TOMAR

Instruction

Strobecom II 4080V2 and OSPOC8V2 series with Integrated Communications: Configuration and Front Panel User Guide

The front panel of the 4080V2 and OSPOC8V2 series provide feedback on system status and allow user access to a command set. Unit configuration is performed via jumpers. This document will focus on system configuration and the front panel command set.

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ATTENTION

THE STROBECOM II SYSTEM IS DESIGNED TO AID IN THE TRANSIT OF DESIGNATED VEHICLES THROUGH THE TRAFFIC CONTROL SYSTEM, TO THEIR DESTINATIONS.

IT IS IMPERATIVE THAT THE DRIVERS OF EACH TYPE OF VEHICLE THAT USES THE STROBECOM II SYSTEM BE MADE AWARE OF THE RESPONSE HE CAN EXPECT FROM THE TRAFFIC CONTROL SYSTEM.

IT IS THE RESPONSIBILITY OF THE CUSTOMER TO CONFIGURE THE SYSTEM'S RESPONSE TO EACH VEHICLE TYPE AND TO EDUCATE EACH DRIVER TO EXPECT THE APPROPRIATE RESPONSE FROM THE SYSTEM.

AT NO TIME SHOULD A DRIVER OF A VEHICLE EXPECT THAT HE IS GUARANTEED TO RECEIVE PROTECTED RIGHT-OF-WAY THROUGH TRAFFIC INTERSECTIONS. DRIVERS OF VEHICLES THAT WILL OPERATE OUTSIDE OF THE NORMAL TRAFFIC LAWS AND CONVENTIONS MUST ALWAYS TAKE RESPONSIBILITY FOR ENSURING THE SAFE PASSAGE OF HIS VEHICLE THROUGH AN INTERSECTION REGARDLESS OF THE OPERATION OR NON-OPERATION OF THE STROBECOM II SYSTEM.

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Strobecom II 4080V2 and OSPOC8V2 Series Overview

The front panel of the Strobecom 4080V2 and OSPOC8V2 series provides feedback on the system status. A single pushbutton on the front panel is also provided to select actions specific to on-site installation and verification operations. The user may enable or disable channels, enable or disable transit on channels, test channels using either transit or emergency band, and activate the ranging process. The user may also reset the system to the default configuration. A timeout is provided such that after 30 seconds of inactivity, the menu idles.

The Strobecom 4080V2 and OSPOC8V2 do not provide an external interface. Configuration jumpers are available to enable, disable, or modify certain system behaviors. These allow general configurations for acceptable emitter types. Confirmation light pattern selections are also available along with certain behaviors related to the confirmation lights.

1 Front Panel Overview

The front panel of the 4080V2 and OSPOC8V2 is the only interface available on the Strobecom 4080V2 and OSPOC8V2. This allows certain actions that may be performed. It also provides basic information on the system status.

1.1 Components

1.1.1 On Indicator LED

This LED provides information on the health of the system. When the system is powered, this LED will pulse at a 2 second rate, called a heartbeat. Upon a power-up, a red heartbeat is used to indicate the system is initializing. Once initialized, a green heartbeat will appear. The green heartbeat indicates the system is operating normally.

Note: The heartbeat indicator LED is labeled as 'on'.

1.1.2 Power Switch

The power switch is used to turn power on or off to the Strobecom II 4080 and OSPOC8.

1.1.3 Channel LED Display

These LEDs are numbered 1 to 6, indicating the respective channel for preemption. Under normal operations these LEDs indicate the status of any preemption events. These LEDs are also used in a menu system for access to the commands available from the front panel.

1.1.4 Select Pushbutton

The pushbutton is used to access the front panel command menus.

1.1.5 Power-up Display

Upon power-up, the front panel will first cycle through each LED color for all channels. Afterwards, the front panel will display the number of channels supported by the installed SPM. Each supported channel that is supported will display solid green.

Note: During the power-up display period, the heartbeat will be red.

2 Front Panel Command Menu

The front panel menu allows access to a set of commands. Once the menu is active, each channel provides a single command as illustrated in the figure below.

- Channel 6: Blinks to indicate the front panel menu system is active
- Channel 5: Transit Enable/Disable
- Channel 4: Channel Enable/Disable
- Channel 3: Ranging
- Channel 2: Transit Band Test
- Channel 1: Emergency Band Test

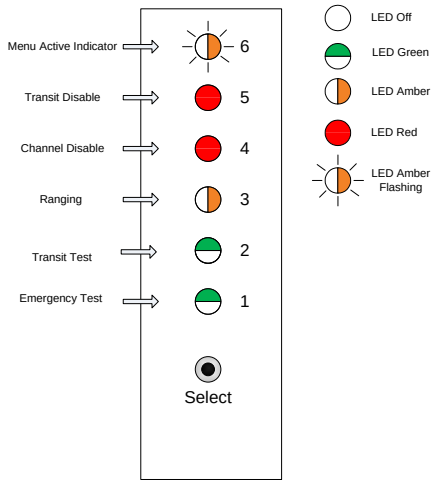


Figure 1: Front Panel Command Menu

Use of the front panel entails the process of first selecting the desired command, then selecting the channel(s) on which to apply the command, and finally activation of the command. Brief pushbutton presses (less than 2 seconds) are used in the selection of either the command or the channel. Holding the pushbutton press (longer than 2 seconds) is used to either choose a command or activate the command on the selected channels.

Note: In the event that all front panel LED indicators are solid red (a configuration corruption has been detected), the user must reset the system to defaults. Press and hold the pushbutton for at least 12 seconds to reset the system to defaults.

Note: LED 6 is used to indicate that the menu system is active

Note: During active preemption, the front panel menu system is overridden. The user should not use the front panel pushbutton during preemption events.

2.1 Entering the Front Panel Menu

By default after a power-up, the front panel menu is inactive. To active the front panel menu, press and hold the pushbutton for at least 6 seconds. The channel 6 LED will slowly blink amber when the menu becomes active. Channel 1 will also turn solid green.

Note: Upon the initial entry into the front panel menu system, the LED display will provide information on which channels are disabled or have transit band disabled. First, the channel status will be displayed as solid LED colors. If a channel is enabled, it will be solid green. If a channel is disabled, it will be solid red. After about 1 ½ seconds, the transit band status will be displayed as flashing LED colors. If transit is enabled on a channel, it will be blinking green. If transit is disabled on a channel, it will be blinking red. The LED display will only light for the number of channels as supported by the installed SPM module.

2.2 Front Panel Commands

Each channel LED position provides a single command, as shown in the previous figure (Figure 1).
To select a command, briefly press and release the pushbutton until the desired command is illuminated. To utilize the command, press and hold the pushbutton for at least 2 seconds. The LED will briefly blink when the command has been activated.

The channel selection process is now active for the selected command. To select a channel, briefly press and release the pushbutton until the desired channel is illuminated.

Note: The menu system will remain at the channel selection level. To exit back to the command selection level, either wait 30 seconds for the menu to revert to an idle state or cycle the system power.

To activate the command on the selected channel, press and hold the pushbutton for at least 2 seconds. The LED will briefly blink when the command has been applied to the channel.

The following command descriptions assume the front panel menu system has been entered from an idle state.

2.2.1 Emergency Band Test

Emergency band test is associated with LED channel 1. It is solid green at this level. This will issue an emergency band test on the selected channel. During channel selection, the LED will be a solid green color.

2.2.2 Transit Band Test

Transit band test is associated with LED channel 2. It is solid green at this level. This will issue a transit band test on the selected channel. During channel selection, the LED will be a blinking green color.

2.2.3 Ranging

Ranging is associated with LED channel 3. It is solid amber at this level. This will arm the selected channel or channels for range setting operations.

During channel selection, the LED will be a solid amber color. Once the command has been activated on the channel, the applicable channels will be a blinking amber color.

Note: The ranging process allows the user to select all channels as well as individual channels.

Note: Once armed, a single channel will have a timeout of 10 minutes. If all channels are armed, the timeout will be 20 minutes for a 2 channel SPM or 40 minutes for a 4 channel SPM.

2.2.4 Channel Enable/Disable

Channel enable or disable is associated with LED channel 4. It is solid red at this level. This allows toggling a channel between enabled or disabled. A disabled channel will not produce a preemption event.

During channel selection, the channel LED color will indicate the current status of the channel. A solid green LED indicates the channel is currently enabled. A solid red LED indicates the channel is currently disabled.

2.2.5 Transit Enable/Disable

Transit enable or disable is associated with LED channel 5. It is solid red at this level. This allows toggling a transit band between enabled or disabled. A channel with transit disabled will not produce a preemption event for transit band signals.

During channel selection, the channel LED color will indicate the current status of the channel. A blinking green LED indicates transit is currently enabled for the channel. A blinking red LED indicates transit is currently disabled for the channel.

2.3 Resetting the System to Defaults

To reset the system to defaults, simply press and hold the pushbutton for at least 12 seconds.

Note: After 6 seconds, the menu system will become active and display channel status. Remain holding the pushbutton to continue on with the reset to defaults command.

Note: When the reset to defaults command has been activated, the front panel will display a pattern indicated the command is being applied to the system.

3 Command Menu – Operation Reference

A quick reference is provided for the menu operations. The table represents the actions performed on the pushbutton to achieve the desired operations.

Command	Description	Pushbutton
Emergency Band Test	Select emergency test Utilize emergency channel test Select channel Apply operation	Select LED 1 (solid green) using short presses Utilize command by pressing button for > 2 s Select channel using short presses Activate command by pressing button for > 2 s
Transit Band Test	Select transit test Utilize transit channel test Select channel Apply operation	Select LED 2 (solid green) using short presses Utilize command by pressing button for > 2 s Select channel using short presses Activate command by pressing button for > 2 s
Ranging	Select ranging Utilize ranging Select channel(s) Apply operation	Select LED 3 (solid amber) using short presses Utilize command by pressing button for > 2 s Select channel(s) using short presses Activate command by pressing button for > 2 s
Channel Disable	Select channel disable Utilize channel disable Select channel Apply operation	Select LED 4 (solid red) using short presses Utilize command by pressing button for > 2 s Select channel using short presses Activate command by pressing button for > 2 s
Transit Disable	Select transit disable Utilize transit disable Select channel Apply operation	Select LED 5 (solid red) using short presses Utilize command by pressing button for > 2 s Select channel using short presses Activate command by pressing button for > 2 s

4 4080V2 and OSPOC8V2 Series Configuration Jumpers

The behavior of the 4080V2 and OSPOC8V2 series can be modified via jumper settings on the 4080V2 and OSPOC8V2 motherboard. This allows general acceptance of certain emitter types as well as configuration of confirmation light patterns and behavior.

The picture below shows the jumper locations and labels for each jumper position. These jumpers are located roughly in the middle of the 4080V2 and OSPOC8V2 motherboard.

Note: In the default configuration, no jumpers are installed across a configuration parameter. All emitter types are allowed, true confirmation is disabled, and confirmation light patterns are steady for the preempting channel and flashing for any pending channels. The jumpers are provided on the board in a manner that has no impact (i.e. across ground or an additional header near the fuse).

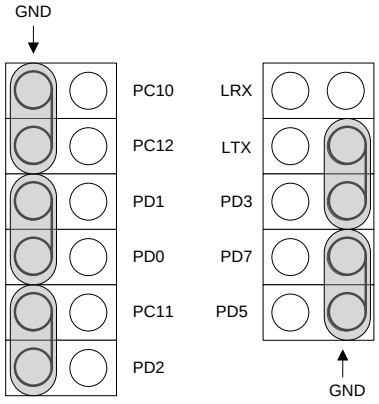
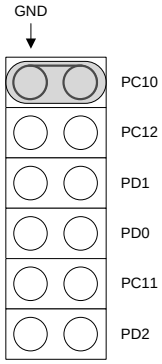


Figure 2: Default Jumper Placement

4.1 Un-coded Emitter – Jumper PC10

Install this jumper to disable un-coded emitters.

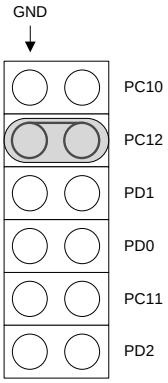
When installed, any detected un-coded emitters will display amber on the front panel, but will not be allowed to preempt.



4.2 Competitive Coded Emitter – Jumper PC12

Install this jumper to disable competitively coded emitters.

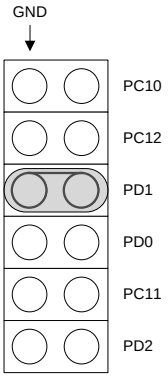
When installed, any detected competitively coded emitters will display amber on the front panel, but will not be allowed to preempt.



4.3 Emergency Band – Jumper PD1

Install this jumper to disable all emergency band emitters.

When installed, any detected emergency band emitters will display amber on the front panel, but will not be allowed to preempt.

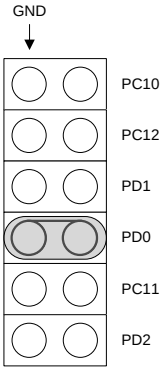


4.4 True Confirmation – Jumper PD0

Install this jumper to enable true confirmation signaling.

When installed, confirmation lights for a channel requesting preemption will only indicate preemption when confirmation is received via the controller unit.

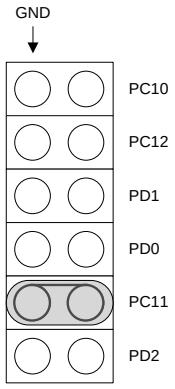
Note: Using this feature requires a connection between the front panel DB15 connector and the controller unit.



4.5 Band Independent Priority – Jumper PC11

Install this jumper to enable band independent priority.

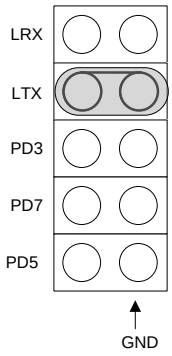
When installed, priority is given independent of the band. Transit band and emergency band are given identical priority.



4.6 Replicate Pending Confirmation on Idle Channels – Jumper LTX

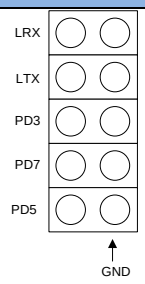
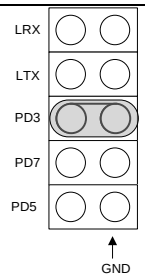
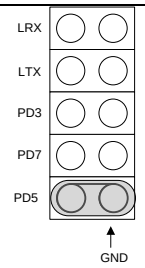
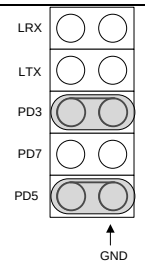
Install this jumper to set the confirmation light for all non-preempting channels to the pattern as configured.

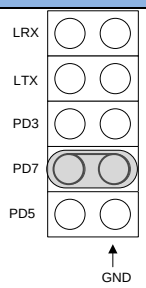
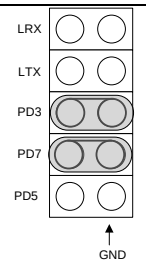
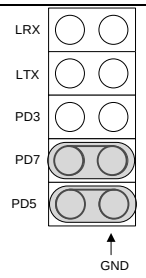
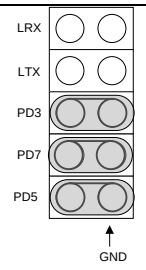
Note: This applies only when a channel is actively asserting preemption. All other channels, whether pending or idle, will act according to the pending confirmation pattern as configured.



4.7 Confirmation Light Pattern Selections – Jumpers PD3/PD5/PD7

Set these jumpers to select the desired behavior of the confirmation lights.

Jumper Settings	Preempting Channel Pattern	Pending Channel Pattern
	Steady	Flashing at 0.5 second rate
	Off	Steady
	Steady	Off
	Off	Flashing at 0.5 second rate

Jumper Settings	Preempting Channel Pattern	Pending Channel Pattern
	Steady	Steady
	Flashing at 0.5 second rate	Off
	Flashing at 0.5 second rate	Flashing at 0.5 second rate
	Flashing at 0.5 second rate	Steady