



SCM-LC-N2K LIGHT COMMANDER

NMEA 2000
LIGHTING CONTROLLER

INSTALLATION & OPERATION MANUAL



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SCM-LC-N2K BOX CONTENTS

- SCM-LC-N2K Lighting Commander
- 4 x SS316 Pan Head #8 x 3/4" Mounting Screws
- Installation & Operation Manual
- Warranty and Registration Information

PRODUCT SERIAL NUMBER

You can add your product serial number here for warranty and product registration purposes.

The serial number is located on the bottom of the SCM-LC-N2K Light Commander housing.

My Serial Number:

SCM-LC OVERVIEW

The Shadow-Caster® Light Commander (SCM-LC) is available in three models:

SCM-LC-N2K

For connection directly to support NMEA 2000 networks.

SCM-LC-SCNET

Used to expand the number of lighting channels to any system by 6 channels, up to 18 channels total.

SCM-LC-PLUS

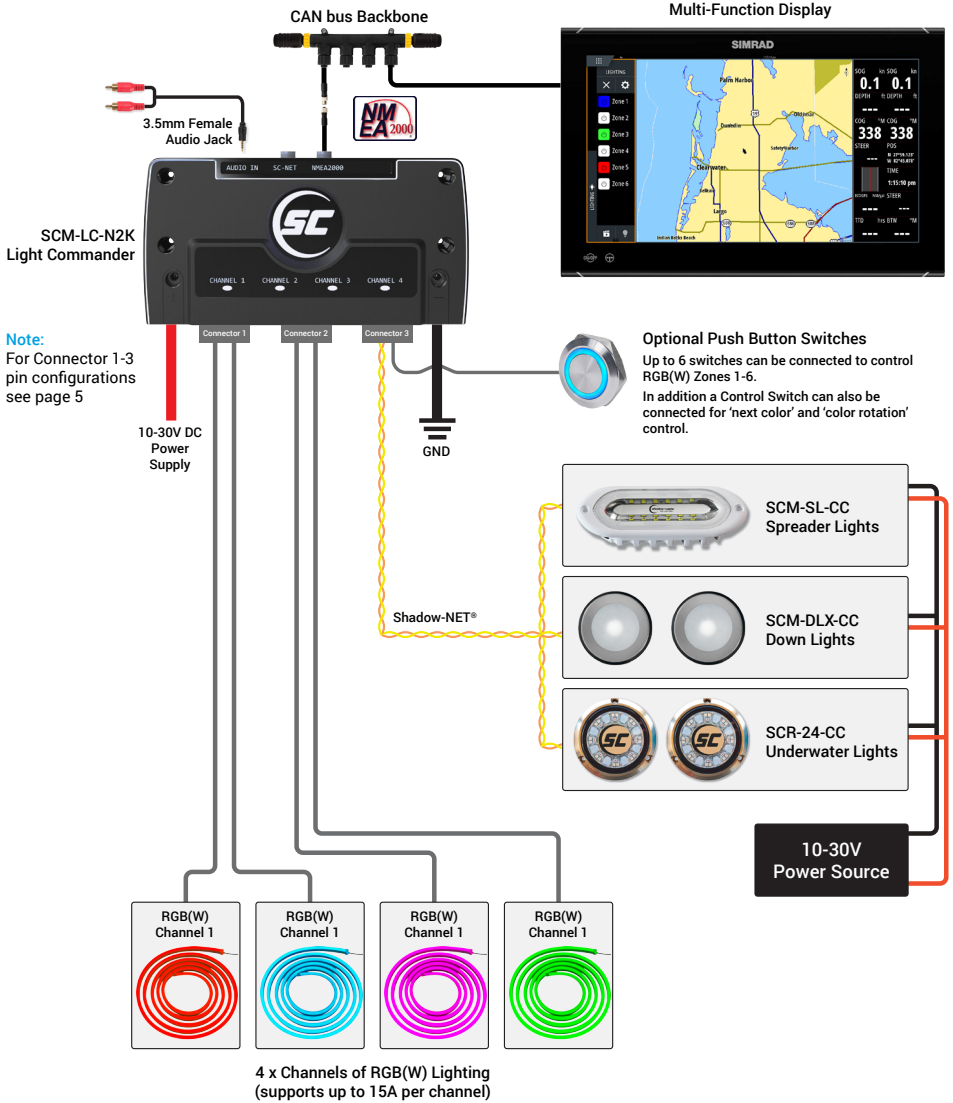
Offers an additional Wifi and Ethernet interface along with an NMEA 2000 interface for network connections to Garmin, Simrad, Lowrance, Raymarine and Furuno.

This operation manual covers the SCM-LC-N2K NMEA 2000 model.

SCM-LC-N2K FEATURES

- Control up to 6 zones lights (expandable to 18 by adding an SCM-LC-SCNET, with each SCM-LC-NET adding 6 additional channels).
- IP67 Housing with LED indicators for channels 1-4 and logo backlight.
- Full independent color, brightness and multiple lighting modes including 4 types of music synchronization, fade and custom color rotations.
- Built in support for 4 channels of RGBW lighting up to 15 amps each.
- Digital overcurrent protection.
- Autodetect for selection of RGB or RGBW channel configurations.
- Store and recall unlimited lighting scenes.
- Integrated instant on switch support. 6 independent inputs to turn on/off and dim each zone.
- Global momentary push button color control.
- Deutsch connectors for lighting connections and switch inputs.
- Direct music input via 3.5mm audio jack.

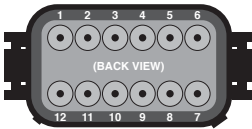
SCM-LC-N2K TYPICAL WIRING DIAGRAM



DEUTSCH CONNECTORS FOR LIGHTING AND SWITCH INPUTS

CONNECTOR 1

Mating connector
DT06-12SA "A Key"

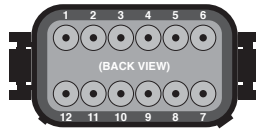


Connector 1 Pinouts

1. RED Channel 1
2. Green Channel 1
3. Blue Channel 1
4. Red Channel 2
5. Green Channel 2
6. Blue Channel 2
7. PWR + OUT Channel 2 (1 of 2)*
8. PWR + OUT Channel 2 (2 of 2)*
9. White Channel 2
10. White Channel 1
11. PWR + OUT Channel 1 (1 of 2)*
12. PWR + OUT Channel 1 (2 of 2)*

CONNECTOR 2

Mating connector
DT06-12SA "A Key"

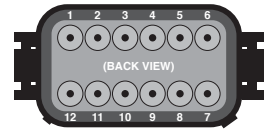


Connector 2 Pinouts

1. RED Channel 3
2. Green Channel 3
3. Blue Channel 3
4. Red Channel 4
5. Green Channel 4
6. Blue Channel 4
7. PWR + OUT Channel 4 (1 of 2)*
8. PWR + OUT Channel 4 (2 of 2)*
9. White Channel 4
10. White Channel 3
11. PWR + OUT Channel 3 (1 of 2)*
12. PWR + OUT Channel 3 (2 of 2)*

CONNECTOR 3

Mating connector
DT06-12SB "B Key"



Connector 3 Pinouts

1. + Input SW Zone 1
2. + Input SW Zone 2
3. + Input SW Zone 3
4. + Input SW Zone 4
5. + Input SW Zone 5
6. + Input SW Zone 6
7. +12V Color Control
8. Not used
9. Ground
10. 200mA +12V for supporting switch inputs
11. Shadow-NET CAN-H (Yellow)
12. Shadow-NET CAN-L (Orange)

* Combine these two outputs together when current exceeds 10A.

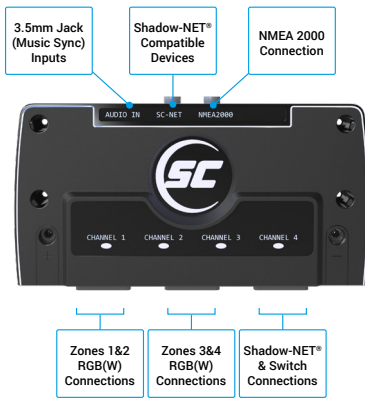
INSTALLATION

SCM-LC-N2K INSTALLATION

Central mounting locations under the helm areas or in the bilges are acceptable.

1. Typical orientation is with Deutsch wire connections facing down.
2. Use the included four 8 x 3/4" SS pan head screws for mounting.

SCM-LC-N2K CONNECTIONS



The SCM-LC-N2K Light Commander has four built in RGBW channels. By default these RGBW channels correspond to zones 1-4, however, they are independent and can be assigned to any of the configured zones 1-6 supported by the controller.

The SCM-LC-N2K Light Commander will support 15 amps per each of the 4 RGB(W) channels, for a total of 60 amps in the entire box.

SELECTING RGB OR RGBW LIGHTING

The SCM-LC-N2K Light Commander is pre-configured for RGB output.

TO CONFIGURE FOR RGBW

1. Press and hold buttons 1 and 2.
2. Apply main power to the controller - the white channels should then immediately start flashing.
3. Release the buttons and cycle the power to resume normal operation.
4. Once detected, release switch 1 & 2 and cycle power to resume normal operation.

Note: The minimum detection level is 100mA.

SWITCH INPUTS (OPTIONAL)

The SCM-LC-N2K Light Commander is configured to support zone activation switches.

There are 6 zone switch inputs located on connector 3. The inputs are configured for momentary '+' inputs.

The first button press will turn the corresponding lighting zone on to White, the second press will turn the lights off

Pressing and holding the input will toggle between dimming and stepping up brightness.

There is one global control input, that will step between colors on subsequent presses.

Holding the control switch on for more than 1 second will start color rotation. Color rotation can be stopped by a subsequent button press.

SCM-LC-N2K POWER REQUIREMENTS

See the Shadow-Caster® wire awg recommendations for detailed calculations. It is very important to have sufficient gauge wire feeds for RGB lighting. Typical installations use 8AWG or larger wire.

It is recommended to separate feeds for lighting and for sensitive stereo power feeds with direct runs to the battery or a heavy gauge distribution point.

The SCM-LC-N2K Light Commander uses digital current sensing to detect over current conditions. When this is detected, the SCM-LC-N2K Light Commander will disconnect RGBW channels from power and flash the backlit logo to indicate a fault condition.

The SCM-LC-N2K Light Commander will work in 12V or 24V systems. Please note that 12V or 24 compatible RGB(W) products should be used depending on the application.

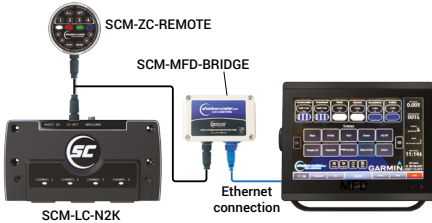
RECOMMENDED WIRE GAUGES

Scan the QR Code or click [here](#) to view our recommended wire gauge chart.



ADDING ADDITIONAL REMOTES AND MULTI-FUNCTION DISPLAYS

Additional SCM-ZC-REMOTES can be added to your installation with our Y-cable and 1m, 2m & 4m extension cables. See Optional Parts section below for details.



BEST PRACTICES FOR MITIGATING NOISE ISSUES

Noise interface is common in systems with RGB lighting controls and amplified stereo systems. The advanced circuitry in the lighting controller does everything possible to protect from this.

Utilizing installation best practices will further mitigate these issues.

1. Make sure to supply ample gauge power and separate distribution points from stereo power.
2. Run RGB power wires as far as possible from the speaker feeds for the stereo. Run separate bundles where possible.

SHADOW-NET® DEVICES

Connect Shadow-NET® enabled devices to the orange and yellow Shadow-NET® wires coming from the SCM-LC-N2K Light Commander.

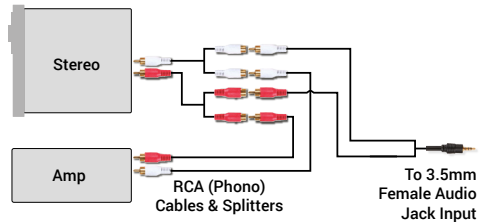
As soon as the SCM-LC-N2K Light Commander receives power, multiple channels of digital messages start broadcasting on these wires. These messages allow Shadow-NET® enabled devices to be connected without a switch. Initially these commands are for attached lights to turn off. As soon as a command is given to the SCM-LC-N2K Light Commander to go to a color, these attached devices will receive a message to go to the corresponding color and brightness.

Please note that different products are pre-programmed to respond to a certain channel. For example, Underwater Lights respond to Zone 1, Down Lights respond to Zone 2 and Spreader Lights respond to Zone 3.

OPTIONAL PARTS

- **SCM-ZC-REMOTE** Additional Remote Control
- **SCM-MFD-BRIDGE** MFD Communications Bridge
- **SCM-SCNET-01** 1meter Cable
- **SCM-SCNET-02** 2 meter Cable
- **SCM-SCNET-04** 4 meter Cable
- **SCM-SCNET-Y** Y Cable

CONNECTING STEREO INPUT FOR STEREO MUSIC SYNC INPUT



BASIC OPERATIONS FOR SIMRAD NMEA 2000 LIGHTING INTERFACE

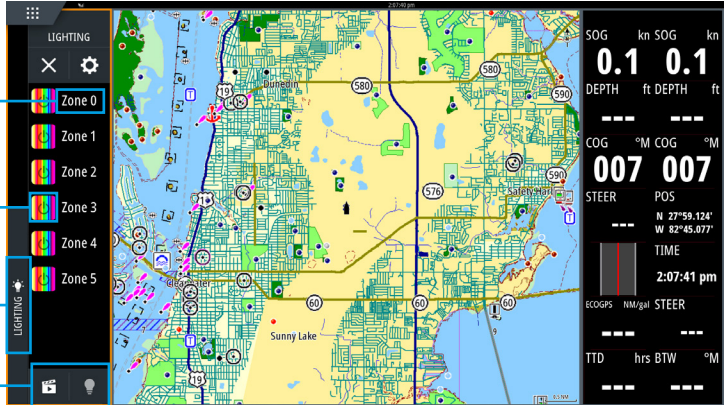
ZONE CONTROL

Zone names can be customized

Zone color indicates current zone color or function

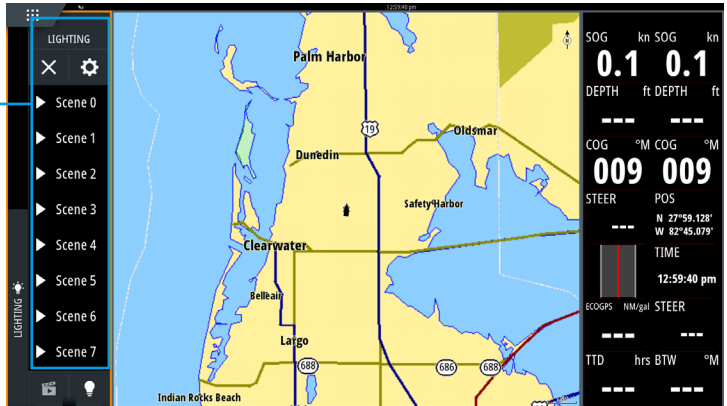
Press to slide out lighting interface

Select between zones or scene selection



SCENE SELECTION

Customizable scene menu



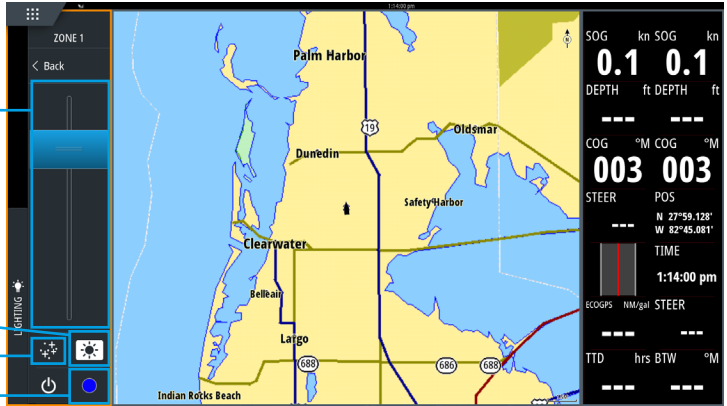
**BRIGHTNESS
ADJUSTMENT SCREEN**

Adjust brightness

Brightness

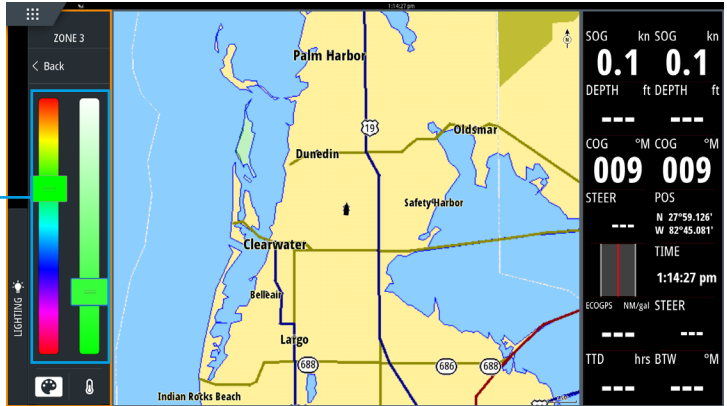
Lighting effects

Color selection



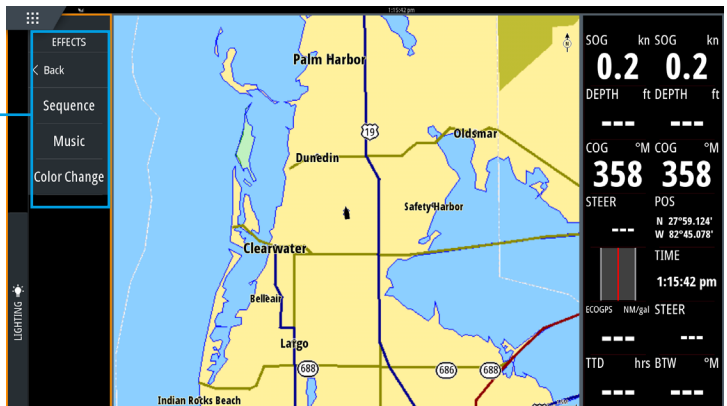
**SINGLE COLOR
ADJUSTMENT SCREEN**

Adjust color and hue



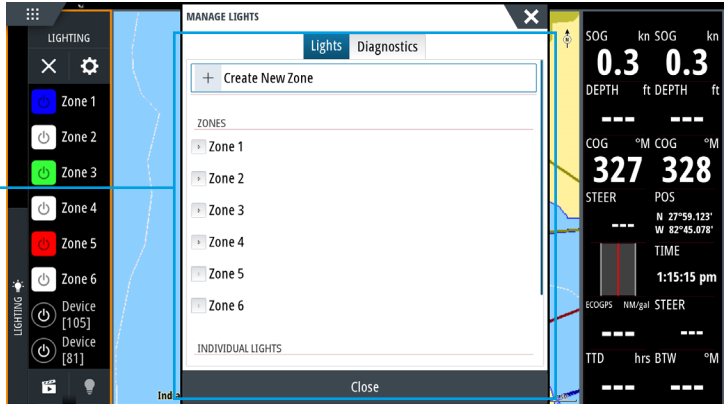
**DYNAMIC LIGHTING
EFFECTS SCREEN**

Dynamic function selection

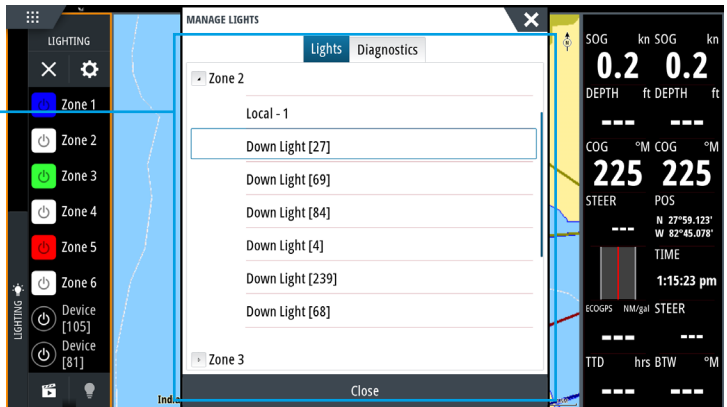


ZONE CONFIGURATION & LIGHT ASSIGNMENT SCREENS

Zone configuration and light assignment



Zone light assignment



TROUBLESHOOTING

MUSIC SYNC NOT WORKING

Verify that an appropriate 3.5mm stereo jack is being used and that there is a usable signal.

If a separate output zone is used, verify that the output is enabled and the output is set to a usable volume.

It is not recommended to use a subwoofer output, as certain sync modes require the full audio range.

SHADOW-NET® LIGHTS WILL OCCASIONALLY LOCK UP AND STOP RECEIVING MESSAGES

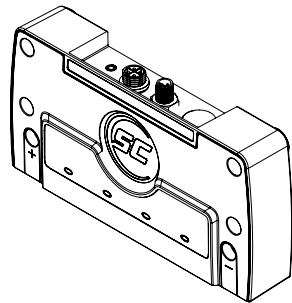
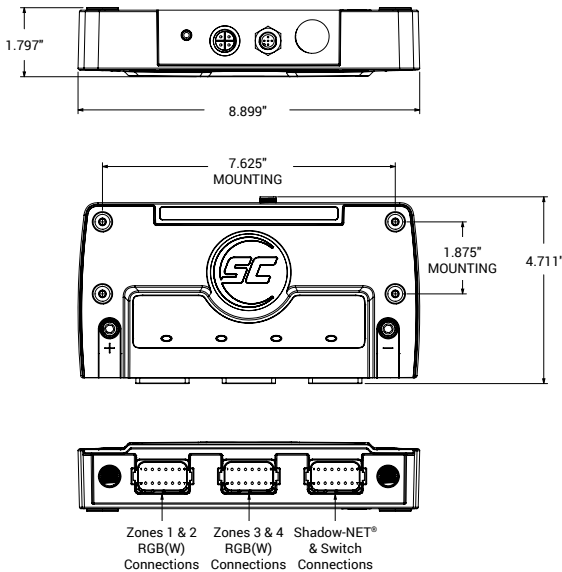
This indicates that there is a noise issue on the Shadow-NET® communication lines. Typically this is caused by insufficient gauge wire feeding one or more Shadow-NET® connected lights.

SHADOW-NET® LIGHTS STAY ON

If the connected Shadow-NET® lights are not turning off at initial power up then there is a challenge with the Shadow-NET® connection.

Check the orange and yellow wire connections are not reversed and are fully connected.

DIMENSIONS





Designed & Manufactured
in Clearwater, FL

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