

NUVICO®

ZOOM MATIC™

HIGH RESOLUTION 22X AF ZOOM
Outdoor Integrated Camera

CI-Z22N-L



INSTALLATION MANUAL

Disclaimer

- While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions.
- NUVICO reserves the right to change the specifications of the hardware and software described herein at any time without prior notice.
- No part of this guide may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without prior written permission of NUVICO.
- NUVICO makes no warranties for damages resulting from corrupted or lost data due to a mistaken operation or malfunction of the cameras, peripheral devices, or unapproved/unsupported devices.

Warning and Caution

WARNING!

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OPENINGS ON THE EQUIPMENT.

CAUTION!



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) instruction in the literature accompanying the product.

FCC Compliance Statement

FCC INFORMATION : THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

CAUTION : CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL EQUIPMENT COMPLIES WITH CANADIAN ICES-003.
CET APPAREIL NUMÉRIQUE DE LA CLASSE A EST CONFORME À LA NORME NMB-003 DU CANADA.

CE Compliance Statement

WARNING : THIS IS A CLASS A PRODUCT. IN A DOMESTIC ENVIRONMENT THIS PRODUCT MAY CAUSE RADIO INTERFERENCE IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES

Important Safeguards

- Read these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this equipment near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other equipment (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the equipment.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this equipment during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the equipment has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the equipment, the equipment has been exposed to rain or moisture, does not operate normally, or has been dropped.
- **CAUTION - THIS MANUAL IS FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.**
- Use Certified/Listed Class 2 power supply transformer only.

Table of Contents

Disclaimer	2
Warning and Caution	3
FCC Compliance Statement / CE Compliance Statement	4
Important Safeguards	5
Table of Contents	6
Introduction	8
Content Verification / Dimensions	9
Connections & Wiring	
Connecting the ZoomMatic™ Integrated Camera to the Controller	10
Connecting the ZoomMatic™ Integrated Camera Directly to the DVR	11
Remote Controller Keys & Descriptions	12
Adjusting the Lens & Setup Menu	13
Adjusting the 3-Axis Bracket	14
OSD Menu Control & Navigation	
1. OSD MENU CONTROLS (On-Screen-Display).....	15
OSD Menu Terms & Settings	
2. FOCUS SETUP	16
2.1 MODE	16
2.2 D-ZOOM	16
2.3 LENS INIT	16
3. WB SETUP (White Balance)	
3.1 MODE	17
3.2 R GAIN	17
3.3 B GAIN	17
4. AE SETUP (Automatic Exposure)	
4.1 MODE	18
4.2 SHUTTER	19
4.3 IRIS	19
4.4 AGC (Automatic Gain Control)	19
4.5 DSS (Digital Slow Shutter)	19
4.6 BRIGHTNESS	19
4.7 FLICKERLESS	19

Table of Contents

5. SPECIAL	
5.1 BACKLIGHT	20
5.2 DAY/NIGHT	20
5.3 SHARPNESS	20
5.4 COMMUNICATION	21
5.5 FACTORY DEFAULT	22
5.6 ACCESS CONTROL	22
6. DISPLAY	
6.1 CAMERA TITLE	23
6.2 EDIT TITLE	23
<i>Programming The CAMERA TITLE</i>	24
6.3 CAMERA ID	24
6.4 FUNCTION NAME	24
6.5 ZOOM MAGNIFICATION	24
7. FUNCTION	
7.1 HOME PRESET	25
7.2 PRESET	26
<i>Recalling the Programmed PRESET</i>	26
7.3 ALARM SETUP	26
7.4 MOTION SETUP	27
7.5 PRIVACY MASK	28
Programming The PRIVACY ZONE	28
7.6 D-ZOOM	29
8. IR RADIATOR	29
ZoomMatic™ Integrated Camera Accessories	30
Technical Specifications NTSC	31

Introduction

ABOUT THIS MANUAL

Thank you for purchasing our ZoomMatic™ Integrated camera.

Our ZoomMatic™ Integrated cameras are all equipped with high resolution 1/4" Interline transfer CCD Imager for enhanced low light sensitivity. A user-friendly, on-screen display (OSD) menu makes it easy to setup and program functions, and automatic motion detection with zoom function and auto focus makes it ideal for monitoring Point-of-Sales, driveways, corridors, alleys, and entrances. 580 TV Lines and powerful wide optical zoom lens delivers crystal clear pictures during the day, and ICR cut-filter and Smart IR LEDs provides flexibility in changing night-time environments while granting excellent pictures even in complete darkness.

*Before installing and using this camera, please read this manual fully and carefully, and be sure to keep it handy for later use.

Key Features

- 1/4" CCD Sensor
- 580 TV Lines
- 22X A/F Optical Zoom Lens (3.9~85.5mm)
- 16X Digital Zoom (Combined total of 352X)
- Day/Night Functionality with ICR
- Auto Focus & Auto Iris
- 0.2 Lux (Color), 0.02 Lux (B/W), 0.00 Lux (IR LED On)
- 78 Power IR LEDs
- IR Adjustments: On/Off, Intensity Levels (Smart IR)
- IR Distance: Up to 300ft.
- IR Remote for Camera Setup & Zoom Control
- 8 Programmable Presets, 4 Privacy Masks
- Built-in Motion Detection
- Built-in Fan & Heater
- RS-485 Communication
- 24VAC Only

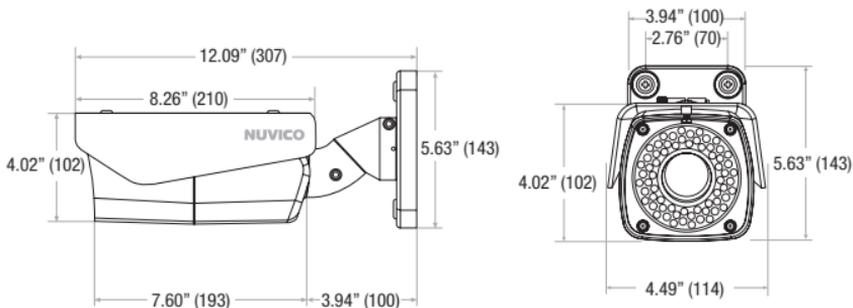
Content Verification

Before installing the camera, please make sure that all of the following items are included in the box.

ZoomMatic™ Series

1. ZoomMatic™ Integrated Camera
2. Sun Shield
3. Remote Controller
4. Installation Manual
5. Mounting Hardware

Dimensions Unit: Inch (mm)

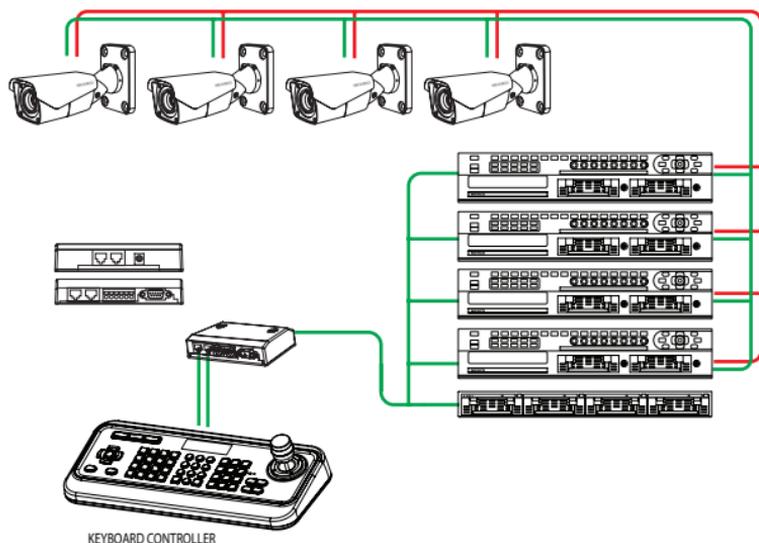


Connections & Wiring

Connecting the ZoomMatic™ Integrated Camera to the Controller

Additional Controller Keyboard and a variety of external switching devices such as Multiplexers (MUXes) and Digital Video Recorders (DVRs) may be incorporated to accommodate the needs from a small to a large surveillance/security system.

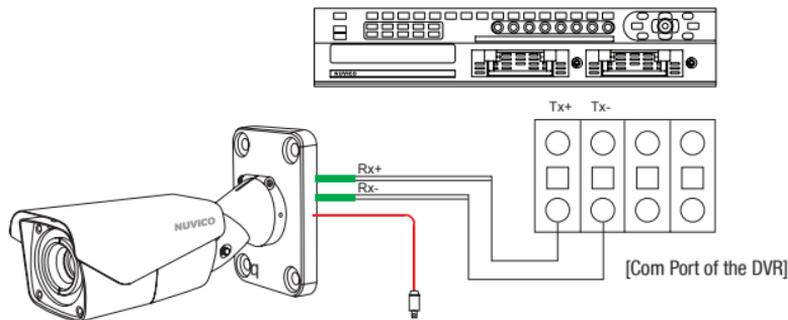
The below illustrates sample installation configuration



Connections & Wiring

Connecting the ZoomMatic™ Integrated Camera Directly to the DVR

- Locate the RS-422 Rx+ & Rx- conductor wire from the ZoomMatic™ Integrated camera.
- Connect the RS-485 Tx(+)/ Tx(-) of the DVR into Rx(+)/Rx(-) of the ZoomMatic™ Integrated camera.

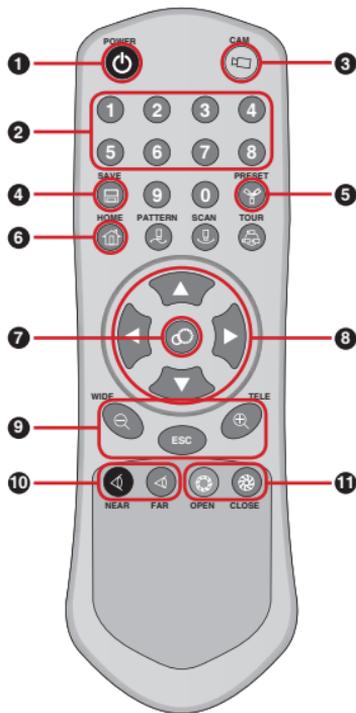


The above illustrates connecting ZoomMatic™ Integrated camera to the DVR

Remote Controller Keys & Descriptions

The ZoomMatic™ Integrated camera comes with a remote controller for ease of installation and control. Gain access to the OSD menu to simply modify any feature settings, recall any programmed presets, modify the motion detection sensitivity, or change the IR LED intensity.

- 1 POWER** – Not used
- 2 NUMBERS** – Use Numbers when changing the ID of the remote controller. They are also used to save or recall presets.
- 3 Camera Address (ID)** - Use CAM button to change the ID of the remote controller when controlling multiple cameras.
Example: To control CAM ID#2, Press 2 and CAM button in sequence.
- 4 SAVE** - Saves preset position.
Example: To save Preset #1, Press 1 and SAVE in sequence.
- 5 PRESET** - Recall preset.
Example: To recall Preset #1, Press 1 and PRESET in sequence.
- 6 HOME** - Immediately calls Home function.
- 7 MENU** – Recalls On Screen Display Menu.
- 8 ▼ DOWN / ▲ UP / ◀ LEFT / ▶ RIGHT**
Moves up/down in the menu.
Moves left/right in the menu.
Decreases/increases control.
- 9 ZOOM** - Zoom In / Out
- 10 FOCUS** – Adjusts focus.
- 11 IRIS** – Adjusts Iris.

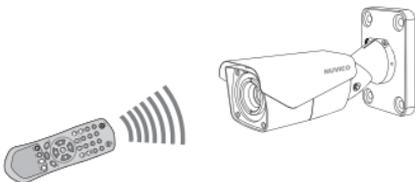


Note: When you use the remote controller, set the camera ID number up to 99.

Adjusting the Lens & Setup Menu

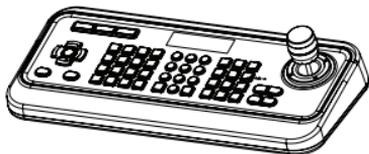
Adjusting Via Remote Control

Point the remote controller to the camera to control the zoom. Remote controller may be used to enter and make changes in the OSD Setup Menu.



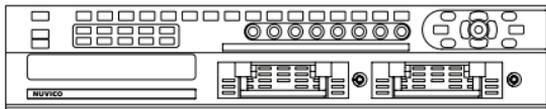
Adjusting Via Controller Keyboard

Use the controller keyboard (CK-1000) to adjust the zoom by twisting the joystick. You can also enter and make changes in the OSD Setup Menu.



Adjusting Via DVR (Digital Video Recorder)

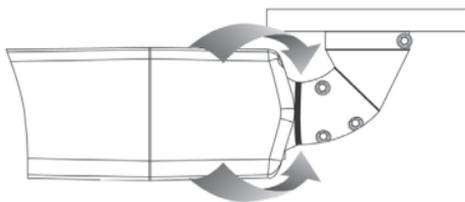
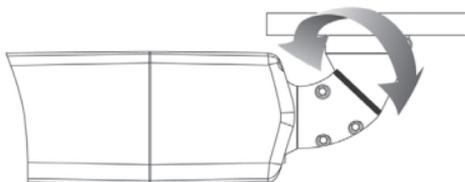
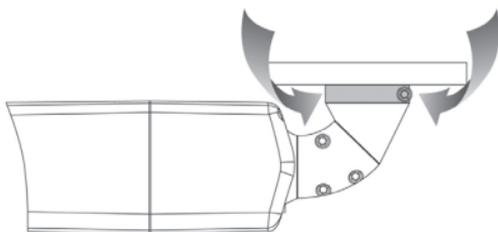
Use the DVR's PTZ menu to adjust the zoom using the + and -. You can also enter and make changes in the OSD Setup Menu.



Note: Make sure that the RS485 connection is connected to the Controller or DVR.

Adjusting the 3-Axis Bracket

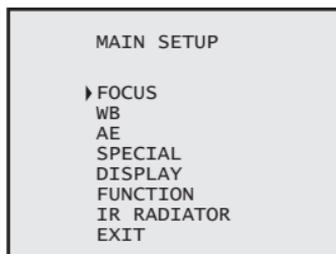
Loosen the corresponding screws before attempting to make Pan, Tilt and Rotation adjustments.



OSD Menu Controls & Navigation

1. OSD MENU CONTROLS (On-Screen-Display)

- **Menu Key** - Used to access Main menu.
- **▲ Up / ▼ Down Key** - Used to scroll through the desired sub-menu selection and to move the cursor up or down during the OSD menu.
- **◀ Left / ▶ Right Key** - Used to adjust the desired menu selection, and to move the cursor left or right during the OSD menu. Also used to confirm the setting changes.
- **ESC Key** - Used to exit from the sub-menu without saving.



1.1 Entering and Navigating the Menus

To enter the main menu, press the [MENU] key. To enter the sub-menu, scroll down to the desired sub-menu and press the [▶] RIGHT key. Scrolling the available options are accomplished by pressing the corresponding [▲/ ▼] UP/DOWN arrow keys.

1.2 Go to the Main Menu from the Sub-Menu

To go to the Main menu from the Sub-menu, press the [▶] RIGHT key while highlighting 'Exit' or the 'End' options. You may also exit by pressing the [ESC] button.

1.3 Exiting the OSD Menu

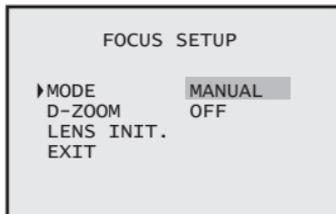
Once all of the desired changes have been made, move the cursor over to the SAVE AND EXIT line to save and exit. Choosing EXIT will lose all changes and revert back to its previously saved configuration.

OSD Menu Terms & Settings

2. FOCUS SETUP

The ZoomMatic™ Integrated camera can be set up to automatically focus to the changing environment or just once at a preset field of view. (e.g., a man walking across the monitored area closer to the camera)

IMPORTANT: Continuous use of the Auto Focus feature under heavy movement conditions will significantly shorten the lifespan of the lens.



2.1 MODE (ONE-PUSH, MANUAL, AUTO)

- **ONE-PUSH:** Focus is automatically adjusted just once following a zoom operation. This focus setting will not change until another zoom operation is made.
- **MANUAL:** Control the Focus manually in this mode.
- **AUTO:** Focus is automatically adjusted independently of the zoom operation.

2.2 D-ZOOM (ON, OFF)

When the feature is set to ON, it will digitally magnify images after the optical magnification has reached its limit.

- **ON:** Enable the digital zoom magnification.
- **OFF:** Disable the digital zoom magnification and utilize the optical zoom only.

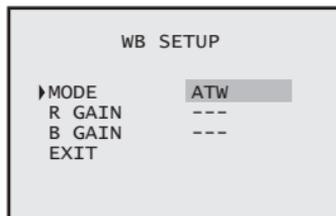
2.3 LENS INIT

This feature re-initializes the lens.

OSD Menu Terms & Settings

3. WB SETUP (White Balance)

The WB SETUP is used to control the white balance under different illumination sources. Adjust this setting to calibrate the camera for correct color rendering.



3.1 MODE (ATW, AWC, INDOOR, OUTDOOR, MANUAL)

- **ATW** (Automatic Tracking White Balance): ATW mode monitors the color changes and automatically adjusts the red and blue values within a set parameter (Light source between 2,500°K~8,000°K)
- **AWC** (Automatic White Balance Control): AWC mode monitors the color changes and automatically adjusts the red and blue values accordingly. AWC does not have a color temperature range.
- **INDOOR**: Fixed at 3200°K
- **OUTDOOR**: Fixed at 5400°K
- **MANUAL**: Select the MANUAL mode to adjust the red or blue color values manually.

Note: ATW mode is recommended for most environments. The factory default is set to ATW.

3.2 R GAIN (0 ~ 255)

Displays the current red value of the WB mode. Red value ranges from 0~255.

3.3 B GAIN (0 ~ 255)

Displays the current blue value of the WB mode. Blue value ranges from 0~255.

OSD Menu Terms & Settings

4. AE SETUP (Automatic Exposure)

The AE Control function is used to control the Iris, Shutter, AGC (Gain), DSS (Slow Shutter), and BRIGHTNESS. It can also be set to AUTO (recommended) or one of 3 other pre-configured settings. The pre-configured settings are as follows: AUTO, SHUTTER (Shutter Priority), IRIS (Iris Priority), or MANUAL.

AE SETUP	
▶MODE	AUTO
SHUTTER	----
IRIS	---
AGC	-
DSS	X4
BRIGHTNESS	48
FLICKERLESS	OFF
END	

4.1 MODE (AUTO, SHUTTER, IRIS, MANUAL)

- **AUTO:** The AUTO mode will continuously monitor changes in the lighting intensity and automatically adjust the Shutter, Iris, and AGC (Gain) to the most optimal level.
- **SHUTTER:** Make your Shutter adjustments here. Once modified, this value remains fixed. The Iris, and AGC cannot be changed while in this mode.
- **IRIS:** Make your Iris adjustments here. Once modified, this value remains fixed. The Shutter, and AGC cannot be changed while in this mode.
- **MANUAL:** The Iris, Shutter, and AGC (Gain) can be controlled manually. The setting values are fixed and will not deviate once assigned a specific value.

OSD Menu Terms & Settings

4.2 SHUTTER (1/60 ⇨ ... ⇨ F1/100,000)

The SHUTTER speed can be selected according to user preference in the SHUTTER and MANUAL modes. The shutter speed of 1/60 (NTSC), or 1/50 (PAL) seconds are recommended for most environments.

4.3 IRIS (OPEN, CLOSED, F16.0 ⇨ ... ⇨ F1.8)

The IRIS of the camera can be set to user preference in the IRIS and MANUAL modes.

4.4 AGC - Automatic Gain Control (0 ~ 30)

The AGC is automatically controlled in the AUTO, SHUTTER, and the IRIS modes. You can have manual control over the AGC in the MANUAL mode only. This function is used to amplify the video signal when it falls below the set parameter. Increasing the AGC level brightens the overall screen, but a setting too high can produce noise.

4.5 DSS: Digital Slow Shutter (OFF, 2X, 4X ⇨ ... ⇨ 128X, 256X)

The DSS can be set to user preference under any AE mode setting. This function is used to boost the light sensitivity of the camera by slowing down the effective shutter speed. Increasing the DSS enhances the low light performance of the camera, but also produces "ghosting" effect, which becomes more pronounced.

4.6 BRIGHTNESS (0 ~ 90)

The brightness can be set to user preference under any AE mode setting. The brightness ranges from 0~90 - 0 at its darkest, and 90 at its brightest.

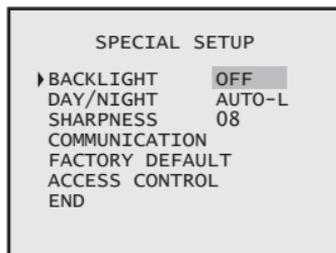
4.7 FLICKERLESS (ON, OFF)

Enable the FLICKERLESS mode if the screen flickers due to differences in light and electric frequencies.

OSD Menu Terms & Settings

5. SPECIAL

The Special Setup is used to control the DAY/NIGHT, SENSING, SHARPNESS, COMMUNICATION, ACCESS CONTROL, and FACTORY DEFAULT of the Integrated camera.



5.1 BACKLIGHT (OFF, LOW, MID, HIGH)

BLC can assist in compensating for exposure problem associated with very bright backgrounds causing subjects to bloom or silhouette. Select from LOW, MID, HIGH, or turn the function OFF entirely.

5.2 DAY/NIGHT (AUTO-L/M/H, COLOR, B/W)

This function is used to control the color setting during daytime or night-time operations.

- **AUTO-L (LOW) / AUTO-M (MID) / AUTO-H (HIGH):** The color mode is operated during daytime and automatically converts to B/W mode in the absence of adequate lighting during night-time.
- **COLOR:** The camera is always in color mode even during night-time operation.
- **B/W:** The camera is always in B/W (black and white) mode.

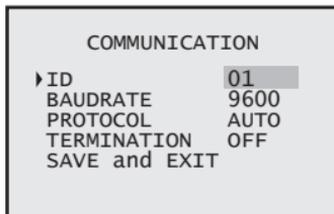
5.3 SHARPNESS (0~15)

Increasing this value sharpens the object edges. A setting too high produces noise and can potentially obscure the image.

OSD Menu Terms & Settings

5.4 COMMUNICATION

The function is used to setup the ID, BAUDRATE, PROTOCOL, and set the TERMINATION of the ZoomMatic™ Integrated camera.

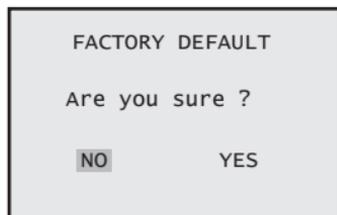


- **ID:** Assign the ID number to the camera. Assigning an ID number can easily identify the camera from your DVR or network. The ID number ranges from 1-99. **Note:** The CAMERA ID under DISPLAY must be set to ON to be visible on the screen.
- **BAUDRATE:** Configure the camera baud rate (2400, 4800, 9600, 19200, 38400, 57600). Baudrate is set to 9600 as the factory default.
- **PROTOCOL:** Assign the protocol to the camera. (AUTO, NUVICO, Pelco-D/P)
- **TERMINATION:** Every device that is connected at the end of the communication data line must be terminated to prevent potential control signal errors. Switch the TERMINATION ON or OFF.

OSD Menu Terms & Settings

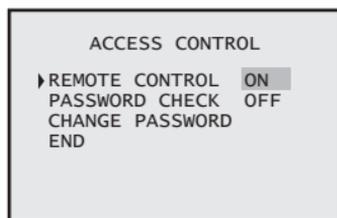
5.6 FACTORY DEFAULT

This function is used to reset all the camera settings to the factory default. **This will erase all 'Camera' and 'Function' programming! Everything will be erased!**



5.5 ACCESS CONTROL (REMOTE CONTROL, PASSWORD CHECK, CHANGE PASSWORD)

This function is used to set limitations to the remote control access and to set up a password for additional security measures.

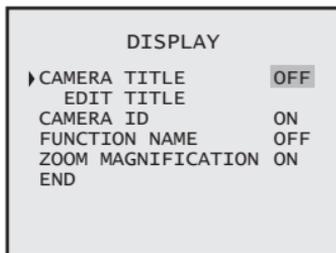


- **REMOTE CONTROL:** For unlimited access to all the functions, set this feature to ON. To limit the remote capability (Everything except the [MENU] key), set it to OFF.
- **PASSWORD CHECK:** Set this feature ON, to turn on the password prompt on the main menu screen. You will be prompted to enter the password each time the OSD menu is accessed. **Note:** The factory default password is "[9-PRESET-9-PRESET-9-PRESET-9-PRESET]"
- **CHANGE PASSWORD:** This feature is used to change the current password. Input a number from 1-9 followed by the [PRESET] key.

OSD Menu Terms & Settings

6. DISPLAY

The Display Setup is used to set the CAMERA TITLE, CAMERA ID, FUNCTION NAME, and ZOOM MAGNIFICATION of the ZoomMatic™ Integrated camera.

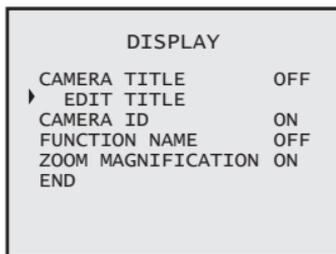


6.1 CAMERA TITLE

This function enables or disables the assigned CAMERA TITLE display on the main screen

6.2 EDIT TITLE

This function is used to assign a custom title to easily identify the monitored area. You may enter up to 10 characters to create a custom title, such as Front Door, Hallway, or Rear Entry etc.



OSD Menu Terms & Settings

6.2 EDIT TITLE (Continued..)

Programming The CAMERA TITLE

1. Enter the EDIT TITLE screen by highlighting the function and pressing the [▶] RIGHT key to enter the sub-menu.

```
TITLE: CAMERA
```

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
0123456789()<>[]+=#*!?,.:
```

```
←→↑↓:Sel TEL/WIDE:Move  
MENU or ENTER:Complete  
ON/OFF:Ins/De1 ESC:QUIT
```

2. Once the default title appears with cursor blinking below the first letter, navigate using the [▼ / ▲ / ◀ / ▶] arrow key on the remote controller to the alphabetical letters, numbers, and symbols, to create a custom title moving one letter at a time to the right. (Maximum 10 characters)
3. Once the desired TITLE has been entered, press [ESC] key to save and exit.

6.3 CAMERA ID

This function enables or disables the assigned CAMERA ID display on the main screen

6.4 FUNCTION NAME

This function enables or disables the assigned FUNCTION NAME display on the main screen

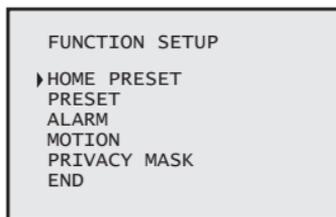
6.5 ZOOM MAGNIFICATION

This function displays the ZOOM MAGNIFICATION factor on the main screen.

OSD Menu Terms & Settings

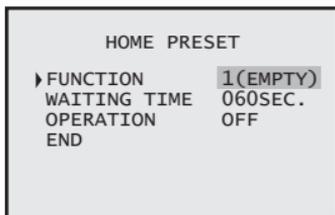
7. FUNCTION

The Function Setup is used to set the HOME PRESET, PRESET, ALARM, MOTION, and PRIVACY MASK of the ZoomMatic™ Integrated camera.



7.1 HOME PRESET (FUNCTION, WAITING TIME, OPERATION)

Please program the Preset prior to designating the 'Home Preset.' This function recalls the predefined PRESET as the default function after a prolonged period of inactivity passes.



- **FUNCTION:** Assign the desired PRESET as the HOME PRESET.
- **WAITING TIME:** Determine the desired dwell time before executing the HOME PRESET. (10-240sec)
- **OPERATION:** Activate this feature ON/OFF

OSD Menu Terms & Settings

7.2 PRESET (NO., FOCUS, IRIS, BACKLIGHT, TITLE, SAVE PRESET)

PRESET is designed to store ZOOM, FOCUS, IRIS, and BACKLIGHT, as well as the TITLE settings to the camera memory, allowing otherwise complicated set of settings to be recalled at a touch of a button.

PRESET SETUP	
▶ NO.	1 (EMPTY)
FOCUS	ONE-PUSH
IRIS	AUTO
BACKLIGHT	OFF
TITLE	PRESET 1
SAVE PRESET	
END	

- **NO:** Assign a desired PRESET number
- **FOCUS:** Determine the FOCUS method. (See section 1: FOCUS SETUP)
- **IRIS:** Select the desired IRIS mode.
- **BACKLIGHT:** Select the desired BACKLIGHT COMPENSATION mode.
- **PRESET TITLE:** Create a PRESET TITLE to easily identify the programmed PRESET.

Recalling the Programmed PRESET

Recall the desired PRESET by pressing the corresponding number key [1-8] followed by the [PRESET] key. Avoid recalling a PRESET if the MOTION SETUP is already set up and is currently running. To avoid conflict, either turn OFF the motion detection, or wait until the area is cleared of activity.

7.3 ALARM SETUP (INPUT, OUTPUT, PRESET, HOLD TIME)

This function uses the Magnetic, PIR or other external sensor devices to signal the camera reacting to an event. **Important:** Please program a PRESET prior to designating ALARM action.

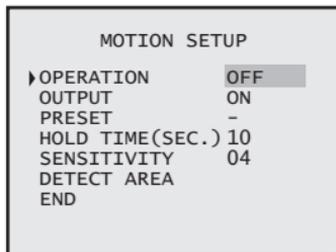
ALARM SETUP	
▶ TYPE	ALARM1
INPUT	OFF
OUTPUT	ON
PRESET	-
HOLD TIME (SEC.)	03
END	

- **INPUT:** Designate the dry contact relays for ALARM input. (OFF, N/O, N/C)
- **OUTPUT:** Activate the relay ON/OFF.
- **PRESET:** Assign the desired PRESET for ALARM action.
- **HOLD TIME:** Determine the dwell time of the relay output for alarm output. (3~60sec)

OSD Menu Terms & Settings

7.4 MOTION SETUP (OPERATION, OUTPUT, PRESET, HOLD TIME, SENSITIVITY, DETECT AREA)

The ZoomMatic™ Integrated camera has built-in motion detection that allows movement to be observed on the screen, and be set up to trigger an ALARM or PRESET to take closer look at the subject or area being monitored. **Note:** A motion icon (running man) appears on the screen when movement is detected.



- **OPERATION:** Activate the motion detection ON/OFF.
- **OUTPUT:** Determine whether to just display when motion is detected, or to trigger an ALARM response.
- **PRESET:** Assign the desired PRESET for MOTION action.
- **HOLD TIME:** Determine the dwell time of the MOTION output. (3~60sec)
- **SENSITIVITY:** Determine the sensitivity of the motion detection. (1 Low ~ 8 High)
- **DETECT AREA:** Specific areas of the frame can be monitored for movement. A grid of 48 squares will appear. Each square can be individually turned active or inactive for motion detection. Using the arrow navigation keys (▼ / ▲ / ◀ / ▶) on your remote controller, navigate to a specific area of the screen and use the [Near or Far] focus keys to select that square ON or OFF.



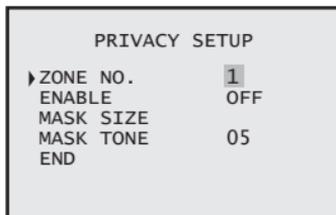
- **Active Areas:** Clear
- **Inactive Areas:** Gray
- **Current Position:** Flashing Cursor

Important: By factory default, the edges around the frame are already inactive. You may enable or disable the rest of the squares once motion detection has been turned on.

OSD Menu Terms & Settings

7.5 PRIVACY MASK (ZONE NO., ENABLE, MASK TONE, CONTROL AREA)

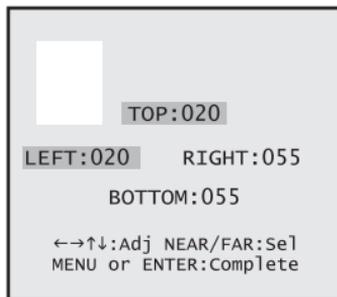
Specific areas of the camera frame can be masked, or concealed for privacy. The Integrated camera offers masking of up to 4 unwanted areas.



- **ZONE NO.:** Assign a ZONE number 1-4.
- **ENABLE:** Activate the MASK ON or OFF.
- **MASK SIZE:** Designate the location and size of the mask.
- **MASK TONE:** Designate the desired mask tone (Tint). 00 indicates a darkest tint (black) and 15, the lightest tint (white)..

Programming the PRIVACY MASK

1. Highlight the ENABLE option, then turn the PRIVACY MASK function ON.
2. Scroll down to the MASK SIZE, then press the [▶] RIGHT key to enter its sub-menu.
3. Adjust the size AND location by increasing or decreasing the values on the TOP, LEFT, RIGHT, and BOTTOM fields using the [▲ / ▼] UP or DOWN keys.



Adjusting the Location/Size of the Mask: Don't attempt to adjust the size then move the mask. Rather, make the MASK large enough to cover the entire unwanted area then adjust the size appropriately by switching to the other set (side) of controls.

4. Repeat steps 2-3 as many times as necessary to conceal all the unwanted areas.

OSD Menu Terms & Settings

7.6 D-ZOOM (Digital Zoom)

The ZoomMatic™ Integrated camera is equipped with both optical zoom and digital zoom to allow for maximum magnification. Once set to ON, the camera will automatically digitally magnify the image after the optical magnification has reached its limit.

8. IR RADIATOR (Smart IR)

The ZoomMatic™ Integrated camera is equipped Smart IR LEDs that automatically detects too much IR reflection and adjusts the intensity to its most optimal levels preventing 'Hot-spots' or over-exposure. However, the IR LEDs can also be fine-tuned manually.

IR RADIATOR	
▶LINE-1	0
LINE-2	0
LINE-3	0
LINE-4	0
CONTROL	MANUAL
END	

- **LINE-1:** Controls the outer most ring of LEDs. Setting 0 indicated that the LEDs have been turned OFF, and setting 9 indicates the LEDs are at its most intense.
- **LINE-4:** Controls the inner most ring of LEDs. Setting 0 indicated that the LEDs have been turned OFF, and setting 9 indicates the LEDs are at its most intense.

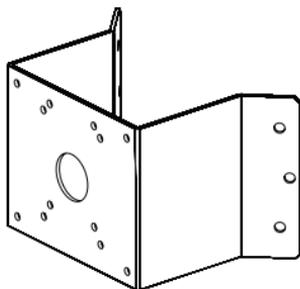
Note: For best result, leave this function in AUTO mode. When using the MANUAL mode please adjust the IR LEDs intensity levels while viewing the changes on a monitor.

ZoomMatic™ Integrated Camera Accessories

The following are various mounting accessories available for the ZoomMatic™ Integrated camera.

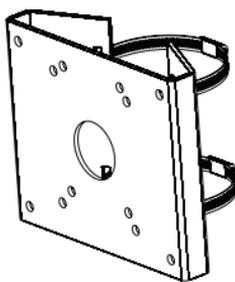
Universal Corner Mount Bracket

CA-CMB



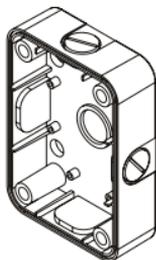
Universal Pole Mount Bracket

CA-PMB



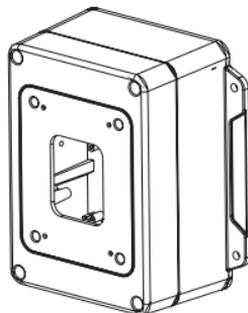
Junction Box

CA-JB



Multipurpose Junction Box Enclosure

CA-JB2



Technical Specifications | NTSC

Technical Specifications	CI-Z22N-L
Video Format	NTSC
Image Sensor	1/4" CCD
Horizontal Resolution	580 TV Lines
Day/Night Functionality	Yes w/ ICR
Lens Type	22X A/F Optical Zoom 3.9mm-85.8mm 16X Digital Zoom (Total: 352X), Auto Focus & Auto Iris
Angle of View	49.5°(W) ~ 2.4°(T)
Power IR LED	78
IR LED Distance	Up to 300ft.
LED Illumination Angle	80°
Min. Focus Distance	3ft
Camera Setup & Zoom Control	IR Remote Controller, Controller Keyboard, NUVICO DVRs
Presets	8
Communication	RS-485
Sync System	Internal
Effective Pixels (HxV)	768(H) x 494(V)
Scanning System	525 Lines. 2:1 Interlaced
Electronic Shutter	1/60 ~ 1/100,000 sec.
Main Video Output	1.0 Vp-p Composite, 75 ohm
Service Monitor Output	1.0 Vp-p Composite, 75 ohm
Minimum Illumination	0.2 Lux (Color), 0.02 Lux (B/W), 0.00 Lux (IR LED On)
S/N Ratio	More than 50dB (AGC Off)
Camera Control & Setup	OSD Menu
General Information	CI-Z22N-L
Operating Temperature	-40°F ~ 122°F (-40°C ~ +50°C) With Fan & Heater
Operating Humidity	Within 90% RH
Power Consumption	40VA
Input Voltage	24VAC Only

*Specifications are subject to change without any prior notice.

NUVICO®

Tel: 201-541-1605 Fax: 201-541-1620
Toll Free: 866-523-1700
E-mail: techsupport@nuvico.com
www.nuvico.com

ZoomMatic™ and the NUVICO logos are registered trademarks of NUVICO.
© Copyright 2011, NUVICO. All rights reserved.

Version 1.0