BRIDGE COMMAND
BY GREEN MARINE

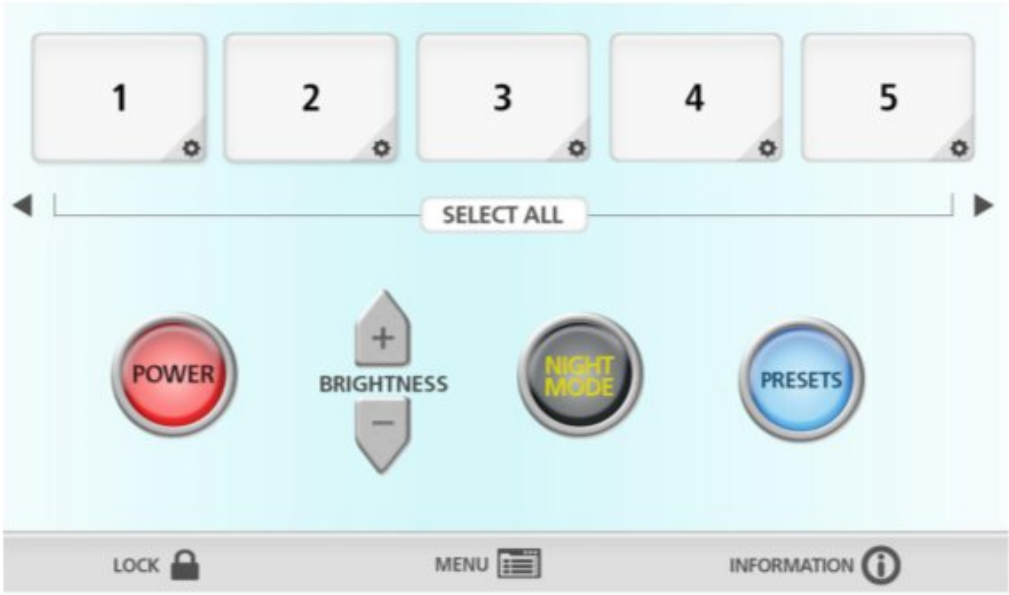
Confidential

The screen shots below are designed to provide the software developers functional information regarding the software GUI. This is a "working document" and it will be updated as needed.

The teahnical specifications for the controller include WiFi capability so it will have the abillity to receive software updates once deployed.

On power up, a logo screen will always apear for around 2-3 seconds.

After the logo screen, the "home screen" will appear as picture below.



Number on the monitor icons coresponds to the connector numbers on the back of the controller. (We plan on having 15 RJ-45 jacks on backside of controller to handle RS-232 communication with monitors and matrix switches)
When screen is not touched for 30 seconds controller will go into standby mode with backlights turning off. When screen is touched anywhere backlights will turn back on. This activation touch must not activate any functions (icons).

Monitors #1-10 are "bridge" monitors and are controlled with touch controller commands. Monitors #11-15 are "remote" monitors (such as captain's cabin) and are only capable of having signal selection controlled by touch controller. (See page 7)

HOME SCREEN BUTTON FUNCTIONS

Bridge Monitor Buttons (1-10)

When a bridge monitor button is pressed, it highlights. When it is pressed a second time it is un-highlighted. When a monitor button is highlighted, that monitor will respond to "power on/off", "brightness", and "night mode" commands. When a monitor is not highlighted it will not respond to any commands.

Whether a monitor is highlighted or not it can still be opened to it's settings page by pressing the "settings" icon in the lower right corner.

When the "settings" icon is pressed on any monitor, that monitor opens to the monitor settings screen pictured below on page 3.

Select/Deselect All Button

When the select all button is pressed all monitors highlight (even those not displayed) and the button changes to Deselect All. When the Deselect button is pressed all monitors are unhighlighted (even those not displayed).

Left and Right Arrow Buttons

Pressing the right arrow button moves the next monitor "bank" onto the home screen (monitors #6 trhough #10). Pressing the right arrow again will move monitors #11 through #15 onto the home screen. Pressing the left arrow will return to previous monitor "bank". (Best solution is if entire monitor bank could scroll with finger swipe)

Pressing the "gear" icon in the lower right corner of the monitor icon will open that monitor to the monitor settings page as pictured below.

(Double tap may replace gear icon to open to monitor settings page pictured below)

Signal / Matrix Button

NOTE: The signal / matrix buttons function differently depending on whether a matrix switcher has been selected for use or not in martix setup page 11.

Without a Matrix Switcher:

The first time the monitor settings screen is opened, all signal buttons are blank. When a signal button is pressed and held, a cursor apears in the field and a keyboard slides up from the bottom of the page (pic. page 4). The desired signal name is typed and then the "done" button is pressed causing the keyboard to hide. This process is repeated for each signal button.

When a signal button is pressed (left side of the signal /matrix button) it highlights and an RS-232 command is sent to the monitor to switch it to display that input. The matrix button is grayed out (inactive) and does not functiion.

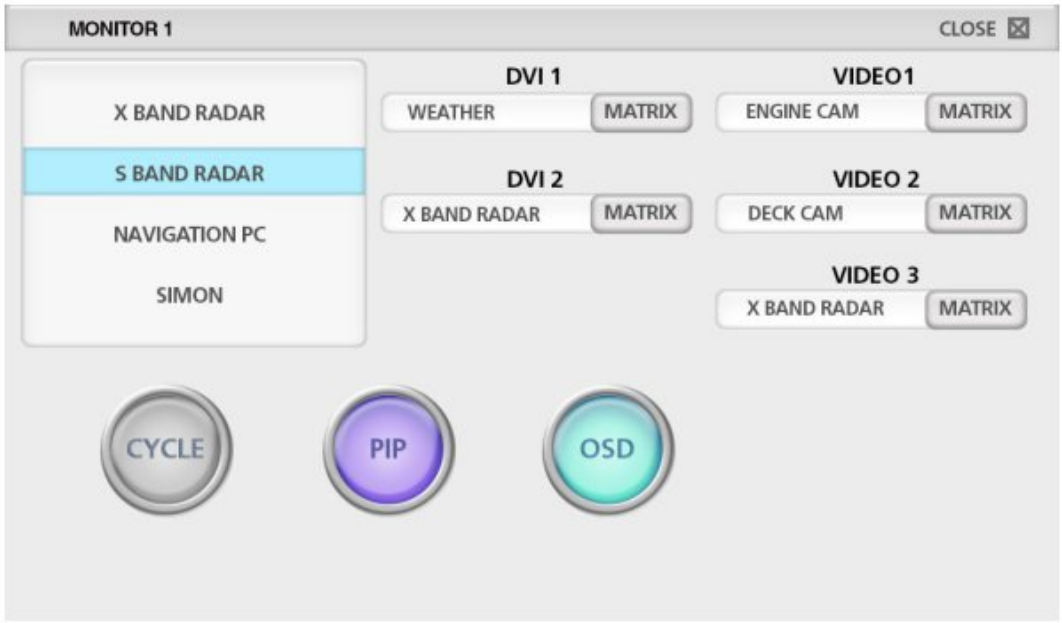
When the monitor settings screen is opened, which ever signal is currently displayed on the monitor is already highlighted as per picture above.

With a Matrix Switcher:

The first time the monitor screen is opened the signal button names already appear as they will have been typed in the matrix settings screen (pictures page 11-12) When a signal button is pressed (left side of the signal /matrix button) it highlights and an RS-232 command is sent to the monitor to switch it to display that input. The matrix button is active as shown in the picture below.

Matrix Button

When the matrix button is pressed a pop up box appears containing all of the signal sources associated with that "type" of input (VGA, DVI, or CVBS). Picture below. When a signal name is pressed the pop up closes and the selected signal name is displayed on the signal / matrix button and is highlighted. An RS-232 command is sent to the matrix switch and the monitor at the same time to display the selected signal on the monitor screen.

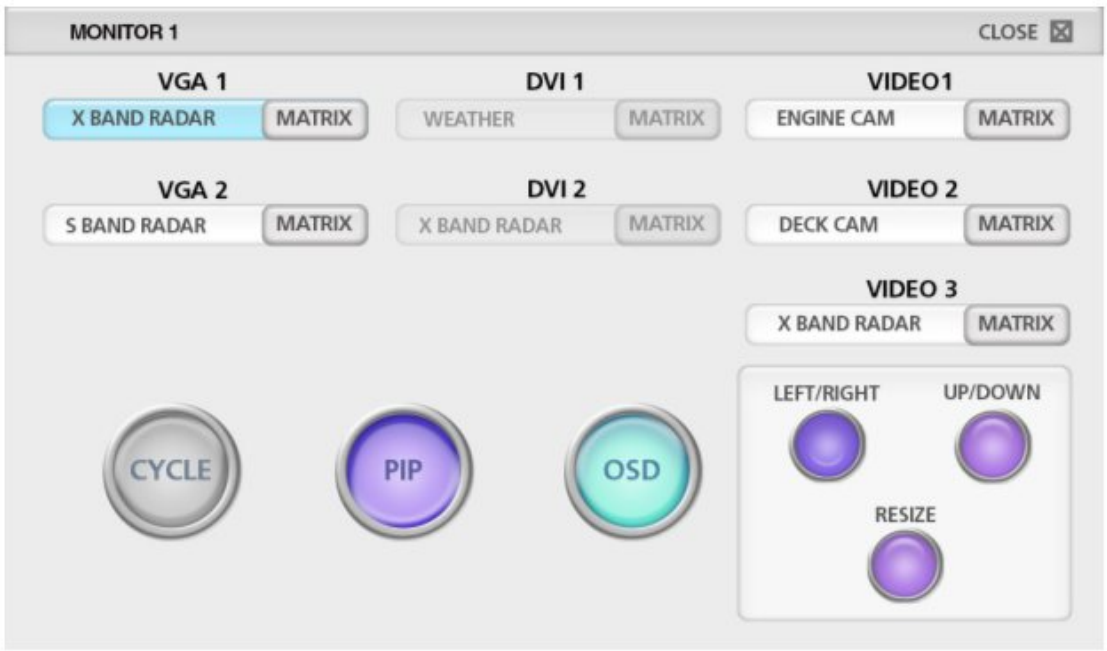


Cycle Button

On a "bridge" monitor settings screen the cycle button is "inactive" and grayed out.

Picture-In-Picture Button

When the PIP button is pressed it stays in the "down" position and a PIP pop up window opens as pictured below. Whatever signal input is currently displayed on the monitor will determine what inputs are available for PIP function. Signals not availabe for function are grayed out (inactive).



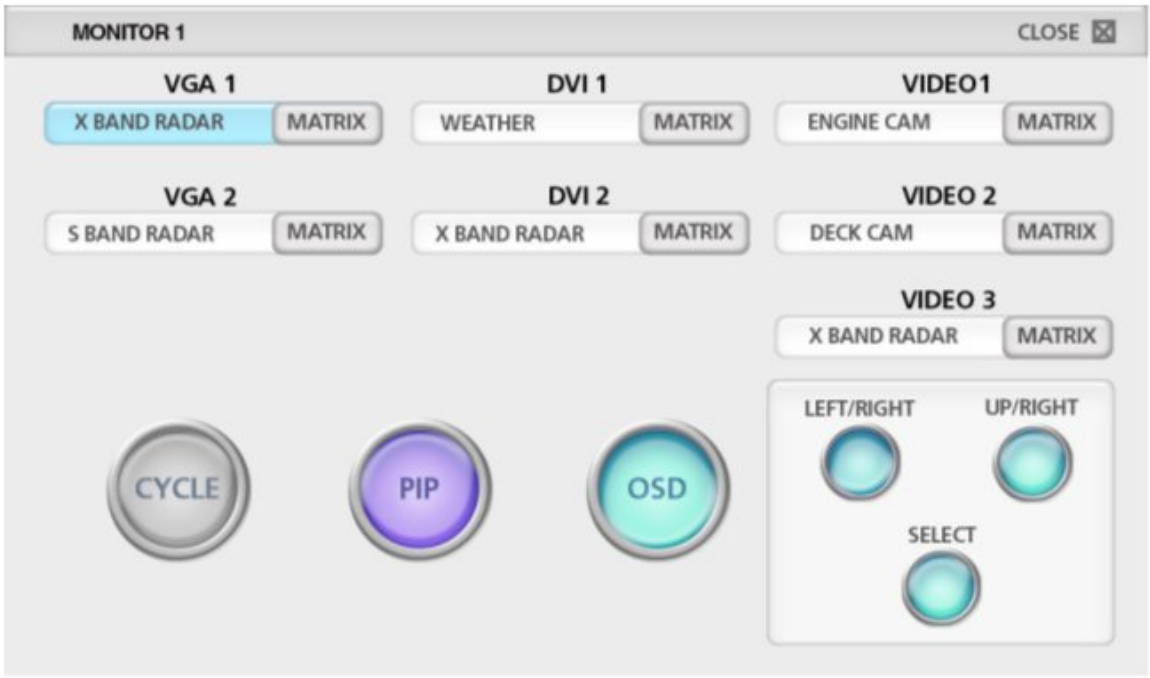
A signal for PIP may now be selected by either pressing on an available signal button or a matrix button and chossing from it's input list. The selected signal is highlighted and the command is sent to the monitor (or monitor and matrix switch) to make input change.

The buttons in the PIP pop up may now be used to move the PIP window to the desired position on the monitor screen or change it's size including split screen and side-by-side screen. When the desired PIP display is acheived the PIP button is pressed again and it returns to "up" position, PIP pop up closes, and monitor settings screen returns to all inputs available with current main screen input highlighted as before PIP button was pressed.

The PIP window is deactivated by following the procedure above and unhighlighting the PIP signal input.

On Screen Display Button

When the OSD button is pressed it stays in the down position and the OSD pop up window opens as pictured below.



The buttons in the OSD pop up may now be used to maneuver the cursor around the on screen menu of the monitor to select or change settings. When changes have been completed the user presses the OSD button again, the OSD pop up closes, and the OSD button returns to the "up" position.

Close Button

When all changes have been completed in the monitor settings screen the user presses the close button. The monitor settings screen closes and the user is returned to the home screen. The close button works the same for the bridge monitors settings screen and the remote monitors settings screen.

Remote Monitor Buttons

Remote monitor icons do not highlight and are not effected by Select All/De-Select All button.

When the "settings" icon is pressed on any remote monitor button, that monitor opens to the monitor settings screen pictured below.

Cycle Button

When the cycle button is pressed it stays in the down position as pictured above. The user may then select multiple inputs to cycle by either pressing on input buttons or matrix buttons. All inputs selected will remain highlited. When the cycle button is pressed again it returns to the "up" position and selections are saved. Now when a user presses a remote monitor switch located next to each monitor, a signal is sent to the controller and it switches the signal to next input in the sequence.

NOTE: In order for all signal types to be available a VGA, DVI, and Video cable will need to be connected to each remote monitor.

On a "remote" monitor settings screen the PIP and OSD buttons are "inactive" and grayed out.

Power Button

When the "power button" is pressed it clicks down and back up. It does not stay in the down position. All monitors that are highlighted power "on" if they are currenly "off", and vise versa. If no monitors are highlighted then the power button remains in it's inactive mode. (grayed out)

Brightness Buttons

When the + or - "brightness buttons" are pressed, all monitors that are highlighted will have brightness adjusted. If different monitors are at different brightness levels, taking the brightness setting all the way up or all the way down will syncronize brightness levels again. Brightness buttons always take priority over "night mode" setting. So if monitors are in "nightmode" touching + or - brightness button will take control of the monitors brightness settings. If no monitors are highlighted then the brightness buttons are still active as they then only control the controller brightness. The + and - buttons click down and back up or they are held down by the user until the desired brightness is reached and then released.

The "brightness buttons" also contol the brighness of the controller backlights. If the user wants to only control the brightness of the controller and not the monitors the monitor "de-select" button can be be pressed to un-highlight all monitors.

Night Mode Button

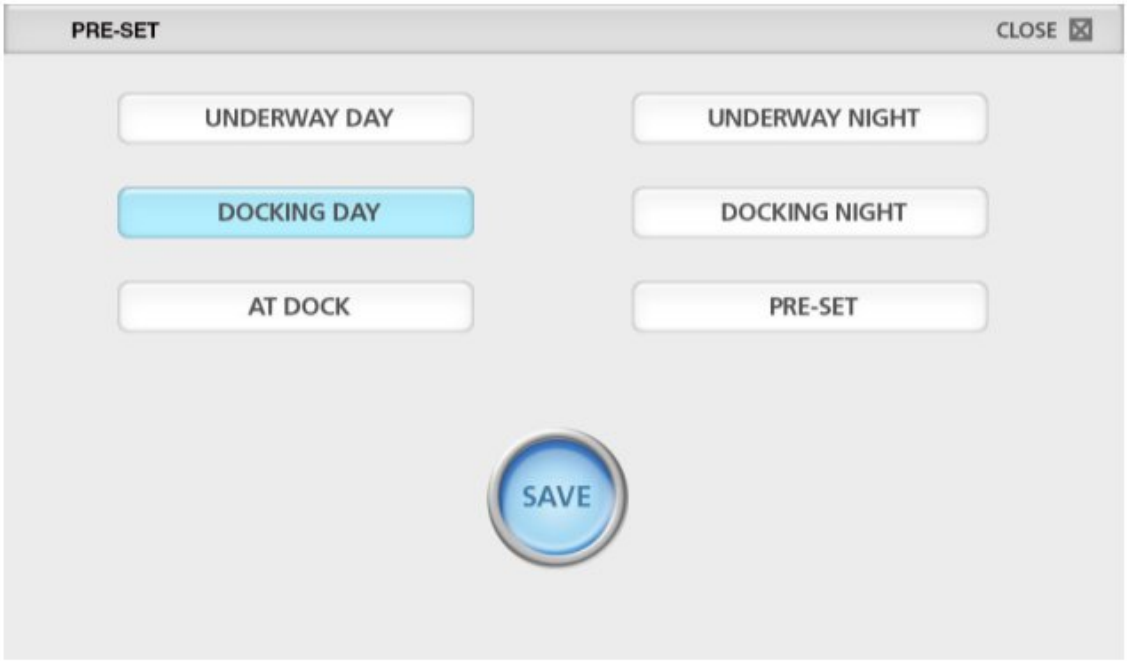
When the "night mode" button is pressed, all highlighted monitors will go to .5 nits brightness. When the button is pressed a second time all highlighted monitors will go black. This sequence repeats back and forth. The button clicks down and back up. It does not stay down.

Pre-sets Button

The first step in setting up a pre-set is to set all monitors to the desired end result. This includes input settings, brightness settings, and PIP settings. When all settings have been made then the pre-sets button is pressed.

When the pre-sets button is pressed it returns to the up position and the pre-sets screen opens as pictured below.

When the user presses and holds a pre-set button a cursor appears and the keyboard slides up from the bottom. The name of the pre-set is typed in and when the "done" button is pressed the keyboard hides and the new pre-set is highlighted. Now the "Save" button is pressed and stays in the down position as pictured on page 10. The controller then queries the monitors and places their settings in memory (this process may take awhile). When all monitor settings have been successfully saved, the "save" button returns to the "up" position. The close button is pressed to return user to the home screen.



Once pre-sets have been saved, when the pre-set page is opened and the user presses on any pre-set button, the saved bank of commands for that pre-set are sent to all bridge monitors and or monitors/matirx switch to make all settings changes.

Lock Button

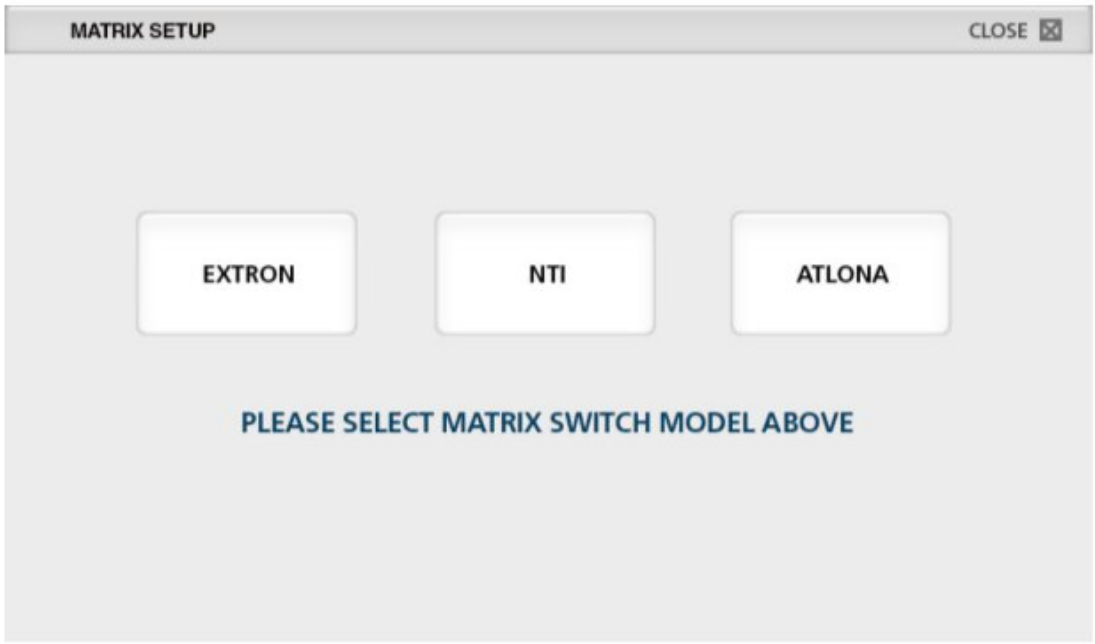
When the lock button is pressed the icon changes to "un-lock" and the touch functiion of the screen is disabled. The screen may now be cleaned. When the un-lock icon is pressed it changes back to "lock" and touch function is restored.

Menu Button

When the menu button is pressed a menu screen opens as pictured below.

Matrix Setup Button

When the matrix setup button is pressed the matrix switch selection screen opens as pictured below.



When the user selects a matrix switch model, the RS-232 control commands for that model are loaded into a table within the software. The matrix setup screen then opens as pictured below.

The inputs are labled by number and letter to correspond to the inputs on the matrix switch.

When the user presses and holds an input button a cursor appears and the keyboard slides up from the bottom. The name of the input is typed in and when the "done" button is pressed the keyboard hides and the new input is highlighted. Now the signal type button is pressed and the signal type (VGA, DVI, CVBS) is selected as pictured below. The signal type corresponds to the connector on the back of the monitor that you want to make this signal available to.

The ◀ and ▶ arrows are used to navigate to the next bank of inputs.
(Best solution is if entire monitor bank could scroll with finger swipe)

When finished the close button is pressed and the user is returned to the home screen.

Wi-Fi Setup Button

When the wi-fi setup button is pressed the wi-fi setup screen is opened as pictured on page 13.

When the user presses and holds a text field a cursor appears and the keyboard slides up from the bottom. The information is typed in the text field and when the "done" button is pressed the keyboard hides. The close button is pressed and the user is returned to the home page. More information may be added to this screen as required. This is just for demonstration.

Updates Button

When the updates button is pressed the update screen is opened as pictured below.

When the update screen is opened the controller will its Wi-Fi connection to check if new updates are available on the server. If updates are not available the "load" button remains gray (inactive). If updates are availabe the "load" button becomes active and turns blue. When pressed the button stays in the "down" position until the update is fully loaded then returns to the "up" position.

The text field underneath the load button always displays the current software version and date of last update.

Information Button

When the information button is pressed the information screen is opened as pictured below.

When the user presses and holds the text field a cursor appears and the keyboard slides up from the bottom. The information is typed in the text field and when the "done" button is pressed the keyboard hides. The close button is pressed and the user is returned to the home page. This is an open text field so any information can be stored here.