

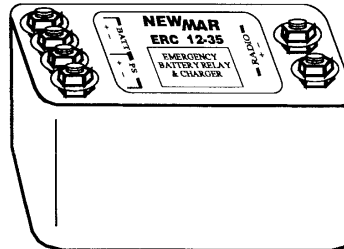
# Emergency Relay/Charger

## Models:

**ERC 12-15, ERC 12-35**

**ERC 24-15, ERC 24-35**

## INSTALLATION AND OPERATION INSTRUCTIONS



### Principle of Operation

The Emergency Relay/Charger is a device for assuring immediate back-up power to communications equipment in the event AC power is temporarily lost to the power supply or the supply fails. In addition it will allow the power supply to act as a "trickle" battery charger without any additional modification.

When loss of DC voltage is sensed by the ERC, it employs a fast-acting S.P.D.T. relay to automatically switch the equipment's DC input over to a standby battery to allow continued operation. When the power supply is returned to service, the ERC disengages the battery and puts the supply back on line to provide DC voltage. While the power supply is operating normally, a small portion of the output current is directed to the battery to trickle-charge and maintain it at full voltage. (Note: Battery float voltage will be maintained at .7 volts lower than power supply voltage)

Note: If the power supply is down for an extended period, the back-up battery may become significantly discharged while powering the radio. When the supply returns to service, the trickle charge rate of the ERC may be insufficient to restore the battery to full charge in a timely manner. In the event this occurs, a supplemental charger may be necessary to bring the battery to full charge.

### Installation

Select a suitable location as near to the battery as possible where there is no likelihood of accidental contact and shorting of the terminals. The ERC may be mounted vertically, horizontally or even upside-down if necessary without affecting its operation. Two # 10 sheet-metal or wood screws will be needed. Mounting on a metal surface is acceptable as the inputs and outputs are isolated from the mounting bracket.

Note: If your battery is stored in an unventilated enclosure it is **not** recommended that you mount the ERC within the same enclosure. As with any relay, it should not be located in an area where there may possibly be battery gases or any other potentially explosive gases present.

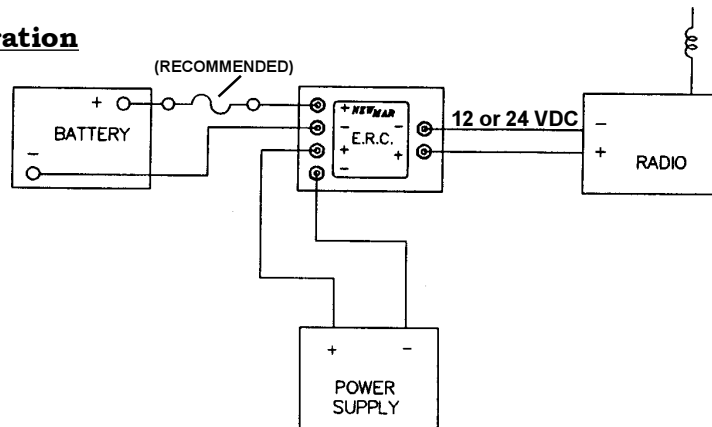
## Wiring

Wiring should be as direct as possible. Ensure that the battery posts are free from corrosion. To determine the correct gauge wire use the chart below. Wire Length is the total length of the run (ERC-to-Radio + Power Supply-to-ERC) or (ERC-to-Radio + Battery-to-ERC), whichever is longer.

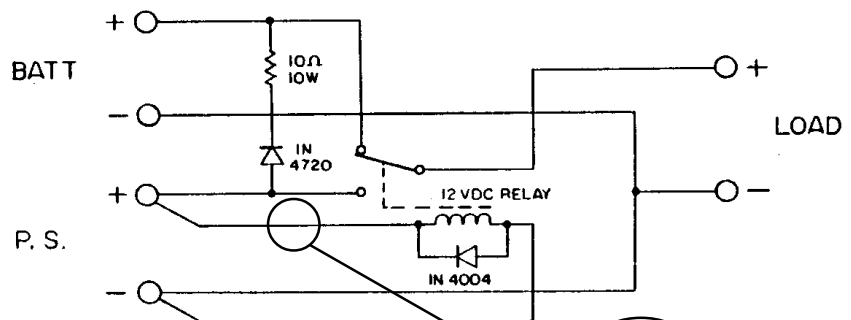
Model	Wire Length			
	5'	10'	15'	20'
ERC 12-15, ERC 24-15	#14	#12	#10	#10
ERC 12-35, ERC 24-35	#8	#6	#4	#4

Use the provided crimp ring lug connectors to secure wiring to the ERC. Models ERC-12-15 and ERC-24-15 are provided with yellow plastic terminal covers which must be reinstated after wiring to prevent accidental shorting. Models ERC-12-35 and ERC-24-35 are provided with six rubber boots. Slide each wire through the boot, attach the lug, then wire to the ERC terminal and slide the boot over the lug and terminal to prevent accidental shorting in the future.

## Typical Wiring Configuration



## Schematic Diagram



## Specifications

	ERC 12-15, 24-15	ERC 12-35, 24-35
Input Range:	10.0-14.5 VDC (12V) 20.0-29.0 VDC (24V)	10.0-14.5 VDC (12V) 20.0-29.0 VDC (24V)
Relay Rating:	10 amps continuous 15 amps intermittent	30 amps continuous 35 amps intermittent
Float Trickle (typical):	0.1 amps (12V) 0.2 amps (24V)	0.1 amps (12V) 0.2 amps (24V)
Dimensions:	5 1/8" x 2 7/8" x 2 3/8"	5 1/8" x 2 7/8" x 3 5/8"
Weight:	.5 lb.	1.15 lbs.

24 Volt Models:  
75 Ω, 10 W  
resistor installed

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