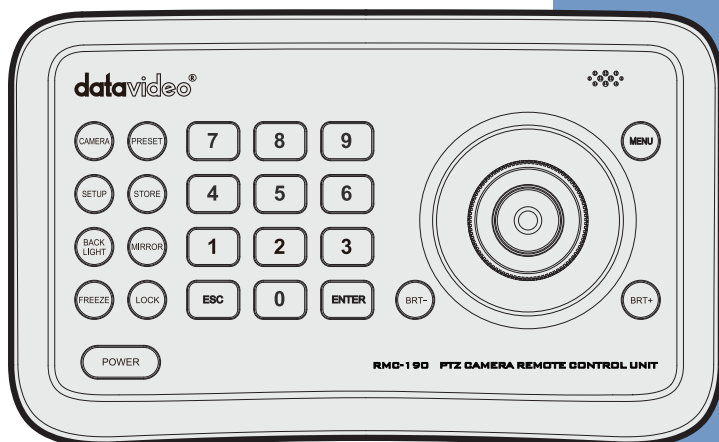


datavideo



**PTZ CAMERA
CONTROL UNIT**

RMC-190

Instruction manual

www.datavideo.com

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Disclaimer of Product & Services

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.



Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
 - a. When the power cord is damaged or frayed;
 - b. When liquid has spilled into the unit;
 - c. When the product has been exposed to rain or water;
 - d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
 - e. When the product has been dropped or the cabinet has been damaged;
 - f. When the product exhibits a distinct change in performance, indicating a need for service.

Warranty

Standard Warranty

- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- Cables and batteries are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

Three Year Warranty

- All Datavideo products purchased after July 1st, 2017 are qualified for a free two years extension to the standard warranty, providing the product is registered with Datavideo within 30 days of purchase.
- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Camera module, PCIe Card are covered for 1 year.
- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.



Disposal



For EU Customers only - WEEE Marking

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



CE Marking is the symbol as shown on the left of this page. The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.

1. Product Overview

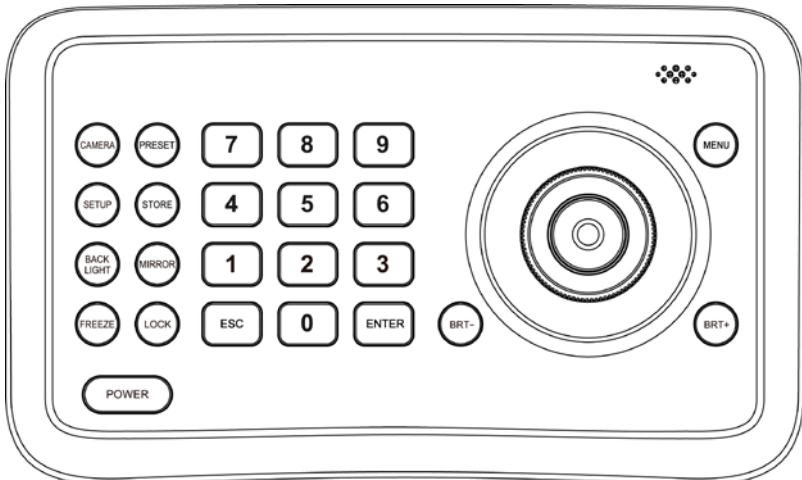
The Datavideo mini keyboard controller is a full-function system keyboard. With features of ergonomic design, multi-function, high reliability and easy operation, it is a perfect controller for PTZ cameras, video conference cameras, surveillance cameras and etc.

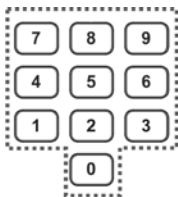
The VISCA RS-232/RS-422 communication interface allows high speed, long distance communication. The benefit of RMC-190 is that it is capable of controlling up to 7 cameras connected in a daisy chain fashion and automatically assigning the corresponding ID and address to the connected cameras.

2. Features

- 4D joystick for pan/tilt/zoom/focus control, ergonomic design and excellent finishing
- High brightness OLED display
- Auto backlight keys
- Multi-level protection from illegal operation or setting
- Multi-baud rates and protocols
- Connection of 7 cameras
- Batch program cameras in the systems
- Compact design with portable features

3. Keypad Functions





Numeric Keypads 0~9 (Numbers)

Number keys for number inputs.



PRESET (Call preset)

Input preset number, then press **PRESET** key to call a preset



CAMERA (Switch cameras)

Input camera number, then press **CAMERA** key to switch to another camera



STORE (Set / Clear preset)

Input preset number, then press **STORE** key to set or delete a preset (Short press to “set”; long press to “clear”)



SETUP (Enter setup menu)

Press **SETUP** key to enter menu and program the keyboard



MIRROR (Flip the image)

Press **MIRROR** key to control the image **flip** of the camera



BACKLIGHT (Turn camera backlight compensation ON/OFF)

Press **BACK LIGHT** key to turn on / off back light compensation



FREEZE (Freeze the screen)

Press **FREEZE** key to control the image freeze of the camera



LOCK (keyboard lock)

Press **LOCK** key to lock the control keyboard and key in the user password to unlock the keyboard



POWER (Power switch)

Press **POWER** key to turn on / off the camera



ESC (Exit / Delete)

EXIT a menu or DELETE in other operations



ENTER (Confirm)

Confirms menu setting



BRT - (Decrease brightness)

Press BRT- key to decrease the image brightness.



Joystick

This joystick is used to Pan, Tilt, Zoom and Focus

Non-Menu State

Left / Right / Up / Down: Pan / Tilt the camera correspondingly

Twist clockwise: Zoom In

Twist anti-clockwise: Zoom Out

Press Zoom / Focus Switch Key and Twist: Focus Near/Far

Menu State

Right: Enter a submenu or Confirm


Left: Return to previous menu or exit (expect some non-return menus)

Up: Move to previous option

Down: Move to next option



BRT+ (Increase brightness)

Press  key to increase the image brightness.



Zoom / Focus Switch Key

This key is used to switch between zoom and focus function.

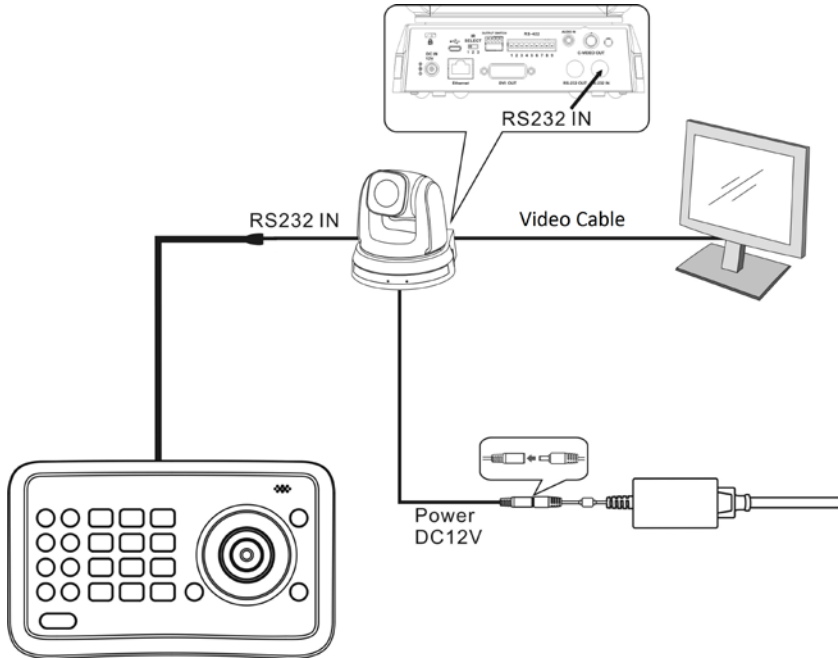
Operation: Press this key, the crisscross of indicator light near the joystick will go out, twist the joystick to zoom in / out; press this key again, the crisscross of indicator light will be lightened, twist the joystick to adjust focus value.



MENU (Enter Camera Menu)

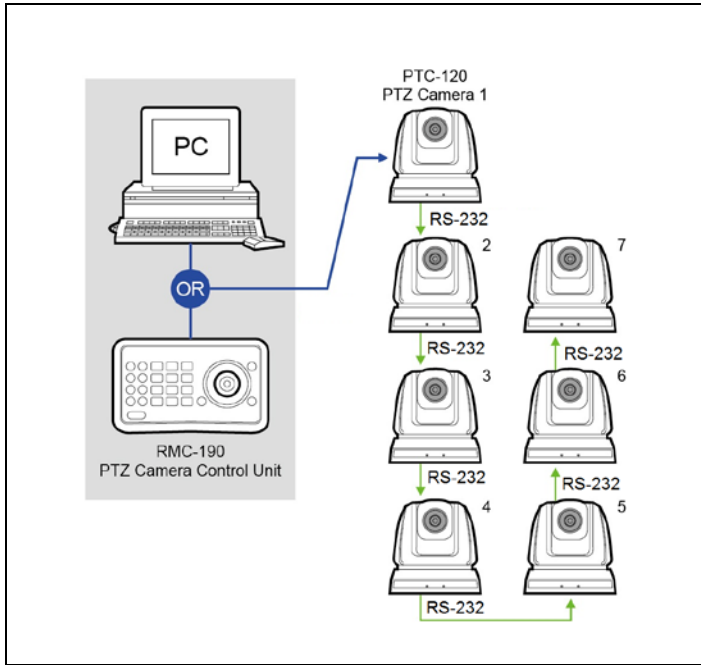
This key is used to enter camera menu.

4. System Diagram



The RMC-190 PTZ Camera Control Unit can also be used in an environment where multiple cameras are required. With RS-232 INPUT/OUTPUT ports, the user is allowed to control up to seven cameras connected in a daisy chain fashion.

A multi-camera daisy chain connection scenario is illustrated in the diagram below.

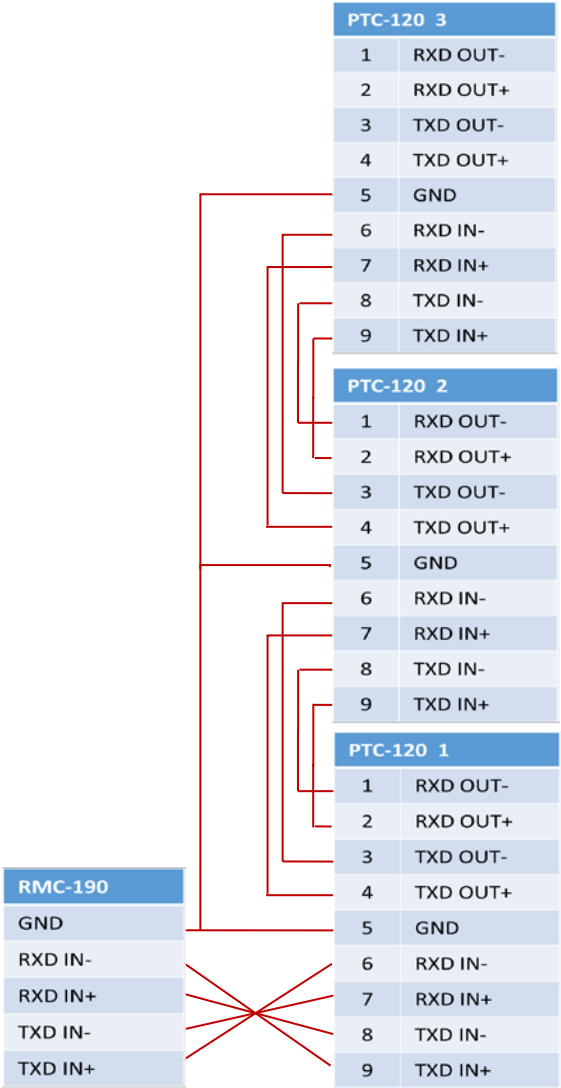


However, it should be noted that the connection will be broken if one unit is powered off. In other words, the cameras connected subsequent to the broken one will become uncontrollable by RMC-190. For example, in the above diagram, if cameras #2 and #3 are defective or powered off, all camera connections (4/5/6/7) after camera #3 will be cut off from the daisy chain and RMC-190 will not be able to control them even if the cameras are still operable.

The cameras have to be at least in the standby mode for the entire daisy chain connection to stay controllable by RMC-190. In the above example, if cameras #2 and #3 are in standby mode, the user will still be able to control all cameras after camera #3 from RMC-190.

If the camera is powered off or defective, there will be no LED lighting in standby mode. The user should check the LED lighting first if the daisy chain is found to be broken.

The wiring scheme between RMC-190 and PTC-120's is illustrated below.



5. Setting Menu


Press **[SETUP]** on the **remote control** to open the setting menu; the **bold underlined** values in the following table are defaults.

1st Level Major Items	2nd Level Minor Items	3rd Level Adjustment Values	Function Descriptions
Camera Settings	Camera ID	1~ <u>C</u> ~7	Set camera ID
	Protocol	1. <u>PD</u> 2. <u>V</u>	PD = Pelco D/P Protocol V = SONY VISCA Protocol
	Baud Rate	1. <u>9600</u> 2. 38400	Set baud rate. This baud rate must be the same as the camera's baud rate.
Time Setting	-	xx:xx:xx	Set time in 24 hour format
Time Display		1. <u>On</u> 2. <u>Off</u>	Set the time display
Volume Setting	-	1. <u>On</u> 2. <u>1~6</u>	Adjust the volume of the controller
Backlight Setting	-	1. <u>Auto</u> 2. <u>On</u> 3. <u>Off</u>	Set the backlight of the controller on or off
Sleep Setting	-	1. <u>Off</u> 2. 60M 3. 30M 4. 10M 5. 5M 6. 30S	Set sleep time of the controller.
Pin Setting	-	1. <u>User</u> 2. Admin	Set user and admin pins of the controller
Joystick Calibration	Pan Left	-	Calibrate the joystick leftward
	Pan Right	-	Calibrate the joystick rightward

	Tilt Up	-	Calibrate the joystick upward
	Tilt Down	-	Calibrate the joystick downward
	Zoom Tele	-	Calibrate the joystick with Zoom Tele
	Zoom Wide	-	Calibrate the joystick with Zoom Wide
	Free State	-	Setting menu, no calibration is required.
	-	<u>Save</u>	Save the calibration setting
	-	<u>Cancel</u>	Cancel the calibration setting
Speed Setting	-	1. <u>High</u> 2. Middle 3. Low	Set control speed of the joystick.
Default Setting	-	1. Yes 2. <u>No</u>	Restore the keyboard setting to factory default.
Information	-		Related control keyboard information

6. Menu operation

After powered on, “USER PIN” will show on the controller’s screen. The initial pin is “111111”.

- **Pin Error** : When “USER PIN : ERROR” shows on screen, it indicates incorrect input pin. Enter correct pin to go to next step
- **Pin Correct** : Screen shows “1”; this indicates camera icon and default camera number. If the controller is idle for a long time, the current time will be automatically displayed on the screen. If there is still no operation, the controller will enter

sleep mode.

To enter OSD menu, press SETUP key. Screen shows “ADMIN PIN:” and default admin pin is “111111”.

a. Camera Setting

Camera Setting option sets camera ID (Range from 1~7), the corresponding protocol, baud rates and camera address of the target cameras. To control the desired camera, simply select the corresponding camera ID.

1. Move the joystick up / down the options list under “CAMERA SETTING”
2. Move the joystick right or press **ENT** key to enter the selected option menu. For example, after selecting **□** : , press number keys to input camera number (range from 1~7). If the input number falls outside this range, the system will show “ERROR”. After the setting is entered, press **ENT** key to confirm
3. After the camera ID is selected, the user will be automatically entered the protocol option; move the joystick up / down the protocol option to select either PD or V and move the joystick right to set the desired protocol
4. Baud rate setting: After setting the protocol, move the joystick up / down the baud rates; to select a baud rate, move the joystick right or press **ENT** to confirm
5. The system returns automatically to the main menu after the camera setting is finished.

b. Time Setting

Set time in 24-hour format.

1. Move the joystick up / down the main menu to the “TIME SETTING” option
2. Move the joystick right or press **ENT** to enter the “Time Setting” option. Once in “Time Setting”, “HH” hour field will be enabled for editing; input number digits from keyboard or move joystick up / down to set the “HH” value (range is from 0~23). If number digits are entered from number keypads, “MM” minute field will be automatically enabled after the hour field has been successfully set. If “HH” number digits are set by the joystick, to move on to minute setting, move the joystick right to enable

“MM” minute setting. Move the joystick right / left to select from “HH”, “MM” and “SS” settings.

3. To set “MM” and “SS” fields, repeat Step 2
4. Press **ENT** to save and return to Main Menu.

c. Time Display

Manually turns on/off the time display

1. Move the joystick up / down the main menu and select “Time Display” by moving the joystick right or pressing **ENT** to enter “Time Display”.
2. Move the joystick up / down to select ON or OFF.
3. Set the Time Display to ON or OFF by moving the joystick right or pressing **ENT** to confirm.

d. Volume Setting

There are 6 volume levels available for selection.

1. Move the joystick up / down the main menu, and select “ VOLUME SETTING” by moving the joystick right or pressing **ENT** to enter “VOLUME SETTING”
2. In this option, the user is allowed to either turn off the volume or set the volume level by moving the joystick right on the desired option or press **ENT** to confirm.

e. Backlight Setting

Backlight mode allows the keys to be clearly illuminated even in a very dark environment.

1. Move the joystick up / down the main menu and select “BACKLIGHT Setting” by moving the joystick right or pressing **ENT** to enter “BACKLIGHT Setting”.
2. Move the joystick up / down the options list and set the backlight to AUTO, ON or OFF by moving the joystick right or pressing **ENT** to confirm.

f. Sleep Setting

This option sets the sleep time of the controller. The screen enters sleep mode after the controller is idle for a pre-determined period.

1. Move the joystick up / down the main menu and select “SLEEP

SETTING” by moving the joystick right or pressing **ENT** to enter “SLEEP SETTING”.

2. Move the joystick up / down the option list to select the desired idle time before entering sleep mode by moving the joystick right or pressing **ENT** to confirm.

g. Pin Setting

This option sets the user and admin pins of the controller.

1. Move the joystick up / down the main menu and select “PIN SETTING” by moving the joystick right or pressing **ENT**. After entering “PIN SETTING”, move the joystick up / down USER and ADMIN options and select one by moving the joystick right or pressing **ENT** to confirm.
2. After entering either USER or ADMIN, the user will be prompted to enter the OLD PIN (Press **ESC** to cancel). If correct Pin is entered, the user will be directed to “NEW PIN” menu. If incorrect pin is entered, “ERROR” will be displayed.
3. Input “NEW PIN”
4. “CONFIRM”: after new pin is entered, enter the same pin again to confirm. If the two pins do not match, “PIN NOT MATCH” will be displayed and the menu will return to “NEW PIN” menu.
5. If the two pins match, it will display “OK!” and the new pin will be applied

To disable “PIN PROTECTION” function, there is no need to input any digit in both “NEW PIN” boxes. Press **ENT** directly to confirm. To enable “PIN PROTECTION” again, simply set new pins.

At any point, the user is allowed to press **ESC** key to exit the PIN setting menu.

h. Joystick Calibration

After the joystick is used for a long time, calibration may be required.

1. Move the joystick up / down the main menu and select “JOYSTICK CALIBRATION” by right moving the joystick or pressing **ENT** to confirm
2. Once “JOYSTICK CALIBRATION” is entered, options list will be

displayed; the options are PAN Left / Right, TILT Up / Down, ZOOM Tele / Wide and Free State. To calibrate "PAN LEFT", move the joystick to its left extreme and hold, and press **ENT** to complete "PAN LEFT" calibration.

3. Refer to the "PAN LEFT" calibration to calibrate "PAN RIGHT", "TILT UP" and "TILT DOWN".
4. To calibrate "ZOOM TELE", twist the joystick clockwise to the extreme and press **ENT**
5. To calibrate "ZOOM WIDE", twist the joystick anticlockwise to the extreme and press **ENT**
6. "FREE STATE" calibration requires no action; the user can simply press **ENT** to confirm.
7. Upon completion of the above calibrations, <SAVE> and <CANCEL> buttons will be displayed. Click on the corresponding button to save or cancel the settings. Move the joystick left/right to choose, and press **ENT** to confirm.

i. Speed Setting

This option sets the control speed of joystick.

1. Move the joystick up / down the main menu and select "SPEED SETTING" by moving the joystick right or pressing **ENT** to enter "SPEED SETTING" menu.
2. Move the joystick up / down the speed levels and select the desired speed level by moving the joystick right or pressing **ENT** to confirm.

j. Default Setting

Restore the keyboard setting to factory default.

1. Move the joystick up / down the main menu and select "DEFAULT SETTING" by moving the joystick right or pressing **ENT** key.
2. Once the "DEFAULT SETTING" option is entered, move the joystick left / right to select either <YES> or <NO>; press **ENT** to confirm

k. Information

Move the joystick up / down the main menu and select "INFORMATION" by moving the joystick right or pressing **ENT** key to display the current firmware version number

7. Specifications

Comm. Interface	RS-232 / RS422
Protocol	VISCA
Baud	9600bps / 38400 bps
Address	1~7
Joystick	4-axis (Left/Right, Up /Down, Zoom In/Zoom Out, Focus Near / Focus Far)
Display	OLED
Power	DC 12 V
Working Temperature	0 °C ~ +40 °C
Storage Temperature	-20 °C ~ +60°C
Relative Humidity	≤90% (non-condensation)
Dimensions	200mm(L) x 120mm(W) x 103mm(H)
Net Weight	0.5 Kg

Service & Support

It is our goal to make owning and using Datavideo products a satisfying experience. Our support staff is available to assist you to set up and operate your system. Contact your local office for specific support requests. Plus, please visit www.datavideo.com to access our FAQ section.

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