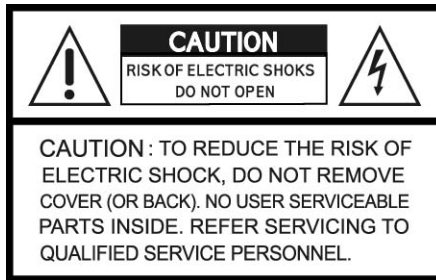


These symbols with supplemental markings are the power supply AC / DC adapter.



*** Explanation of Symbols**



This symbol is intended to alert the user to the presence of unprotected "dangerous voltage" within the product's enclosure that may be strong enough to cause a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING- TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

NOTE: This equipment has been tested and found to comply with the limits for a class a digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The user may find the following booklet prepared by Federal Communications Commission helpful:

HOW TO IDENTIFY AND RESOLVE RADIO-TV INTERFERENCE PROBLEMS.

Change or modifications not expressly approved by the product company could void the user's authority to operate the equipment.

CAUTION: CHANGE OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Correct Disposal of This Product(Waste Electrical & Electronic Equipment)



(Applicable in the European Union and other European countries with separate collection systems) This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

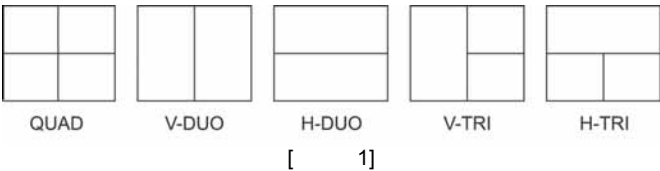
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1.

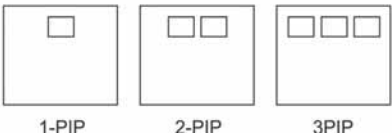
1-1.



ON / /

PIP (Picture in Picture)

Quad PIP



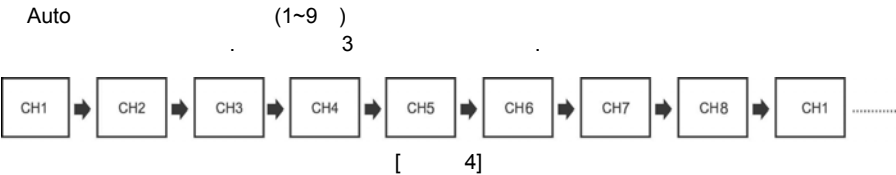
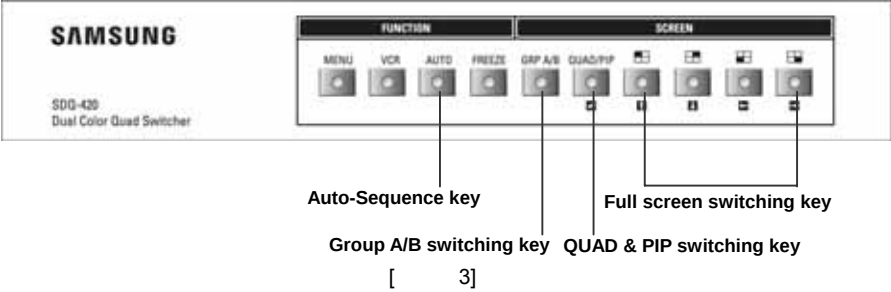
[2]

(CH1~ CH8, AUTO)

8

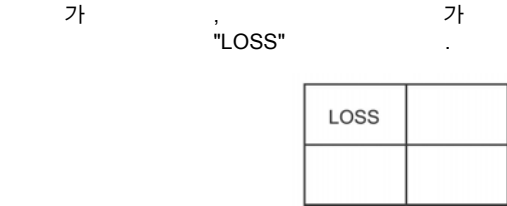
Group A: CH1~ CH4, Group B: CH5~ CH8, AUTO

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가 가

4-1,



[Figure 5]

"loss" , 4

SDQ-420

VCR

(PIP

loss

4-4,

: Group A 가

Group B video Loss

;

: Group A

PIP

Display mode

Group B

.

()

4

,

, PIP

.

•

1. Freeze

.

Freeze

LED

.

2. 가

. Quad

freeze

.

Freeze

LED가on

, QUAD

Freeze mode

3.

freeze

가

.

Quad

Freeze

frozen

.

4.

, Freeze

freeze

Freeze

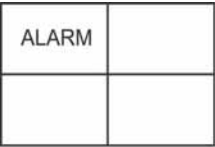
freeze



"ON"

4-4.VIDEO / ALARM

"ALARM" 가 (1~60)
SENSOR "N-O" "N-C" QUAD
, "ALARM" 가 4



<QUAD ON>



<QUAD OFF>

[6]
SENSOR "N-O" or "N-C" QUAD "OFF"
"ALARM"

4

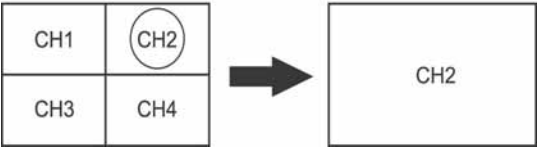
2

VCR 4

(QUAD PIP .)

VCR 4

2 (2x)



[7]
[2-1, 2 2-1.]

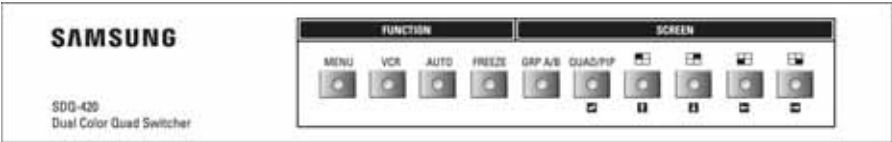
[illegible]

[illegible]

SDQ-420



가



[Figure 1.]



DC (12V / 4A).



(NTSC: 30fps, PAL: 25fps)

1-2.

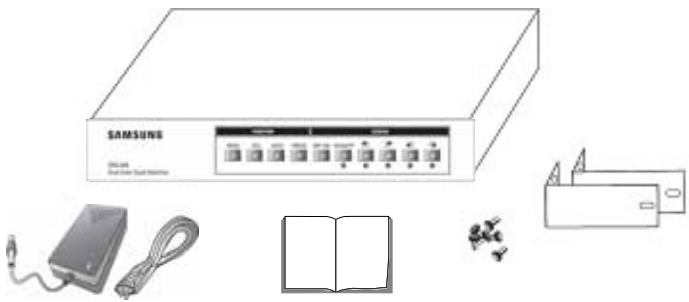
: DC 12V/4A
(AC/DC Adapter .)

: 0~50°C
(: , 가 .)

: 0 ~ 90%

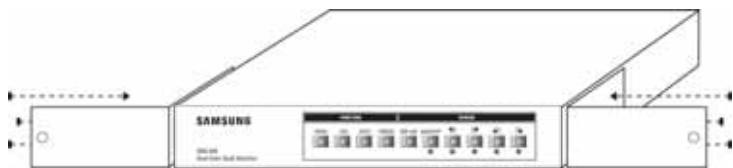
SDQ-420

1-3.



[11.]

1-4.



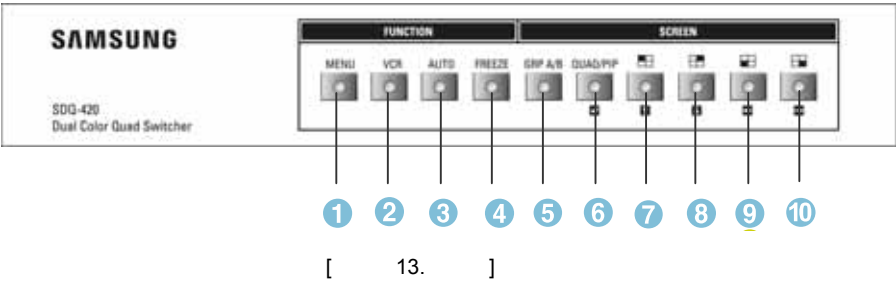
[12.]

(12)

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2.

2-1.

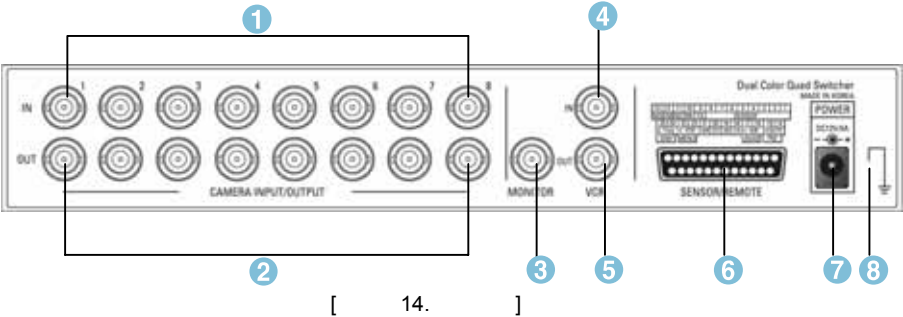


1	MENU	가
2	VCR	1. 가 VCR 2.
3	AUTO	1~8
4	FREEZE	1. freeze on (1 , 2 , 3 , 4) 4 freeze 2. VCR freeze 3. freeze
5	GRP A/B	A(CH1~CH4) B(CH5~CH8) LED A
6	QUAD/PIP 	1. 1-1 (page 4) 2. 3. VCR off

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7~10		1. 2. VCR
		
		
		
		

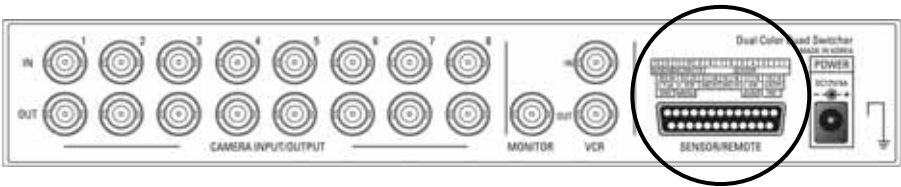
2.



1	CAMERA INPUT	BNC
2	CAMERA OUTPUT	Loop Out BNC
3	MONITOR OUT	
4	VCR IN	VCR
5	VCR OUT	VCR
6	SENSOR / REMOTE	
7	POWER	(DC12V / 4A).

SDQ-420

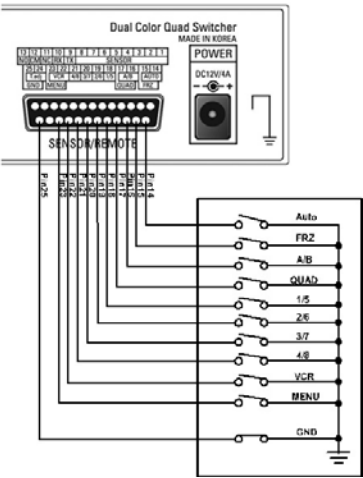
3-3. / (25Pin D-Sub Female Connector)



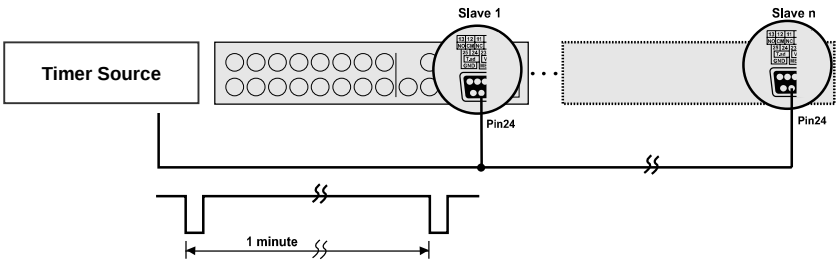
[17. /]

1	SENSOR (Input)	CH1	14	(18)	AUTO
2		CH2	15		FRZ (Freeze)
3		CH3	16		A/B(Group A/B)
4		CH4	17		QUAD
5		CH5	18		1/5 (CH1/CH5)
6		CH6	19		2/6 (CH2/CH6)
7		CH7	20		3/7 (CH3/CH7)
8		CH8	21		4/8 (CH4/CH8)
9	RS232C	TX	22		VCR
10		RX	23		MENU
11		NC(Normal Close)	24	T.adj (Time Adjust:) (19)	
12		CM (Common)	25	GND (Ground:)	
13		NO (Normal Open)			

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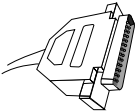


[18.]



[19. (T.adj)]

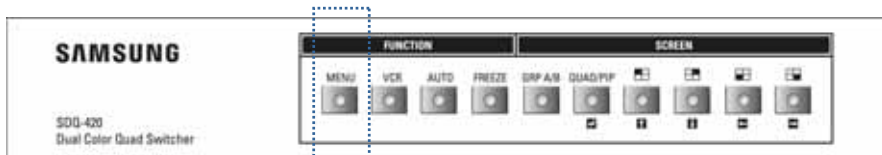
D-Sub 24 Pin TTL (+5V) Timer Source
Low 30~59 1 가) 0 ~29 0 ,
/ 가)



25Pin D-Sub Male Connector

SDQ-420

4.



1. TIME SETUP
2. TITLE SETUP
3. DISPLAY SETUP QUAD
4. VIDEO / ALARM
5. VIDEO CONTROL
6. OPTION
7. RS-232C

[20.]

():

():

가

가

():

가

():

():

(MENU):

4-1.

TIME SETUP	
2000.01.01	00:00:00
DATE MODE	YY/MM/DD
TIME COMP	0 SEC/DAY
DWELL TIME	MANUAL
AUTO SEQUENCE	3 SEC
QUAD SEQUENCE	MANUAL
ALARM BUZZER	10 SEC
LOSS BUZZER	10 SEC

[10.]

4-1-1. DATE & TIME ()

•

- 1. UP DOWN ( ) TIME SETUP
- 2. ENTER ()
- 3. LEFT RIGHT ( )
- 4. UP DOWN ( )
- 5. ENTER ()
- 6. MENU

4-1-2. TIME COMP ()

•

- 1. UP DOWN ( ) TIME SETUP
- 2. ENTER () TIME COMP
 - 1 가 , 가 1
 - 1 SEC/DAY TIME COMP
 - 1 가 , 가 1 가
 - +1 SEC/DAY TIME COMP

SDQ-420

* -15 SEC/DAY +15 SEC/DAY
 0 SEC/DAY

3. MENU

4-1-3. DATE MODE ()

- 1. UP DOWN ( ) TIME SETUP
- 2. ENTER () DATE MODE

YY/MM/DD → MM/DD/YY → DD/MM/YY →
* YY/MM/DD

3. MENU

4-1-4. DWELL TIME ()

- 1. UP DOWN ( ) TIME SETUP
- 2. ENTER () DWELL time

MANUAL → 1 → 2 → 3 → 4 → 5 → 6 → 7 → 8 → 9 →
* MANUAL
* 4 가

4-1-5. AUTO SEQUENCE ()

- 1. UP DOWN ( ) TIME SETUP
- 
- 2. ENTER () AUTO SEQUENCE

3 SEC → 4 SEC → 5 SEC → 6 SEC → 7 SEC → 8 SEC → 9 SEC → 1 SEC → 2 SEC →
* 3 SEC

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4-1-6. QUAD SEQUENCE (4)

- 1. UP DOWN ( ) TIME SETUP
- 2. ENTER () AUTO SEQUENCE

MANUAL → 1 SEC → 2 SEC → 3 SEC → → 6 SEC → 7 SEC → 8 SEC → 9 SEC

* 3 SEC

● GRP A(CH1~CH4) GRP B(CH5~CH8)

3. MENU

4-1-7. ALARM BUZZER ()

- 1. UP DOWN ( ) TIME SETUP

- 2. ENTER ()

- 3. UP DOWN ( )

- 4. ENTER ()
- * 10 SEC

5. MENU

4-1-8. LOSS BUZZER ()

- 1. UP DOWN ( ) TIME SETUP

- 2. ENTER ()

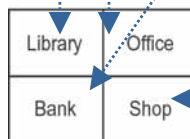
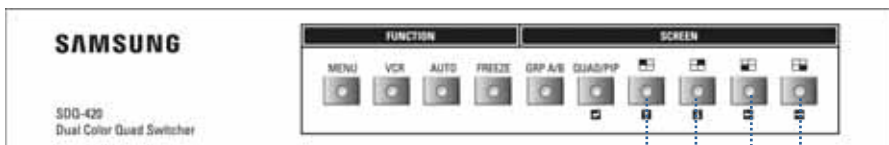
- 3. UP DOWN ( )

- 4. ENTER ()
- * 10 SEC

5. MENU

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4-2.



[13.]

8

1. (): UP DOWN MAIN MENU

2. (): Press the ENTER

3. FREEZE FREEZE LED가

4. LEFT RIGHT () UP
DOWN ()

* C1, C2, C3, C4, C5, C6, C7, C8

5. FREEZE key LED

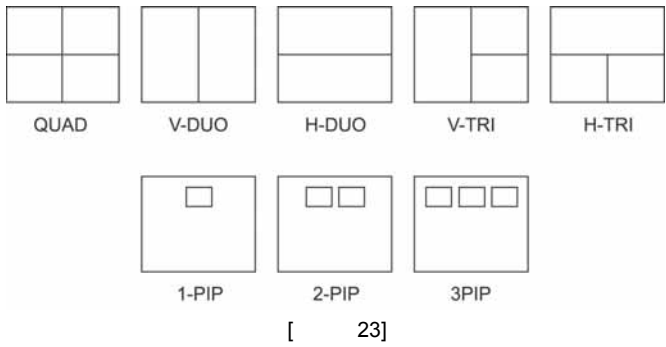
6. (): LEFT, RIGHT, UP, DOWN key

7. (): ENTER key

8. MENU

4-3. (QUAD & PIP Mode)

1. (← →) , LEFT RIGHT



2. ENTER (↵)

3. UP, DOWN, LEFT, RIGHT (↑ ↓ ← →) Enter (↵) Freeze

QUAD : , 4 .
(Menu .)

V-DUO : . LEFT, RIGHT (← →)
가 .
4-3

H-DUO : . UP
DOWN s 가
1-1 (page 4), 4-3
(page 19)

V-TRI : V-DUO
1-1 (page 6), 4-3
(page 23)

H-TRI : H-DUO
1-1 (page 6), 4-3
(page 24)

1-PIP : UP, DOWN,LEFT,RIGHT (   )

2-PIP : UP, DOWN,LEFT, RIGHT (   )
2

3-PIP : UP, DOWN,LEFT,RIGHT (   )

* 2-PIP 3-PIP Enter
* Freeze

4-4.

VIDEO / ALARM INPUT				
SEQ LOSS SENSOR QUAD				
C1	ON	OFF	N-O	ON
C2	ON	OFF	N-O	ON
C3	ON	OFF	N-O	ON
C4	ON	OFF	N-O	ON
C5	ON	OFF	N-O	ON
C6	ON	OFF	N-O	ON
C7	ON	OFF	N-O	ON
C8	ON	OFF	N-O	ON

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- 1. UP DOWN ( )
- 2. LEFT RIGHT ( )
- 3. ENTER ()

SEQ	ON, OFF
LOSS	ON, OFF
SENSOR	N-O, N-C, OFF
QUAD	ON, OFF

4. MENU

- SEQ

가 AUTO SEQUENCE
가 ON AUTO SEQUENCE
ON

- LOSS

가 LOSS 가
ON

- SENSOR

가 ALARM
(N-O: Normal-Open, N-C: Normal-Close, OFF). N-O.

- QUAD

가 4
QUAD가 ON 4
QUAD가 OFF
ON



[25. Video Control Menu]

4-5-1. COLOR CONTROL ()

Color control : 가
CONTRAST(), BRIGHTNESS(), HUE(), SATURATION()

1. UP DOWN () VIDEO CONTROL
2. ENTER ()
3. UP DOWN ()
4. ENTER ()
5. LEFT RIGHT ()
6. MENU

4-5-2. SIZE CONTROL ()

가 4

1. UP DOWN( ) VIDEO CONTROL
2. ENTER button () SIZE CONTROL MENU
3. UP, DOWN, LEFT, RIGHT (   )
4. MENU

4-5-3. POSITION CONTROL ()

가

1. UP DOWN ( ) VIDEO CONTROL
2. ENTER () POSITION CONTROL MENU
3. UP, DOWN, LEFT, RIGHT (   )
4. ENTER () 가
GRP A/B
5. MENU

4-5-4. VIDEO SYSTEM ()

가 video system(NTSC/ PAL/ AUTO)
AUTO SDQ-420 가 on video system(NTSC or PAL)

•

1. UP DOWN ( ) VIDEO CONTROL

2. ENTER () NTSC, PAL, Auto ..
* AUTO.

3. DC 가

4-6.

OPTION

1. BORDER DISPLAY	ON
2. DATE DISPLAY	ON
3. TIME DISPLAY	ON
4. TITLE DISPLAY	ON
5. GRP DISPLAY	ON
6. VCR MODE	MULTI
7. KEY ECHO	ON
8. AUTO PAN/TILT	OFF

[26.]

•

1. UP DOWN ( ) VIDEO CONTROL

2. ENTER () option

3. UP DOWN ( )

4. ENTER ()

SDQ-420

- BORDER DISPLAY : 'ON'
- DATE DISPLAY : 'ON'
- TIME DISPLAY : 'ON'
- TITLE DISPLAY : 'ON'
- GRP DISPLAY : 'ON' GROUP(GRP A GRP B)
- VCR MODE : 가 VCR
MULTI: PIP
MONITOR:
- KEY ECHO : 'ON' 가
- AUTO PAN / TILT : 'ON' 가
'OFF'
UP, DOWN, LEFT, RIGHT
가
(   )

5. MENU

4-7. RS-232C

2. ENTER () RS-232C ...

[27. RS-232C]

4. ENTER ()

- SYSTEM ID: (1-99 17)
point to point :
(17 1~16 DVR)

- 30

5. RS-232C

Remote control the 9(TX) pin 10(RX) pin DCON25/F port .

1. Communication format

: Asynchronous() half duplex
 : 1200/2400/4800/9600/19200/38400/5760 bit/sec
 Data : 6/7/8 bit
 Stop bit : 1/2 bit
 Parity bit : NONE/EVEN/ODD

2. Command

[The command of screen control]

Function	Hexa Value
CH1 FULL screen	80,11,00,00,00,02,00,ee,01,7d,5d,00,00,0d,0a
CH2 FULL screen	80,11,00,00,00,02,00,ee,02,7d,5d,00,00,0d,0a
CH3 FULL screen	80,11,00,00,00,02,00,ee,04,7d,5d,00,00,0d,0a
CH4 FULL screen	80,11,00,00,00,02,00,ee,08,7d,5d,00,00,0d,0a
CH5 FULL screen	80,11,00,00,00,02,00,ee,10,7d,5d,00,00,0d,0a
CH6 FULL screen	80,11,00,00,00,02,00,ee,20,7d,5d,00,00,0d,0a
CH7 FULL screen	80,11,00,00,00,02,00,ee,40,7d,5d,00,00,0d,0a
CH8 FULL screen	80,11,00,00,00,02,00,ee,80,7d,5d,00,00,0d,0a
GRP A/B select	80,11,00,00,00,02,00,e7,04,7d,5d,00,00,0d,0a
QUAD/PIP select	80,11,00,00,00,02,00,eb,01,7d,5d,00,00,0d,0a
AUTO SEQ	80,11,00,00,00,02,00,eb,04,7d,5d,00,00,0d,0a
VCR mode ON/OFF	80,11,00,00,00,02,00,ed,40,7d,5d,00,00,0d,0a
MENU/ESC	80,11,00,00,00,02,00,ed,10,7d,5d,00,00,0d,0a
Cursor (up)	80,11,00,00,00,02,00,ed,20,7d,5d,00,00,0d,0a
Cursor (down)	80,11,00,00,00,02,00,eb,08,7d,5d,00,00,0d,0a

Cursor (left)	80,11,00,00,00,02,00,e7,10,7d,5d,00,00,0d,0a
Cursor (right)	80,11,00,00,00,02,00,eb,02,7d,5d,00,00,0d,0a
Cursor (up) : external control	80,11,00,00,00,02,00,e7,01,7d,5d,00,00,0d,0a
Cursor (down) : external control	80,11,00,00,00,02,00,eb,40,7d,5d,00,00,0d,0a
Cursor (left) : external control	80,11,00,00,00,02,00,e7,02,7d,5d,00,00,0d,0a
Cursor (right) : external control	80,11,00,00,00,02,00,eb,80,7d,5d,00,00,0d,0a
RS-232C communication test(TX)	8F,11,00,00,00,00,00,00,00,7D,5D,00,00,0D,0A
RS-232C communication test(RX)	8F,11,00,00,00,20,00,00,00,7D,5D,00,00,0D,0A

6.

1. Display Input : 1Vp-p with composite Video signal (2Vp-p : if 75ohms is set off)
Input of NTSC , PAL available BNC Jack Input
2. Screen display : 1Vp-p 75ohms Composite video signal BNC Jack Input
3. Alarm Input : 8 channels , 5V TTL Level 10k ohms Pull-up
4. Alarm Output : Relay contact capability- AC120V 0.5A / DC 24V 1A
5. Power Input Voltage : 12V / 4A (DC)
6. Power Consumption : 10W
7. Operating Temperature : 0°C ~ 50°C
8. Dimensions : 280W x 44H x 200D mm (11.02W x 1.73H x 78.74D inch)
9. Weight : 1.5 kg
10. Connector type :

Power.....	DC JACK
Alarm In.....	25 Pin D-sub(Pin1-Pin8)
Alarm Out.....	25 Pin D-sub(Pin11-Pin13)
Camera In.....	BNC
Camera Out.....	BNC
VCR In.....	BNC
VCR Out.....	BNC
Monitor Out.....	BNC
11. Display :

Full-screen Format 720x480(NTSC), 720x576(PAL)
QUAD Format 360x240(NTSC), 360x288(PAL)
Vertical Half-screen Format 360x480(NTSC), 360x576(PAL)
Horizontal Half-screen Format 720x240(NTSC), 720x288(PAL)
PIP Insert 180x120(NTSC), 180x144(PAL)
Zoom Display 360x240(NTSC), 360x288(PAL)

MEMO

MEMO