



Dimming Expansion Manual

V1.3.1

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Important Safety Instructions



PLEASE READ AND FOLLOW ALL SAFETY INSTRUCTIONS BEFORE PROCEEDING

DANGER

Discontinue use if any signs of water are present in any electronic/electrical device.

WARNING – To avoid injury to yourself and others, safety precautions should always be observed.

DANGER – Never attempt to service any electronic /electrical equipment before unplugging the device from the outlet. Risk of electrical shock if care is not taken. Special care should always be taken when operating any aquarium equipment. If the plug or receptacle gets wet, **NEVER** unplug it from the outlet. Always use the fuse or circuit breaker that supplies power to the device. Disconnect it and then examine for water presence.

- If device shows any sign of abnormal appearance, discontinue use.
- Never operate the device if plugs or cords are damaged, torn, ripped or malfunctioning.
- A “drip loop” should be arranged and position your aquarium stand and tank to the side of the power receptacle to avoid the device or power receptacle from getting wet. Please refer to Figure 1 below.

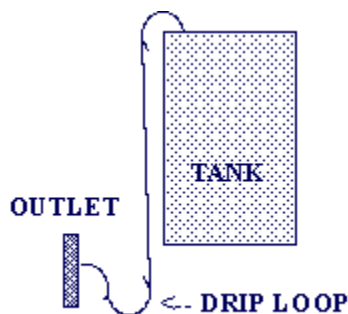
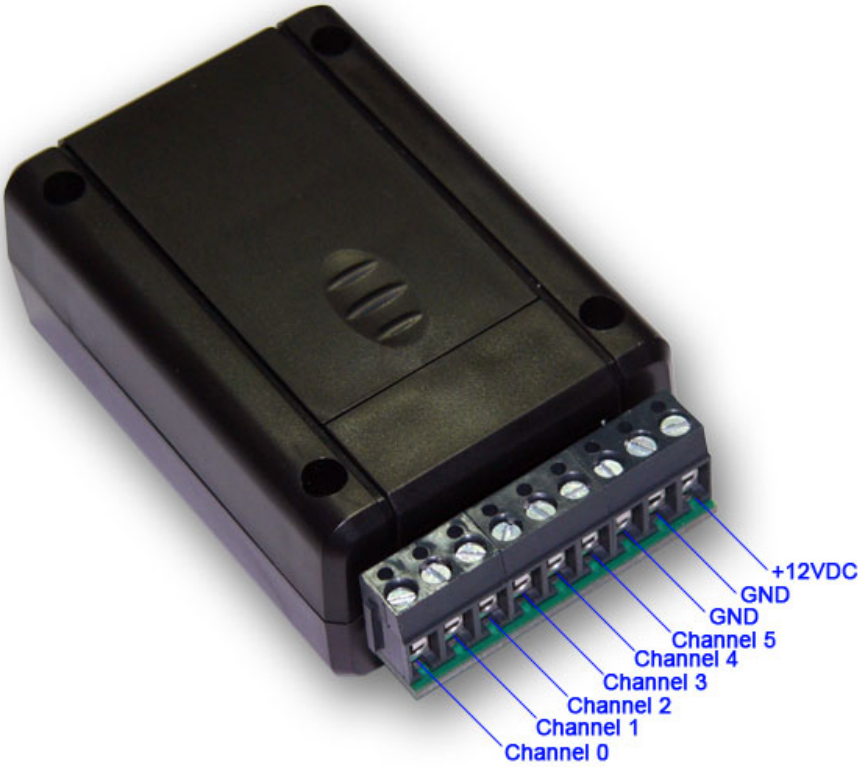
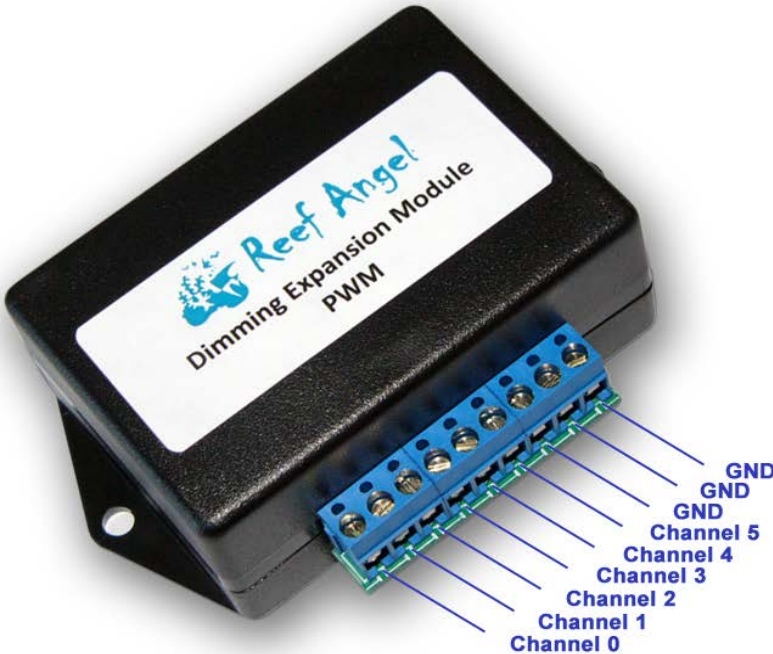


Figure 1

Dimming Expansion Unit (1st Generation) - Pin out



Dimming Expansion Unit (2nd Generation) - Pin out



Getting Started

Wiring your Reef Angel Dimming Expansion Module (1st Generation)

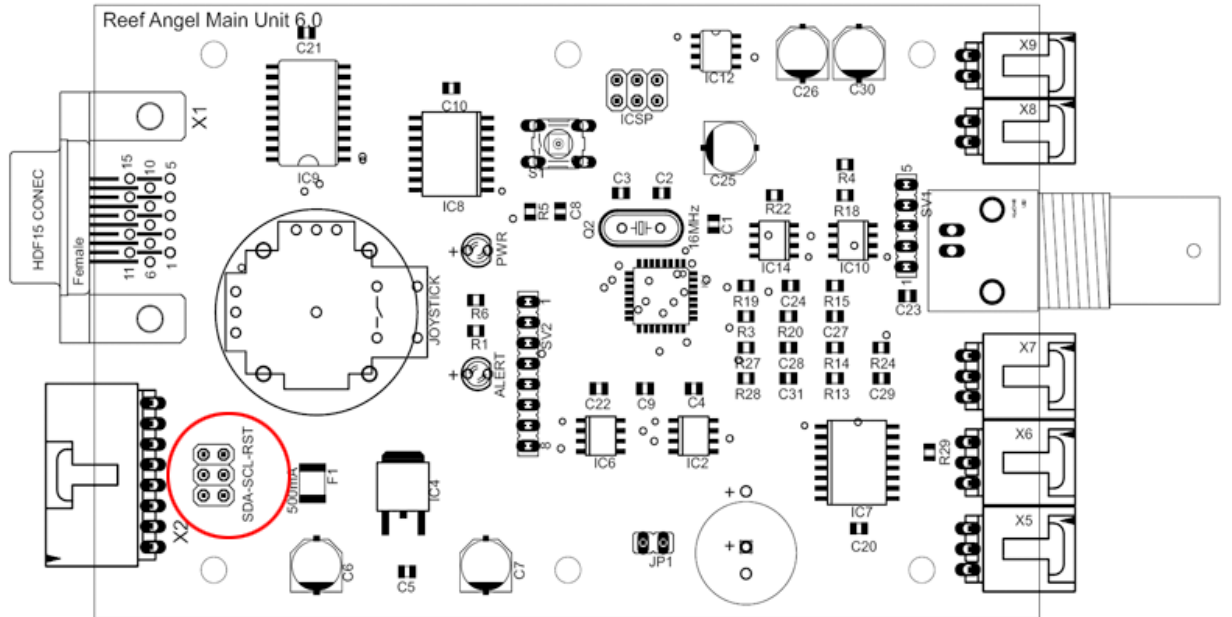
1. 12VDC is required by the Dimming Expansion Module to ensure proper functionality. Use the 12VDC power supply and connect it to the GND and +12VDC terminals.
2. Connect each channel to your driver dimming input signal wire. You may connect multiple drivers in the same channel.
3. Make sure they all share the same ground reference by using the remaining GND terminal and connecting to the negative/GND dimming input signal wire.

Wiring your Reef Angel Dimming Expansion Module (2nd Generation)

1. 12VDC is required by the Dimming Expansion Module to ensure proper functionality. Use the 12VDC power supply and plug it into the DC connector on the side of the module.
2. Connect each channel to your driver PWM dimming input signal wire. You may connect multiple drivers in the same channel.
3. Make sure they all share the same ground reference by using the remaining GND terminals and connecting to the negative/GND dimming input signal wire.

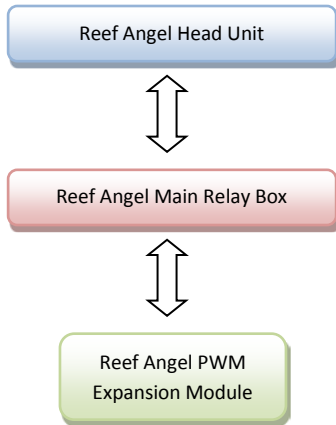
Setting up your Reef Angel Head Unit

1. Your Reef Angel Head unit needs to be setup to be able to communicate with any expansion module.
2. You need to place the provided jumpers to the SDA and SCL pins.

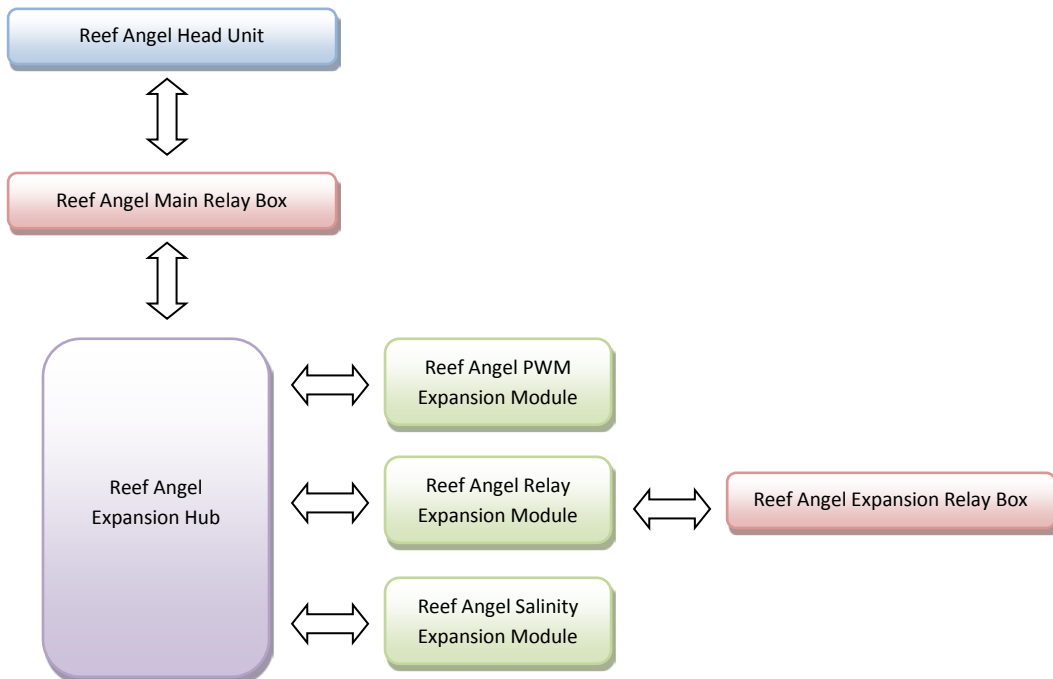


Adding your Dimming Expansion Module to your Reef Angel system

1. Plug the blue bus cable to the bus port of the expansion module
2. If you are only using one expansion module you can plug the other end of the bus cable straight into the expansion port of the main relay box.



3. If you are connecting more than one expansion module, you will need an expansion hub, which offers 10 additional ports to connect expansion modules.



Testing your Dimming Expansion module

Uploading the test code

1. Start your Arduino software
2. Open the PWM Expansion test code by going to menu File->Sketchbook->Example Codes and selecting CustomMainScreen_PWMExpansion
3. Upload the code to your Reef Angel Controller.