

# USER'S GUIDE

**MEMOCam Mobile®**

**MOBILEModule®**

Version 4.0

PN/V7140003

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**Video Domain Technologies Ltd.**

Manufacturer: Video Domain Technologies Ltd.  
Model: MemoCam  
Rated voltage(s): 12VDC  
Current(s) (or power): 0.5 A

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

This Class A/B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A/B est conforme à la norme NMB-003 du Canada.



Changes or modifications not expressly approved by Video Domain could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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## INTRODUCTION

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The MemoCam Mobile unit is specially designed for places where a reliable mains power source is not available. You are now able to install a MemoCam on mobile platforms such as boats trucks and aircraft. When the MemoCam Mobile Module is installed the unit shuts down most of its functions with only the PIR (Passive Infra-red) or external trigger drawing power from the battery. The external trigger is an N/C (normally closed) contact that opens when triggered. When this standby mode is interrupted by one or both of the triggers (configurable) the MemoCam becomes fully operational. Upon wakeup, the first frame is captured after 1.5 seconds, the second frame after an additional 0.8 seconds, and then all subsequent frames are captured according to the configuration parameters.

This model can select one or more cameras to record each event, serving as an excellent surveillance unit, supplying a high quality video record of events only when they actually occur.

After the event is recorded on the MMC, the unit re-enters the standby or sleep mode until another unit wakeup is triggered.





## GENERAL INFORMATION

### Scope of this Document

This document only describes how to install or remove the Mobile Module. For all other operations, please refer to the appropriate documentation provided with each MemoCam.

### Prerequisites

Table 1 shows the minimum version levels required when installing the Mobile Module.

*Table 1 Minimum Required Version Levels*

Program	Version	Version Level Location
MemoCam Firmware	3.8	Written on the label located on the unit rear cover.
Application Software	4.0	When the application opens from the desktop, the version level is clearly shown



*The application version is also shown in the About MemoCam window.*

To show this window, choose **About MemoCam** from the application **Help** menu



## MemoCam Reference Documents

Document	Description
Getting Started Guide	Quick start guide
Installation Manual	How to install the hardware unit
Software Manual	How to install and use the software

## Tools and Equipment Required

- ❑ Medium Philips screwdriver
- ❑ Small flat blade screwdriver (terminal blocks)
- ❑ MMC reader connected to the PC with the MemoCam software installed

## Location Tips

Before installing the MemoCam Mobile it is important to realize that this unit is connected to a battery. It is therefore more suited for locations that either have low traffic, or where only a few hours of operation are required.

## Technical Specifications

Refer to the MemoCam Installation Manual.

## INSTALLING THE MOBILE MODULE

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These instructions are intended for qualified technicians but are detailed enough for anybody with a technical background. If you encounter any doubts or problems please contact your nearest service representative or contact us at [www.memocam.com](http://www.memocam.com).



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*If you are installing a MemoCam with the Mobile Module factory installed, go directly to section, **Configuring the Unit for Standby Mode** on page 11.*

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## Unpacking Instructions

Open the box and check the contents of the container against the shipping lists shown below. If there are any missing or broken items please contact your local agent.

### Shipping List

If you have purchased a MemoCam Mobile unit with the Mobile Module factory installed, in addition to the shipping list described in the Getting Started Guide, the following items are supplied:

- ☐ Mobile Module factory installed inside the MemoCam unit
- ☐ Power cable with low voltage cable connectors (auto)
- ☐ This document (MemoCam Mobile User's Guide)



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*The MemoCam mains power adapter is **NOT** supplied.*

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If you have purchased a MemoCam Module in order to install on a MemoCam or MemoCam DVR unit, the following items are supplied:

- ❑ Mobile Module
- ❑ MemoCam application CD
- ❑ Power cable with low voltage cable connectors (automobile)
- ❑ This document (MemoCam Mobile User's Guide)



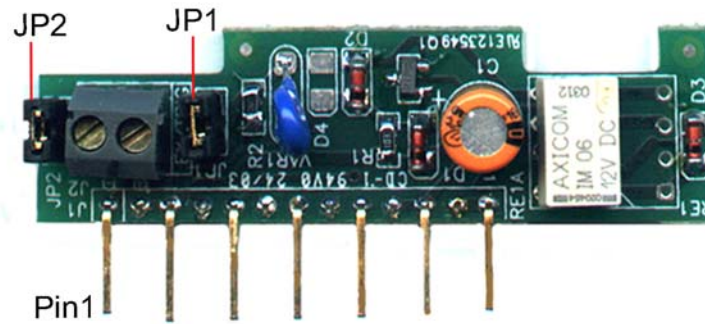
*To install the Mobile Module it is not necessary to remove any board screws.*

**DO NOT** discard any hardware, it is required if the Mobile Module is removed in the future.

*Installing the Mobile Module requires that the MemoCam internal firmware be at version 3.8 or higher.*

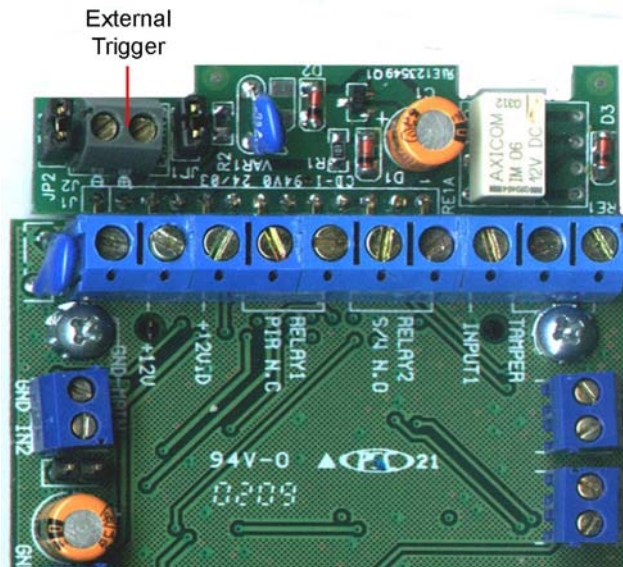
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1. Remove the front cover. Refer to the *MemoCam Installation Manual* version 4.0 or greater.
2. Remove the two power wires connected to the main terminal block positions 1 and 2.
3. Place soft material on the work area.
4. Turn the unit upside down keeping it close to the work area. Gently spread the center section of the plastic cover, until the two boards drop softly onto the work area.
5. Fully open the screws in the main terminal block positions 1 to 7.
6. Thread the Red wire (+12V) through the aperture in the rear plastic cover, and then insert it into the MemoCam main terminal block position 2.  
(Refer to Figure 3). Do not tighten the screw at this time.
7. Using Figure 1 to Figure 3 as a guide, gently insert the Mobile Module pins 1 to 7, fully into the main terminal block positions 1 to 7. Insert Pin1 of the Mobile Module into the MemoCam main terminal block position 1.



*Figure 1 Memory Module Showing of Jumpers and Pin1*

8. Tighten the screws. The Mobile Module is now installed onto the MemoCam main board as shown below. For clarity the red wire inserted in position 2 is not shown.



*Figure 2 Mobile Module Shown Installed on the Main Board*

9. Thread the **Black** wire (GND) through the aperture in the rear plastic cover, and then connect it to the **GND** terminal as shown in Figure 3.
10. Using the **Mobile Module** jumper table below, add or remove the J1 and J2 jumpers to enable the PIR or external triggers, or both. Refer to Figure 1. These triggers wake-up the MemoCam to full operational mode.

These jumpers are located on the Mobile Module.

Trigger	Jumper J1	Jumper J2	Comments
External	Installed	Removed	MemoCam and DVR
PIR	Removed	Installed	MemoCam <b>ONLY</b>
External and PIR	Removed	Removed	MemoCam <b>ONLY</b>

### PIR (Passive Infra Red)

The PIR trigger is built-in to the MemoCam unit and detects any motion in the vicinity of the unit. There is **NO** PIR available on the DVR unit.

### External Trigger

A normally closed circuit (switch or relay) opens to trigger the unit.

11. If you are using an external trigger, connect the wires to the terminal block now. Don't forget to thread the wires through the prepared hole (knockout) in the rear plastic cover.
12. Gently reinsert the MemoCam board unit into the rear plastic cover as shown below. Don't install the top cover at this time.



*It is important to route the new power wires as shown in **Figure 3**, otherwise the wires may be damaged when re-installing the boards and closing the top cover.*

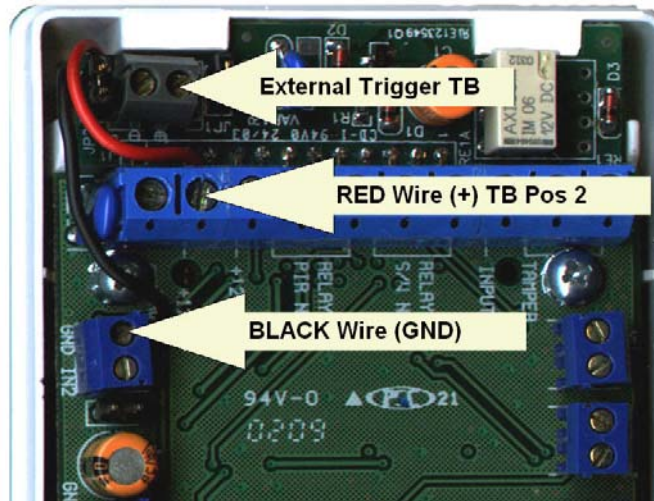


Figure 3 Wire Routing and Power Connection Diagram

13. Using the hardware supplied, place the unit securely in a suitable location.  
Refer to the *MemoCam Installation Manual*.

## Configuring the Unit for Standby Mode

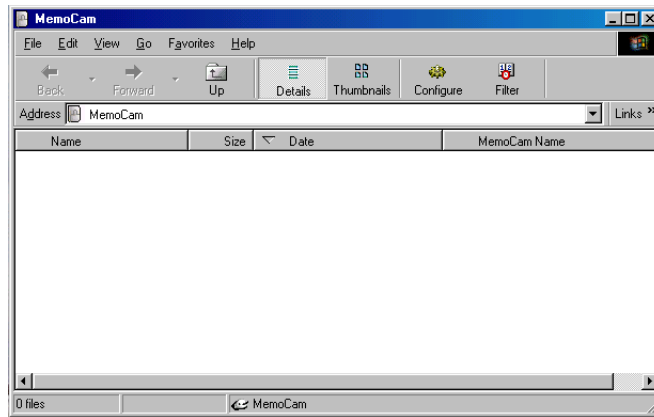


If the MemoCam software is NOT installed on your PC you can install it from the CD (supplied) using the on screen prompts. For detailed information on installing the software, refer to the *MemoCam Software Manual*.

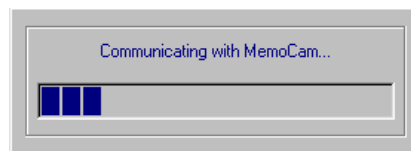
1. Insert the MMC from the new Mobile unit into the card reader installed on the PC where the MemoCam control program is installed.
2. On the desktop, click the  icon. The MMC is detected and the MemoCam main window opens.




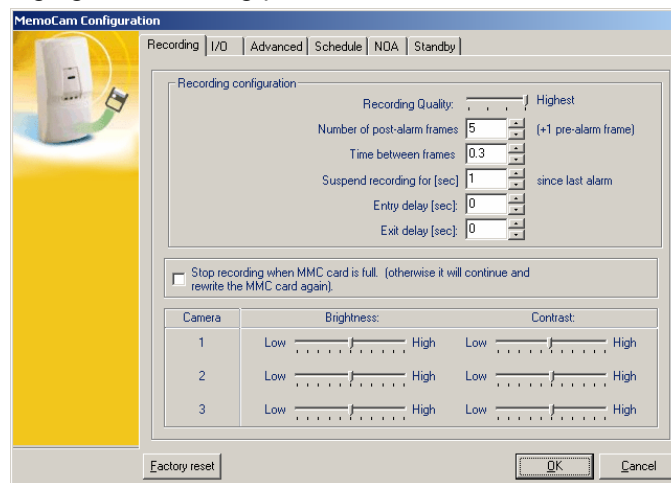
The actual browser installed on your computer determines how the main window is displayed. If an MMC is not detected at this time the program enters DEMO mode.



3. Ensure that the MemoCam window is active and then press the F5 key (refresh function), or using the Menu bar **View => Refresh**.  
The MMC read progress bar is automatically displayed.

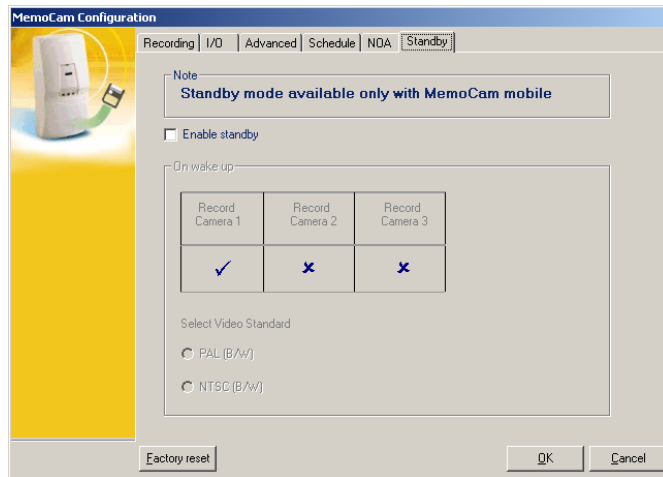


4. Click the **Configure** button or  icon. The **MemoCam Configuration** window opens. This window is used for changing the recording parameters.





- Click the **Standby** tab. The Configuration window opens.



- Check the **Enable standby** box.



*When Standby mode is active the DISARM function is disabled, and the Mobile unit is permanently armed.*

- Select a camera. You can select any combination of the three cameras. Camera 1 is the built-in camera. Cameras 2 and 3 are external cameras.
- Click **OK** to write the new configuration onto the MMC.

## Connecting the Power (Mobile Unit)

This section describes how to connect the power to the MemoCam Mobile unit, after installing the Mobile Module.



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*MemoCam units do not have a power switch. They power-on when connected to a 12V power source.*

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1. Using the new power wires and terminal (auto) connectors supplied, connect the MemoCam unit to a 12V source as follows:
  - a. Connect the black wire (-) to the negative (-) battery terminal.
  - b. Connect the red wire (+) to the positive (+) battery terminal.
2. Insert the MMC (configured for standby mode) into the MemoCam with the Mobile Module hardware already installed.

### Correct LED Indicator Sequence

- a. The left-hand LED (red) goes **OFF**.
- b. Unit performs a Power-On Reset (POR).
- c. Right-hand LED turns yellow.
- d. Left-hand LED blinks (green) and then turns **GREEN**.



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*The new configuration has been successfully written to the Flash memory, and the MemoCam Mobile unit firmware is now operational.*

---

3. Ensure that the trigger jumpers on the Mobile Module are plugged correctly.
4. Disconnect the MemoCam unit from the 12V battery
5. **On the main board, remove Jumper 1** (unplug). Plug it on one of the pins for safe *keeping (Storage position)*.



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*When **Jumper 1** is removed the Mobile Module controls the power to the MemoCam unit, enabling standby mode.*

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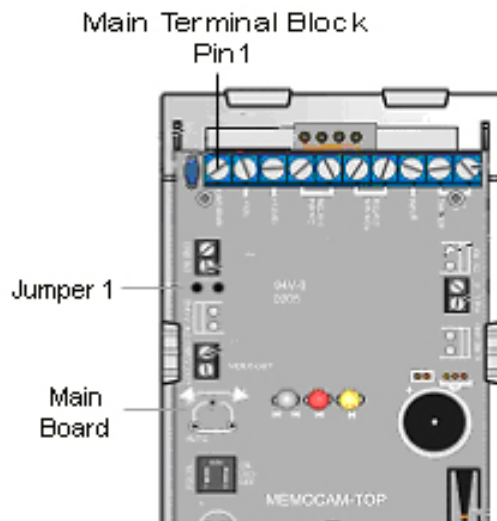


Figure 4 MemoCam Main Board Locations

6. Reinstall the front cover. Refer to the *MemoCam Installation Manual* version 4.0 or greater.




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*The MemoCam Mobile is now configured to operate in standby mode.*

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7. To mount the MemoCam unit, refer to the MemoCam Installation Manual.

## Disabled Functions (Mobile Unit Only)

When the Mobile Module board is installed and configured for standby mode, the following MemoCam features are no longer functional:

- ☐ Inputs 1, 2 and 3
- ☐ Disarm function
- ☐ The Remote Control (R/C) unit

## Connecting External Camera Power

When configured for standby mode, external camera power is connected as shown in Figure 5 below.

A voltage of +12V (150mA max) is applied to the main terminal block position 3, only when an event occurs.

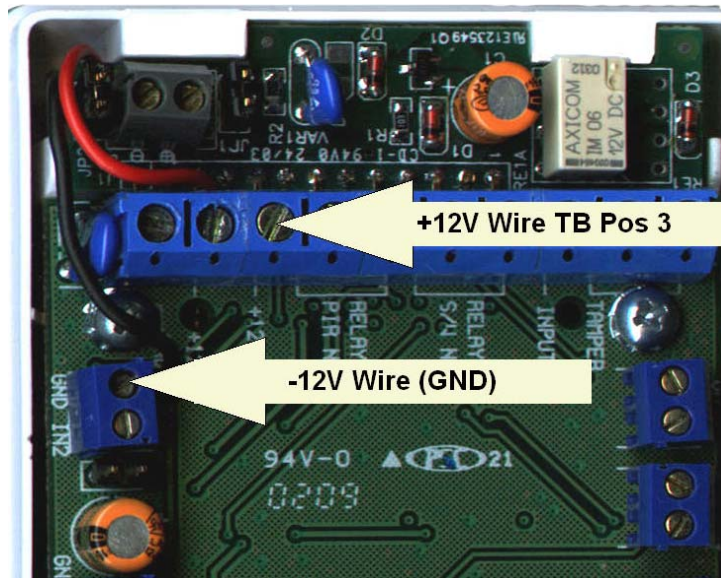


Figure 5 External Camera Power Connections

## Connecting the Wires

1. Thread the +12V wire from each external camera through an aperture in the rear plastic cover, and then insert it into the MemoCam main terminal block position 3.
2. Thread the -12V wire (GND) from each external camera through an aperture in the rear plastic cover, and then connect it to the **GND** terminal as shown in **Figure 5** above.



*Route the external camera wires together with the wires from the battery, as shown above.*

## REMOVING THE MOBILE MODULE

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This section describes the steps required to remove the MemoCam Module.

### Removing the Hardware

1. Disconnect the battery source.
2. Remove the front cover. Refer to the *MemoCam Installation Manual* version 4.0 or greater.
3. Remove the two power wires. Refer to **Figure 3**.
4. Place soft material on the work area.
5. Turn the unit upside down keeping it close to the work area. Gently spread the center section of the plastic cover, until the two boards drop softly onto the work area.
6. Unscrew the MemoCam main terminal Block screws 1 to 7 and remove the Mobile Module board and the Red (+) wire.
7. On the main board, install Jumper1 (plug). Refer to Figure 6. The jumper when not installed is left plugged on one of the pins (storage position).
8. Thread the original MemoCam power cable through the aperture in the rear plastic cover.
9. Connect power wires on the MemoCam main terminal block.  
The **Black** wire (-) to position 1, and the **Red** wire (+) to position 2.



**DO NOT** connect the power cable to the mains adapter at this time.

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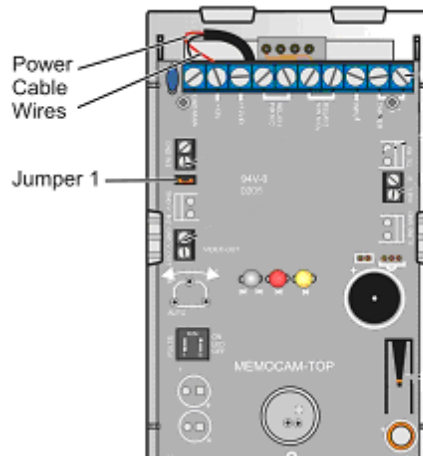


Figure 6 Mobile Module Removed and Jumper1 Re-plugged

10. Gently reinsert the MemoCam board unit into the rear plastic cover.  
Don't install the top cover at this time.



*Route the power wires as shown in **Figure 6**, otherwise the wires may be damaged when re-installing the boards and closing the top cover.*


## Configuring the Unit for Normal Mode

This configures the MemoCam unit for **NON** standby mode.



*Before you change the configuration to **NON** standby mode, you must first remove the Mobile Module*

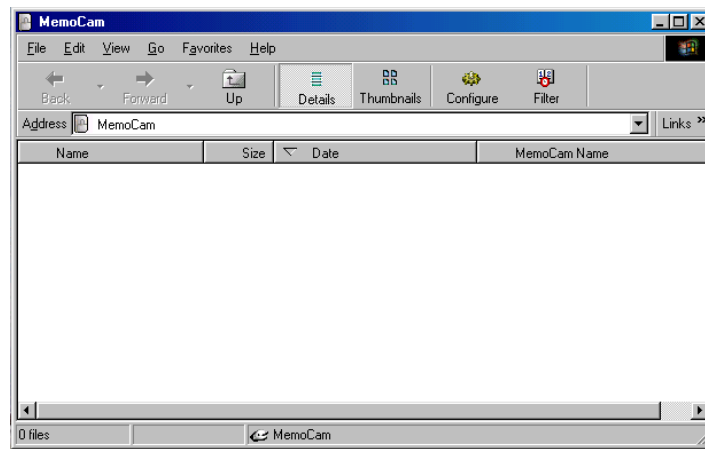
*If the MemoCam software is **NOT** installed on your PC you can install it from the CD (supplied) using the on screen prompts. For detailed information on installing the software, refer to the MemoCam Software Manual.*

1. Insert the MMC from the new Mobile unit into the card reader installed on the PC where the MemoCam control program is installed.
2. On the desktop, click the  icon. The MMC is detected and the MemoCam main window opens.

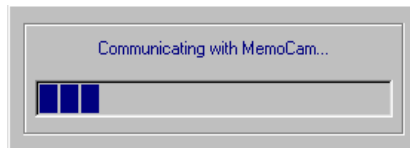



*The main window display is dependant on the particular browser installed on your computer.*

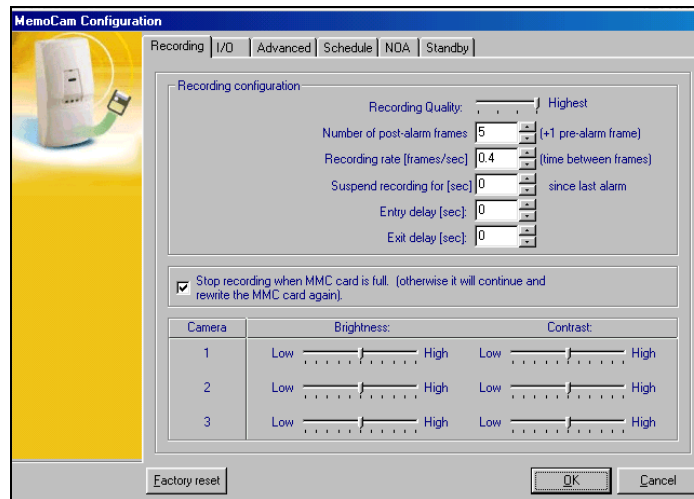
*If an MMC is not detected the program enters DEMO mode.*



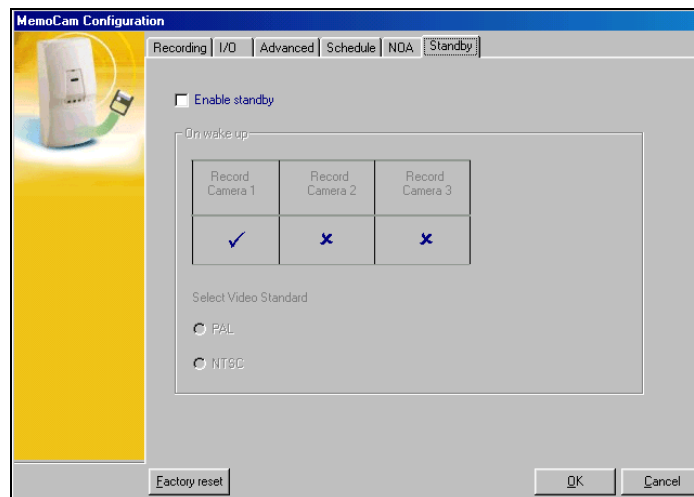
3. Ensure that the MemoCam window is active and then press the F5 key (refresh function) or, using the Menu bar **View => Refresh**.  
The MMC read progress bar is automatically displayed.



- Click the **Configure** button or  icon. The **MemoCam Configuration** window opens. This window is used for changing the recording configuration.



- Click the **Standby** tab. The Configuration window opens.
- Uncheck the **Enable standby** box.



*When Standby is **NOT** active the ARM and DISARM functions are enabled, and the R/C is fully functional.*

- Click **OK** to write the new configuration onto the MMC.



## Connecting the Power (Normal Unit)

This section describes how to connect the power to the MemoCam unit after removing the Mobile Module.

**MemoCam units do not have a power switch. When connected to a suitable power source they power-on automatically.**

1. Connect the power cable to the MemoCam mains converter.
2. Insert the MMC (configured for normal mode) into the MemoCam with the Mobile Module removed.

### LED Indicator Sequence

- a. The left-hand LED (red) goes **OFF**.
- b. Unit performs a Power-On Reset (POR).
- c. Right-hand LED turns yellow.
- d. Left-hand LED blinks (green) and then turns **GREEN**.



*The new configuration has been successfully written to the Flash memory, and the MemoCam unit firmware is now fully operational.*

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3. Reinstall the front cover. Refer to the *MemoCam Installation Manual* version 4.0 or higher.  
The MemoCam is now operating in normal mode.



## TROUBLESHOOTING

Use the following table to troubleshoot your MemoCam. Should you require further assistance or support in using your MemoCam, you can visit the support section of our web site at [www.vdomain.com](http://www.vdomain.com) and file a problem report, or contact the local Video Domain representative

Problem	Symptom	Solution
Doesn't enter standby mode	LEDs are ON constantly Battery discharges very quickly	Check Jumper1 on the main board is not plugged or standby not configured
Trigger does not work	Stays in standby mode when a trigger occurs	Ensure that at least one of the jumpers on the Mobile Module are NOT installed
Events not recorded	No new frames are recorded	Ensure MMC is not full or damaged
Black pictures	All the pictures are black	Battery voltage below 11.5V
Poor quality pictures	Pictures are streaky and have black lines	Check PAL/NTSC setting
Unit inoperable	Unit doesn't record events	MMC missing or faulty



## GLOSSARY

Arm	Enables automatic detection and recording function.
Cyclic Recording	Continuous recording. The MemoCam records over older images from start of the cycle when Multimedia Card is full.
Disarm	Disables the automatic detection and recording function.
Entry Delay	Time between first trigger and actual recording (unit is armed). Entry delay can be used when entering a room to avoid event recording until the unit is disarmed.
Event	The recording of one or more images as a result of a trigger.
Exit Delay	Once the operator arms the unit, a delay can be used to avoid event recording when exiting the room.
LED	Light Emitting Diode. An electric component that lights up.
Multimedia Card (MMC)	A stamp-sized plastic card containing read/write non-volatile memory.
PIR	Passive Infrared motion detector.
R/C	Remote Control unit
Snapshot	Recording of a single picture.
Trigger	A signal that activates the recording process. Usually generated by an alarm contact.
VMD	Video Motion Detection. A feature that detects changes in video frames.