

OPERATION MANUAL

MULTI VIEWER

MV-91C

(1st EDITION)



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SECTION 1. SPECIFICATIONS & INSTALLATION

1-1. INTRODUCTION

The MV-91C is a 6-image divided display system which accepts up to 5 main and 3 AUX (auxiliary) inputs. The unit provides two video outputs for observation purposes. VIDEO 1 displays inputs in a 5-plus-1 arrangement (1 selected main image / 5 smaller fixed), while VIDEO 2 displays one full screen image (same as VIDEO 1 main image selection).

The input selected for display as the VIDEO 1 main image (and VIDEO 2 image) can be switched over according to AMS microphone mixer signals, computer command, and/or by panel selections and menu settings. A real time clock character display is also internally generated for display on the VIDEO 1 main image to notify the viewer of when specific events occur. (Time/date display can be positioned at one of five fixed locations on main image.)

Moreover, operational parameters can be easily and quickly changed via front panel menu controls. Menus are displayed on the monitor screen and accessed with a minimum of keystrokes. Changes in parameters are stored in memory and will be maintained due to a battery backup.

1-2. FEATURES

- Connects to up to 8 asynchronous (B/W or color) television cameras (5 main / 3 AUX.)
- Six camera images can be displayed on a single monitor screen. (1 main / 5 smaller.)
- Smaller images in 5-plus-1 display dedicated to 5 main inputs, main image selectable as one of the five or one of the three AUX inputs.
- Main image of 5-plus-1 display covers approx. 45% of effective picture area (upper left corner), smaller images cover approx. 11% each.
- Uses an 8-bit gradation method and 4-field memory to realize high quality reduced images with natural motion.
- Real time character display positionable at one of five fixed locations on main image of 5-plus-1 display.
- Input for main image of 5-plus-1 display switched over according to AMS microphone mixer signal, computer command, or by manual selection.
- Easy menu access and change of operational parameters via front panel switches.

- Battery backup of parameter memory to ensure operational settings are maintained.
- Computer control of unit possible via RS-232C interface.

1-3. SPECIFICATIONS

Video format

NTSC

Video inputs

Composite color or monochrome, 1.0 Vp-p \pm 3dB, 75 Ω , 8 inputs, BNC connectors.

NOTE

All eight inputs are available for main image display. Inputs 1~5 only are displayed as smaller images in 5-plus-1 display (no AUX inputs).

Video outputs

VIDEO OUT 1

Composite color or monochrome, 1.0 Vp-p \pm 3dB, 75 Ω , 1 output, BNC connector.

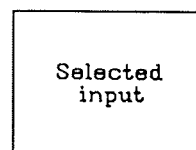
Outputs 5-plus-1 display only (Inputs 1~5 plus selected input (1~5 or AUX 1~3))

Selected input	1	
	2	
5	4	3

Where 1~5 equals camera inputs 1~5. Menus/characters also displayed on this output.

VIDEO OUT 2

Same specs as for VIDEO OUT 1, full screen display of selected input, no divided screen display, no character display.



Character display

Configuration	10 x 14 dots
Type	Alphanumeric characters
Clock	HRS : MINS : SECS (24 hour format) MONTH/DAY/YEAR (order selectable)
SUPER ON/OFF	Independently set for TIME and DATE
TIME/DATE Position	Selectable as 1 of 5 fixed locations on main image of 5-plus-1 display
Brightness	80%, white with black border
Border edge depth	According to monitor background brightness
Reduced image borderline	20% grey

Input switching (main and full screen images)

Inputs 1~5, AUX 1~3	TTL active low
Delay Buffering	0.6~2.8 sec., selectable in 0.2 sec. steps
Auto idle switch over time	2.0~10.0 sec., selectable in 0.5 sec. steps (To default channel or scan all inputs)
Default channel select	Inputs 1~5, AUX 1~3

Rotate or default conflict resolution

Rotation switch over time	0.5~6.0 sec., selectable in 0.5 sec. steps
Default channel select	Inputs 1~5, AUX 1~3

Override control

Enable/disable trigger	TTL activated
Override channel select	Inputs 1~5, AUX 1~3

Parameter change menus

1) Time	6) Time display
2) Switching delay	7) Active channels
3) Date display	8) Default channel
4) Time to default	9) Rotate or default on conflict
5) Override channel	10) Communication parameters

Other

Operating temperature	0~40°C
Operating humidity	20~90% (no condensation)
Power requirements	100~117 V AC; 50/60Hz
Power consumption	Approx. 27 VA (14W)
External dimensions	430 (W) X 44 (H) X 375 (D) mm (16.9" X 1.75" X 14.8")
Weight	Approx. 4.6 kg (10.1 lb)

1-4. INSTALLATION

a) Unpacking

The MV-91C is fully assembled, checked and adjusted prior to shipment and ready to operate immediately upon unpacking.

Check your received items against the packing list below.

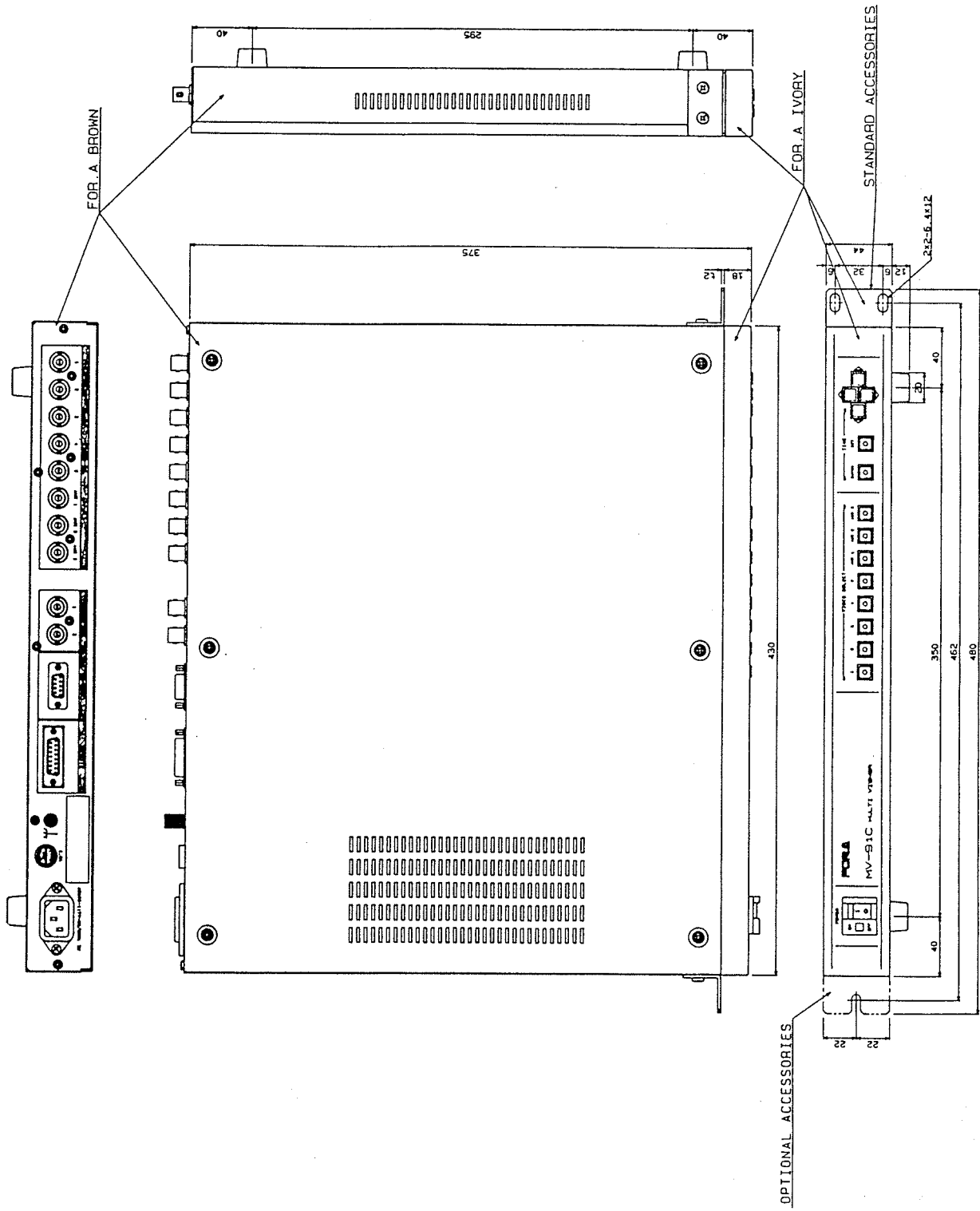
ITEM	QUANTITY
Main Unit	1
AC Power Cord	1
Rack Mount Brackets	1pr.
Operation Manual	1

b) Check

Check to ensure no damage has occurred during shipment. If damage has occurred, or items are missing, inform your supplier immediately.

1-5. EXTERNAL DIMENSIONS

(All dimensions in mm)



C) Power Supply

Verify you have the correct unit for your voltage specification prior to applying power. The MV-91C operates on 100 ~ 117 V AC; 50/60Hz.

d) Grounding

The MV-91C comes equipped with a 3-pin power cord which automatically grounds the unit to protect operators from electrical shock. If your power source has a 2-pin outlet, use a 3-pin to 2-pin adaptor and ground the green wire (pigtail) of the adaptor. If your 3-pin to 2-pin adaptor does not have a pigtail, ground the ground terminal on the rear panel of the unit.

e) Installation

Avoid using the MV-91C in areas having high temperature, high humidity or excessive dust. Adequate ventilation is also required for optimum performance. As a result of this consideration, ensure no other equipment is located, or installed, closer than 5cm to the unit.

f) Desk or Tabletop Usage

The MV-91C is designed for quick and easy rack mounting, but can also be immediately used as a tabletop unit since it comes equipped with rubber feet mounted on the baseplate.

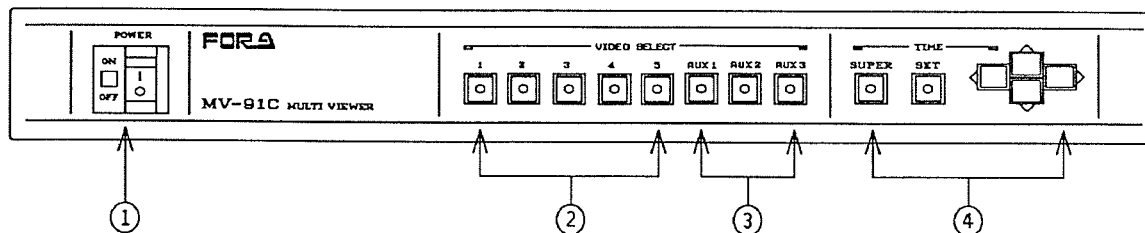
g) Rack Mounting

When rack mounting the MV-91C, remove the rubber feet and use the accessory rack mount brackets (rack ears) included with your unit.

SECTION 2. OPERATION

2-1. PANEL DESCRIPTIONS & FUNCTIONS

2-1-1. Front Panel



(1) Power switch and indicator

Used to switch unit power ON and OFF. Indicator lights green to show power is ON.

(2) Video select 1~5

Used to manually select one of the line camera inputs as the main (VIDEO OUT 1) and full screen (VIDEO OUT 2) images. Switch indicator will light to show selected input. (Inputs 1~5 are also automatically displayed as the 5-plus-1 display. Input selection is not possible for smaller images.)

(3) Video select AUX 1~3

Used to manually select one of the auxiliary inputs as the main (VIDEO OUT 1) and full screen (VIDEO OUT 2) images. Switch indicator will light to show selected input. (AUX 1~3 inputs can only be displayed as main and full images. They can not appear as any of the smaller images in the 5-plus-1 display.)

(4) Super

Used by itself to manually set character display ON/OFF for main image in 5-plus-1 display. Used in conjunction with [SET] to access operational parameter menus and set changed parameters.

(5) Set

Used by itself to access operational parameter sub-menus and to exit menu. Used in conjunction with [SUPER] to access operational parameter menus and set changed parameters.

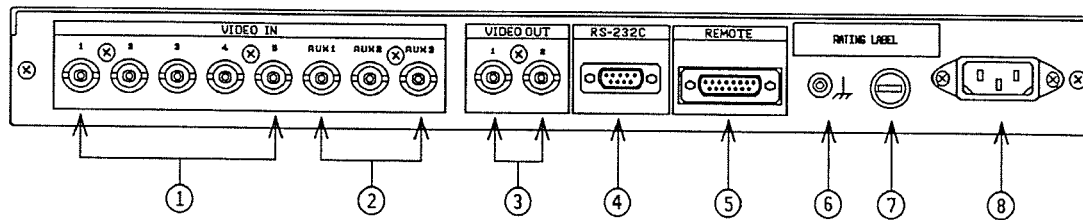
(6) Directional switches

Used to change, select, and/or set ON/OFF, operational parameters when on-screen menus are displayed.

[↑] and [↓] are used to select an item for change or to increase/decrease a displayed value.

[←] and [→] are used to shift between parameters on the same character line or to set a function ON/OFF (selected/not selected).

2-1-2. Rear panel



(1) Video In 1 ~ 5

Used to connect main line video camera inputs. These inputs are automatically used for the 5 smaller images in the 5-plus-1 display (VIDEO OUT 1). One input (or one of the auxiliary (AUX) inputs) can be selected at any given time as the main image in the 5-plus-1 display and the full screen display (VIDEO OUT 2).

(2) Video In AUX 1 ~ 3

Used to connect auxiliary inputs. These inputs will only appear when selected as the main image in the 5-plus-1 display (VIDEO OUT 1) and the full screen image (VIDEO OUT 2).

(3) Video Out 1/2

VIDEO OUT 1 outputs a 5-plus-1 display on a connected monitor. Display will show the 5 main line camera inputs as the 5 smaller images (inputs not selectable) in the display, while the main image displayed is selectable (1 ~ 5 or AUX 1 ~ 3).

VIDEO OUT 2 outputs a full screen display of the selected input. (Same as main image in 5-plus-1 display.)

(4) RS-232C

Used primarily for computer connection (serial port must be enabled). Allows computer control of MV-91C functions and computer generated characters to be displayed on the main image of the 5-plus-1 display (VIDEO OUT 1).

(5) REMOTE

Used primarily for connection to an AMS type switcher to initiate input switchover. Can also be used for remote unit connection.

(6) Ground terminal

Used to ground the unit and protect operators from possible electrical shock.

(7) Fuse holder

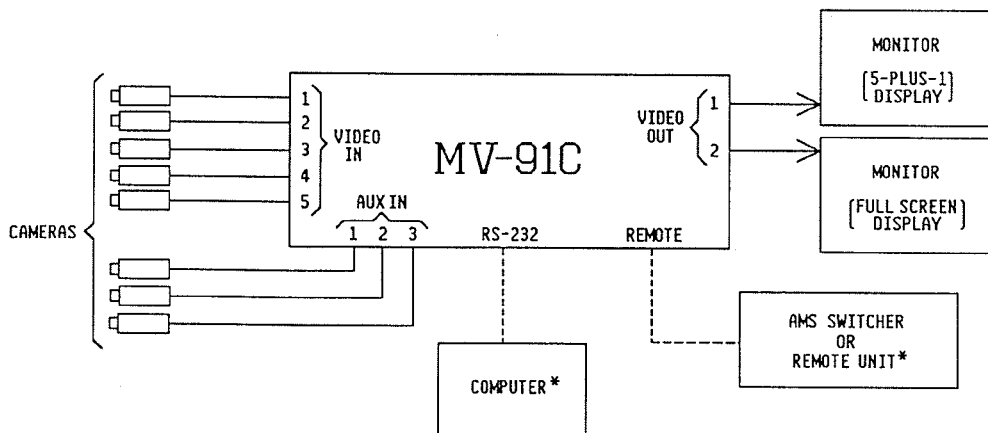
Should contain a 1A slow blow fuse.

(8) AC IN

Used for connection to the AC power source via the supplied accessory power cord.

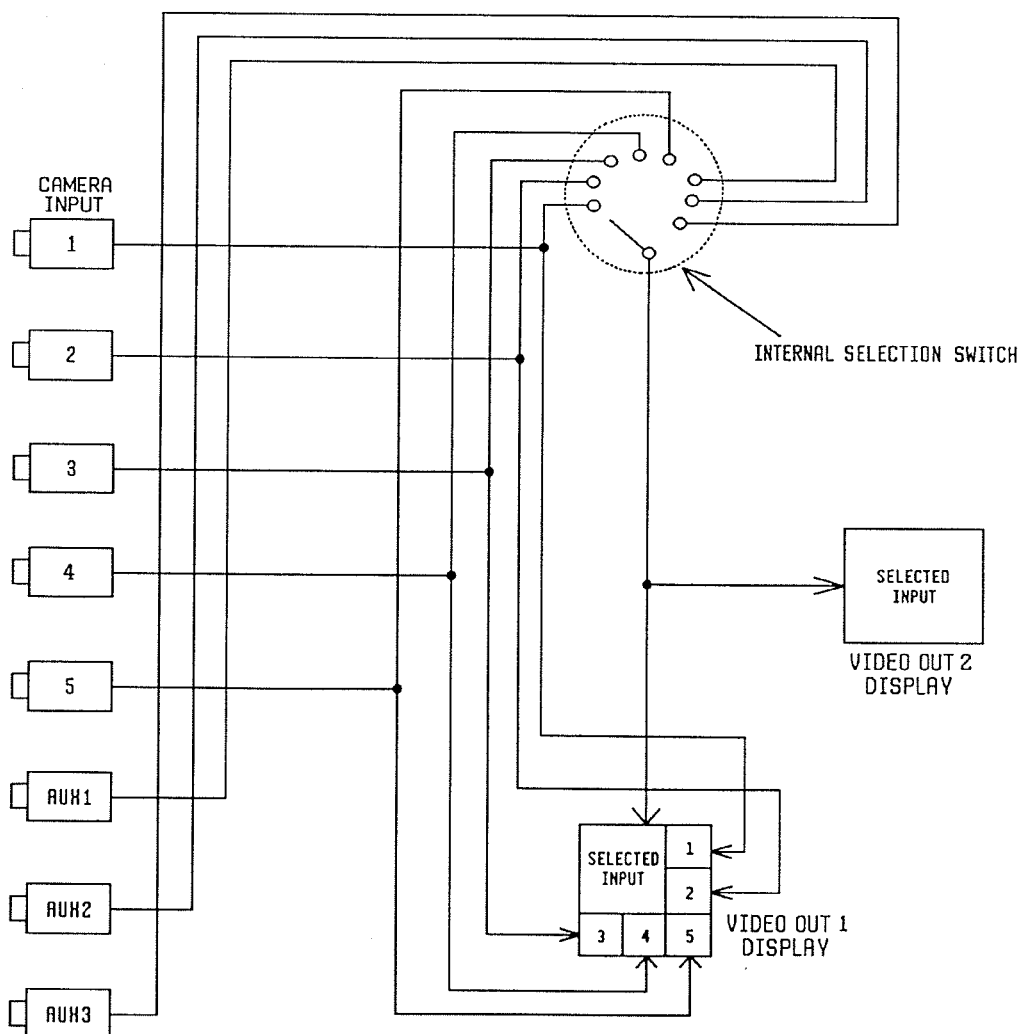
2-2. Connection and Operational Diagrams

2-2-1. Basic Connection Example



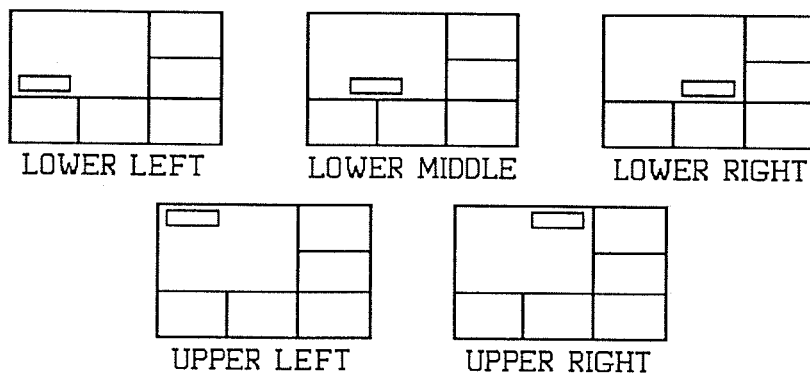
(* in figure above indicate units are optional connections.)

2-2-2. Input Display Diagram



2-2-3. Character Positioning

Time/date characters can only be displayed on the main image of the 5-plus-1 display. Character position is selectable to one of the five fixed locations shown below.



IMPORTANT

Computer generated characters can also be displayed when a computer is connected with the MV-91C via the RS-232C port. However, computer generated characters are not positionable using the MV-91C controls. (See section 2-5 of this manual for character display grid pattern.)

2-2-4. Input Switchover

The input displayed as the main image in the 5-plus-1 display (VIDEO OUT 1) and the full screen display (VIDEO OUT 2) is switched over according to the type of input switchover selected and the switchover command source.

Input switchover is determined by computer command if the serial port is enabled or by front panel selections/AMS microphone mixer signals if it is disabled. (See section 2-4-10, 'Selecting Communication Parameters' for information on enabling/disabling serial port operation.)

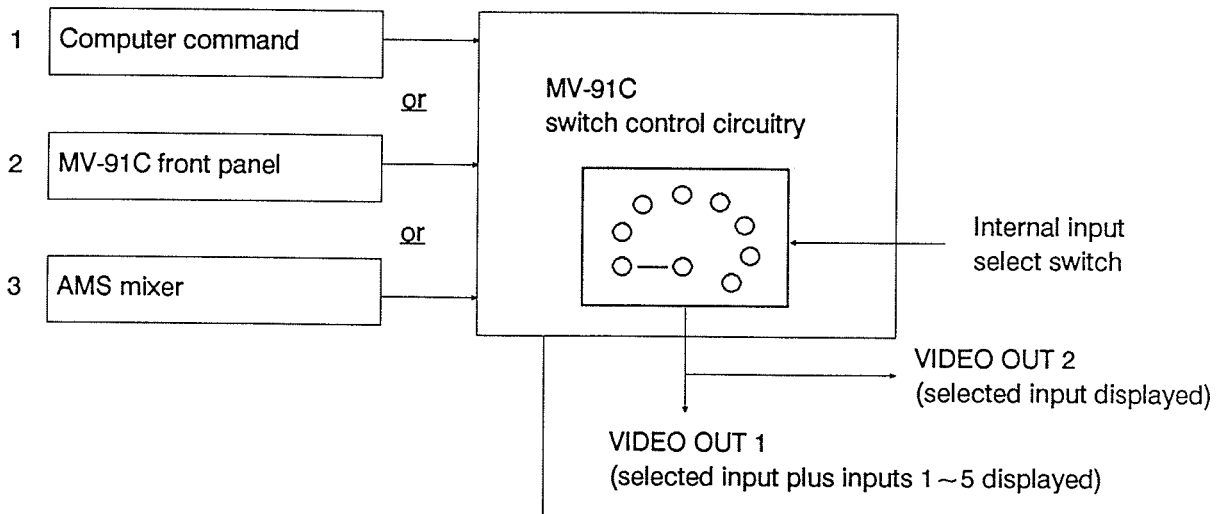
COMMAND SOURCE	RESPONSE
Computer control via RS-232C connector (when serial port enabled).	Switchover performed per computer input. Front panel settings and AMS microphone mixer signals ignored.
Front panel control/menu settings.	Switchover performed per front panel/menu selections when serial port is disabled. (Computer control not possible.)
AMS microphone mixer signals.	Switchover initiated by AMS microphone mixer signals when serial port is disabled. Actual switchover occurs shortly after signal received according to the set delay time. (Computer control not possible.)

NOTE

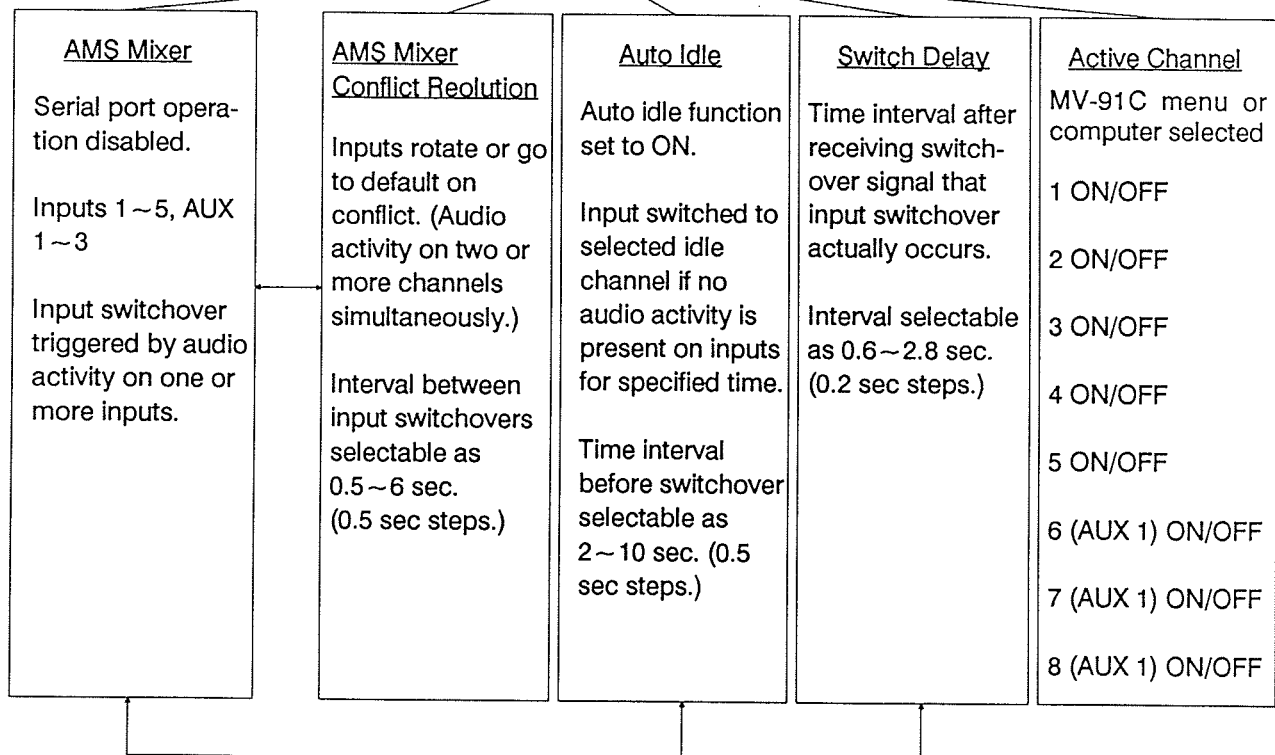
Front panel selections and AMS signals have equal priority and the MV-91C will respond to whichever signal is received first. Type of response depends on the operational parameter settings made using the MV-91C menus.

The diagram below shows which functions and command sources affect input switchover.

Command Source



Switchover (input selection) determined by:



See operational notes on next page.

OPERATIONAL NOTES

A) AMS conflict resolution

The MV-91C can be set to resolve input switchover conflicts in one of two ways.

- (1) ROTATE: The MV-91C will alternately display the conflicting inputs for the selected time interval.
- (2) DEFAULT: The MV-91C will switch to the selected default channel after the selected time interval has passed.

B) Auto Idle

The MV-91C will automatically switch to the selected idle channel if no audio activity is detected on the active inputs for a specified period of time. However, the auto idle function must be set to ON to obtain this automatic response. (See section 2-4-6 of this manual for procedure.)

2-3. Operational Menus

Operational parameters for the functions in the previous section can be easily set using the monitor displayed menus generated by the MV-91C.

2-3-1. Main Menu

To access the MV-91C menu functions and display the main menu on the monitor screen, press [SUPER] on the front panel of the MV-91C.

The following list of sub menus should appear on the VIDEO OUT 1 divided display (character can not appear on the VIDEO OUT 2 full screen display).

SET TIME
SET DATE
DATE TIME DISPLAY MODE
SET SWITCH DELAY
SET ACTIVE CHANNELS
SET DEFAULT CHANNEL
SET TIME TO DEFAULT
SELECT ROTATE OR DEFAULT (ON CONFLICT)
SET OVERRIDE CHANNEL
SET COMMUNICATION PARAMETERS

2-3-2. Basic Menu Procedures

- A) Press ↑ or ↓ to select an item or increase/decrease a parameter setting.
- B) Press ← or → to shift between parameters on the same character line, set a selected item ON/OFF or to change parameters.
- C) After changes to a menu are complete, press [SET] on the front panel to store the settings in memory. (RAM parameter memory has a battery backup and all settings will be kept, even if unit power is turned OFF.)

[SET] on the front panel will also return you to the main menu when settings are stored.

- D) Pressing [SET] while in the main menu allows you to access the selected sub menu. Pressing [SET] while in a sub menu allows you to exit the parameter change operation currently being performed.

2-4. Setting Operational Parameters with Sub Menus

2-4-1. Setting Time Display

- 1 > Press [SUPER] to access the main menu display.
- 2 > Press ↑ or ↓ to move between sub menu listings and select 'SET TIME'.
- 3 > Press [SET] to access the SET TIME display

HOURS : MINS : SECS MONTH / DAY / YEAR*
00 : 00 : 00 00 / 00 / 00

↑
1st item flashes to show it can be changed.

(* MONTH/DAY/YEAR listing order is selectable as one of three. See section 2-4-3 of this manual.)

- 4 > Press ↑ or ↓ to increase/decrease HOURS time setting. Press ⇒ to shift to change to next section when required setting is obtained.
- 5 > Repeat the above step until all time settings are complete.
- 6 > Press [SET] to store setting in memory and return to main menu. Real time clock will start counting from set time.

2-4-2. Setting Date Display

- 1 > Press [SUPER] to access the main menu display.
- 2 > Press ↑ or ↓ to move between sub menu listings and select 'SET DATE'.

3> Press [SET] to access the SET DATE display

HOURS : MINS : SECS MONTH / DAY / YEAR*
00 : 00 : 00 00 / 00 / 00



1st item flashes to show it can be changed.

(* MONTH/DAY/YEAR listing order is selectable as one of three. See section 2-4-3 of this manual.)

- 4> Press ↑ or ↓ to increase/decrease MONTH date setting. Press ⇒ to shift to next section when required setting is obtained.
- 5> Repeat the above step until all time settings are complete.
- 6> Press [SET] to store setting in memory and return to main menu. Date immediately will start counting from set day.

2-4-3. Selecting Date/Time Display

- 1> Press [SUPER] to access the main menu display.
- 2> Press ↑ or ↓ to move between sub menu listings and select 'DATE TIME DISPLAY MODE'.
- 3> Press [SET] to access the DATE TIME DISPLAY MODE display

Monitor display will change to one similar to the following.

DATE FORMAT
DATE ON/OFF
TIME ON/OFF
POSITION 1 (or 2~5)

4> Press ↑ or ↓ to move between listing and make a selection.

4A> Selecting Date Format

- (1) Press ↑ or ↓ to select 'DATE FORMAT', then press [SET]. The following monitor display will appear.

DATE FORMAT

MONTH / DAY / YEAR
DAY / MONTH / YEAR
YEAR / DAY / MONTH

- (2) Press ↑ or ↓ to select desired format, then press [SET] to store setting in memory and return to main menu.

4B > Date ON/OFF

- (1) Press \uparrow or \downarrow to select 'DATE ON/OFF'. The following monitor display will appear.

DATE ON/OFF

ON (or OFF displayed)

- (2) Press \leftarrow / \rightarrow or \uparrow / \downarrow to shift display between ON/OFF and select required indication.
- (3) Press [SET] to store setting in memory and return to main menu.

4C > Time ON/OFF

- (1) Press \uparrow or \downarrow to select 'DATE ON/OFF'. The following monitor display will appear.

TIME ON/OFF

ON (or OFF displayed)

- (2) Press \leftarrow / \rightarrow or \uparrow / \downarrow to shift display between ON/OFF and select required indication.
- (3) Press [SET] to store setting in memory and return to main menu.

4D > Time/Date Character Position

- (1) Press \uparrow or \downarrow to select 'POSITION' listing. The following monitor display will appear.

POSITION 1 (or 2~5)

- (2) Press \leftarrow or \rightarrow to select a position number. (Number displayed corresponds to one of the five fixed positions available on the main image of the 5-plus-1 display; upper left, upper right, lower left, lower middle or lower right.)
- (3) Press [SET] to store setting in memory and return to main menu.

2-4-4. Selecting Switch Delay

- 1 > Press [SUPER] to access the main menu display.
- 2 > Press \uparrow or \downarrow to move between sub menu listings and select 'SET SWITCH DELAY'.
- 3 > Press [SET] to access the SET SWITCH DELAY display

Character similar to below will appear on the monitor.

SWITCH DELAY 0.6

Delay parameter shown is in seconds and has a selectable range of 0.6~2.8 seconds.

- 4> Press ↑ or ↓ to increase/decrease displayed delay time setting. Each press will increase/decrease the displayed time 0.2 seconds.
- 5> When required delay time is displayed, simultaneously press [SET] to store setting in memory and return to main menu.

2-4-5. Selecting Active Channels

- 1> Press [SUPER] to access the main menu display.
- 2> Press ↑ or ↓ to move between sub menu listings and select 'SET ACTIVE CHANNELS'.
- 3> Press [SUPER] to access the SET ACTIVE CHANNELS display

Character similar to below will appear on the monitor.

ACTIVE CHANNEL 1 CH ON (or OFF displayed)

- 4> Press ↑ or ↓ to scroll through all channels (inputs) available for switchover selection. (1CH~5CH = inputs 1~5, 6CH~8 CH = AUX inputs 1~3.)
- 5> Select a channel, then press ← or ⇒ to set the channel ON (active) or OFF (not available for switchover).
- 6> Repeat steps 4 and 5 above until settings have been made for all required channels.
- 7> When settings are complete, press [SET] to store settings in memory and return to main menu.

2-4-6. Selecting Idle Channel & Auto Idle ON/OFF

- 1> Press [SUPER] to access the main menu display.
- 2> Press ↑ or ↓ to move between sub menu listings and select 'SET DEFAULT CHANNEL'.
- 3> Press [SET] to access the SET DEFAULT CHANNEL display

Character similar to below will appear on the monitor.

DEFAULT CHANNEL 1 ON (or OFF displayed)

In this case, selecting ON means the AUTO IDLE function is active and input will switchover to the selected default (idle) channel if no audio activity is detected on the active inputs for a specified period of time. (See 2-4-6 for procedure to select time interval.) OFF means AUTO IDLE will not be performed and input switchover will not occur if no audio activity is detected on the active inputs.

- 4> Press ↑ or ↓ to select the default channel. Number section of display should change. (1 CH~5 CH = inputs 1~5, 6 CH~8 CH = AUX inputs 1~3.)
- 5> When the desired default channel is displayed, press ⇒ to move the cursor and shift to ON/OFF section of display.
- 6> Press ↑ or ↓ to select ON or OFF.
- 7> When settings are complete, press [SET] to store settings in memory and return to main menu.

2-4-7. Selecting Default (Idle Switchover) Time

- 1> Press [SUPER] to access the main menu display.
- 2> Press ↑ or ↓ to move between sub menu listings and select 'SET TIME TO DEFAULT'.
- 3> Press [SET] to access the SET TIME TO DEFAULT display

Character similar to below will appear on the monitor.

TIME TO DEFAULT 2.0

The default time parameter shown is in seconds and has a selectable range of 2.0~10.0 seconds.

- 4> Press ↑ or ↓ to increase or decrease the displayed time setting. Each press will increase/decrease the displayed time by 0.5 seconds.
- 5> When required time is displayed, press [SET] to store settings in memory and return to main menu.

2-4-8. Selecting Rotate or Default on Conflict

- 1> Press [SUPER] to access the main menu display.
- 2> Press ↑ or ↓ to move between sub menu listings and select 'SELECT ROTATE OR DEFAULT ON CONFLICT'.
- 3> Press [SET] to access the SELECT ROTATE OR DEFAULT ON CONFLICT display

Character similar to below will appear on the monitor.

DEFAULT (or ROTATE displayed)

DEFAULT CHANNEL 1

ROTATE TIME 0.5

The total time parameter shown is in seconds and has a selectable range of 0.5~6.0 seconds.

- 4> Press ↑ or ↓ to move between the listings and make a selection.

4A> DEFAULT/ROTATE

- (1) Press ↑ or ↓ to select first parameter listing.
- (2) Press ← / ⇒ to shift display between DEFAULT/ROTATE and select required indication.
- (3) Press [SET] to store setting in memory and return to main menu.

4B> Default Channel

- (1) Press ↑ or ↓ to select 'DEFAULT CHANNEL' listing.
- (2) Press ← / ⇒ to select the default channel. (1 CH~5 CH = inputs 1~5, 6 CH~8 CH = AUX inputs 1~3.)
- (3) Press [SET] to store setting in memory and return to main menu.

4C> Rotation Time

- (1) Press ↑ or ↓ to move between sub menu listings and select 'ROTATE TIME'.
- (2) Press ← or → to increase or decrease the displayed time. Selectable range is 0.5~6.0 seconds. Each press increases or decreases the displayed time by 0.5 seconds.
- (3) When required settings are complete, press [SET] to store settings in memory and return to main menu.

2-4-9. Selecting Override Channel

- 1> Press [SUPER] to access the main menu display.
- 2> Press ↑ or ↓ to move between sub menu listings and select 'SET OVERRIDE CHANNEL'.
- 3> Press [SET] to access the SET OVERRIDE CHANNEL display

Character similar to below will appear on the monitor.

OVERRIDE CHANNEL 0 (or 1) ON (or OFF)

- 4> Press ↑ or ↓ to switch between 0 and 1 and select the required channel.
- 5> When required override channel is displayed, Press ⇒ to shift to the ON/OFF section of the display.
- 6> Press ↑ or ↓ to set override function ON or OFF.
- 7> When settings are complete, press [SET] to store settings in memory and return to main menu.

2-4-10. Selecting Communication Parameters

- 1> Press [SUPER] to access the main menu display.
- 2> Press ↑ or ↓ to move between sub menu listings and select 'SET COMMUNICATION PARAMETERS'.
- 3> Press [SET] to access the SET COMMUNICATION PARAMETERS display

Character similar to below will appear on the monitor.

SERIAL PORT	ENABLE	(or DISABLE)
BAUD RATE	300	(Selectable as 300, 1200, 2400, 4800, 9600, or 19,200. Default = 1200.)
PARITY	NONE	(or EVEN or ODD)
STOP BITS	1	(or 2)
DATA BITS	7	(or 8)

NOTE

Customer must design required control software according to their system requirements. SERIAL PORT setting must be selected 'ENABLE' for computer control.

4> Press ↑ or ↓ to move between listings and make a selection.

4A> Port Enable/Disable

- (1) Press ↑ or ↓ to select 'SERIAL PORT' listing.
- (2) Press ← or → to select ENABLE or DISABLE. 'ENABLE' allows a connected computer to control the MV-91C via the RS-232 port. 'DISABLE' means control can be performed locally (front panel of MV-91C) or by a remote unit.
- (3) Press [SET] to confirm setting.

4B> Baud Rate

- (1) Press ↑ or ↓ to select 'BAUD RATE' listing.
- (2) Press ← or → to select baud rate. (Selectable as 300, 1200, 2400, 4800, 9600, or 19,200. Default = 1200.)
- (3) Press [SET] to confirm setting and return to the main menu.

4C> Parity

- (1) Press ↑ or ↓ to select 'PARITY' listing.
- (2) Press ← or → to select parity. (Selectable as NONE, ODD or EVEN.)
- (3) Press [SET] to confirm setting and return to the main menu.

4D> Stop Bits

- (1) Press ↑ or ↓ to select 'STOP BITS' listing.
- (2) Press ← or → to select 1 or 2.
- (3) Press [SET] to confirm setting and return to the main menu.

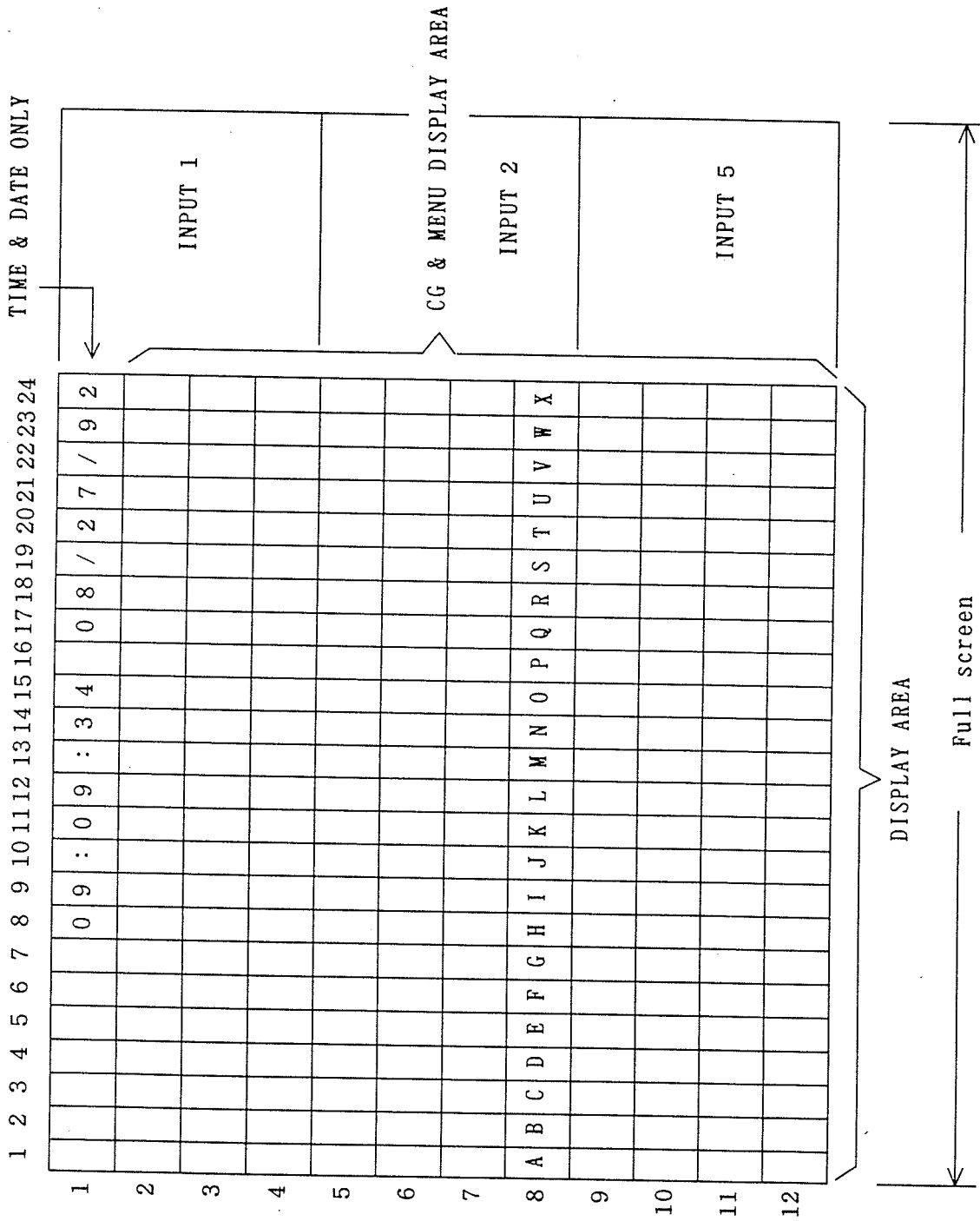
4E> Data Bits

- (1) Press ↑ or ↓ to select 'DATA BITS' listing.
- (2) Press ← or → to select 7 or 8.
- (3) Press [SET] to confirm setting and return to the main menu.

In the case of the MV-91C, standard communications parameters for computer control via the RS-232C port are as follows.

BAUD RATE	9600
PARITY	NONE
STOP BITS	1
DATA BITS	7 (for ASC II)

2-5. Character Display Grid



Time/date Character Display Position ... Five fixed locations :
 Upper left, upper right, lower left, lower middle, lower right

Character Size ... 10 X 14 matrix 1 Dot/2h/1 Field

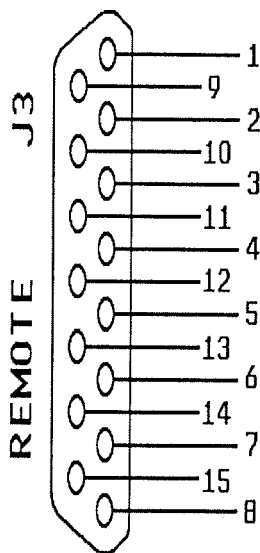
2-6. CPU Reset and Default Settings

Dipswitch SW 1 on the internal p.c. board is used for reset of the CPU. When this switch is set to ON, the CPU will reset and the operational parameters shown below will return to their listed default settings.

	PARAMETER	DEFAULT SETTING
1	Time display	00 : 00 : 00
2	Date display	DAY/MONTH/YEAR 01 / 01 / u 93
3	Time Dat Display Mode	Date ON Time ON Position UP (L)
4	Switch delay	1.0 sec
5	Active channels	All to ON (1~5, AUX 1~3)
6	Idle / Default	Idle ON 1 CH
7	Idle switchover time	10.0 sec
8	Rotate / Default	Rotate Rotate default OFF Rotate time 1.0 sec Default Channel 1 CH
9	Override channel	1 CH
10	Local/Remote Operation	Local

2-7. Remote Connector

Pin assignments for the REMOTE connector are as shown in the diagram and table below.



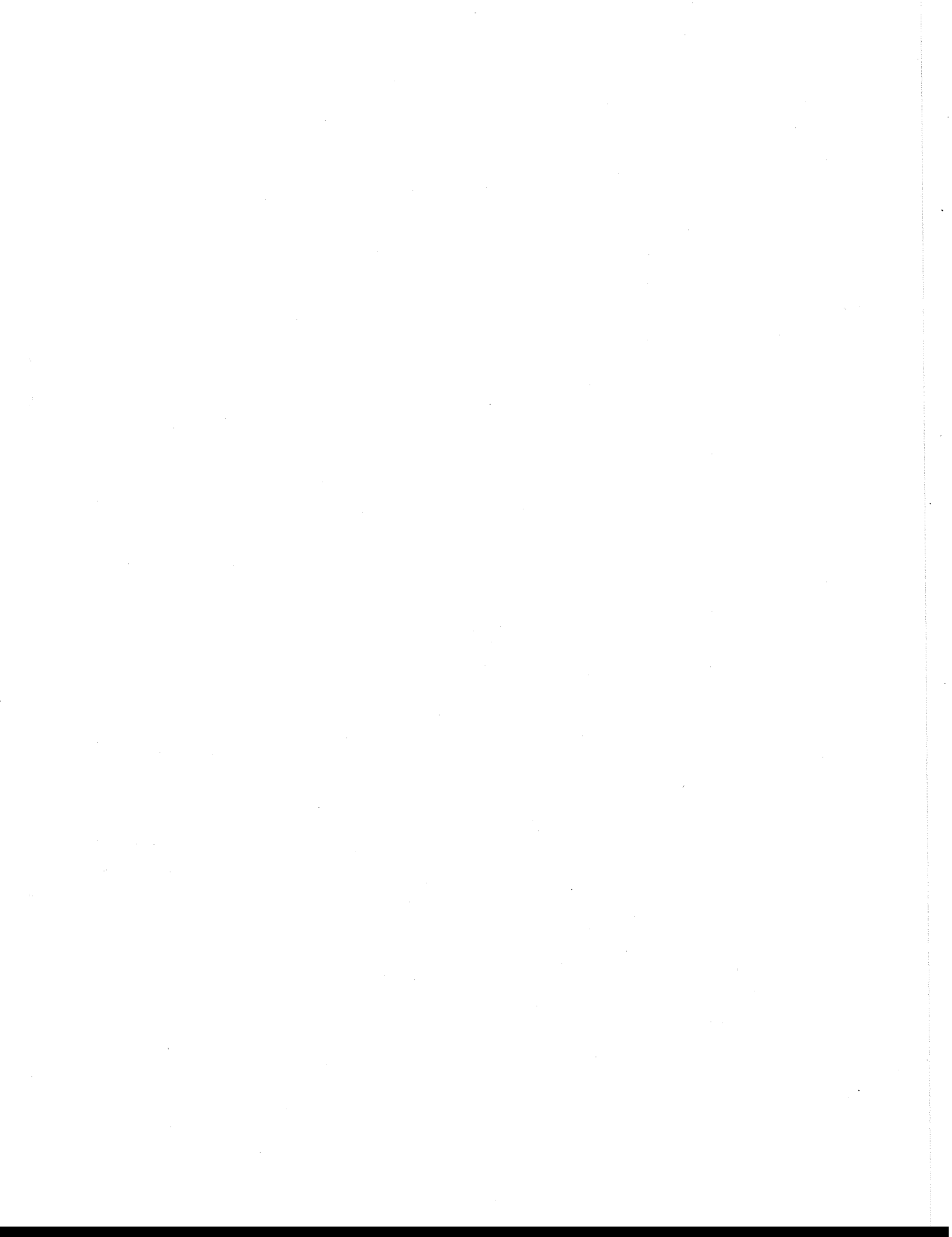
PIN	SIGNAL
1	CH1 SEL IN
2	CH2 SEL IN
3	CH3 SEL IN
4	CH4 SEL IN
5	CH5 SEL IN
6	AUX1 SEL IN
7	AUX2 SEL IN
8	AUX3 SEL IN
9	OVERRIDE SW IN
10	CPU RESET IN
11	CPU OPERATE OUT
12	AUTO DISABLE SW IN
13	N.C. (not connected)
14	N.C. (not connected)
15	GND (ground)



Warning

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.







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