



EAGLE

PAN TILT SYSTEMS

PT-TSC Color Touch Screen Pan Tilt / Camera Controller



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INCLUDED WITH PT-TSC COLOR TOUCHSCREEN CONTROLLER:

1 EA. PT-TSC TOUCHSCREEN CONTROLLER

1 EA. PT-TS-PS 9VDC, 2.3A DC INTERNATIONAL POWER SUPPLY

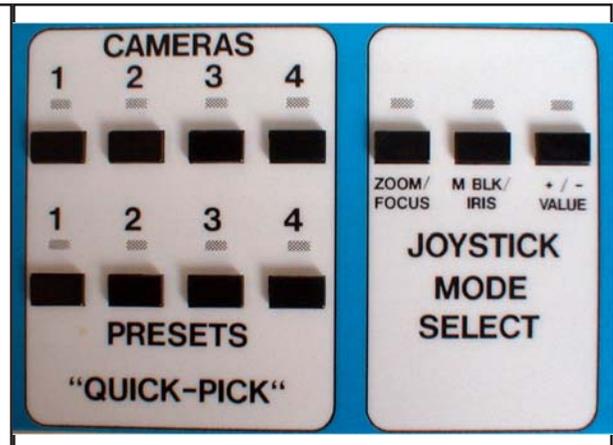
1 EA. DB-9 FEMALE CONNECTOR AND SHELL FOR RS-485 CONNECTION

1 EA. INSTRUCTION MANUAL



The PT-TSC controller includes a new, QUICK-PICK control panel, allowing the user to instantly select cameras 1 through 4, and presets 1 through 4 per each head. This provides much faster access than the previous, fully menu driven version. There are also four erasable write on areas built into the Lexan graphics overlay to allow the operator to make simple notes of the preset locations. Make sure to use only a pencil or water based marker to write on these areas!!

Shown here is a close up of the QUICK-PICK area, as well as the control buttons for the multi-function joystick. This joystick, on the right side of the controller, is switchable between standard zoom/focus operation, master black/iris level adjustment, and increment / decrement values of a chosen dialog box. The LED for the selected mode will light up above the button. The QUICK-PICK area allows the user to instantly select cameras 1 through 4, and presets 1 through 4, for each head. The LED for the selected head and preset will illuminate above the button. The chosen camera or preset buttons will also show up on the touch screen menus.



Here is another view showing the multi-function joystick. Note the legends above and on the left side of the joystick. With the mode select in ZOOM/ FOCUS, pushing the stick up zooms in, pulling back zooms wide; focus is from side to side. In M BLK/IRIS mode, adjust master black from side to side, iris level by pushing up and down. In +/- value adjust mode, push up and down to raise or lower the value in a displayed box.

The PT-TSC touch screen control allows integrated pan, tilt, zoom, focus and camera control of all of the 100,200, and 300 series of pan-tilt heads from Eagle. It is shipped in a standard desktop configuration. It provides attitude control of the pan tilt head as well as zoom, focus and iris control of camera lenses; control of an optional environmental housing. In conjunction with the PT-CCB camera control board, it will allow detailed remote bidirectional camera control of the Hitachi HVC/D and Z series of cameras.

PRECAUTIONARY STATEMENT

Improper settings and connections may cause damage to the pan tilt head, the camera, and the lens being used. 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 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 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.

CONTROL PANEL USAGE

The PT-TSC control panel has a 4"x6" backlit color touch screen LCD display for feedback and control of Eagle™ pan-tilt systems. It is important not to use anything but a finger or a special touch-screen stylus for touching the screen as it may be easily scratched!! Window cleaner may be used for cleaning fingerprints and smears from the screen.

Individual control joysticks allow adjustment of the pan tilt head and lens' zoom and focus control. The pan tilt heads are vector solving, i.e., they will move diagonally instead of just moving horizontally and vertically. It is also speed sensitive; deflect the joystick a small amount and the head moves slowly; deflect the joystick a large amount and the head moves quickly. The same speed sensitive control applies to the lens' zoom and focus features in the manual, "speed" mode only. For ease of usage, views of all of the screen layouts used in the PT-TSC can be found throughout this document, as well as at the end.



SETUP PAGE VIEW

TOUCH SCREEN SETUP--NOTE: THIS MUST BE COMPLETED BEFORE OPERATION OF THE SYSTEM CAN BEGIN !!!

Pressing the image of the EAGLE on the MAIN PAGE of the PT-TSC will activate the setup menu

Use this screen to setup the parameters of the pantilt heads and cameras in your system. When the menu first appears, the first thing to do is to choose the camera you wish to set the parameters of. Press the area next to CAMERA # and select the camera number.

Next, touch the box next to CAMERA; use the up/down arrows to select your camera model from the list. If your camera model can not be found, either choose NONE or call tech support to ask which one to use.

Touch the LENS box and select the LENS type for your camera; use BAY for bayonet mount, teleconferencing type lenses; C mount for CCTV type lenses.

Press the CAMERA CONTROLLER box and choose YES or NO to select bi-directional camera control if your PT head has the optional PT-CCB camera control board installed. Note that not all of the Hitachi cameras use bidirectional communications; set to NO if this camera will not support bidirectional comm; set to YES if it does. NOTE: If you are using camera control, make sure that the baud rate of the Hitachi camera has been set to 9600 bps. Consult your specific Hitachi camera manual for instructions on setting the baud rate.

Use the INCREASE or DECREASE buttons to raise or lower the CONTRAST of the screen.

Pressing the CALIBRATE TOUCH button will run the built in touch screen alignment routine; this is done at the factory, and should not normally need to be done in the field. However, in the event that the touch screen overlay becomes misaligned from the graphic fields, you can use this routine to realign the touch screen.

Once you have made all of your screen adjustments to your liking, press the SAVE button to store the parameters in the PT-TSC memory. The EXIT button will change to read

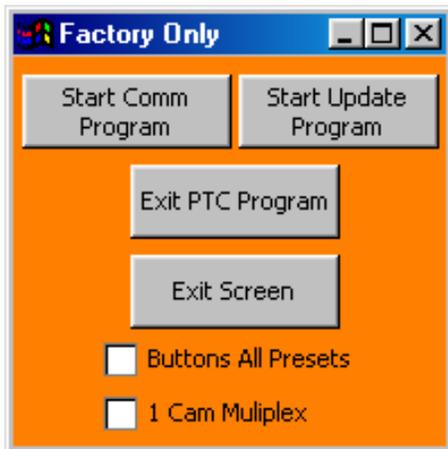
PLEASE WAIT. The controller will be unresponsive until saving is done. This is a battery powered memory, and will retain the information during power off and unplugged conditions. Note that this memory is for the contrast and calibration features only; the camera info is stored automatically with every keypress.



ABOUT PT-TSC PAGE

ABOUT PT-TSC

Pressing the About PT-TSC button on the SETUP page will show the above screen. This gives the software revision level, our manufacturers' info, and access to the FACTORY USE ONLY button. Software versions of 4.0 and higher support remote software upgrades via the serial programming port on the rear of the controller. Pressing the FACTORY USE ONLY button will access a password screen. Enter the correct four digit password shown below to get into the FACTORY USE ONLY screen.



The four digit password to access the screen is:
1988

The two buttons labeled START COMM PROGRAM and EXIT PTC PROGRAM should NOT be pressed unless instructed to by Eagle™ service personnel. The START UPDATE PROGRAM button is to begin the update of the PT-TSC software via the serial update port on the rear of the controller. See the detailed instructions on the next page for updating the software. The PT-TSC “QUICK PICK” camera and preset button panel can be reconfigured from four camera and four preset buttons to ALL presets (Presets 1 thru 8). Simply touch the check box next to “Buttons All Presets”, then the Exit Screen button to accomplish this. You may switch back and forth as desired; this is not a permanent software change. The “1 Cam Multiplex” check box should NOT be checked. Press EXIT SCREEN to leave the Factory Use Only area.

UPGRADING PT-TSC SOFTWARE

From time to time, Eagle™ may make software upgrades available to the PT-TSC controller. Due to the fact it is essentially a Windows CE™ computer, software upgrades are easily implemented through the serial upgrade port on the rear of the PT-TSC. This is the DB9 female port, located to the side of the rear panel, not the DB9 male in the center of the panel.

Here are the steps in proceeding with the software upgrade; it will require the following:

One PT-TSC controller with power supply

One PC running Windows 98, ME, 2000, or XP operating system, with a serial port available

One DB9 cable, male to female, wired pin to pin straight through. This can be made up or purchased locally.

- 1) Using an Internet connection, go to the Eagle™ website (www.eaglepantilt.com)
- 2) Find the software downloads area of the site, and download the TSupdate.exe file. It is a self extracting file.
- 3) Make sure to save it in a known location on your computers' hard drive so that you can find it after downloading. A folder such as "C:\Program Files\Eagle" should be created for the purpose of the installation (if you have administrative priviledges on your workstation; if you don't, contact your system administrator.)
- 4) Find and double click on the TSUpdate.exe file; extract it to the C:\Program Files\Eagle folder that was created above.
- 5) Connect the PT-TSC to the serial port of your computer using the DB9 serial update port on the PT-TSC rear panel.
- 6) Start the Eagle™ update program on your computer. Set the serial port number to the port you are using (it defaults to COM1)
- 7) On the PT-TSC controller, enter the SETUP menu by touching the Eagle icon in the upper left corner of the MAIN screen.
- 8) Press the About PT-TSC button in the lower left corner of the SETUP screen.
- 9) Choose the Factory Use only button; when prompted for the password, enter 1988 on the keypad.
- 10) Press the Start Update Program button on the top right corner of the PT-TSC window.
- 11) In the Eagle software application on the PC, click the START UPDATE button. It will take several minutes for the program to transfer from your PC to the touch screen.
- 12) Wait until the message appears on the PT-TSC that states "All Done, Reset Touch Screen". Exit all menus on the PT-TSC, disconnect the serial cable, and cycle the power to the PT-TSC.

13) The software update is now complete; to verify, go to the SETUP page on the touchscreen and touch the About PT-TSC button. The current software version should match the version you just installed.

PLEASE NOTE: If your controller was manufactured prior to March of 2002, or doesn't have the serial upgrade port, it will have to be sent in to Eagle™ for a manual upgrade. Please contact tech support to receive a return authorization before sending in the unit.



MAIN PAGE

MAIN PAGE CONTROLS

Take a moment to look at the layout of the MAIN PAGE of controls. It is broken up into three areas; the camera number/camera status display in the top right; the quick commands section at the top; and the menu button selection area in the lower half. The camera number / camera status area shows the number of the camera / pan-tilt head currently selected to be controlled. It will also show various status messages when the STATUS button is pressed.

The Commands section allows quick, one button access to selecting camera number, recalling and saving presets, and checking head status. These commands are detailed below. The MENU area contains buttons that when pressed will jump to the menu shown on the button. It will take some time to get acquainted with the destination you wish to obtain; this can be helped by playing around with the buttons, learning where they take you. None of these destinations are more than one button press away from this main menu, allowing fast return to select another menu as desired in the middle of a production session. The back pages of this manual contain a printout of all of the screens to allow you to quickly refer to the layout of the controller.

CAMERA NUMBER

Selects the camera / head combination to be used. Select the CAMERA NUMBER button and a keypad will popup. Enter the number of the camera you wish to control, then press ENTER. For example, to control head #1, press CAMERA NUMBER, then the 1 key, then ENTER. The display will read "CAMERA 1".

NOTE: to control all pan tilt heads at once, enter CAMERA NUMBER , 0; this is the command to control ALL heads on the line. Please note that when CAMERA, 0 is enabled, you may not clear the travel limits of any head; this is a safety issue.

NOTE: if this is the first time the pan tilt head and camera have been accessed this work session, and you are using the PT-CCB camera control option in bidirectional mode, it will take about 30 seconds for the camera head to download it's current settings to the controller. You will see the CAMERA STATUS line popup in the display window at the top right; it will count from 1 to 52 as it downloads. It may stop and start again during the count up; this is normal. Please let the counting finish before attempting to use the head or any other head.

RECALL PRESET

Push this button followed by the number of the preset you wish to recall. Example: to recall preset 14, touch RECALL PRESET, 1, 4, ENTER.

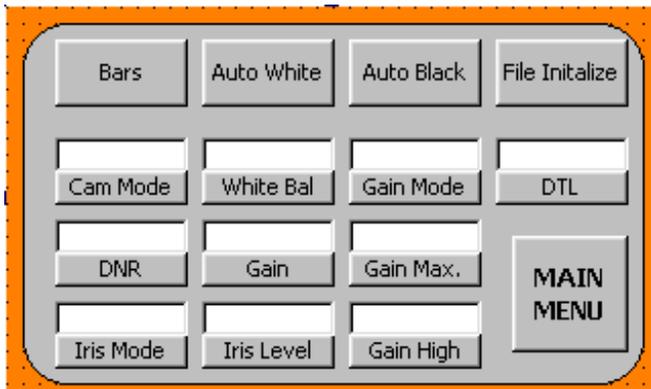
SAVE PRESET

This button is used to save preset position/lens setting combinations. To use this button, you must first be in POSITION mode. (FUNCTION, toggle POSITION/SPEED MODE button to POSITION, EXIT) 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 joystick to select the field of view as desired. **YOU MUST ZOOM AND FOCUS TO SET UP YOUR SHOT AFTER ENTERING THE POSITION MODE !!**. 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. Press the SAVE PRESET button followed by the number of the preset, then ENTER. Up to 32 presets may be saved for each individual pan tilt head. The system automatically stays in POSITION MODE after you save the preset, so you will have to manually enter SPEED MODE from the FUNCTION menu to return to normal operating mode

Example: FUNCTION, POSITION MODE, EXIT, setup the shot, SAVE PRESET, 1, ENTER.

STATUS

The STATUS button will show the current status for the pantilt head selected. This may show various phrases for factory use; however the only important ones for field use are 'OK' if the RS-485 comm link is connected. The other would be if you hit STATUS and no response is seen; this means the RS-485 link to the head is disconnected or improperly wired. It can also mean another sort of problem is occurring, such as the head is not addressed correctly or is not even part of the system (example, if you try to get status of head number 16 when you only have 15 heads in the system)



CAM CONTROLLER PAGE 1
VIEW

IMPORTANT NOTE:
MAKE SURE TO SET YOUR CAMERA'S BAUD RATE TO 9600BPS TO ALLOW CONTROL BY THE EAGLE PAN TILT SYSTEM.

CAMERA CONTROLLER MENUS

The four CAMERA CONTROLLER menus unleash the power of the Eagle™ system. No other pantilt control system on the market makes it as easy to use the camera controller at the same time as the pan-tilt / zoom / focus controller. Over 80% of the frequently needed camera control items can be found on this first page; the other three main menus linked to this page are for detailed camera setup parameters that are usually done once when the camera is first installed, and then rarely touched again. Note that these pages show all available buttons for camera control; when used with HV-D3, HV-D5 or 5W, HV-D15, Z-2010, Z-3000, or other Hitachi cameras, different function buttons will appear or disappear specific to the camera. ***It is not the intent of this section of the manual to tell you how to set up your camera, merely to explain how the camera controller works.*** For a detailed explanation of your particular cameras' operation and setup, consult your Hitachi camera owners manual, your dealer, or Hitachi representative.

NOTE: all of the CAMERA CONTROLLER functions only apply to the camera / head that is currently addressed on the MAIN page; you may not adjust camera parameters for a different camera than the one addressed. If background changes are a necessity for your system, a second PT-TSC or PT-C/PT-CC controller and the PT-MP-1 multiplexer would be required.

BAR/CAM

This is a toggling function between the normal video out of the camera and the built in color bar generator of the camera.

AUTO WHITE

This activates the AUTO WHITE feature of the camera. In order to use and save the reference values generated by the camera, the WHITE BAL mode must be set to MEM. Just press the button to start the AUTO WHITE process.

AUTO BLACK

This sets the black level of the camera. Just press the button to activate it; it will go through an automatic setup level procedure; the picture will go black momentarily.

FILE INITIALIZE

Pressing this button resets the camera to the factory default settings stored in the camera.

CAM MODE

This sets the camera mode to MANUAL or AUTO; for normal operation where you would like to control the camera, set this to MANUAL.

WHITE BAL

This sets the WHITE BALANCE mode of the camera to AUTO, MEMORY 1, MEMORY 2, or PRESET. Press the WHITE BAL button; use the multifunction joystick to select.

GAIN MODE

This sets the gain mode of the camera to AUTO, PRESET, or VARIABLE. Press the GAIN MODE button; use the multifunction joystick to select.

DTL

This sets the DETAIL enhancement circuitry of the camera to LOW, NORMAL, HIGH, or VARIABLE. Press the DTL button; use the multifunction joystick to select.

DNR

This sets the dynamic noise reduction circuitry of the camera to setting 1, 2, or OFF. Press the DNR button; use the multifunction joystick to select.

GAIN

This button sets the level of GAIN desired. Press the GAIN button; use the multifunction joystick to select.

IRIS LEVEL

This is for level control of the iris when the IRIS MODE is set to MANUAL. Press the IRIS LEVEL button; use the multifunction joystick, in M BLK / IRIS mode to adjust the range from -127 to +127 in setting.

IRIS MODE

This sets the IRIS MODE of the camera to AUTO, MANUAL, or REMOTE. Press the IRIS MODE button; use the multifunction joystick to select.

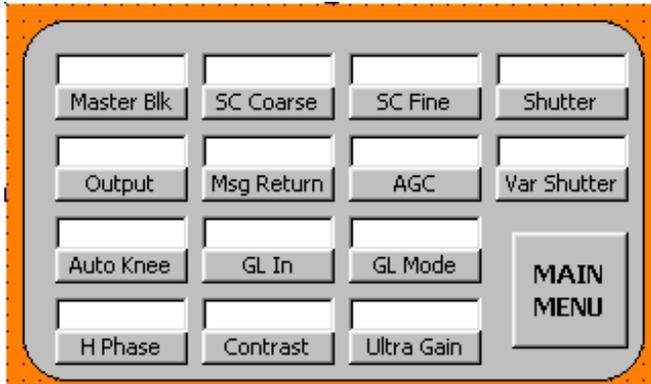
GAIN HIGH

Press GAIN HIGH to select the gain amount in dB from 1 to 10 that will be used when GAIN HIGH mode is selected on the main CAMERA CONTROLLER page. Note that this feature

only works with some of the Hitachi cameras.

GAIN MAX

Press GAIN MAX to select the gain amount in dB from 11 to 20 that will be used when GAIN MAX mode is selected on the main CAMERA CONTROLLER page. Note that this feature only works with some of the Hitachi cameras.



CAM CONTROLLER PAGE 2
VIEW

MASTER BLACK

Pressing MASTER BLACK will raise or lower the MASTER BLACK level of the camera. This should only be done when used in conjunction with a waveform monitor/vectorscope system. Press MASTER BLACK; use the multifunction joystick, in M BLK / IRIS mode to adjust the range from -127 to +127 in setting.

SC COARSE

This button is used to set subcarrier phase of the camera; use the multifunction joystick to select from values between 0,90,180,270.

SC FINE

This button is used to set the fine subcarrier phase adjustment of the camera; use the multifunction joystick to select from values between +/- 127.

SHUTTER

Press SHUTTER to select the electronic shutter speed setting. Use the multifunction joystick to select from OFF, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, VAR, AES and back again to OFF. Use VAR for variable shutter speed or long time integration modes, selectable by the VAR. SHUTTER button.

OUTPUT MODE

Pressing the OUTPUT MODE button allows you to cycle through choices of signal output mode for the 9 pin MULTI output connector on the rear of the HVD-15.

Press the OUTPUT MODE button; use the multifunction joystick to cycle through COMPONENT, RGB, and Y/C output modes.

MSG. RETURN

Pressing MSG. RETURN determines whether or not the info during AUTO WHITE and AUTO BLACK setting are shown on the video out connector.

Press MSG. RETURN ;use the multifunction joystick to select ON or OFF modes.

AGC

Press AGC to set the upper limit of automatic gain control that will be used when the GAIN MODE button on the CAMERA CONTROLLER main page is set to AUTO position. Use the multifunction joystick to vary this between 6 and 20 dB.

VAR. SHUTTER

Press VAR. SHUTTER to select adjustable shutter speeds from 8 seconds to 1/251.5 second. Use the multifunction joystick to select from values between +/- 127. NOTE: to use this feature the SHUTTER button MUST be set to VAR position.

AUTO KNEE

Pressing AUTO KNEE allows this function to be turned ON or OFF using the multifunction joystick to select.

GL IN

Pressing GL IN allows you to select whether the genlock input BNC terminal on the camera is to be used for signal input or terminated. Press GL IN, then use the multifunction joystick to select 75 ohm termination or HIGH (no termination)

GL MODE

Press GL MODE and use the multifunction joystick to select either HD/VD mode or VBS mode for genlock.

H PHASE

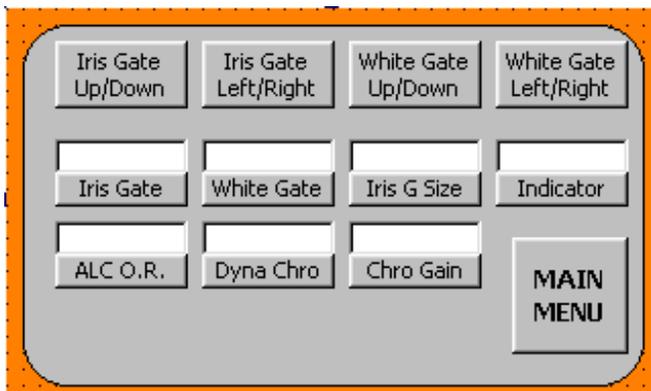
Press H PHASE and use the multifunction joystick to select from +/- 127 levels of H sync phase adjustment.

CONTRAST

Use the multifunction joystick to select between OFF, NORMAL, and HIGH contrast modes.

ULTRA GAIN

Pressing ULTRA GAIN activates this feature (if your camera has it). This adds additional gain, with low noise, to the image for use in low light conditions.



CAM CONTROLLER PAGE 3
VIEW

IRIS GATE

Pressing the IRIS GATE button turns on a window over the video output to allow you to make iris gate settings via the IRIS GATE size, IRIS GATE UP/DOWN, and IRIS GATE LEFT/RIGHT buttons. Press IRIS GATE, then use the multifunction joystick to select ON or OFF. NOTE: IRIS GATE only functions if IRIS MODE is set to MANUAL or REMOTE.

WHITE GATE

Pressing the WHITE GATE button turns on a window over the video output to allow you to make white gate settings via the WHITE GATE UP/DOWN, and WHITE GATE LEFT/RIGHT buttons. Press WHITE GATE, then use the multifunction joystick to select ON or OFF. NOTE: WHITE GATE only functions if WHITE BAL is set to AUTO, MEMORY 1, or MEMORY 2 positions.

INDICATOR

This button switches between the visual gate indicator modes. The selections are OFF, WHITE GATE, and IRIS GATE.

ALC OR

Pressing ALC OR will override the AUTO LEVEL CONTROL feature of the camera. This can be adjusted in a range from -127 to +127.

DYNA CHROM

This turns on the DYNA CHROMA feature of the camera (if your camera has it)

CHROM GAIN

This button allows the setting of the chrominance gain of your camera; push the button and use the multi-function joystick to raise or lower the value.



CAM CONTROLLER PAGE 4
VIEW

ASPECT

This is a new feature for the PT-TSC. It allows the switching of aspect ratios on cameras equipped with this feature, such as the Z-3000W and the HV-D5W. Push the button and use the multifunction joystick to select between 4:3 and 16:9 formats.

DETAIL

This sets the detail amplifier frequency; choose low, standard, or high to amplify the low, normal, or high frequency ranges.

FLESH LEVEL

This sets the flesh tone detail amount. Select this button and use the multifunction joystick to raise or lower the amount.

FLESH PHASE

This adjusts the color phase of the flesh tone. Select this button and use the multifunction joystick to raise or lower the amount.

FLESH TONE

Use this button and select from ON or OFF to turn the detail on or off.

FLESH WIDTH

Use this button to control the amount of detail suppression near flesh tone areas. Select this button and use the multifunction joystick to raise or lower the amount.

RED GAIN, BLUE GAIN

Use these buttons to control the amount of red and blue gain. Select these buttons and use the multifunction joystick to raise or lower the amount.

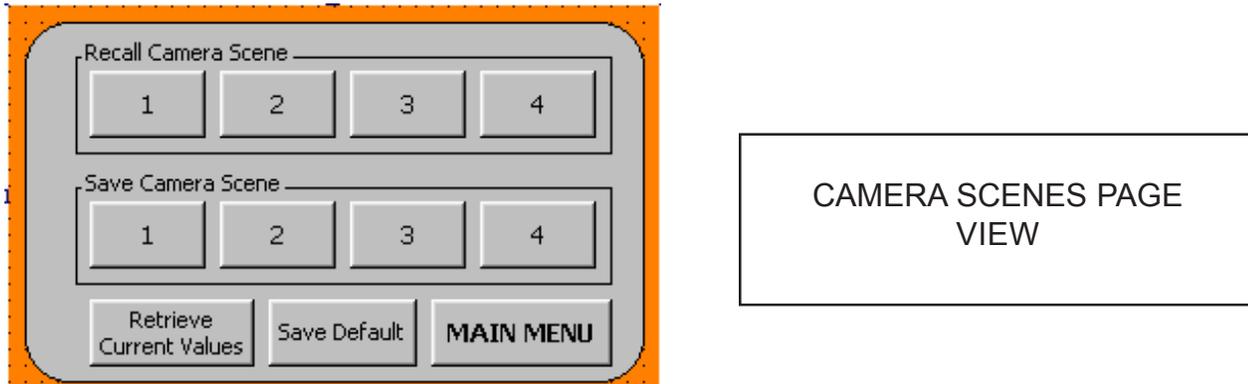
RED BLACK , BLUE BLACK

Use these buttons to control the amount of red and blue black level. Select these buttons and use the multifunction joystick to raise or lower the amount.

SETUP AND ARROWS

Use the SETUP button to turn on or off the remote menu display of certain Hitachi cameras, such as the HV-D5 or the HV-D15 Rev 2. You may then use the up, down, left, and

right arrow keys to make menu selections from the video monitor display. All of the remote functions shown may be selected in this manner. Push the SETUP button again to turn off the remote display.



CAMERA SCENES

The camera scenes page will allow you to memorize and store multiple different combinations of camera parameter settings for later recall. You could create individual SCENE memories for different lighting setups, different studio configurations, etc. , and store them for easy recall. Not all of the Hitachi cameras have these features, and some of them have 3 memory locations instead of 4. Consult your specific camera instruction manual for detailed instructions.

RECALL CAMERA SCENES

Buttons 1-4 will recall a stored scene file from memory. The memory location is inside each camera, not inside the controller. This information is stored specific to each camera head.

SAVE CAMERA SCENES

Buttons 1-4 will store the chosen parameters to file locations 1-4. Please note that the memory locations are onboard each individual camera, not in this controller.

RETRIEVE CURRENT VALUES

Pressing this button will force a retrieval of the current camera information from the currently selected head. Ordinarily, this is done automatically during use. This button is only used if you feel the displayed information is incorrect.

SAVE DEFAULT

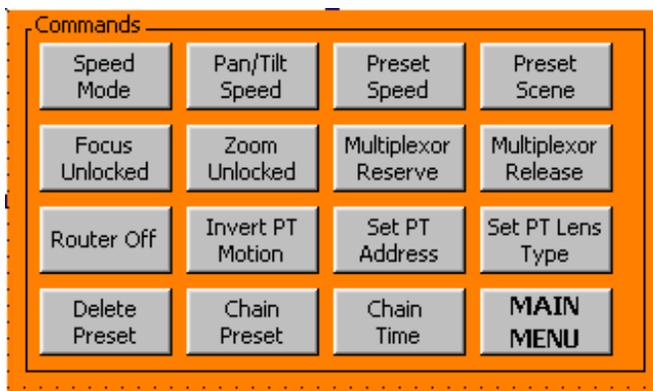
This button will save chosen settings to the power up memory of the camera. For example, if you chose BARS on the camera control page 1, then pressed this button, when the camera is powered up, BARS will be displayed. Whatever settings you make and store using this button will become the power up default of the camera. This includes info such as timing settings, etc.



CAMERA MASKING PAGE VIEW

CAMERA MASKING

The masking menu allows you to adjust the six way color correction features of certain Hitachi cameras. The HUE controls adjust the color phase for each individual color; the SAT controls adjust the level of each color. MASKING ON /OFF is a toggle button to turn the correction on and off; MASKING INITIALIZE will return any corrections made back to a factory setting.



FUNCTION PAGE VIEW

FUNCTION modes

LENS SPEED / POSITION

This is a toggling button to choose the operation mode of the LENS only. The normal mode for lens operation is SPEED; toggle to POSITION to set lens zoom and focus presets. See section "SAVE PRESET" on page 6 for details on the full operation of setting presets. Once in POSITION mode for setting presets, make sure to go back to SPEED mode for normal operation. POSITION mode applies to teleconferencing style lenses only; C mount lenses don't need to be in POSITION mode to save a preset.

PAN/TILT SPEED

This changes the overall speed of the pan and tilt motion. Press the PAN/TILT SPEED button; it will then pop up the numeric keypad. Choose 1 for HIGH speed, 2 for NORMAL, and 3 for SLOW. Then hit the ENTER button to set the speed. Any pan and tilt PRESETS

will also store the speed set here. For example, you can set a preset position using two different speeds, and recall them at different times depending on the effect desired. NOTE: lens zoom and focus presets are always recalled at full speed, this is not changeable.

PRESET SPEED

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 speed). If you now want to change travel speed to this preset to 2 (normal), RECALL PRESET 3, then touch the PRESET SPEED button; the keypad will prompt you for a speed entry. Then touch 1 for high range, 2 for normal range, and 3 for slow range.

PRESET SCENE

Depending on the camera being used, i.e., if using the HV-D3, HV-D15, or Z-2010A cameras, SCENE files can be stored on the camera controller 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 controller features. 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 position preset 3, then hit FUNCTION, PRESET SCENE, and the number 1, specifying the recall of 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 the SCENE file, or resave or delete the position preset 3.

FOCUS LOCKED / FOCUS UNLOCKED

This is a toggling button functions that will lock and unlock the FOCUS axis of the joystick. This is convenient if you have a shot setup that the focus will not need to be changed, but you wish to zoom in and out to change the shot. This will prevent any accidental changes in focus while zooming.

ZOOM LOCKED / FOCUS UNLOCKED

This is a toggling button that will lock and unlock the ZOOM axis of the joystick. This is convenient if you have a shot setup that the zoom setting will not need to be changed, but you wish to focus near or far to make the shot. This can also be used to prevent any unwanted or unauthorized changes.

MULTIPLEXER CONTROL BUTTONS

These buttons are used with the optional PT-MP-1 multiplexer unit. This is used for interconnecting multiple PT-TS or PT-C controllers on a single RS-485 line; controllers can then share the same line and pan-tilt heads. RESERVE HEAD assigns exclusive control of the selected head to your controller; when pushed the screen will prompt for the head number to be reserved. Enter the number of the head, followed by the ENTER button. It will then prompt you for the number of your controller, which is determined by what port it is plugged into on the multiplexer. RELEASE HEAD releases the head from your controller for use by other operators.

INVERT PT MOTION

(up/down, left/right reversed). This function is used when the pan/tilt is to be ceiling mounted instead of tripod mounted, and 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.

ROUTER ON/OFF

This button is used with the accessory PT-MFA multi-function adapter; it will send a command to the serial port of the PT-MFA to enable or disable video follow routing from an accessory switcher hooked to the port.

SET PT ADDRESS

All heads are set to address 1 by the factory when shipped. When a change is required, follow these procedures carefully:

NOTE: this will set the number for all heads hooked to the RS-485 comm line; you must disconnect the power or communications for all the heads except the one you wish to re-address, otherwise all the powered heads will be set to the same address.

From the MAIN page, press CAMERA NUMBER, 1, ENTER (or hit the CAMERA 1 button on the QUICK-PICK panel.) Check to make sure you have control of the head by panning or tilting. If you don't have control, press CAMERA NUMBER, 0, ENTER. This will enable you to talk to all heads on the RS-485 line at the same time.

Enter the FUNCTION menu, and press the SET PT ADDRESS button. Use the numeric keypad to enter the number you wish to set the head to, then press ENTER. The head is now addressed to this number. Check it by exiting to the main page, selecting CAMERA, x (the number you just programmed in), ENTER. Move the pan/tilt joystick to make sure you have control of the newly addressed head.

SET PT LENS TYPE

Each head is set by the factory when ordered for your specified lens type; 1 is for Rainbow and other CCTV type (c-mount) lenses, 2 is for Fujinon and Canon teleconferencing lenses set to Fujinon mode. Use this function only if changing lens / camera types; ordinarily, no change is needed. NOTE: The setting of lens type on the PT-TSC setup screen must match the type of lens set in the pantilt head by this function.

DELETE PRESET

Push this button followed by the number of the preset you wish to delete.

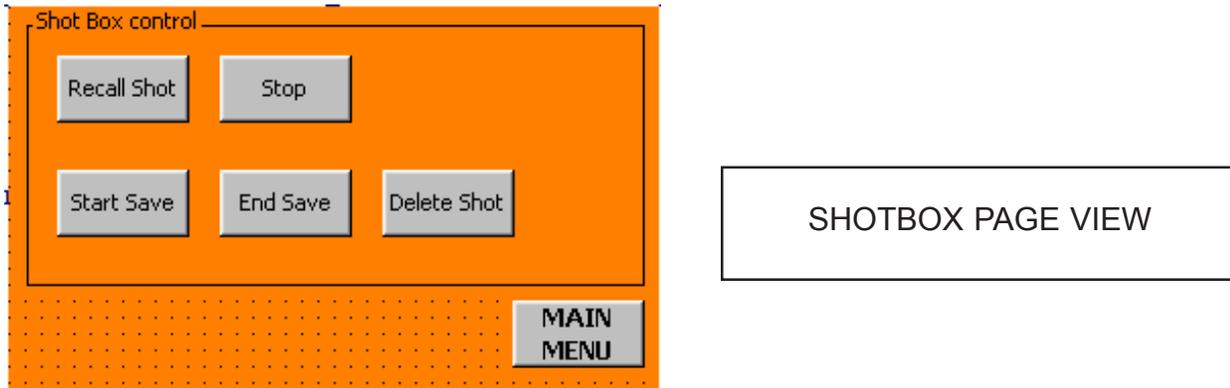
Example: DELETE PRESET, 1, ENTER

CHAIN PRESET AND CHAIN TIME

Presets may be linked together with this function. It will automatically recall presets at intervals of your choosing. First, recall the preset number you wish to start from; even if you

are at this preset currently, you must recall it in order to use the CHAIN function. Press CHAIN PRESET and the number of the next preset; Press CHAIN TIME and enter the wait time at this preset in seconds from 1 to 16. Repeat this process for as many presets as desired to be linked. Recall the first preset and the CHAIN feature will start.

Example: enter RECALL PRESET, 1, ENTER, CHAIN PRESET, 2, ENTER, TIME, 5, ENTER. When this preset is reached, RECALL PRESET, 2, ENTER, CHAIN PRESET, 1, ENTER, TIME, 5, ENTER.



SHOT BOX

This is a submenu for the control of the optional PT-SB Shot Box, motion control recorder.

The PT-SB is a digital motion path recorder, capable of recording all input from the PT-TS controller to the pan tilt heads. Everything entered on the controller(s) is recorded by the PT-SB for recall later during a production.

START SAVE/ END SAVE

Pushing this button activates the saving process. The keypad will prompt you to save to a memory location (1 - 8). Choose a location to save to, followed by ENTER, and the display will change to "Saving". You can then just move the pan-tilt, zoom / focus joysticks to save manual moves, EXIT this menu and recall presets, activate relay closures on an optional PT-MFA, etc. Just return to this screen when done to press END SAVE. This closes the recording process.

NOTE: there is no way to edit a motion path once recorded; if you make a mistake or don't like the final result, you must delete the saved file and start the process over.

RECALL SHOT

This button will recall a saved motion path. Touch RECALL SHOT; the keypad will prompt for the memory location to recall. Enter the location (1 - 8) and press ENTER. The saved motion path will be recalled just as it was recorded.

STOP

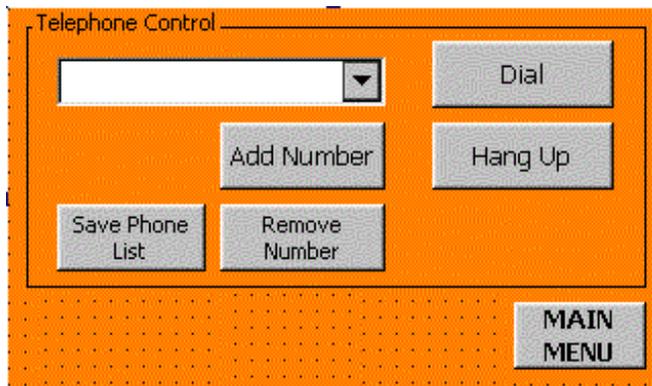
Pressing the STOP button will halt playback of a motion path partway through its' progress. It is necessary to restart playback from the beginning if the playback is stopped.

DELETE SHOT

The DELETE button will delete a prerecorded motion path. Press DELETE and the display will prompt for the number of the memory location to remove. Enter the number and press ENTER.

NOTE: once deleted, there is no choice to recover the motion path other than saving a new one!

MODEM CONTROL



MODEM CONTROL PAGE

The PHONE CONTROL button brings up this sub menu. It is used with the optional PT-AAM modem system for remote, dial-up phone line control of Eagle™ systems.

ADD NUMBER: Using the numeric keypad, enter in the number of the remote site to be dialed. Uses standard dialing conventions; either direct 7 or 10 digit dialing, or PBX codes may be entered (9 for outside line, etc.) Enter in the number, then press DIAL; the display will prompt for memory location. Enter in 1 thru 10 for the location you want to store the number in.

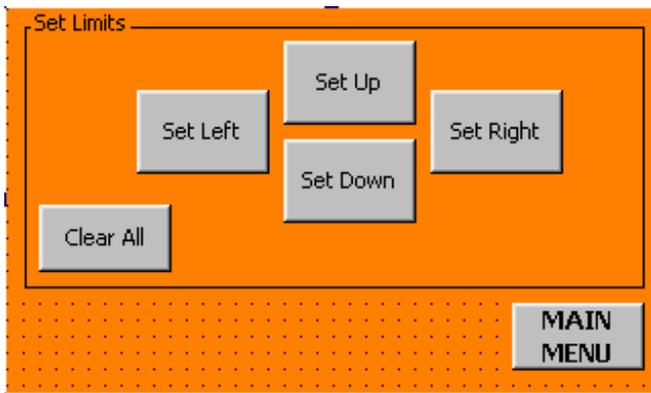
REMOVE NUMBER: Using the selection box, choose the number you wish to remove from memory, then press the REMOVE NUMBER button.

DIAL: Press this button to dial a number directly entered from the keypad, or to execute a number recalled from memory.

HANG UP: This disconnects the phone call when the control session is done.

SAVE PHONE LIST:

MAIN MENU: This leaves the DIALING CONTROL sub menu and returns to the FUNCTION main menu.



SET LIMITS PAGE VIEW

SET LIMITS

Pressing this button brings up the limit setting sub menu.

NOTE: SETTING THE LIMITS MUST BE DONE TO INSURE THE SAFE OPERATION OF THE PAN TILT HEAD! IF LIMITS ARE NOT SET, DAMAGE TO THE PANTILT HEAD, CAMERA, AND LENS MAY RESULT FROM STRIKING A WALL, CEILING, OR OTHER OBJECT. THIS IS NOT COVERED BY ANY WARRANTY!!

Limits are preset at the factory to about 50 degrees each up and down, and about 90 degrees each left and right. Change the limit settings if you want to change these amounts; this is useful to set up cameras such that they can not get shots of the wall behind the camera, the ceiling above the camera, the floor directly below the camera, etc. Also, limits may need to be set for tilting upwards to prevent lens contact with the ceiling, etc. Make sure when cabling the system that enough cable slack is included to prevent damage to the pan-tilt connectors and camera and lens connectors. The motors in the head are very strong, and will easily rip a connector out of its' socket. Once the travel limits are set, normal usage of the pan tilt system may begin.

NOTE: as this function is tied in with the INVERT DIRECTION command, the left/right, up/down limits are reversed when in INVERTED OPERATION.

EXAMPLE: If you move the camera to the leftmost position, hit SET LEFT limit button, and the camera will not move back the other direction, it's because the left and right, up and down are flip-flopped with the INVERT DIRECTION command. Simply hit CLEAR ALL, then reset the limit using the opposite command, in this example touch SET RIGHT instead of SET LEFT.

CLEAR ALL

This function will eliminate all position limits that may have been set to prevent excess travel. **This clearing is temporary only; when power is reset, the previous limits will return unless you set new limits.** Press the CLEAR ALL button; this will erase any limits previously set by the factory during testing.

GENERAL PAN-TILT OPERATIONS WITH THE PT-TSC CONTROLLER

Be sure to follow all of the installation instructions included with the Eagle pan tilt head before starting to use this controller !!

First, follow the procedure for TOUCH SCREEN SETUP found on page 6 of this manual. Correct operation of the system depends on this being done. Adjust the angle and contrast of the screen to provide the best viewing from your position.

Next, select the address of the head you wish to control. Since up to 31 heads may be on a single RS-485 line, you must choose the correct one to control. Select CAMERA, then the number of the head to be controlled. Select CAMERA, 0 to talk to ALL heads simultaneously. Head addresses can be changed as described in the section on page 19.

The pan tilt heads are all set at the factory to address 1; it is up to the installer to correctly set the desired address into the head before using the system. Set the address to a head by making sure it is the only one connected to the RS-485 control line. You may accomplish this by unplugging any other heads on the line, or shutting off the individual power supplies for those heads. Choose CAMERA, 1 to select head number 1. From the FUNCTION menu, choose SET PT ADDRESS button. Enter the number of the head you wish it to become; for example, for number 2, just hit 2 and ENTER. Verify that the address is saved by entering CAMERA, 2 from the main screen or from the QUICK-PICK button; the head should respond. Continue in this manner to set all of the addresses for the rest of the system.

If this is the first use of the system, the safety limits of pan tilt movement must be set now. Choose an individual head. Begin by touching the LIMITS button from the main page, then CLEAR ALL. This function will temporarily eliminate all travel limits set at the factory. Unless new limits are set at this time, the previous factory limits will still be in place when power is cycled off / on.

Next, set the new limits of travel as desired. Use the buttons defined above for left, right, up, and down limit setting. Remember, that the pan tilt head has a range of pan of 355° (left or right 178°), and a tilt range of 355° (up or down 178°); it cannot turn more than a full circle. There are end travel stops programmed into the head to prevent traveling more than these amounts. Make sure when cabling the system that enough cable slack is included to prevent damage to the pan-tilt connectors and camera and lens connectors. The motors in the head are very strong, and will easily rip a connector out of its' socket. Once the travel limits are set, they are automatically stored in the non-volatile memory of the head. At this point normal usage of the pan tilt system may begin.

Start by entering the location number you wish to control. Use the keypad and push CAMERA, then select the number from 1 to 31.

Use the left joystick for up/down, left/right control; use the right joystick for zoom in/out, focus near/far, or master black / iris level, or to raise/ lower a value.

You may now utilize any of the control screens as described previously in the manual to operate your Eagle pan-tilt system.

PT-TSC POWER AND DATA CONNECTIONS



DB-9 female connector to RS-485 network
PIN 2--RS 485 LINE 1
PIN 3--RS 485 LINE 2
PIN 5--RS 485 GROUND

Above is shown the connector panel at the rear of the PT-TSC unit. The data connection to the RS-485 serial line is shown in the above table; use the supplied connector and shell to make up this cable. Also included with your PT-TSC is a 9 VDC, 2.5A power adapter. USE THIS POWER SUPPLY ONLY WITH THE PT-TSC; DAMAGE MAY RESULT FROM USAGE OF ANOTHER POWER SUPPLY!!

On the right side of the image is shown the SERIAL UPDATE PORT. It is used for updating the software in the PT-TSC by hooking up to a PC containing the PT-TSC update program. Please see the detailed instructions for upgrading contained elsewhere inside this manual.

ALL PT-TSC SCREEN LAYOUTS



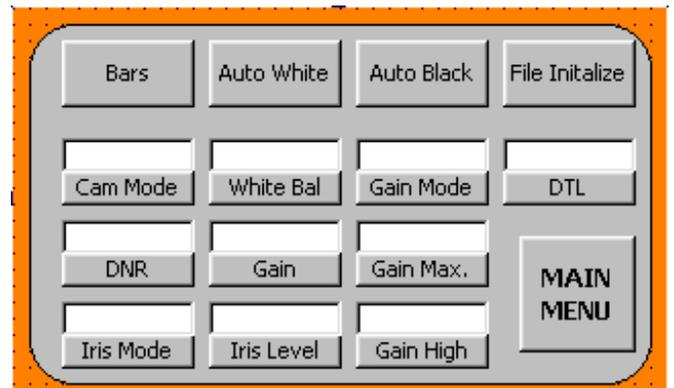
EAGLE SETUP



INFO SCREEN



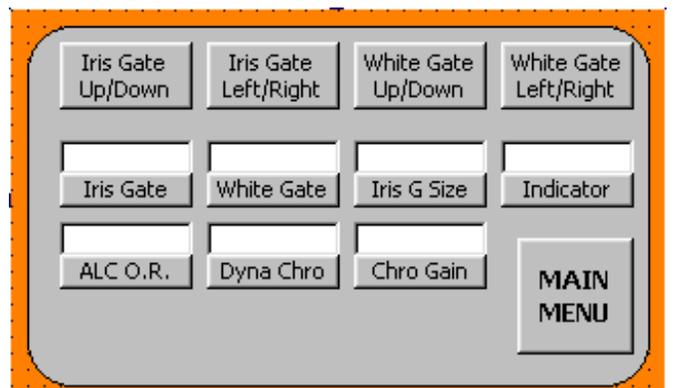
MAIN SCREEN



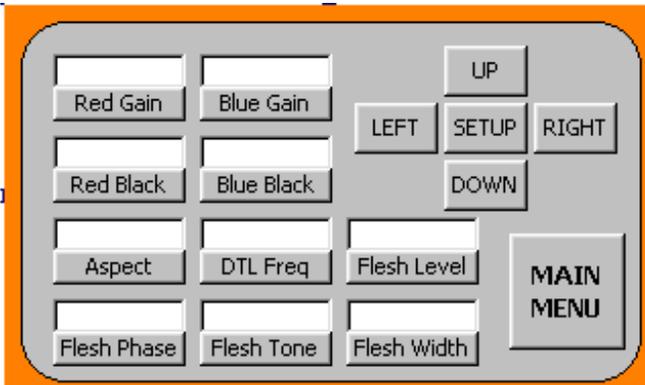
CAMERA CONTROL PAGE 1



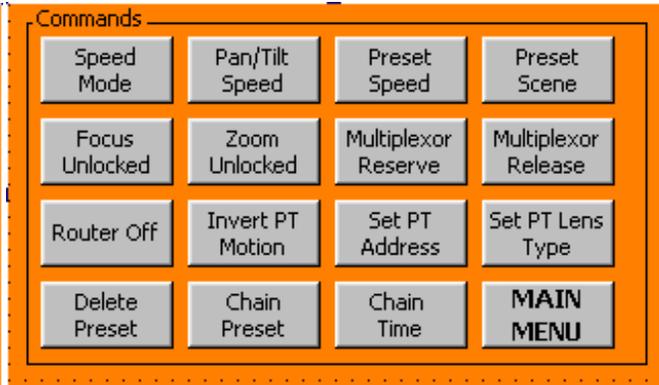
CAMERA CONTROL PAGE 2



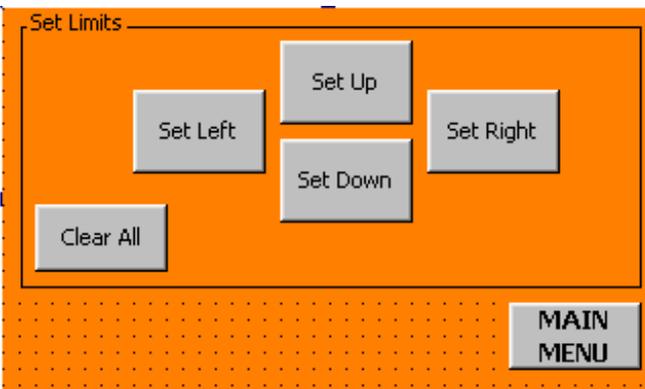
CAMERA CONTROL PAGE 3



CAMERA CONTROL PAGE 4



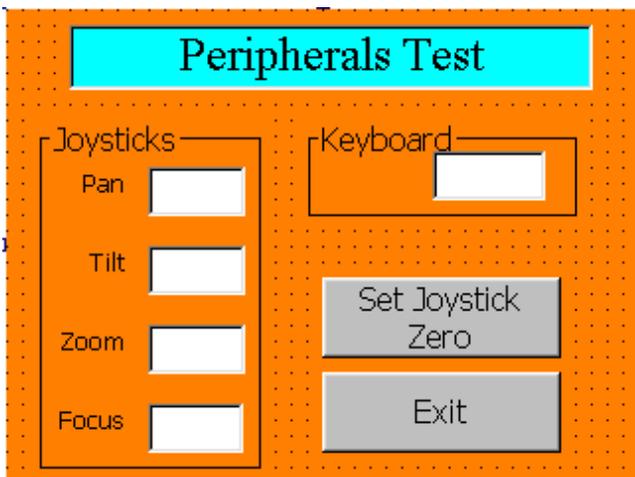
FUNCTION PAGE



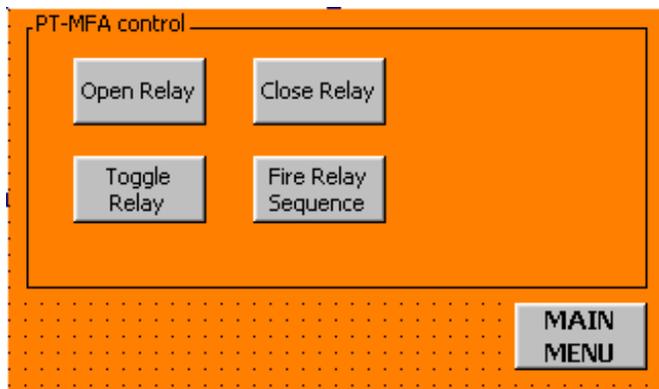
LIMITS PAGE



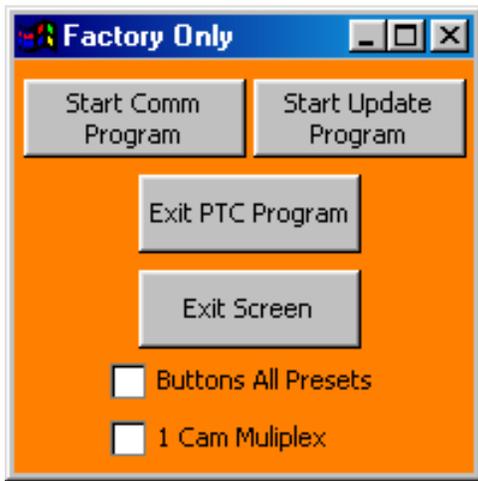
MASKING PAGE



PERIPHERALS TEST



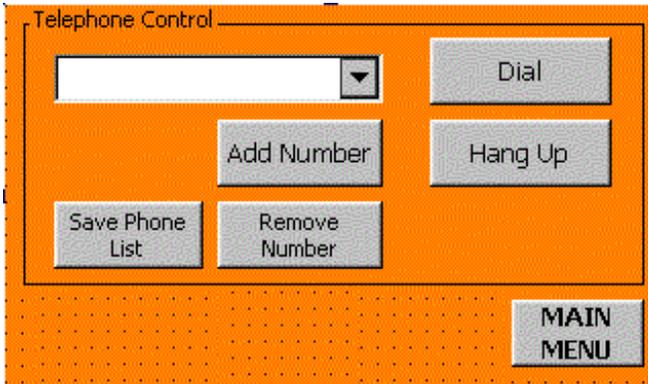
PT-MFA CONTROL PAGE



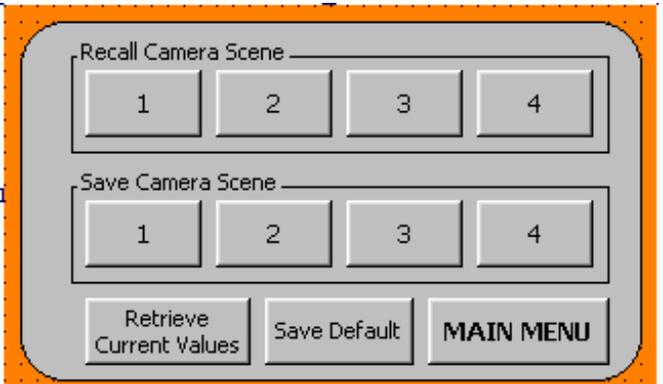
FACTORY USE ONLY PAGE



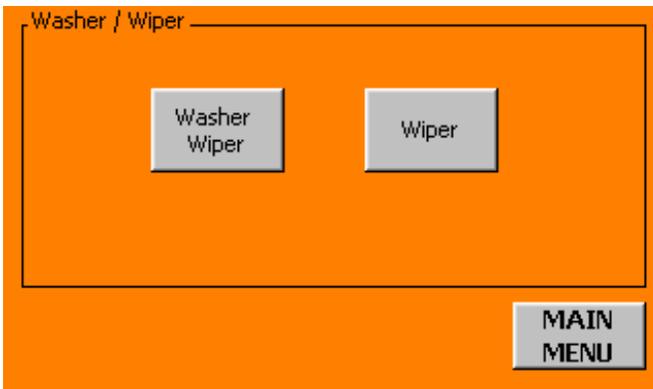
SHOT BOX CONTROL



MODEM CONTROL



SCENE CONTROL



WIPER/WASHER CONTROL PAGE