

## 1. Controls and Connectors on LCD monitor:

- |                                  |                                |
|----------------------------------|--------------------------------|
| 1. Brightness control            | 2. Colour Control              |
| 3. Volume control for headphones | 4. Audio output for headphones |
| 5. Main Power switch             | 6. Video output                |
| 7. Audio input                   | 8. Video 1 Input               |
| 9. Video 2 Input                 | 10. Video Input 1 or 2 Switch  |
| 11. 12V DC Power Input           |                                |

## 2. Connections

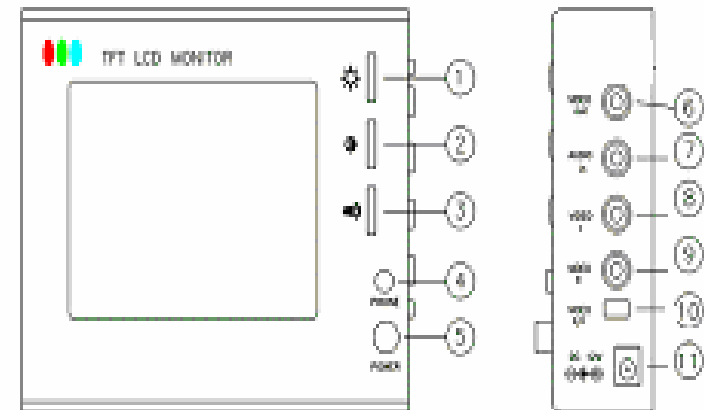
- 1) Connect the video source to the Video input 1(8) or Video II (9) Inputs.
- 2) Select the correct Video input using the Video Input switch (10).
- 3) Connect the Audio source to the audio input (7).
- 4) Connect an electronically regulated 12V power supply  
The positive pole must be connected to the centre contact.
- 5) Connect headphones to the Audio Output if required.

## 3. Operation

- 1) Switch on the monitor using the Main Power switch (5).
- 2) Adjust the brightness control (1) and Colour (2) in order to obtain an image as clear and sharp as possible.
- 3) Adjust the volume control of the headphones to the desired level.

**CAUTION:** When using headphones do not adjust to a high volume. Permanent high volumes may damage a person's hearing! The human ear gets accustomed to high volumes which do not seem to be that high after some time. Therefore, do not increase the volume further after getting used to it.

Fig. 1



#### 4. Security notes

The unit is only suitable for indoor use. The heat being generated in the unit has to be removed via air circulation. Therefore the circulation vents in the housings must not be covered with any objects. Do not insert or drop anything into the air vents ! This could result in a short-circuit. If the unit is used for purposes other than originally intended, if it is connected in the wrong way or not repaired by authorized skilled personnel, there is no liability for possible damage. **Do not** use any fluid, cleaning chemicals or abrasive materials. If the unit is to be scrapped then take it to the local recycling plant for disposal.

We do not accept any liability for the following: a) If the unit is used for purposes other than originally intended. B) If the unit is wrongly connected. c) If the unit is not repaired by a qualified authorized engineer.

#### 5. Application range

The LCD colour monitors LM-413 active matrix technology offer a sharp and high contrast display. It can be universally used for Surveillance systems, In-Vehicle Reverse monitoring systems or for Multimedia applications. The additional Audio input enables sound reception via Headphones.

#### 6. Technical Data

LCD technology: TFT active matrix

Display size: 4.0"

Active area: 82.08 x 61.56 mm

Colour system: NTSC or PAL – Auto switched.

Sync.: Horizontal: 15, 625 Hz, Vertical: 50 Hz.

Resolution: 960 x 240, 230,400 Pixels

Audio level: 1V/10k Video Input : 1Vpp 75 Ω

Power supply: 12V, 500mA. Centre pin positive.

Dimensions : 155.0 (W) x 125.0 (H) x 36.0 (D)mm

Weight : 450g



# LM – 413

## 4” Color TFT LCD Monitor

### User's Manual

Version 3.3