Safety Precautions





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.

Information for USA

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'ELECTRO-CUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

INFORMATION (FOR CANADA) RENSEIGNEMENT (POUR CANADA)

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

Cet appareil numérique de la Class A est conforme à la norme NMB-003 du Canada.

2

2

Keep away from moisture

Fire or electrical shock can result from the presence of moisture.

Spillage can occur from objects containing water (flower vases, flower pots, cups, cosmetics, pharmaceuticals, etc.) and should not be placed on top of this device.

Do not touch

Do not touch lines (antenna wires, phone lines, etc.) connected to this device or power plugs during a thunder storm because this can result in electrical shock.

 \triangle

When installing this device, maintain a space of 10cm or more between this device and the wall. Also keep other devices at a distance to ensure good radiation. Internal heat can result in fire.

Warning

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This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required take adequate measures.

3

3

PRECAUTIONS FOR SAFE AND PROPER USE

To ensure safety

■ Always observe the following to ensure correct and safe usage of this device. Read Safety Precautions thoroughly before using this device. The safety precautions contain important information and should always be observed. After reading, store in a readily available location for future reference.

Regarding Symbol Indications

Numerous symbols are employed as indication in the precautions for safety, precautions for handling, and in the indication to the products. These are designed to prevent in advance any possible infliction of injury on you and other individuals and the damage of properties through the proper use of the product. The symbols and meanings are shown below. Grasp the contents of the symbols completely before reading this manual.



Examples of Symbol Indications

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This symbol informs you of the presence of the contents that demands caution (including danger and warning). Specifically prohibited contents (caution against electric shock in case of the left symbol) are illustrated in the symbol.



This symbol informs you of prohibited actions. Specifically prohibited contents (prohibition of disassembly in case of the left symbol) are illustrated in the symbol and its vicinity.



This symbol informs you of the contents that forces you to take some action or gives you some guidelines or instructions. Specific contents of instructions (unplug the power cord from the outlet in case of the left symbol) are illustrated.

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Cautions

- This instruction manual may not be reproduced in part or in its entirety.
- Use caution to avoid infringing the copyrights of others during use.
- Please note that this company does not assume any responsibility in the case of any possible errors that may be found in this instruction manual.
- The contents of this instruction manual are subject to change without notice.
 When this product is discarded, always observe all applicable laws and regulations.

Trademarks

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Any other company names and product names mentioned in this instruction manual are the trademarks or registered trademarks of the respective companies.

Before Recording or Saving Important Images

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- Due to provisions of the copyright law, images recorded and saved from TV broadcasts and recorded tapes, etc., and recorded and saved images of printed materials such as posters, etc., cannot be used for any purpose other than personal enjoyment without the express written permission of the copyright holder.
- When recording important images, always make test shots beforehand to make sure that recording and display are correct. Also use caution concerning available hard disk capacity.
- Please note that compensation will not be paid in the case that normal recording and playback are not possible due to problems with this product or with the computer software, etc.

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About New Versions

New versions of the software (VN-C3U) can be acquired via Internet. Download the software from the following. (under construction as of Feb. 29. 2000)

Home page: http://www.jvc-victor.co.jp

Package Contents

This product includes all of the following items. If any item should be missing, please contact your local dealer.

- VN-C3U main unit
- VN-C3U Controller CD-ROM
- Instruction manual (this document)

Operating Environment

The environment described below is necessary for operation of the VN-C3U.

A PC running Microsoft Windows95, 98 or NT.

- CPU
- Pentium 133MHz or equivalent (200MHz or more recommended).
- Memory capacity
- 32MB or more (64MB or more recommended).

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- Hard disk capacity
- 20MB or more.
- Display and video card
- 640 x 480 dots or more, High Color (1024 x 768 dots or more, True Color recommended).
- 10BASE-T

LAN board, connection cables.

LAN Environment

- 10BASE-T networks mutually connected by hubs, etc., that conform to IEEE 802.3.
- The VN-C3U and a PC can be connected directly by using a cross cable. (Although rare, the use of cross cables is not possible with some LAN boards.)

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To ensure correct usage

- When installing, avoid the following.
 - · Locations subject to rain and water.
 - Locations where the ambient temperature exceeds the range of 0 40 (recommended) degrees C.
 - Locations with vibration.
 - Locations with excessive dust, oil or gas.
- When this product is used with AGC on (Auto on), the sensitivity will be increased automatically in dark places, so the screen may flicker in some cases. This is not a malfunction.
- When this product is used with Auto on, in some cases the recorded colors may differ slightly from the natural colors due to the principle of the automatic tracking color balance circuit.
- When any bright object such as a lamp, etc., is photographed, white bands may appear above and below the bright object. This is called smearing, a phenomenon caused by the characteristics of the individual pixels, and is not a malfunction.
- When panning and tilting the VN-C3U, do not apply force to any part other than the body because this could result in damage or a malfunction.
- Use caution to avoid catching on the sensor insert button of the alarm input/output jack. In case this happens and disconnection from the alarm input/output jack occurs, return to the original location and use there.

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VN-C3U Installation and Setup

Before starting installation and setup

It is necessary to set an IP address for each VN-C3U unit. Use the following procedure for the setup of each unit. (If the power is not turned on, the installation of multiple VN-C3U can be performed at one time.)

1. Install the VN-C3U

- In case of installation in a location where the power cannot easily be turned on, complete steps 2 - 5 before step 1.
- 2. Connect the VN-C3U to the network and turn the power on.

3. Set the VN-C3U IP address.

- When setting the VN-C3U IP address, be sure to contact the network administrator for assignment or approval. When installing the second and following units, reboot the PC and then return to step 2.
- 4. Enable the VN-C3U IP address. (Turn the VN-C3U power off and then on again.)
- 5. Register the connection point.* This registers the VN-C3U IP address data in the PC.

Names of VN-C3U parts



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Installation and setup

1. Installation

Use the optional bracket (Model VN-BK30) for installation. Make the power and network connections after completion of the installation work.

- Caution -

Install in a location with sufficient strength to prevent falling. VN-C3U units can only be installed as shown in the diagram below, or inverted. Do not install facing sideways. Tilted installation is not possible.



2. Connecting to a network

Turn on the power of only one VN-C3U unit.

When network connection is completed and the power is turned on, the VN-C3U unit will be connected to the network at the following IP address.



About the power supply connection cable

- Length: 30m or less.
- Recommended model: UL1007, UL1015 or equivalent cable with wire equivalent to ID AWG #20 or larger.

- Caution ·

All VN-C3U units are set to the same IP address at the factory; therefore, if the power of multiple VN-C3U units is turned on at the same time, address duplication will occur and correct access will not be possible. Always turn the power on for only one unit at a time. If address duplication occurred, perform the proper processing and wait for 10 min. or more, or turn off the power of all units on the network and then turn the power on again; otherwise, correct access may not be possible.

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Alarm IN/OUT connection

Connect external devices to the alarm IN/OUT as shown below.



• Cable connection and disconnection

Press the sensor insert button when connecting and disconnecting cables. After connecting or disconnecting, make sure the sensor insert button returns to its original position.

- About the alarm IN/OUT connection cables
 - Length: use cables with a length of 50m or less.
 - Recommended model: UL1007, UL1015 or equivalent cable with wire equivalent to AWG #22 AWG #18.

- Caution

External noise may affect the alarm working properly even with a cable length of 50m or less. In such cases, it is necessary to either change to the use of shielded cable to prevent influence by noise or to change the wiring route to avoid passing close to the source of the noise.

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3. Setting the VN-C3U IP address

3-1 Changing the IP address of the PC Display the network settings panel by selecting Settings from the Start button, then selecting Control Panel and Network, in that order.



3-2 Installing the software
 Load the VN-C3U Controller CD-ROM into the CD-ROM drive.
 The setup program is in the ¥JVC folder on the CD-ROM.
 Execute ¥JVC¥Setup.exe and follow the displayed instructions to setup the software.





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3-3 Setting the VN-C3U IP address The V.NETWORKS setup tool is in the ¥Victor folder on the CD-ROM. Execute ¥Victor¥setup¥vsetup.exe directly from the CD-ROM.



* Refer to the next page for Password button and Page 20 for Alarm button.

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Password function

An access protection using a password is provided to regulate connecting PCs (users). Password setting and cancellation is performed by the V.NETWORKS setup tool.

.....

- Caution —

Never forget the current password because the current password setting cannot be changed unless it matches the password setting.

The screen shown below will be displayed when the password button of the V.NETWORKS setup tool is clicked.



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Alarm function This function is to receive or send an alarm signal from/to alarm input/ output over network. Use the V.NETWORKS setup tool for the fundamental settings.

When the Alarm button of the V.NETWORKS setup tool is clicked, the screen shown below will be displayed.

larm Setting	- C
Alarm1 C OFF C ON Alarm Output Go to a preset position C DF	Relay Alarm V Use relay alarm Alarm1 V Within 0 min. 1 min. 2
Alarm2 OFF ON Alarm Output Go to a preset position G D F	Alarm2 Use relay alarm Alarm Output Go to a preset position
Out port setting C OFF C ON Output Value C High C Low 100 ms Initialization C ON C OFF	Alarm force output Output the Alarm out port complying with current settings. Output

The procedure for the alarm settings is explained on the following page.

- Caution ·

When VN-C2U or VN-C1U is controlled from VN-C3U controller, the alarm setting is not available.

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function.

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Caution The V.NETWORKS setup tool can only be run on PCs which Setup.exe was executed on page 17. The V.NETWORKS setup tool does not function properly with PCs which Setup.exe has not been executed. With PCs which Setup.exe has been executed, operation is possible from not only the CD-ROM but also the hard disk, etc. where the setup folder is copied.

The V.NETWORKS setup tool is software that is necessary only for the setup operation; therefore, this software should be deleted at the end of the operation, except for PCs which may require this software for special reasons.

When setting two or more units, reboot the PC and then return to item 2 "Connecting to a network" (page 14). When all VN-C3U setting have been completed, proceed to the following item.

3-4 Restoring a work PC IP address

Using the same procedure as in 3-1, select Settings from the Start button, then select Control Panel and Network, Change to the original TCP/ IP properties setting that you made a note and then restore a work PC IP address.

After restoration is completed, follow the messages of OS and reboot the PC.

4. Enabling the IP address setting

Turn the VN-C3U power off and then on again. (When the power is turned on, the pan/tilt reset operation will be performed; therefore, it is possible to confirm that the power was turned on correctly by observing the pan/tilt reset operation.)

IP addresses changed with the setup tool become effective when the VN-C3U power is turned off and then on again. (The previous IP address will remain effective until the power is turned off.)

Search function

The Search button is used to find the V.NETWORKS IP addresses currently connected to the network.

When Search button is pressed, the Search screen will be displayed. When Start Search button is pressed, a list of the V.NETWORKS IP addresses currently connected to the network will be displayed. Timeout is used to set the search time and can be set to 0 - 30 sec.

Caution When your own PC and a V.NETWORKS of a different subnet are connected on a LAN, connection will not be possible even if the search is successful.
In such cases, change to an appropriate IP address on your PC and then try connection.

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5. Registering connection points

Start the VN-C3U controller (VN-C3U.exe). Select **New** from the **File** item in the menu and then specify the connection point.



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Controller Software Operation

displayed and then the following screen will appear.

Starting connection and changing connection points

Refer to Software Installation on page 17 for the installation procedure. When the VN-C3U controller (VN-C3U.exe) is executed, a logo will be



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Connecting from the Settings file

Connection is possible by linking the VN-C3U.exe and vnet*.data files and then double clicking the *.dat file.

Preparation

- 1. Start Explorer, then click on Folder Options... from the View menu.
- Click on New type... of the File Types tab. Enter an explanation in the Description of type box. Example: Dat file.
- 3. Enter ".dat" in the **Associated Extensions** box. Click on **New...** and then enter "open" in the **Action** box.
- 4. Specify "VN-C3U.exe" in the **Application used to perform action** box. Example: C:¥Program Files¥VN-C3U¥VN-C3U.exe

Add New File Type 🔹 🔋 🗙	
Change [con	
Description of type: DAT file	
Assogiated extension: .dat	
Content Type (MIME):	
Default Extension for Content Type: Actions:	
New Action	? ×
New	OK
Alw vs show e Application used to perform action:	Cancel Browse
Use DDE	

- Caution

• This function cannot be used if the ".dat" extension has already been specified as the file type for another application.

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Controller 1

After a connection point is selected, you will find the names of currently connected VN-C3U, the pan/tilt operation angle step and the current Pan/Tilt position.



The Pan/Tilt operation angle step of connected VN-C3U can be changed by clicking on the left and right (\boxdot) buttons.

Pan/Tilt position can be changed with the Pan/Tilt operation buttons (8 buttons). Zoom in/Zoom out is performed by one step for each click of zoom button. If you keep pressing the button, Zoom in/Zoom out can be performed continuously.





Caution -

During the Pan/Tilt operation, the images may pause for a few seconds. This is because the position correction function is automatically being operated and this is not a malfunction.

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Controller 2



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Creating new connection points

Refer to "Registering connection points" on page 25.

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Changing resolution and inverting the image

ile <u>V</u> iew <u>Setting H</u> elp	Select View from the menu.
CAMERA	J
The resolution can now be selected from 160×120 , 320×240 or 640×480 . Depending on the installation, select Normal or Upside Down.	Room No1 O E Image Size Image View Image Vi
• On-screen resolution • The resolution can also be	n change changed on the screen with the
On-screen resolution The resolution can also be following procedure.	n change changed on the screen with the

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Image quality adjustment



* Refer to the following pages for details concerning image quality settings.

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Image quality settings

Image quality can be adjusted by changing each of the following settings.

ltem	Effect
Saturation	Adjustment of the color saturation. (The larger the number, the greater the color saturation.)
Color balance	Move the slide bar to the right to emphasize blue or to the left to emphasize red.
Full Auto	This the Auto/Manual switch. (When the check is removed, the following three items will be switched to the Manual setting.
Gain	Adjustment of the gain of the internal amp. (Use only when light is insufficient.)
Contrast	Adjustment of the contrast.
Brightness	Adjustment of the brightness.

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Transmission frames



low bandwidth is available for VN-C3U.

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Lens setting



Select **Setting** from the menu and then select **Lens** settings.

- Caution This function is not available for VN-C1U and
- VN-C2U.

Image: Second Not O Image: Second S	The current setting status is displayed in the window. After the setting is completed, press OK to close this window.
 When the iris is set to Auto, the amound be kept constant. When Manual is selected will be kept constant. The scroll bar is settings. When Auto is selected from Focus, the Operation of the scroll bar is possible 	nt of light entering the camera will ected, the brightness of the screen s used to perform the respective scroll bar will become inoperative. when Manual is selected.
Advice For locations where many people are part Tele, we recommend select Manual For focusing.	assing by or operation of zoom at ocus to prevent continuous auto
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Alarm setting

The alarm settings determines the actions to be performed when an alarm signal is received from Alarm 1 or Alarm 2 input of VN-C3U. Make sure to select "ON" in Alarm 1/Alarm 2 setting of V.NETWORKS setup tool (refer to page 21) to enable all the Alarm settings in this page.

3U Controller	
ew <u>S</u> etting <u>H</u> elp	
Quality Frame Rate Not Position Memory	
Lens Alarm	Select Settings from the menu, then select Alarm Settings.
Alarm Setting	
Marmi George Alarm∠ Seting Al	elay Hiarm Setting
Stranger!	
Fecording start	
C¥Program Files¥vn-c3u¥alarn	n.way Browse
Execute a Program	
C:¥WINDOWS¥Sndrec32.exe	Browse

There are four functions as follows:

OK

Message Pop-up

Pop-up the message entered in the text box. Up to 100 letters can be entered.

Cancel

- Recording start
- Start recording the images.
- Play a wave file Play a specified wave file . Any wave files can be specified from the Browse button.
- Execute a program file Execute a specified program file. Any execute (.exe) files can be specified from the Browse button.

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Alarm Seting	
Alarm1 Seting Alarm2 Seting Relay Alarm Setting	
Play a wave file	
C¥Program Files¥vn-c3u¥siren.wav	Browse.
Execute a Program	
file	
U%Program Files#vn=c3u#emergency.exe	Browse.
OK Cancel	1

Relay alarm setting

The Relay Alarm Setting determines the actions to be performed when an alarm signal is received from Alarm 1 and Alarm 2 input of VN-C3U. There are two functions; Play a wave file and execute a program file. (Refer to page 39) Make sure to select "ON" in Relay Alarm Setting of V.NETWORKS setup tool (refer to page 21) to enable these Relay Alarm setting in this page.

- Caution

- When a large wave file (*.wav) is selected, the alarm operation may be delayed depending on the PC specifications. Try to select a relatively small wave file.
- In order to enable the Alarm 1, Alarm 2 and/or Relay Alarm setting it is necessary to
- 1) Select "ON" in Alarm 1, Alarm 2 and/or Relay Alarm setting of V.NETWORKS setup tool (refer to page 21),

and 2) Check (✔) Alarm reg.

- When relay alarm has been set, the second alarm operations is not performed.
 - Example: When the Relay Alarm occurs in the sequence of
 - Alarm $1 \rightarrow$ Alarm 2, alarms operate in the sequence of
 - Alarm 1 \rightarrow Relay Alarm and Alarm 2 does not operate at all.



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Time stamp setting



* Changing the time stamp display position

On the screen, hold down the Shift key and click the left button of the mouse at the position where time stamp is to be displayed.

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Recording function

This function is to continuously record the images of connected VN-C3U onto automatically created folder with "VN-C3U Name." (refer to page 25)



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Playback function



The recorded time is indicated in the unit of one minute. Select the time for playback and press **OK**.

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Snapshot function

This function is to capture still images or save them onto hard disk.



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V.NETWORKS property

Display the property of connected VN-C3U.



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Troubleshooting	
An IP address changed with the V.NETWORKS setup tool has been forgotten.	The Search button of the V.NETWORKS setup tool can be used to acquire the IP addresses of V.NETWORKS cameras connected to the network. The change history file vsetup in the root directory is used to save contents that have been changed with the V.NETWORKS setup tool in the following formats. IP before change, ID before change IP after change, ID before change Date/time (date/month/year/hour/minute) If the desired information cannot be found by viewing the vsetup file, this must be handled as a repair. Please consult your local dealer.
Recording is not possible.	 It is possible to delete the folder used to save images. Check to make sure the folder exists. It is possible for the disk to become full. Check the available capacity of the disk.
The password set with the password protection function has been forgotten.	The disabling of the password protection function is handled as a repair. Please consult your local dealer. For safety, be prepared to show proper identification.
The message "Pan/tilt control is not being performed correctly." is displayed at the time of connection.	Turn off the VN-C3U power and then turn it on again. If there is no improvement, please consult your local dealer.
Time is required for cancellation when "Connecting" is displayed.	Once the connection operation starts, cancellation is not possible for a period of several seconds.



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The colors are not satisfactory.	 Check the color adjustments of the display or video card. The colors displayed by different PC display monitors and video cards will differ to some degree. Improvement is sometime possible by adjusting the color settings of the display monitor. Depending on the video card, colors can sometimes be adjusted using Screen Properties (click the right mouse button on the desktop.) Switching to True Color (24-bit) display Colors are sometimes not natural at the High Color (16-bit) or lower setting. It is recommended that you use True Color. Adjusting color balance Colors can also be changed by using Color Balance from the image quality adjustment screen. Turn Auto off and then on again. When different light sources have been used. (For example, when alternately using sunlight outdoors and fluorescent lighting indoors.) Time is sometimes required for auto tracking white balance to start operating. In such cases, white balance can sometimes be made to work quickly by removing the check from Auto in the image quality adjustment screen and then replacing the check. Depending on the subject, the colors may appear to vary slightly in some cases. This is not a malfunction.
The image size and position change	When one VN-C3U unit is connected to several PCs, the last PC to operate and set
spontaneously.	the VN-C3U unit will have priority.

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Out of focus.	The autofocus sometimes does not operate correctly in dark places and when blank surfaces such as walls are photographed. In such cases, focus manually. The focus may be off slightly when manual focus is used at the TELE position, but this is not a malfunction.
VN-C3U connection is not possible or the connection has been broken.	When there are multiple occurrences of broadcasts, collisions, etc., or when the network status is not normal, it may become impossible to connect the VN-C3U or the connection may be broken.

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Specifications

LAN standard	IEEE 802.3
Communication protocol	UDP/IP
Video element	1/3-inch, 300,000-pixel CMOS image sensor.
Minimum focusing distance	1.0m
Pan/tilt operation angle	Pan: 320 °
	Tilt: 90 °
Output image format	640 × 480, 320 × 240, 160 ×120
Power supply voltage	DC 12 V
Power consumption	2.0 A (max.)
Operating temperature	0° C — 40° C
Mass (weight)	Approx. 730 g.
Alarm input	Non-voltage a contact input
	Low level. latch/momentary (500ms or more)
	Low level circuit current 1mA
	High level impressed voltage 5V
Alarm output	NPN open collector output (allowable impressed voltage: 12V; allowable input current: 300mA)
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External dimensions (Unit: mm)



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VM-C3U_E.65J

JVC®

V.NETWORKS INSTRUCTIONS



For Customer Use:

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

Model No. VN-C3U

Serial No.

This instruction book is made from 100% recycled paper.

SS961510-001

VM-C3U_E.65J