjack 1	Interface		RJjack2	SW164OSM
		IN	OUT		
RS485A	White	A	RX	yellow	TX
			TX	white	RX
RS485B	Yellow	B	GND	red	GND

Matrix settings

Inside the matrix, both jumpers JP1 and JP2 should be set up for RS232 type communication, as shown in the drawing.

Dip switch SW1 is used to select the baud rate:

Baudrate	dip 3	dip 4
9600 baud	ON	ON
1200 baud	OFF	ON

Refer to the respective manual for further information.

Keyboard settings

While the keyboard is being set up, the COMMUNICATION / VIDEO LINE submenu should be set as follows:

```
VIDEO LINE COMMUNIC.
  Type:      16/4
  Protocol: VideoOSM
  Baudrate: 9600
```

Control of a SW164OSM matrix.

Even in the presence of more than one keyboard connected to the matrix, the identification number of each keyboard is of no importance.

Operational test

If the keyboard is connected directly with the switcher set up in this way using the telephone cable supplied, it should be possible to switch the input videos immediately:

- press MON 1 ENTER to select monitor 1
- press CAM 1 ENTER, CAM 2 ENTER, to select the cameras.

5.8.3 Matrix setup

Connect a camera to input no.1 and a monitor to output no.1, as specified in the video device's instruction manual.

Press SET MON to start the setup then insert the setup password if it has been enabled.

Keyboard's display shows the mode change:

```
      MATRIX
      SETUP

          ESC to end
```

Key ESC: setup end

To maintain compatibility to previous keyboards the usual meaning of DCJ keys was in a few cases changed.

The following table shows the indications read on monitor during setup, the corresponding DCS2/KEYPLUS keys, and the new keys used on DCJ:

On screen menu	Meaning	DCS2 KEYPLUS	DCJ
numbers 1..9	choice of cameras 1..9	1 .. 9	1 .. 9
number 0	choice of camera 10	0	0
numbers 11..16	choice of cameras 11..16	-/-- 1 0 .. -/-- 1 6	SET 0 .. SET 6
4 (id-text menu only)	move cursor up	4	Joystick Up or 4
9 (id-text menu only)	move cursor down	9	Joystick Down or 9
8 (id-text menu only)	move cursor left	8	Joystick Left or 8
0 (id-text menu only)	move cursor right	0	Joystick Right or 0
PROG	PROG key	PROG	MENU
ENT	ENTER key	ENTER	ENTER
CLR	CLEAR key	CLEAR	CLEAR
M/A	Automatic sequence	M/A	SEQ
↑ (arrow up)	**previous/increase**	▲	INC
↓ (arrow down)	**next/decrease**	▼	DEC

5.9 Video multiplexer Javelin/Hitron

5.9.1 Description

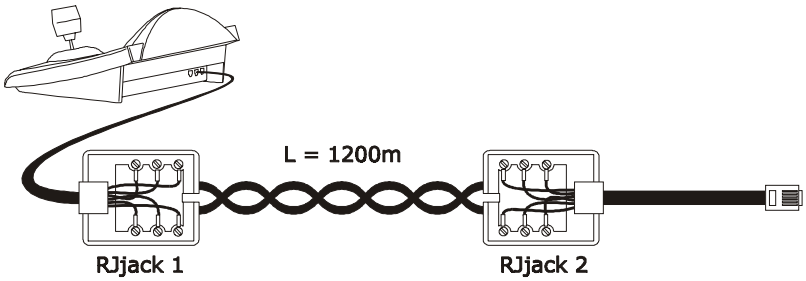
The Javelin/Hitron multiplexer allows the connection of 16 input videos, which are digitalized and shown as a composite image at output. A spot service monitor supplies the display of one of the inputs.

Communication from keyboard to multiplexer is one-way. It is necessary to determine whether the connected multiplexer is a black & white or colour model, since the specifications and protocols are different in the two cases.

It is also possible to control the multiplexer indirectly, using a new generation video matrix from the SM series (SM42A, SM82A, SM84A, SM164A). This type of control is described in *§ 5.11 - Controlling the multiplexer using a video device, page 41*.

5.9.2 Direct connection

Cable



DCJ	RJjack 1	RJjack 2	JAVELIN
RS485A	White	Black	RS485A
RS485B	Yellow	Green	RS485B

The connection is of the RS485 type (one-way) and the maximum distance between keyboard and multiplexer is 1200 metres.

Multiplexer settings

The Javelin multiplexer is available in two versions that differ in their control protocol.

It can only be set up using the local multiplexer keyboard.

See the respective manual.

Keyboard settings

While the keyboard is being set up, the COMMUNICATION / VIDEO LINE submenu should be set as follows:

```
VIDEO LINE COMMUNIC.
  Type:      Mux
  Protocol:  Jav. Col
  Baudrate:  9600
```

Control of a Javelin/Hitron multiplexer

It is necessary to specify whether the multiplexer is a colour model (Jav.Col) or black & white (Jav.B/W).
Four baud rate values are available.

It is only possible to connect one keyboard to each Javelin multiplexer, and therefore the identification number of the keyboard is of no importance. More than one multiplexer can be controlled by the same keyboard, as long as they are identified by different unit numbers.

Operational test

If the keyboard is connected directly with the multiplexer set up in this way using the cable as indicated above, it should be possible to switch the input videos immediately:

- press MON 1 ENTER to select multiplexer unit 1
- press CAM 1 ENTER, CAM 2 ENTER, to select the input videos.

Each command sent by the keyboard corresponds to the lighting up of an LED on the local multiplexer keyboard.

Warning! If the number of the multiplexer unit does not coincide with the commands sent from the keyboard, they will be ignored.

5.9.3 Dedicated functions

As well as the normal procedure for selecting input videos, the Javelin/Hitron multiplexer is equipped with numerous other functions that can be activated by pressing key combinations, and that correspond to the keys present on its local keypad.

The MON key is used to change the number of the unit responding to the command.

Only some of the functions given below are available for both models of the multiplexer. Refer to the multiplexer manual for further information.

SHIFT CAM live record, SET CAM vcr, END CAM spot monitor

ENTER select, SET ENTER double select

SET MON menu

END MON spot monitor output, SEQ auto, SET SEQ full, END SEQ freeze

SHIFT 0 “2nd” key, SHIFT 1 pip1, SHIFT 2 2x2, SHIFT 3 3x3

SHIFT 4 4x4, SHIFT 5 pip2, SHIFT 6 zoom, SHIFT 7 3+4

SHIFT 8 2+8, SHIFT 9 set.

5.10 Video multiplexer SP16C

5.10.1 Description

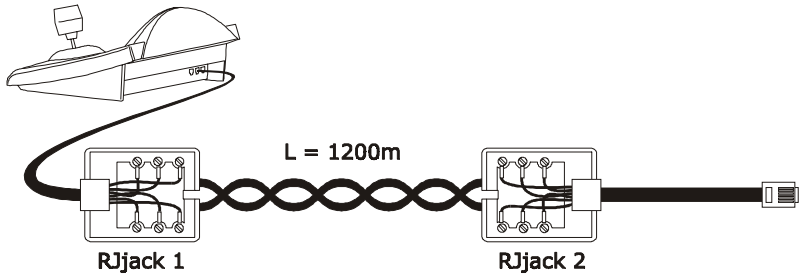
The SP16C allows the connection of 16 input videos, which are digitalized and shown as a composite image at output. A spot service monitor supplies the display of one of the inputs.

Communication from keyboard to multiplexer is one-way.

It is also possible to control the multiplexer indirectly, using a new generation video matrix from the SM series (SM42A, SM82A, SM84A, SM164A). This type of control is described in *§ 5.11* - Controlling the multiplexer using a video device*, page 41*.

5.10.2 Connexion

Cable



DCJ	RJjack 1	RJjack 2	SP16C
RS485A	White	Black	RS485A
RS485B	Yellow	Yellow	RS485B

The connection is of the RS485 type (one-way) and the maximum distance between keyboard and multiplexer is 1200 metres.

Multiplexer settings

The multiplexer can only be set up using the local multiplexer keyboard.

See the respective manual.

Keyboard settings

While the keyboard is being set up, the COMMUNICATION / VIDEO LINE submenu should be set as follows:

```
VIDEO LINE COMMUNIC.
  Type:      Mux
  Protocol: Videotec
  Baudrate: 9600
```

Control of a SP16C multiplexer

Four baud rate values are available.

It is only possible to connect one keyboard to each SP16C, and therefore the identification number of the keyboard is of no importance.

Operational test

If the keyboard is connected directly with the multiplexer set up in this way using the cable as indicated above, it should be possible to switch the input videos immediately:

- press CAM 1 ENTER, CAM 2 ENTER, to select the input videos.

Each command sent by the keyboard corresponds to the lighting up of an LED on the local multiplexer keyboard.

5.10.3 Dedicated functions

As well as the normal procedure for selecting input videos, the SP16C is equipped with numerous other functions that can be activated by pressing key combinations, and that correspond to the keys present on its local keypad.

SHIFT CAM live, SET CAM vcr

SHIFT 2 function 1+12 / top

SHIFT 4 function 3x3 / left

SHIFT 6 function 4x4 / right

SHIFT 8 function 2x2 / bottom

SET SEQ full/zoom

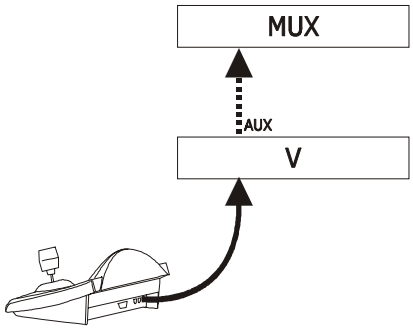
ENTER sel

SEQ auto

5.11 Controlling the multiplexer using a video device

The multiplexer can be controlled using a new generation video device from the SM series (SM42A, SM82A, SM84A, SM164A).

In order to control a multiplexer in this way, the MACRO protocol must be used.



In this case control may refer equally to the video matrix or the multiplexer. Therefore the choice of active monitor should be made differently in each case.

5.11.1 Selecting a monitor connected to the video matrix

Press MON, followed by the monitor number and if correct confirm with ENTER.

After selecting a monitor the display will show the word MONITOR, followed by the monitor number.

Only monitors that have been defined as “enabled” in the ACCEPTED VALUES / MONITORS menu can be requested.

5.11.2 Selecting a monitor connected to the multiplexer

To each multiplexer corresponds a single main monitor. To use the optional spot monitor see the respective users' manual..

If the multiplexer is identified by an address (Javelin/Hitron multiplexer for example), press SHIFT MON, followed by the multiplexer address and if correct confirm with ENTER.

If the multiplexer is not identified by an address (a SP16C mux for example) press SHIFT MON 1 and if correct confirm with ENTER.

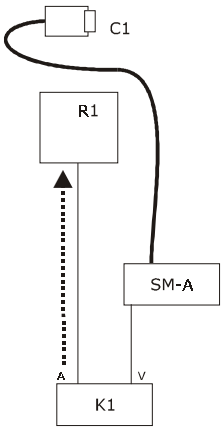
After selecting a multiplexer the display will show the word UNIT, followed by the multiplexer number.

Only multiplexers that have been defined as "enabled" in the ENABLED / MULTIPLEXERS menu can be requested.

6 Telemetry control

6.1 Controlling the telemetry directly and using video systems

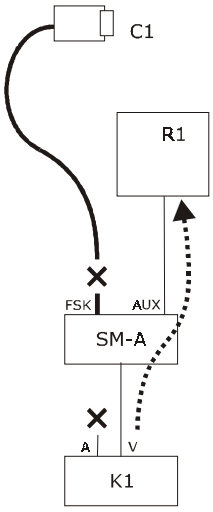
Using the SM series of switchers e matrix (SM42A, SM82A, SM84A, SM164A) it is possible to control a telemetry line directly from the video device. This saves an output telemetry cable from the keyboards. This series of switchers can also be used for the transmission of telemetry commands on the video signal coax.



Control is of the traditional type, with the keyboard controlling two distinct communication channels: receiver R1 is controlled by keyboard line A; the VIDEO line controls the SM matrix.

There are two output cables from the keyboard.

The video cable of camera C1 can pass through video signal management devices such as video multiplexers, video distributors, twisted pair transmitters, etc.



Telemetry control is carried out by the AUX outlet of the video matrix.

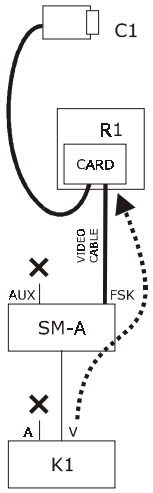
There is only one output cable from the keyboard.

The SM matrix should be set up to retransmit the telemetry messages using the MACRO or VIDEOTEC protocol. Receiver R1 should be able to recognise the transmitted protocol (MACRO or VIDEOTEC).

Communication between keyboard and matrix can only use the MACRO protocol.

The video cable of camera can pass through video signal management devices such as video multiplexers, video distributors, twisted pair transmitters, etc.

Telemetry line A (or B) is set up to transmit messages along the video cable, so that the A (or B) connector on the back of the keyboard may not be used to address other telemetry devices, but should be left without a connection.



Telemetry control is carried out by the transmitted output signals from the video matrix to the coax cable. There is only one output cable from the keyboard.

The SM matrix should be set up to retransmit the telemetry messages using the FSK protocol along the video input cables. Receiver R1 should be fitted with the DTCOAX decodification card.

Communication from keyboard to matrix can only use the MACRO protocol.

The video cables from the receivers to the matrix may not pass through any device and must be direct.

Telemetry line A (or B) is set up to transmit messages along the video cable, so that the A (or B) connector on the back of the keyboard may not be used to address other telemetry devices, but should be left without a connection.

6.2 Common telemetry operations

Telemetry operations are divided into different categories:

- setup operations (receiver/dome setup, preset, etc.)
- manual handling operations (pan & tilt)
- automatic handling operations (autopan, scan, patrol, etc.)
- lens control operations
- relay and auxiliary contact control operations.

The keyboard can be enabled or disabled for the request of each group of operations. If an operation belonging to a disabled group is requested, the display will show an error message.

In the following text the term “receiver” refers to any device set up to receive telemetry commands.

6.2.1 Changing the active receiver

Telemetry commands are always directed to the active receiver, shown on the display.

If the keyboard is enabled to make a change, press RECEIV and insert a new active receiver number.

6.3 Communication problems between keyboard and receiver

If a receiver does not respond to the commands it will be necessary to check:

- does the receiver model connected to the telemetry line (A or B) use the protocol setting for the telemetry line?
- does the receiver number correspond to that shown on the display?
- does the receiver baud rate correspond to the setting for the telemetry line?
- does the telemetry line in question output to a video cable or to a dedicated connector?
- has the connection between keyboard and receiver been implemented correctly?
- if the line passes through an SM matrix, has the matrix been set up correctly?

6.4 Notes regarding telemetry control

6.4.1 Special codes

The DCJ keyboard can be used to control a considerable number of telemetry functions, and to recall some of these there are no suitable key combinations.

They can therefore be activated by using the following procedure:

- press the CODE key
- insert the numeric code X X X X corresponding to the required function and confirm with ENTER.

The ESC key cancels the code insertion operation.

6.4.2 Typographical conventions

The indication CODE X X X X (min÷max) means that it is possible to insert numeric codes between the specified min and max limit: for example CODE 2 0 X X (0÷19) means that it is possible to insert special codes from 2000 to 2019. For each X symbol, a numeric digit should be inserted.

The terms “Video programming”, “On Screen Menu” and “OSM” should be considered equivalent: in the dome user’s manual these terms are interchangeable.

6.5 Elmo dome

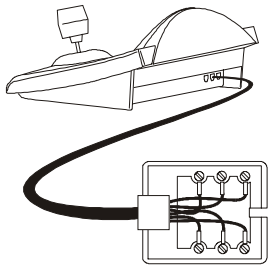
6.5.1 Reference material and documents

Dome D7720B-J1P

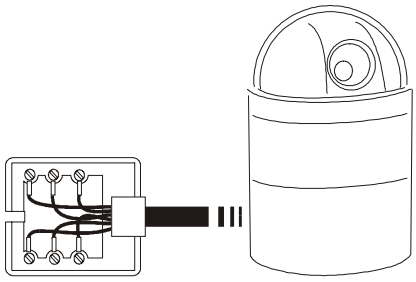
Surveillance Control Protocol (DSCP), ver2.4, 2001.05.25

6.5.2 Connection

Cable



White	***RS485A***	Red
Yellow	***RS485B***	Black
Red	***GND***	Green



Warning!

Both phone-cables (one connected to the keyboard, the other to the dome) are supplied as standard with the DCJ keyboard. DO NOT USE the grey phone cable included in the ELMO dome equipment; its use can cause the damage of the keyboard.

Dome settings

Dome ID-number must be set according to the respective installation manual.

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -`, must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Elmo
  Connect.: Tel.-
  Baudrate: 9600
```

Baudrate is fixed (9600 baud).

6.5.3 Setup

Dome setup is mostly carried out by On Screen Menu.

Some parameters can be set up by pressing a combination of keys or by inserting a special code.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

OSM Setup

Connect the dome directly to the keyboard and connect a monitor to the dome video outlet.

The DCJ keyboard enters special mode while the dome is being set up. When **ESC** is pressed for the first time, the keyboard is reset to normal operation.

SET RECEIV starts dome setup.

The dome shows the menu on video; the keyboard shows the mode change on the display:

```
      ELMO
ON SCREEN MENU

Esc to end
```

ESC end setup

ENTER enter submenu

Joystick ▲▼: shifts the cursor within the menus

Joystick ◄►: changes the value shown by the cursor.

When dome movement is required in OSM mode, the SHIFT key should be held down while the joystick is being moved ◄▲▼►.

Activation of Zoom Tele and Zoom Wide, when required, is obtained by rotating the joystick ↺.

Direct setup

Some parameters can be set up by pressing the keys or inserting a special code:

Line lock phase: F1 increase, F2 decrease.

Automatic autoflip: CODE 5 0 0 enable, CODE 5 0 1 disable

Zoom speed: CODE 6 0 X (1÷4); slow zoom (X = 1), fast zoom (X = 4)

Pan speed proportional to thezoom: CODE 2 1 1 enabled, CODE 2 1 0 disabled

Digital zoom: CODE 6 1 0 disabledd, CODE 6 1 X (2÷8) enabled 2x÷8x

Focus speed: CODE 6 2 X (1÷4); focus slow (X = 1), focus fast (X = 4)

Autofocus: A.FOCUS on/off (toggle), END A.FOCUS off

Autoiris A.IRIS: on

6.5.4 Autopan

A.PAN: start autopan

END A.PAN: stop autopan; the autopan stops at a limit switch

CODE 4 0 0: store the present position as the first limit switch

CODE 4 0 1 : store the present position as the second limit switch

CODE 4 0 2 : movement towards the right

CODE 4 0 3 : movement towards the left

CODE 4 1 X (1÷4): autopan speed from slow (X = 1) to fast (X = 4); the speed change is maintained at the next Autopan restart.

6.5.5 Preset, scan, home

PRESET X X X (1÷128): store the present position as preset position number X

SCAN X X X (1÷128): movement towards previously stored preset position X

END PRESET X X X (1÷128): erase previously stored preset position X

CODE X X X (1÷128): slow scan towards preset position X

HOME : movement towards the Home position

CODE 1 X X X (1÷128): Home position setting from 1 to 128.

6.5.6 Sequences and Cruise

Sequences (patrol function) and the “cruise” function are defined at the OSM level. They are activated by special codes:

CODE 2 0 X (1÷4): start sequence X

CODE 3 0 0 : activate the cruise function.

6.5.7 Other functions

Identification text: CODE 3 5 1 visible, CODE 3 5 0 non visible

Title: CODE 3 6 1 visible, CODE 3 6 0 invisible

CODE 9 9 9 9 : dome reset.

6.6 Ernitec Saturn Dome

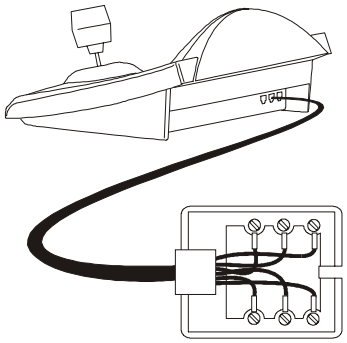
6.6.1 Reference material and documents

Dome Ernitec Saturn

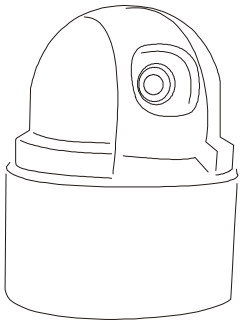
ICU Installation Instruction, Manual No.3040-00014, Rev.980220

6.6.2 Connection

Cable



White	***RS485A***	Rx+
Yellow	***RS485B***	Rx-



Dome settings

Dome ID-number must be set according to the respective installation manual.

Baudrate can be selected among the following values: 1200, 2400 (default), 4800, 9600, 19200 baud.

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -` must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Ernitec
  Connect.: Tel.-
  Baudrate: 2400
```

Baudrate must be equal to the one selected for the dome.

6.6.3 Setup

Dome setup is mostly carried out by On Screen Menu.

Some parameters can be set up by pressing a combination of keys or by inserting a special code.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup).`

OSM setup

Connect the dome directly to the keyboard and a monitor to the dome video outlet.

SET RECEIV: starts dome setup (corresponding to the command Preset 128 shown in the relevant dome instruction manual).

The dome shows the menu on video; the keyboard shows the mode change on the display:

ESC end setup

ENTER or **IRIS O**: enter submenu and confirm the values; corresponding to key Iris Open

Joystick ◂●▸, keys **INC** e **DEC**: shifting the cursor within the menus, values change

FOCUS N and **FOCUS F**: correspond to the keys Previous e Next

6.6.4 Autopan

A.PAN: start autopan

CODE **X** **X** **X** (0÷255): autopan speed from 0 slow 255 fast (not available for Saturn model).

CODE **3** **0** **1**: store the present position as the first limit switch

CODE **3** **0** **2**: store the present position as the second limit switch

6.6.5 Preset, scan, patrol and home

PATROL: start the patrol sequence

HOME: movement towards the Home position, corresponding to preset position 1.

PRESET **X** **X** **X** (1÷128) store the present position as preset position number X

SCAN **X** **X** **X** (1÷128): movement towards previously stored preset position X

Patrol setup

The patrol sequence is set up using special codes:

CODE **1** **0** **0** **0**: erase the patrol sequence

CODE **1** **X** **X** **X** (1÷128): insert preset position X in the patrol sequence

CODE **2** **0** **0** **0**: show patrol sequence

CODE **2** **X** **X** **X** (1÷128): remove preset position X from the patrol sequence

CODE **3** **X** **X** **X** (0÷255): assign a dwell time in seconds when reaching the position

The following is an example of setup and use of the patrol sequence:

CODE **1** **0** **0** **0**, erase the previously defined sequence

CODE 1 0 0 1, insert preset position 1 in the sequence

CODE 1 0 0 5, insert position 5 in the sequence

CODE 1 0 0 6, insert position 6 in the sequence

CODE 2 0 0 5, remove position 5

CODE 3 0 0 5, 5 seconds dwell time between one position and the next

PATROL, start the patrol sequence.

6.6.6 Auxiliary relays

SET AUX X (1÷8): activate relay X

END AUX X (1÷8): deactivate relay X.

6.6.7 Lenses

A.FOCUS: autofocus on

A.IRIS: autoiris on

6.6.8 Return position

It is possible to configure the dome to move automatically to a “return position” after a set interval of inactivity.

CODE 4 X X X, where X consists of:

- the first two digits show the return position to be considered (only positions from 1 to 99 are allowed; positions from 100 to 128 can not be selected)
- the third digit shows the return time:

  0: 10 seconds, 1: 20 seconds, 2: 30 seconds,

  3: 40 seconds, 4: 1 minute, 5: 2 minutes,

  6: 5 minutes, 7: 10 minutes, 8: 20 minutes,

  9: 40 minutes

For example, the code CODE 4 2 1 6 sets the dome to return to position 21 after 5 minutes of inactivity.

6.6.9 Other special codes

CODE 4 0 0: text shown/not shown (toggle)

CODE 5 0 0: Backlight compensation on/off (toggle)

CODE 9 9 9 9: reset internal memory of dome

6.7 JVC Dome

6.7.1 Reference material and documents

Dome JVC TK-C675

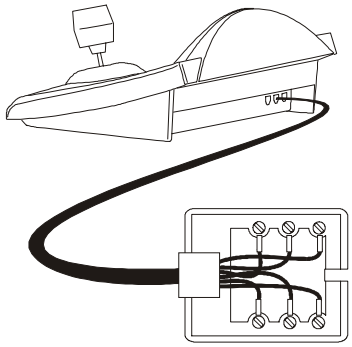
TK-C675 Programmer's manual, version 1.00/Feb.1998

TK-C675/C675B Programmer's manual (supplement), version 0.01/Dec.1998

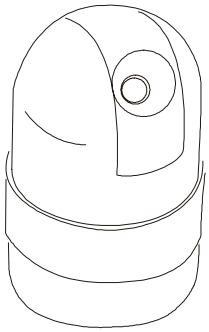
JVC CCTV Serial Communication Protocol, Basic Protocol Reference, version 2, Jan.1998

6.7.2 Connection

Cable



White	***RS485A***	Rx +
Yellow	***RS485B***	Rx -



Dome settings

Dome ID-number must be set according to the respective installation manual.

Protocol must be set as Multidrop/Simplex.

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -` must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Jvc
  Connect.: Tel.-
  Baudrate: 9600
```

Baudrate is fixed (9600 baud).

6.7.3 Setup

Dome setup is mostly carried out by On Screen Menu.

Some parameters can be set up by pressing a combination of keys or by inserting a special code.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

OSM setup

Connect the dome directly to the keyboard and a monitor to the dome video outlet

SET RECEIV: start dome setup

The dome shows the menu on video; the keyboard shows the mode change on the display:

ESC setup end

ENTER corresponds to Set key shown in the dome instruction manual, to enter the submenu

MENU allows the exit from submenu

Joystick ◂●▸: for shifting the cursor within the menus and for the dome movement

Special commands for some submenus, as described in the dome instruction manual:

Joystick ↶●↷: zoom tele and zoom wide

FOCUS N e FOCUS F: focus near and focus far

HOME: Home key

PRESET X X ENTER (1÷63): corresponding to the keys Pos1-Pos63, when a position insertion is required; ESC remove insertion.

6.7.4 Autopan

A.PAN: start autopan

END A.PAN: stop autopan; if the autopan function is active the dome will not respond to other commands until it has been stopped

CODE 1: store the present position as the first limit switch

CODE 3: show the position of the first stored limit switch

CODE 2: store the present position as the second limit switch

CODE 4: show the position of the second stored limit switch

6.7.5 Preset, home, scan

PRESET X X (1÷63): store the present position as preset position number X

END PRESET X X (1÷63): erase previously stored preset position number X

END SET PRESET: erase all previously stored preset and home positions

HOME: movement towards the Home position

SET HOME: store present position as Home position

END HOME: erase previously stored Home position

SCAN X X (1÷63): movement towards preset position X

6.7.6 Patrol

The three patrol sequences are set during OSM setup.

CODE 2 X (1÷3): selects the active patrol sequence and starts immediately, without pressing the PATROL key. Warning! If the patrol function is active the dome will not respond to other commands until it has been stopped by END PATROL

CODE 3 X (1÷3): selects the active patrol sequence and waits for the PATROL key to be pressed to activate the selected sequence

PATROL: starts the active patrol sequence. Warning! If the patrol function is active the dome will not respond to other commands until it has been stopped by END PATROL

END PATROL: stops the patrol.

6.7.7 Other commands and special codes

A.FLIP horizontal rotation through 180 degrees (autoflip)

Enabling automatic autoflip: CODE 5 enable; CODE 6 disable

Information on video: CODE 9 information on the camera, CODE 1 0 service information, CODE 1 1 no information shown on video

“Area title”: CODE 7 shown, CODE 8 hidden

“Event display mode”: CODE 1 2 enabled, CODE 1 3 disabled

A.FOCUS: autofocus on

6.8 Panasonic dome

6.8.1 Reference material and documents

Dome Panasonic WV-CS600 e Panasonic WV-CS850

Protocol Information WV-CS850 ver 2.2, Nov.28, 2001

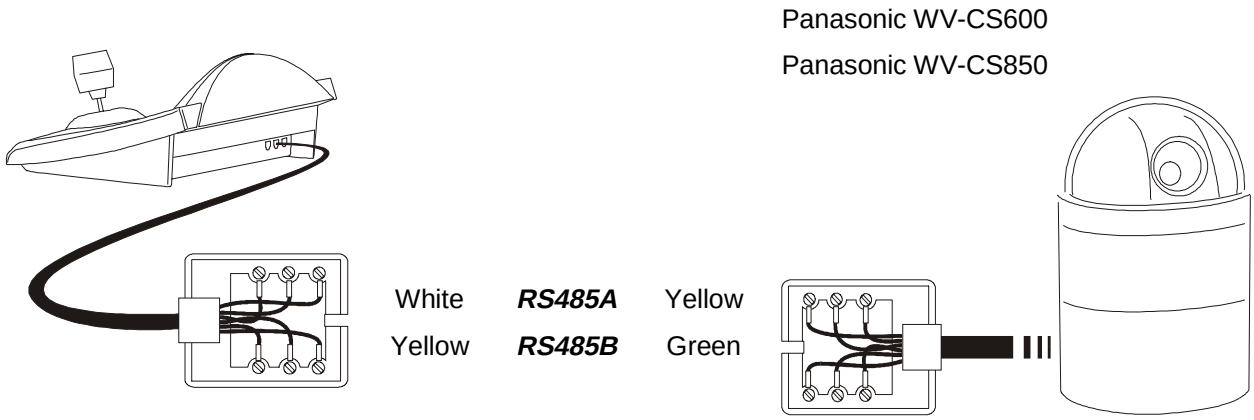
Protocol Information WV-CSR600, WV-CSR400, WV-BSR300 ver 5.3, Nov.27, 1997

6.8.2 Important protocol note

The Panasonic protocols allow the control of a range of domes with different features. As the protocols have been wholly implemented the following commands can be used both for the WV-CS600 and WV-CS850 models or they're peculiar of only one model. Where possible, this difference has been specified in the following paragraphs. In any case, check in the dome instruction manual for the available functions list.

6.8.3 Connection

Cable



Dome settings

Warning! Even though the two Panasonic dome control protocols (Panas600 and Panas850) are compatible to a certain degree, to achieve better control of the dome we advise choosing the more suitable.

Set "Conventional protocol", LOCAL (not REMOTE)

8 data bits, no parity, 1 stop bit, Full Duplex

Wait time = 0

Dome ID-number must be set according to the respective installation manual.

Baudrate can be selected among the following values: 2400, 4800, 9600, 19200 (default) baud.

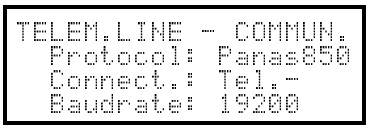
Keyboard settings

During Keyboard setup, submenu COMMUNICATIONS / TELEMETRY LINE - must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Panas600
  Connect.: Tel.-
  Baudrate: 19200
```

Panasonic 600

Baudrate must be equal to the one selected for the dome.



Panasonic 850

Baudrate must be equal to the one selected for the dome.

6.8.4 Setup

Dome setup is mostly carried out by On Screen Menu.

Some parameters can be set up by pressing a combination of keys or by inserting a special code.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

OSM Setup

Connect the dome directly to the keyboard following the diagram shown and a monitor to the dome video outlet.

SET RECEIV starts dome setup

The dome shows the menu on video; the keyboard shows the mode change on the display:

ESC ends setup

Joystick ◂●▸: movement within the menus

ENTER: "set"

CLEAR: "exit"

MENU: enter special menu

F2: reset all

Focus FOCUS N / FOCUS F, Zoom ↶● when provided.

6.8.5 Autopan

The autopan setup changes are enabled only when the next time autopan is started.

A.PAN (equivalent to CODE 6 5): autopan on

Warning! the autopan function acts differently depending on the menu setting for the item "auto pan key"

END A.PAN (or CODE 6 6): stop autopan

Auto mode: CODE 7 1 off, CODE 7 2 seq on, CODE 7 3 sort on

CODE 7 6: endless mode

CODE 7 7 : endless off mode

6.8.6 Autopan functions for WV-CS850 model

Autopan speed: CODE 6 7 increase, CODE 6 8 decrease

CODE 6 9 : store the present position as first limit switch

CODE 7 0 : store the present position as second limit switch

CODE 7 4 : Autopan inverting direction

6.8.7 Limit movement for WV-CS850 model

CODE 1 0 0 9 : limits enabled

CODE 1 0 1 0 : limits disabled

6.8.8 Preset, scan, home

PRESET X X (1÷64): store the present position as preset position number X

SCAN X X (or CODE X X): movement towards previously stored preset position X (1÷64)

HOME (or CODE 8 9): movement towards the Home position

6.8.9 Patrol Setup for the WV-CS850 model

Patrol (Pattern)

PATROL (or CODE 1 6 5): start patrol

END PATROL (or CODE 1 6 6): stop patrol.

SET PATROL (or CODE 1 6 7): store the pattern

END PATROL : end storing pattern

6.8.10 Patrol setup for WV-CS600 model

Patrol (Auto sequence)

PATROL (or CODE 7 2): Auto Sequence on

END PATROL (or CODE 7 1): Auto Sequence off

6.8.11 Shutter and Electronic sensitivity setup

Shutter

CODE 1 7 1 : on

CODE 1 7 2 : off

CODE 1 7 3 : increase

CODE 1 7 4 : decrease

Manual electronic sensitivity

CODE 1 7 7 : on

CODE 1 7 8 : off

CODE 1 7 9 : increase

CODE 1 8 0 : decrease

Automatic electronic sensitivity

CODE 1 8 1 : on

CODE 1 8 2 : off

CODE 1 8 3 : increase

CODE 1 8 4 : decrease

6.8.12 Autoflip

A.FLIP (or CODE 1 8 7): autoflip

SET A.FLIP (or CODE 7 8): enabling digital autoflip

END A.FLIP (or CODE 7 9): disabling digital autoflip

6.8.13 Lenses and flip

A.FOCUS (or CODE 8 8): autofocus on

Autofocus stop: CODE 8 6 on, CODE 8 7 off

Autoiris: A.IRIS on, END A.IRIS off

SET IRIS O or SET IRIS C: reset camera iris

Super-D: CODE 8 4 on, CODE 8 5 off

BW: CODE 9 0 on, CODE 9 1 off, CODE 9 2 automatic

AGC: CODE 1 7 5 on, CODE 1 7 6 off

Line lock sync: CODE 1 8 5 increase, CODE 1 8 6 decrease

ALC: CODE 1 0 0 0 on

ELC: CODE 1 0 0 1 on

AWC: CODE 1 0 0 2 on

ATW: CODE 1 0 0 3 on

6.8.14 Relè (only WV-CS850 model)

SET AUX X (1÷2): activate relay number X

END AUX X (1÷2): deactivate relay number X

6.8.15 Other functions (only WV-CS850 mode)

Electronic zoom: CODE 9 8 on, CODE 9 9 off

Pan/tilt speed proportional to zoom factor: CODE 8 0 enabled, CODE 8 1 disabled

Camera ID: CODE 9 3 enabled, CODE 9 4 disabled

Area titles: CODE 9 5 North/South/East/West type, CODE 9 6 type defined by user, CODE 9 7 off

Cleaning: CODE 1 8 8 on, CODE 1 8 9 off

Motion detect: CODE 1 0 0 4 on, CODE 1 0 0 5 off

Privacy zone: CODE 1 0 0 6 on, CODE 1 0 0 7 off

Refresh: CODE 1 0 1 1

Reset: CODE 9 9 9 8

Complete reset: CODE 9 9 9 9.

6.9 Pelco dome

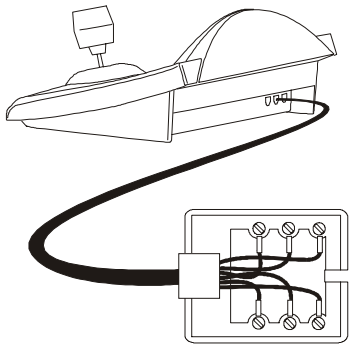
6.9.1 Reference material and documents

Dome Spectra II 3.31

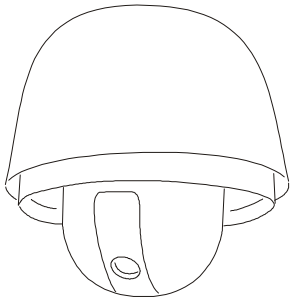
Pelco Protocol Manual, “D” Protocol, March 2, 1999

6.9.2 Connection

Cable



White	***RS485A***	RX+
Yellow	***RS485B***	RX-



Dome settings

Dome ID-number must be set according to the respective installation manual.

Protocol must be set as Type ‘D’.

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -` must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Pelco'D'
  Connect.: Tel.-
  Baudrate: 2400
```

Baudrate is fixed (2400 baud).

6.9.3 Setup

The dome can be set up by pressing a combination of keys or by inserting a special code.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

6.9.4 Preset, scan, home

PRESET X X (1÷32): store the present position as preset position number X

END PRESET X X (1÷32): erase previously stored preset position number X

SCAN X X (1÷32): movement towards previously stored position X

HOME: movement towards the Home position, corresponding to preset position 1

CODE 0 : movement towards pan position 0

6.9.5 Pattern

PATROL: start pattern

SET PATROL: start pattern setup

END PATROL: end pattern setup

6.9.6 Zone

CODE 2 0 : start zone scan

CODE 2 1 : stop zone scan

CODE 1 0 X (1÷8): store from the beginning of zone number X

CODE 2 0 X (1÷8): store from the end of zone number X

6.9.7 Lenses

Autofocus

A.FOCUS (or CODE 4 2): automatic autofocus active

CODE 4 0 : autofocus on

CODE 4 1 : autofocus off

Autoiris

A.IRIS (o CODE 5 2): automatic autoiris active

CODE 5 0 : autoiris on

CODE 5 1 : autoiris off

Automatic Gain Control

CODE 6 0 : AGC on

CODE 6 1 : AGC off

CODE 6 2 : automatic AGC

6.9.8 Relays and alarms

SET AUX X (1÷8): activation of relay number X

END AUX X (1÷8): deactivation of relay number X

CODE X (1÷8): recognition of alarm number X

6.9.9 Other functions

A.FLIP: autoflip

CODE 9 9: clean screen

CODE 9 9 9: reset camera remote (pan/tilt)

CODE 9 9 9 9: reset camera remote (default values)

White balance: CODE 8 0 on, CODE 8 1 off

Back Light Compensation: CODE 7 0 on, CODE 7 1 off

CODE 9 0: enable “device phase delay mode”

CODE 3 X (0÷3): set zoom speed

CODE 1 3 X (0÷3): set focus speed

CODE 1 0 0 0: shutter speed*

CODE 1 0 0 1: line lock level*

CODE 1 0 0 2: adjust white balance R-B *

CODE 1 0 0 3: adjust white balance M-G *

CODE 1 0 0 4: gain*

CODE 1 0 0 5: autoiris level*

CODE 1 0 0 6: autoiris peak*

Note *) after the code has been inserted, a value between o and 40000 will be requested. Its meaning is described in the dome user’s manual.

6.10 Samsung Dome

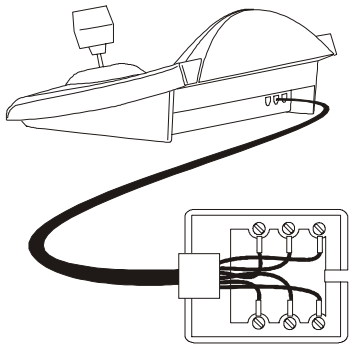
6.10.1 Reference material and documents

Dome Samsung SCC-641

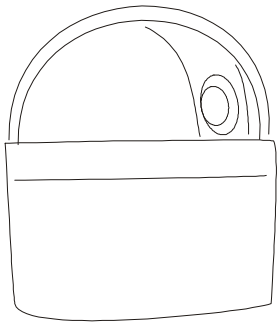
Samsung Protocol

6.10.2 Connection

Cable



White	***RS485A***	Txd +
Yellow	***RS485B***	Txd -



Dome settings

Dome ID-number must be set according to the respective installation manual.

Baudrate can be selected among the following values: 4800, 9600 (default), 19200, 38400 baud.

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -` must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Samsung
  Connect.: Tel.-
  Baudrate: 9600
```

Baudrate must be equal to the one selected for the dome.

6.10.3 Setup

Dome setup is mostly carried out by On Screen Menu.

Some parameters can be set up by pressing a combination of keys or by inserting a special code.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

OSM Setup

Connect the dome directly to the keyboard and connect a monitor to the dome video outlet.

The DCJ keyboard enters special mode while the dome is being set up.

SET RECEIV starts dome setup.

The dome shows the menu on video; the keyboard shows the mode change on the display:

ESC setup end

Joystick ◂●▸: movement within the menus

Zoom ↶●, Focus FOCUS N / FOCUS F, Iris IRIS O / IRIS C when present

ENTER: enter submenus

5: '5' key when necessary, as specified in the dome manual

6.10.4 Autopan

A.PAN: start autopan

END A.PAN: stop autopan

6.10.5 Preset, scan, home, patrol

Warning! The 'Scan' and 'Patrol' instructions given in the dome manual do not correspond to commonly accepted use in this manual: for practical purposes the functions take on the 'standard' meaning and not that suggested by the dome manual:

- 'preset' (associated with the PRESET key) means storage of the present position
- 'scan' (associated with the SCAN key) means the pan & tilt movement towards a previously stored position; in the dome manual this function is called 'preset'
- 'patrol' (associated with the PATROL key) means a series of scans, where the previously stored positions are shown one after the other in sequence; in the dome manual this function is called 'scan'.

The preset positions are stored using OSM and cannot be carried out from the keyboard using direct commands.

SCAN X X X (0÷127): movement towards previously stored preset position X

HOME: movement towards the Home position, corresponding to preset position 1

PATROL: start patrol

END PATROL: stop patrol

6.10.6 Pattern

F1 start pattern number 1

END F1 end pattern number 1

F2 start pattern number 2

END F2 end pattern 2

F3 start pattern number 3

END F3 end pattern 3

6.10.7 Other functions

A.FOCUS: autofocus on

AUX X (1÷4): activate/deactivate (toggle) relay X

6.11 Sensormatic / American Dynamics dome

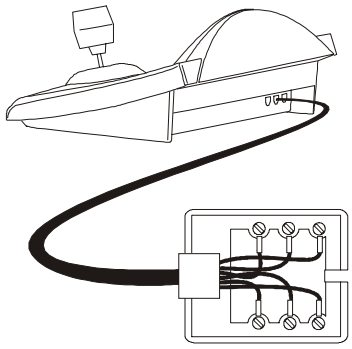
6.11.1 Reference material and documents

Dome Sensormatic DeltaDome II

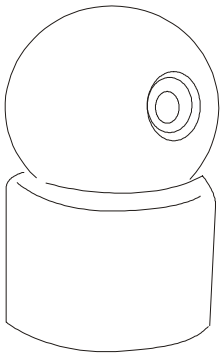
Rs-422/RS-485 Communication Protocols, 8000-2694-01, Rev.A

6.11.2 Connection

Cable



White	***RS485A***	RX +
Yellow	***RS485B***	RX -



Dome settings

Dome ID-number must be set according to the respective installation manual.

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -` must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Sensorm.
  Connect.: Tel.-
  Baudrate: 4800
```

Baudrate is fixed (4800 baud).

6.11.3 Setup

Dome setup is mostly carried out by On Screen Menu.

Some parameters can be set up by pressing a combination of keys or by inserting a special code.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

OSM Setup

Connect the dome directly to the keyboard and a monitor to the dome video outlet.

The DCJ keyboard enter in special mode during the dome setup.

SET RECEIV start dome setup

The dome show the On Screen Menu; the keyboard shows the change mode in the display:

ESC setup end

Joystick ◂●▸: cursor movement within the menus

ENTER or **FOCUS N** / **FOCUS F**: select the submenus

INC or ● to increase a value; cursor to the right in text definitions

DEC or ● to decrease a value; cursor to the left in text definitions

6.11.4 Preset, scan, home

PRESET **X** (1÷7): store the present position as preset position number X

SCAN **X** (1÷7): movement towards previously stored preset position X

HOME: movement towards the Home position, corresponding to preset position 1

6.11.5 Pattern and "apple peel"

F1, **F2**, **F3** start pattern 1,2,3 ("repeat" mode)

SET **F1**, **SET** **F2**, **SET** **F3** pattern 1,2,3 definition:

move the joystick and press zoom/focus to define the new pattern;

when the definition is concluded press **ESC** to save it.

END **F1**, **END** **F2**, **END** **F3** pattern 1,2,3 erase.

SHIFT **F2** start "apple peel"

6.11.6 Relays

The four relays are controlled simultaneously with special codes. The special code shows the relays to be activated; those not shown in the code are considered deactivated. The order in which the relay numbers are inserted in the code has no significance.

For example:

CODE **1** **3** (or **CODE** **3** **1**) activates relays 1 and 3; relays 2 and 4 are deactivated

CODE 1 3 4 (or CODE 3 4 1, CODE 4 1 3, etc.) activates relays 1, 3 and 4; relay 2 is deactivated

CODE 0 deactivates all relays

6.11.7 Other functions

A.FLIP autoflip

A.FOCUS autofocus

CODE 9 9 9 9 reset dome remote

VPhase delay

SHIFT IRIS O increase Vphase delay; increase continues until the IRIS O key is released

SHIFT IRIS C decrease Vphase delay; decrease continues until the IRIS O key is released

6.12 Star Dome

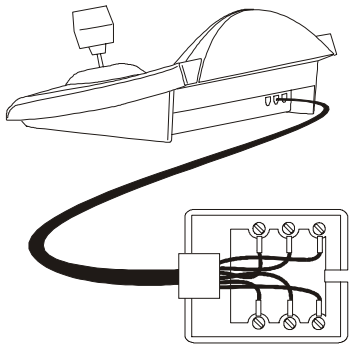
6.12.1 Reference material and documents

Dome Star SMD

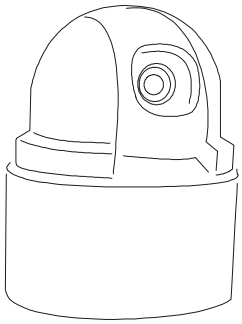
MD200 Series Control Command Reference, rev.2.02, September 1, 1999

6.12.2 Connection

Cable



White	***RS485A***	Data +
Yellow	***RS485B***	Data -



Dome settings

Dome ID-number must be set according to the respective installation manual.

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -` must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Star
  Connect.: Tel.-
  Baudrate: 9600
```

Baudrate is fixed (9600 baud).

6.12.3 Preset, scan, home

PRESET X X (0÷63): store the present position as preset position number X

END PRESET X X (0÷63): erase preset position number X

SCAN X X (0÷63): movement towards previously stored position X

HOME: movement towards the Home position

6.12.4 Autopan, patrol, tour

For the Star dome, the autopan and patrol functions are called swing and group respectively. In addition, autopan can be of the horizontal type (Pan Swing) or vertical (Tilt Swing).

Swing is a movement between the horizontal or vertical limits of two preset positions.

Group is a continuous movement between as series of preset positions.

Tour is used to join different groups into a single sequence of positions.

Swing

A.PAN Start swing

When the key is pressed the display asks what type of swing to start, Pan or Tilt:

```
SWING

 Swing Type:
  [PAN] [TILT]
```

Choose with the joystick ◂●▸ and confirm with **ENTER**.

END **A.PAN** Deactivate the swing

SET **A.PAN** Set the swing

When the keys are pressed the display asks what type of swing to set, Pan or Tilt:

```
SWING SETUP

 Swing Type:
  [PAN] [TILT]
```

Choose with the joystick ◂●▸ and confirm with **ENTER**.

```
PAN SWING
▶ Limits (preset)
  Dwell time
  Speed setup
```

Choose the items with the joystick ▲● and confirm with **ENTER**.

```
SWING LIMITS
  Start posit.: _
  End posit.  : _
              (0-63)
```

Insert the preset position numbers chosen as swing limits.

```
SWING DWELL TIME

  Seconds: _
           (0-127)
```

Insert the dwell time when the position is reached.

```
SWING SPEED

  Speed: _
         (1-64)
```

Insert the swing speed, from 1 (slow) to 64 (fast).

Groups

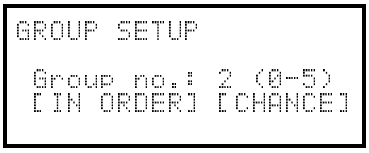
PATROL start a group sequence.

When the key is pressed the display will ask for activation mode:

```
GROUP SETUP

 Group no.: _ (0-5)
```

Insert the group number (from 0 to 5)



Use the joystick ◂●▸ to choose whether the positions are to be requested in the setup order or in a random sequence.

Confirm with ENTER.

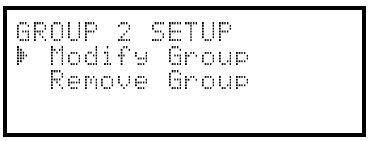
END PATROL stop a group sequence.

Warning! The dome will not respond to keyboard commands until the Group function is switched off.

SET PATROL setup of the group sequences.

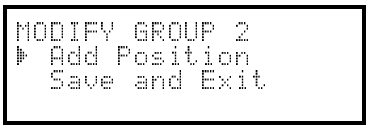
When the key is pressed the display will ask which group number to modify:

Insert the group number to be modified (from 0 to 5)



Use the joystick to modify or remove the group.

Confirm with ENTER.



When this menu is entered, the group has been erased. Choose the line “Add position” as many times as necessary to redefine the sequence of positions for the group. When the sequence is complete choose “Save and exit”

Insert the desired position, the scan speed and dwell time in seconds (when the position is reached).

For “Speed” and “Dwell time”, default values are suggested, but these can be changed.

Tour

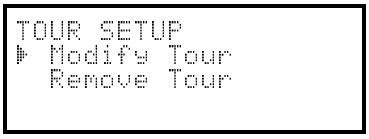
A Tour is available, which is defined as a combination of a series of groups. See the dome manual for further explanation.

F1 start tour

END F1 end tour

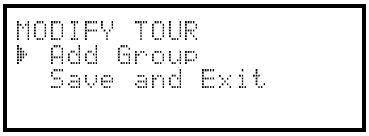
SET F1 set up tour

When the key is pressed the display will ask what kind of change to make to the tour:



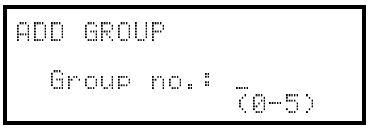
Use the joystick to modify or remove the tour.

Confirm with ENTER.



When this menu is entered, the tour has been erased.

Choose the line “Add group” as many times as necessary to redefine the sequence of tour groups. When the sequence is complete choose “Save and exit”



Insert the group to add to the tour sequence.

6.12.5 Setup

The dome can be set up by pressing a combination of keys or by inserting a special code.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

Exposure Control

CODE 1 AE mode

CODE 2 priority

CODE 2 1 flickerless shutter

CODE 2 2 increase shutter value

CODE 2 3 decrease shutter value

CODE 2 4 increase iris open, CODE 1 2 4 iris open

CODE 2 5 increase iris close, CODE 1 2 5 iris close

CODE 3 manual

CODE 3 1 increase shutter value

CODE 3 2 decrease shutter value

CODE 3 3 increase iris open, CODE 1 3 3 iris open

CODE 3 4 increase iris close, CODE 1 3 4 iris close

CODE 3 5 increase gain

CODE 3 6 decrease gain

CODE 3 7 maximum positive gain

CODE 3 8 maximum negative gain

Other setups

Autofocus: CODE 4 on, CODE 5 off, CODE 6 one shot

White balance: CODE 1 0 auto, CODE 1 1 one shot

Exposure: CODE 4 0 lighter, CODE 4 1 darker, CODE 4 2 default

Autopower mode: CODE 7 enable, CODE 8 disable

Digital zoom: CODE 5 0 on, CODE 5 1 off

CODE 1 9 9 9 synchronise internal video

CODE 1 X X X (0÷359): synchronise external video (X phase in degrees)

6.12.6 Other functions

A.FLIP autoflip

A.FOCUS autofocus on

CODE 9 9 9 9 reset dome

6.13 VCL Dome

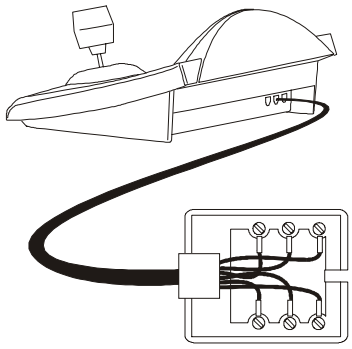
6.13.1 Reference material and documents

Dome VCL 8” Internal Orbiter

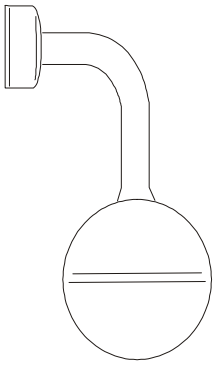
Details of VCLTP Protocol, file ref. CIMICRO8 26.05.99

6.13.2 Connection

Cable



White	***RS485A***	D +
Yellow	***RS485B***	D -



Dome settings

Dome ID-number must be set according to the respective installation manual.

Keyboard settings

During Keyboard setup, submenu COMMUNICATIONS / TELEMETRY LINE - must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Vcl
  Connect.: Tel.-
  Baudrate: 9600
```

Baudrate is fixed (9600 baud).

6.13.3 Preset, scan, home

PRESET X X X (0÷127): store the present position as preset position number X

SCAN X X X (0÷127): movement towards previously stored preset position X

HOME: movement towards the Home position, corresponding to preset position 1

6.13.4 Autopan and tour

Autopan is simulated with a movement between preset positions 1 and 2, thus modifying tour 4. Any previously stored setup for tour 4 will be lost.

Autopan

A.PAN start autopan

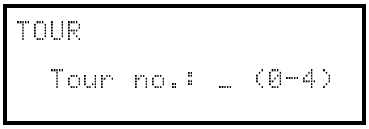
END A.PAN stop autopan

Tour

Tour corresponds to patrol. There are 4 tour sequences available.

PATROL start tour

When the key is pressed the display will ask for the tour number to be activated:

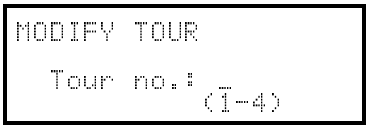


Insert the tour number (1-4) or 0 to indicate the last tour to be stopped.

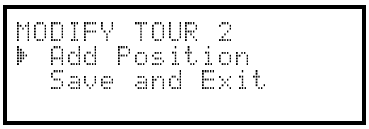
END PATROL stop tour

SET PATROL set up tour

When the keys are pressed the display will ask for the tour number to be modified::

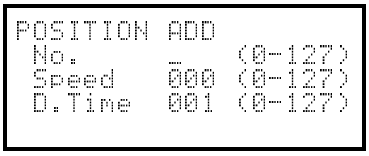


Insert the tour number (1-4).



When this menu is entered, the tour has been erased. Choose the line “Add group” as many times as necessary to redefine the sequence of tour positions.

When the sequence is complete choose “Save and exit”.



Insert the desired position, the scan speed and dwell time in seconds (when the position is reached). For “Speed” and “Dwell time”, default values are suggested, but these can be changed.

6.13.5 Camera setup

The dome allows the enabling of IR mode and automatic autoflip; These parameters are setup at the same time. Only some VCL models allow the one-colour changeover. In case of infrared illumination, the IR mode is suggested. The autoflip, when enabled, consists of a 180° dome rotation when the limit switch is joined towards the low.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

CODE 1 : IR mode disabled, autoflip disabled

CODE 2 : IR mode enabled, autoflip disabled

CODE 3 : IR mode disabled, autoflip enabled

CODE 4 : IR mode enabled, autoflip enabled.

6.13.6 Lenses

Autofocus: A.FOCUS on, END A.FOCUS off

Autoiris: A.IRIS on, END A.IRIS off

Change mono/colour: F1 on/off (toggle), SHIFT F1 automatic

6.13.7 Other functions

A.FLIP autoflip

Alarm mode: F2 on, END F2 off

Relay: SET AUX on, END AUX off

WASHER washer on

WIPER wiper on

6.14 Videotec and Linxs receivers

The functions of Videotec and Linxs telemetry receivers are different depending on the selected model. See following reference table:

	DTRX3	DTRX1 with DTRP	DTRX1 w/o DTRP	DTRXDC	DTMRX	MICRODEC
Videotec Protocol	✓	✓	✓	✓	✓	✓
Macro Protocol	✓	-	-	-	-	-
Basic functions	✓	✓	✓	✓	✓	✓
Variable speed	-	-	-	✓	-	-
Autopan toggle	✓	✓	✓	✓	✓	-
Autopan start/end	✓[1)]	-	-	-	-	-
No. of relays	4	4	4	4	1	-
Relays toggle	✓	✓	✓	✓	✓	-
Relays activ./disactiv.	✓[1)]	-	-	-	-	-
Standard patrol (14 pos.)	✓	✓	-	✓	-	-
Extended patrol (99 pos.)	✓[1),2)]	-	-	-	-	-

[1)] only using Macro protocol

[2)] 40 positions

6.15 Videotec and Linxs receivers with Videotec protocol

6.15.1 Reference material

Videotec and Linxs telemetry receivers:

DTRX1, DTRX3 (with Videotec protocol), DTRXDC, DTMRX, MICRODEC

Receiver settings

The new generation of Videotec receivers allows the choice of two protocol types (Videotec and Macro).

The chapter refers only to the Videotec protocol.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

Receiver ID-number must be set according to the respective installation manual.

Baudrate can be selected among the following values: 1200, 9600 (default).

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -` must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Videotec
  Connect.: Tel.-
  Baudrate: 9600
```

Videotec Receivers

Baudrate must be equal to the one selected for the receiver.

```
TELEM.LINE - COMMUN.
  Protocol: Linxs
  Connect.: Tel.-
  Baudrate: 9600
```

Linxs Receivers

Baudrate must be equal to the one selected for the receiver.

6.15.2 Connexion

Cable

The Videotec and Linxs receivers can be connected directly to the keyboard using the telephone cable supplied (for testing and checks) or a telephone cable for distances of up to 1200 using the standard connection cable described in *§ 3.3 - Standard connection cable, page 10*.

6.15.3 Preset, scan, home

PRESET X X (1÷14): store the present position as preset position number X

SCAN X X (1÷14): movement towards previously stored position X

HOME: movement towards the Home position corresponding to preset position 1

6.15.4 Autopan

A.PAN autopan on/off (toggle)

6.15.5 Patrol

The patrol sequence consists of a series of preset positions that are shown one after the other, with a fixed dwell time when each position is reached. The standard patrol allows a maximum of 14 positions.

PATROL start patrol

SET PATROL patrol setup

When the keys are pressed the display shows a modify patrol menu.

The patrol is only actually modified when the setup is transmitted to the receiver:

```
PATROL PARAMETERS
▶ Preset positions
  Dwell time
  Transmit data
```

Select “Preset positions” to define the patrol sequence.

```
PATROL POSITIONS
▶ Preset 1 : Yes
  Preset 2 : Yes
  Preset 3 : No
```

Use the joystick to select each position and define whether is active (joystick to the right) or not (joystick to the left).

ESC to end.

```
PATROL PARAMETERS
  Preset positions
▶ Dwell time
  Transmit data
```

Select “Dwell time” to define the dwell time when each position is reached. The time is the same for all positions.

```
DWELL TIME

  Seconds: _
           (1-60)
```

Insert a time between 1 and 60 seconds.

```
PATROL PARAMETERS
  Preset positions
  Dwell time
▶ Transmit data
```

Select “Transmit data” to transmit the patrol setup to the receiver.

6.15.6 Relays

When the activation/deactivation of a relay is requested, the display will always show the message “4 relays available”. Their number may actually be different, depending on the receiver model that is connected, as described in the table “Available functions for each receiver model”.

AUX activate/deactivate relays (toggle); when the key is pressed the display will ask for the relay number.

6.15.7 Other functions

WASHER washer on

WIPER wiper on

6.16 Videotec Receivers with Macro protocol

6.16.1 Note

The Macro protocol extends over a range of products with widely different specifications.

Consult the receiver manual for information to find out which functions are available.

6.16.2 Reference material and documents

Videotec DTRX3 telemetry receiver

Receiver settings

The new generation of Videotec receivers allows the choice of two protocol types (Videotec and Macro).

The chapter refers only to the Macro protocol. Configure the receivers following the instructions given in the respective manuals.

For all setup operations the keyboard must be enabled to perform the receiver setup (menu `Accepted values / Functions / Receiv.Setup`).

Receiver ID-number must be set according to the respective installation manual.

Baudrate can be selected among the following values: 1200, 9600 (default), 19200, 38400 baud.

Keyboard settings

During Keyboard setup, submenu `COMMUNICATIONS / TELEMETRY LINE -` must be suitably set:

```
TELEM.LINE - COMMUN.
  Protocol: Macro
  Connect.: Tel.-
  Baudrate: 9600
```

Baudrate must be equal to the one selected for the dome.

6.16.3 Connection

Cable

The Videotec and Linxs receivers can be connected directly to the keyboard using the telephone cable supplied (for testing and checks) or a telephone cable for distances of up to 1200 m, using the standard connection cable described in see *§ 3.3* - Standard connection cable*, page 10*.

6.16.4 Setup

SET RECEIV start setup

END RECEIV end of setup and reset receiver

6.16.5 Autopan

A.PAN activate/deactivate autopan (toggle)

SET A.PAN autopan on

END A.PAN autopan off

6.16.6 Preset, scan, home

PRESET X X (1÷99): store the present position as preset position number X

END PRESET X X (1÷99): erase preset position number X

SET END PRESET: erase all preset positions

SCAN X X (1÷99): movement towards previously stored preset position X

HOME: movement towards the Home position

SET HOME: store the present position as the “home position”

END HOME: erase the home position.

6.16.7 Patrol

The patrol sequence consists of a series of preset positions that are shown one after the other, with a fixed dwell time when each position is reached. The Macro protocol allows the management of two types of patrol: standard patrol and extended patrol.

Standard patrol

The standard patrol is the same as that described in see *§ 6.15.5* - Patrol*, page 79*.

PATROL activate/deactivate standard patrol (toggle)

SET PATROL configure standard patrol

SHIFT PATROL standard patrol on

END PATROL standard patrol off

Extended patrol

Extended patrol allows the management of 99 preset positions with different individual dwell times. It is only available on some receiver models that use the Macro protocol and have the preset functions.

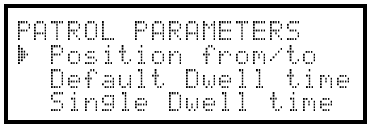
F1 activate/deactivate extended patrol (toggle)

SHIFT F1 extended patrol on

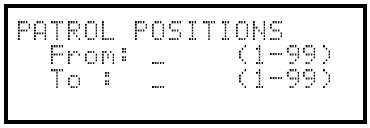
END F1 extended patrol off

SET F1 extended patrol setup

When the keys are pressed the display shows a menu for modifying the extended patrol:

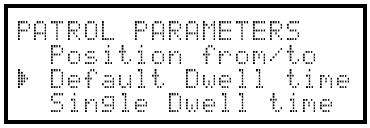


Select “Positions” to define the patrol sequence.



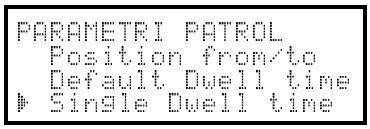
Insert the first and last position of the patrol sequence:

the patrol sequence consists of all the positions between these two ends, and they are recalled one after the other

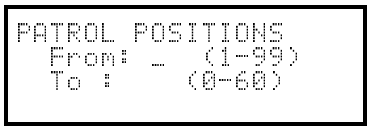


Select “Default dwell time” if the same dwell time is to be used for all positions:
the previously set individual pause times will be erased.

Insert the default dwell time value, from 0 to 60 seconds.



Select “Single dwell time” to set a dwell time when a specific position is reached.



Insert the position number and dwell time, from 0 to 60 seconds.

6.16.8 Relays

When the activation/deactivation of a relay is requested, the display will always show the message “4 relays available”. Their number may actually be different, depending on the receiver model that is connected, as described in the table “Available functions for each receiver model”.

AUX activate/deactivate relays (toggle); when the key is pressed the display will ask for the relay number, from 1 to 4.

SET **AUX** activate relay; the display will ask for the relay number

END **AUX** deactivate relay; the display will ask for the relay number

6.16.9 Lenses

Autofocus: **A.FOCUS** on, **END** **A.FOCUS** off

Autoiris: **A.IRIS** on, **END** **A.IRIS** off

6.16.10 Other functions

WASHER washer on

WIPER wiper on

A.FLIP autoflip

SET A.FLIP “digital flip” on

END A.FLIP “digital flip” on

7 Maintenance

The DCJ keyboard does not need any particular maintenance.

The cleaning must always be carried-out with the machine turned-off. Clean the keyboard periodically with a dry cotton cloth, avoiding the use of detergents or wet cloths.

8 Specifications

Dimensions

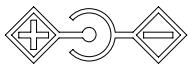
Dimensions: 298 x 107 x 210 mm

Weight: 810 g

Power supply

Input voltage: 100-240 VAC 47-63Hz

Output voltage: 12VDC 1A

Connector: Jack 

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UNI EN ISO 9001
N° 9170.VID3

N° IT-1102

Dichiarazione di conformità

Declaration of conformity

La Ditta Videotec srl, Via Lago Maggiore 15 Schio (VI), dichiara sotto la sua responsabilità che i prodotti:
Videotec srl, having its head office in Schio (VI) Italy Via Lago Maggiore 15, declares under its responsibility that the products:

DCJ tastiera di controllo video e telemetria
video and telemetry control keyboard

ai quali questa dichiarazione si riferisce sono conformi ai seguenti documenti normativi:
to whom this declaration refers are in conformity with the following standards:

EN 50081-1 :1992
Compatibilità elettromagnetica – Norma generica sull'emissione
Parte 1: Ambienti residenziali, commerciali e dell'industria leggera
Electromagnetic compatibility - Generic emission standard
Part 1: Residential, commercial and light industry

EN 50130-4:1995
Sistemi d'allarme - Parte 4: Compatibilità elettromagnetica
Norma per famiglia di prodotto: Requisiti di immunità per componenti di sistemi antincendio, antintrusione e di allarme personale
Alarm systems – Part 4: Electromagnetic compatibility
Product family standard: Immunity requirements for components of fire, intruder and social alarm system

EN 60065 : 1998
Prescrizioni di sicurezza per apparecchi elettronici e loro accessori collegati alla rete per uso domestico e analogo uso generale
Safety requirements for mains operated electronic and related apparatus for household and similar general use.

In base a quanto previsto dalle seguenti direttive comunitarie CEE:
With reference to what it is provided for the following EEC-directives:

- **89/336/CEE.**
- **92/31/CEE.**
- **93/68/CEE.**
- **73/23/CEE.**

Firma
Signature

Schio 03/07/2002

Alessio Grotto
*(Presidente***)**