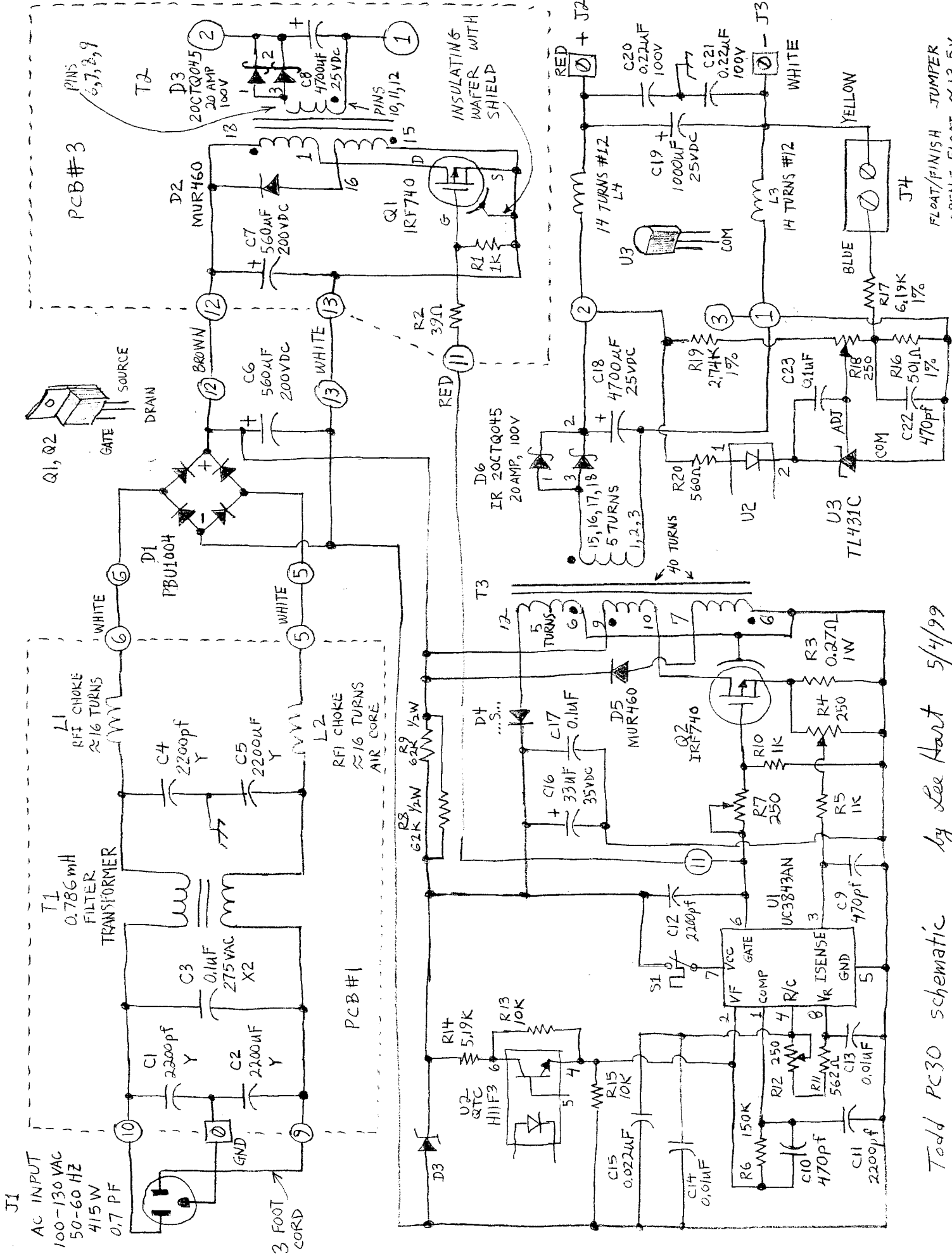


PARTS NOT EXPLICITLY ON PCB#1 OR PCB#3 ARE ON PCB#2



Todd PCB30 schematic by Lee Hunt 5/4/99

FLOAT/FINISH JUMPER
 OPEN = FLOAT ≈ 13.5V
 SHORT = FINISH ≈ 17.4V

PC-30 Todd DC/DC converter test

Charge 12v battery (Eveready 24EV 12v deep cycle marine)
 reserve capacity 140 minutes at 25 amps)
 battery initially at 11.77v open circuit

TODD: powered from 120VAC

open circuit output voltage = 14.03 VDC (ext. jumper installed)

| ELAPSED TIME | TIME | V | I | AH |
|--------------|------------|--------|-------|--------|
| 0 | 6:30pm | 11.80v | 0a | 0ah |
| 0:00:30 | 6:30:30 pm | 13.65v | 19.6a | 0ah |
| 0:03 | 6:33pm | 13.7v | 18.7a | 1ah |
| 0:05 | 6:35pm | 13.75v | 18.3a | 1.5ah |
| 0:15 | 6:45pm | 13.7v | 17.7a | 4.4ah |
| 0:30 | 7:00pm | 13.75v | 17.1a | 7.7ah |
| 1:35 | 8:05pm | 13.8v | 11.1a | 21.2ah |
| 2:18 | 8:48pm | 13.95v | 8.1a | 27.5ah |
| 2:37 | 9:07pm | 13.95v | 7.2a | 29.4ah |
| 3:02 | 9:32pm | 14.0v | 6.3a | 31.8ah |
| 3:33 | 10:03pm | 14.0v | 5.4a | 34.5ah |
| 3:54 | 10:24pm | 14.0v | 4.9a | 36.0ah |
| 4:15 | 10:45pm | 14.0v | 4.5a | 37.5ah |
| 4:55 | 11:25pm | 14.0v | 3.9a | 39.9ah |
| 5:10 | 11:40pm | 14.0v | 3.7a | 40.7ah |
| 5:30 | 12:00pm | 14.05v | 3.4a | 41.8ah |
| | 12:12pm | 14.05v | 3.3a | 42.3ah |
| 5:55 | 12:25pm | 14.0v | 3.2a | 42.9ah |
| | 1:45am | 14.05v | 2.6a | 46.2ah |
| 7:30 | 2:00am | 14.05v | 2.5a | 46.8ah |
| | 2:47am | 14.05v | 2.2a | 48.4ah |
| | ↓ | | | |
| 15:45 | 10:15am | 14.05v | 1.2a | 58.5ah |
| | 11:10am | 14.05v | 1.1a | 59.4ah |
| 17:30 | 12:00 noon | 14.05v | 1.1a | 60.1ah |
| 18:37 | 1:07pm | 14.05v | 1.0a | 61.1ah |
| 19:51 | 2:21pm | 14.05v | 1.0a | 0 |

just before starting initial peak I=28a
 30 seconds after start.

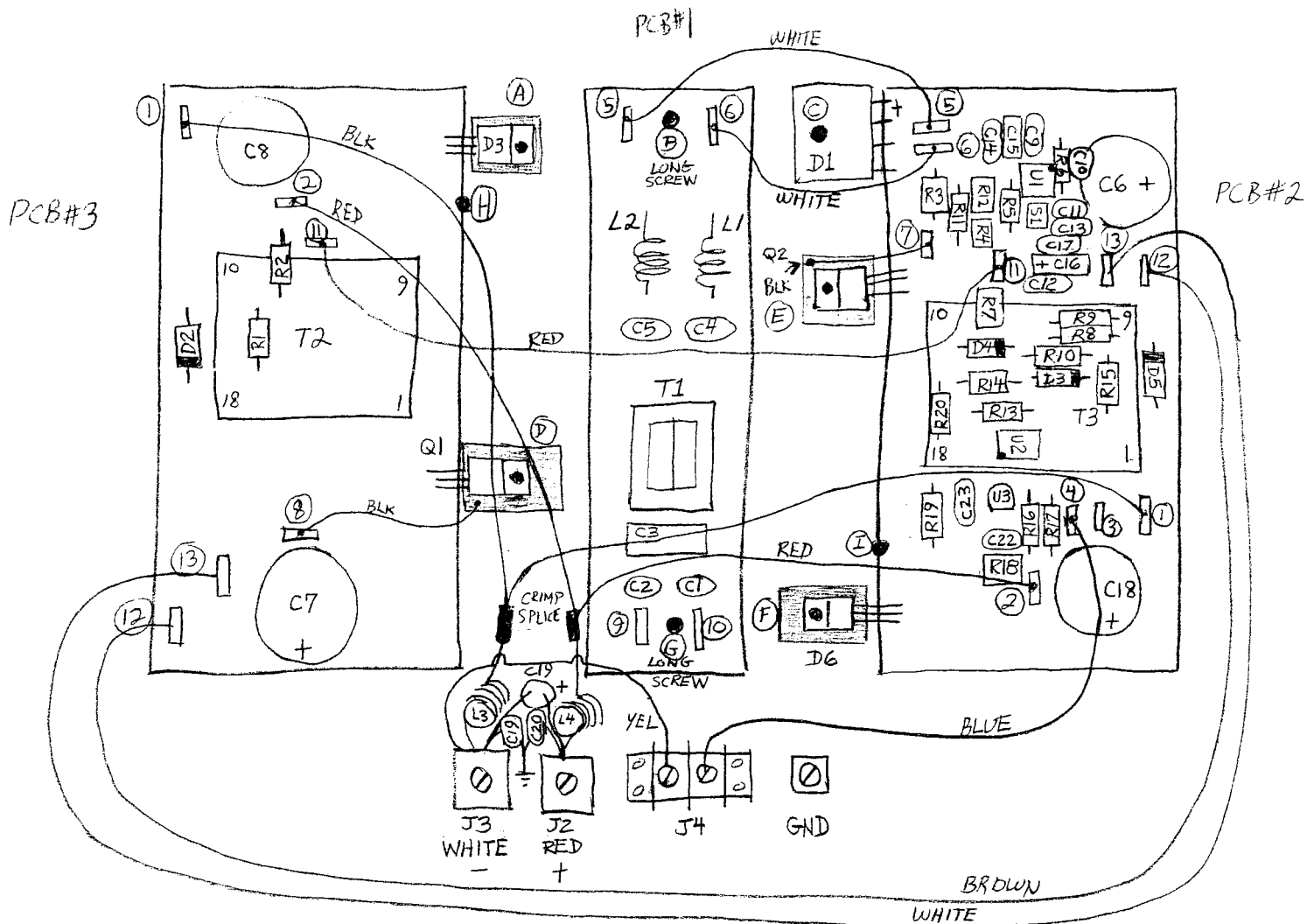
E-meter configuration
 V = 13.5V
 A = 002%
 Ah = 50

Todd PC30 input current:
 8mA @ 120VDC in
 14.02V @ 1mA out

(E-meter reset to full)
 reset E-meter to 60 ah

TODD PC 30 DC/DC CONVERTER

ser. no. C30-0000420



Disassembly

1. Drill out pivots and remove top and end cover
2. Unplug wires at ① and ② (2 each), ④, ⑨, ⑩, ⑪
3. Remove screws at (A), (B), (C), (D), (E), (F), (G), (H), (I) with 4 clips at A, C, D, F, 2 nuts at B, G
4. Pull out mylar insulating sheets from under PCB's (3 used)
5. Remove PCB#3. Note insulators between semiconductors and case.
6. Remove PCB#1. Note oversize nuts used as spacers between PCB and case.
7. Remove PCB#2. Note insulators between semiconductors and case.
8. Reverse to reassemble.

Output

R18 sets output voltage
 14.35V no-load with J4 closed
 13.50V no-load with J4 open

QC:

- T2 and T3 are identical, but bobbin with pin numbers was rotated 180° on one transformer.
 - ⑨ is a bare terminal, very close to L4.
 - C19, C20 make poor connections to J2, J3.
- by Lee Hart 5/4/99