

1 Ch Mobile DVR

TVV980

Manual



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1. Features

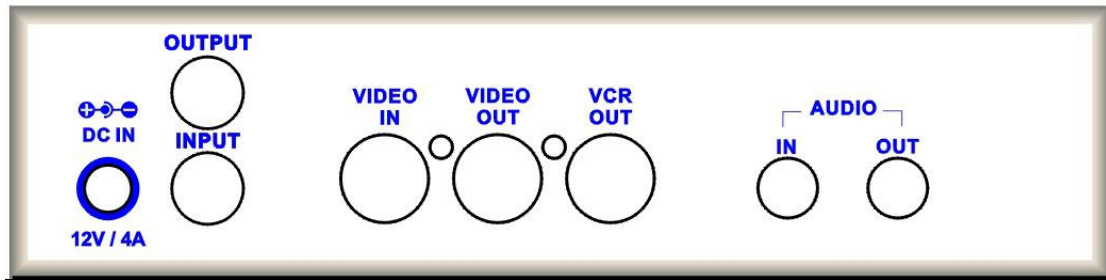
- Automatically detects NTSC/PAL
(Please connect the video camera, before connecting the Power adaptor.)
- Tapeless recording replaces conventional time-lapse recorder.
- Video compression MJPEG
- Motion detection recording.
- Various recording mode by continue, schedule, and motion detection.
- 1 channel audio recording.
- Quick and easy search for events by time and date.
- Highly professional stabilized digital system, equipped with anti-vibration and shock resistance.
- Easy to operate front panel.
- Alarm notification will be made when storage capacity is full.
- Automatically return to the original operation when power recovery from failure.
- Suitable for all kinds of transportation appliance.
- Supporting function to format the new hard disk.

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2. Specification

Operation Mode	Front panel, OSD
Recording Speed	720 x 240 : 1–10 Frames/sec (adjustable) 360 x 240 : 1–15 Frames/sec (adjustable)
Recording Mode	Manual Schedule Motion Detection (Sensitivity Adjustable)
Audio Recording / Live Audio	1 ch
Compression	MJPEG
Camera Input	1 ch BNC (NTSC/PAL)
Video Output	Composite video (BNC) x 2
Playback Function	Playback — forward、reverse Fast forward Fast reverse Forward one frame Zoom in
HDD	30 GB
Built-in Buzzer	Video input signal trigger Motion
Watch-Dog Function	Automatically return to the original operation when power recovery from failure.
Search Mode	Date, Time
Operation Temperature	5 °C → 40 °C
Power Supply	AC100V~240V, 50/60Hz DC 12V/4A
Power Consumption	12 W
Dimension	175mm x 220mm x 44mm (W x D x H)
Weight	1.4 Kg

3. Installation



Rear panel

Power Supply : DC 12V , 4A.

OUTPUT : Image signal and sound output terminal.

INPUT : Image signal and microphone input terminal.

VIDEO IN : Image signal input, connected to the camera.




VIDEO OUT : "VIDEO OUT" is connected to monitor "VIDEO IN".

VCR OUT : "VCR OUT" is connected to the VCR "VIDEO IN".

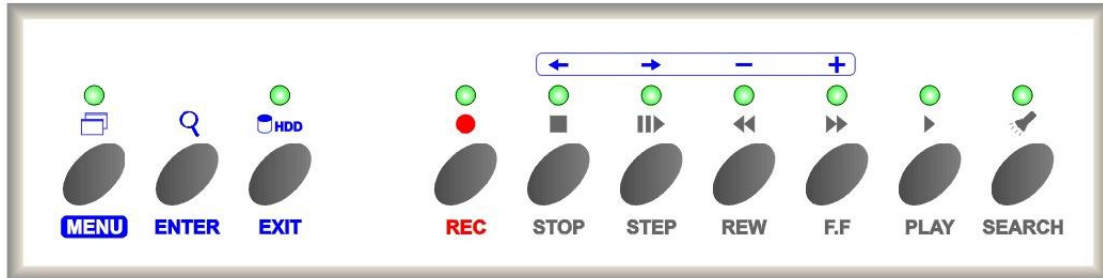
AUDIO IN : For camera microphone connection.

AUDIO OUT : For speaker, as live and playback Audio.

CAUTIONS

-  Automatically detects NTSC/PAL, please connect the video camera, before connecting the Power adaptor.
-  **VIDEO OUT** and **AUDIO OUT** should not be applied when the **OUTPUT** terminal has been connected.
-  **VIDEO IN** and **AUDIO IN** should not be applied when the **INPUT** terminal has been connected.

4. Function Key Description



Front Panel

Single Function Key Description :

MENU : Menu set up

ENTER : Enter to sub-menu or editing procedure.

EXIT : Press this function key to return to the previous selection.

REC : Under normal mode, press this key to enter record mode.

PLAY : Under normal mode, press this key to enter the latest record file.

SEARCH : Under normal mode, press this key to display log file lists.

Dual Function Key Description :

STOP<-> , ■> :

Under the function setup mode, move to the left (up) item during editing procedure.

Under playback mode, press this key to stop playback mode and return to normal mode.

STEP <-> , ||▶> :

Under the function setup mode, move to the right (down) item during

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editing procedure.

Under playback mode, press this key to skip and pause the images.

REW < - , ◀▶ :

Under the function setup mode, the setup may be set to a value increase.

Under playback mode, press this key to fast reverse the images.

F.F. < + , ▶▶> :

Under the function setup mode, the setup may be set to a value decrease.

Under playback mode, press this key to fast forward the images.

5. Playback Mode

5.1 Play Mode

In normal mode, press **<PLAY>** key to enter the playback mode, or press **<SEARCH>** key to enter the log files list (including: date, time), then press **<PLAY>** key or **<ENTER>** key to display image.

- **Quick Image Search :**

Press **<F.F.>** key, for quick fast forward image search (x2, x4).

Press **<REW>** key, for quick fast reverse image (x1, x2, x4).

- **Skip Search :**

Press **<STEP>** key, to skip and pause images.

- **Zoom :**

When the resolution is 720x240, press **<ENTER>** key to enlarge, press **<II>** key and than press **<←>**、**<→>**、**<+>**、**<->** key to allow the zoom in window to be moved to all directions, press **<ENTER>** key again to return to its original size.

When the resolution is 360x240, press **<ENTER>** key to enlarge, press **<ENTER>** again to return to normal image size (360x240).

- **Stop mode :**

Press **<STOP>** key to stop play mode and return to normal mode.

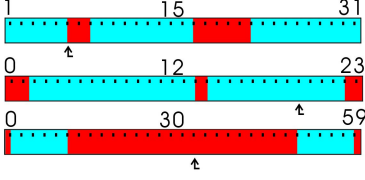
5.2 SEARCH

According to date and time to perform searching function, press

<SEARCH> key to display the image below :

SEARCHING

YEAR	2002	
MONTH	08	
DAY	06	1 15 31
HOUR	18	0 12 23
MINUTE	32	0 30 59



Use **<←>**、**<→>** key to move the cursor (Highlight) up and down to the area to be modified, press **<+>**、**<->** key to make changes.

Year、Month :

Enter the year / month by pressing **<+>** or **<->** key to select the year / month.

Day、Hour、Minute :

Enter the above setting by pressing **<+>** and **<->** key or **<▶▶>** and **<◀◀>** key.

After all selections has been made, press **<PLAY>** or **<ENTER>** key to enter play mode, or **<EXIT>** key to return to normal mode.

Red : Indicates that the area is under Motion Recording.

Blue : Indicates manual recording or schedule recording.

6. Recording Mode

Manual Recording : Under Normal mode, press <REC> key, then will start recording, press <STOP> key to stop manual recording.

- To stop manual recording, it takes 5 sec to stop manual recording.

Other function including: **Schedule Recording, Motion Detect Recording, Sensor Input Recording**, please refer to **Menu Setup**.

- After recording are set either to **Schedule Recording, Motion Detect Recording**, or **Sensor Input Recording** (set in **Recording Mode**). THE <STOP> key does not function when it has been pressed, due to protection on recordings set.
- When during recording, all items under **Main Menu** may not be entered to make adjustments, except in **System Status** and the **Recording Mode**.

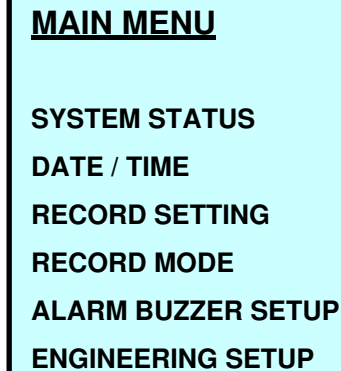
7. Menu Set Up

7.1 Enter Main Menu

Press <MENU> key to enter **Main Menu**, using the cursor, which can be moved up and down by the <←>, <→> keys.

All the items in the main menu contain several sub menu will be described step-by step in the following section.

Press <ENTER> key to enter the menu.
Press <EXIT> key to return to the previous page.
Press <STOP> key to skip over the main menu (Image display).



MAIN MENU

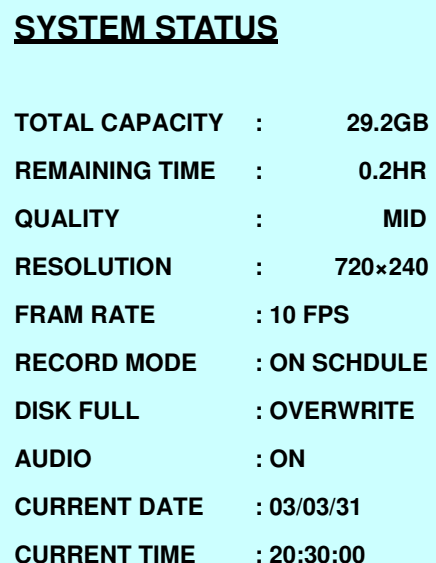
SYSTEM STATUS
DATE / TIME
RECORD SETTING
RECORD MODE
ALARM BUZZER SETUP
ENGINEERING SETUP

- When during recording, all items under **Main Menu** may not be entered to make adjustments, except in **System Status** and the **Recording Mode**.

7.2 System Status

When entered to the main menu, select **System Status**.

Press <ENTER> key to enter the menu.
Press <EXIT> key to return to the previous page.
Press <STOP> key to skip over the main menu (Image display).



SYSTEM STATUS

TOTAL CAPACITY : 29.2GB
REMAINING TIME : 0.2HR
QUALITY : MID
RESOLUTION : 720×240
FRAM RATE : 10 FPS
RECORD MODE : ON SCHEDULE
DISK FULL : OVERWRITE
AUDIO : ON
CURRENT DATE : 03/03/31
CURRENT TIME : 20:30:00

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When entered to the main menu, select **Date / Time** and press **<ENTER>** key to enter the menu:

Press **<←>**、**<→>** key to move the cursor

Press **<+>**、**<->** key to make changes

Press **<EXIT>** key to return to the previous menu.

Press **<STOP>** key to skip over the main menu (Image display).

DATE / TIME

DATE FORMAT		YY/MM/DD
DATE	ON	03/03/31
TIME	ON	20:30:00
LOCATION		RIGHT BOTTOM

7.3 Date / Time

Time and date for the on-screen calendar and clock is set from this menu.

Date Format :

The date format can be one of the following :

- a. YY/MM/DD : (year – month – day)
- b. MM/DD/YY : (month – day – year)
- c. DD/MM/YY : (day – month – year)

Date :

Toggles the date for the monitor display ON/OFF.

Time :

Toggles the date for the monitor display ON/OFF.

Location :

Set the location to display time and date. The position can be one of the following:

- a. LEFT TOP
- b. RIGHT TOP
- c. LEFT BOTTOM
- d. RIGHT BOTTOM
- e. TOP
- f. BOTTOM

- When recording, date / time will be stored together with the image. Please try and prevent the constant changing of date / time setup. Thus, to prevent any unnecessary error to occur.**

7.4 Record Setting

When entered to the main menu, select **Record Setting** and press **<ENTER>** key

to enter the menu :

Press **<←>**、**<→>** key to move the cursor

Press **<+>**、**<- >** key to make changes

Press **<EXIT>** key to return to the previous page.

Press **<STOP>** key to skip over the main menu (Image display).

RECORD SETTING

QUALITY	MID
RESOLUTION	720X240
REC RATE	10 FPS
DISK FULL	OVERWRITE
AUDIO IN	OFF

RECORD TIME

TOTAL TIME	:	38.5HR
REMAINING TIME	:	0.3HR

Quality : Three choices to select from:

High : Large file capacity and high image quality display.

Mid : Medium file capacity and medium image quality display.

Low : Small file capacity and low image quality display.

Resolution : **720 × 240** or **360 × 240**.

REC Rate : Press **<+>**、**<- >** key to adjust the recording rate.

When Quality setting is HIGH:720x240 : 1~6 FPS

360x240 : 1~9 FPS

When Quality setting is Mid or Low:720x240 : 1~10 FPS

360x240 : 1~15FPS

Disk Full :

Overwrite : When the disk is full, it starts to overwrite the information from the beginning

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Stop : When the disk is full, it stops recording
(screen display disk full message warning).

Audio In :

ON : Audio recording "ON".

OFF : Audio recording "OFF".

Record Time :

Total Time : According to quality, resolution, the HDD Capacity and the recording rate reflects the total available recording time.

Remaining Time: According to quality, resolution, the HDD Capacity and the recording rate reflects the remaining recording time.

7.5 Record Mode

In the **Main Menu** move the cursor toward **Record Mode**, press **<ENTER>** key to enter the recording mode display:

<u>RECORD MODE</u>			
SCHEDULE RECORDING			
REC	BEGIN / END		
OFF	20:00 / 08:00		
MOTION DETECTION RECORDING			
REC	BEGIN / END	SEN	GRID
OFF	20:00 / 08:00	3	SET
POST ALARM TIME : 10 SEC			

Press **<←>**、**<→>** key to move the cursor.

Press **<+>**、**<->** key to make changes.

Press **<EXIT>** key to return to the previous page.

Press **<STOP>** key to skip over the main menu(Image display).

Two types of recording mode :

- a. **Schedule Recording:** According to the schedule time, to set camera for continuous recording.

REC :

ON : For **Schedule Recording** "ON".

OFF : For **Schedule Recording** "OFF".

* **<STOP>** key does not work during **Schedule Recording**.

BEGIN / END :

Begin : Starting time for recording.

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End : Ending time for recording.

- * **Example:** For 24H recording, the settings of the begin time must be the same as the ending time (enter 06:00 am – 06:00am)
For other time settings, recording time from 08:00 am to 21:00 pm (enter 08:00 – 21:00).

- b. Motion Detection Recording:** According to the schedule time, to set the camera for motion detect recording.

REC :

ON : For **Motion Detection Recording** “ON”.

OFF : For **Motion Detection Recording** “OFF”.

- * <STOP> key does not work during **Motion Detect Recording**.

BEGIN / END :

Begin : Starting time for recording.

End : Ending time for recording.

- * **Example:** For 24H recording, the settings of the begin time must be the same as the ending time (enter 06:00 am – 06:00am)
For other time settings, recording time from 08:00 am to 21:00 pm (enter 08:00 – 21:00).

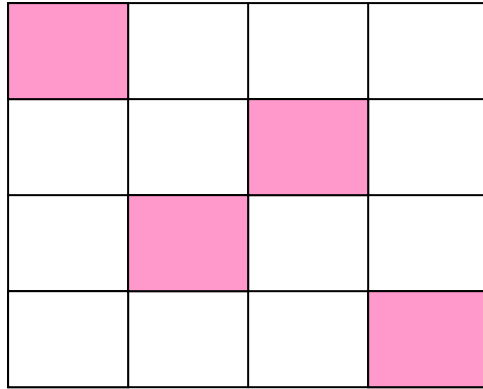
SEN (Motion Sensitivity) : There are 5 levels of sensitivity for motion detection.

(1: High motion sensitivity rate, 5: Low motion sensitivity rate).

Grid (Motion Activity Grid) : Move the cursor to **Activity Grid**, then press <ENTER> key to enter the **Motion Activity Grid** display :

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(Red block indicates the area under motion detection)



Press <←>, <→> key to move the cursor

Press <+>, <-> key to switch ON/OFF the motion detection area.

Press <EXIT> key to return to the previous page.

Press <STOP> key to skip over the main menu.

Post-alarm Time : The extra recording time, straight after when the sensor recording event ended (Time setting range from 0~99 Sec).

7.6 Alarm Buzzer Setup

In the main menu select **Alarm Buzzer Setup**, and press **<ENTER>** key to enter the menu :

ALARM BUZZER SETUP

MOTION ALARM :	ON
VIDEO LOSS :	ON
BUZZER PERIOD :	05 MIN

Press **<←>**、**<→>** key to move the cursor

Press **<+>**、**<->** key to change the settings.

Press **<EXIT>** key to return to previous page.

Motion Alarm :

ON : Notification at event of unauthorized intrusions in secured area via **BUZZER ON**.

OFF : **BUZZER OFF**.

Video Loss :

ON : VIDEO LOSS indication via BUZZER ON.

OFF : VIDEO LOSS indication via BUZZER OFF.

Buzzer Period: Control scope for up to 15 min.

- * When the **BUZZER PERIOD** is set to "00", the buzzer will be effective for only 2sec.

7.7 Engineering Setup

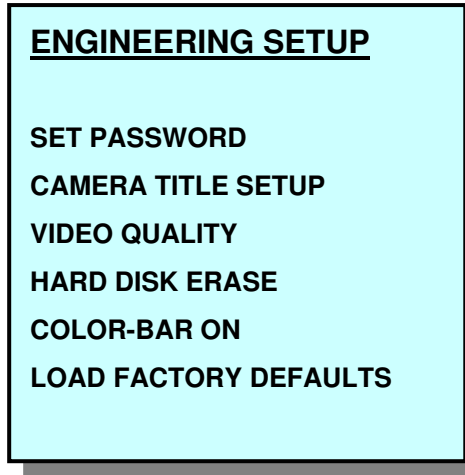
In the main menu select **Engineering Setup**.

Press **<ENTER>** key to enter the menu.

Press **<←>**、**<→>** key to move the cursor.

Press **<+>**、**<->** key to change the value settings

Press **<EXIT>** key to return to the previous page



7.7.1 Set Password

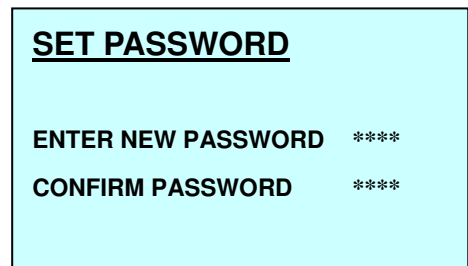
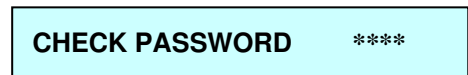
Move the cursor to **Set Password**.

Press **<ENTER>** key to enter the menu.

Press **<←>**、**<→>** key to move the cursor.

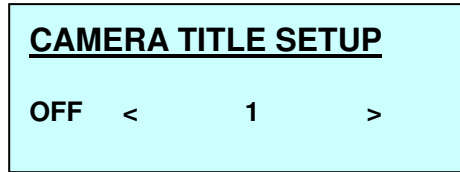
Press **<+>**、**<->** key to change the password.

Press **<ENTER>** key again, the system will request for the old password, then for new password and after the change, press **<ENTER>** key once more to confirm.



7.7.2 Camera Title Setup

Move the cursor to **Camera Title Setup**, press **<ENTER>** key to enter the menu. The camera titles can be up to eight (8) characters in length and configured using the following available characters: A-Z 0-9.



Press **<←>**, **<→>** key to move the cursor

Press **<+>**, **<->** key to change the setting values

Press **<EXIT>** key to return to the previous page

ON : To show the camera title

OFF: To hide the camera title

7.7.3 Video Quality

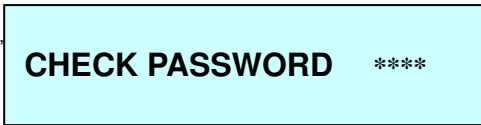
Adjust camera brightness, contrast, color and chroma. Four cameras may be separately adjusted.

BRIGHT	22
CONTRAST	40
CHROMA	25
SHARP	31

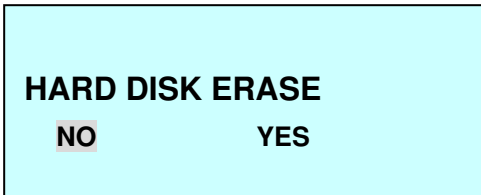
* This setting changes the image quality for recording images, but not for real-time monitoring images.

7.7.4 Hard Disk Erase

Move the cursor to **Hard Disk Erase**,
press <ENTER> key to enter the menu :



Password should be entered, before
formatting the data in the hard disk,
then press <ENTER> key to enter the
Hard Disk Erase display :

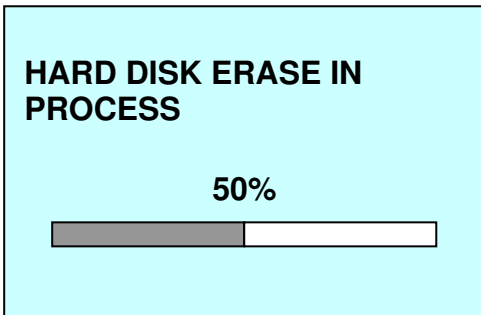


To Reconfirm:

Select "YES", then press <ENTER>
key to erasing the data in the hard
disk.

- By now all stored images are erased.

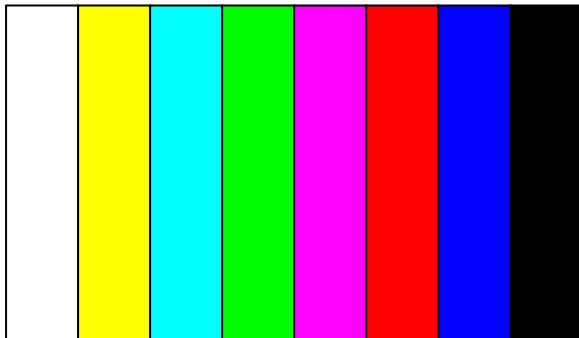
Press <EXIT> key to return to the
previous page.



* **This method is applicable to format a new hard disk.**

7.7.5 Color-Bar

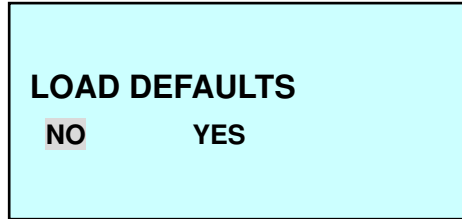
Color-Bar is helpful to user in camera settings.



7.7.6 Load Factory Defaults

To Load defaults, please press “**YES**”,
than press <**ENTER**> key to complete
the setup procedure.

Press <**EXIT**> key to return to the
previous page.



8. Recording reference time table

Below is a reference table of the Recording time:

HDD 30G

REC Rate : High

720x240			360x240			(Hour)
FRAM	RECORD TIME		FRAM	RECORD TIME		
	Audio OFF	Audio ON		Audio OFF	Audio ON	
1	203.3	159.5	1	406.7	262.4	
2	101.6	89.4	2	203.3	159.5	
3	67.7	62.1	3	135.5	114.5	
4	50.8	47.5	4	101.6	89.4	
5	40.6	38.5	5	81.3	73.2	
6	33.8	32.4	6	67.7	62.1	
			7	58.1	53.8	
			8	50.8	47.5	
			9	45.1	42.5	

REC Rate : Mid

720x240			360x240			(Hour)
FRAM	RECORD TIME		FRAM	RECORD TIME		
	Audio OFF	Audio ON		Audio OFF	Audio ON	
1	406.7	262.4	1	813.5	387.4	
2	203.3	159.5	2	406.7	262.4	
3	135.5	114.5	3	271.1	198.4	
4	101.6	89.4	4	203.3	159.5	
5	81.3	73.2	5	162.7	133.3	
6	67.7	62.1	6	135.5	114.5	
7	58.1	53.8	7	116.2	100.4	
8	50.8	47.5	8	101.6	89.4	
9	45.1	42.5	9	90.3	80.5	
10	40.6	38.5	10	81.3	73.2	
			11	73.9	67.2	

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12	67.7	62.1
13	62.5	57.6
14	58.1	53.8
15	54.2	50.5

REC Rate : Low

720x240

360x240

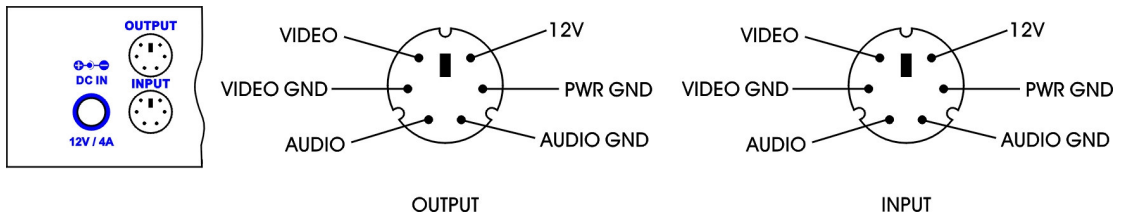
(Hour)

FRAM	RECORD TIME		FRAM	RECORD TIME	
	Audio OFF	Audio ON		Audio OFF	Audio ON
1	813.5	387.4	1	1627.1	508.4
2	406.7	262.4	2	813.5	387.4
3	271.1	198.4	3	542.3	312.9
4	203.3	159.5	4	406.7	262.4
5	162.7	133.3	5	325.4	225.9
6	135.5	114.5	6	271.1	198.4
7	116.2	100.4	7	232.4	176.8
8	101.6	89.4	8	203.3	159.5
9	90.3	80.5	9	180.7	145.2
10	81.3	73.2	10	162.7	133.3
			11	147.9	123.2
			12	135.5	114.5
			13	125.1	107.0
			14	116.2	100.4
			15	108.4	94.6

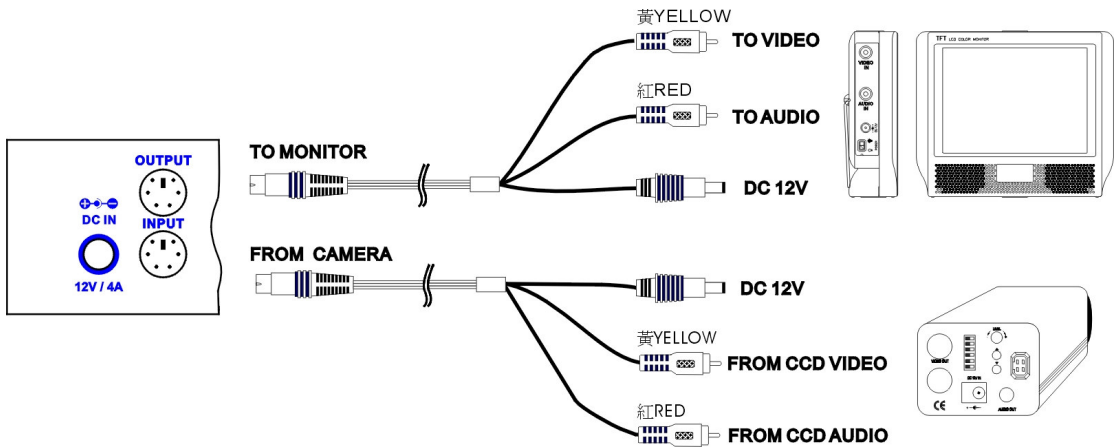
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9. Appendix

Din Jack Pin Configuration



Mini Din Installation Diagram



System Installation Diagram

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