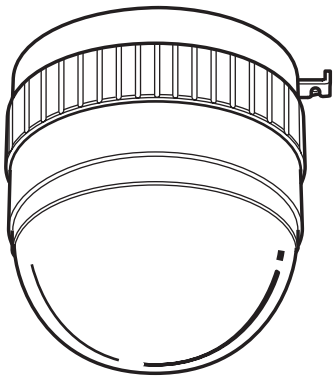
JVC®

ACTIVE MOVEMENT VIDEO CAMERA

TK-AM200 INSTRUCTIONS



For Customer Use:
Enter below the Serial No. which is located on the body. Retain this information for future reference.

Model No. **TK-AM200**

Serial No.

This instruction book is made from 100% recycled paper.

SC96866-001

IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance.
   Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer. An appliance and cart combination should be moved with care.
   Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PORTABLE CART WARNING
(symbol provided by RETAC)

S3126A

8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface.
   This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. This appliance system is equipped with a 3-wire grounding type plug (a plug having a third (grounding) pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding plug.
11. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
12. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.

13. Follow all warnings and instructions marked on the appliance.
14. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
15. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
16. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the appliance.
    c. If the appliance has been exposed to rain or water.
    d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
    e. If the appliance has been dropped or the cabinet has been damaged.
    f. When the appliance exhibits a distinct change in performance - this indicates a need for service.
18. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

Safety Precautions

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This device complies with part 15 of the FCC Rules. Changes or modifications not approved by JVC could void the user's authority to operate the equipment.

Due to design modifications, data given in this instruction book are subject to possible change without prior notice.

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

AVERTISSEMENT:
POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

INFORMATION (FOR CANADA)
RENSEIGNEMENT (POUR CANADA)

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

Cet appareil numérique de la Class B est conforme á la norme NMB-003 du Canada.

Thank you for purchasing this product.
(These instructions are for TK-AM200U.)

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INTRODUCTION

Features

- Active movement camera with integrated moving mechanism and camera.
- Backlight compensation function provided. Enables improvement of video image shot under backlit conditions.
- Electronic shutter with a selectable shutter speed of 1/100 sec reduces flickering caused by fluorescent lighting in areas where the commercial power supply frequency is 50 Hz.
- Employment of TTL automatic tracking white balance allows use under various light source conditions.
- Panic alarm input terminal provided.
- Electronic zoom function.
- Control possible via external control signal conforming to the EIA/TIA RS-422A or RS-485 standard. The unit can be controlled using the optional JVC Remote Control Unit RM-P2580.
- The following functions are available when used in combination with the JVC Remote Control Unit RM-P2580.
  - Many kinds of function can be set using menus.
  - Camera text, position text setting.
  - Auto panning function
  - Auto patrol function

    This function outputs the video image at specified pre-set positions in the set order.

Safety Precautions

Installation of this unit requires expertise. Please contact your JVC dealer for details.

Be sure to tighten the screws and nuts used for installation securely. Insufficient tightening could cause the unit to fall from its mount.

Operating Precautions

- To save energy, be sure to turn off the system when not in use.
- This camera has been designed for indoor use. It cannot be used outdoors.
- This camera has been designed exclusively to be hung from the ceiling. It may malfunction if it is placed standing on a surface or if it is installed in a tilted position.
- Do not install or use the camera in the following places.
  - In a place exposed to rain or water.
  - In a place with vapor or oil soot, for example in a kitchen.
  - Where the temperature is outside the allowed operating temperature range (–10°C to 50°C).
  - Near a source of radiation, X-rays, strong radio waves or magnetism.
  - In a place subjected to vibrations.
  - In a place with excessive dirt.
- The camera incorporates an AGC circuit. When it is used under low light conditions, the camera sensitivity is automatically boosted and the picture may look grainy. This is not a malfunction.
- Use the ATW (auto-tracking white balance) mode when the camera is used under fluorescent lighting. If set to MANUAL, the correct white balance may not be accomplished.
- When this camera is used in the ATW (auto-tracking white balance) mode, the recorded colors may be slightly different from the actual colors due to the operational principles of the auto-tracking white balance circuit. This is not a malfunction.
- If a high-intensity object (such as a lamp) is shot, the image on the screen may have vertical lines (smear) or blur (blooming) at its periphery. This is a characteristic of the CCD; and it is not a defect.
- The camera's electronic shutter is set to 1/60 s when shipped from the factory. When the camera is used under fluorescent lighting in an area with a local power frequency of 50 Hz, please set the shutter to 1/100 s on remote control unit. (Sensitivity will decrease slightly at the 1/100 s setting.)
- When dirt adheres to the dome cover, the image will be difficult to see. Be sure to clean the lens and the dome cover periodically. Use a soft cloth for cleaning. Do not use thinner, benzene, etc. If very soiled, soak the cloth in a neutral detergent diluted with water and wipe clean. Then wipe with a dry cloth.

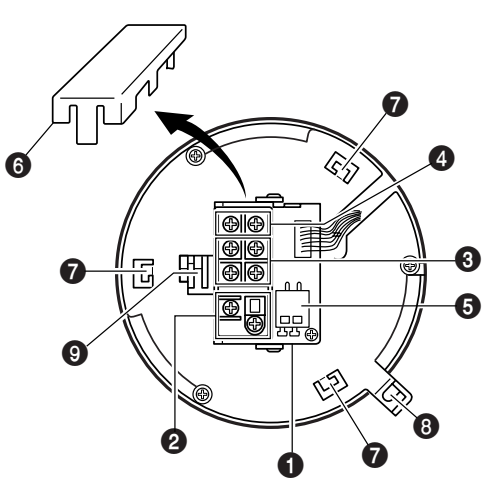
Precautions for use with the RM-P2580

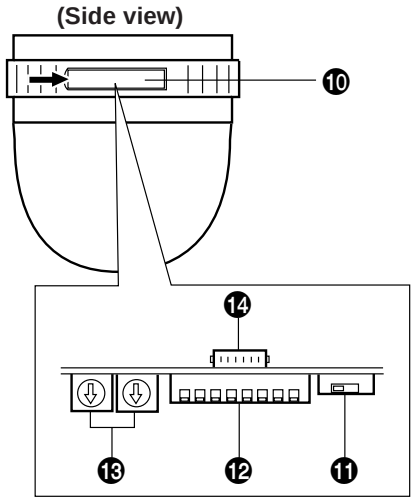
- Focus (including AF) cannot be used.
- Do not select more than maximum 16 preset positions.
- ALARM TEXT EDIT 1 to EDIT 10 cannot be used.

INTRODUCTION

Controls, Connectors and Indicators

■ **Camera Body** (With terminal board in attached condition)





❶ **Terminal board**
To connect the coaxial cable used as the video signal cable, the power cable, the control signal cable, and the alarm input signal cable. (☞ See page 12.)

❷ **Video output terminal**
Outputs composite video signals (1V(p-p), output impedance 75 Ω).

❸ **Control signal connection terminals**
Terminals for inputting signals with electrical characteristics conforming to the EIA/TIA RS-422A or RS-485 standard.

❹ **AC 24 V input terminal**
To input AC 24 V power.

❺ **Panic alarm signal input terminal**
Terminal for inputting the panic alarm signal. Settings concerning the panic alarm signal should be made using the PANIC ALARM SET screen. (☞ See pages 24 and 32.)

❻ **Terminal board cover**
Protects the cable connection terminals from dirt, etc.

❼ **Camera body mounting guides (×3)**
To be inserted into the guide holes ⓰ of the ceiling mount.

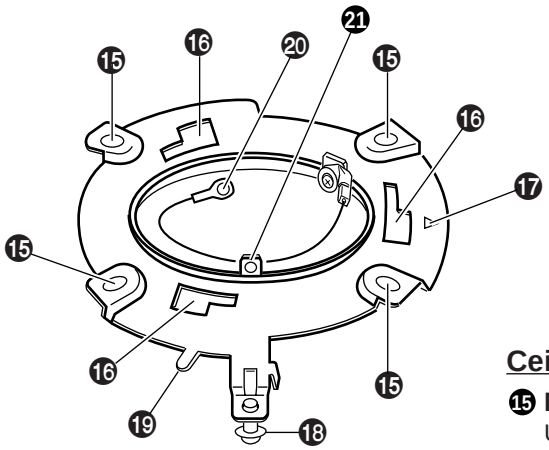
❽ **Camera body clamp**
Fix the camera body to the ceiling mount by fastening the ceiling mount's camera clamping screw ⓲ to this clamp.

❾ **Drop prevention wire hook**
Attach the drop prevention wire ⓴ from the ceiling mount to this hook.

❿ **Switch cover**
Open this cover to use the setting switches. The cover can be opened by pushing the cover edge in the direction of the arrow.

⓫ **Control signal selector switch (RS-422A/RS-485, RS-232C)**
Switches the communication mode of the control signal terminal ❸.
- When connected to the RM-P2580, set to the RS-422A/RS-485 side.
- When connected to a personal computer, etc. set to the RS-232C side.

■ Ceiling Mount



⓬ System setting switches
Set switches in accordance with the system to be connected to.
The settings comprise setting the form of the control signal cable connection, communication protocol, control signal termination ON/OFF, and image synchronization method.
(☞ See “Camera Settings” on page 14.)

⓭ Camera ID setting switches
Use to set the camera ID.
Be sure to set the camera ID when switch 1 of the system setting switches ⓬ is set to ON (MULTIDROP).
(☞ See “Camera Settings” on page 14.)

⓮ FOR SERVICE connector
Exclusively for service purposes.

Ceiling Mount

⓯ Mounting holes (×4)
Use these holes to attach the ceiling mount to the ceiling.

⓰ Guide holes for mounting camera (×3)
Guide holes for mounting the camera body. The camera body mounting guides ❼ are inserted into these holes.

⓱ Camera direction alignment mark
When mounting the ceiling mount to the ceiling, align this mark with the center of the direction in which you want the camera to face.

⓲ Camera clamping screw
To hold the camera body in place, be sure to use this screw to clamp the camera clamp ❽.

⓳ Positioning alignment protrusion
When attaching the camera body, align the camera clamp ❽ on the camera body with this protrusion.

⓴ Drop prevention wire hook
Attach this wire to the drop prevention wire hook ❾ on the camera body.

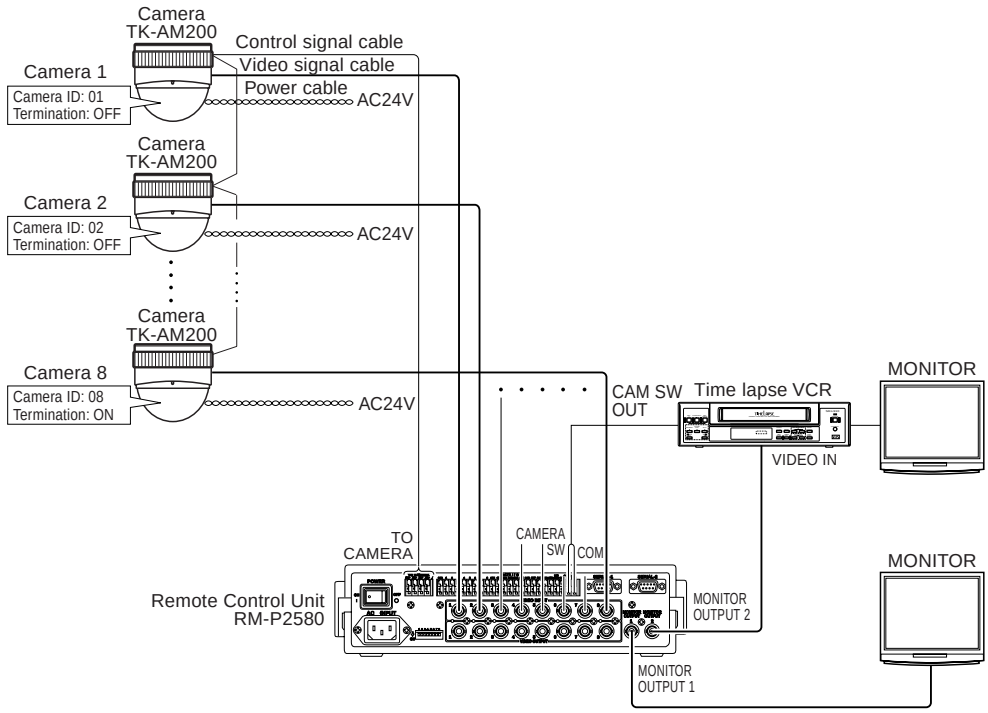
㉑ Safety wire attachment hole
To prevent the camera from accidentally dropping down, fasten a wire from the ceiling to this hole using an M3 screw.
(☞ See “Ceiling Installation” step ***2.*** on page 16.)

SYSTEM

RM-P2580 System

■ System with up to 8 cameras

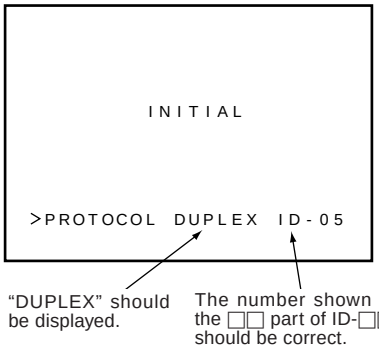
(Sixteen position settings available for each camera.)



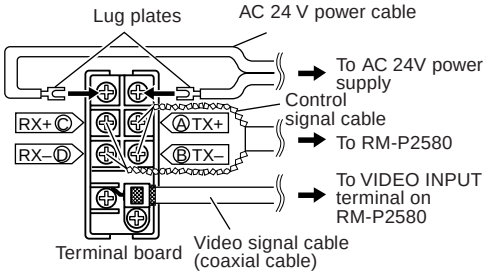
Memo:

- When operating a system using the RM-P2580, several cameras (up to 8) can be connected and used on one control signal cable. Consequently, an incorrect switch setting on just a single camera will cause the entire system to work incorrectly.
- Confirm switch settings on the screen as follows.
  - ① Confirm that the image from the camera to be checked is displayed on the monitor.
  - ② Turn OFF and then ON the AC 24 V power to the camera to be checked.
  - ③ The camera begins the initial operation and characters similar to those shown in the illustration on the right appear on the monitor screen.
  - ④ Confirm that "DUPLEX" and "ID-□□" are displayed and that the ID number is the correct number (the number should be the same as the number of the VIDEO INPUT terminal to which the camera is connected on the rear panel of the RM-P2580).
  - ⑤ If wrong, set the camera ID again.

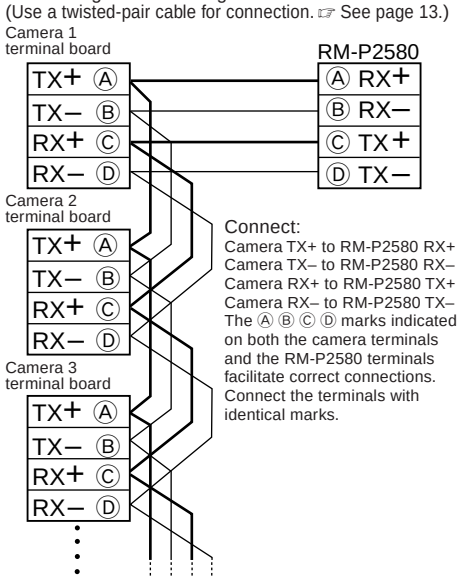
MONITOR screen
(example showing camera ID as "05")



■ Connections

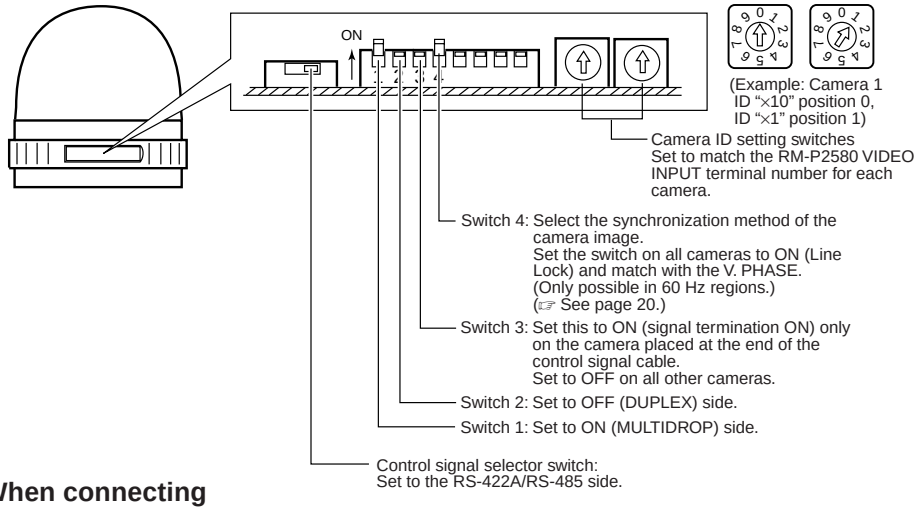


Connecting the control signal cable
(Use a twisted-pair cable for connection. ☞ See page 13.)



Connect:
Camera TX+ to RM-P2580 RX+
Camera TX– to RM-P2580 RX–
Camera RX+ to RM-P2580 TX+
Camera RX– to RM-P2580 TX–
The Ⓐ Ⓑ Ⓒ Ⓓ marks indicated on both the camera terminals and the RM-P2580 terminals facilitate correct connections. Connect the terminals with identical marks.

■ Settings

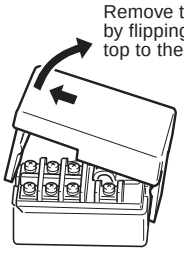


When connecting

- Turn OFF the power supply to all equipment to be used before making connections.
- Carefully read the Instruction Manual for each piece of equipment to be used before making connections.
- For the appropriate connection cables and the length of these, carefully read “Connections to Camera Terminal Board” on page 12.
- The control signal cable cannot be used for loop connection.

INSTALLATION

Connections to Terminal Board

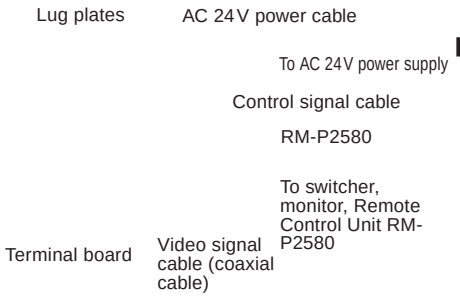


Turn OFF the power supply to all equipment to be used before making connections.

Connections to Terminal Board

Remove the terminal board cover and connect the video signal cable (coaxial cable) (×1). Connect the AC 24V power cables (×2) and the control signal cables (×4).

When alarm input via the camera is used, connect the alarm input cables (×2) to the panic alarm signal input terminals.



■ **AC 24V power supply cable**

Connect the AC 24V power supply to the AC 24V terminals on the terminal board. To prevent connection errors or a cable disconnection, we recommend the use of lug plates for the connections.

The following table shows the connection distances.

Maximum extension (m)	50	100	170	180	300	320	500
CPEV, VVF, etc. conductor diameter (mm)	0.65	0.9		1.2		1.6	2.0
CCV, etc. conductor cross section (mm^2)			1.25		2.0		

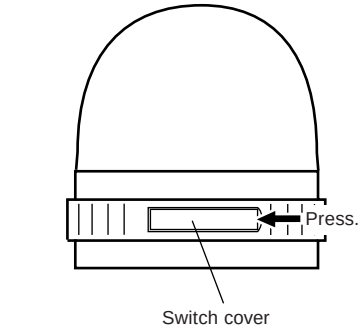
CAUTION:

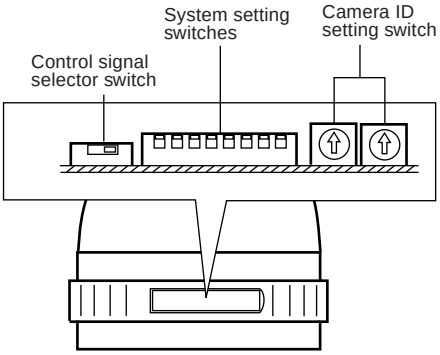
- If thin cables are used (i.e. with a high resistance), a significant voltage drop will occur when the unit is at its maximum power consumption (pan, tilt, zoom operated simultaneously). Either use a thick cable to restrict the voltage drop at the camera side to below 10%, or place the power supply near to the camera. If voltage drop occurs during operation, the performance will be unstable.
- Be sure not to inadvertently connect the AC 24V cable to an AC 120V power supply. This could destroy the unit.

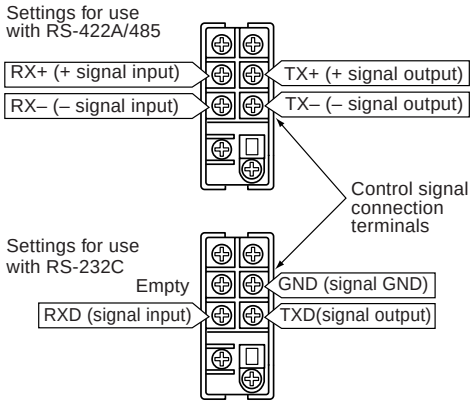
INSTALLATION

Camera Settings

Set the switches on the side of the camera in accordance with the system or equipment to be connected to.
Always turn OFF the power before setting the switches.

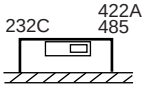






1. Open the switch cover on the side.
To open the cover, pull outward while pressing at the edge in the direction of the arrow.
(Be sure not to press with excessive force as this could deform or destroy the cover.)

2. Set the control signal selector switch.
This switch is used to switch the input and output signal to and from the control signal connection terminals.
When shipped from the factory, the switch is set to “422A/485”. Normally, there should be no need to change this setting. When it becomes necessary to change the setting, use a fine screwdriver or other difficult to break or bend object to change the setting.



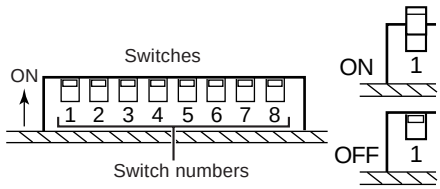
(Initial setting: 422A/485)

- 422A: 485 Use this setting when the camera is connected to the optional Remote Control Unit RM-P2580.
  Input and output of signals with electrical characteristics conforming to the EIA/TIA RS-422A or RS-485 standard takes place.
- 232C: Input and output of signals with electrical characteristics conforming to the EIA/TIA RS-232C standard takes place. (When connecting to a personal computer, etc.)

Memo:

The control signal selector switch setting position and the signals input and output to and from the control signal connection terminals are as shown in the illustration on the left.
Improper setting could result in incorrect operation or damage.

3. Set system setting switches.



- **Switch 1, 2: System connection selector switch**

  Set the system connection selector switches (Switch 1, 2) in accordance with the equipment that the camera body is to be connected to.

Connecting equipment	Switch 1	Switch 2
RM-P2580	ON	OFF

Memo:

Switch 1 and 2 are used to specify the form of the control signal cable connection between the remote control unit and the camera and the communication protocol.
Switch 1 (Initial setting: OFF)
OFF: POINT TO POINT
ON: MULTIDROP
Switch 2: (Initial setting: OFF)
OFF: DUPLEX (two-way data transmission)
ON: SIMPLEX (one-way data transmission)

- **Switch 3: Termination ON/OFF switch**

  This is a termination ON/OFF switch between the “RX+” and “RX–” control signal connection terminals.
  ON: The “RX+” to “RX–” route is terminated by a 110Ω resistor.
  OFF: The RX+ to RX– route is not terminated.

(Initial setting: OFF)

In a system using the Remote Control Unit RM-P2580, set this to “ON” only on the camera placed at the end of the control signal cable. Set to OFF on all other cameras.

- **Switch 4: Synchronization signal selector switch**

  Switches the synchronization method of the camera image.
  OFF: Internal synchronization (INT)
  ON: The camera’s vertical synchronization is matched with the frequency of the AC 24V line power supply. When switching between multiple cameras using a switcher, selecting this mode and adjusting the vertical phase can reduce the monitor sync disturbances occurring when the camera image is switched. (This cannot be used in regions where the power frequency is 50 Hz.)

- **Switches 5, 6, 7, 8**

  These switches are not used. (Set them to OFF.)

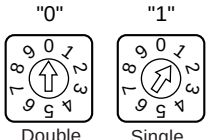
4. Camera ID setting switches

Camera ID setting is only performed when the system connection selector switches (Switch 1 and 2) are set to “RM-P2580”.

The camera ID number is a number to identify each of the cameras connect to the RM-P2580. The camera ID number should be the same as the number of the RM-P2580 VIDEO INPUT terminal to which the camera is connected.

Example:

The camera connected to VIDEO INPUT 1 is set to “01” as shown on the right.



Memo:

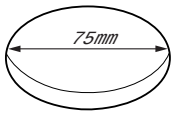
If the camera ID numbers of cameras connect to the RM-P2580 are duplicated, the system will not work correctly.

5. When setting of the switches is completed, close the cover over the setting switches again.

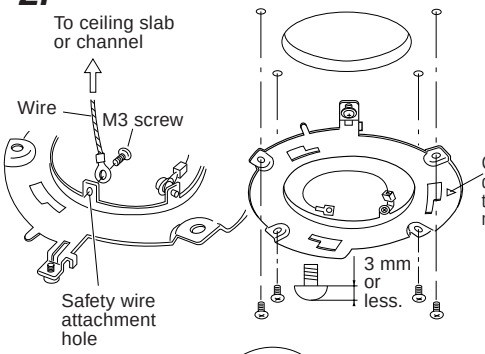
INSTALLATION

Ceiling Installation

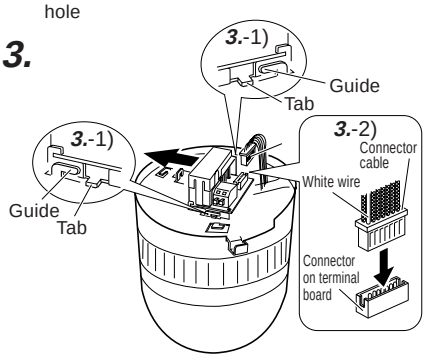
1.



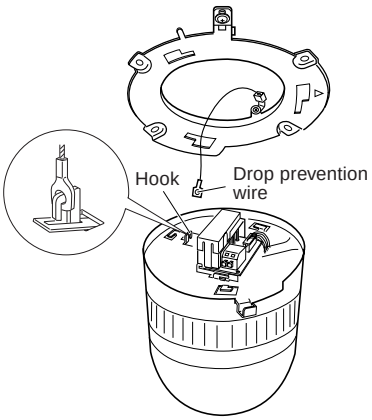
2.



3.



4.



1. Make a hole (75 mm diameter) in the ceiling for passing the connection cables.

2. Attach the provided ceiling mount to the ceiling.

- Attach the ceiling mount so that the camera direction mark is aligned with the direction in which you want the camera to face. Coincide the center of the mount with the hole (75 mm diameter) for passing the cables through the ceiling. Attach the ceiling mount to the ceiling using 4 screws.
- Use M4 screws or bolts for attaching the ceiling mount.
- If wood screws are used, use screws with a diameter of 4.1 mm.
- The screw head height should be no more than 3 mm.

CAUTION:

To prevent the ceiling mount and camera from dropping down, it is recommended to connect the ceiling mount to a ceiling slab or channel with a wire. Fasten the wire to the safety wire attachment hole using an M3 screw as shown in the illustration.

3. Pass the wired terminal board through the hole in the ceiling mount and attach it to the camera body.

1) Slide the tab on the terminal board into the guide on the camera. When the terminal board is moved in the direction of the arrow, it is secured to the camera.
2) Connect the connector cable from the camera body to the connector on the terminal board.

4. Attach the drop prevention wire.
As shown in the illustration, pull the drop prevention wire out from the ceiling mount and attach it to the drop prevention wire hook on the underside of the camera body.

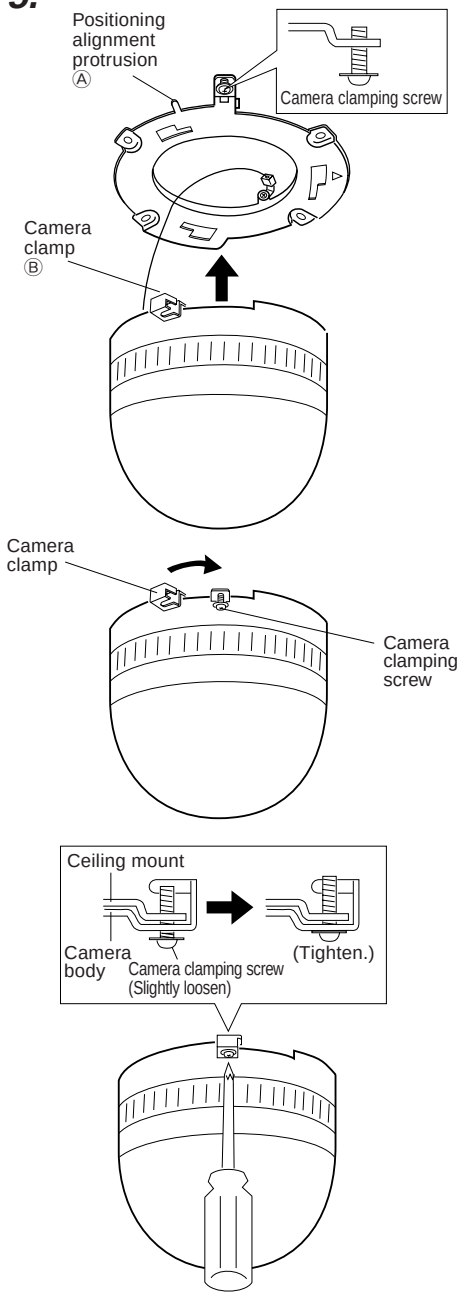
Memo:

Bundling the drop prevention wire together with the cables connected to the terminal board using vinyl tape will help prevent the cables from being pinched.

CAUTION

Be sure to attach the drop prevention wire. If not attached, the camera body could drop down.

5.



5. Mount the camera body.

1) Ensure that the camera clamping screw on the ceiling mount is loosened.
2) Align the ceiling mount's positioning alignment protrusion (Ⓐ in the illustration on the left) with the camera clamp (Ⓑ in the illustration on the left) position on the camera body and press the camera body straight against the mount.

CAUTION:

Exercise caution so as not to pinch the drop prevention wire and the connected cables.

3) Rotate the camera body clockwise as far as it will go.
   At this point, check that the camera body clamp is located on the camera clamping screw on the ceiling mount.
4) Tighten the camera clamping screw.

■ Changing the position of the mounted camera body

1) Slightly loosen the camera clamping screw. By turning the camera body counterclockwise, the position of the mounted camera body can be changed within a range of approximately 40 degrees (approximately 20 degrees to the left and right).

Memo:

Loosening the camera clamping screw too much will cause the camera body to come off the ceiling mount.

2) After the position for the camera body is decided, tighten the camera clamping screw.

CAUTION

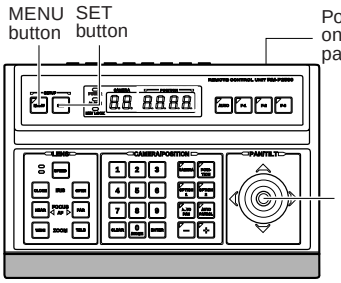
Be sure to tighten the camera clamping screw fully. Otherwise the camera body may vibrate or drop from the ceiling.

■ To dismount the camera from the ceiling, perform steps ***3.*** to ***5.*** in reverse order.

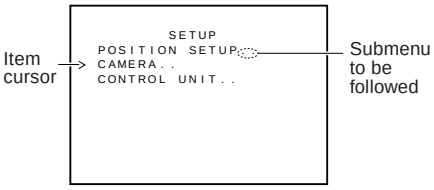
Changing Camera Settings Using the RM-P2580

Menu Operations

When the RM-P2580 is used as the remote control unit, the camera's built-in menus can be called up and set from the remote control unit. This function is explained on this page. (For details, refer to the Instruction Manual for the remote control unit.)

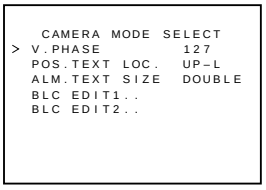


RM-P2580

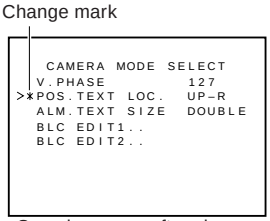


SETUP screen from the remote control

Camera SETUP screen



Submenu sample screen



Sample screen after change

1. Set the power switch on the rear panel of the remote control unit to ON.

2. When the MENU button is pressed for about 3 seconds, the LED lights up and the remote control's SETUP screen will be output from the MONITOR OUTPUT-1 connector.

3. Use the PAN/TILT control lever to move the cursor (>) and align it the CAMERA item.
- The cursor will move up when the lever is pressed up (▲).
- The cursor will move down when the lever is pressed down (▼).

4. Press the SET button to display the SETUP screen of the camera.

> ***Memo:***
> Items followed by ".." are items that have a submenu.

5. Select the item in the same manner as in step ***3***.

6. Press the PAN/TILT control lever to the left or to the right to change the set value of the selected item.
- The value will become smaller when the lever is pressed to the left (◀).
- The value will become larger when the lever is pressed to the right (▶).

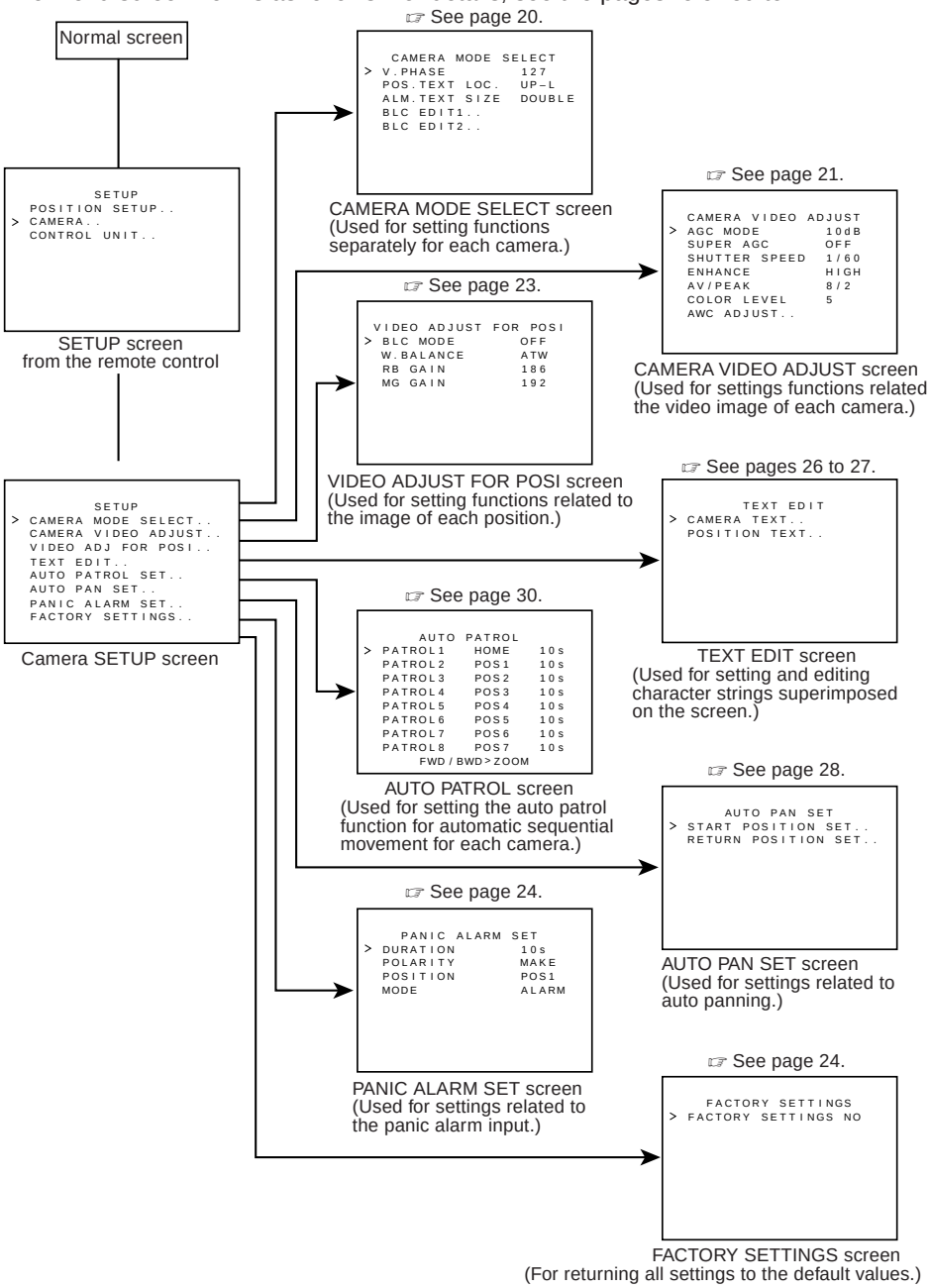
When the set value of an item is changed, the change mark (∗) shown in the illustration on the left appears.

> ***Memo:***
> For details on submenu settings, see the next and following pages.

7. When changes have been made, press the MENU button to return to the higher order menu.
- At this point, "DATA SAVED" is displayed on the screen for about 3 seconds when item settings have been changed.

Menu Screen Flow

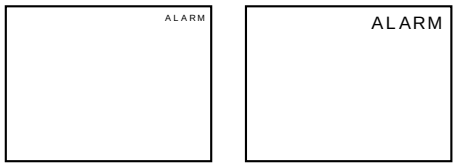
The menu screen flow is as follows. For details, see the pages referred to.



Changing Camera Settings Using the RM-P2580

CAMERA MODE SELECT Screen

Used for setting functions separately for each camera.

Item	Function	Variable range	Factory setting
V. PHASE	Used to adjust and align the vertical phase of the camera body with other cameras operating in the Line Lock (LL) mode. Adjust while viewing the monitor screen. Adjustment is made by tilting the PAN/TILT control lever to the left or right.	0 to 255	127
POS. TEXT LOC.	Used to select the location for displaying position text. UP-L: Displays the text in the upper left corner of the screen. DOWN-L: Displays the text in the lower left corner of the screen. UP-C: Displays the text in the center of the upper part of the screen. DOWN-C: Displays the text in the center of the lower part of the screen. UP-R: Displays the text in the upper right corner of the screen. DOWN-R: Displays the text in the lower right corner of the screen.	UP-L DOWN-L UP-C DOWN-C UP-R DOWN-R	UP-L
ALM. TEXT SIZE	Used to select the size of the characters displayed during ALARM.  NORMAL DOUBLE	NORMAL DOUBLE	DOUBLE
BLC EDIT 1	Pressing the SET button displays the screen (BLC EDIT 1 screen) on which the user can set the backlight compensation metering area. ☞ See “BLC EDIT Screen” on page 25.	____	____
BLC EDIT 2	Pressing the SET button displays the screen (BLC EDIT 2 screen) on which the user can set the backlight compensation metering area. ☞ See “BLC EDIT Screen” on page 25.	____	____

CAMERA VIDEO ADJUST Screen

Used for setting functions related to the video image of each camera.

Item	Function	Variable range	Factory setting
AGC MODE	Sets the maximum gain of the AGC (Automatic Gain Control). • Set to OFF when the AGC function is not used. • Set to 20 dB when illumination is particularly dim.	OFF 10 dB 20 dB	10 dB
SUPER AGC	Used when the brightness is still insufficient even if the AGC MODE is set at 20 dB. ON: Gain level is increased. OFF: Gain level is not increased. ∗ When SUPER AGC is ON; • Dark areas of the screen may appear grainy. • Gain will be set according to the setting of the SUPER AGC with no relation to the AGC MODE setting.	ON OFF	OFF
SHUTTER SPEED	Used to set the electronic shutter speed for each camera. To reduce flickering caused by fluorescent lighting, set the electronic shutter speed to 1/100 in areas where the commercial power supply frequency is 50 Hz, and to 1/60 in areas where the frequency is 60 Hz.	1/60 1/100	1/60
ENHANCE	Contour compensation function that enhances the sharpness of the monitor screen. LOW: Low contour enhancement HIGH: High contour enhancement	LOW HIGH	HIGH
AV/PEAK	Sets the exposure detection as a ratio of the average value and the peak value. • AVERAGE value large: Increase the AVERAGE value when portions other than the highlighted areas of the screen are dark and look corrupted. (Ex. 10/0) • PEAK value large: Increase the PEAK value when halation occurs in the highlighted areas of the screen. (Ex. 5/5)	10/0 9/1 8/2 7/3 6/4 5/5	8/2

Changing Camera Settings Using the RM-P2580

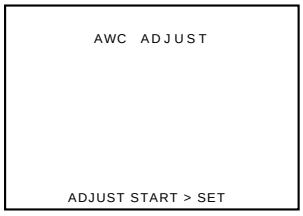
CAMERA VIDEO ADJUST Screen (Continued)

Item	Function	Variable range	Factory setting
COLOR LEVEL	Used to adjust the color level of the video signal. • To make colors lighter ... Decrease the value. • To make colors darker ... Increase the value.	0 ↕ 10 (Integer steps)	5
AWC ADJUST	Pressing the SET button displays the AWC (One-push Auto White Balance) adjustment screen. ☞ See “AWC ADJUST Screen” below.	———	———

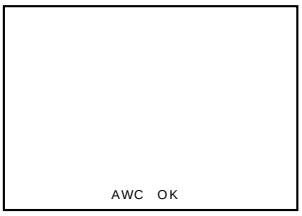
AWC ADJUST Screen

The white balance compensation values set on this screen are retained in camera body.

To use the saved white balance compensation values, set the W. BALANCE item on the VIDEO ADJUST FOR POSI screen to AWC. (☞ See page 23.)



AWC ADJUST screen



Normal screen

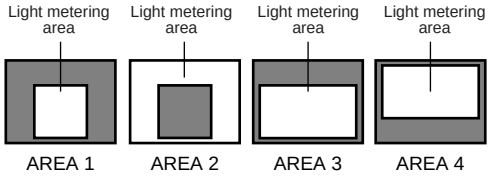
1. Select the AWC ADJUST item on the CAMERA VIDEO ADJUST screen. When the SET button is pressed, the AWC ADJUST screen is displayed.
2. Pressing the SET button on the AWC ADJUST screen starts AWC (white balance adjustment).
3. When AWC adjustment is completed normally, the compensation values are retained in the camera body, and “AWC OK” is displayed on the screen for about 3 seconds before the AWC ADJUST screen returns.
   The following indications are displayed if the AWC adjustment is not accomplished correctly.
   • **OBJECT NG** (improper object)
   • **HIGH LIGHT ERROR** (excessive illumination)
   • **LOW LIGHT ERROR** (insufficient illumination)
4. To cancel the AWC operation, press the MENU button before the operation is completed normally.

CAUTION:

- Even when the VIDEO ADJUST FOR POSI screen’s W. BALANCE item is set to “ATW” or “MANUAL”, the AWC adjustment on the AWC ADJUST screen is effective and the value resulting from the AWC adjustment is stored in the camera body.
  However, when the positions set by “ATW” or “MANUAL” are selected again, the image returns from the setting determined by the value resulting from the AWC adjustment to the setting values of “ATW” or “MANUAL”, respectively.
- AWC adjustment works separately for each position but only one adjustment value is stored, and the value stored in the camera body is the value obtained when AWC adjustment was last performed.

VIDEO ADJUST FOR POSI Screen

Used for setting functions related to the image of each position.

Item	Function	Variable range	Factory setting
BLC MODE	Used to select the backlight compensation function. Used when a bright light source, etc. is placed in the same direction as the subject. OFF: The backlight compensation function does not work. AREA 1 to AREA 4: When the SET button is pressed, the fixed light metering areas are displayed. Select one of the four types.  EDIT 1 to EDIT 2: When the SET button is pressed, the user light metering area set on BLC EDIT 1 or BLC EDIT 2 of the CAMERA MODE SELECT screen is displayed. ☞ See page 20. • Using light metering areas Move the light metering area so that an unnecessary light source is placed outside the area. To stop the light metering area display, press the MENU button.	OFF AREA 1 AREA 2 AREA 3 AREA 4 EDIT 1 EDIT 2	OFF
W. BALANCE	Used for selecting the white balance adjustment function. MANUAL: Selects the manual adjustment mode. (Adjustment is made in the following items RB GAIN and MG GAIN.) ATW: Automatic color temperature adjustment mode. AWC: Selects the AWC (One-push Auto White Balance) mode set for the AWC ADJUST item on the CAMERA VIDEO ADJUST screen.	MANUAL ATW AWC	ATW
RB GAIN	Used when the white balance is adjusted manually. Small value: Red is enhanced. Large value: Blue is enhanced.	0 to 255	186
MG GAIN	Used when the white balance is adjusted manually. Small value: Magenta is enhanced. Large value: Green is enhanced.	0 to 255	192

RB GAIN and MG GAIN values cannot be changed when W. BALANCE is set to ATW or AWC.

Changing Camera Settings Using the RM-P2580

PANIC ALARM SET Screen

Used for settings related to the panic alarm input. (☞ See "PANIC ALARM" on page 32.)

Item	Function	Variable range	Factory setting
DURATION	Sets the duration of the alarm mode operation when alarm signal is input. When set to SERIES, alarm mode operation continues. ***Note:*** When used in a system with the RM-P2580, this setting becomes invalid. Make the setting using the RM-P2580 ALARM TIME option.	5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 60 s, SERIES	10 s
POLARITY	Sets the polarity of the alarm input. MAKE: Alarm condition generated when MAKE connected. BREAK: Alarm condition generated when BREAK connected.	MAKE BREAK	MAKE
POSITION	Sets the camera position at the time of alarm input.	HOME POS 1 to POS 15	POS 1
MODE	Sets whether or not manual operation should be accepted during alarm operation. ALARM: Manual operation not accepted during alarm operation. MANUAL: Manual operation is accepted also during alarm operation. ***Note:*** When used in a system with the RM-P2580, this setting becomes invalid. The mode becomes the ALARM priority mode.	ALARM MANUAL	ALARM

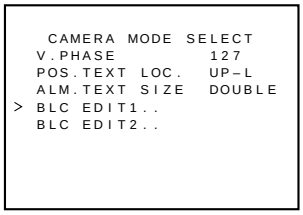
FACTORY SETTINGS Screen

Used for returning all settings to the default values.

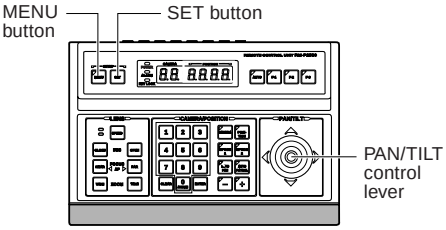
Item	Function	Variable range	Factory setting
FACTORY SETTINGS	Used to return menu settings to the factory settings. YES: Returns settings to the factory settings. NO: Settings are not returned to the factory settings. ***Memo:*** When YES is selected and the SET button is pressed, after "EXECUTING" has been displayed for about 10 seconds on the screen, "DATA CLEARED" is shown for about 3 seconds. Do not turn off the power during this interval.	YES NO	NO

BLC EDIT Screen

This is a screen for changing the position of the light metering area used for backlight compensation. There are two types of screens on which the light metering area can be changed. (BLC EDIT 1 and BLC EDIT 2)



CAMERA MODE SELECT screen



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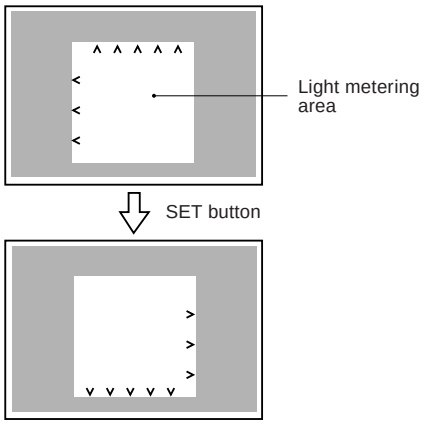
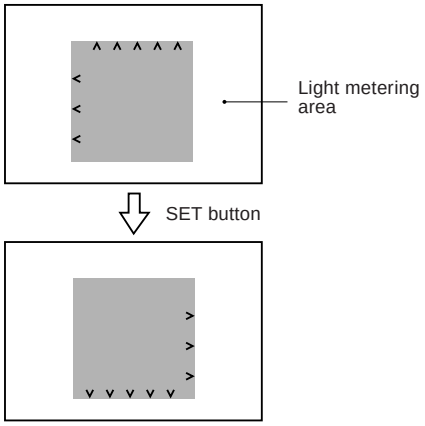
BLC EDIT 1 screen



BLC EDIT 2 screen



1. Select BLC EDIT 1 on the CAMERA MODE SELECT screen. When the SET button is pressed, the BLC EDIT 1 screen is displayed. (☞ See page 20.) When BLC EDIT 2 is selected and the SET button is pressed, the BLC EDIT 2 screen is displayed. (☞ See page 20.)

2. Press the SET button to select the edges of the light metering area to be set. (Left/Up → Right/Down → Left/Down ...)

3. Press the PAN/TILT control lever up, down, left, or right to enlarge or decrease the area occupied by the light metering area.

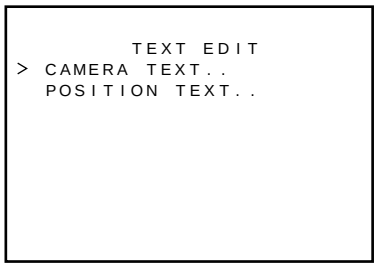
4. When done with setting of the light metering area, press the MENU button.
- The set light metering area is retained in memory, and the CAMERA MODE SELECT screen returns.

■ To use the set light metering area, set the BLC MODE item on the VIDEO ADJUST FOR POSI screen to EDIT 1 or EDIT 2.

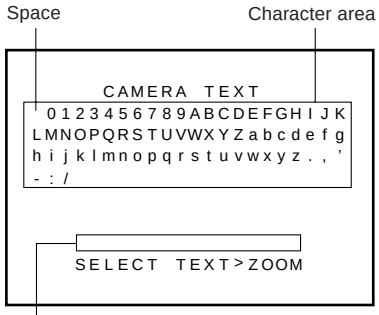
Changing Camera Settings Using the RM-P2580

CAMERA TEXT Setting

Up to 16 characters can be selected as camera text for each camera.

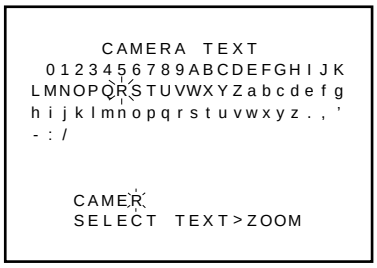


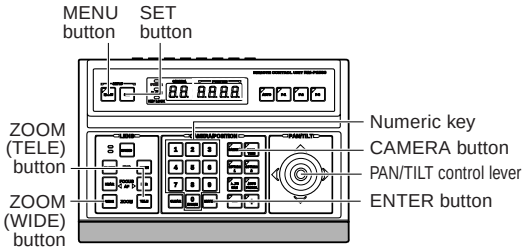
TEXT EDIT screen



CAMERA TEXT screen

Text input area





RM-P2580

■ Select the camera whose text should be set. Use the CAMERA button → Numeric key → ENTER button to select the camera.

☞ For details, see the instruction manual for the RM-P2580.

1. Select the CAMERA TEXT.. item on the TEXT EDIT screen, and then press the SET button.

- The CAMERA TEXT screen appears on the monitor screen. Characters selected from the character area are displayed in the text input area.

2. Use the ZOOM (TELE) or ZOOM (WIDE) button to select the position in the text input area. The position moves to the right when the ZOOM (TELE) button is pressed, and it moves to the left when the ZOOM (WIDE) button is pressed.

3. Use the PAN/TILT control lever to select the character to be input from the character area.

4. When the first character for the text has been selected, press the ZOOM (TELE) button.

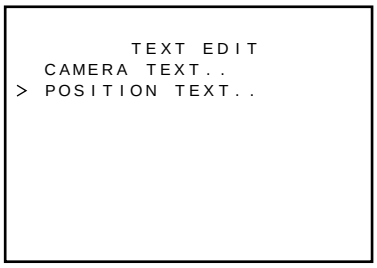
- The first character of the text is confirmed, and the second character can now be input (shown blinking).

5. When the whole text has been input, press the MENU button.

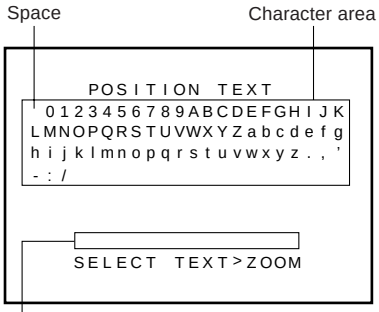
- "DATA SAVED" is shown on the monitor for about 3 seconds, and then the TEXT EDIT screen returns.

POSITION TEXT Setting

A title can be set for the registered positions for each camera. The position text can consist of up to 16 characters.

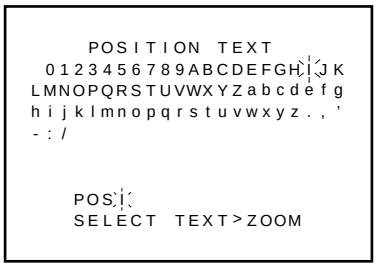


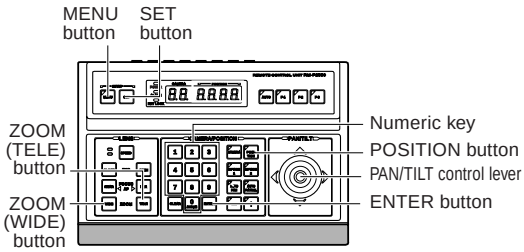
TEXT EDIT screen



POSITION TEXT screen

Text input area





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1. Select the POSITION TEXT.. item on the TEXT EDIT screen, and then press the SET button.

- The POSITION TEXT screen is displayed on the monitor. Characters selected from the character area are displayed in the text input area.
- Select the position for which position title text should be set. Use the POSITION button → Numeric key → ENTER button to select the position.
  ☞ For details, see the instruction manual for the RM-P2580.

2. Use the ZOOM (TELE) or ZOOM (WIDE) button to select the position in the text input area.
The position moves to the right when the ZOOM (TELE) button is pressed, and it moves to the left when the ZOOM (WIDE) button is pressed.

3. Use the PAN/TILT control lever to select the character to be input from the character area.

4. When the first character for the text has been selected, press the ZOOM (TELE) button.

- The first character of the text is confirmed, and the second character (shown blinking) can now be input.

5. To set other position text titles, select the position and then repeat steps ***2.*** to ***4.*** to set the text.

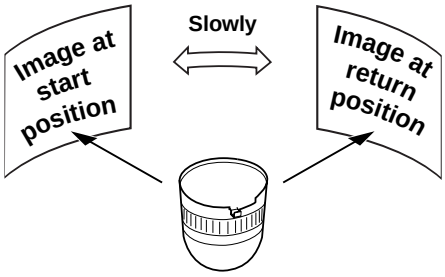
6. When setting of all titles is completed, press the MENU button.

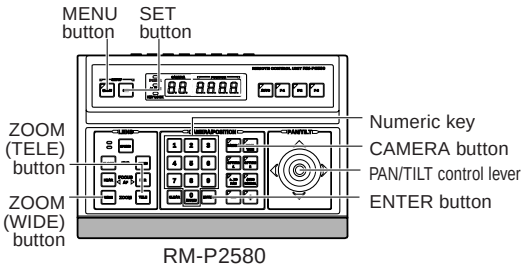
- "DATA SAVED" is shown on the monitor for about 3 seconds, and then the TEXT EDIT screen returns.

Changing Camera Settings Using the RM-P2580

AUTO PAN Setting

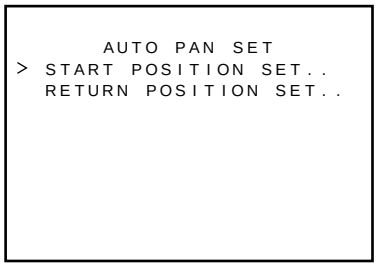
AUTO PAN is a function that automatically swings the camera horizontally in a panning movement. Select this setting to observe the range between two points. (Set for each camera.)



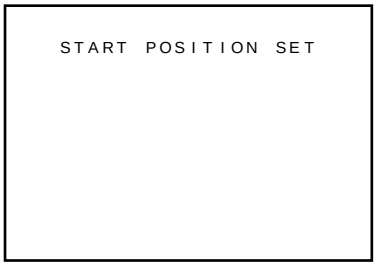


RM-P2580

CAMERA SETUP screen



AUTO PAN SET screen



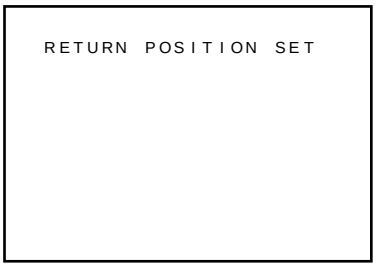
START POSITION SET screen

■ Use the CAMERA button → Numeric key → ENTER button to select the camera to be set for auto pan.

1. Select the AUTO PAN SET.. item on the camera's SETUP screen, and then press the SET button.
- The AUTO PAN SET screen is displayed on the monitor.

2. Use the PAN/TILT control lever to align the cursor (>) with the START POSITION SET. When the SET button is pressed, the START POSITION SET screen is displayed.
- Adjust the angle of view at the start position using the PAN/TILT control lever and ZOOM button.

3. When the MENU button is pressed, "DATA SAVED" is displayed on the screen for about 3 seconds before the AUTO PAN SET screen returns.
- The set angle of view at the start position is saved.



RETURN POSITION SET screen

4. Use the PAN/TILT control lever to align the cursor (>) with the RETURN POSITION SET item. When the SET button is pressed, the RETURN POSITION SET screen is displayed.

- Adjust the angle of view at the return position using the PAN/TILT control lever.

Memo:

- Movement in the up and down direction (tilt) and lens operation are not possible at the stop (return) position.
- Correct setting data will not be memorized if the SET button or MENU button is pressed while the camera is moving. Be sure to confirm that the camera has stopped before pressing the SET or MENU button.

5. When the MENU button is pressed, "DATA SAVED" is displayed on the screen for about 3 seconds before the AUTO PAN SET screen returns.

- The set angle of view at the return position is saved.

6. When both the start position and the return position have been set, press the MENU button.

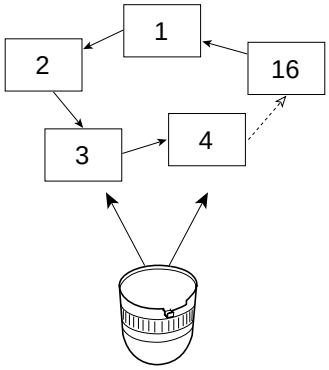
- The camera's SETUP screen returns.

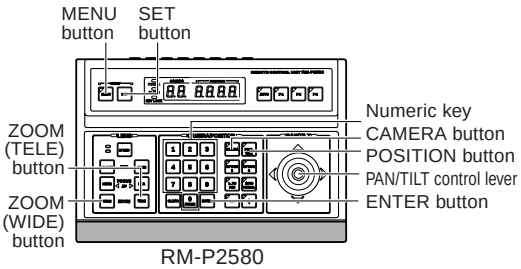
■ To activate the auto pan operation of the camera, press the AUTO PAN button on the RM-P2580.

Changing Camera Settings Using the RM-P2580

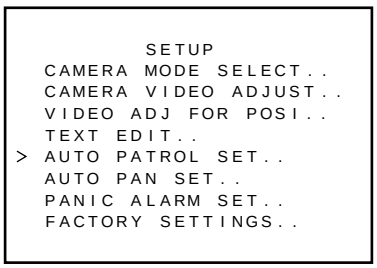
AUTO PATROL Setting

The AUTO PATROL function allows you to specify multiple positions (up to 16 positions) that the camera will move to in the specified order and observe for the specified interval. AUTO PATROL is set for each camera.



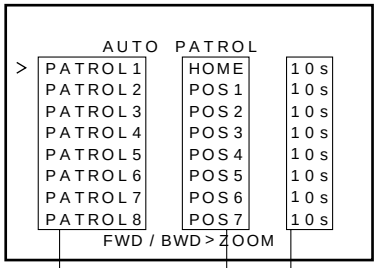


RM-P2580



Camera SETUP screen

AUTO PATROL screen



PATROL No. item

Position No. setting

HOME
POS 1
≀
POS 15

Observation time

10 s
20 s
30 s
45 s
1 min
2 min
SKIP

■ Use the CAMERA button → Numeric key → ENTER button to select the camera to be set for auto pan.

☞ For details, see the instruction manual for the RM-P2580.

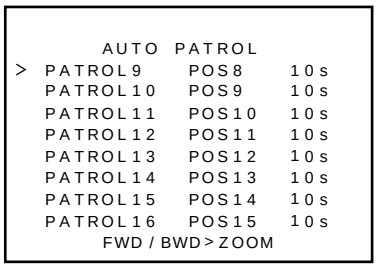
1. Select the AUTO PATROL item on the camera's SETUP screen, and then press the SET button.

- The AUTO PATROL setting screen is displayed on the monitor.
  The AUTO PATROL setting screen consists of two screens.
- When the ZOOM (TELE) button is pressed, the next AUTO PATROL setting screen appears.
  When the ZOOM (WIDE) button is pressed, the first AUTO PATROL setting screen returns.

The PATROL 1 to 8 and 9 to 16 items indicate the AUTO PATROL operation order.

PATROL 1: Specifies the first position number and the observation interval for AUTO PATROL.
·
·
·
PATROL 16: Specifies the last position number and the observation interval for AUTO PATROL.

The next AUTO PATROL screen



2. Press the PAN/TILT control lever up (▲) or down (▼) to align the cursor (>) with the PATROL No. item to be set.
- To set the PATROL 9 to 16 items, press the ZOOM (TELE) button to display the next AUTO PATROL setting screen.

3. Set the position number of the selected PATROL No. item.
- Use the POSITION button → Numeric key → ENTER button to make the setting.

4. Set the observation interval for the selected PATROL No.
Press the PAN/TILT control lever to the left (◀) or to the right (▶) to make the setting.
- If set to SKIP, observation will not take place at this position.

5. Repeat steps ***2.*** to ***4.*** to set the position number and observation interval for all the PATROL No. items.

6. When done with the setting is completed, press the MENU button.
- "DATA SAVED" is displayed on the monitor for about 3 seconds before the camera SETUP screen returns.

■ To start the AUTO PATROL operation, press the AUTO PATROL button on the RM-P2580.

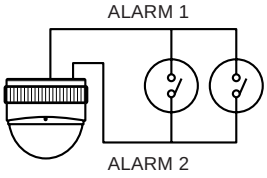
OTHERS

PANIC ALARM

By inputting an alarm signal through the panic alarm signal input terminal (☞ See page 13.), a specified position can be invoked from which surveillance is then conducted.

The camera can be set so that the PANIC ALARM operation overrides manual operation, AUTO PATROL operation and AUTO PATROL operation by terminating these. By installing a switch near the camera, a single press in an emergency situation will effect immediate observation of an important surveillance point.

1. Connecting the Alarm Signal (☞ See page 13.)



- Supply a no-voltage contact signal to the panic alarm signal input terminal.

Be sure not to supply voltage or connect to other apparatus (open collector terminal, etc.).
This could result in incorrect operation or damage.

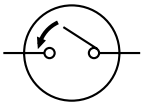
- By linking multiple contacts (switches), as shown in the illustration, the alarm condition can be activated when any of the contacts comes on.

Memo:

Ensure that the maximum line resistance value becomes 100 Ω or less inside the alarm circuit (ALARM IN1 ~ alarm generating switch ~ ALARM IN2). If the resistance is large, the alarm may not work correctly.

2. Setting of Alarm Signal Polarity (POLARITY)

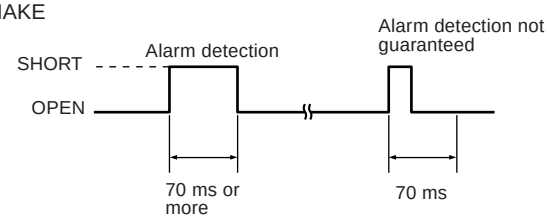
Match the setting with that of the alarm generating contact (switch). (☞ See page 24.)

When the contact closes (short), the alarm condition is generated: 	Set to MAKE.
When the contact opens (open), the alarm condition is generated:	Set to BREAK.

Memo:

Minimum 70 ms or more is required for the camera body to detect the switched condition of the contact.

Example: In the case of MAKE



3. Setting of Alarm Condition Duration (DURATION)
Set how long the alarm condition should last from when the alarm signal is supplied. (☞ See page 24.)

Memo:

When a new alarm signal is input during the alarm condition, the alarm condition is prolonged.

4. Setting the Alarm Position (POSITION)
Set the preset position to be invoked when the alarm condition is generated. (☞See page 24.)

5. Setting the Alarm Text Size (ALM. TEXT SIZE)
The “ALARM” text indication can be displayed on the screen to indicate the alarm condition when this is generated. The size of the characters should be set. (☞See page 20.)

OTHERS

Specifications

■ Camera

Signal system: NTSC standard
Image device: IT CCD
Effective picture elements:
380,000 pixels,
(H) 768 × (V) 494
Image size: 1/4”
Sync system: Internal
Line lock (Only possible in 60 Hz regions.)
Scanning frequency:
Horizontal: 15.734 kHz
Vertical: 59.94 Hz
Horizontal resolution:
470 TV lines
Video S/N: 50 dB (typical) ...
(AGC OFF)
Minimum illumination:
4 lx (F1.0, AGC 20 dB, Y: 25%)
White balance: ATW (auto tracking)/AWC (auto white control)
Manual (2-axis system)
Electronic shutter: 1/60 s (standard)
1/100 s (50 Hz flickerless)
Electronic zoom: Possible (×2)
Character display: Possible
Backlight compensation:
Available by adjustment of light metering area position.
Color level adjustment:
Possible
Contour compensation:
Horizontal, vertical

■ Lens

Focal length: f = 2.2 mm
Max. aperture ratio:
F1.0

■ Moving mechanism

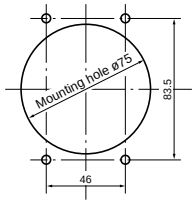
Panning: ±30°
Panning speed: 2°/s, 4°/s, 6°/s, 12°/s, 20°/s, 40°/s, 60°/s, 80°/s (in MANUAL mode)
4°/s (AUTO PAN mode)
120°/s (Preset maximum)
Tilting: 0° to 60° (from down to horizontal direction)
Tilting speed: 2°/s, 4°/s, 6°/s, 12°/s, 20°/s, 40°/s, 60°/s, 80°/s (in MANUAL mode)
120°/s (Preset maximum)

■ General

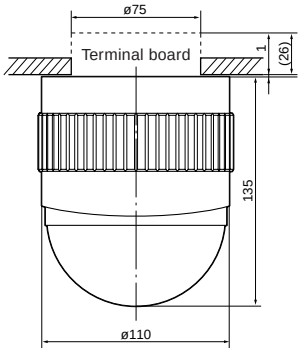
Power requirement:
AC 24V 50/60Hz, 9.0W
Communications port:
RS-422A/RS-485 or RS-232C (switchable)
9600 bit/s
Ambient temperature:
–10°C to 50°C (operating)
0°C to 40°C (recommended)
Mass: 0.8 kg (including ceiling mount)
Accessories:

Instructions	× 1
Warranty Card	× 1
Service Information Card	× 1
Ceiling Mount	× 1
Terminal Board	× 1

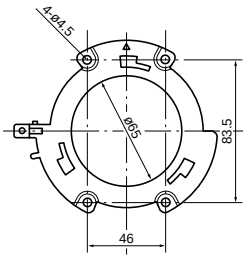
■ External dimensions [Unit: mm]



Mounting hole
in ceiling



Camera body



Ceiling mount

• Design and specifications are subject to change without notice.

TK-AM200 ACTIVE MOVEMENT VIDEO CAMERA

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