EAGLE
PAN TILT SYSTEMS
Helping to bring your world into focus

PT-C55

Operations and Instructions Manual

Revision 2

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PRECAUTIONARY STATEMENT AND WARRANTY

Please read all of the following documentation before attempting the installation and configuration of these systems. If any of the instructions are unclear to you, call your servicing dealer or Hitachi before proceeding for clarification. Failure to correctly configure and install these systems may cause damage to the equipment, and will void the warranties. Please make sure before connecting or disconnecting any cables that the power supplies are turned OFF.

WARRANTY

Hitachi Denshi America, Ltd. warrants to the original customer that each PT-C55 unit shall be free from malfunction due to defective workmanship or component failure for a period of ONE YEAR from the original date of delivery to the customer. For service under the warranty period, return authorization must be obtained before returning the product. This warranty does not apply to finish or appearance items, to malfunction due to abuse, or operation in violation of published operating specifications, or to failures caused by improper installation, connections, modifications, alterations, or other unauthorized repairs. This warranty does not cover labor or shipping costs for removal and/or reinstallation of equipment under warranty. Under no circumstances shall Hitachi Denshi America, Ltd. or Display Devices, Inc., their owners or employees be liable to you for any special damages, including any lost profits, lost savings, or other incidental or consequential damages, or for any claim by any other party.

IMPORTANT SAFETY INSTRUCTIONS

1. Read ALL The Instructions! All the safety and operating instructions should be read before the product is operated

2. Retain Instructions. These safety and operating instructions should be retained for future reference.

3. Heed Warnings. All warnings on the product and the operating instructions should be adhered to.

4. Follow Instructions. All operating and use instructions should be followed.

5. Cleaning. Unplug this product from the power supply before cleaning. Do not use liquid cleaners or aerosol cleaners. Use only a damp cloth for cleaning.

6. Attachments. Do no use attachments not recommended by the product manufacturer as they may cause hazards.

7. Water and Moisture. Do not use this product near water--for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, wet basement, swimming pool, pond, or similar areas.

8. Accessories. Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and cause serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturers' instructions, and should use only mounting accessories

recommended by the manufacturer.

9. Moving. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may coarse the product and cart combination to overturn.

10. Ventilation. The outer case of the unit functions as a heat sink for the electronics contained inside. Do not block off the product from airflow by placing the product on a bed, sofa, rug, or similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturers' instructions have been adhered to .

11. Power Sources. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your facility, consult your product dealer or local power company.

12. Grounding or Polarization. This product's power supply is supplied with a three wire grounding type plug; a plug having a third (grounding) pin. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace the obsolete outlet. Do not defeat the purpose of the grounding plug.

13. Power cord protection. Power supply cords should be routed such that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the cords at plug, receptacle, and to the point at which they enter the power supply and the product.

14. Lightning. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power line surges.

15. Overloading. Do not overload wall outlets, extension cords, or receptacles as this can result in a risk of fire or electric shock.

16. Object and liquid entry. Never push objects of any kind into this product through openings as they may touch voltage points or short out parts that could result in a fire or electrical shock. Never spill liquid of any kind on the product.

17. Flammable and Explosive substances. Avoid using this product where there are gases and also where there are flammable and explosive substances in the immediate vicinity.

18. Heavy shock or vibration. When carrying this product around, do not subject the product to heavy shock or vibration.

19. Servicing. Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

20. Damage requiring service. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions: a--When the power supply cord or plug is damaged. b--if liquid has been spilled, or objects have fallen into the product. c--If the product has been exposed to rain or water. d-- if the product does not operate normally by following the operating instructions. Adjust only those controls which are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operating range. e-- if the product has been dropped or damaged in any way. f--When the product exhibits a distinct change in performance, this indicates a need for service.

21. Replacement parts. When replacement parts are required, be sure that the service techni-

cian has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

22. Safety Check. Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

23. Wall or Ceiling mounting. This product should only be mounted to a wall or ceiling using brackets made and/or as specified by the manufacturer.

24. Heat. The product must be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers or direct sunlight) that produce heat.

ITEMS INCLUDED WITH YOUR NEW PT-C55 PAN TILT CONTROLLER:

PT-C55 PAN TILT CONTROLLER

9 PIN DATA OUTPUT CONNECTOR PACK

9VDC POWER ADAPTER

UNPACKING AND INSTALLING THE PT-C55 PAN TILT CONTROLLER

Remove the PT-C55 controller and accessories from the protective foam packaging. It is recommended to save this packaging until the installation is complete and the head has been put into operation, in the unlikely event that there is a problem and it needs to be returned for service.

5 pin connector on base of PT head	MAIN PAN TILT CONTROL INTERFACE
PIN 1	RS-485 GROUND from controller pin 5
PIN 2	RS-485 LINE 1 (-) from controller pin 2
PIN 3	RS-485 LINE 2 (+) from controller pin 3
PIN 4	+24VDC FROM MAIN POWER SUPPLY PIN 1 OR 2
PIN 5	GROUND TO 24VDC MAIN POWER SUPPLY PIN 3 OR 4

The table above shows all of the basic system wiring connections. Now you may hook up the wiring to the Eagle™ control system and power supply, using the instructions included with those devices. If you are using the Eagle™ PT-T2 connection block, follow the instructions included with the PT-T2 for system configuration choices. Proceed to the next step ONLY when the system wiring is complete, and all connections have been verified for accuracy.

RS-485 CONNECTION AND TERMINATION

Communications for the Eagle™ pan tilt system is transmitted via the RS-485 standard, a common multidrop network configuration. Three wires are required for RS-485 communications, two for signal and one for ground. Using 20 AWG shielded twisted pair cable, maximum communication length without a repeater is 4,000 feet. There is a D-sub 9 type female connector for hooking up the RS-485 output of the PT-C-55 to the PT head(s). See the table for the correct pin out wiring.

RS-485 network
PIN 2--RS 485 LINE 1
PIN 3--RS 485 LINE 2
PIN 5--RS 485 GROUND

To connect multiple units to the same communication line, connect the three wires in parallel from unit to unit. On each of the pan tilt heads and in the controller is a 120 ohm terminating resistor. The resistor is connected in series to a switch for easy configuration; this switch for termination is located on the side of the unit (under the removeable access panel) next to a COMM status LED; with the switch towards the LED, the head is terminated; with the switch away from the LED, the head is unterminated. Heads are shipped with the termination turned ON. The easiest way to terminate your system is to terminate the head that is farthest away by cable distance, and leave the controller terminated. Any other head should NOT be terminated.

ENERGIZING THE SYSTEM

It is recommended to power up the Eagle™ pan tilt controller before powering up the pan tilt head(s). When this is done, you may now power up the power supply for the PT head(s). Ob-

serve the red status LED lens on the side of the pan tilt head. About two seconds after power is applied, the LED should blink twice. This is to signal that the main microprocessor is active, and ready to receive a command. The head will now move on its' own to the "home" position of straight ahead and level, and then proceed to recall PRESET 1 automatically after homing is done. This is to allow you to create a startup position that the head will always recall upon power up.

The LED provides important visual feedback to the status of the head; if the head has been activated and is being talked to by a controller, the LED is on solid, with some flickering. If the head is attached to the RS-485 line and hearing a command being sent to another head, it will flicker.

If the LED comes on solid, with no flickering at all, it usually means the RS-485 wiring is incorrect. Usually the ground and one of the data lines have been swapped. Check the wiring and try again.

INSTALLING AND USING EAGLE™ PAN TILTS WITH PT-C55 CONTROL PANEL

The Eagle™ PT-C-55 controller is the preferred controller for use with the PT-50 head, but may be used with any head. Hookup the included 9V power supply to the rear panel connector.

The PT-C55 control panel has some bi-color (red/green) LED's for status feedback of the current operation. Most of the individual functions for setup of the pan-tilt system have feedback that is shown by the LED display.

Note that the graphic overlay on the control panel has information in both black text below some of the buttons, and in red and green text below some of the buttons. The red text signifies the NORMAL number of the key; the green text shows the number of the key when the SHIFT key is pressed first. For example, to enter camera number 1, simply hit the 1 button when the LED is RED. To control camera 5, touch the SHIFT key, then the camera 1 button. The LED will turn green, signifying that camera 5 is selected.

Also note that the PT-C55 is broken down into several different control zones. CAMERA NUMBER selection is at the top center, FUNCTIONs are in the middle center, and PRESET RECALL is located in the lower center. CAMERA FUNCTIONS, which allow you to control the some camera functions remotely (if the optional PT-CCB camera control chip is installed in the pan tilt head) is located at the top right.

Below that are the red and blue GAIN and IRIS control buttons. Please note that not all cameras have remote gain adjustment, and not lenses have remote iris level control; some lenses are auto iris only, and the IRIS buttons will not function in that case. Check the info with your PT head to see what iris control your camera and lens model supports if you are not already aware. Check your camera's manual to find out if it supports remote color gain adjustments.

The joystick on the right side of the controller has multiple functions, controlling both pan and tilt direction, and either zoom or focus functions. It is configurable from the controller; selecting FUNCTion, 8, 1 sets the rocker to control the zoom in/out, and the rotary knob on the joystick to control the focus. If you instead select FUNCTion, 8, 2 then the rocker controls focus near/far, and the rotary knob controls zoom in/out. It is also speed sensitive; rotate the knob a small amount and the lens moves slowly; rotate the knob a large amount and the lens moves quickly.

The control rocker on the left hand side allows adjustment of the lens' zoom or focus position. It is configurable from the controller; selecting FUNCTion, 8, 1 sets the rocker to control the zoom in/out, and the rotary knob on the joystick to control the focus. If you instead select FUNCTion, 8, 2 then the rocker controls focus near/far, and the rotary knob controls zoom in/out. It is also speed sensitive; deflect the rocker a small amount and the lens moves slowly; deflect the rocker a large amount and the lens moves quickly.

FUNCTION DEFINITIONS FOR PT-C55 CONTROL PANEL

CAMERA NUMBER

Selects the camera / head combination to be moved. Select the CAMERA NUMBER button that corresponds to the pan tilt head you wish to control. For example, to control camera 1-4, press the 1-4 key. To select cameras 5-8, press SHIFT, then the 5-8 button you want. Note that the LED of the selected camera will change from RED to GREEN when cameras 5 to 8 are selected.

Select the ALL button if you wish to move ALL camera heads. Please note that for safety reasons when CAMERA ALL is selected, you may not clear travel limits. Travel limits must be cleared individually on a head by head basis.

SAVE FUNCTION

This is used for saving preset pan tilt and lens positions. To save a preset, you must first be in the POSition mode. Press the POS button to enter POSition mode. Move the left joystick up, down, left, or right for positioning the head, manually aiming the shot the way you desire. Use the zoom and focus in/out buttons to select the field of view as desired. **YOU MUST ZOOM AND FOCUS TO SET UP YOUR SHOT <u>AFTER</u> ENTERING THE POSITION MODE !!.** (Fujinon and Canon telecon type servo lenses only. If using a C mount, DC drive lens, you don't need to enter POSition mode first.) If you set up your zoom and focus before entering the POSITION mode, the lens will not report where it is in its' zoom and focus range to the software, and the lens preset will not be stored. Press the SAVE button followed by the PRESET button you wish to call it. For storing presets 11 thru 20, touch SAVE, SHIFT, and the PRESET button number. Note that the LED of the PRESET button will shift to GREEN to show that you are saving a number from 11 to 20. Up to 20 presets may be saved for each individual pan tilt head.

A.IRIS

This button controls the toggling of Auto Iris being ON or OFF. When the LED is lit, AUTO IRIS is ON. This is only applicable for cameras and lens systems with auto iris functionality. If you switch from one head to another, this LED may stay on even though the Auto Iris function of the second camera may not be on. Cycle the button once to verify the mode. Check the list in your PT head manual to see if your camera / lens has this feature.

FUNCTION

Used in combination with the PRESET buttons to select special setup functions of the PT-50 system. Consult the detailed chart at the end of this manual for all of the FUNCTIONS available.

POS

As described earlier with SAVE FUNCTION; this button puts the pan tilt head into POSition mode for saving presets.

LIMIT

The LIMIT button in conjunction with the CAMERA FUNCTIONS keypad allows the operator to set the travel limits of the PT head. Limits are to prevent the head from traveling in areas not needed, or to prevent the camera / lens from hitting an obstruction. Limits on the Eagle™ pan tilt systems are set electronically, not mechanically. The PT-50 and 101 heads use DC stepper type motors instead of DC geared motors. If an obstruction is encountered during travel, the motor merely slips until the condition is corrected. If this occurs, recalled preset positions will not be recalled correctly until the next time the PT head passes through the “home” position of straight ahead and level.

The heads are shipped with safety limits in place of about 30˚ each up and down, and 120˚ each left and right. It is recommended to stay with these limits until you are familiar with the operation of the system. Once familiar with the operation you may change the limits

by touching the LIMIT button followed by the MENU button. This will clear all previously set limits.

Please note that if you clear the safety limits, and don’t set new ones immediately, the head will revert to the previously set limits the next time power is cycled off and on. Simply clear the limits and set new ones right away to prevent this from happening.

Press LIMIT followed by the UP, DOWN, LEFT, and RIGHT buttons respectively to set the UP, DOWN, LEFT, and RIGHT limits. Note that you must move the head to those positions before setting the LIMIT, otherwise you will set all of the limits in one place, preventing the head from moving at all! If this happens, simply clear the limits and start over.

BARS

Pressing this button will toggle the video output of the selected head/camera between normal video output and color bars. Note that the PT head must have the Eagle CCB camera control option for this to work.

SHUTTER

Pressing this button will toggle through the camera's shutter speeds. Note that the PT head must have the Eagle CCB camera control option for this to work. Check your camera's owners manual for the listing of the shutter speeds selectable.

AUTO WHITE

The A.WHT button is a toggling function. Press the button by itself to execute the AUTO WHITE setting of the camera. Press SHIFT then A.WHT to execute the AUTO BLACK setting of the camera.

SPEED

The SPEED button in combination with some other buttons allow various speed settings to be changed.

The PT heads have three overall speed ranges; to change the range, press SPEED followed by PRESET 1, 2, or 3 for HIGH, MEDIUM, and SLOW speed ranges. The heads are shipped in HIGH range.

SHIFT

The SHIFT button is used only as a modifier button in conjunction with other buttons to carry out special functions. It has no effect on it's own.

"PAINTING" COMMANDS--R & B GAIN, R & B BLACK ADJ

The R&B Gain buttons, and their shifted counterparts R&B Black adjust, allow you to "paint" the camera's color output to match desired levels. You should only use these buttons in conjunction with proper test equipment, such as a vectorscope, to keep track of these adjustments. Note that not all cameras have these functions, and may not be adjustable.

FUNCTION MODES

Select the FUNCTion button then a PRESET button and the following combination of keys to run the shown function. Touch the FUNCTion key again to clear the function operation.

PRESET 1-- PRESET SPEED CHANGE

This function allows changing preset speeds to different values than were originally chosen. For example, travel to preset 3 was originally set to speed 1(high range). If you now want to change travel speed to this preset to 2 (mid range), recall preset 3, then enter FUNCT, PRESET 1, then PRESET 1, 2 or 3 to change the preset to HIGH, MEDIUM, or LOW speed.

PRESET 2-- SCENE FILE ASSIGNMENT

Dependent upon the camera being used, i.e., if using capable Hitachi cameras, SCENE files can be stored In the camera controller chip and recalled in conjunction with a specific location preset. This could be useful if the scene has multiple shots to be setup, under different lighting conditions. First, the scene files must be set up and stored using the camera functions / on screen menu system of the camera. Next, decide which position preset you want to link to which scene file. For our example, let's use position preset 3, and link it to scene file 1. Recall preset 3 (by pressing the PRESET 3 button). Once it is done recalling, then hit FUNCTion, PRESET 2, and PRESET 1, representing scene file 1. This will now link the position preset 3 and the scene file 1 together. In order to make any changes after saving this information, you must either resave or delete the position preset 1.

PRESET 3--INVERT DIRECTION

This toggling FUNCTion will invert the left and right, and up and down directions of the PT head. This is useful when the pan/tilt is to be ceiling mounted instead of tripod or wall mounted. It reverses the movement directions of the pan tilt head. This can be set individually on a head by head basis so that if a mix of upright and inverted heads are being used in the same room, they can be configured such that they all move the same direction.

Simply choose the camera number to change, followed by FUNCTion, and PRESET 3. Repeat the command sequence to change it back.

PRESET 4--ADDRESS OF PAN TILT HEAD

The head address is set by the factory to 1 when shipped. If a change is required, simply enter FUNCTion, the PRESET 4 button, then PRESET 1 through 8 to readdress the head from number 1 through 8.

Note that the readdressing procedure will only work if you know the number the head is currently set to; if you don't know the number, first select CAMERA, ALL. This will allow you to talk to any head that is correctly wired up.

Note that this will set the number for all heads on the RS-485 comm line; you must disconnect the power or communication for all the heads except the one you wish to address, otherwise all the powered heads will be set to the same address!

PRESET 5--SET LENS TYPE.

This is set by the factory when ordered for your specified lens type; 1 is for Rainbow and other CCTV type lenses, 2 is for Fujinon and Canon telecon lenses. The newer Fujinon C mount lenses with the -T11 designation are also set to type 2.

If you wish to change the lens type after receiving your PT head, press FUNCTion, PRESET 5, then PRESET 1 or 2 to set lens type 1 or 2. If you are changing lens types, you may also need to reconfigure the lens cable inside the PT head. Contact Eagle™ tech support for assistance.

PRESET 6--HEAD STATUS CHECK

This is a simple method of checking pan tilt head status remotely. Touch FUNCTion, then PRESET 6. If the head is working correctly, all of the PRESET LED's will flash green. If something is wrong with communications to the head, the LED's will flash RED. If there is no response from the head, the LED's will not flash at all. Also, if the controller is being routed through the PT-MP1 multiplexer, the LED's will not flash either.

PRESET 7-- SAVING SCENE FILES

The PT-C55 controller is capable of saving SCENE files for use with some Hitachi cameras, in particular, the HV-D30 camera. The HV-D30 is capable of saving up to four different scene files, which are combinations of various lighting and color correction settings. See the Hitachi HV-D30 camera manual for complete details on creating scene files. To save a scene file with the PT-C50 controller, press FUNCTion, PRESET 7, then PRESET 1 through 4 for scene file 1 through 4.

PRESET 8-- ZOOM/FOCUS CONTROLS

The PT-C55 controllers' zoom and focus controls may be swapped to fit user preference. Normally, the rocker pot is set to zoom, and the rotary knob at the end of the joystick is used to focus. If you would like to swap these, simply touch FUNCTion, 8, 2 to set the rocker to focus and the rotary knob to zoom. To set them back to normal, touch FUNCTion, 8, 1.

CAMERA FUNCTIONS

The buttons in the top right hand area of the PT-C55 controller allow the adjustment of the on-screen camera setup menus of several Hitachi cameras. To activate the on-screen menu, simply hit the MENU button. You may then scroll up and down through the menus of the cameras. To make a change to a setting, touch the left or right button. Push the MENU button again to turn off the MENU operation.

NOTE: To access the SPECIAL SET menu of the camera, press FUNCTION, then the MENU button. This is to access the SPECIAL SETup menu screen. The SPECIAL SET menu of the HV-D15/25 is available by just pressing the MENU button, then pressing LEFT or RIGHT until the SPECIAL SET menu appears.

PAN-TILT OPERATIONS

Be sure to follow all of the installation and safety instructions included with the Eagle™ PT-50 pan tilt head before starting to use this system !!

First, select the address of the head you wish to control. Since up to 31 Eagle™ heads may be on a single RS-485 line, you must choose the correct one to control (only 8 may be controlled from the PT-C-50 controller). Select CAMERA, then the number of the head to be controlled. Head addresses can be changed as described in the previous section about PRESET 4 for addressing.

If this is the first use of the system, the limits of pan tilt movement should be adjusted as desired now. Begin by entering LIMIT, MENU to clear all movement limits. This function will eliminate all safety limits that have been set at the factory to prevent excess travel. This clearing is temporary only; when power is cycled off and on, the previous limits will return unless you have set new limits. This will erase any limits previously set by the factory during testing.

Now, set the safety limits of travel as desired. Use the LIMIT then UP, DOWN, RIGHT, and LEFT for up, down, left, and right limit setting. Remember, that the pan tilt head has a range of pan of 360˚ (left or right 180˚), and a tilt range of 90˚ (up or down 45˚ on PT-50 only); it cannot turn more than a full circle. There are end travel stops programmed into the head at the factory to prevent traveling more than these amounts; these cannot be cleared when clearing the safety limits. Once the travel limits are set, normal usage of the pan tilt system may begin.

The PT-50 and 101 heads use DC stepper type motors instead of geared motors. If an obstruction is encountered during travel, the motor merely “slips” until the condition is corrected. This prevents damage to both the pan tilt head and the camera/lens. If this occurs, recalled preset positions will not be recalled correctly until the next time the PT head passes through the “home” position of straight ahead and level.

FREQUENTLY ASKED QUESTIONS / SETUP PROBLEMS

My pan tilt head was working, but now has stopped responding. I still have a picture from the camera, but have no control. What happened?

A: You are either trying to control the wrong head number, or the head has accidentally been readdressed to an unknown number, or the serial communications have failed. If you are certain that you are trying to control the correct head, follow this procedure to regain control.

1. On the PT-C55 controller, select CAMERA, ALL. This will talk to any head on the line. Try to move the head up, down, left, or right. If it responds, then you have good communications. Follow the procedure on page 11 to readdress the head to the number you want it to be.

2) If it doesn't respond, then check the serial wiring path from the controller to the head(s). If you have multiple heads, and the other heads work correctly, then your wiring path is most likely correct, but should still be tested. Try moving the non-working head to a known working location and retesting.

3) The red LED on the side panel of the head is for troubleshooting and status. If a head is correctly wired and addressed, when you move the joystick, the LED will glow solid, with some modulation(flickering) seen as you move the joystick. If the LED comes on solid upon power up, then the RS-485 ground and one of the comm lines are reversed. Check your wiring again. If the LED never comes on solid, but only flickers, then either the head is hearing traffic for another head, or the RS-485 A & B comm lines are reversed. If you are certain the head is addressed properly, then swap the A&B comm lines and test again.

If it still doesn't work at a known good location, you have swapped the comm lines, and tried readdressing, then the head may be faulty. Contact Eagle tech support at (877) 862-6865 or www.eaglepantilt.com.

My lens control isn't working correctly; the lens goes to one end of its' range and wont move.

The lens type has been set incorrectly. The Eagle pan tilt system is capable of using either servo drive teleconferencing lenses, or DC drive C-mount lenses. If set to the wrong type, this symptom will result. Verify the type of lens you are using and check the lens type in your PT head manual.

I am trying to set up a preset shot, but the head isn't returning to the correct position or zoom/ focus setting.

This could be caused by a number of things. First, if using a teleconferencing lens (TYPE 2), make sure you are going into POSITION mode (POS button) before trying to set the preset. If you are not in POSITION mode, the lens' zoom and focus settings cannot be memorized. Also, the pan and tilt joystick must be moved for the head's position settings to be recorded.

If the zoom and focus settings are retrieved correctly, but the head is landing high or low when recalling, then the weight balance of the camera/lens assembly is probably off from front to rear. The assembly must be centered from front to rear to provide accurate recall; if it is balanced too far front, then it will probably be low in recalling presets above horizontal. If balanced too far rear, it will be high in recalling presets above horizontal. Remove the camera/lens assembly as needed in order to check the balance, and replace it in the correct

position.

My head starts moving on its' own after going to the home position; why?

Notice that the head is moving to a preset position. See the explanation on page 6-7 under Energizing the System. After August 10, 2004 PT50 and 101 heads automatically recall preset 1 after going to the home position at power up.

PT-C-55 FUNCTION LIST REV AUG 2006

Keystroke(s)	Function
CAMERA 1-4	Select Camera 1-4
CAMERA All	Select All Cameras
SHIFT CAMERA 1-4	Select Camera 5-8
PRESET 1-10	Recall preset 1-10
SHIFT PRESET 1-10	Recall preset 11-20
SAVE PRESET 1-10	Save preset 1-10
SAVE SHIFT PRESET 1-10	Save preset 11-20
BARS	Toggles camera color bars on/off
SHUTTER	Toggles through camera shutter speeds
AUTO IRIS	Toggle Auto Iris on/off
A.WHITE	Auto White function
SHIFT A.WHITE	Auto Black function
POS	Toggle Position/Speed Mode
LIMIT *UP(camera func.)*	Set up tilt limit
LIMIT *DOWN(camera func.)*	Set down tilt limit
LIMIT *LEFT(camera func.)*	Set left pan limit
LIMIT *RIGHT(camera func.)*	Set right pan limit
LIMIT *MENU(camera func.)*	Clear all movement limits
SPEED *PRESET1-3*	Set speed of pan/tilt 1=fast 3=slow
FUNCTION *PRESET1 PRESET1-3*	Change speed of last preset to speed 1-3
FUNCTION *PRESET2 PRESET1-4*	Assign camera scene 1-4 to last preset
FUNCTION *PRESET3*	Invert up/down, left/right movement of PT head
FUNCTION *PRESET4 PRESET1-8*	Change head address to 1-8
FUNCTION *PRESET5 PRESET1-3*	Set lens type 1-3
FUNCTION *PRESET6*	Request status of current head
FUNCTION *PRESET 7 PRESET1-4*	Saves Scene file 1-4
FUNCTION *PRESET 8 PRESET 1-2*	1 sets zoom to rocker, focus to knob 2 sets zoom to knob, focus to rocker
FUNCTION *PRESET 9 PRESET 1-2*	RESERVED
FUNCTION	If in the middle of a multi-stroke function, this will cancel it
MENU	Camera Main Menu / Select
FUNCTION *MENU*	Camera Special Set Menu
UP	Camera Menu Up
DOWN	Camera Menu Down
LEFT	Camera Menu Left
RIGHT	Camera Menu Right
R GAIN+	Increase R Gain level
R GAIN-	Decrease R Gain level
B GAIN +	Increase B Gain level
B GAIN -	Decrease B Gain level
IRIS OPEN	Increase Iris level
IRIS CLOSE	Decrease Iris level
SHIFT R GAIN+	Increase R Blk level
SHIFT R GAIN-	Decrease R Blk level
SHIFT B GAIN +	Increase B Blk level
SHIFT B GAIN -	Decrease B Blk level
SHIFT IRIS OPEN	Increase M Blk level
SHIFT IRIS CLOSE	Decrease M Blk level