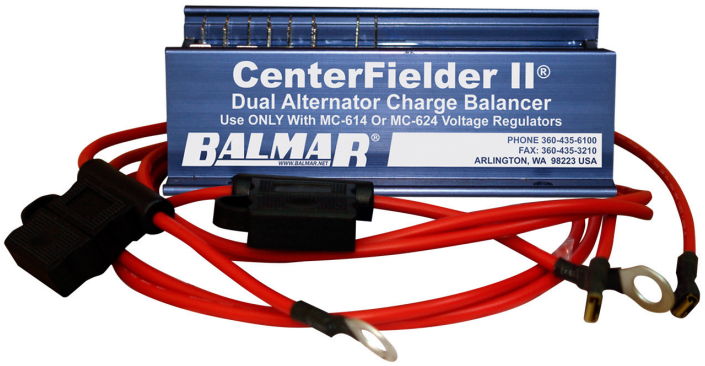
BALMAR®
WWW.BALMAR.NET
DC CHARGING SOLUTIONS

Centerfielder II
CFII-12/24



INSTALLATION AND OPERATION MANUAL

Introduction

Designed for use in application requiring balanced charge control from two alternators and two regulators on twin engines, the Centerfielder II: CFII-12/24 makes it possible to utilize the combined output of both alternators to supply optimized charging to a single large battery bank.

By monitoring the ignition and field voltages at port and starboard regulators, the CFII-12/24 determines when both engines are running, and directs field current from the master (starboard) regulator to both alternators. By controlling both alternators with the same field source, the CFII-12/24 ensures that alternators can work together to ensure optimal charging at a single large battery bank.

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Safety Considerations

1. *Always disconnect your battery banks and ensure that switches are "OFF" prior to installing your regulator.*
2. *Remove loose-fitting clothing or jewelry, which could become entangled in your motor or other machinery prior to installing regulator.*
3. *Wear ANSI-approved safety eye-wear and protective gear.*
4. *DO NOT attempt to modify the regulator. Modifications could result in damage to your charging system, and will void your warranty.*
5. *DO NOT attempt installation if you are tired or fatigued.*
6. *Ensure that the engine has cooled before initiating installation.*
7. *DO NOT attempt regulator installation while using alcohol or medication that could impair your judgment or reaction time.*
8. *Always use the right tool for the job. Improper tool use may damage regulator or your vessel, and could result in personal injury.*
9. *Take time to read the manual. Equipment damage and possible injuries may result from an incomplete understanding of the installation and operation of the MC-612-DUAL regulator. If you are unfamiliar with marine electrical systems, consult with a licensed marine electrician.*

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CAUTION: The following instructions are intended for use by experienced marine electrical installers. If you are not experienced at installing electrical system components, we recommend the use of a qualified marine electrical technician.

CFII-12/24 Installation

The following information is intended to provide the installer with the basic information required to complete installation. This section of the installation manual will deal with mounting and wiring connections.

Unpacking the Box

Your Max Charge CFII-12/24 regulator kit is packaged with the following items:

- Centerfielder II: CFII-12/24
- Collection of wiring terminal connectors
- (2) fused 12-gauge RED wires required to replace the standard
- 14-gauge RED power wires in the Max Charge regulator's wiring harness
- CFII-12/24 Quick Start Guide

If any of the listed items is not included with your regulator kit, call our customer service department at 360-435-6100.

Installation

The Centerfieldr II is easy to install. You will find, included with the Centerfielder II, a collction of wiring terminal connectors as well as two fused 12-gauge RED wires required to replace the standard 14-gauge RED power wires in the Max Charge regulator' wiring harnesses.

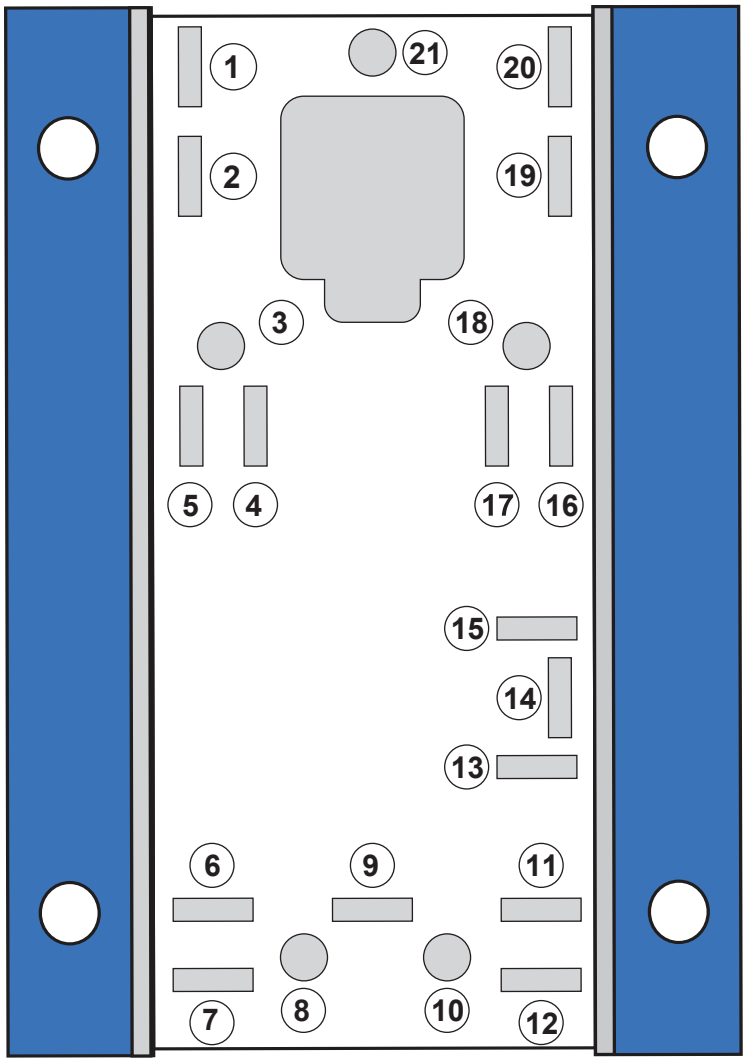
Use wire size calculation in alternator manual to determine required wire size based on the length of wire run needed to connect charging system components.

To Install:

1. Disconnect batteries or turn battery switches to the OFF position.
2. Install the CFII 12/24 on a bulkhead or other flat surface that's away from extreme heat or moisture. Typically, the CFII-12/24 is mounted close to one or the other voltage regulator.
3. Determine the distances and gauges required for wire runs between the CFII-12/24, the Max Charge regulators and the port and starboard alternators.
4. Connect the supplied wiring connectors to their appropriate wires, as described to the right, and connect to the CFII-12/24, regulators and alternators as shown.
5. Remove the exiting RED power wires from the Max Charge wiring harnesses and replace with the included, fused RED 12-gauge wires.
6. Re-connect batteries and start engines. Indicator LEDs will light as the CFII-12/24 controls field output from the regulators to the two alternators.

CFII-12/24 Regulator Terminal Layout

1. **PORT REGULATOR FIELD INPUT TERMINAL**
2. **PORT ALTERNATOR FIELD OUTPUT TERMINAL**
3. **PORT "IGNITION ACTIVATED" LED (RED)**
4. **PORT REGULATOR IGNITION**
5. **PORT IGNITION INPUT**
6. **PORT REGULATOR DASH LAMP TERMINAL**
7. **PORT DASH LAMP TERMINAL**
8. **PORT "DASH LAMP" LED (RED)**
9. **GROUND TERMINAL**
10. **STARBOARD "DASH LAMP: LED (GREEN)**
11. **STARBOARD REGULATOR DASH LAMP TERMINAL**
12. **STARBOARD DASH LAMP TERMINAL**
13. **COMMUNICATIONS PORT**
14. **COMMUNICATIONS PORT**
15. **COMMUNICATIONS PORT**
16. **STARBOARD IGNITION INPUT**
17. **STARBOARD REGULATOR IGNITION**
18. **STARBOARD "IGNITION ACTIVATED" LED (GREEN)**
19. **STARBOARD ALTERNATOR FIELD OUTPUT TERMINAL (MASTER)**
20. **STARBOARD REGULATOR FIELD INPUT TERMINAL (MASTER)**
21. **"COMBINE" LED (AMBER)**



1. **PORT REGULATOR FIELD INPUT TERMINAL -** Connect Terminal #1 to port voltage regulator's Field Output terminal via a user-supplied 12-gauge BLUE wire. A female 1/4" spade terminal is supplied for connection to Terminal #1. The 12-gauge BLUE wire will replace the regulator's 14-gauge field wire.

2. **PORT ALTERNATOR FIELD OUTPUT TERMINAL -** Connect Terminal #2 to the port alternator's field input terminal via a user supplied 12-gauge BLUE wire. A female 1/4" spade terminal is supplied for connection to Terminal #2. Alternator-side termination will vary based on alternator, and may require a user-supplied spade or ring terminal connector, depending on the alternator configuration.

3. **PORT "IGNITION ACTIVATED" LED (RED) -** Indicates activation of port voltage regulator's ignition wire. If LED is illuminated, but the port voltage regulator is inactive, check for voltage at the regulator's ignition terminal.
4.
5. **PORT REGULATOR IGNITION -** Connect Terminal #4 to the port voltage regulator's BROWN ignition wire. A BROWN 14-Gauge user-supplied wire is recommended. A female 1/4" spade terminal is supplied with the Centerfielder II.

6. **PORT IGNITION INPUT -** Connect Terminal #5 to the port engine ignition switch or port engine oil pressure switch. Terminal #5 must see zero volts when the port engine is turned off, and battery voltage when the port engine is running. BROWN 14-Gauge user-supplied wire is recommended. A female 1/4" spade terminal is supplied for connection to Terminal.

7. **PORT REGULATOR DASH LAMP TERMINAL-** Connect Terminal #6 to the port voltage regulator's dash lamp terminal via a user supplied 16-gauge wire. Female 1/4" spade terminals are supplied for connecting to Terminal #6.

8. **PORT DASH LAMP TERMINAL-** Connect Terminal #7 to the port dash lamp via a user supplied 16-gauge wire. Female 1/4" spade terminals are supplied for connection to Terminal #7.

9. **GROUND TERMINAL -** Connect Terminal #9 to system ground via 14-gauge BLACK wire. A female 1/4" spade terminal is supplied for connection to Terminal #9. Termination to system ground will require a user-supplied spade or ring terminal connector, depending on the ground location chosen. ALL GROUND CONNECTIONS MUST BE COMMON.

10. **STARBOARD "DASH LAMP" LED (GREEN)-** Indicates activation of starboard voltage regulator's Dash Lamp terminal. Activation of the Dash Lamp may occur as a result of high or low voltage, high alternator or high battery temperature. If LED is illuminated, inspect the starboard voltage regulator long display for advisory codes.

11. **STARBOARD REGULATOR DASH LAMP TERMINAL-** Connect Terminal #11 to the starboard voltage regulator's dash lamp terminal via a user supplied 16-gauge wire. Female 1/4" spade terminals are supplied for connection to Terminal #11.

12. **STARBOARD DASH LAMP TERMINAL-** Connect Terminal #12 to the starboard dash lamp via a user supplied 16-gauge wire. Female 1/4" spade terminals are supplied for connection to Terminal #12, and for connection to the starboard regulator's dash lamp.

13. **COMMUNICATION PORT-** Factory use only.

14. **COMMUNICATION PORT-** Factory use only.

15. **COMMUNICATION PORT-** Factory use only.

16. **STARBOARD IGNITION INPUT-** Connect Terminal #16 to the starboard ignition switch or starboard engine oil pressure switch. Terminal #16 must see zero volts when the starboard engine is turned off, and battery voltage when the starboard engine is running. BROWN 14-Gauge user-supplied wire is recommended. A female 1/4" spade terminal is supplied for connection to Terminal #16.

17. **STARBOARD REGULATOR IGNITION-** Connect Terminal #17 to the starboard voltage regulator's BROWN ignition wire. A BROWN ignition wire. A BROWN 14-Gauge user-supplied wire is recommended. A female 1/4" spade terminal is supplied for connection to Terminal #17.

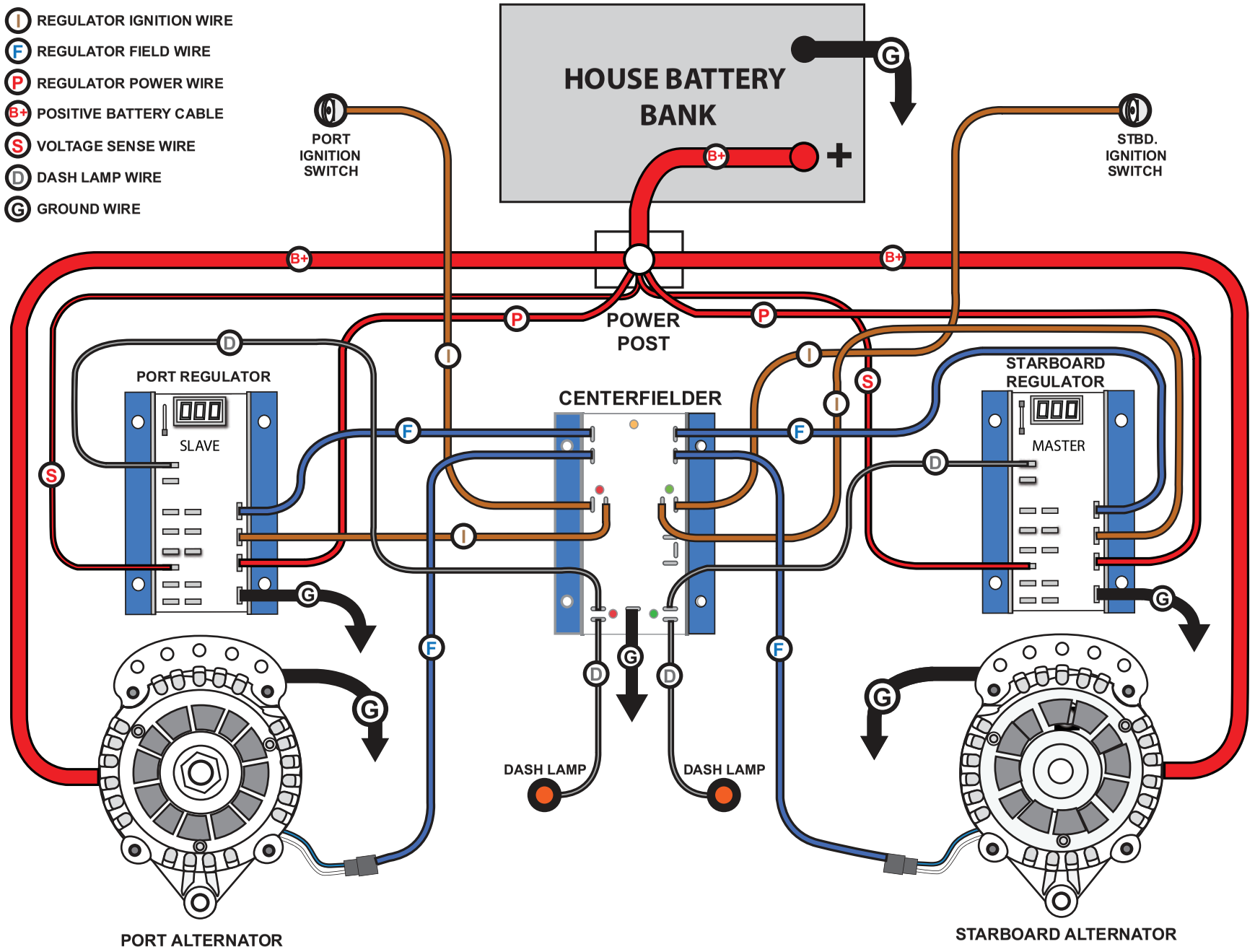
18. **STARBOARD "IGNITION ACTIVATED" LED (GREEN)-** Indicates activation of starboard voltage regulator's ignition wire. If LED is illuminated, but the starboard voltage regulator is inactive, check for voltage at the regulator's ignition terminal.

19. **STARBOARD ALTERNATOR FIELD OUTPUT TERMINAL (MASTER)-** Connect Terminal #19 to the starboard alternator's field input terminal via a user supplied 12-Gauge BLUE wire. A female 1/4" spade terminal is supplied for connection to Terminal #19. Alternator-side termination will require a user-supplied spade or ring terminal connector, depending on the alternator configuration.

20. **STARBOARD REGULATOR FIELD INPUT TERMINAL (MASTER)-** Connect Terminal #20 to starboard voltage regulator's Field Output terminal via a user-supplied 12-Gauge BLUE wire. A female 1/4" spade terminal is supplied for connection to Terminal #20. The 12-Gauge BLUE wire will replace the regulator's 14-Gauge field wire.

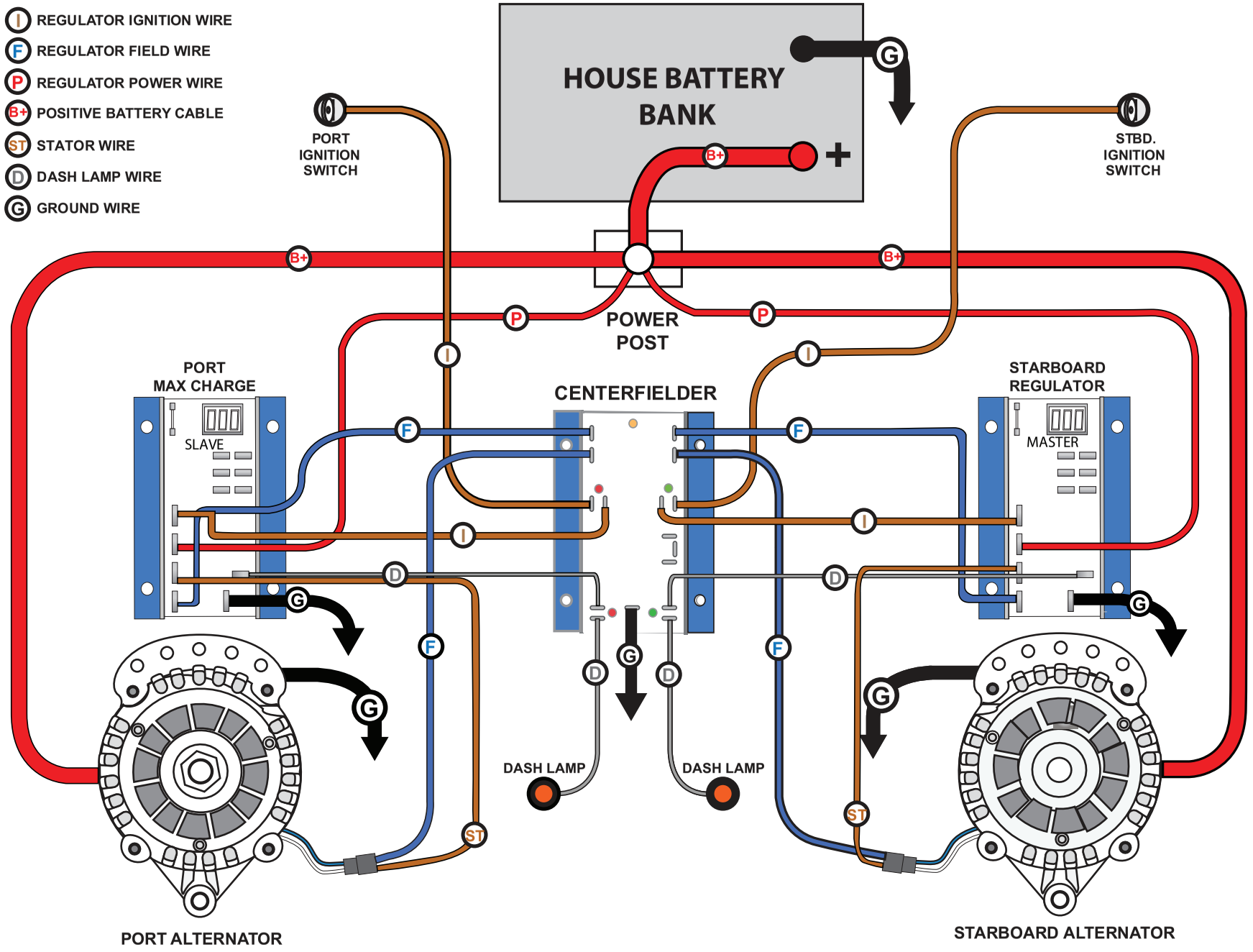
21. **"COMBINE" LED (AMBER)-** Indicates activation of port and starboard alternators and voltage regulators. The CFII - 12/24 will continue to supply balanced field current to both port and starboard alternators when the LED is activated.

Centerfielder II Installation - 12-Volt System



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Centerfielder II Installation - 24-Volt System



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Balmar Warranty

Balmar Limited Warranty

Balmar's Limited Warranty covers defects in material or workmanship on new Balmar products generally for a period of one (1) year from the purchase date. Only consumers or dealers purchasing Balmar products from authorized Balmar retailers or resellers and installed by a qualified installer may obtain coverage under Balmar's Limited Warranty. Components with a manufacturing date greater than ten (10) years old are not covered under the Balmar Warranty, even if the purchase date has been within the past two (2) years. Purchase from unauthorized resellers, which may include some online entities, may not guarantee the purchaser will receive a newly manufactured component, and therefore does not guarantee Warranty coverage.

Warranty Resolution

If Balmar authorizes a product to be returned to Balmar or an authorized service provider, Balmar will repair the product or replace it without charge with a functionally equivalent replacement product. Balmar may replace the product with a product that was previously in service or repaired, but re-tested to meet Balmar specifications. Balmar will pay to ship the replacement product to the purchaser. By sending the product for replacement, ownership of the original product will be transferred to Balmar. Labor charges at the consumer's site are not covered under this Warranty. Balmar warrants that repaired or replaced products shall be covered under the Balmar Warranty for the remainder of the original product warranty, or 90 days, whichever is greater.

Not Covered Under Warranty

Balmar's Warranty does not cover any problem that is caused by (a) an accident, abuse, neglect, exposure to shock, electrostatic discharge, heat or humidity beyond the product's specifications, improper installation, inappropriate operation/misapplication, maintenance or modification, or (b) any misuse contrary to the instructions provided with the product, or (c) loss, or (d) malfunctions caused by other equipment, or (e) acts of God. Examples of conditions not warranted: cracked or broken cases, parts damaged by fire, water, freezing, lightning, collision, theft, explosion, rust, corrosion, or items damaged in route to Balmar for repair. Balmar's Warranty is void if a product is returned with removed, damaged or tampered labels or any other alterations (including removal of any component or external cover) to the product. Balmar's Warranty does not cover labor charges or any direct, consequential, or incidental damages. Costs related to recovery removal or installation are not recoverable under the Balmar Limited Warranty.

Applicable Laws

Balmar's Warranty is governed by the laws of the State of Alabama, USA. The Balmar Warranty provides the purchaser specific legal rights, and you may also have other rights that vary from state to state. Balmar's Warranty does not affect any additional rights consumers have under laws in their jurisdictions governing the sale of consumer goods, including, without limitation, national laws implementing EC Directive 44/99/EC. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the limitation or exclusions of Balmar's Warranty may not apply in certain jurisdictions.

Warranty Return Material Process

1. Contact Balmar Technical Support at +1 (360) 435-6100. Tech Support will review the troubleshooting steps with you to help determine if Balmar's product is defective.
2. Go to www.balmar.net and download the RMA request.
3. Once complete, you will receive an RMA number, at which point you should complete the forms and send them with the product and the original receipt showing the date of purchase to Balmar at the address listed below. Please include the RMA number on the outside of the package.
4. Please send the product postage prepaid via a carrier that can track the package. Note: If you have a 9-Series Alternator to return, please ship it to our Marysville, WA location.

Balmar LLC
353 James Record Road SW
Huntsville, AL 35824
Attention: Warranty Returns RMA# _____

Balmar LLC
15201 39th Ave. NE
Marysville, WA 98271
Attention: Warranty Returns RMA# _____

Once Balmar receives the product, we will test the product to determine if the problem is due to a defect in the product. If, at the sole discretion of Balmar, the problem is determined to be a manufacturer defect, Balmar will repair the product or send a new product to replace the defective product.

Balmar will not provide Warranty coverage unless Warranty claims are made in compliance with all the terms listed here, and the specified return procedures are followed.

For more information, contact Balmar Customer Service or Technical Support at +1(360) 435-6100 or visit the Balmar website at www.balmar.net. Balmar LLC believes all information herein to be factual and accurate, yet maintains no liability for factual or typographic error. In addition, Balmar retains the right to revise or update products without notification. Visit the Balmar website for product updates or bulletins and may apply to your alternator or voltage regulator. No part of this document may be reproduced without express written permission of Balmar LLC © Copyright 2017.

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Balmar LLC
15201 39th Avenue NE
Marysville, WA 98271
USA
+1 (360) 435-6100
www.balmar.net



CDI Electronics

CDI Electronics LLC
353 James Record Road SW
Huntsville, AL 35824
USA
+1 (256) 772-3829
www.cdielectronics.com



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CDI Electronics designs and manufactures ignition components for outboard motors and diagnostic software for most Marine Engines. CDI enjoys relationships with 70 distribution partners around the world. To Find a CDI distribution partner, visit **www.cdielectronics.com.**

Both Balmar and CDI Products are manufactured in our ISO 9000-Certified Factory in Huntsville, Alabama.

Please read carefully. All policies, procedures and instructions are subject to change. This guide was prepared to provide information and does not constitute a contract. Balmar reserves the right, without prior notice, to change, delete, supplement, or otherwise amend at any time the information and policies contained in this guide.

For the most recent information about Balmar's products, policies and instructions please visit, **www.balmar.net.**

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