# User Manual

# PTM-520CDN/PTM-520WDN/PTM-520HDN

# Mini PTZ Camera



x) ID=3

1 2 3 4 5 6 7 8

1 2 4 8 16 32 64

The range of D's 1200, both of use of as camera to that only denault of camera is 1.
 If you want to control a certain camera, you must match the camera ID with Ca
 ID setting of D'R or Controller.
 Communication Protocol Setup

Protocol

If you want to control using DVR or P/T controller, their protocol must be identical to camera, Otherwise, you can not control the camera. In You changed camera protocol by changing DIPS/W, the change will be effective after you reboot the camera. - Factory default or protocol is "Peloc-D, 2400 bps"

Power DC12V/2A

RS485 Keyboard controller

Video Moinitor

eyboard and DVR, TO o

Press check the voltage and power consumption carefully, power supply is
indicated in the back of main unit.

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IN COM+

\_\_\_\_\_\_ IN 4-\_\_\_\_\_ Sensor 4 Output +

Before connecting sensors, check driving voltage and output signal type of the sensor, Since output signal types of the sensors are divided into Open Collector and Voltage Output type in general, the cabling must be done properly after considering these types.

IN COM+ Connect [+] cable of electric power source for Sensors to this port as shown in the circuit above. IN1-JN2-JN3-JN4- Connect output of sensors for each port as shown in the circuit above.

If you want use Alarm Input, the types of sensor must be selected in OSD menu The sensor types are Normal Open and Normal. If sensor type is not selected properly, the alarm can't be activated properly.

IN 1-

indicated in the back of main unit.

 Supply Power
 Input Voltage Range
 Power Consumption

 DC 12V
 DC 11V-18 V
 0.8A

ex ID=10 Off On Off On Off Off Off Off Off

cation Protocol Setup

Select the appropriate Protocol with DIP switch com Switch State

 OFn D
 OFn D

 OFF
 OFF
 PELCO-D\_1000 hps

 ON
 OPF
 PELCO-D\_1000 hps

 OFF
 ON
 PELCO-P\_0000 hps

 ON
 ON
 PELCO-P\_0000 hps

**888** 

1 2 3 4

P0 P1 (Pin 1) (Pin 2)

Cable connection

RS-485 Communication

arallel as shown below. Keybeard Centreller/DVR

+

Video Connection.
 Connect with BNC tap ca

Internal

Signal

Alarm input Connection
 Sensor Input

RS-485

For PTZ control, connect this line cameras at the same time, RS-48

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### Features

Camera Specifications 1/4" Interline Transfer HAD CCD 1.44\* Interdine Transfer HAD CCD
 More Than 520 V Lines (CloV)/570 TV Lines (R/W) of Horizontal Resolution
 High Sensitivity, Minimum illumination of 0.02 Lux
 Detorobic Bay/Migh Function
 Optical Zoom, Digital Zoom Function
 Digital Noise Reduction for Reducing HDD capacity
 Built-in OSD (Un Screen Display)

## Powerful Pan/Tilt Functions

- Max. 360\*/sec high speed Pan/Tilt Motion - Using Vector Drive Technology, Pan/Tilt motions are accomplished in a shortest path. As a result, time to larget view is reduced dramatically and the video on the monitor is very natural to watch. - For jog operation using a controller, since ultra slow speed 0.05\*/sec can be reached, it is very easy to locate camera to desired target view. Additionally it is easy to move camera to desired target view. Additionally it is easy to move camera to a desired position with zoom-proportional pan/tilt movement.

### Preset, Pattern, Swing, Group, Privacy Mask and More...

Max. 127 Presets are assignable and characteristics of each preset can be set up independently, such as White Balance, Auto Exposure, Label and so n. Max. 8 set of swing action can be stored, This enables to move camera

-max.o sex.or swrug action can be stored, This enables to move camera repetitively between two preset positions with designated speed.
 -Max. 4 of Patterns can be recorded and played back. This enables to move camera to follow any trajectory operated by jostick as closely ad possible.
 -Max. 8 set of Group action can be stored. This enables to move camera repetitively with combination of Preset of Pattern of Swing. A Group is composed of max. 20 entities of Preset/Pattern/Swings.
 -Phracy Mass's reasingable, not to intrude on other's privacy. (Max. 4 privacy masks)

### PTZ (Pan/Tilt/Zoom) Control

With RS-485 communication, max. 255 of cameras can be controlled at the same time.
 - Pelco-D or Pelco-P protocol can be selected as a control protocol in the current version of firmware.

### OSD (On Screen Display) Menu

OSD menu is provided to display the status of camera and to configure the Reserved for Supplier -OSD menu is provided to display the status of camera and to comigure unductions interactively.
 -The information such ad Camera ID, Pan/Tilt Angle, Alarm Input and Preset
 and be display on screen.
 -Fin a FAL/INTS System selection of camera, DO NOT CHANGE THIS PIN.
 -Fin 4 Factory default is ON state. This pin is used for system firmware upgrade.
 DO NOT CHANGE THIS PIN.

# Alarm I/O Functions

- A aimm sensor inputs are available. - To reject external electric noise and shock perfectly, alarm sensor input is decoupled with hoto coupler. - The signal range of sensor input is from DC 5.0 to 12.0 volts to adopt various applications - If an external sensor is activated, camera can be set to move to the corresponding preset position.

Reserved Presets for Special Purpose

Most camera characteristics can be set up easily and directly with reserved preset, without entering into OSD menu, For more information, refer to "Reserved Preset" in this manual.

J\_L









ID number of camera is set by using binary number, The example is shown



P/T/Z Information

"UNDE-INE-D" When underined function is called to run **Preset Labe!** The Label stored for specific preset. **Alarm Input:** This information shows current state of Alarm Input, if an input points of is ON state it will show a number corresponding to each point if an input points of state. --" will be displayed. Eg. point 2&3 of inputs are ON, OSD will show as below

nage Flip: shows that images are currently reversed by nip flip.

veneral nuess of key Uperation for Menu The menu items surrounded with (lawlays has its sub menu. For all menu level, press NEAR key, to go into sub menu. To go to up-one-level menu, press RAR key. TO move from item to item in the menu, use joysticks in the Up-Down or #/Right.

TU move from term a second and term later, use Up/Down of the joystick in the controller - To change a value of an item, use Up/Down of the joystick in the controller - Press NEAR key to save values and Press FAR key to cancel Values.

### Normal Open Output Voltage is high state when sensor is activated Output Voltage is high state when sensor is not activated

 Check points before operation
 Before power is applied, please check the cables carefully.
 The camera ID of the controller must be identical to that of the target camera, The Ine camera ID of the controller must be identical to that of the target camera, Ine camera ID can be checked by reading DIP switch of the camera.
 If your controller supports multi-protocols, the protocol must be changed to match to that of the camera.

to that of the camera. I Hyou changed camera protocol by changing DIP switch, the change will be effective after you reboot the camera. - Since the operation method can be different for each controller available, refer to the manual for your controller if camera can be not be controlled properly. The operation of this manual is based on the standard Pelco® Controller.

Preset and pattern Function Pre-Check Check how to operate preset and pattern function with controller or DVR in advance to operate the full function of camera when using controller or DVR. Refer to the following table when using standard Pelco<sup>⊕</sup>protocol controller. Go Preset Input/Preset Number| and press Preset| Initian shartly.
 Ge Preset Input/Preset Number| and press Preset| Initian shartly.
 Ran Patterns Input/Pattern Number| and press Preset| Initian shartly.
 Get Patterns Input/Pattern Number| and press Preset| Initian in more than 2 is

- If controller or DVR has no pattern button function, use shortcut keys with preset numbers, For more information, refer to "Reserved Preset" in this manual.

Description: Some Preset number are reserved to : Function : Go Preset>[95]: Enters into OSD menu Go Preset>[131-134]: Runs Pattern Function 1-4 Go Preset-1951; Enters Imd USD memü
Go Preset-1131:34]; Runs Swing Function 1.4
Go Preset-1131:134]; Runs Swing Function 1.8
Go Preset-1151:158; Runs Gowing Function 1.8
Go Preset-1171]; Sets Camera BLC Mode to OFF
Go Preset-1171]; Sets Camera BLC Mode to AUTO
Go Preset-1175]; Sets Camera BLC Mode to AUTO
Go Preset-1175]; Sets Camera BLC Mode to AUTO
Go Preset-1175]; Sets Camera Couss Mode to AUTO
Go Preset-1175]; Sets Camera Focus Mode to Manual
Go Preset-1175]; Sets Camera Focus Mode to Natural
Go Preset-1175]; Sets Day A Night Mode to NUEO
Go Preset-1175]; Sets Day A Night Mode to NUEO
Go Preset-1175]; Sets Day A Night Mode to AUTO
Go Preset-1175]; Sets Day A Night Mode to AUTO
Go Preset-1175]; Sets Day A Night Mode to AUTO
Go Preset-1175]; Sets Day A Night Mode to AUTO
Go Preset-1175]; Sets Day A Night Mode to AUTO
Go Preset-1175]; Sets Day A Night Mode to AUTO
Go Preset-1130]; Sets Day A Night Mode to AUTO
Go Preset-1130]; Sets Day A Night Mode to AUTO
Go Preset-1130]; Sets Day A Night Mode to AUTO
Go Preset-1130]; Sets Day A Night Mode to AUTO (Except Privacy Mask)
Go Preset-1132]; Sets Day A Night Mode to VD (Except Privacy Mask)
Go Preset-1133]; Sets all Privacy Mask Display to OFF
Go Preset-1134]; Sets all Privacy Mask Display to OH

Preset
 -

O.

+5V-12V

Sensor 1 Output +

+

- Function: By using swing function, you can make camera to move between 2 preset positions repeatedly. When swing function runs, camera moves from the 1st preset point to the 2nd preset point in CW (Clockwise) direction. Then camera moves from the 2nd preset point to the 1st preset point in CCW (Counter



Pattern - Function: Pattern Function is that a camera memorizes the path (mostly curve path) by jostick of controller for assigned time and retrive the path exactly as it memorized. 4 Patterns are available and maximum 1200 communication commands can be stored in a pattern. - Set Pattern: Pattern XO. - Set Pattern: Pattern XO.

Partern evaning over in subjuyed as default
 Movement by joydick and preact
 movement can be memorized in a pattern.
 The mest memory size is default
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	DISPLAY SETUP	- Camera ID: [ON/OFF]     - PTZ Information: [ON/OFF/AUTO]     Action Title (ON/OFF/AUTO)	Alarm Input Setup Match the Alarm sensor input to one activated community will make to access	of preset positions, If an external sensor is
	+CAMERA ID ON PTZ INFORMATION AUTO	- Action Title: [UN/OFF/AUTO] - Preset Label: [ON/OFF/AUTO]	predefined.	sponding preset position when this item is
	ACTION TITLE AUTO PRESET LABEL AUTO	- Alarm Input: [ ON/OFF/AUTO]	ALARM INDUT RETUR	- Alarm × Type: [Normal OPEN/Normal
	ALARM INPUT AUTO		ALARMINFOISEIOP	- Alarm × Action: [NOT USED/PRESET 1
	<privacy zone=""></privacy>		ALARM2TYPE N.OPEN	-128] Assign counteraction Preset position
	BACK	ļ	ALARMSTYPE N.OPEN ALARM4TYPE N.OPEN ALARM1ACT NOT USED	to each Alarm input.
BANDING	Compass Direction Setup	-Set North to assign compass direction as	ALARM2ACT NOT USED ALARM3ACT NOT USED ALARM4ACT NOT USED	
	SET NORTH DIRECTION	criteria, Move camera and press NEAR button to save.	BACK EXIT	J
			Preset Setup	
			PRESET SETUP	- Preset Number: [1-128]
			→PRESET NO. 1	camera moves to pre-defined position and
	INEAR:SAVE (FAR:CANCEL)	)	CLR PRESET CANCEL	preset characteristics such as label and relay output show on monitor, if a selected preset
EEN 360* 360*/sec 0.05 /sec	<ul> <li>Privacy Zone Mask Setup Select area in image to mask</li> </ul>		<edit label=""> LABEL123 CAM ADJUST GLOBAL</edit>	is not defined, "UNDEFINED" shows on monitor.
	PRIVACY ZONE	- Mask N0 [1-4] Select Mask number, If the selected mask	BACK	- Clear Preset [ CANCEL/OK] Delete current     preset data     - Edit Preset Scene: Redefine current preset
	MASK NO 1 UNDEFINED	has already data, camera moves as it was set, Otherwise, "UNDEFINED" will be	- Edit Preset Label: Edits Label to sh	scene position.
RN 4 VECTOR PRIVACY ALARM 4 IN	CLEAR MASK CANCEL <edit mask=""></edit>	- Display [ ON/OFF]	alphabets are allowed	
MOTION ZONE		Sets if camera makes mask shows or not on images.	WB (White Balance) and AE (Auto Ex	posure) can be set up independently for each
	BACK	- Clear Mask [ CANCEL/OK] Deletes data in the selected mask NO.	means that WB or AE can be set up t	totally and simultaneously for all presets in
	EDIT MASK 1	Privacy Zone Area Setup.	The Local mode means that WB or A	E can be set up independently or separately for
Group			correspondingly when camera arrive	s at each preset location, During jog operation,
Function: The group function allows running sequence of Presets, Pattern and /or			All Local WB/AE value should be apple All Local WB/AE value should not cha	ed. ange although Global WB/AE value changes , If
which can be preset, pattern or swing preset speed can be set up and the repeat			"Local " is selected, Menu to set WB	/AE shows on Monitor.
number of pattern & swing can be up in group setup. Dwell time between actions can be set up also.			Edit Preset Scene	
Dwell Time	MOVE TO TARGET POSITION [NEAR SELECT/FAR CANCEL]		EDIT SCENE - PRESET 1	<ol> <li>Using Joysticks , move camera to desired position.</li> </ol>
<b>-</b>	-Move camera to area to mask, Then	/ the menu to adjust mask size will be		2. By pressing NEAR key, save current PTZ
	displayed.	-		3. Press FAR key to cancel.
Preset 1 Pattern 1 Swing 1	<ul> <li>Privacy Zone Size Adjustm</li> </ul>	ient		
	EDIT MASK 1	buttons to adjust mask size.		
		Use [LEFT] or [RIGHT]: Adjusts mask width. Use [UP] or [DOWN]: Adjusts mask height.	MOVE TO TARGET POSITION [NEAR:SAVE /FAR:CANCEL]	
Max 20 Entities			Edit Preset Label	
<ul> <li>Set Group: Use OSD Menu to create a Group</li> <li>Run Group: Method 1.) &lt; Run pattern&gt;[Group N0.±20]</li> </ul>			EDIT LABEL - PRESET 1	1. Edits label to show on monitor when camera arrives at presets. In Edit label
eg. Run Group 7: < Run Pattern>[27]	INEAR SAVE /FAR CANCELI		<b>1</b> 3	menu, a reverse rectangular is cursor as
Method 2 ) <go preset=""> [Group NU.+150] eg. Run Group7: &lt; Go Preset&gt;[157]</go>	Comono Sotun	1	3234567890 OK ABCDEFGHIJ CANCEL	soon as finishing selecting alphabet, cursor moves to the next digit
Delete Group: Use OSD Menu to delete     Other Function	Setup the general functions of	zoom camera module	KLMNOPQRST UVWXYZabcd	
- Power Up Action: This function enables to resume the last action executed before	ZOOM CAMERA SETUP	- Focus Mode: [AUTO/MANUAL/SEMIAUTO] Sets camera focus mode.	ogrstuvwx	
power down, Most of actions such as Preset, Pattern, Swing and Group are available for this function but jog actions are not available to resume.	+FOCUS MODE SEMIAUTO	Semiauto Mode		
<ul> <li>- Auto Flip: In case that tilt angle arrives at the top of tilt orbit (90°), Zoom module camera keep maximit to apposite tilt direction (190°) to keep tracing targets. As</li> </ul>	LINE LOCK OFF	automatically between manual focus mode		2. Using Left/Right/UP/Down of joysticks, move to
soon as zoom module camera passes through the top of tilt direction (90°), images	«AUTO EXPOSURE SETUP»	and Auto Focus mode manual focus mode activates in preset operation and auto focus	-	choose that character, Press the NEAR key/If you
should be reversed automatically and appears in screen, If this function is set to OFF, tilt movement range is 0°-95°.		mode activates when jog operation starts.	Ī	want to use blank, choose space character ("→"), If you want to delete a character before se back
<ul> <li>Parking Action: This function enables to locate the camera to specific position outcomptibility if appropriate departs the camera to specific position.</li> </ul>	BACK	memorized in each preset in advance and	Current Cursor Position	space character ("←").
can be defined as an interval from 1 minute to 4 hours.	with procets as coop as compra arriv	camera calls focus data in correspondence	1234567890	3. If you complete the label editing , move
<ul> <li>Alarm Input: 4 Alarm Inputs are used, If an external sensor is activated, camera can be set to move to corresponding preset position. It is noted that the latest</li> </ul>	Digital Zoom: [ON/OFF]	es at a preset	ABCDEFGHIJ	cursor to "OK" and press NEAR key to save completed label, To abort current change,
alarm input is effective if multiple sensors are activated.	Sets digital zoom function to ON/OFF runs but zoom function stops at the	<ul> <li>If this is set to OFF, optical zoom function and of optical zoom magnification.</li> </ul>	UVWXYZabcd	move cursor to "Cancel" and press NEAR
<ul> <li>Privacy Zone Mask: To protect privacy, Max. 4 privacy Masks can be created on the arbitrary position to hide objects such as windows, shops or private house. With</li> </ul>	Line Lock: [ ON/OFF]		ogrstuvwx	key.
Spherical Coordinates System, Powerful Privacy Zone mask function is possible.	If Line lock sync is ON, video signal is fluctuated after setting is changed.	s synchronized with AC power, Video can be	yz <> -1:. 4	
<ul> <li>GLOBAL/LOCAL: WB (White Balance) and AE (Auto Exposure) can be set up independently for each preset, There are 2 modes, "Global" mode &amp; "Local" mode,</li> </ul>	White Balance Setup		/ \	
The Global mode means that WB or AE can be set up totally and simultaneously for all presets in "700M CAMERA SETUP" menu. The Local mode means that WP or AE	WB SETUP - GLOBAL	In manual mode, Red and blue level can be	Space Char. Back Space Char	r
can be set up independently or separately for each preset in each preset setup	+WB MODE AUTO	set up manually	Swing Setup	
menu. Each Local WB/AE value should activate correspondingly when camera arrives at each preset location.	BLUE ADJUST	- Blue Adjust: [10-60]		- Swing Number [1-8]
During jog operation, Global WB/AE value should be applied, All local WB/AE value			SWING SETUP	Selects swing number to edit. If a selected swing has not defined. "NOT USED" is displayed in 1 st
<ul> <li>do not change although global WB/AE value changes.</li> <li>Semiauto Focus: This mode exchanges focus mode automatically between</li> </ul>			1ST POS NOT USED	position and 2"position
manual focus mode and auto focus mode by operation. Manual Focus mode	BACK		SWING SPEED SOURCE	- 1st Position [PRESET 1 - 128] 2 <sup>rd</sup> Position: Set up the 2 position for swing function
with manual mode at presets, Focus data is memorized in each preset in advance	Auto Exposure Setun	/	CLEAR SWING CANCEL	if a selected preset is not defined, "UNDEFINED"
and camera calls focus data in correspondence with presets as soon as camera arrives at preset. It should shorten time to get focuses focus more change to Auto		- Backlight: [ ON/OFF] Sets Backlight	BACK	www.soc.usprayed.as.anow/I.below.
Focus mode automatically when jog operation starts.	*BACKLIGHT OFF	- Day/Night: [AUTO 1/AUTO 2 DAY/NIGHT]	EXIT	J
	a contraction and the	LAUTO 1 evenenges Dev Alight mode feater		

### BACK • Auto Exposure Setup - Backlight: [ ON/OFF] Sets Backlight AE SETUP - GLOBAL BACK LOBAL Compensation Vol Jeels Boungin Ger - Danylight: LINO Jun 20 Jun 2 \*BACKLIGHT DAY/NIGHT BRIGHTNESS IRIS SHUTTER AGC SSNR SENG-UP BACK EXIT When swing function runs, camera moves from the preset assigned as the 1st point to present assigned as the 2rd point in CW (Clockwise) direction. Then camera moves to the preset assigned as the 1st point in CW (Clockwise) direction. Then camera moves to the preset assigned as the 1st point in CW the preset assigned as the 1st point in CW Preset Label +LABEL 12345 PRESET1 + Action Title Speed and Gain are adjusted automatically accessible and Gain are adjusted automatically in correspondence with this value Intro is set to adjusting AE and shutter speed should here highest priority in adjusting AE and shutter speed should be fixed. If this is set to annual, his should be fixed and this slower priority in adjusting AE, in comparison with others. -Shutter Speed: [ESC/AF.inter/Manual (x128-1/120000 sec)] If this is set to manual and shutter speed is set to SFLG. Shutter speed should have highest priority. If shutter speed is set to AFICker, shutter speed should have to 1/100 secretary for NTSC and 1/120 for PAL. - AGC: [OFF.NORMUL/HIGH] Enhances image brightness automatically in case that luminance level of image signal is to iow. pres and -Swi -Cle • Pa I:1--4 ● Alarm Intern ●15/4/×1/N P/T/Z Information: Current Pan/Tilt angle in degree, zoom magnification and a

signal is too bre SSNE (GFL/DW/INDDLFLHRE) Enhances images by deducting noises when gain level of images is too high. - SENS - UP: [AUTO (2-128)]/OFF] Adviates silve whatter function when luminance of image (signal) is too dark It is possible to set up the maximum number of frames piled up one on another by silve whatter function.

# Motion Setup Setup the general functions of Pan/Tilt motions.

MOTION SETUP	- Motion Lock: [ UN/OFF] If motion lock is set to ON. It is impossible to
-MOTION LOCK OFF PWR UP ACTION ON ACTION ON JOG MAX SPEED 120/SEC JOG DIRECTION INVERSE PRZ IN PRESET OFF «PARKING ACTION SETUP» ALARM INPUT SETUP» BACK EXIT	set up and delete preset, Swing, Pattern and group, it is possible only to run those functions, To set up and delete those functions, enter into GSD menu. - <b>Poser Up</b> Action: [ON/OFF] Refer to "Other Functions" section. - <b>Auto Flip:</b> [ON/OFF] Refer to "Other Functions" section.
	Jog Max Speed: [1*/sec - 360*/sec]
Sets maximum jog speed, Jog speed	I is inversely proportional to zoom
If you set this to "Inverse", the view tilting, If 'Normal' is selected, the vie - Freeze in Preset: [ ON/OFF]	in the screen is moving same direction with jog w in the screen is moving reversely.
At start point of preset movement, c Camera keeps displaying the image does not display the images which c	amera starts freezing the image of start point, of start point during preset movement and amera gets during preset movement as soon
as camera stops at preset end point	, camera starts displaying live images which it
gets at preset end point.	
This forestion confidentiate at a data to	
This function availability should be d	ifferent by models.
Parking Action Setup     If park Enable is set to ON, camera r no PTZ command during assigned =	interent by models. runs assigned function automatically if there is Wait Time".
Parking Action Setup     for a command during assigned     Parking Action Setup     Parking Action Setup	unterent by models. uns assigned function automatically if there is Wait Time". ] - <b>Park Enable</b> : [ ON/OFF]

n Setup et to ON, camera ri during assigned " 1	uns assigned function automatically if there Wait Time".
TION SETUP	- Park Enable: [ ON/OFF] - Wait Time: [1 minute - 4 hour]
LE OFF 00:10:00 N HOME	The time is displayed with"hh:mm:ss" format and you can change this by 1 min unit. - Park Action: [ HOME//RESET/PATTERN/SWING/GROUP HOME: Camera moves to home position if there is no PT2 command during assigned Wait Time".

BACK

Pattern Setup	- Pattern Number: [1-4]
PATTERN SETUP	Selects Pattern number to edit. If a selecte
+PATTERB NO. 1	pattern number is not defined, "UNDEFINE will be displayed under selected pattern
CLR PATTERN CANCEL	number.
	- Clear Pattern: [CANCEL/OK] Deletes data
	current pattern.
	- Edit Pattern: Starts editing pattern.
EXIT	
Edit Pattern	
EDIT PATTERN 1	<ol> <li>By using Joystick, move to start position with appropriate zoom. To start pattern recording, press NFAR key. To exit this menu, press FAR key.</li> </ol>
MOVE TO START POSITION	

memory size is displayed in the rorm or uar, meaning the second state and exit, press NEAR key.

 EDIT PATTERN 1

 S. To save data and exit, press NEAR key.

 To cancel recording and delete record data, mease FAR key.

[NEAR:SAVE /FAR:DELETE] 0/0/×1/N

### • Gr

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tes data in



1st Preset \, 单

In case that the preset assigned as the 1st point is same as the preset assigned as the 2nd point, camera turns on its axis by 360° in CW (Clockwise) direction and then it turns on its axis by 360° in CCW (Counterclockwise) direction. Speed can be set up from 1'yse to 180°/sec. Set Swing: To set Swing, use GSD menu Run Swing! XetBod 1; Kun Pattern>[Swing No. +10] e.g. Run Swing 3: <e Mon Pattern>[3] Method 2; Go Preset>[Swing No. +140] e.g. Run Swing 3: <e Mon Pattern>[3] Delete Swing: To delete Swing, use GSD menu.

Pattern editing screen is displayed as bellow.

• Display Setup This menu defines Enable/Disable of OSD display on main screen, If an item is set to be AUTO, the item is displayed only when the value of it is changed.

SPEED DOME CAMERA

I:-23-

General Rules of Key Operation for Menu

2nd Preset compass direction, - Camera ID: Current Camera ID (Address ) - Action Title: Followings are possible Action - Titles and their mean "SET PRESET XXX" When Petters west xix is stored "PRTEERN XX" When Petters is in action "SWQX/PRESET XXX" When Swing is in action "UNDEPRHO" When underland function is called to run "UNDEPRHO" When underland function is called to run

CCCM DI

Function: using the OSD Menu Function: using the OSD menu, Preset, Pattern, Swing, Group and Alarm Input function can be configured for each application. Enter Menu: < Go Preset>[95]

Reserved Preset
Description: Some Preset number are reserved to special functions.

Preset

OSD Display of Main Screen

# Swing

Edit Group		Crown opportunit	5. After finishing setting up a Action, Press
EDIT GROUP T	1. Press Near key in "NO" list to start Group setup.	NO ACTION *** DWELLOPT *1 PRENET 1 00:03 360	Near key to one-upper level menu (Step 2). Move cursor Up/Down to select Action number and repeat Step 2 to Step 4 to edit
1 NONE 2 NONE 3 NONE 4 NONE 5 NONE 5 NONE 5 NONE		3 NONE 4 NONE 5 NONE SAVE (NEAR EDITACT CANCEL (PAR EDITEND	selected Group.
EDIT GROUP 1	2. Note that Max. 20 Functions are allowed in a Group. Move cursor up/down and press Near key	ROIT GHOUP I NO ACTION *** DWELL OPT	<ol> <li>After finishing setting up all Action, Press FAR key to exit. Then cursor should be moved to "SAVE", press Near key to save data.</li> </ol>
NO ACTION SHE DWELL OFT + 1 NONE 2 NONE 3 NONE 4 NONE 5 N	to set up.	1 PREART 1 00:03 360 2 NONE 3 NONE 4 NONE 5 NONE • SAVE CANCEL	
EDIT GROUP 1	3、Set up Action, Dwell time and Option. Note that	System Initialize	
NO ACTION BRE DWELL OPT	selected item is displayed in reverse. Move cursor Left/Right to select items and move cursor	STOTEM INITIAL IZE	
1 NONE 2 NONE 3 NONE 4 NONE 5 NONE	Up/Down to change each value.	CLR DISPLAY BET NO     CLR CAMERA BET NO     CLR MOTION SET NO     CLR EDIT DATA NO     EEBOOT CAMERA NO     REBOOT CAMERA NO	
SAVE I ** MOVE CURSORI CANCEL[** CHANGE VAL.]		SAVE CANCEL	
Action ###: [NONE/PRESET DWELL: [0 second - 4 minute OPT: Option. It should be pres he number of repeat when Pa	//SWING/PATTERN] s] Sets Dwell Time between functions. set speed when preset is set in Action It should be ttern or Swing is selected in Action.	Clear All Data: Deletes all co setup and so on.     Clear Display Set: Initializes     Clear Camera Set: Initializes	nfiguration data such as display. camera, motion Display Configuration Camera Configuration
EDIT GHOUP 1 NO ACTION *** DWELLOFT 1 PRESET 00.03360 2 NONE 3 NONE 4 NONE	<ol> <li>Set up items such as Action, ###, Dwell and OPT.</li> </ol>	- Clear Motion Set: Initializes 1 - Clear Edit Data: Deletes Pres - Reboot Camera: Reboots Zot - Reboot System: Reboots Spe	Motion Configuration set Date, Swing Data, Pattern Data and Group Data om Camera module ed Dome Camera
SAVE [++ MOVE CURSOR CANCEL [++ CHANGE VAL			

# **Initial Configuration Table**

<ul> <li>Display Configura</li> </ul>	ation	<ul> <li>Camera Configura</li> </ul>	tion
Camera ID	ON	Focus Mode	SemiAuto
PTZ Information	AUTO	Digital Zoom	ON
Action Title	AUTO	Line Lock	OFF
Preset Label	AUTO	White Balance	AUTO
Alarm Input	AUTO	Backlight	OFF
North Direction	Pan 0°	Day&Night	AUTO1
Privacy Zone	Undefined	Brightness	25
		Iris	AUTO
		Shutter	ESC
Motion Configura	tion	AGC	NORMAL
Motion Lock	OFF	SSNR	MIDDLE
Power Up Action	ON	SENS-UP	AUTO (4 Frame)
Auto Flip	ON		
Jog Max Speed	120°/sec	• User Edit Data	
Jog Direction	INVERSE	Preset 1~128	Undefined
Freeze In Preset	OFF	Swing 1~8	Undefined
Park Action	OFF	Pattern 1~4	Undefined
Alarm Action	OFF	Group 1~8	Undefined

# **Specifications**

Model	PTM-520CDN/PTM-520WDN/PTM-520HDN		
Scanning System	NTSC	PAL	
Image Sensor	1/4" Interline Transfer HAD CCD		
Effective Picture Elements	768 (H) × 494 (V)	752 (H)×582 (V)	
Horizontal Resolution	520 TV lines (Color) / 570 TV lines (B/W)		
Minimum illumination (approx.)	0.02 Lux		
Video Output Level	1.0 V (p-p)/75 ohms, composite		
Video S/N Ratio	More than 52dB ( AGC Off )		
Electrical Shutter	1/128 - 1/120,000 sec		
Pan speed	360° sec		
Tilting speed	95° sec (Normal)	180° sec (Auto-Filp)	
BLC	Low/Middle/High/Off		
AGC	Low/Middle/High/Off		
Day/Night	Color/B/W/Ext/Auto		
Sens-Up	On/Off		
Alarm Input	On/Off (4 Inputs)		
Digital Zoom	On/Off (10X Zoom)		
Optical Zoom	On/Off (10X Zoom)		
Privacy Masking	On/Off (4 Zones)		
Pattern Positions	On/Off (4 Patterns)		
Group	On/Off (8 Group)		
Swing	On/Off (8 Swing)		
Preset Positions	127 Preset		
Communication	Pelco-D , Pelco-P selectable		
OSD Language	English		
Communication	RS-485		
Lens	Auto Iris Lens (3.8mm - 38mm)		
Power Requirement	DC 12V		
Operating Temperature	0°C - 40°C		
Humidity	0% - 90%		
Installation Type	Ceiling Mount/Wa	II Mount/Hanging	
Mounting brackets	Optional		