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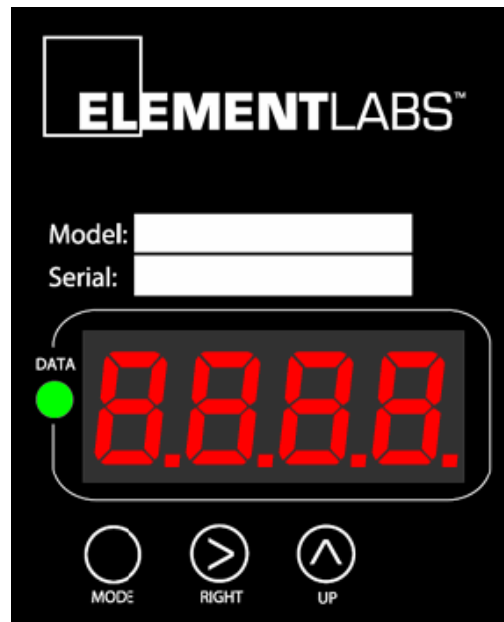
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1. Introduction

The Versa™ v1.5c Buffer Board is used in the VD-B2 Buffer Box. It is a data addressing, conversion, and distribution device that takes the incoming Serial Data and sends the appropriate Local Data to the individual fixtures connected to the Local Data Output of the Buffer. It also actively buffers the incoming Serial Data signal and sends it back out the Serial Data Output connector.

2. Displays and Controls



Digital Display: 4 digits that display the modes and parameter values

DATA LED: Blinking rapidly: RS 422 data input is OK

Steady on or off: RS 422 data input is missing or corrupt

MODE button: Cycles through modes

RIGHT (>) button: Used to enter into a mode and step through the adjustable parameters

UP (^) button: Used to step up through the parameter values

3. Operation

3.1 Modes

The **MODE** button on the Buffer Board cycles through the following seven functions:

1. **Addr** (Address) sets the starting pixel address of the panel
2. **SIZE** (Size) sets the number of pixels for that panel
3. **nEXT** (Next) displays the start address of the following panel
4. **dISP** (Display) turns the digital display and Data LED off or on
5. **F-88** (Firmware) displays the Buffer Board's firmware version
6. **tYPE** (Type) sets the Versa DRIVE type
7. **Loc** (Lock) locks the buffer boards **RIGHT** (>) and **UP** (Λ) buttons

3.2 Adjusting Parameter Values

Several modes (Address, Size, and Type) have values that can be set by the user as follows:

1. Press the **MODE** button to cycle through the modes.
2. Press the **RIGHT** (>) button to select the first (or next) digit when the desired mode is shown in the display. The selected digit will be flashing.
3. Press the **UP** (Λ) button to increment the value of the selected digit.
4. Repeat steps 2b and 2c to set all of the digits.
5. Press the **MODE** button to exit the current mode. Any changes will automatically be saved.
6. The Buffer Board automatically locks after 10 seconds. This disables the **RIGHT** (>) and **UP** (Λ) buttons. Press the mode button to unlock the Buffer Board.

3.3 Setting the Address, Size, and Type

1. Set the starting pixel address (**Addr** mode).
The starting pixel address of the first fixture (fixture #0 in the RasterMAPPER map) should be 1.
The start address for other buffer boxes will need to be calculated (also, see the **nEXT** function below).
2. Set the size (**SIZE** mode).
The size is the total number of pixels for all fixtures on that Buffer.
For example, 10 Versa TUBEs would be 160 pixels (10 x 16).
3. Set the Versa DRIVE type that is being used with the system (**tYPE** mode).
Use d-01 for Versa DRIVE D1s.
Use d-02 for Versa DRIVE D2s.
d-03 is reserved for future use.
4. Repeat steps 3a, 3b, and 3c for each Buffer Box in the system.
 - a. Any Buffer's address should be the sum of the previous Buffer's start address plus the previous Buffer's size (# of pixels).
 - b. If the **SIZE** value is set correctly (step 3b above), the buffer board will display the **nEXT** panel's address.
 - c. View this by pressing the **MODE** button to view the **nEXT** mode.
5. Also, when the Buffer Board is locked the display will alternate between the panel's address and the **nEXT** address. This is convenient for automatically calculating the starting addresses on a series of Buffer Boxes.

3.4 Display Function

The LED display and data light can be turned off if they are distracting. This will not affect the normal operation of the buffer.

1. Press the **MODE** button to get to the **d ISP** modes.
2. Press the **RIGHT** (>) button to show the current display mode – either “on” or “OFF”.
3. Press the **UP** (Λ) button to change the value between on and off.

The display will not immediately turn off. The display will turn off whenever the Buffer Board goes into Lock mode automatically. If you manually lock the Buffer Board, the display will stay active for 10 seconds, then black out.

When the display is off, pressing the MODE button will automatically turn it back on.

NOTE: when the display is off the Buffer Board panel looks the same as if it turned off. Keep this in mind when troubleshooting.

3.5 Firmware Version

The firmware mode display the current firmware version in the format F - ## where ## is the version number. The **RIGHT** (>) and **UP** (Λ) buttons have no function in this mode.

3.6 Lock Mode

The Buffer Board automatically locks after 10 seconds. This disables the **RIGHT** (>) and **UP** (Λ) buttons. Press the mode button to unlock the Buffer Board.

You can also manually lock the Buffer Board by selecting the Lock mode with the MODE button and then pressing the **RIGHT** (>) button.

When the Buffer Board is locked the digital display shows all four decimal points on.

When the Buffer Board is locked, the display alternates between the current address value and the next address value (as determined by address + size values)

4. Data LED

The green Data LED will flash rapidly when there is valid Serial Data coming into the Buffer Board. If the LED is either on (not flashing) or off, then there is not valid Serial Data on the input to the Buffer Board.

5. Contacting Element Labs

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