HEATSINK THESE 2 DEVICES

COOLING FAN TO BLOW ACROSS POWER RESISTORS

NOTES;
ONE TO 4 CHARGER INDIVIDUAL SELECTABLE
CHARGING TIMER SET AT 16 MINUTES,
LED BAR GRAPH READS 2 MINUTE INTERVALS.
FAN TURNS ON ANY CHARGE, AND STAYS ON 1/2
MINUTE AFTER CHARGER HAS TIMED OUT.
FRONT PANEL LED SERVES AS A LOW VOLTAGE
INDICATOR, DIMS AT 12 VDC SOURCE VOLTAGE,
OUT AT 11 VDC.

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ENGINEERING SERVICE

Title
7.2 V FIELD CHARGER (4 BATTERIES)

Size Document Number Rev
A /7.2V CHARGER A

Date Thursday, May 31, 2001 Sheet 1 of 2
<table>
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<tr>
<th>Item</th>
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<td>RED BEZEL PLASTIC (FOR LED 4 DISPLAYS)</td>
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<td>C4,C1 10UF 20V</td>
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<td>FAN 1 SMALL 12VDC FAN</td>
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<td>K1,K2,K3,K4 12V 10A RELAY</td>
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<td>U1,U2,U3,U4 74164 I.C.</td>
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This charger was designed by me in 1993 to fill a need that I had. This was I had two R.C. model boats that needed 2 batteries each and I needed to charge them simultaneously, from my car battery. I could not find a commercial unit to do this, so came up with a neat project to fill the bill. Layout was done on a 2 proto-boards, one lays flat, and the other vertical for the bar graph displays. The displays a need red filter in front of them.

The unit is novel as it’s display graph shows you the time the battery has been charging in 2 minute intervals up to 16 minutes when finished.

The “power” led indicates source voltage as it dims, and goes out at 11 vdc, this is needed because the unit draws 20 amps fully charging 4 batteries as you will need to run your engine or you will walk home!! The d.c. fan needs to be situated as to force air across the power resistors, the fan has a circuit to turn off ½ minute after the unit quits charging. Heat sink the two regulators (U8 & U9) to the metal case also. All of the parts are easy to get, most available at radio shack, allied, or digi-key

Good luck and happy charging,
Dave M.