

# **Video Controls Limited**

*Document Number - MNMXPROO0102UK*



## ***MaxCom Pro Series*** ***TELEMETRY CONTROL SYSTEM*** ***Owners Operation Guide***



<b>Safety Instructions</b>	<b>iii</b>
<b>1 Keyboard Functions</b>	<b>1</b>
1.0 Initialisation of Cameras	1
2.0 System Lock	1
3.0 Monitor Select	1
4.0 Camera Select	2
5.0 Auto-sequence Control	2
<b>2 Telemetry Functions</b>	<b>7</b>
1.0 Systems with more than one keyboard	7
2.0 Simultaneous Telemetry Commands	7
3.0 Pan and Tilt	8
4.0 Turn 180°	8
5.0 Zoom	8
6.0 Focus and Iris	8
7.0 Manual Change Over (Change Over Orbiter Microspheres only)	9
8.0 Wash, Wipe and Auxiliary Functions	9
<b>3 Presets and Tours</b>	<b>11</b>
1.0 To Define a Preset	11
2.0 To Seek a Preset	11
3.0 To Start a Tour of Presets	12
4.0 To Define a Simple Tour	12
5.0 To Vary the Standard Speed of a Tour	12
6.0 To Vary the Standard Speeds and Dwell Times of a Tour	13
7.0 Alarm Activation during Tour Programming	14
8.0 To Stop a Tour of Presets	14
9.0 To Restart a Tour of Presets	14
<b>4 Alarms</b>	<b>15</b>
1.0 Alarm Monitor	15

2.0	Alarm Input Options	15
3.0	Alarm Priorities	15
4.0	Alarm Activations	16
5.0	Alarm Keyboard	18
6.0	Cancelling Alarms	19
7.0	'Manual Alarm Mode'	20
8.0	Setting a Global Alarm Timer	20
<b>5</b>	<b>Menu Options</b>	<b>23</b>
1.0	To Display a list of Menu options	23
2.0	To set-up an Auto-sequence using the Menus	24
3.0	To Set the Time and Date	25
4.0	To Edit the Idents.	27
5.0	Set-up of Text Colour	29
6.0	To Set Up the Cameras (for Microspheres)	30
7.0	To Set Up the Monitor Control	33
8.0	To Set Active Alarms	35
9.0	Set-up of Alarm Timers	36
10.0	Line Lock	38
11.0	Remote Reset	42
12.0	Privacy Zones	48
<b>6</b>	<b>EQUIPMENT RETURNS PROCEDURE</b>	<b>53</b>
1.0	FOR REPAIR	53
2.0	FOR CREDIT	54

## Safety Instructions



**WARNING! Read these notes before attempting to operate the *MaxCom Pro***

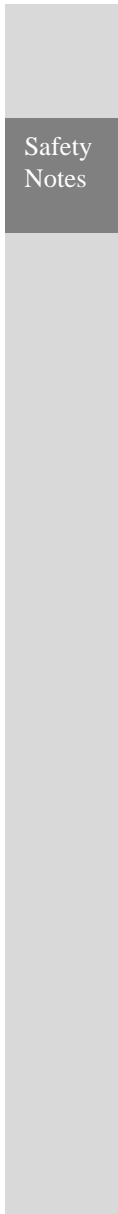
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These products contain static electricity sensitive devices. Please take appropriate precautions when handling.  
Handle the unit with care, as improper handling may cause irreparable damage to the precision or sensitive parts within this unit.

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## 1.Keyboard Functions

Throughout this manual, reference will be made to button presses. In the body of the text, an instruction to press a button means that it should be pressed and then released. If a button must be pressed and then held, then that will be specified in the text.

### 1.0 Initialisation of Cameras

When a microsphere which is fitted with stepper motors is switched on, it will initialise by panning and tilting for several seconds. During this initialisation, the Microsphere will not respond to telemetry commands from the *MaxCom*.

### 2.0 System Lock

Whenever the transmitter is switched on, it will remember whether the keyboard was locked or unlocked before the power was switched off. If the Lock LED is illuminated, then the keyboard is locked, if the Lock LED is not illuminated then the keyboard is unlocked.

If the keyboard is locked, then it is necessary to unlock it to make all functions available. This is done in the following way:

- **Press and hold** the 'LOCK' button.  
Carry out the following sequence of 'NUMBER' button presses - '1', '2', '1', '2'.  
**Release** the 'LOCK' button.

The keyboard may be locked again by carrying out the same process.

### 3.0 Monitor Select

#### 3.1 *MaxCom 3V*

This function is not available on these keyboards and pressing the 'MONITOR' button will produce an error beep.

### 3.2 *MaxCom 4V*

An asterisk ('\*') to the left of the camera number at the top left of the image on the monitor indicates that this monitor is being controlled by the keyboard.

Pressing the 'MONITOR' button sequences control through all of the monitors which the keyboard is controlling. Press the 'MONITOR' button until the asterisk appears on the monitor that you wish to control.

*Note:*            **Telemetry commands** are always sent to the camera that is displayed on the monitor which is being controlled by the handset.

## 4.0 Camera Select

### 4.1 To select a camera

Press the 'NUMBER' button(s) which correspond to the required camera, then press the 'CAMERA' button.

For example, to select camera 15:

Press button '1', then press button '5' then press the 'CAMERA' button.

### 4.2 Using the 'CAMERA' button to select cameras

If the 'CAMERA' button is pressed repeatedly, then each of the available camera images will be displayed in turn.

### 4.3 Absent cameras

If a camera is absent then the MaxCom will automatically skip to the next camera that is present. ('Auto-skip'.)

## 5.0 Auto-sequence Control

### 5.1 Basic Operation of Auto Sequence

#### 5.1.1 To turn on auto-sequence

Press the 'AUTO' button. (LED is illuminated = AUTO SEQUENCE 'ON'.) The black AUTO button will be illuminated for the new MaxCom 3V & 4V.

### 5.1.2 To turn off auto-sequence

Press the 'AUTO' button. (LED is not illuminated = AUTO SEQUENCE 'OFF'.) The black AUTO button will not be illuminated.

### 5.1.3 To turn off auto-sequence and select a particular camera

Press the 'NUMBER' button(s) which correspond to the required camera, then press the 'CAMERA' button. (The AUTO SEQUENCE LED is no longer illuminated and the camera selected is displayed.) The black AUTO button will not be illuminated.

### 5.1.4 Use of the 'CAMERA' button while auto-sequence is on

When auto-sequence is 'ON', if the 'CAMERA' button is pressed repeatedly, then each of the cameras in the auto-sequence will be displayed in turn.

### 5.1.5 Absent cameras in auto-sequence

If a camera in the auto-sequence is absent, then the MaxCom will automatically skip to the next camera in the sequence that is present. ('Auto-skip'.)

*Note: Auto-sequencing will be turned off if the joystick is moved or a telemetry button is pressed while the monitor under control is auto-sequencing.*

## 5.2 Setting up Auto-sequence for Cameras

For example, to set up an auto-sequence using cameras 1, 2, 3, 4, & 5.

**Press and hold** the 'AUTO' button.

With the 'AUTO' button held down:

Press button '1', then press the 'CAMERA' button.

Press button '2', then press the 'CAMERA' button.

Press button '3', then press the 'CAMERA' button.

Press button '4', then press the 'CAMERA' button.

Press button '5', then press the 'CAMERA' button.

**Release** the 'AUTO' button.

The dwell time will be five seconds, unless changed manually. See section 5.3, below, for more information.

Any auto-sequence of cameras may be programmed up to the maximum length of sequence which is equal to twice the number of camera inputs on the transmitter.

For more information regarding set-up and checking auto-sequence through the set up menu. See Chapter 5 - 'Menu Options' section "To set-up an Auto-sequence using the Menus" on page 14.

### 5.3 Set up of Auto-sequence Timers

Auto-switching is variable from 1 second to 255 seconds. All cameras can be set up with the same time, or an individual time can be set for each camera position in the switching sequence.

#### 5.3.1 To set all cameras with the same dwell time

For example, to set the dwell time as 6 seconds for all cameras

**Press and hold** the 'AUTO' button.

Press button '6', then press the 'TIME' button.

**Release** the 'AUTO' button.

Similarly, to set the dwell time to 19 seconds for all cameras

**Press and hold** the 'AUTO' button.

Press button '1', then press button '9', then press the 'TIME' button.

**Release** the 'AUTO' button.

#### 5.3.2 To set up an auto sequence with different dwell times

For example, Set camera 4 dwell time to 8 seconds, camera 2 dwell time to 4 seconds, camera 9 dwell time to 20 seconds and camera 6 dwell time to 5 seconds (using the default timer).

**Press and hold** the 'AUTO' button.

First Camera:

Press button '4', then press the 'CAMERA' button.

Press button '8', then press the 'TIME' button.

## Next Camera:

Press button '2', then press the 'CAMERA' button.

Press button '4', then press the 'TIME' button.

## Next Camera

Press button '9', then press the 'CAMERA' button.

Press button '2', then press button '0', then press the 'TIME' button.

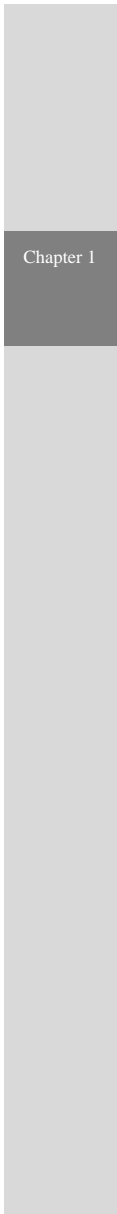
## Next Camera

Press button '6', then press the 'CAMERA' button.

**Release** the 'AUTO' button.

For more information regarding set-up and checking auto-sequence and timers through the set up menu, see Chapter 5 - 'Menu Options' section  
"To set-up an Auto-sequence using the Menus" on page 14.

**Note:** *If an alarm is activated during the programming of Monitor 1 with an auto-sequence, the programming will be interrupted at the point of activation. (The sequence will also require re-programming.)*



## 2.0 Telemetry Functions

The *MaxCom* range of keyboards can control any VCL telemetry receiver. The features that can be used depend upon the features that are available on the camera / receiver.

Under normal operation there is no audible beep when pressing the telemetry function buttons.

The functions 'WIPE' and 'AUTOPAN' are latched functions (i.e. press once for ON, press again for OFF). When the latched function is ON, then the associated LED is also illuminated.

When the joystick is used or when telemetry buttons are pressed, instructions are sent to the camera that is selected on the monitor under control. The instructions are not sent to the unselected cameras in the system.

If the joystick is moved or a telemetry button is pressed while the handset is auto-sequencing, then the auto-sequencing will be turned off.

### 1.0 Systems with more than one keyboard

If two or more keyboards are being used on a telemetry system, any commands that are sent to the camera that cause the telemetry LED's to change on the keyboards will cause the same telemetry LED's to change on any other keyboards that have the same camera selected.

### 2.0 Simultaneous Telemetry Commands

If the joystick is moved or telemetry buttons are pressed when another keyboard is currently sending telemetry commands to the same camera, the message 'CAMERA IN USE' will be displayed. When the message appears, the keyboard cannot send telemetry commands for a short period of time. The message will be removed as soon as the other keyboard stops

sending telemetry commands. Any telemetry commands that are attempted while the message is displayed will be ignored.

### **3.0 Pan and Tilt**

Very precise control of pan and tilt can be achieved using the joystick. The speed of pan and tilt is relative to the force applied to the joystick.

### **4.0 Turn 180°**

This function allows the camera to view a person who is walking underneath the camera.

Press the 'AUTO 180°' button to pan the camera 180°.

The camera will pan 180° at the maximum speed. (Up to 400° per second.)

### **5.0 Zoom**

#### **5.1 For MaxCom 3VE and MaxCom 4VE keyboards**

Press the 'ZOOM IN' button to zoom in.

Press the 'ZOOM OUT' button to zoom out.

#### **5.2 For MaxCom 3V and MaxCom 4V keyboards**

Rotate the top of the joystick clockwise to zoom in.

Rotate the top of the joystick anti-clockwise to zoom out.

### **6.0 Focus and Iris**

Press the 'AUTO FOCUS' button (or blue AUTO button above the focus control buttons) to toggle the camera in and out of 'auto-focus' mode, if the feature is available on the selected camera / receiver. (If the LED above the 'AUTO FOCUS' button or the AUTO button is illuminated, then 'auto-focus' mode is selected.)

Press the 'NEAR' or 'FAR' [or + (FAR) or - (NEAR)] buttons to manually focus the camera. (The camera will automatically change to 'manual focus' mode if one of these two buttons is pressed.)

Press the 'AUTO IRIS' button (or blue AUTO button above the iris control button) to toggle the camera in and out of 'auto-iris' mode, if the feature is available on the selected camera / receiver. (If the LED above the 'AUTO IRIS' button or the AUTO button is illuminated, then 'auto-iris' mode is selected.) Press the 'OPEN' or 'CLOSE' [or + (OPEN) or - (CLOSE)] buttons to manually alter the camera iris. (The camera will automatically change to 'manual iris' mode if one of these two buttons is pressed.)

## **7.0 Manual Change Over (Change Over Orbiter Microspheres only)**

The operator can force the camera to change from MONO to COLOUR or COLOUR to MONO by pressing the 'AUX' button. The camera will automatically change back dependant on the illumination.

If the camera is in the mode selected by the operator (and is different to the mode that the camera would have automatically selected), the LED above the 'AUX' button, or the AUX button itself is illuminated.

If the camera is in the mode that the camera has automatically selected, the LED above the 'AUX' button is off or the AUX button itself is not illuminated.

## **8.0 Wash, Wipe and Auxiliary Functions**

If the receiver being controlled has WASH and WIPE functions, they are controlled as follows:

FOR WIPE.

Press the 'WIPE' button to activate the wiper.

Press the 'WIPE' button again to turn off the wiper.

*Note: If the LED above the 'WIPE' button is illuminated, or the WIPE button is illuminated, then the wiper is ON.*

FOR WASH.

**Press and hold** the 'WASH' button to activate the washer.

**Release** the 'WASH' button to turn off the washer.

*Note: If the LED above the 'WASH' button is illuminated, or the WASH button is illuminated, then the washer is ON.*

If the receiver has a separate momentary function (auxiliary), it is controlled as follows:

Press the '0' button, then **press and hold** the 'AUX' button to activate the auxiliary function.

**Release** the 'AUX' button to turn off the auxiliary function.

*Note: The LED above the 'AUX' button is not altered by this operation as it is used to monitor 'Change Over' Orbiter Microspheres.*

## 3.0 Presets and Tours

*Note: In an alarm system, there can be alarm presets as well as non-alarm presets for general use. If both types of presets are to be used, they must have different numbers so that alarm presets are not re-positioned in error when changing the position of a general preset. (e.g. Use presets 0 to 63 for general presets and 64 to 127 for alarm presets.)*

### 1.0 To Define a Preset

For example, to define Preset 1.  
Move the selected camera to view the desired preset position, using the joystick, zoom, focus and iris buttons.

**Press and hold** the 'PRESET' button.

Press button '1'.

**Release** the 'PRESET' button.

The current position of the camera has now been defined as Preset 1.

Up to 128 presets can be defined, and these are numbered 0 - 127.

### 2.0 To Seek a Preset

For Example, to seek Preset 1.

Press button '1'.

Press the 'PRESET' button.

The camera will now move at the maximum speed to the previously defined Preset 1.

The user may also select presets 1 - 4 by single button presses, using the buttons labelled 'PRESET 1' to 'PRESET 4'.

*Note: A preset seek will only occur if the preset has previously been defined*

### 3.0 To Start a Tour of Presets

The units in the *MaxCom* range have enough memory for four different tours. After programming the tours, as detailed in the next sections, they may be recalled in the following way.

Press the number button that corresponds to the tour number, either '1', '2', '3', or '4'.

Press the 'AUTOPAN' button.

### 4.0 To Define a Simple Tour

For example, to define a tour for three preset positions in memory as 'Tour 1'.

First, define the three preset positions, as detailed in section 1.0, above.

Press button '1', then **press and hold** the 'AUTOPAN' button. (This will define 'Tour 1'.)

Press button '1', then press the 'PRESET' button. (This selects the first preset in 'Tour 1'.)

Press button '2', then press the 'PRESET' button. (This selects the second preset in 'Tour 1'.)

Press button '3', then press the 'PRESET' button. (This selects the third preset in 'Tour 1'.)

**Release** the 'AUTOPAN' button.

The tour is now set up. To operate 'Tour 1'

Press button '1', then press the 'AUTOPAN' button.

The tour will now be set with a standard speed of 30°/sec and the dwell time at each preset set to a standard 60 seconds.

### 5.0 To Vary the Standard Speed of a Tour

For example, to define a tour (As set in "To Define a Simple Tour" on page 12.) in memory as 'Tour 2' with different speeds between preset positions.

Press button '2', then **press and hold** the 'AUTOPAN' button. (This will define 'Tour 2'.)

Press button '1', then press the 'PRESET' button. (This selects the first preset in 'Tour 2'.)

Press button '5', then press button '0', then press the '180°' button. (This defines 50°/sec to this preset position.)

Press button '2', then press the 'PRESET' button. (This selects the second preset in 'Tour 2'.)

Press button '1', then press button '0', then press button '0', then press the '180°' button. (This defines 100°/sec to this preset position.)

Press button '3', then press the 'PRESET' button. (This selects the third preset in 'Tour 2'.)

Press button '2', then press the '180°' button. (This defines 2°/sec to this preset position.)

**Release** the 'AUTOPAN' button.

The tour is now set up. To operate 'Tour 2'

Press button '2', then press the 'AUTOPAN' button.

*Note: The range of speeds that can be selected goes from '1' = 1°/sec up to '100' = 100°/sec. To select the maximum seek speed, press '0'.*

## 6.0 To Vary the Standard Speeds and Dwell Times of a Tour

For example, to define a tour (As set in 5.0, above.) in memory as 'Tour 3' with different dwell times between preset positions.

Press button '3', then **press and hold** the 'AUTOPAN' button. (This will define 'Tour 3'.)

Press button '1', then press the 'PRESET' button. (This selects the first preset in 'Tour 3'.)

Press button '5', then press button '0', then press the '180°' button. (This defines 50°/sec to this preset position.)

Press button '1', then press button '0', then press the 'TIME' button. (This defines a 10 second dwell time at this preset position.)

Press button '2', then press the 'PRESET' button. (This selects the second preset in 'Tour 3'.)

Press button '1', then press button '0', then press button '0', then press the '180°' button. (This defines 100°/sec to this preset position.)

Press button '1', then press button '6', then press the 'TIME' button. (This defines a 16 second dwell time at this preset position.)

Press button '3', then press the 'PRESET' button. (This selects the third preset in 'Tour 3'.)

Press button '2', then press the '180°' button. (This defines 2°/sec to this preset position.)

Press button '1', then press button '4', then press the 'TIME' button. (This defines a 14 second dwell time at this preset position.)

**Release** the 'AUTOPAN' button.

The tour is now set up. To operate 'Tour 3'

Press button '3', then press the 'AUTOPAN' button.

*Note: The range of the dwell times that can be set varies from 1 to 254 seconds. Entering a time of '0' will select 1 second dwell time.*

## 7.0 Alarm Activation during Tour Programming

If an alarm is activated on a camera whilst any keyboard is being used to program a tour for that camera, the programming will be interrupted at the point of activation. (The tour will also require re-programming.)

## 8.0 To Stop a Tour of Presets

Press the 'AUTOPAN' button. (This will turn off the tour.)

The tour will also stop if the telemetry buttons or the joystick are used to control the camera.

## 9.0 To Restart a Tour of Presets

Press the 'AUTOPAN' button. (This will start the last tour that the unit was carrying out.)

## 4 Alarms

### 1.0 Alarm Monitor

The *MaxCom* can have alarm inputs that are associated with the cameras. Monitor 1 is the alarm monitor and it is this monitor which displays all the alarm messages and the alarm cameras. This monitor is the only monitor which can display the 'alarm menus' (as detailed in Chapter 5 - Menu Options sections 8.0 and 9.0).

### 2.0 Alarm Input Options

The alarm input options are all selected using the menu, as detailed in Chapter 5 - Menu Options sections 8.0 and 9.0.

They can be 'normally open' ('active' when closed) or 'normally closed' ('active' when open) contacts.

They can be enabled ('ON') or disabled ('OFF').

They can be assigned to activate certain cameras and seek certain presets on those cameras.

They can be programmed to have different 'alarm timers' which extend the 'alarm mode' after the alarm input has become 'inactive'. (The timers start when the contacts become 'inactive'.) The alarm timers can also be set the same for all alarm inputs through the alarm keyboard directly (see section 8.0, Setting a Global Alarm Timer).

### 3.0 Alarm Priorities

As only one alarm can be displayed on the alarm monitor at any one time, the alarms are prioritised. The lower the number of the alarm input, the higher the priority with Alarm Input 1 being the highest.

## 4.0 Alarm Activations

When an alarm input becomes 'active', the *MaxCom* will be set to 'alarm mode' and as a result will respond in several ways (as listed in this section). The *MaxCom* will remain in 'alarm mode' until all the alarm inputs have gone 'inactive' and all the alarm timers (for those inputs) have expired or until they are cancelled by the 'ALARM' button (see section 6.0, Cancelling Alarms). Once all the alarm inputs become 'inactive' (and their alarm timers have expired), the *MaxCom* will no longer be in 'alarm mode' and will return to the condition that it was in prior to the activation of any alarms.

### 4.1 Camera 'Alarm Mode'

The *MaxCom* will set the associated camera to 'alarm mode' which will cause the camera to seek the appropriate preset as defined in the menu. The camera will remain in 'alarm mode' until the alarm input has gone 'inactive' and the associated alarm timer has expired or until it is cancelled by the 'ALARM' button (see section 6.0, Cancelling Alarms) at which point the camera will return to the condition that it was in prior to the activation of any alarms.

*Note: For 'in coax' telemetry cameras, if more than one alarm input is 'active', the lower priority camera(s) will not be in 'alarm mode' whilst a higher priority alarm input is 'active'.*

When the *MaxCom* is in 'alarm mode' due to 'active' alarm inputs, the alarm keyboard cannot select other cameras to view unless it 'cancels' the alarm inputs first (see section 6.0, Cancelling Alarms).

### 4.2 Monitor 'Alarm Mode'

The *MaxCom* will switch to display the picture from the associated camera on the alarm monitor (Monitor 1). If more than one alarm is active, then the highest priority alarm will be displayed. The message 'ALARM n' (where n is the alarm number) will also be displayed at the top of the monitor.

If an alarm becomes active but the corresponding camera is not connected, the *MaxCom* will not switch but the 'ALARM n' message will still be displayed.

Once the alarms have gone 'inactive' and the *MaxCom* is no longer in 'alarm mode', the alarm messages will disappear and the alarm monitor will return to the condition it was in prior to the activation of any alarms.

### 4.3 Alarm Relay

There is an alarm relay output on the *MaxCom* which could be used to switch a time-lapse VCR to 'alarm mode recording' (e.g. It could switch the VCR from 'time-lapse' to 'real-time' recording).

The relay closes when an alarm input becomes 'active' and opens again when all the alarm inputs have gone 'inactive' and the alarm timers (for those inputs) have expired or until they are cancelled by the 'ALARM' button (see section 6.0, Cancelling Alarms).

If an alarm becomes active but the corresponding camera is not connected, the relay will close momentarily and then open again.

On the smaller *MaxCom* units (MAXCOM8, MAXCOM8/2, MAXCOM16 and MAXCOM16/2) there is a second relay output (Relay 2) which closes for 1 second when the first relay output has opened. (This is to be used to switch the VCR out of 'alarm mode recording' if the VCR requires it.)

### 4.4 Alarm Buzzer

The buzzer in the keyboard for the alarm monitor will sound continuously whilst the *MaxCom* is in 'alarm mode'. The alarm buzzer can be silenced by pressing the 'ALARM' button. If more than one alarm input is 'active', the 'ALARM' button must be pressed a number of times equal to the number of 'active' alarm inputs to silence the buzzer.

**Note:** *If a MaxCom 4V or a MaxCom 4VE keyboard is used to control the alarm monitor, the buzzer will only sound when the keyboard is actually in control of this monitor and it will be silent if the keyboard is controlling a different monitor.*

#### 4.5 Alarm LED

The LED above the 'ALARM' button on the keyboard, or the ALARM button itself for the alarm monitor will be illuminated when an alarm input becomes 'active' and will remain illuminated until all alarm inputs have gone 'inactive' and the alarm timers (for those inputs) have expired. Even if the alarms have all been cancelled by pressing the 'ALARM' button (see section 6.0, Cancelling Alarms), the LED will remain illuminated until the alarm inputs themselves have gone 'inactive' (and timed out).

The LED will also be illuminated if the *MaxCom* is in 'manual alarm mode' (see section 7.0, 'Manual Alarm Mode').

**Note:** *If the alarm LED is illuminated on the keyboard for the alarm monitor, it will also be illuminated on all other keyboards connected to the MaxCom.*

### 5.0 Alarm Keyboard

The keyboard that is used to control the alarm monitor on the *MaxCom* is the alarm keyboard. If a *MaxCom 4V* or a *MaxCom 4VE* keyboard is used to control the alarm monitor, only when the keyboard is actually in control of this monitor will it operate as the alarm keyboard.

The alarm buzzer will only sound on the alarm keyboard (see section 4.4, Alarm Buzzer).

Only the alarm keyboard can cancel alarms (see section 6.0, Cancelling Alarms).

When the *MaxCom* is in 'alarm mode' (either due to active alarm inputs or due to manual activation), the alarm keyboard can assume control of the displayed camera at any time even if another keyboard is currently controlling it. (At this point, the

'CAMERA IN USE' message will appear on the monitor being controlled by the other keyboard.)

*Note: When the MaxCom is in 'alarm mode' due to 'active' alarm inputs, the alarm keyboard cannot select other cameras to view unless it 'cancels' the alarm inputs first (see section 6.0, Cancelling Alarms).*

## 6.0 Cancelling Alarms

On the *MaxCom*, 'active' alarm inputs can be 'cancelled' in one of two ways – either through the alarm keyboard directly or by disabling the alarm inputs in the alarm menus. (In both instances only the alarm keyboard can 'cancel' alarm inputs.)

*Note: If an alarm input is cancelled, the MaxCom will no longer respond to that input until the input has gone 'inactive' and the alarm timer associated with that input has expired.*

### 6.1 Cancelling Directly

As stated earlier, the highest priority alarm is displayed on the alarm monitor. To select another camera for display (or to cancel the *MaxCom* 'alarm mode' if only one alarm input is active), the highest priority alarm must be cancelled first. This is done by pressing the 'ALARM' button one more time after it has been pressed to silence the buzzer. The next highest priority alarm camera is then displayed. To 'cancel' all the alarms that are currently active, the 'ALARM' button must be pressed a total number of times equal to twice the number of alarm inputs that are currently 'active'. (The buzzers for the alarms are cancelled first and then when the buzzer is silent, the alarms themselves are cancelled.)

### 6.2 Cancelling through the Alarm Menu

The menu can be selected while alarms are 'active' and if an 'active' alarm input is disabled in the 'SET ACTIVE ALARMS' menu (see chapter 5, Menu Options, section 8.0), the alarm input will be 'disabled' when the menu is turned

off. At this point the alarm timer for the 'disabled' alarm input will start and when it has expired, the *MaxCom* will no longer respond to that alarm input.

## 7.0 'Manual Alarm Mode'

When there are no 'active' alarm inputs on the *MaxCom*, it can be put into a 'manual alarm mode' by pressing the 'ALARM' button on the alarm keyboard only.

When the *MaxCom* is in 'manual alarm mode', the alarm relay output will be closed. The message 'ALARM' will also be displayed at the top of the alarm monitor. As mentioned earlier, when the *MaxCom* is in 'manual alarm mode', the alarm keyboard can assume control of the camera it has selected at any time (even if another keyboard is currently controlling that camera).

The alarm keyboard can change cameras whilst in 'manual alarm mode' without having to cancel it first (unlike the 'alarm mode' due to active alarm inputs).

If an alarm input becomes 'active' whilst the *MaxCom* is in 'manual alarm mode', this will take priority and the *MaxCom* will operate as detailed earlier. When all the alarm inputs have gone 'inactive' (and their associated alarm timers have expired), the *MaxCom* will return to 'manual alarm mode'.

The 'manual alarm mode' is cancelled by pressing the 'ALARM' button a second time (at which point the alarm relay opens and the alarm LED is turned off).

## 8.0 Setting a Global Alarm Timer

To set different alarm timers for the alarm inputs, the 'SET ALARMS' menu must be edited using the alarm keyboard (see Chapter 5 - Menu Options section 9.0, Set-up of Alarm Timers for details).

However, the alarm inputs can be programmed to have the same alarm timer directly through the alarm keyboard.

(No other keyboard can be used to do this .) This is done as follows :

**Press and hold** the 'ALARM' button.

Enter the global timer required by pressing the NUMBER buttons. (This time can be anywhere in the range from 0 to 255 seconds.)

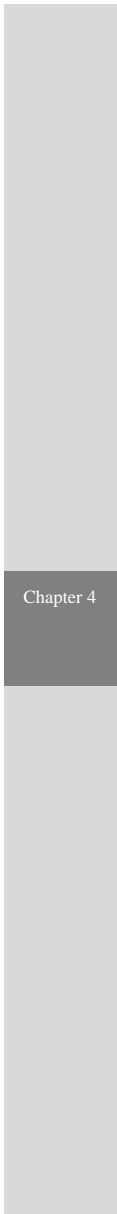
Press the TIME button .

**Release** the ALARM button .

All alarm inputs will now be programmed with the same alarm timer.

*Note: If an alarm is activated whilst the keyboard is being used to program Monitor 1 with an auto-sequence, the programming will be interrupted at the point of activation. (The sequence will also require re-programming.)*

*Note: If an alarm is activated on a camera whilst any keyboard is being used to program a tour for that camera, the programming will be interrupted at the point of activation. (The tour will also require re-programming.)*



## 5.0 Menu Options

While the *MaxCom* is in any of the following menus, if there is no keyboard activity (button presses or use of the joystick) for sixty seconds, the *MaxCom* automatically returns to normal operation

### Systems with more than one monitor

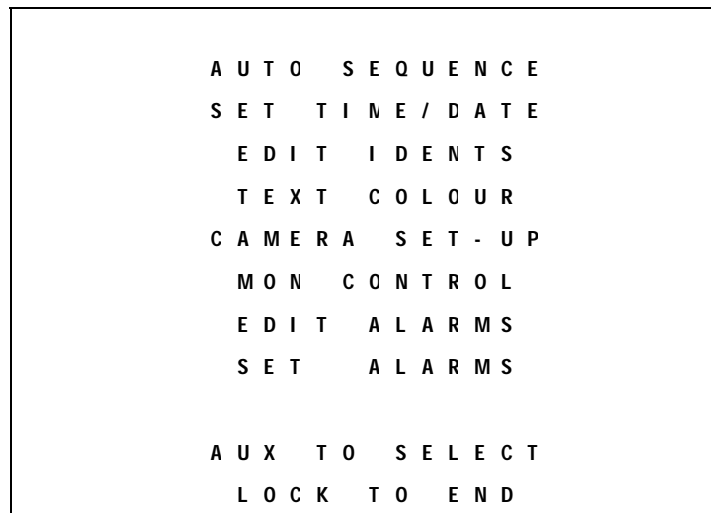
Only one monitor can display the menus at any one time. If the menu code is entered when another keyboard is already using the menus, the 'MENU IN USE' message will be displayed. The message will be removed as soon as the other keyboard exits the menus. (Or if the keyboard changes cameras.)

### 1.0 To Display a list of Menu options

To display the list of menu options carry out the following sequence of key presses:

'9', '0', '9', '0', LOCK

The monitor will show the main menu as shown below.



```
A U T O   S E Q U E N C E
S E T   T I M E / D A T E
E D I T   I D E N T S
T E X T   C O L O U R
C A M E R A   S E T - U P
M O N   C O N T R O L
E D I T   A L A R M S
S E T     A L A R M S

A U X   T O   S E L E C T
L O C K   T O   E N D
```

*Figure i The Main Menu*

The line 'AUTO SEQUENCE' will be flashing.  
 The joystick is used to move the flashing bar up and down. Use the 'AUX' button to select the flashing menu option. The relevant sub-menu will then be displayed.  
 If no item is selected, pressing the 'LOCK' button will return the *MaxCom* to its' normal operation.

**Note:** *Only the alarm monitor menu has the 'MON CONTROL', 'EDIT ALARMS' and 'SET ALARMS' options in the main menu.*

**Note:** *One monitor MaxCom systems do not have the 'MON CONTROL' option.*

## 2.0 To set-up an Auto-sequence using the Menus

This menu controls the auto sequence of cameras for display on the monitor.

Use the joystick while in the main menu to select 'AUTO SEQUENCE', (see Figure i The Main Menu, on page 23) and press the 'AUX' button.

The monitor now displays the 'AUTO SEQUENCE' menu as shown below.

Chapter 5

S E C	C A M E R A	T I M E
1	0 1 : F R O N T D C O R	5
2	0 2 : B A C K D O C R	5
3	0 3 : S I D E D O C R	5
4	0 4 : C A R P A R K	5
5	0 5 : S H O P F L C O R	5
6	0 6 : O F F I C E	5
C A M E R A O F F O R S E Q U E N C E E N D		
L O C K T O E N D		

**Figure ii** *The Auto-sequence Menu*

The number '01' (and the camera ident associated with camera 1) below the word camera will be flashing. The 'down arrow' indicates that more choices are available off screen. These can be accessed by using the joystick. Use the joystick to select a camera number or a dwell time.

To change a setting, the 'number buttons are used. The camera numbers can be in the range of 1 to the maximum number of cameras available on the unit. Setting the camera number to 0 will cause the sequence to end and all subsequent entries to be ignored.

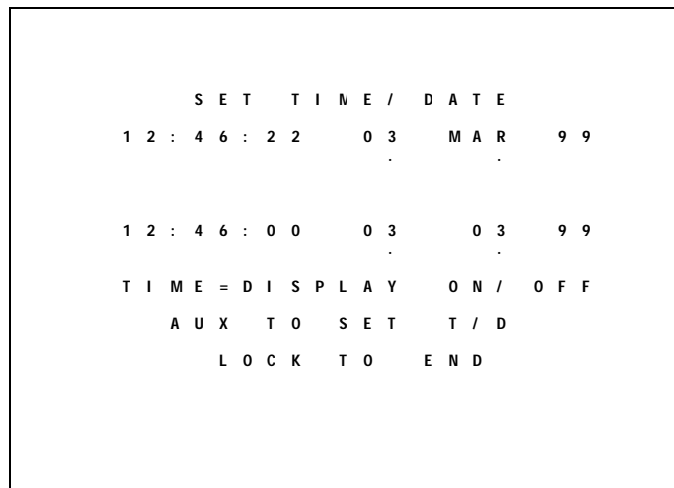
The position of an entry in the auto-sequence table is indicated by the number under the column headed 'SEQ'. Camera 0 is selected to indicate the end of the sequence. Due to all subsequent entries being ignored after the insertion of a 0, it is not possible to have a 0 as the first entry in an auto-sequence table.

If no item is to be selected, or set-up of auto-sequence has been completed, press the 'LOCK' button to return to the main menu. Then press 'LOCK' again to return the *MaxCom* to normal operation.

### 3.0 To Set the Time and Date

Use the joystick while on the main menu to select 'SET TIME /DATE', (see Figure i The Main Menu, on page 23) and press the 'AUX' button.

The monitor now displays the 'SET TIME/DATE' menu as shown overleaf.



**Figure iii** *The Set Time / Date Menu*

The 'ON or 'OFF' will be flashing to indicate whether or not the TIME and DATE settings will be displayed. ON is flashing if the TIME and DATE settings are to be displayed. Press the 'TIME' button to alter whether the TIME and DATE settings are displayed.

The second line of the menu shows the time and date settings that are currently being used.

The third line of the menu shows the time and date to be set. The first two characters will be flashing.

Use the 'NUMBER' buttons to program a new time and date in the following sequence.

hh, mm, dd, mm, yy (hours, minutes, day, month, year)

**Note:** *The seconds are automatically set to 00 when the clock is set and so are not programmed manually.*

As each figure is edited, the next in the sequence will start flashing. Alternatively, use the joystick to move the flashing left or right and also to increment or decrement flashing numbers. (Instead of using the 'NUMBER' keys.)

Press 'AUX' to set the new time and date. The second line of the display will be updated to allow checking and possible further adjustment.

If no item is to be selected, or set-up of the time and date has been completed, press the 'LOCK' button to return to the main menu. The new time and date will not be used unless 'AUX' has been pressed. This allows for accurate setting and checking of the new time and date. Press the 'LOCK' button again to return the *MaxCom* to normal operation.

*Note: Remember to check the time and date display on any other piece of equipment which is connected to the system (e.g. a VCR). If it overlaps the time and date display from the MaxCom, either re-position the time / date on the other piece of equipment to give two legible displays or disable the time / date on the MaxCom to avoid any unnecessary duplication on the recording.*

#### 4.0 To Edit the Idents.

Both the camera idents and the associated preset idents for each camera can be edited. Each ident can be up to 10 characters long.

Use the joystick while on the main menu to select 'EDIT IDENTIS'. (see Figure i The Main Menu, on page 23 and press the 'AUX' button.

The monitor now displays the 'EDIT IDENTIS' menu as shown below.

E D I T I D E N T S									
C	A	M	E	R	A	0	1	:	0 1 2 3 4 5 6 7 8 9
P	R	E	S	E	T	0	0	1	: 0 1 2 3 4 5 6 7 8 9
A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z		.	:	/
0	1	2	3	4	5	6	7	8	9
A U X T O S E L E C T									
L O C K T O E N D									

**Figure iv** The Edit Idents Menu

The user can select any camera or preset to edit. Use the joy stick to select the camera or preset and enter the desired number using the 'NUMBER' buttons.

**Note:** *If an illegal camera number or preset is selected, i.e. a camera number higher than the total cameras on the system, or a preset above 127, then the warning message 'ILLEGAL CAMERA NUMBER' or 'ILLEGAL PRESET NUMBER' will be flashed at the bottom of the screen. This will temporarily overwrite the 'LOCK TO END' line. (Rather than appearing beneath it.)*

When the camera number or preset to be edited is selected, the letter 'A' in the selection of characters will be flashing, as will the whole of the camera or preset ident being changed.

Use the joystick to move the flashing area of the character selection section to the character required. (To enter a space, select the space after the letter 'Z'.)

To select the flashing character, press the 'AUX' button.

*Note: The ident is completely removed if the space character is selected as the first character.*

Press the 'LOCK' button when programming of the ident is complete.

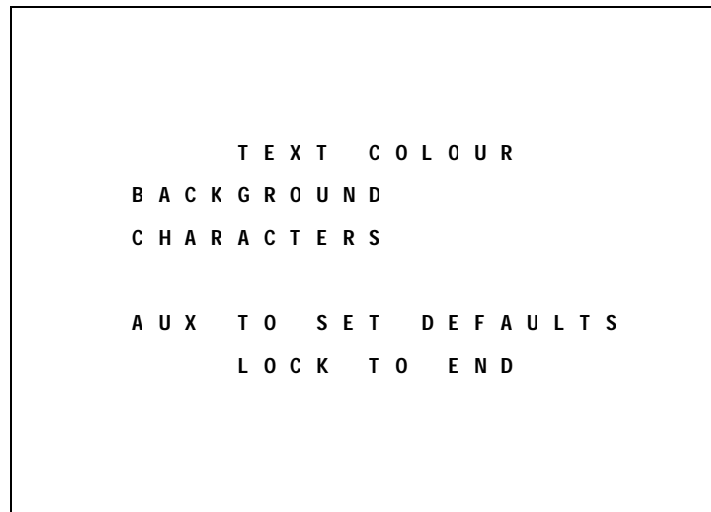
Use the joystick to select another ident to edit or if no item is to be selected, or set-up of idents has been completed, press the 'LOCK' button to return to the main menu. Then press 'LOCK' again to return the *MaxCom* to normal operation.

*Note: The Preset ident is displayed when seeking a preset but not during a tour.*

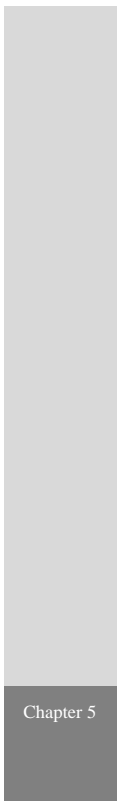
## 5.0 Set-up of Text Colour

Use the joystick while on the main menu to select 'TEXT COLOUR' (See Figure i The Main Menu, on page 23) and press the 'AUX' button.

The monitor now displays the 'TEXT COLOUR' menu as shown below.



**Figure v** The Text Colour Menu  
The word 'BACKGROUND' will be flashing.



To adjust the colour of the box surrounding the characters, press the joystick left or right until the colour of the box (background) is as required. (If the background scale is set to its centre position, then the background will be clear.)

To adjust the colour of the characters, press the joystick down until the word 'CHARACTERS' is flashing. With the word 'CHARACTERS' flashing, press the joystick left or right until the colour of the characters is as required.

To return the colour of the background and characters to their default settings, press the AUX' button.

If no item is to be selected, or set-up of text colour has been completed, press the 'LOCK' button to return to the main menu. Then press 'LOCK' again to return the *MaxCom* to normal operation.

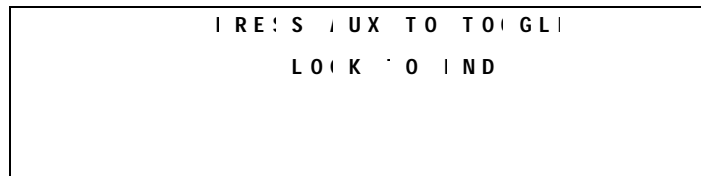
*Note: The background colour and the character colour are not allowed to be the same. If these are set to the same colour, then upon trying to exit the menu, the default colours will be set.*

### 6.0 To Set Up the Cameras (for Microspheres)

Use the joystick while on the main menu to select 'CAMERA SET-UP'. (See Figure i The Main Menu, on page 23) and press the 'AUX' button.

The monitor now displays the 'CAMERA SET-UP' menu as shown below.

C	A	M	I	R	A	L	I	M	P	S	8	0	;	0	0		0	M	I	T	I	M	E					
0	:					I	R																					
0	:					N	(	-	I	I		0						D	I		P		E	S	I	T		3
0	:					N	(	-	I	I		0																3
0	:					N	(	-	I	I		0																3
0	:					N	(	-	I	I		0																3



**Figure vi** The Camera Set-Up Menu

The first item below 'LAMPS' will be flashing. The 'down arrow' indicates that more choices are available off screen. These can be accessed by using the joystick.

Use the joystick to move between the different option columns, 'LAMPS', '180', 'ZOOM', 'HOME' and 'TIME'.

To change a selected setting, press the 'AUX' button. This will toggle the choices.

LAMPS - 'IR' - This version is intended for use in a CCTV system that has 'IR' illumination. When the light level reduces to a point where COLOUR integration would become active, the camera will automatically change over to MONO integration. It is expected that IR lights would be turned on by a light sensor when the light level drops. When the light level increases and the camera starts to 'white-out' it will automatically change over to COLOUR.

LAMPS - 'NO-IR' - This version is intended for use in a CCTV system that has no 'IR' illumination. When the camera is displaying a COLOUR picture, integration will automatically be selected as the illumination reduces. When the final step of integration setting has been reached, the camera will automatically select MONO integration to take advantage of the higher sensitivity MONO integration mode. When the light level increases, the camera will automatically change back to COLOUR integration.

**Note:** *The IR/NO-IR option is used only with mono/colour Change Over Orbiters.*

180 = YES enables the auto-180 feature for the associated camera. When tilting down, as soon as the end stop is reached, the camera will automatically turn through 180°.

180 = NO disables the auto-180 feature for the associated camera.

ZOOM - OPT disables the digital zoom feature for the associated camera.

ZOOM - DIG enables the digital zoom feature for the associated camera.

## **6.1 The Home Function**

The Home function allows the camera to return to a preset or start a tour after a user defined period of inactivity i.e. no keys have been pressed on the keypad, no tour is being carried out or the camera is not performing some other activity. The Home function is found in the main menu, under the camera set-up sub-menu and is controlled via the 'HOME' and 'TIME' option columns.

### **6.1.1 Operation**

This feature is found by pressing the keys '9', '0', '9', '0', 'LOCK'.

This will display the main menu option. Select the 'CAMERA SET-UP' menu using the joystick then press 'AUX' to enter this menu

The 'HOME' option column has three settings, these options are selected by pressing the 'AUX' key to toggle through the available options, which are:

#### **NO**

If this option is set then the home function is off and will therefore not execute no matter what value is entered in the 'TIME' column.

#### **PRESET**

If this option is set then the camera will seek and move to preset 0 after a period of inactivity, as defined in the 'TIME' column. This time is in minutes and is set to a default value of three minutes.

**Note:** *Preset 0 MUST be defined, otherwise this setting will not function (See Chapter 3 - "Presets and Tours" for details on defining a preset.) The 'TIME' value MUST also be set to a value between 1 and 127 minutes - A value of 0 or one in excess of 127 will not be accepted.*

#### TOUR

If this option is set then the camera will start TOUR 1 after a period of inactivity, as defined in the 'TIME' column. This time is in minutes and is set to a default value of three minutes.

**Note:** *Tour 1 MUST be defined, otherwise this setting will not function (See Chapter 3 - "Presets and Tours" for details on defining a tour.) The 'TIME' value MUST also be set to a value between 1 and 127 minutes - A value of 0 or one in excess of 127 will not be accepted.*

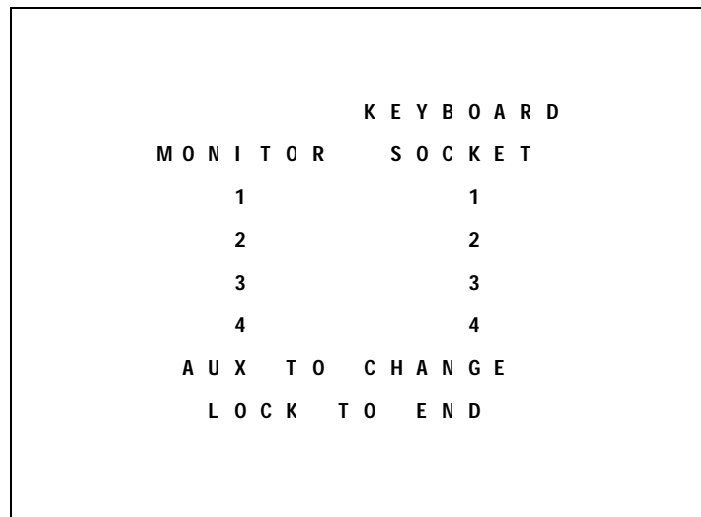
If no item is to be selected, or set-up of cameras has been completed, press the 'LOCK' button to return to the main menu. Then press 'LOCK' again to return the **MaxCom** to normal operation.

## 7.0 To Set Up the Monitor Control

This menu sets up which keyboard controls each monitor output.

Use the joystick while on the main menu to select 'MON CONTROL', (see Figure i The Main Menu, on page 23) and press the 'AUX' button.

The monitor now displays the 'MONITOR CONTROL' menu as shown overleaf.



*Figure vii The Monitor Control Menu*

**Note:** *for 2 monitor systems, there will only be '1' and '2' under the 'MONITOR' heading.*

The number '1' below the word 'SOCKET' will be flashing. The 'down arrow' indicates that more choices are available off screen. These can be accessed by using the joystick. Use the joystick to select which keyboard socket needs to be changed.

To change a setting, the 'AUX' button is used. The keyboard socket number can be set in the range 0 to the number of monitors in the *MaxCom*, or to RS232. (Except Monitor 1 which can only be set to '1' or '1, RS232'.) The number selected indicates the keyboard that will control the relevant monitor. (The number of the keyboard is defined by the keyboard connector on the MaxCom that it is connected to.) If RS232 is selected then the monitor will be controlled by an RS232 keyboard connected to the RS232 connector. If '0' is selected for a monitor, then that monitor will not be controlled by any keyboard.

*Note: At least one monitor must always be able to be controlled from an RS232 keyboard. Thus, either monitor 1 must be set to '1, RS232' to allow keyboard 1 or RS232 keyboard control, or at least one other monitor must be set for RS232 control.*

If no item is to be selected, or the set-up has been completed, press the 'LOCK' button to return to the main menu. Then press 'LOCK' again to return the MaxCom to normal operation.

### 8.0 To Set Active Alarms

Use the joystick while on the main menu to select 'EDIT ALARMS'. (See Figure i The Main Menu, on page 23) and press the 'AUX' button.

The monitor now displays the 'EDIT ALARMS' menu as shown below.

A L A R M	O N / O F F	T Y P E
0 1	O N	N . O .
0 2	O N	N . O .
0 3	O N	N . O .
0 4	O N	N . O .
0 5	O N	N . O .
0 6	O N	N . O .
P R E S S A U X T O T O G G L E		
L O C K T O E N D		

**Figure viii** The Set Active Alarms Menu

The first item below the ON/OFF column will be flashing. The 'down arrow' indicates that more choices are available off screen. These can be accessed by using the joystick.

Use the joystick to move the flashing area to an 'ON/OFF' or a 'TYPE' item.

To change a selected setting, press the 'AUX' button. This will toggle the choices.

ON/OFF = ON indicates that the *MaxCom* will respond to this numbered alarm input.

ON/OFF = OFF indicates that this numbered alarm input will be ignored.

TYPE = N.O. indicates that the alarm is 'normally open' i.e. activated by a closing contact.

TYPE = N.C. indicates that the alarm is 'normally closed' i.e. activated by an opening contact.

If no item is to be selected, or set-up of alarms has been completed, press the 'LOCK' button to return to the main menu. Then press 'LOCK' again to return the *MaxCom* to normal operation.

## 9.0 Set-up of Alarm Timers

Use the joystick while on the main menu to select 'SET ALARMS'. (See Figure i The Main Menu, on page 23) and press the 'AUX' button.

The monitor now displays the 'SET ALARMS' menu as shown overleaf.

A L A R N	C A M E R A	P R E S E T	T I M E
C 1	0 1	1	5
C 2	0 2	2	5
C 3	0 3	3	5
C 4	0 4	4	5
C 5	0 5	5	5
C 6	0 6	6	5
E N T E R T I M E O F F O R T I M E R O F F			
L O C K T O E N D			

**Figure ix** The Set Alarms Menu

The camera number for the first alarm will be flashing. The ‘down arrow’ indicates that more choices are available off screen. These can be accessed by using the joystick.

Use the joystick to move the flashing area to an item to change.

Use the ‘NUMBER’ buttons to change the camera number, preset and alarm timer associated with a particular alarm input. Any camera, preset and timer can be selected for each alarm. The camera number is in the range 1 to the maximum number of cameras on the *MaxCom*. The alarm time can be in the range 0 to 255 seconds. If the alarm time = 0, then the alarm will be active only for the duration of the active alarm input. This option can be used, for example, with sensors that have an in-built alarm timer.

The preset number is in the range 0 to 127.

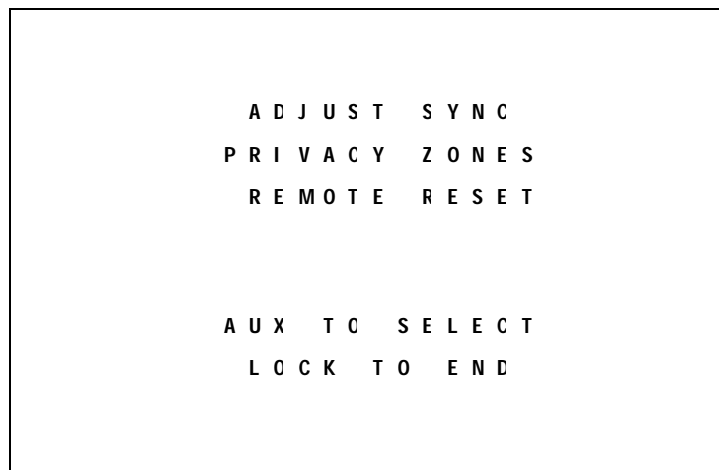
If no item is to be selected, or set-up of alarm timers has been completed, press the ‘LOCK’ button to return to the main menu. Then press ‘LOCK’ again to return the *MaxCom* to normal operation.

## 10.0 Line Lock

The line-lock feature is accessed by pressing '4', '1', '4', '1', 'LOCK'. This will display the engineers menu, as shown below in Figure x. The 'ADJUSTSYNC' menu option will be flashing.

*Note: Please note that this is a different combination than is used to enter the menu options screen.*

When this code is entered, the screen below is displayed. Select the option required by using the joystick and then pressing 'AUX'.



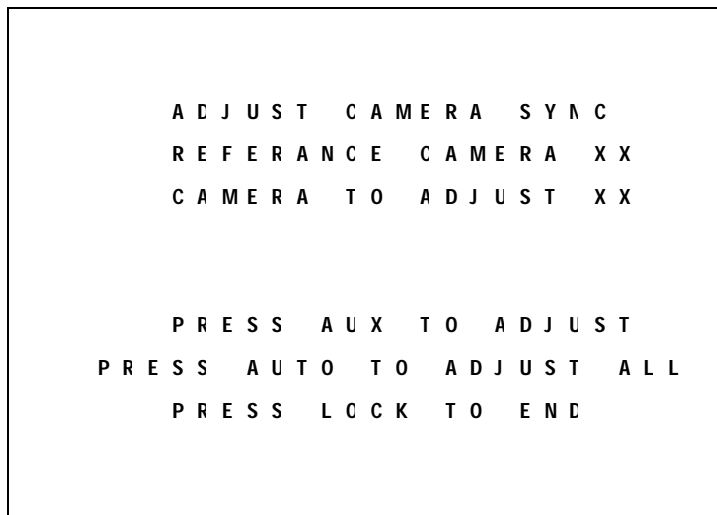
*Figure x Engineers Menu*

### 10.1 Adjust Camera Sync

Choosing this option will bring up the menu as shown in Figure xi.

*Note:* When you switch on a line lock Orbiter, the adjustment parameter that was being used when the Orbiter was switched off is sent to the camera module so that it is not necessary to use the MaxCom 'adjust camera sync' menu every time the power is turned on. The camera module adjusts it's sync which can cause the picture to be unstable for a few seconds.

*Note:* The power to the Orbiters must be 24V ac 60Hz for NTSC type Orbiters and 24Vac 50Hz for PAL type Orbiters.



**Figure xi** The Adjust Camera Sync Menu

Use the joystick to move the highlighting to REFERENCE CAMERA or CAMERA TO ADJUST. Use the number buttons to select the cameras. For example connect the two cameras to inputs 1 and 2. set REFERENCE CAMERA to 01, and CAMERA TO ADJUST to 02.

Press 'AUX' to adjust camera 2. The MaxCom will select camera 1, then camera 2. It will measure the VD syncs and calculate the difference. It will display the message SYNC DIFFERENCE XX.XmS. It then selects camera 2 on the monitor and sends the appropriate adjustment command to camera 2. The command is sent by RS485 and in the coax. The message ADJUSTING CAMERA is displayed. If the camera is being controlled by bi-directional RS485 the message OK is appended to the ADJUSTING CAMERA message.

The sync of the camera is adjusted. If it is currently being displayed, the picture could become unstable for a few seconds.

After a delay of about 4 seconds, the MaxCom will repeat the measurement and display the result on the screen, then it will display FINISHED. The length of time taken for the camera to stabilize is not under our control. Often it is less than 4 seconds, so the final result SYNC DIFFERENCE 00.0mS will be seen. If the camera has not stabilized when the second measurement is made the displayed SYNC DIFFERENCE has no useful meaning. If the measurement is repeated again, the camera will have stabilized and the difference will be small (less than 00.5mS) so you will see that the second measurement and adjustment was not needed, however it does no harm to repeat the adjustment as many times as you want.

If the REFERENCE CAMERA or CAMERA TO ADJUST is absent, one of the following messages will be displayed.

REFERENCE CAMERA FAIL  
UNABLE TO ADJUST SYNC

or

ADJUST CAMERA ABSENT  
UNABLE TO ADJUST SYNC

If the CAMERA TO ADJUST is being controlled by coax telemetry or simplex RS485, or the camera is not a sync Orbiter, then the OK will not be displayed.

The Sync Orbiter can adjust over a range of approximately 270 electrical degrees. It is possible that the required adjustment could be trying to use the 90 degree 'hole' that cannot be used. To synchronize such a camera, simply rotate the PHASE pot which is located on the vertical circuit board inside the Orbiter that is being adjusted by about a third of a turn, then repeat the adjustment from the MaxCom.

If the CAMERA TO ADJUST is a sync Orbiter and the required adjustment is in the 'hole' described above, then the SYNC DIFFERENCE will show a constant value each time you attempt the adjustment.

#### AUTO SYNC OF ALL CAMERAS

If a sync MaxCom is used in a system that has several sync Orbiters, they can all be adjusted together as follows: Select the ADJUST CAMERA SYNC menu and select the camera to be used as the REFERENCE CAMERA. Press 'AUTO'. The MaxCom will select all the cameras in turn, do the measurements, and send the adjustment commands to all the cameras in the system. The display will show ADJUSTING SYNCs after a few seconds it will display FINISHED.

When the auto sync of the whole system is in progress the pictures will flash as the cameras are selected. The second measurement on each is not made and missing cameras do not cause an error message.

You will find it useful to use the 'PHASE' pot to deliberately set the sync to be wrong so you can observe it being corrected by the MaxCom.

During manufacture and test at VCL, the sync Orbiters will all be set to a consistent phase setting with respect to AC+ (we shall define which of the two AC power supply wires is to be called AC+). This means that if a system of sync Orbiters is installed and care is taken to be consistent in the choice of pins used for connecting the AC supply, then the cameras will already be synchronized (assuming that all the power supplies are driven from the same phase of the mains. This could be useful if the system does not use the new MaxCom.

It is possible to use the PHASE pots in the Orbiter to synchronize the cameras manually, using an oscilloscope. But if the range of adjustment does not include the desired phase setting, it will be necessary to interchange the two AC supply wires.

## **11.0 Remote Reset**

### **11.1 Introduction**

The Remote Reset enables you to reset the camera from the Maxcom keyboard, i.e. you can reset the camera without having to physically unplug it, or turn the power off then on again for a particular camera.

### **11.2 Operation**

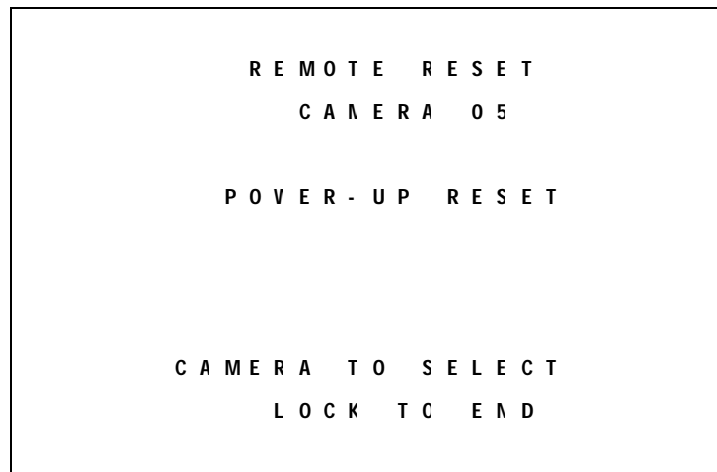
The remote reset has three standard modes of operation

#### **11.2.1 Power Up Reset**

The power up reset allows you to reset the receiver and camera without the loss of any programmed options, i.e. presets, tours etc. Once the camera has reinitialized after a power up reset, it will return to its previous pan and tilt positions, zoom (digital zoom, if enabled), iris and focus settings prior to the power up reset being executed.

This feature is found by pressing '4', '1', '4', '1', 'LOCK'. This will display the Engineer's Menu, as shown in Figure x. The 'ADJUST SYNC' menu option will be flashing.

Select the 'REMOTE RESET' via the joystick then press 'AUX' to enter the remote reset menu as shown in Figure xii.



**Figure xii** Remote Reset (Power-up Reset) Menu

A camera number can be entered then the 'CAMERA' button pressed. The MaxCom will then switch to that camera, providing that the camera input is available. This enables you to view the camera that you want to reset.

For this feature to function correctly there must be a video signal at the camera input of the MaxCom

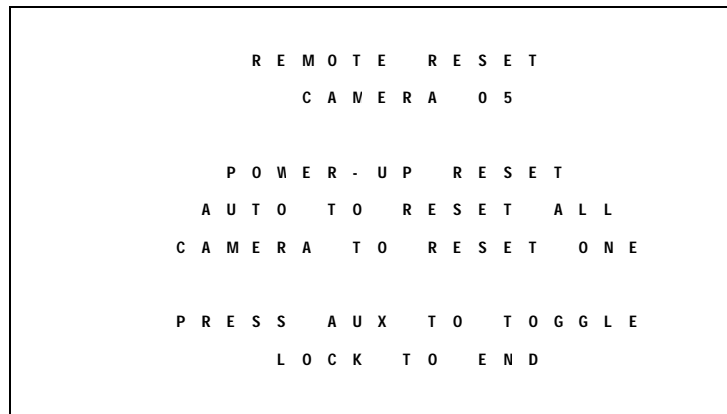
To check that a particular camera is present, do the following:

Enter a valid camera number using the 'NUMBER' keys, then press the 'CAMERA' key to select it. If no video signal is present then the camera number will go to the next camera that has a valid video signal.

If you know that a camera is on a particular video input, but no picture is being displayed, then you can still reset the camera.

To select a particular camera that you know is present, but is not displaying a video picture, do the following:

Enter a valid camera number using the 'NUMBER' keys, then, using the joystick, move down to the options field, i.e. where the option 'POWER-UP RESET' will be flashing as shown overleaf.



**Figure xiii** Remote Reset Menu - reset camera

If this is the only camera you wish to reset then press the 'CAMERA' key to reset this camera

If you wish to reset all cameras then press the 'AUTO' key  
Pressing the 'AUX' key will toggle between 'POWER-UP RESET' and 'FACTORY RESET', 'CAMERA RESET'.  
The camera(s) will now reset. The remote reset menu will remain on screen after reset has occurred, to exit this menu press the 'LOCK' key.

*Note: Pressing the 'AUX' key will toggle between 'POWER-UP RESET' and 'FACTORY RESET', and 'CAMERA RESET' the Factory Reset is explained below.*

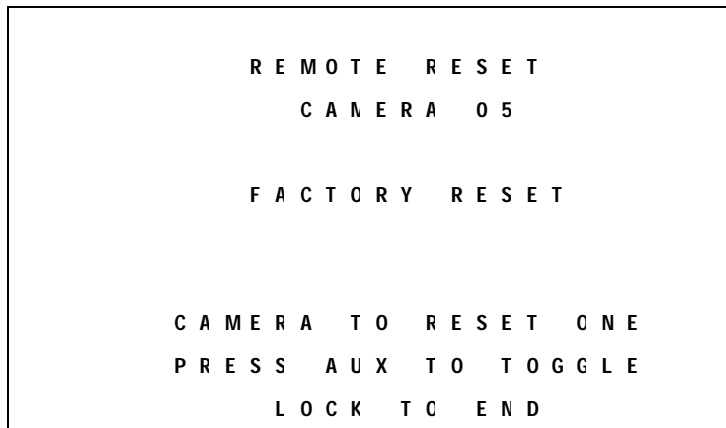
**11.2.2 Factory Reset.**

**WARNING:** THIS OPTION WILL ERASE ALL USER PROGRAMMED PRESETS

The Factory Reset has a more dramatic effect on the receiver. If this option is performed then ALL presets and tours will be cleared and the camera is reset. The home preset / tour functions will not work as it relies on presets. Alarm presets will be lost, etc. This option is useful if you want to reprogram the camera presets from scratch.

This feature is found by entering '4', '1', '4', '1', 'LOCK'. This will display the Engineer's Menu, as shown in Figure x. The 'ADJUST SYNC' menu option will be flashing.

Select the remote reset option via the joystick then press 'AUX' to enter the remote reset menu, then 'AUX' again to toggle through to the the 'FACTORY RESET' option. Select this and the screen will change as shown in Figure xiv.



*Figure xiv Factory Reset Menu*

The camera number will be flashing.  
Select which camera is to be reset via the Maxcom numeric keys.

If this is the camera you wish to reset then press the 'CAMERA' key to reset this camera

**Note:** *Due to the severity of this option there is no ability to reset all cameras.*

The camera will now reset. The remote reset menu will remain on screen after reset has occurred, to exit this menu press the 'LOCK' key.

Pressing the 'AUX' key will toggle between 'POWER-UP RESET' and 'FACTORY RESET', and 'CAMERA RESET' the Camera Reset is explained below.

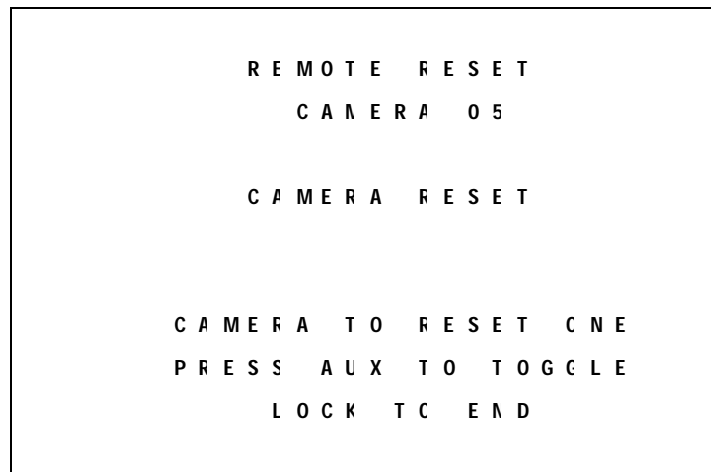
### 11.2.3 Camera Reset.

The Camera Reset function will only reset the camera module and not the whole Microsphere. This feature is not available if data in the video is being used. It is only available when the RS485 control is used.

**Note:** *This function will only work with Microspheres fitted with x12 and x18 zoom lens. Programmed presets / tours will not be lost.*

This feature is found by entering '4', '1', '4', '1', 'LOCK'. This will display the Engineer's Menu, as shown in Figure x. The 'ADJUST SYNC' menu option will be flashing.

Select the remote reset option via the joystick then press 'AUX' to enter the remote reset menu, then 'AUX' again to toggle through to the 'CAMERA RESET' option. Select this and the screen will change as shown in Figure xv.



**Figure xv** Camera Reset Menu

The camera number will be flashing.

Select which camera is to be reset via the Maxcom numeric keys.

If this is the camera you wish to reset then press the 'CAMERA' key to reset this camera

The camera module will now reset. The remote reset menu will remain on screen after reset has occurred, to exit this menu press the 'LOCK' key.

Pressing the 'AUX' key will toggle between 'POWER-UP RESET' and 'FACTORY RESET', and 'CAMERA RESET'.

The camera will now reset. The remote reset menu will remain on screen after reset has occurred, to exit this menu press the 'LOCK' key

## 12.0 Privacy Zones

Privacy Zones, as the name suggests means that specified areas cannot be viewed or recorded e.g. Cameras that are sited in an industrial estate, but which could also over look a residential area. A Privacy Zone allows the operator to define an area, a Privacy Zone, that can be blanked out and will therefore not be viewable to the operator on the monitor.

### 12.1 Privacy Zone

A Privacy zone consists of a blanked rectangular shaped area of screen which is grey in colour.

See section 12.6 for additional information on Privacy Zones.

### 12.2 To Define a Privacy Zone

Up to 28 Privacy Zones can be defined for each camera.

### 12.3 Define a Preset

Presets 100 to 127 can be used as Privacy Zones. It is not possible to define presets 0 to 90 as Privacy Zones.

For example, to define preset 100 as a Privacy Zone.

It is not possible to redefined a preset that is already being used as a Privacy Zone, see the section 'Enabling / Disabling a Privacy Zone for a Defined Preset'.

To select the camera that is to have a preset defined, enter the camera number then press the 'CAMERA' button.

Using the joystick, move / zoom the camera to view the desired position

Press and hold the 'PRESET' button.

Press buttons '1', '0', '0', to define preset 100

Release the 'PRESET' button

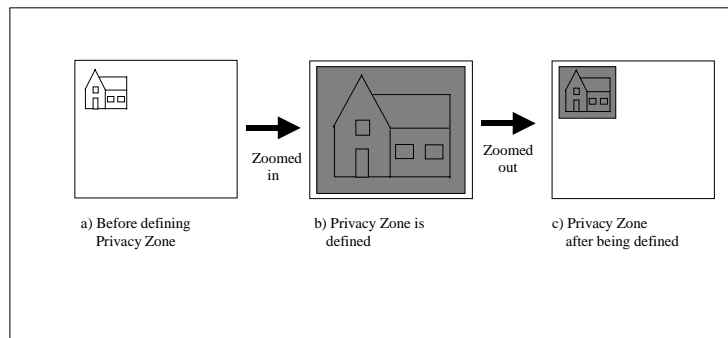
The current camera position will now be defined as preset 100.

### 12.4 Tips for Defining a Preset that is to be a Privacy Zone

When defining the preset that is to be a Privacy Zone, it is should be noted that the whole screen that is currently in view will become

blanked when it is turned in to a Privacy Zone. In Figure xvi a), if the house is to become a Privacy Zone, then we should zoom in until it fills the whole screen, as shown in Figure xvi b). We then define it as a preset. If we defined our preset as is shown in Figure xvi a), then not only would the house be blanked, but also that area that surrounds the house. Once we have defined our Privacy Zone we can then pan, tilt and zoom safe in the knowledge that the area under our Privacy Zone will not become visible. The area under the Privacy Zone will be increased from the actual size of the preset so that it can never be displayed.

The Privacy Zone covers a greater area than the object that it covers, this is to make sure that there is no chance of the area under the Privacy Zone becoming visible. You can make this 'safety region' smaller by zooming into the object more than necessary.

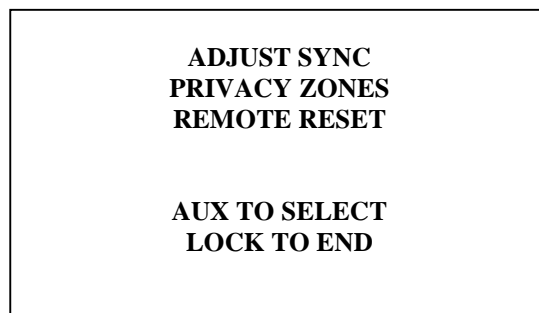


**Figure xvi** Defining a Preset for a 'Privacy Zone'

**Note:** *The objects beneath the shaded area will NOT be shown.*

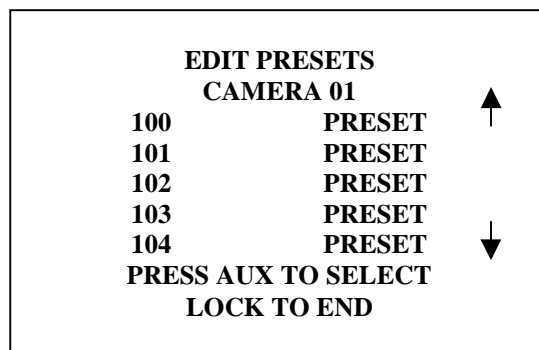
### 12.5 Enabling/Disabling a Privacy Zone for a Defined Preset

Once the Preset is defined then we enter the Privacy Zone menu option. To enter this menu, perform the following. Enter the key sequence '4', '1', '4', '1', 'LOCK'. This will display the Engineers Menu, the 'ADJUST SYNC' menu option will be flashing, as shown in Figure xvii.



*Figure xvii* Privacy Zone Menu Option

Select the 'PRIVACY ZONES' sub-menu option via the joystick, then press 'AUX' to enter the menu for the privacy zones. A menu will appear like that shown below in Figure xviii.

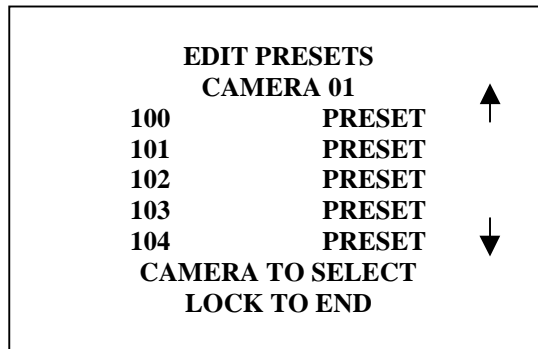


*Figure xviii* The Privacy Zone Menu

The camera number will be flashing, if this is the camera that has the defined preset, then press the 'AUX' button.

If the presets have been defined on a different camera than enter the camera number using the MaxCom 'NUMBER' buttons, then press the 'CAMERA' button. The MaxCom will then display the selected camera, see Figure xix.

*Note: If a camera number is entered and there is no video signal at the MaxCom camera input then the MaxCom will switch to the next available camera.*



**Figure xix** *Selecting a different Privacy Zone Camera*

The 'PRESET' option for preset 100 will be flashing. If this preset has been defined and is required to be a privacy zone then press the 'AUX' button to change it to 'PRIVACY'. Preset 100 will now have the word 'PRIVACY' flashing.

The 'AUX' button can be used to toggle between 'PRIVACY' and 'PRESET'. Press the 'LOCK' to end

**Note:** *Once a Privacy Zone has been defined it cannot be redefined from the normal operation of the keyboard, for example, if preset 100 has been defined as a Privacy Zone then later you try to redefine it from normal operation, then this will cause the keyboard to sound an error beep. To redefine a Privacy Zone you first have to turn the Privacy Zone off via the Privacy Zone Menu, define the new preset, then reselect it as a Privacy Zone.*

### **12.6 Additional Points to Remember About Privacy Zones**

If the MaxCom memory is reset, by removing the battery link, the camera will still have Privacy Zones defined. Entering the MaxCom 'Privacy Zone' menu will show that there are no 'Privacy Zones' defined, i.e. they will all show the default setting of 'PRESET'. To remove the Privacy Zones you must set each Privacy Zone to 'PRIVACY', then back to 'PRESET'.

No more than 10 privacy zones can be actively displayed on screen at any one time.

If the number of Privacy Zones on the screen becomes too complex the camera will compensate by grouping the Privacy Zones into a single Privacy Zone.

## **6. EQUIPMENT RETURNS PROCEDURE**

VCL prides itself on the quality and reliability of all of its' products. However, faults can occur and so to ensure that any faults cause a minimum of fuss or disturbance, you are advised to follow the returns procedure outlined below.

### **1.0 FOR REPAIR**

ONCE A PRODUCT FAULT IS IDENTIFIED

PLEASE CONTACT OUR CUSTOMER SERVICES TEAM  
DIRECT ON

**01928 754010**

TO REGISTER THE FAULT

PLEASE ENSURE THAT YOU HAVE THE FOLLOWING  
INFORMATION TO HAND AS & WHEN THIS CALL IS MADE:

- COMPANY NAME
- TELEPHONE & FAX NUMBER
- PRODUCT TYPE
- SERIAL NUMBER
- PRECISE DETAILS OF THE FAULT

THE RETURN WILL BE LOGGED & YOU WILL BE GIVEN A  
RETURN NUMBER WHICH MUST BE CLEARLY IDENTIFIED  
ON THE OUTER PACKAGING OF THE RETURNING PRODUCT

THIS WILL ASSIST OUR TEAM IN PROCESSING THE REPAIR  
AS QUICKLY & EFFICIENTLY AS POSSIBLE FOR YOU

PLEASE NOTE PRODUCTS RETURNED WHICH DO NOT QUOTE THE RETURNS NUMBER WILL NOT BE ACCEPTED BY US

PLEASE COMPLETE & DETACH THE FAULT REPORT ON PAGE – OF THE INSTRUCTION MANUAL & ENCLOSE WITHIN YOUR RETURNING PRODUCT. THIS WILL GREATLY ASSIST OUR TECHNICIANS WHEN CARRYING OUT THE REPAIR

## **2.0 FOR CREDIT**

THE COMPANY WILL ACCEPT PRODUCT BACK FOR CREDIT WITHIN 30 DAYS OF ITS ORIGINAL PURCHASE UNDER OUR 30 DAY NO WORRY GUARANTEE

IF YOU WISH TO RETURN SUCH PRODUCT FOR CREDIT

PLEASE CONTACT OUR CUSTOMER SERVICES TEAM DIRECT ON

**01928 754010**

TO ARRANGE THE RETURN

Chapter 6

PLEASE ENSURE THAT YOU HAVE THE FOLLOWING INFORMATION TO HAND AS & WHEN THIS CALL IS MADE

- COMPANY NAME
- TELEPHONE & FAX NUMBER
- PRODUCT TYPE
- SERIAL NUMBER
- QUANTITY
- ORIGINAL INVOICE & DATE

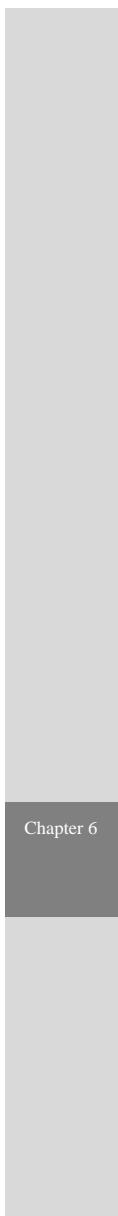
THE RETURN WILL BE LOGGED & YOU WILL BE GIVEN A RETURNS NUMBER WHICH MUST BE CLEARLY IDENTIFIED ON THE PACKAGING OF THE RETURNING PRODUCT

THIS WILL ASSIST OUR TEAM IN POSSESSING YOUR CREDIT RETURN AS QUICKLY & EFFICIENTLY AS POSSIBLE FOR YOU

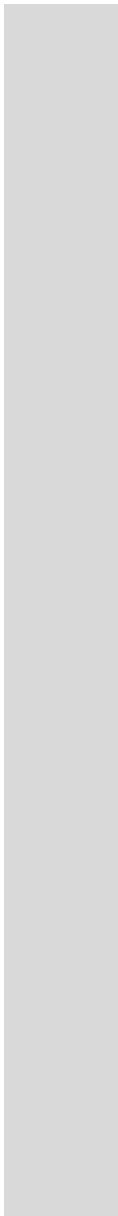
PLEASE NOTE PRODUCTS RETURNED WHICH DO NOT QUOTE THE RETURNS NUMBER WILL NOT BE ACCEPTED BY US

PLEASE NOTE ALL RETURNING PRODUCT FOR CREDIT IS ASSESSED

ON ITS ARRIVAL. IF THE PRODUCT IS MARKED OR DAMAGED, MISSING PACKAGING, ACCESSORIES OR INSTRUCTION MANUAL. A HANDLING CHARGE WILL BE APPLIED TO THE CREDIT NOTE RAISED



Chapter 6





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All documentation subject to change without notice.