

INSTRUCTION MANUAL Ver 1.0.2d

Pan, Tilt and Zoom Dome Camera / ACD-1500





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Features**❑ Camera Specification**

- Sony Module 480 Lines
- .01 Lux (Night Operation)
- 27X Optical Zoom
- 10X Digital Zoom
- Total Zoom 270X
- 3.6mm – 88mm Zoom
- Day & Night Function
- 24v AC

❑ Complete View

- 360 Degree Pan, 90 Degree Tilt. For No Blind Spots

❑ Housing

- Indoor / Outdoor use, Weather Proof Housing.
- Multiple Mounting Configurations.
- Operating Temperatures: 0 Deg. C ~ 40 Deg. C

❑ PTZ Control




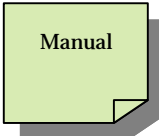

- RS-485 Communication, MAX 256 Multi-drop
- Versatile Pelco-D and Pelco P Protocol
- Variable Pan and Tilt Speed
- 64 Programmable Presets
- OSD Setup
- 1 Programmable Cruise Sequence

Components

□ Parts Information

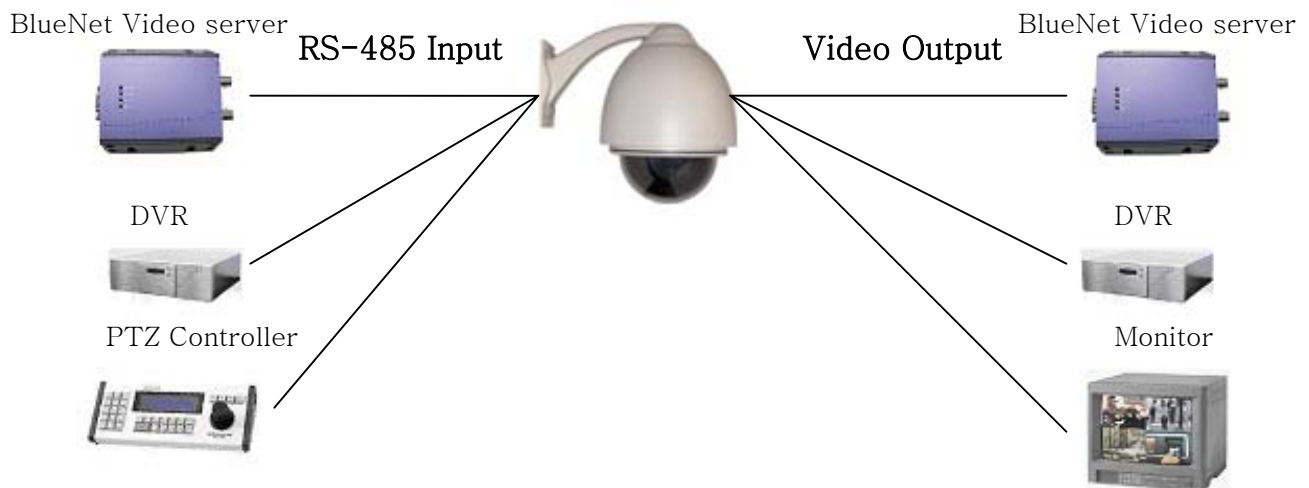
Item	Part No.	Description
Dome Camera and Housing	ACD-1500	NTSC Dome Camera, Weather Proof Housing, Including Transparent Dome
Wall Mount Bracket		Bracket for mounting PTZ to Wall
Ceiling Mount Bracket		Bracket for mounting PTZ to Ceiling
Mounting Screws & Wrench		Allen Screws for mounting PTZ to Mount
Power Supply		24v AC Power Supply
Manual		Manual for ACD-1500

□ Default Components

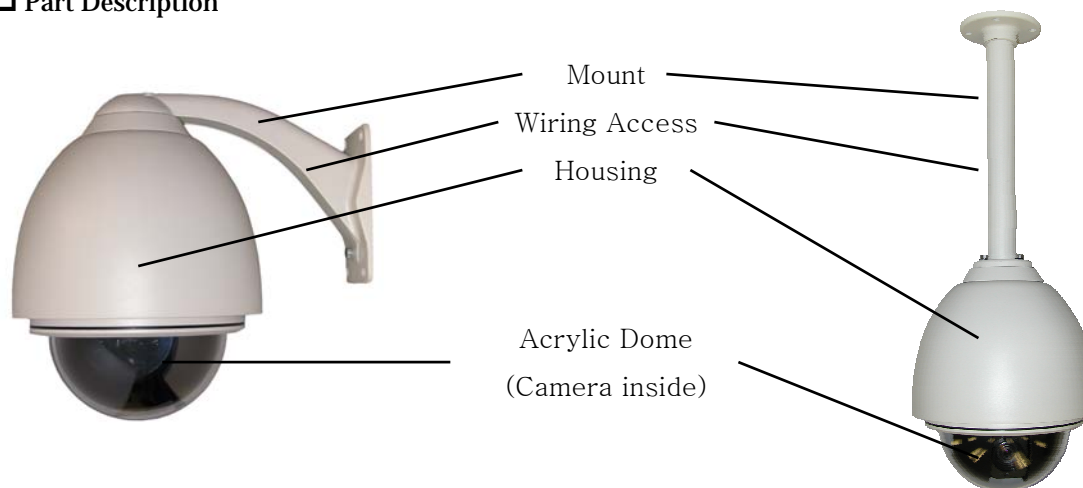
Dome Camera and Housing 	Wall Mount Bracket 
Ceiling Mounting Bracket 	Accessories  ACD-1500 Manual  Screws, Wrench and Power Supply

System Configuration

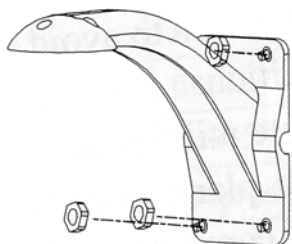
❑ Configuration



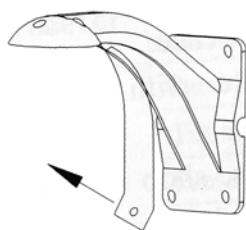
❑ Part Description



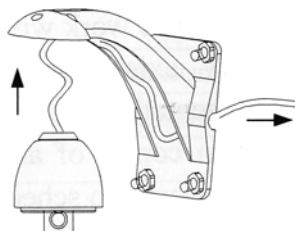
- | | |
|--------------------|--|
| • Mount | Used to install Camera Housing |
| • Housing | Protects Internal Components From the Elements |
| • Acrylic Dome | Protects PTZ Camera |
| • Wiring Access | Allows access to internal wiring |
| • Built in Heaters | Keeps lens clear in cold weather |

System Installation**❑ Wall Mount Installation using Outdoor Housing Assembly**

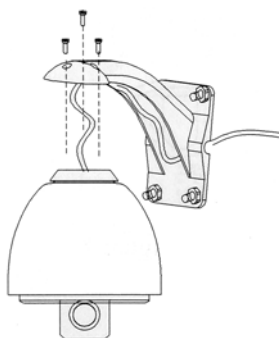
- 1) Attach the Wall Mount Bracket to the wall. Make sure the wall can support the weight and vibration of the camera and housing.



- 2) Remove thumb screw holding access cover in place on Mounting Arm.



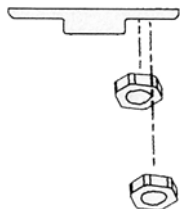
- 3) Route the wiring through the inside of the arm and out the access hole.



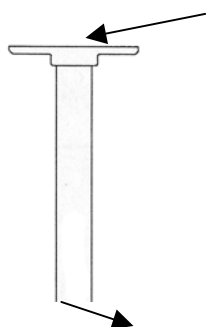
- 4) Assemble and screw the Outdoor Housing Assembly on the Mount Bracket while routing the wiring from the camera through the neck of the bracket and out the access hole.

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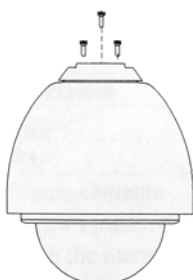
❑ Ceiling Mount Installation using Outdoor Housing Assembly



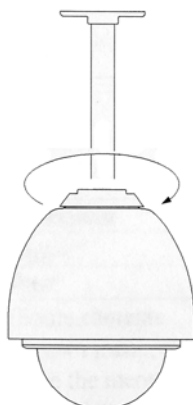
- 1) Mount the Top Ceiling Mount Bracket to the Ceiling. Make sure the Ceiling can support the weight and vibration of the camera and housing.



- 2) Route the wiring through the bottom Ceiling Mount Bracket and Extension.

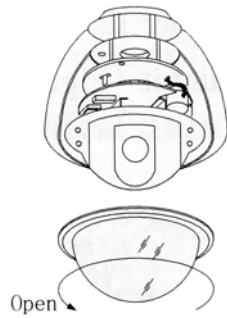


- 3) Attach assembly to the PTZ camera using the included Allen Screws. Tighten setscrews.

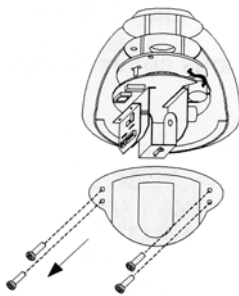


- 4) Align the PTZ Assembly into the top of the ceiling mount. Turn clockwise to thread extension into mount. Tighten setscrews.

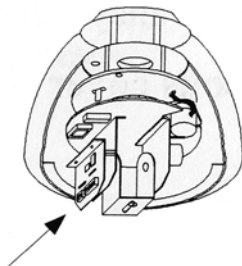
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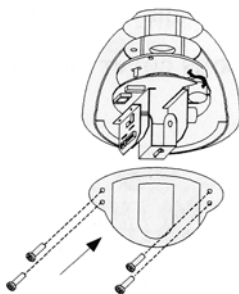
- 5) Unscrew Polycarbonate dome cover counter-clockwise.



- 6) Remove BLACK camera cover inside of housing.



- 7) Set DIP switches according to Protocol and Baud rate desired. (See page 9 for details)



- 8) Replace BLACK camera cover and Polycarbonate dome cover.

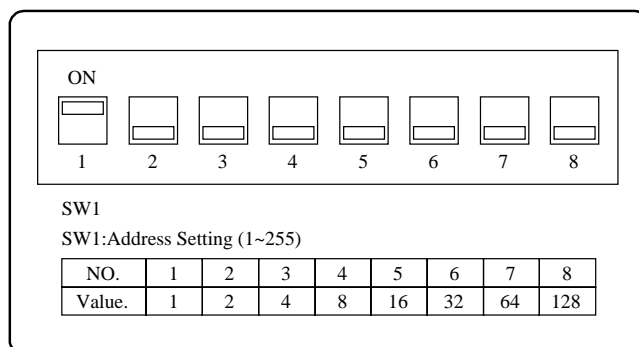
Camera Addressing

❑ RS-485 communication

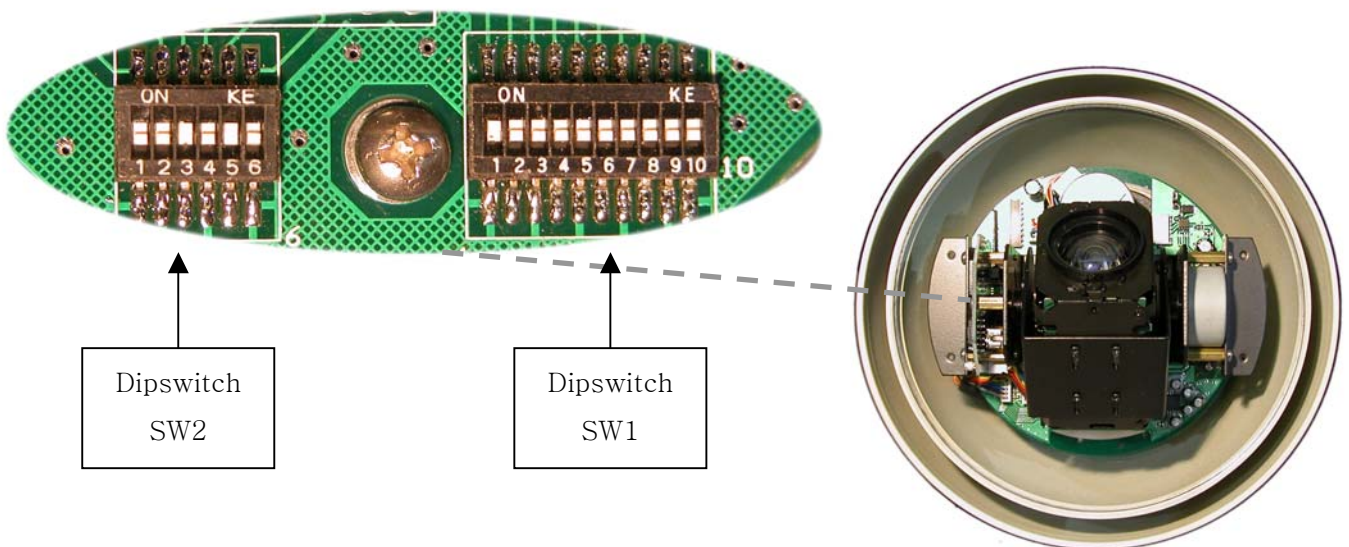
RS-485 communication is used to control the camera. Protocol, Baud rate and Camera Address are set using 2 Dip Switch sets under the BLACK camera cover inside the PTZ housing. Each camera connected to the PTZ controller must have a unique address.

- Specification Standard RS-485 with MAX. 256 Camera Control
- Number of wire 2 Wire (D+, D-)
- Protocol Pelco-D, Pelco-P, A01, B01, Santachi, Longcomity and HUNDA600

❑ SW 1 : Camera Address Settings



- Camera address is set to 1 as the factory default.
- When a dip switch is ON, its bit logic is 1
- Dip Switch 9 and 10 are always set to OFF



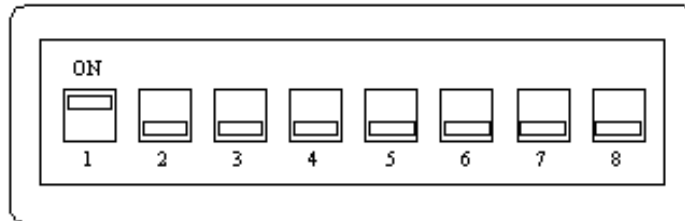
❑ SW 1 : Camera Address Settings (continued)

When using more than 1 RS-485 device each unit must be given a unique address. Refer to the chart on the previous page for the value of each dip switch. For each dip switch that is ON the value/values are added together, the total is the address of that unit.

For Example:

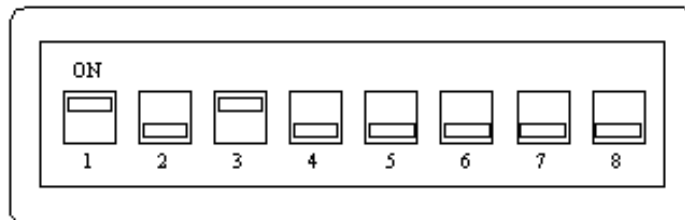
For an address of 1:

Dip switch #1 (value = 1) will be ON all others OFF



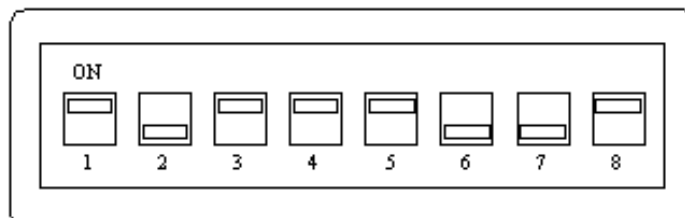
For an address of 5:

Dip switch #1 (value = 1) & #3 (value = 4) will be ON all others OFF



For an address of 157:

Dip Switch #1 (value = 1), #3 (value = 4), #4 (value = 8), #5 (value = 16), #8 (value = 128) will be ON all others OFF

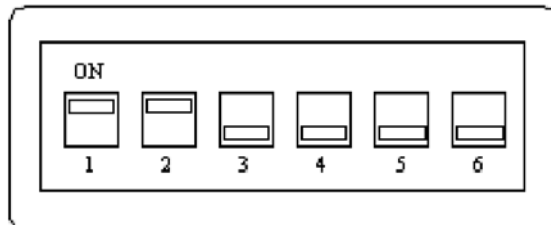


❑ SW 2 : Camera Protocol and Baud Rate Settings

This camera supports multiple RS-485 Protocols and Baud Rates. The Baud rate is set separately from the Protocol on the SW2 Dip switch located under the BLACK camera cover. The table below contains a list of protocols supported by the camera and the default baud rate for the protocol.

Supported Protocol	Selection Of Protocols				Default Baud Rates	
	1 st	2 nd	3 rd	4 th	5 th	6 th
Pelco D /2400	ON	ON	OFF	OFF	OFF	OFF
Pelco P /4800	OFF	OFF	ON	OFF	ON	OFF
Pelco P /9600	OFF	OFF	ON	OFF	OFF	ON
A01	OFF	OFF	OFF	OFF	ON	OFF
B01	ON	OFF	OFF	OFF	OFF	ON
Santachi	OFF	ON	OFF	OFF	OFF	ON
Longcomity	OFF	ON	ON	OFF	OFF	ON
Hunda600	ON	ON	ON	OFF	OFF	ON

Dip Switch settings for configuring the camera to use Pelco D Protocol at 2400 Baud:



Below is a table showing the proper settings of the 5th and 6th dip switch on SW2 for setting preferred baud rate.

Baud Rate	Selection Of Protocols				Baud Rates	
	1 st	2 nd	3 rd	4 th	5 th	6 th
2400					OFF	OFF
4800					ON	OFF
9600					OFF	ON
19200					ON	ON

Advanced Functions

All of the Advanced Functions of this camera are controlled by calling and setting specific presets to enable and disable the functions. This includes the OSD (On Screen Display) Setup. Your PTZ controller must be able to call and set presets 51 through 63 to be able to access the Advanced Functions of this camera.

❑ Auto Scan:

This camera is equipped with an AUTO SCAN function that allows you to pan between 2 programmable points. You are able to select between 3 different pan speeds while in AUTO SCAN mode. To use the AUTO SCAN you must first program the START POINT and END POINT. Once the START POINT and END POINT are programmed you can activate the AUTO SCAN feature while selecting the SCAN SPEED.

Function	Action on Controller
Set START POINT	Set preset 52
Set END POINT	Set preset 53
Enable AUTO SCAN (Low Speed)	Call preset 51
Enable AUTO SCAN (Medium Speed)	Call preset 52
Enable AUTO SCAN (High Speed)	Call preset 53

❑ Camera Power:

The CAMERA POWER feature allows you to power the camera ON or OFF remotely.

Function	Action on Controller
Camera POWER ON	Call preset 54
Camera POWER OFF	Set preset 54

❑ Back Light Compensation:

Back Light Compensation allows the camera to compensate for bright lights in the picture. You can set the BLC ON or OFF manually by using the method below or by setting the BLC to AUTO in the OSD (On Screen Display).

Function	Action on Controller
BLC ON	Call preset 55
BLC OFF	Set preset 55

❑ ICR Shor:

Function	Action on Controller
ICR ON	Call preset 56
ICR OFF	Set preset 56

Advanced Functions (continued)

❑ Digital Zoom:

Digital Zoom allows the camera to zoom further than the optical limit of the camera by digitally enhancing the image. The digital zoom function turns this feature on and off.

Function	Action on Controller
DIGITAL ZOOM ON	Call preset 58
DIGITAL ZOOM OFF	Set preset 58

❑ Focus Mode:

The Focus Mode can be set using this function or in the OSD.

Function	Action on Controller
FOCUS MODE – AUTO	Call preset 59
FOCUS MODE - MANUAL	Set preset 59

❑ Iris Mode:

The Iris Mode can be set using this function or in the OSD.

Function	Action on Controller
IRIS MODE – AUTO	Call preset 60
IRIS MODE - MANUAL	Set preset 60

❑ White Balance Mode:

The White Balance Mode can be set using this function or in the OSD.

Function	Action on Controller
WHITE BALANCE MODE - AUTO	Call preset 61
WHITE BALANCE MODE – MANUAL	Set preset 61
WHITE BALANCE MODE – INDOOR	Call preset 62
WHITE BALANCE MODE – OUTDOOR	Set preset 62
WHITE BALANCE MODE – ATW	Call preset 63
WHITE BALANCE MODE – ONE PUSH WHITE BALANCE	Set preset 63

❑ Auto Cruise:

Auto Cruise allows you to scan from a selection of presets. Program the presets into the camera that you would like to scan between. Presets must be in the sequence you would like them to scan starting with preset 1. To activate the Auto Cruise SET preset 51

Function	Action on Controller
ACTIVATE AUTO CRUISE	Set preset 51

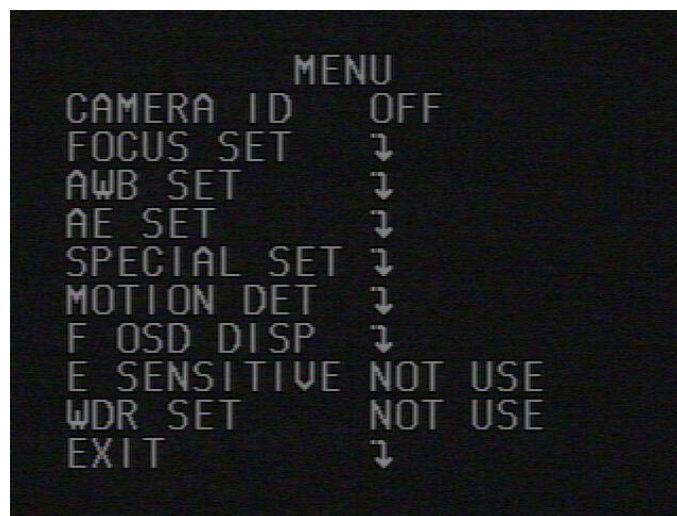
On Screen Display

❑ On Screen Display (OSD):

There are 2 modes in the OSD function. The first enables the On Screen Alerts (Zoom, Motion Detection, etc). The second opens the OSD menu. In the OSD you maneuver using the ZOOM IN, ZOOM OUT, FOCUS NEAR and FOCUS FAR functions on your controller.

Function	Action on Controller
ON SCREEN ALERTS ON	Call preset 57
OSD Menu OPEN	Call preset 57 Twice
ON SCREEN ALERTS or OSD CLOSE	Set preset 57
MOVE CURSOR DOWN	ZOOM OUT
MOVE CURSOR UP	ZOOM IN
MOVE CURSOR RIGTH or <ENTER>	FOCUS NEAR
MOVE CURSOR LEFT	FOCUS FAR

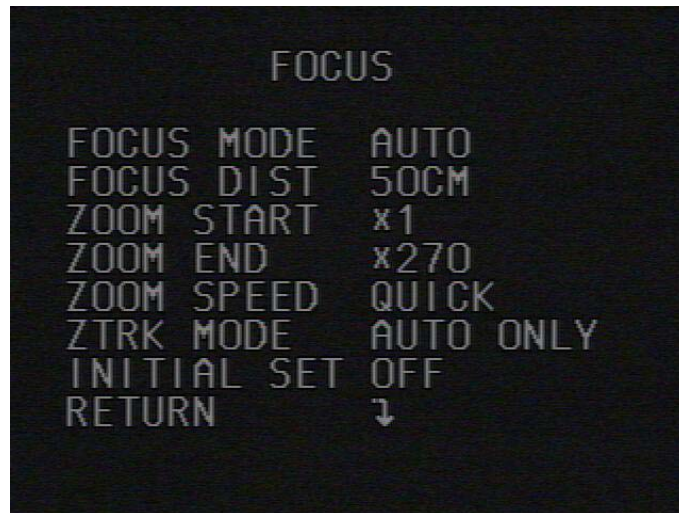
OSD Main Menu



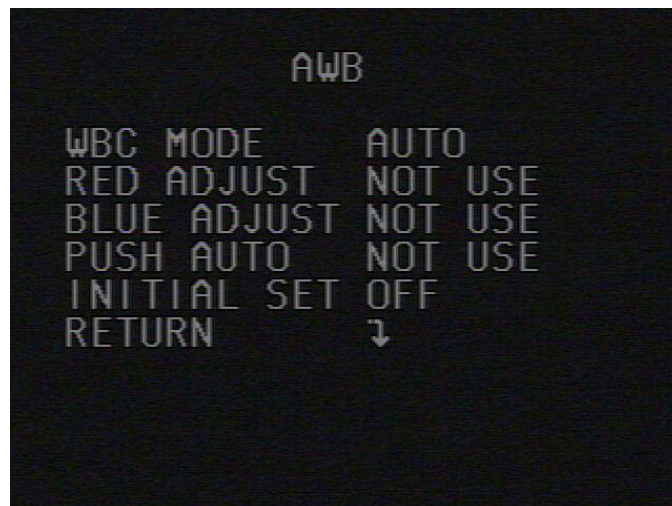
Menu Option	Description
CAMERA ID	
FOCUS SET	Opens the Focus Menu (see page)
AWB SET	Opens the Auto White Balance Menu (see page)
AE SET	Opens the Auto Exposure Menu (see page)
SPECIAL SET	Opens the Special Menu (see page)
MOTION DET	Opens the Motion Detection Menu (see page)
F OSD DISP	Opens the Function Display Menu (see page)
E SENSITIVE	Not Used
WDR SET	Not Used
EXIT	Exits OSD

On Screen Display (continued)**❑ Focus Set Menu:**

Focus Menu

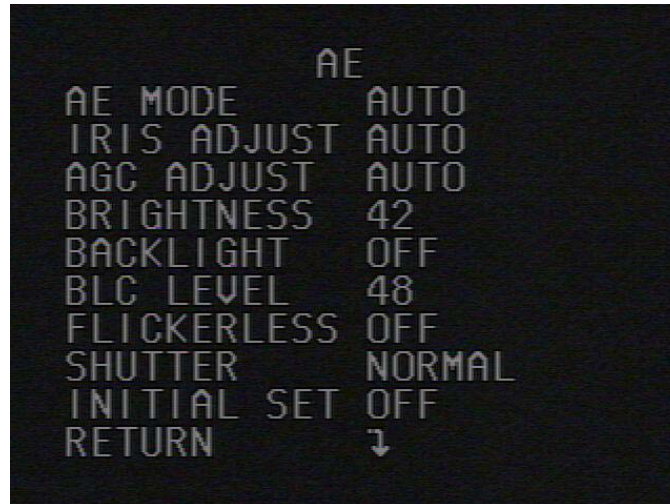
**❑ Auto White Balance (AWB) Menu:**

Auto White Balance Menu

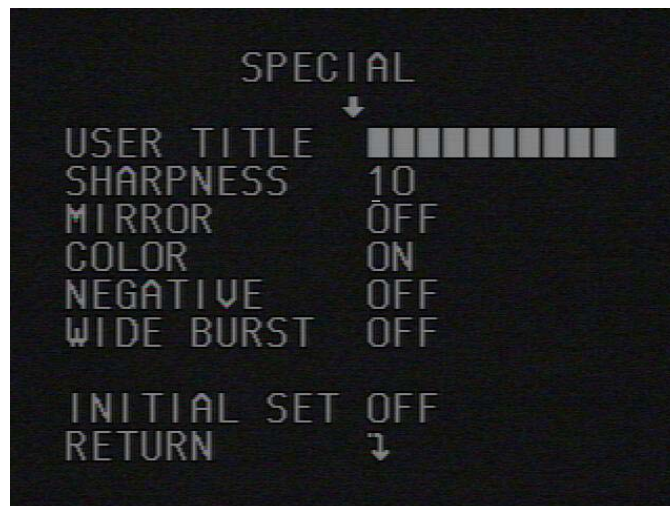


On Screen Display (continued)**❑ Auto Exposure (AE) Menu:**

Auto Exposure Menu

**❑ Special Functions (SPECIAL) Menu:**

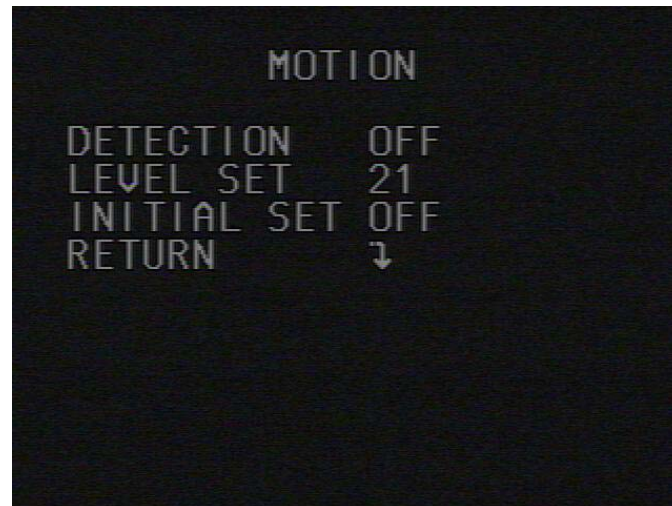
Special Functions Menu



On Screen Display (continued)

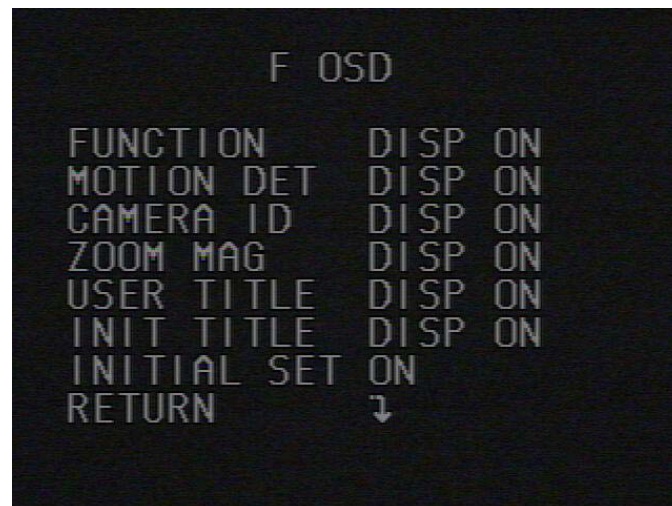
❑ Motion Detection (MOTION DET) Menu:

Motion Detection Menu

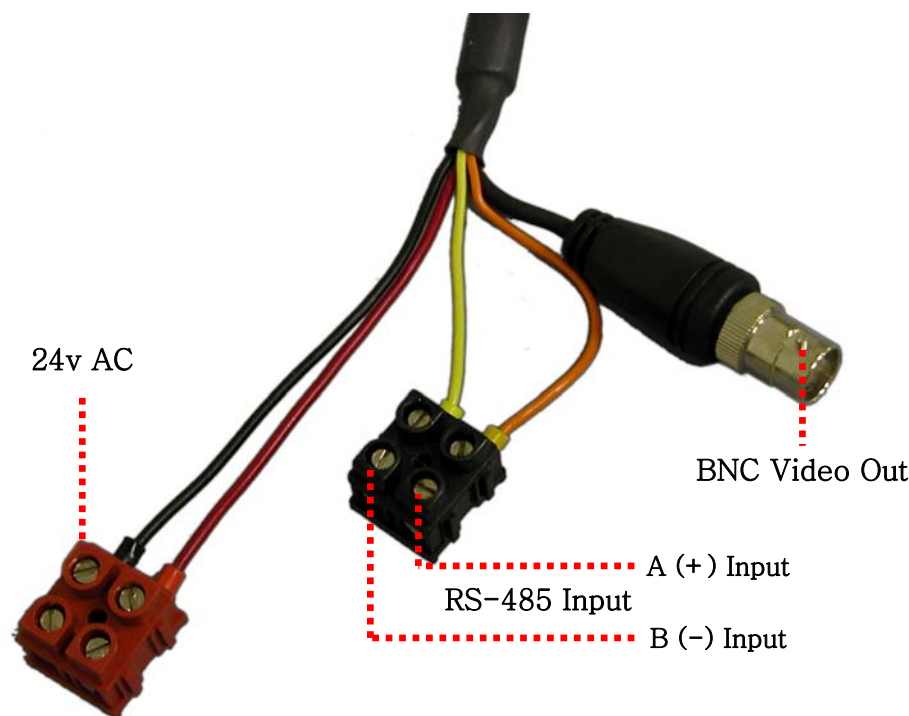


❑ Function On Screen Display (F OSD) Menu:

Function On Screen Display Menu



❑ Wiring:



❑ 24v AC Terminal



- Screw Terminal Power connector:
24v AC wired directly to this plug.

❑ BNC Connector for Video Out



- Video out BNC connector
Connect to units such as monitor, VCR and etc.

❑ RS-485 Communication Terminal



- RS-485 Communication Screw Terminal

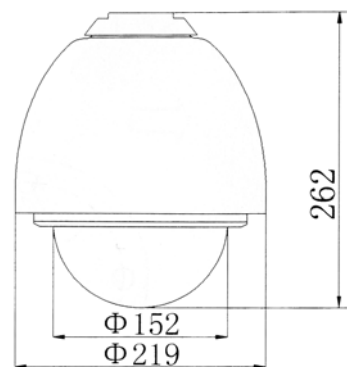
Connector	Signal
A	+ Input
B	- Input

ACD-1500 Specification

Model		ACD-1500
Video Format		NTSC
Camera	Device	1/4" Color CCD
	Pixel	410K pixels
		752(H) × 582(V)
	H. Resolution	More than 480 TV Lines
	Min. Illuminance	0.01 Lux (Day / Night Operation)
	Focus	Auto/Manual
Lens	Iris	Auto/Manual
	Zoom	27x Optical Zoom, 10x Digital Zoom, Total 270x Zoom
	Aperture	F1.6
	Focal Length	f=3.9 ~ 85.8mm
Pan/Tilt	Angle	Pan 360° (Endless) / Tilt : 0~90°
	Pan Speed	Variable 0.2° to 15°/sec (Zoom Proportional)
	Tilt Speed	Variable 0.2° to 15°/sec (Zoom Proportional)
	Presets	64 Programmable Presets
	Auto Cruise	1 Programmable Cruise Sequence
	Auto Pan	Programmable Start, Stop and Speed
General	Control	RS-485
	Communication	Pelco-D, Pelco-P, A01, B01, Santachi, Longcomity, Hunda600
	Power	AC 24V / 1.25A
	Dimension	219Ø × 262(H) mm
	Weight	Approx. 4Kg
	Operating Temp.	0°C ~ 40°C

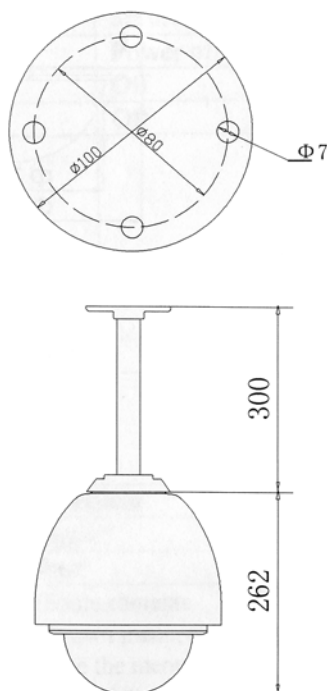
* Specification & design are subject to change without notice

Dimensions



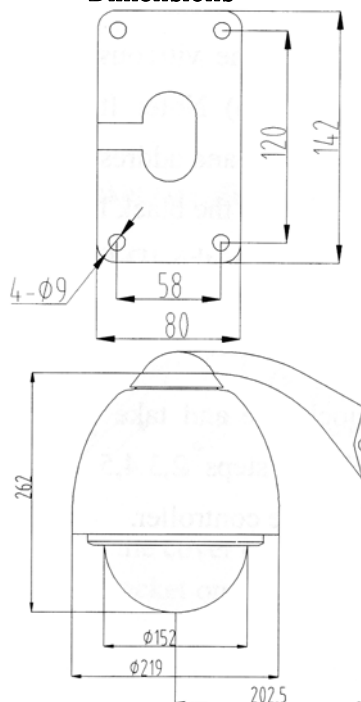
Ceiling Mount

Dimensions



Wall Mount

Dimensions





MEMO