

18 Ft. Runabout System Example - Features

This system example depicts an 18ft vessel featuring MPower Digital Switching

- **Easy Connectivity with MPower**

Using NMEA 2000® networking the MPower® devices connect with either just an NMEA 2000® connection or an NMEA 2000® connection and main power connection.

- **Add an Additional Circuit to the CLMD12 “Accessory” (12A Max) Breaker**
- **Expand your MPower System capabilities easily anytime with NMEA 2000®**

18 Ft. Runabout System Example - Setup

N2KAnalyzer

Please read all of the following pages to understand the necessary actions to commission this system design example.
 Maretron's N2KAnalyzer software is necessary to load the system configurations to the MPower devices for this system.
 If you do not have a way to tether N2KAnalyzer to an NMEA 2000 network, the purchase of a Maretron USB100 is recommended.

After wiring and powering your vessel's NMEA 2000 networks and DC Mains, connectivity will need to be made using Maretron's N2KAnalyzer® V3 software in conjunction with either a Maretron USB100 or a Maretron IPG100 connected to the active NMEA2000® network. For information on how to use Maretron's N2KAnalyzer® V3 software or to download the latest version of Maretron's N2KAnalyzer® V3 software please visit:

<https://www.maretron.com/products/N2KAnalyzer.php>

Before attempting to configure your system, always ensure that you are using the latest version of Maretron N2KAnalyzer® V3 and install the latest software / firmware to your MPower devices using N2KAnalyzer® V3. To update software for an MPower device, first compare "Current Software" vs "Available Software", right click an MPower device inside N2KAnalyzer® and click on "Update Selected Device's Software". A Dialog Box will appear showing the software update progress.

Step 1: Compare

Node ID	Manufacturer	Model	Serial Number	Current Software	Available Software	Percentage
00	Carling Tech...	CLMD16	1540225	CLMD16 #32 1.0.0.56	1.0.0.60	1.6%
64	Carling Tech...	CKM12	1606324	2.01.00	-	0.1%
65	Carling Tech...	CKM12	1606691	2.01.00	-	0.1%

Step 2: Right click device then click "Update Selected Device's Software"

- Configure Device
- Update Selected Device's Software**
- Analyze Received PGNs
- Analyze Transmitted PGNs
- Analyze Device Properties
- Configure Installation Descriptions
- Configure Device Instance
- Restore Factory Defaults
- Reset Device

Software Update Progress Dialog:

Node Address: 0x00 [0]
 Model: CLMD16 Serial Number : 1540225
 Upgrading Software to Version 1.0.0.60

66% Complete
 0:22 Remaining

Step 3: Watch progress until process is complete

Cancel

18 Ft. Runabout System Example - Setup Continued

MPower System Configuration Files

This system example is based off a real life 35ft. Center Console type vessel.

The configuration files provided for this example will need to be loaded to your MPower devices. Below is an instruction on how to load the configurations to your MPower devices using Maretron's N2KAnalyzer.

The following files are provided to you for setup of the MPower devices for this system. Load the configuration files to the respective MPower devices following the instructions below. Repeat this process for each MPower device.

1. "18 Runabout Example_CLMD12 Instance 32.xml"
2. "18 Runabout Example_CKM12 Instance 50.xml"

Maretron N2KAnalyzer V3, Version 3.0.6.0 - VesselName

File Setup Analyze Update Configure Web Help

Expand	Node Address	Manufacturer	Mfg Model ID	Mfg Serial Number	Source	Device Instance	Data Instance	Label	Current Software	Available Software
	50	Maretron	USB100	1171350		0	0		2.1.1.2	2.1.1.2
	01	Garmin	GPSMAP 8617	2795168195		0	0		22.10	-
+	90	Carling Tech...	CLMD12	1671808		33	0	Salon Lights	01.14.10	-
	28	Maretron	TSM810C	1900248					4.1.4.6	-
	65	Carling Tech...	CKM12	1606691					2.01.00	-
+	00	Carling Tech...	CLMD16	1540225					1.0.2.0	1.0.2.0

Step 1:
Connecting to the live NMEA 2000 bus find an MPower device and right click on the device. Select "Configure Device"

CLMD12 (0x90) 1671808 - Configuration Dialog

General | Flash Map | Discrete I/O | Inputs | Advanced | Installation Description | Control

Label: (Max. 32 Characters) Instance: 33

Input Voltage: 12 VDC Not Configured Serial Number Invalid

Breaker #1

Label: Salon Lights Trip Delay: 100 ms Factory Current Rating: 6 A

State: OFF Inrush Delay: 200 ms Current Rating: 6 A

Default State: OFF Default Dim Value: 100 % Current: 0 A

Default Lock State: Unlocked Current Dim Value: 100 % Voltage: 0 V

Sound Alarm When Tripped: Dimming Allowed: Flash Map: 0

ECB Model: 0 Combine With: none User Config Allowed:

Status

Short Load Breaker Locked

Breaker Tripped Breaker ON

Open Load Communications Error Breaker Communicating

Breaker #2

Label: Map Light Trip Delay: 100 ms Factory Current Rating: 3 A

State: OFF Inrush Delay: 200 ms Current Rating: 3 A

Default State: OFF Default Dim Value: 100 % Current: 0 A

Default Lock State: Unlocked Current Dim Value: 100 % Voltage: 0 V

Buttons: Load Config From File... Save Config To File... Restore Factory Defaults

Buttons: Get Config From Device Put Config To Device Close

RED text indicates a changed parameter that has not yet been put to the device

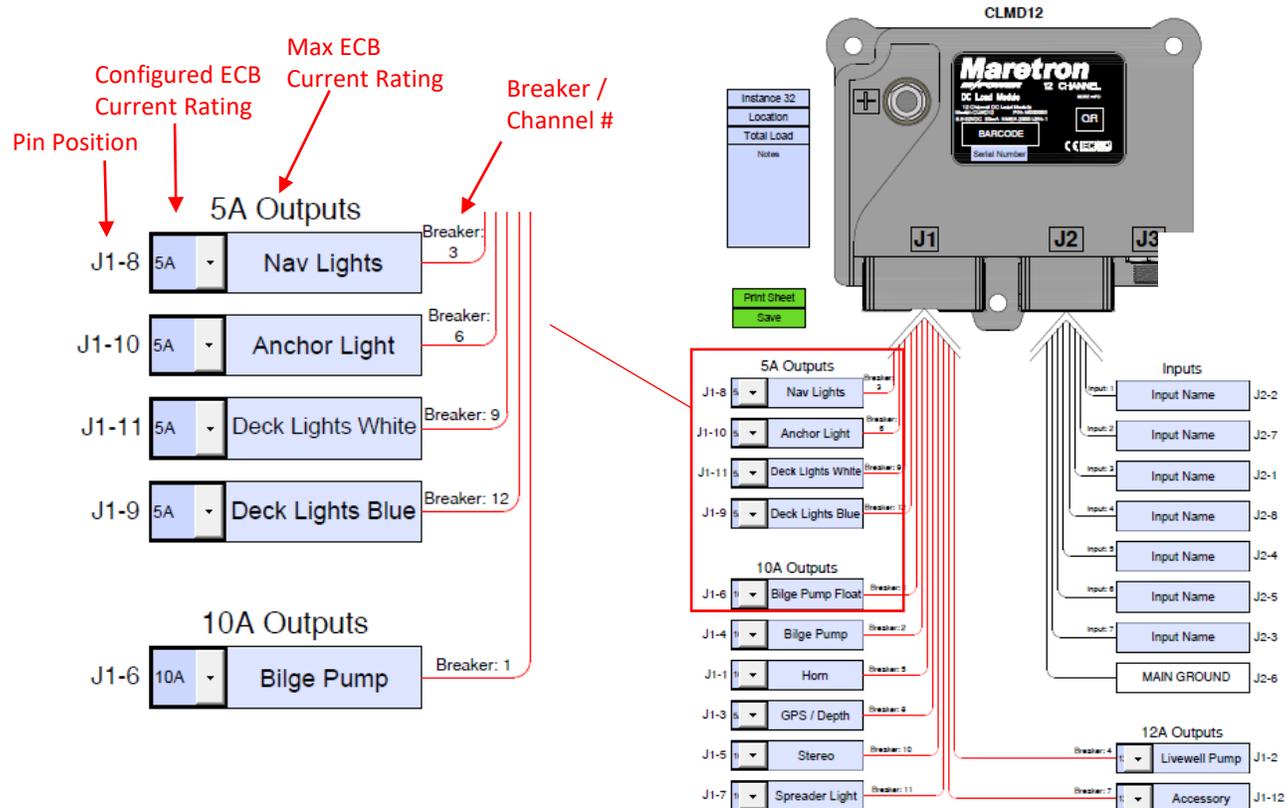
Step 2:
Click "Load Config From File" then select the corresponding device file using the File Explorer dialog.

Step 3:
Click "Put Config. to Device" to apply the configuration file's parameters

18 Ft. Runabout System Example Documentation - Forms

In the File Package provided for this System Example are several documents that are called “Documentation Forms”. The following is a description of what these forms can be used for and why they are being provided with this package.

There is a “Documentation Form” for each MPower device used in this System Example. Each Form is Pre-Filled to depict the exact pin description for each connection to be made for the MPower CLMD12. In addition to a description for each pin/ connection is some additional information such as the ECB’s max current rating, what the ECB’s software current rating is configured to, and other information such as Module Instance Number. On the form associated with the CKM12 unit, there is a general description of what each key’s function is configured to do. These pre-filled forms can be modified so as you modify the operations of the System Configuration. You can modify the forms to keep track of how you will physically connect the MPower device(s) and add information to them such as installation location and MPower unit Serial Numbers. When configuration is complete, use these forms to print and add to your vessel’s User’s Manual or simply save a digital copy for your record.





Enjoy the Power of MPower!