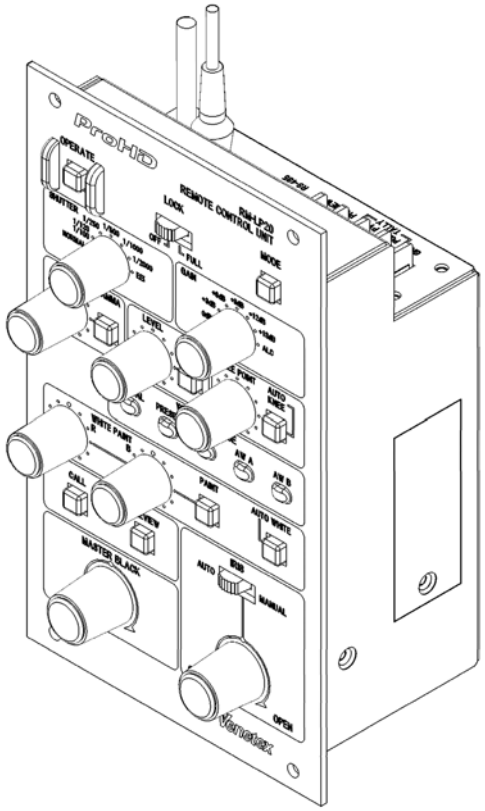
Venetex

Remote Control Unit

RM-LP20G

Operation Manual



Thank you for purchasing RM-LP20G.
This document contains the important information.
Please be sure to read “Important Safety Instructions” section before operating the product.
Please keep the Operation Manual in a secure place for future reference.

Rev.1.0

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1. Important Safety Instructions

（Please be sure to follow the following guideline.）

The following symbols and discretion are used to categorize the degree of harm that may cause as a result of failing to follow instructions for operation. Please pay attention the symbols and read though following instructions.

Warning	The action may cause a “possible risk of serious personal injury or death”.
Caution	The action may cause a “possible risk of personal injury or property damage”.

■ The symbol indicates “Caution”.

General caution

Electric shock

Caution of ignition

■ This symbol indicates “Do not try actions”.

Prohibited

No wet hand

Do not remove

Do not touch

■ This symbol indicates “Put into action”

General indication

Warning

Transport the apparatus;

	● Do not transport the apparatus with connected the cable. Please unplug the cable when transport the apparatus. Misuse may damage the cord and cause fire and electric shock.

Maintenance and cleaning;

	● Always the cables when cleaning the apparatus. It will prevent fire and electric shock.

Caution

- This device is not design for the mounting inside of the wall or rack. If you want to use this devise for special purpose, please ask for Venetex customer support.
- Don't operate this device near the strong magnetic field. It causes the image distortion.
- Don't operate this device near CRT type TV and power transformer. It may cause the noise image distortion.

- Don't stack cameras.
  It may cause overheating and noise. This may cause breakdown and accident.
- Don't give any unnecessary shock. This may damage this device.

Cleaning;

- Do not use water and alcohol for cleaning.
  Always unplug the AC plug and it should be cleaned with a dry cloth.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as objects have fallen into the apparatus, the apparatus has been exposed to moisture, does not operate normally, or has been dropped.

Other cautions;

- When it is thunder storm or during extended period, it may happen that this device may not work properly.
- While you are handling the input and output terminals of this device , please removal of static electricity in advance.

Copy right;

- Taken image cannot use for commercial with having the permission. Were taken image with this camera is use to the public. It may infringe that are protected by copyright law, the rights of right holders, please note.
- For the taken image, please pay attention to the copyright law, It cannot be used because of the Copyright Act.

Protecting the identity privacy protection and personal information

- Please pay attention to “Personal information”.
  It is mandatory to follow "Act on the Protection of Personal Information". In accordance with the law, please properly handling image information.

Disclaimer;

- Venetex takes any responsibility for the taken image by this device, such as invasion of privacy has occurred, it does not assume any responsibility.
- Failure due to inconvenience and was generated by this unit, Venetex assumes no responsibility.

For interference;

- RM-LP20G conforms to the class A approval.
  May cause radio interference, when you use this device at in home environment. In this case, the user may be required to take adequate measures.

Disposal;

- Please follow the laws and regulations of each country.

2. Note on Using

- Operating temperature is from 0℃ to +40℃.
- Operating humidity must be kept between 30%RH to 80%RH.
- Be sure to turn off power when you disconnect the cables.
- Please not place this device in area subject to moisture or excessive dust. Please avoids dew condensation, it may cause the damage the lens which is consist of small precision parts.
- The product should be cleaned only with a dry cloth. Please unplug the cables before cleaning this device.
- Please not use volatile chemicals like benzene or thinner. Please read the instructions carefully, when you use a chemically treated cloth,

3. Supplied Accessory

The supplied accessory is as follows.

- Operation Manual
- Warranty Card

After opining of the carton box of RM-LP20G, please confirm the above items.
If there is missing or damaged, please contact the dealer where you purchased

4. Summary

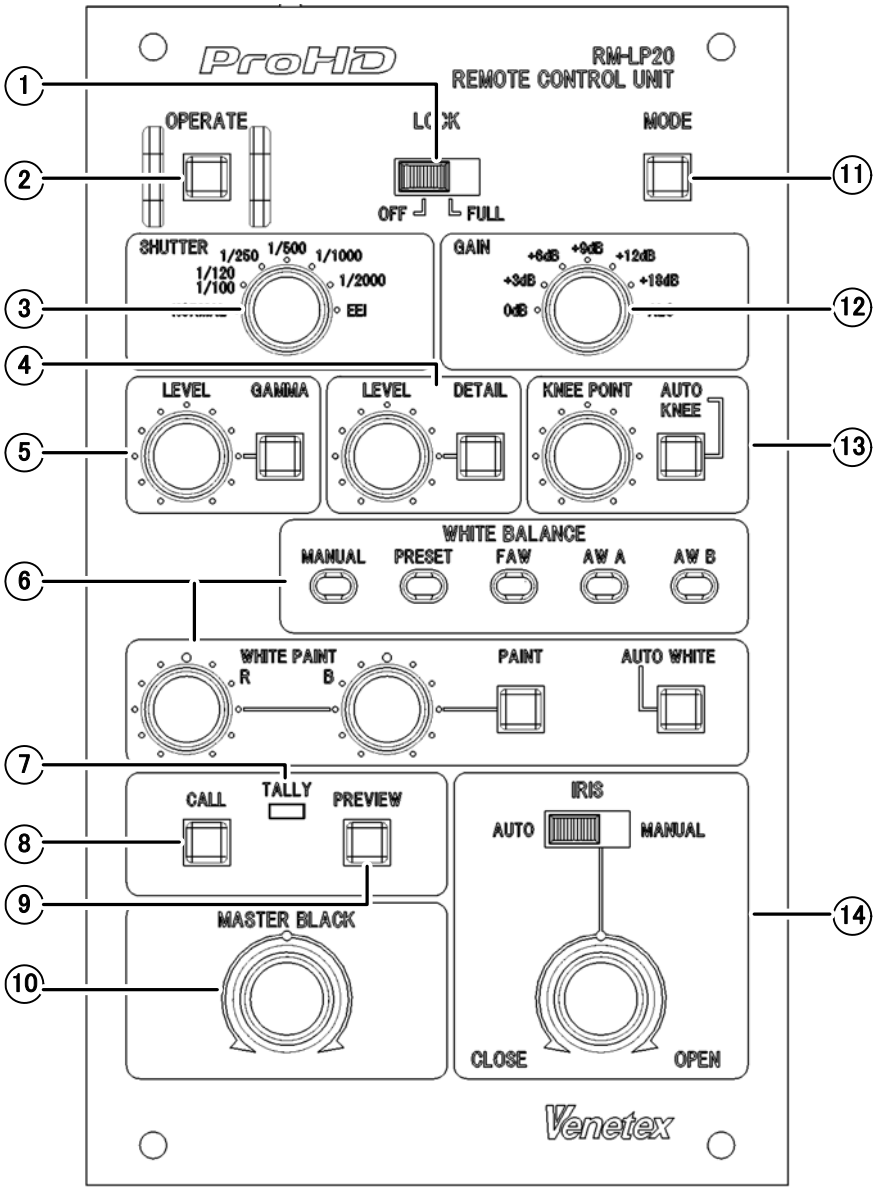
RM-LP20G is a cost effective and simple remote unit that provides low-cost studio system as peripheral of CCU.
It works with GY-HM790 and GY-HM750.

5. Feature

RM-LP20G can set various parameters, direct connection the remote terminal of GY-HM750 or GY-HM790.
It also works as a remote controller of the camera Control Unit RM-HP790.

6. Explanation of Control Panel

6.1 Control Panel front view and functions



① **[LOCK] : Operation Lock Switch**

You can lock the functions of the state that was set in RM-LP20G.

OFF: lock is released and it is possible to operate all features.

FULL: It locks all functions of the operations except TALL, PREVIEW, CALL.

② **[OPERATE] : Operation Button and Indicator**

ON (Green light turn on): It is possible to control camera.

OFF (Green light turn off): It does not operation

Green color blink: Communication for Initial setting.

③ **[SHUTTER] : Shutter Speed Control**

Set up the shutter speed.

④ **[DETAIL] / [LEVEL] : Detail Control Area**

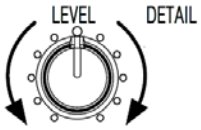
[DETAIL] : Detail Button and Indicator

This button has ON/OFF function which determines the detail (contour) enhancement Adjustment.

ON Mode (Green light turns on):
The level of detail is able to adjust with this unit. We will adjust the value by turning the [LEVEL] knob.

OFF Mode (Green turn off):
The level of detail is not possible to adjust. In this case, detail level is the standard setting of the camera.

[LEVEL] : Level Adjustment knob
This knob adjusts the detail of contour.

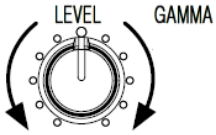
Soft 

Sharp

⑤ **[GAMMA] / [LEVEL] : Gamma control Area.**
[GAMMA] : Gamma button and Indicator
Adjustment is done by turning on and off of Gamma Lever.

ON (Green color turn on): Gamma adjustment is possible. By turning [LEVEL] knob.
OFF (Green turn off): Gamma adjustment is not possible. Gamma level becomes standard (default) setting.

[LEVEL] : Level adjustment knob
This knob is able to adjust Gamma level.

Soft 

Sharp

⑥ **White Balance Control Area**

● **[WHITE BALANCE] : White Balance Select Mode**
White Balance mode is selected.
Indicator of the mode you set is lit on Green.

Setting	Function
MANUAL	White balance is adjusted by the White paint R/B knob Adjustment Knob
PRESET	Become (3200K) preset white balance value.
FAW	Become FAW (full-time Auto White Balance) mode. White balance is adjusted automatically.
AW A	Auto White Balance A of the camera is the value of the AWB memory.
AW B	Auto White Balance B of the camera is the value of the AWB memory.

● **[AUTO WHITE] : Auto White Button**
Green light turns on when [WHITE BALANCE] is set to [AW A] or [AW B] and auto White Button is pushed.
When adjustment is completed, its result is shown in indicator.
Green light turns on. And it turns off: It means Auto White Balance is completed.
Green light tunes on. And it blinks about 5 seconds .And it turns off: It means Auto White Balance is not completed yet.

Caution
When [White Balance] is set to [MANUAL], [PRESET] or [FAW], the button does not light turns on.
The adjustment of Auto White Balance does not start.

● **[PAINT] : Paint Button and Indicator**

When [WHITE BALANCE] sets to [AW A] or [AW B] mode and push [PAINT] button, and the fine adjustment on camera works .In this case the paint set up is possible.
And its result is shown in indicator.

ON (Green light turns on): It is possible to control camera by using [White Paint R/B] knob
OFF (Green light turns off): It inhibits operation.

Remark:
[WHITE BALANCE] is set to [MANUAL], R/B channel gain adjustment is possible by turning [WHITE PAINT R/B] knob.

Caution

When [White Balance] is set to [MANUAL], [PRESET] or [FAW], the button turn does not blink. Does not control.
Button elimination turn off and [WHITE PAINT R/B] adjustment knob does not work.

● **[WHITE PAINT R/B] : White Paint R/B Adjustment knob**

According to the white balance mode button, the available functions are as follows.

White Paint Setting	White Paint Knob function	Paint Indicator Situation
MANUAL	R/B channel gain value adjustment	ON
PRESET/FAW	Cannot use	OFF
AW A	Knob for fine adjustment of white balance values which is obtained during the automatic white balance adjustment.	ON
AW B		

⑦ **[TALLY] : Tally indicator**

Tally indicator turn on when the input signal is supplied to the Tally terminal.

TALLY PGG Input: Red light turns on
TALLY PVW Input: Green light turns on

Caution

TALLY PGM is preferred and it lit red, when at the same time there were also TALLY PGM and TALLY PVW input.

⑧ **[CALL] : Call Button command and Indicator**

Press the [CALL] button.
You can call the camera operator. You don't need to use the intercom.

ON (Green light turns on):
While this button is pressed for the period, the indicator turns on green.
And Tally Lamp of camera blinks.
OFF (Green light turns off):
Press this button, the indicator turns off, blink of the tally lamp on the camera stop.
Green light blinks:
Upon receiving a CALLON signal from the camera, the indicator blinks.
Upon receiving a CALL OFF signal from the camera, indicator turns off.

Caution

In case the [CALL] button and the signal from camera was sent simultaneously, the signal of the camera is priority. And the Green light blinks.

⑨ **[PREVIEW] : Preview button and Indicator**

When this button is pressed, the output signal will appear on the Preview terminal ⑰.

ON (Green light turns on): While [PREVIEW] button is pressed for the period, the indicator will turn on green. And the output signal is connected.

OFF (Green light turns off): The Preview button is pressed, the indicator turns off. And the output signal is disconnected.

⑩ **[MASTER BLACK] : Master Black Adjust Knob**

It adjusts the master Black level.

⑪ **[MODE] : Mode Button and Indicator**

ON (Green color turns on): It outputs the color bar.

OFF (Green light turns off): It outputs camera signal.

⑫ **[GAIN] : Gain Control Area**

It switches the gain setting.

⑬ **[KNEE POINT] / [AUTO KNEE] : Knee Point Adjustment Knob**
[AUTO KNEE] : Auto Knee Button

ON (Green light turns on): Auto Knee function operates. And the knee point is set automatically.

OFF (Green light turns off): Auto knee function becomes off. Then, you can adjust the knee by turning the [KNEE POINT] knob.

[KNEE POINT] : Knee point level adjustment knob

If [AUTO KNEE] is OFF then, This knob is able to adjust Knee point level.

level down

level up

⑭ **[IRIS] : IRIS adjust switch and knob**

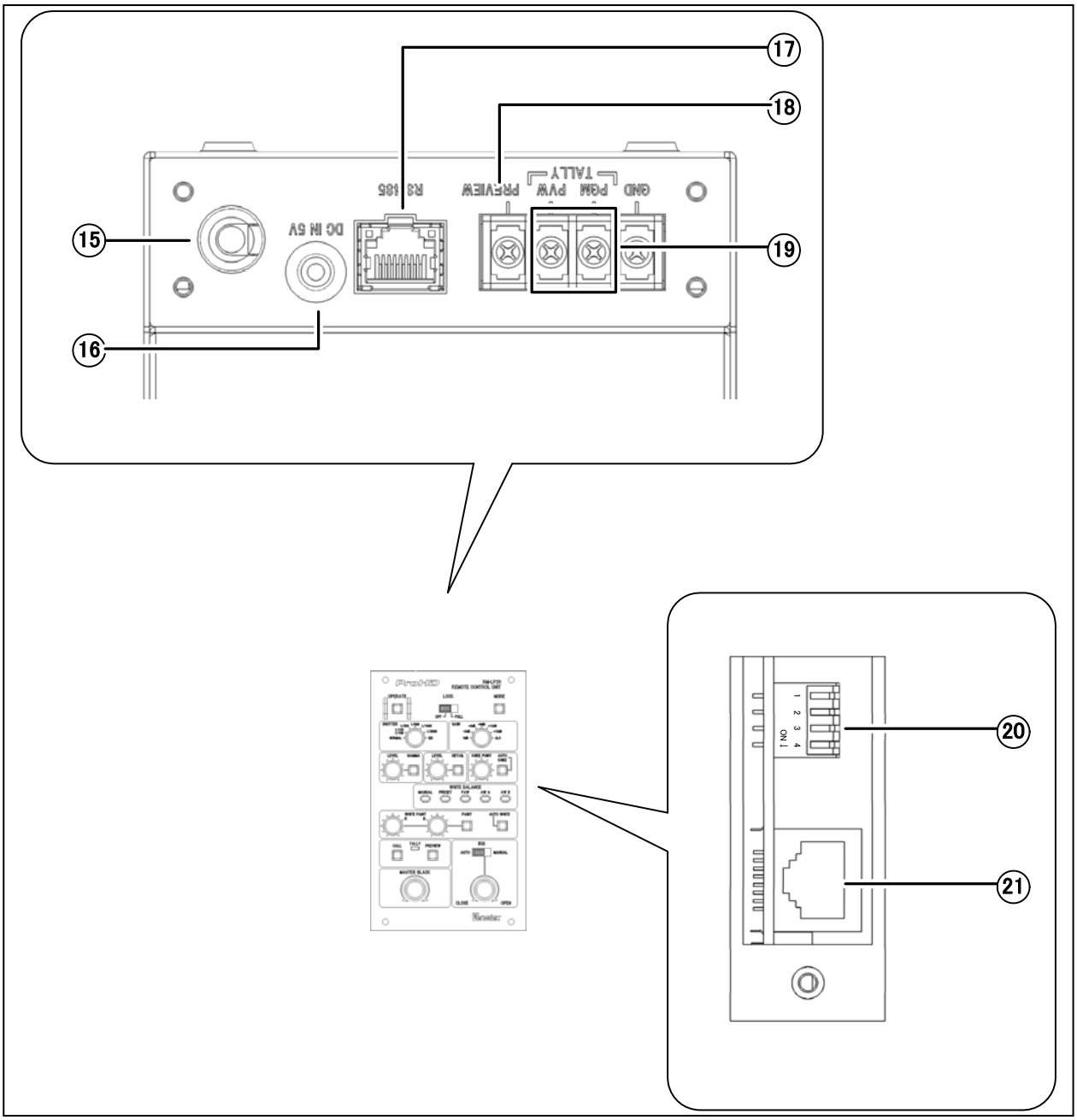
AUTO: This position determines the auto iris mode.
It adjusts the auto iris level by rotating adjustment knob.

MANUAL: This position determines the manual mode.
It adjusts the iris from OPEN CLOSE by rotating adjustment knob.

Caution

If the setting on the camera is MANUAL mode, AUTO mode does not work.

6.2 Rear and Side Panel



⑮ **Cable**
Camera cable connation.

⑯ **DC Jack**
Cannot use.

⑰ **RS485 connector**
Cannot use.

⑱ **[PREVIEW] : Preview output terminal**
When you press the [PREVIEW] button ⑨, It will outputs “make contact” to this terminal.

⑲ **[TALLY] : Tally Switch Input terminal**
This terminal is for Tally input signal. It is connected to the camera tally.
In addition, the TALLY input polarity can be switched by DIP SW. Please refer to page 21.

[PGM]:
When the camera is selected to Program, then Tally signal is connected.
When a signal is inputted, the tally indicator ⑦ is lit red.

[PVW]:
When the camera is selected to Preview, the Tally signal is connected.
When a signal is inputted, the tally indicator ⑦ is lit green.

Caution
[PGM] and [PVW] are inputted at the same time, [PGM] is priority. Tally indicator ⑦ is lit red.

⑳ **DIP Switch**
Please refer to page 21.
It set according to each application.

㉑ **LAN Connector**
This connector is available for the upgrade of the system.

7. Operations

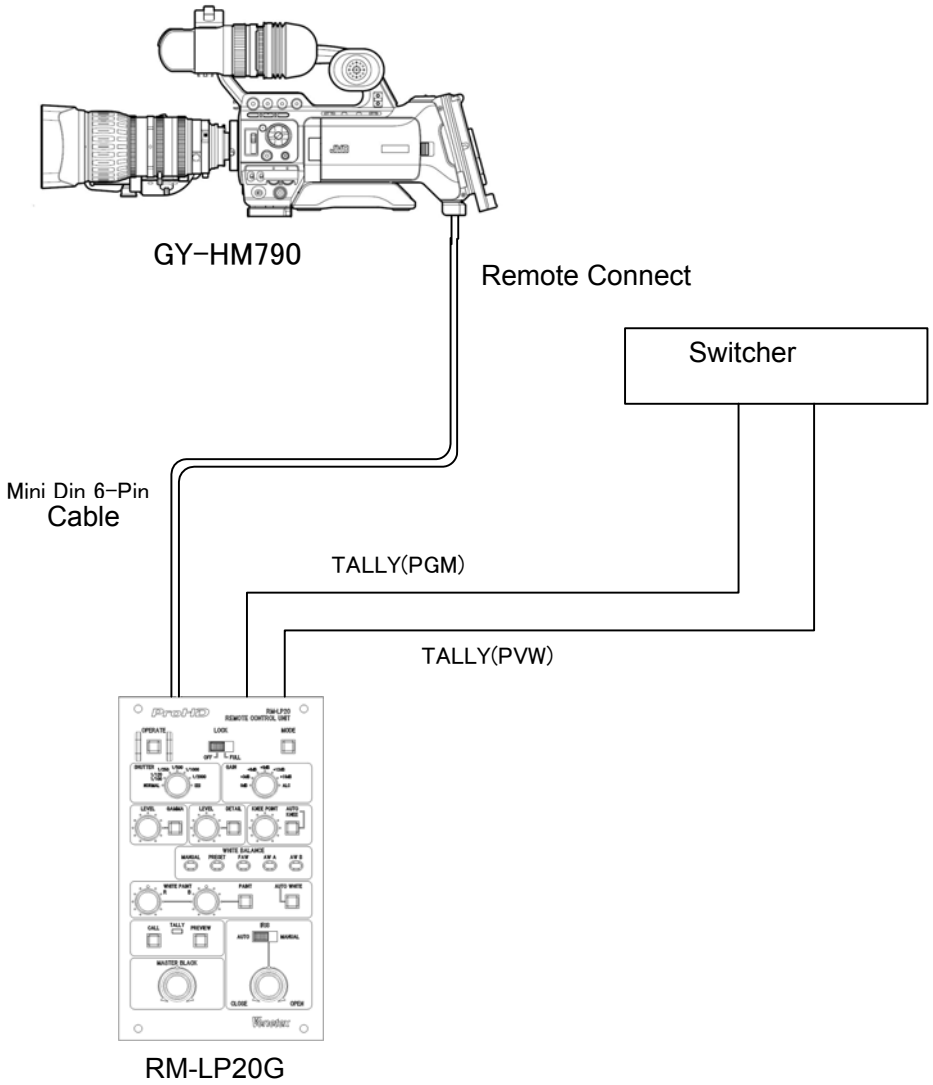
7.1 System example

7.1.1 Preparation

①RM-LP20G
②GY-HM790 (HD MEMORY CARD CAMERA RECORDER)

7.1.2 Connection

RM-LP20G is connected to the remote connector of GY-HM790.



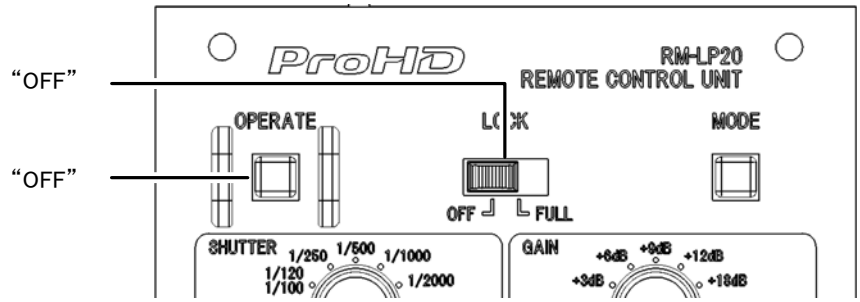
Caution

Please make sure to turn off the main power when do the connection

7.1.3 Set Up

① Please connect RM-LP20G with GY-HM790 or GY-HM750.
*Please refer to the operation manual of GY-HM790 or GY-HM750.

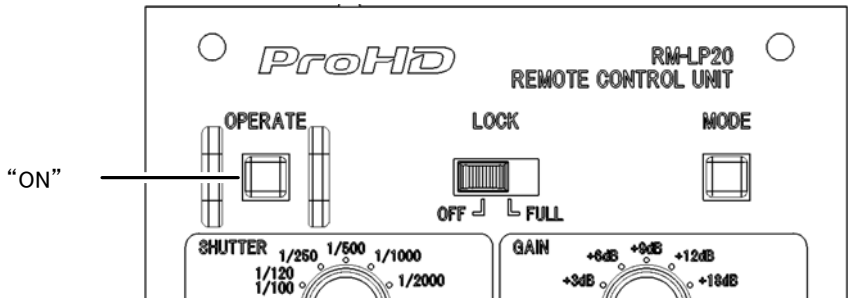
② Please set up RM-LP20g as follows.
- [LOCK] switch is set to OFF position.
- [OPERATE] button is set to OFF position. (light turn off.)



Caution

If you want to control the iris on the RM-LP20G, please set "AUTO" or "A" mode on the iris of the camera lens.

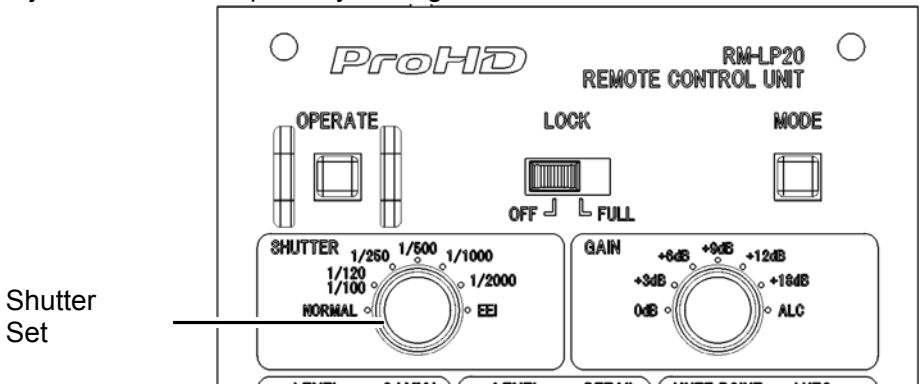
③ Push [OPERATE]
- [OPERATE] starts to blink green light. And it makes the connection to camera.
- When the connection is completed, [OPERATE] button is lit green. The control of the camera becomes possible.



7.2 Shutter Setting

Select the shutter speed.

It adjusts the shutter speed by turning this knob.



① Shutter speed select

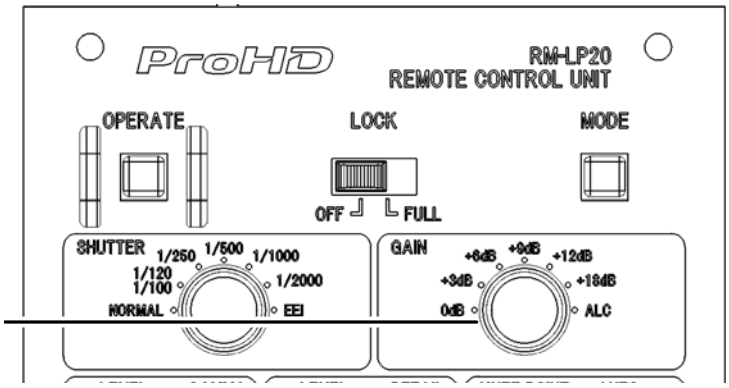
Setting position	Function
NORMAL	This is the default setting mode In case of frame rate 60/30 , it is 1/60 In case of frame rate 50/25 , it is 1/50 In case do frame rate 24, it is 1/48
1/100 1/120	Shutter speed is set indicated below. In case of frame rate 60/24, it is 1/100 In case of frame rate 50, it is 1/120
1/250	Shutter speed is set 1/250
1/500	Shutter speed is set 1/500
1/1000	Shutter speed is set 1/1000
1/2000	Shutter speed is set 1/2000
EEI	It set EEI (Extended Electronic Iris) mode. Regardless of the setting of the IRIS mode switch ⑭, it is automatically adjusted by the camera.

7.3 Gain Setting

① Select the gain value.

It adjusts the gain level by turning this knob.

Gain Set



② Gain setting value

Setting position	Function
0dB	Each gain value is set
+3dB	
+6dB	
+9dB	
+12dB	
+18dB	
ALC	Gain is automatically set

7.4 White Balance adjustment

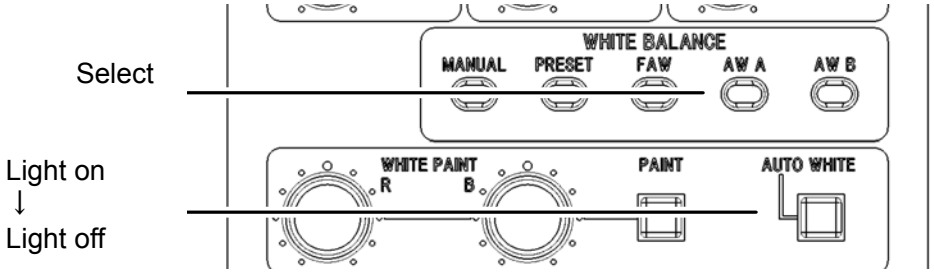
7.4.1 Set Up

- [MODE] Button is set to “OFF” position.
- Please place a white staff like a paper of a cloth of at the same he conditions subject. And please shoot the white staff.

7.4.2 Automatic Adjustment

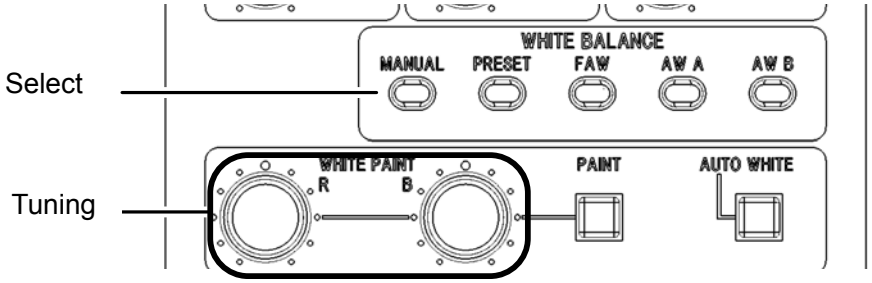
① [WHITE BALANCE] is set to “AW A” or “AW B”.
② Push [AUTO WHITE] button.

- [AUTO WHITE] indicator turn on green.
- Auto white balance is activated, the set value is saved to the camera.
- Setting is saved and [AUTO WHITE] indicator turn off.



7.4.3 Manual Adjustment

① Select “MANUAL” from [WHITE BALANCE] shown as below.
② Adjust white balance value by turning [WHITE PAINT R/B] knob.

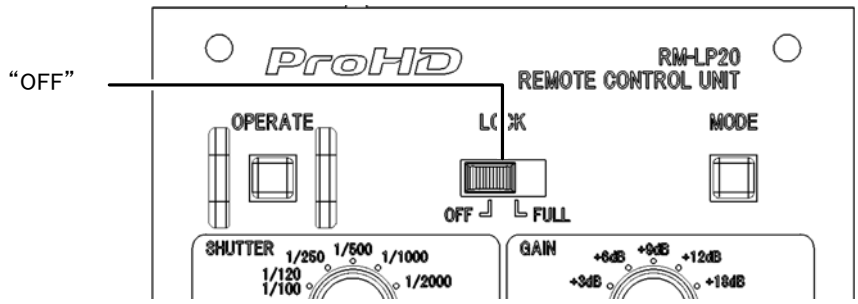


7.5 Indicator Adjustment

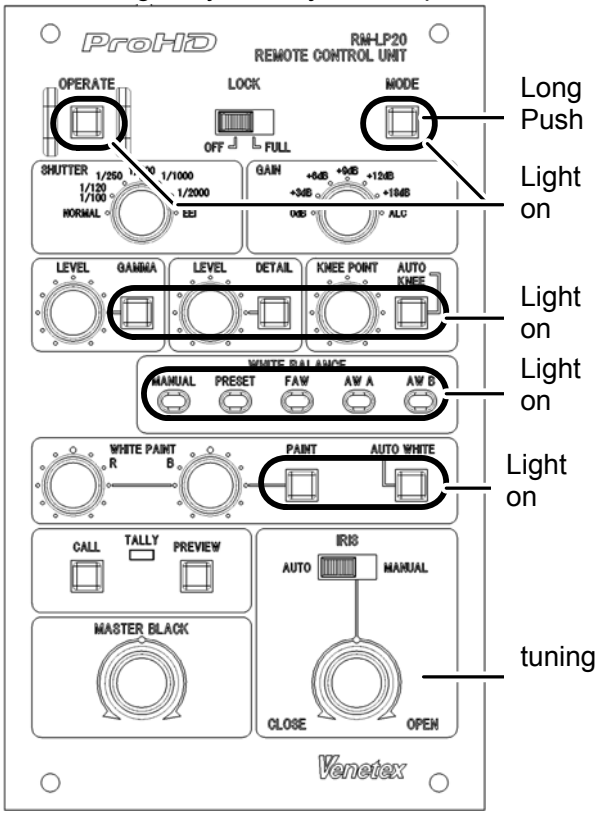
This indicator on the control panel is able to adjust 3 levels.

This indicator cannot adjust
・[TALLY] indicator

① [LOCK] switch sets OFF position.



② Press [MODE] button continually and turn [IRIS] adjustment knob simultaneously.
The brightness of indicator is to changed by this adjustment procedure.



Caution

The basic function does not work during the brightness adjust mode.

③ Determine the brightness level.
Brightness level is retained when you release the [MODE] button during the desired brightness.

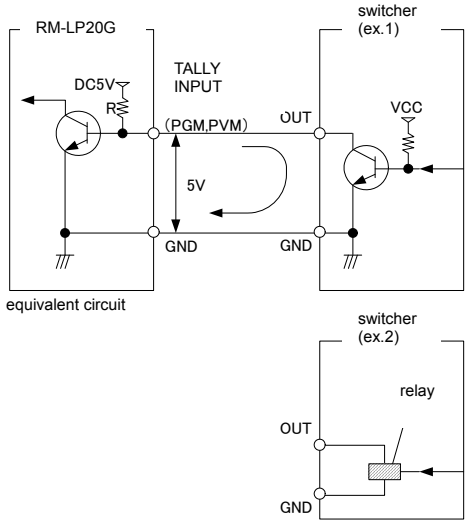
7.6 Rear Port Input and Output

Tally circuit consists of two ways such as “Make contact” and “Open collector”.
The default setting at factory is “Make contact “mode.
It is possible to change to “Open collector “mode by setting the DIP switch on the side panel.

① Tally Input terminal

■Input condition

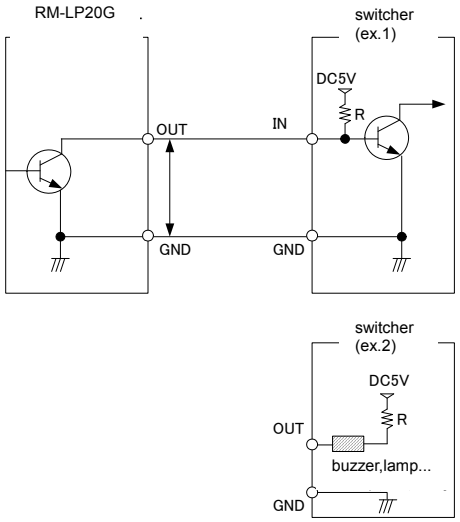
- “Make contact” and “Open collector “are no voltage relay.
  (Normally, it is connects as "Open", When tally operates as "Closed".)
- Impedance is 10kΩ. And DC 5V is connected.
- Input signal is set by the DIP switch. For the detail, please refer to page 22.



② Preview terminal

■Tally lamp

- This is equivalent to Open collector.
- The connection for external is DC 5V, 10mA。
- Normal position is "HIGH" And it works as PREVIEW, it become "LOW".

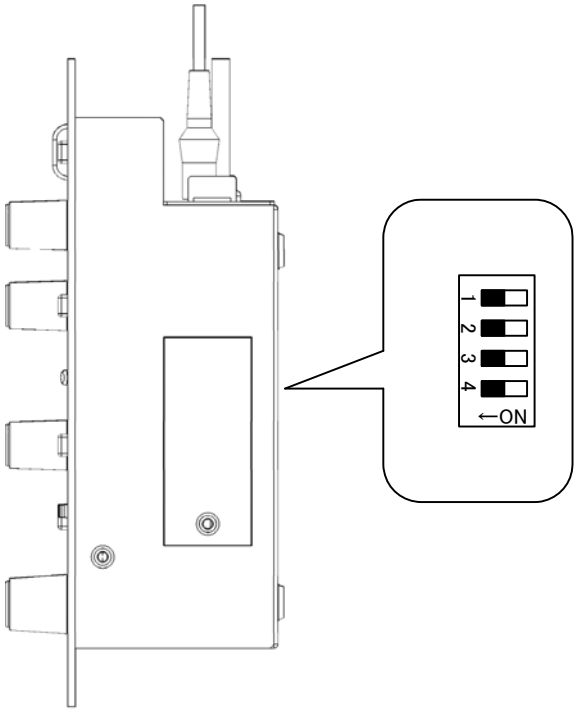


7.7 DIP Switch Set

The default setting at factory is “OFF” mode. It is possible to change to the following mode by setting the DIP switch on the side panel.

Caution

Please make sure that Power switch is OFF or the cables is not connected when you change the DIP Switch mode.



■DIP Switch 1:

[TALLY] terminal input signal setting

Function	[TALLY] terminal input signal selection		
Setting position	OFF	■□	Off mode works as Make contact mode
	ON	□■	Open collector mode set to HIGH mode by ON position ,and LOW mode by OFF position

■DIP Switch 2 for system update:

[LAN connector]（for system update.）

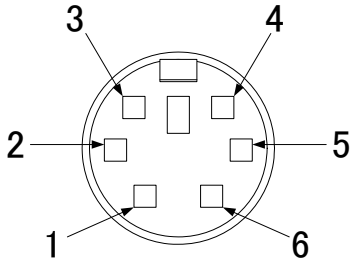
Function	[LAN connector] mode is applied for system update		
Setting position	OFF	■□	Normal mode
	ON	□■	System update mode

■DIP Switch 3: no function.

■DIP Switch 4: no function.

7.8 Remote Connector Specification

Manufactured by Hoshiden Corporation (Cable length is 5m).



Pin No	Signal	content	Level	Input/ Output
1	GND	GND	—	—
2	RM/CTL	Operate Control	+5V	OUT
3	GND	GND	—	—
4	SIO2	Received Data	+5V	IN
5	SIO1	Transmitted Data	+5V	OUT
6	+9V	Vcc	+9V	IN

8. Specification

■RM-LP20G works with the following products.
: GY-HM790/GY-HM750/RM-HP790

■Power Supply.
: +9V(connection through Remote connector)

■Operating Environment.
: Indoor

■Operating Temperature.
:0～40℃

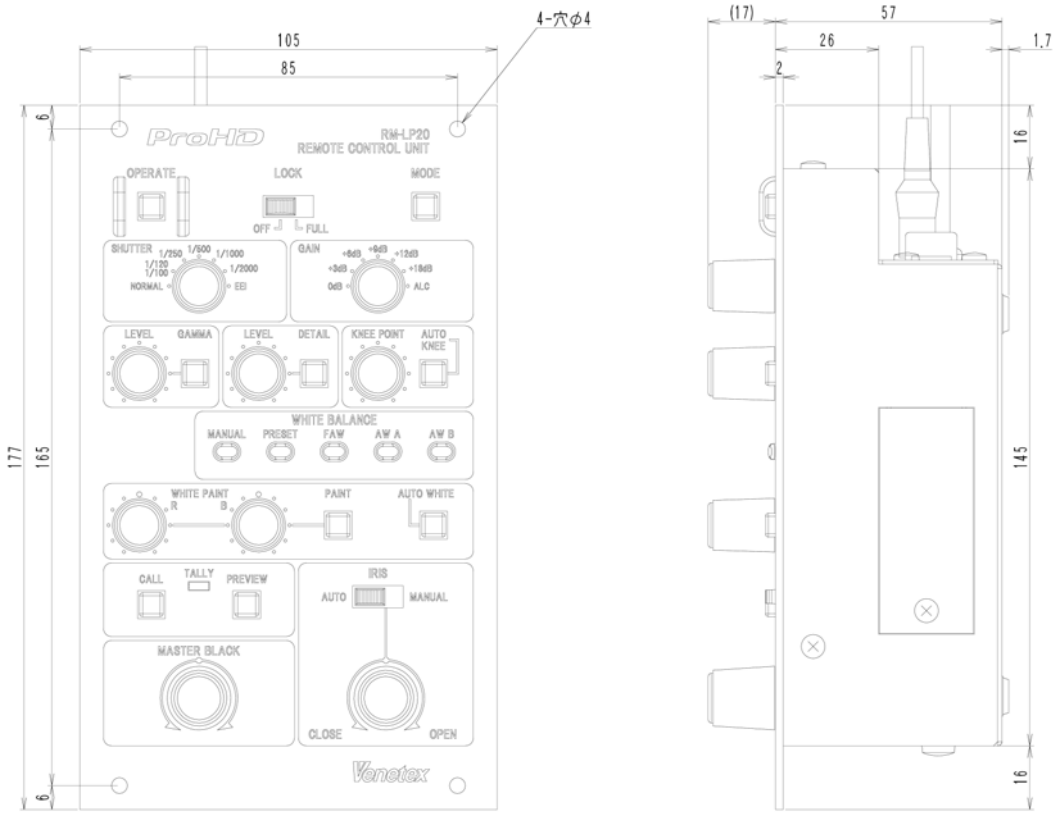
■Operating Humidity.
:10～90%（No condensation）

■Weight.
: 1.2 Kg

■Cable length.
: 5m (By remote connector)

■Supplied Accessories.
: Mini Din 6-Pin cable
: Operation Manual
: Warranty card

9. Dimension


4-穴φ4
105
85
6
177
165
6
ProHD
RM-LP20
REMOTE CONTROL UNIT
OPERATE
LOCK
MODE
OFF
FULL
SHUTTER
1/250
1/500
1/1000
1/120
1/100
1/2000
NORMAL
EEI
GAIN
+6dB
+9dB
+12dB
+3dB
+18dB
0dB
ALC
LEVEL
GAMMA
LEVEL
DETAIL
KNEE POINT
AUTO KNEE
WHITE BALANCE
MANUAL
PRESET
FAW
AW A
AW B
WHITE PAINT
R
B
PAINT
AUTO WHITE
CALL
TALLY
PREVIEW
IRIS
AUTO
MANUAL
MASTER BLACK
CLOSE
OPEN
Venetex
(17)
57
26
1.7
2
16
145
16

10. Warranty and Customer Support and after sales support

(1) Warranty

The warranty period is limited to one year from the date of delivery.

Repairs are provided free of charge during the warranty period for conditions occurring under normal operations.

[Limited warranty and warranty stipulations]

1. Venetex warrants only the original purchaser of this product from Venetex
   Venetex warrants software bugs occurring within one year after purchase.

2. Even during the warranty period, the following items or conditions are not accepted under the warranty.

① Purchase date cannot be confirmed.
② In the case of an accident during transport such as dropping this product during transportation by the customer.
③ Breakdown and/or damage caused by an operational error or repair and/or alteration performed by an unauthorized party.
④ A repair visit is not applied for.
⑤ Natural disaster, installation and environmental conditions such as vibrations, ambient temperature, moisture, dust and caustic gas.
⑥ Breakdown and/or damage caused by an abnormal voltage or power supply that is not listed in the specifications (voltage/frequency).
⑦ Breakdown and/or damage caused by usage under abnormal conditions not specified by the manufacturer.
⑧ Breakdown and/or damage caused by peripheral equipment or parts connected to the unit.
⑨ Breakdown and/or damage of the consumable parts and items specified.
⑩ Computer virus infection and a forgotten password are not the responsibility of Venetex.
⑪ Venetex may introduce software updates and version updates of software which improve the function of this product. In this situation the product is not under warranty conditions.
⑫ Defects due to alteration repair by unauthorized persons, misuse or accidental damage.
⑬ Defects due to improper installation or operation, improper storage or exposure to temperatures which are not kept in accordance with the specifications mentioned in the operation manual.

3. With regard to defective parts returned for repair: Venetex will return defective parts to the manufacturer and will thus, not return the defective parts to the customer. Venetex tries to re-use repaired defective parts to eliminate waste to protect the environment.

4. Product rental and replacement during repair is not possible.

5. This warranty is valid only in Japan.

6. This warranty applies only to the initial purchaser. Subsequent resale and transfer are not applicable.

To Customers:

1. All rights reserved
2. The contents of this operational manual are subject to change without notice.
3. All possible measures have been taken to ensure that the contents of this operational manual are accurate. If you find any errors, please contact us.
4. Respective of items 2 and 3, Venetex bears no responsibility for any loss or damage resulting from customer operation of this product.

To Customers (Disclaimer):

1. Venetex shall not be responsible for damage occurring: during a fire, flooding, earthquakes, lightning, natural disasters or actions by a third party with regard to this product.
2. The limited warranty does not apply to any other companies' products or storage devices which are connected with Venetex products.
3. Venetex shall not be liable for secondary damage that occurs: loss of business profits, business interruption, or loss of contents stored in a storage device or storage medium.
4. Venetex shall not be liable for any incidental or consequential failure or damage caused by inappropriate use of this product. Venetex is not responsible for the use of any other companies' products.
5. Venetex is not responsible for damage arising from failure caused by not following the specifications and operations written in the operational manual.

Others

Warranty does not exclude or limit any rights of the customer arising out of nonconformity with the sales contract.

Handling of Personal Information

With regard to repair and customer support, Venetex will maintain and use customer information in accordance with the Venetex Customer Privacy Policy.

(2) Requesting Repair Service

For all maintenance, please contact the dealer where you purchased this product.

[Please have the following information ready when contacting the repair department]

- Company name, department name, phone number
- Product name, model number, dealer name, purchase date
- Detailed description of the problem or abnormal condition
- Preference for repair date and time

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