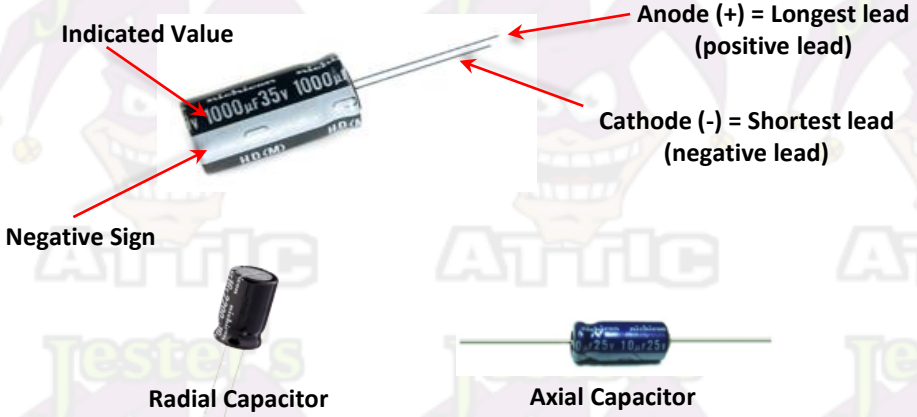
Hantarex MTC-900E 19” Wellness Guide

HAN-MTC-900E



- Temperature, age, and humidity can and will change the original values of capacitors. Therefore, capacitor kits (or cap kits) are necessary.
- Always install capacitors using the correct polarity (positive to positive, negative to negative). Installing a capacitor in the wrong direction can result in damage to the electronic components, and in some cases cause fire or injury.
- Some capacitors are Bi-polar (BP) or Non-Polarized (NP). These capacitors have no positive or negative leads. It doesn’t matter which direction these capacitors are installed.
- Always remove any old solder before installing new capacitors.
- For best results, use high-quality capacitors like Nichicon or Panasonic.

Capacitor count

Quantity	Capacitance	Voltage	Type
7	10uF	16V	Electrolytic
6	4.7uF	25V	Electrolytic
4	100uF	25V	Electrolytic
2	1000uF	35V	Electrolytic
2	2.2uF	100V	Electrolytic
2	220uF	16V	Electrolytic
2	4.7uF	250V	Electrolytic
2	47uF	250V	Electrolytic
1	10uF	25V	Electrolytic
1	2200uF	16V	Electrolytic
1	22uF	35V	Electrolytic
1	330uF	200V	Electrolytic
1	47uF	16V	Electrolytic
1	6800pF	2000V	Ceramic
33	***total***		

Note: *Certain capacitors will not be available for all the exact voltages listed above. It is perfectly acceptable to use a higher voltage capacitor with the same capacitance as a replacement. However,* ***NEVER*** *use a lower voltage capacitor as a replacement!*

General Remarks

- *First and foremost, these monitors are difficult to work on because of the availability of certain parts. Since these monitors were made in the United Kingdom, I guess it would be easier to find parts if you lived in Europe. Be warned…*
- *Most aluminum electrolytic capacitors are rated for at least +85C maximum temperature rating. It is my personal preference to not install +85C capacitors unless absolutely necessary on any board. Since this is a CRT monitor, higher temperatures will be generated if the monitor is left on for long periods of time. I prefer to install at LEAST +105C maximum temperature rated capacitors (or higher) to help mitigate this.*
- *Starting on page 3, the “Voltage” column on the capacitor list for each board states what voltage the schematic calls for. The “Installed” column refers to what voltage the capacitor I opted to install to take advantage of the higher temperature rating.*
- *There are MANY different versions of each board available for this particular monitor. Please pay careful attention to what version of each board you have. The version number will be silk-screened on the bottom of each board. This wellness guide is applicable only to the:*
  - *Interface Board (**version 6 - IE 06**)*
  - *Deflection Board (**version 4 - DE 04**)*
  - *Neck Board (**version 4 - NE 04**)*

Hantarex MTC-900E 19” Disassembly Instructions

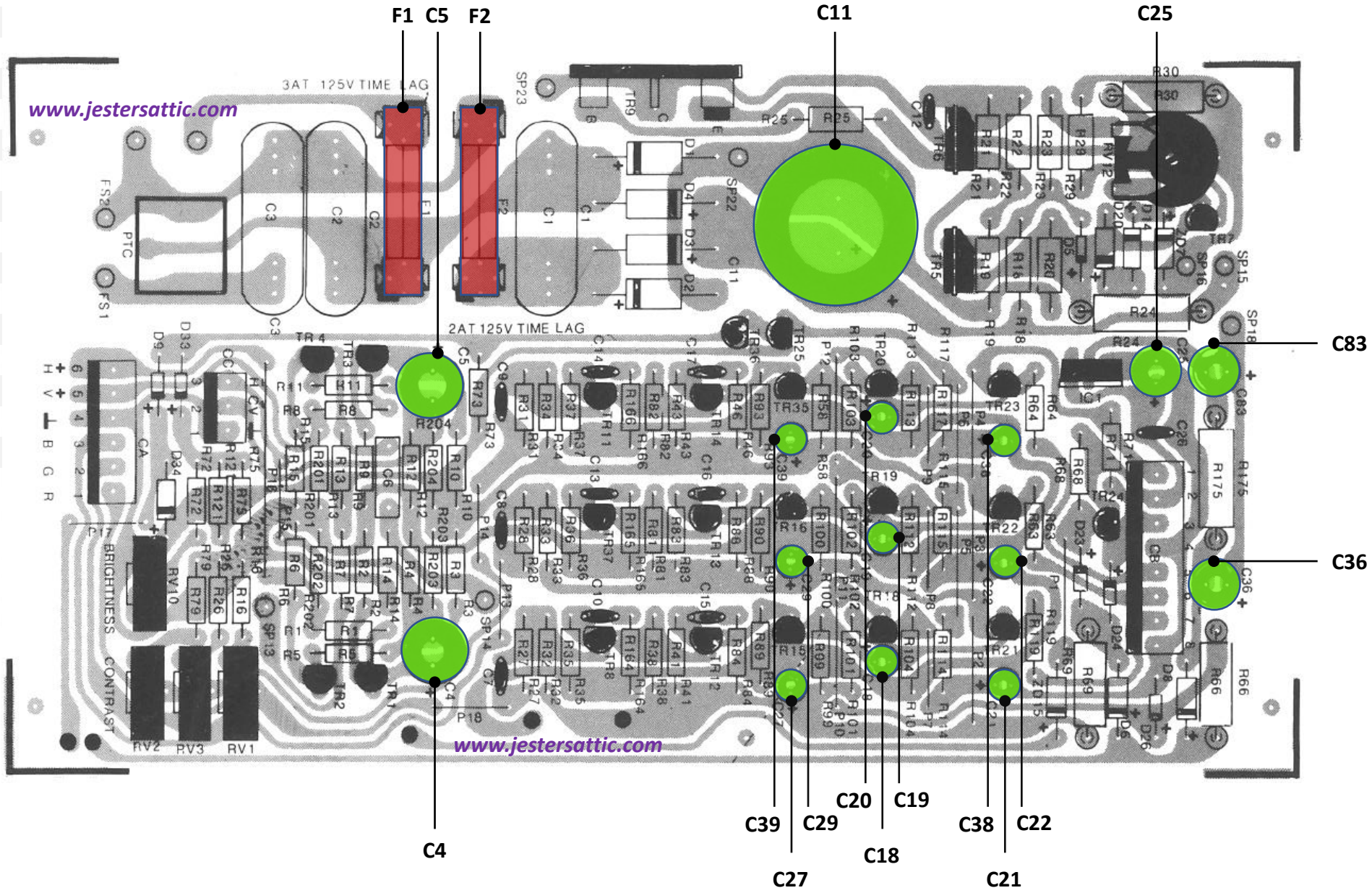
1. Remove protective cage/screws from frame (if present)
2. Discharge CRT monitor & remove Flyback cup from CRT
3. Remove PCB screws to chassis
4. Remove neck board
5. Unplug yoke wires from PCB
6. Remove degauss wires from PCB
7. Remove DAG strap (black) wires from neck board
8. Clean tube
9. Remove two center screws from each PCB
10. Remove plastic PCB clips from Flyback side
11. Remove plastic transistor cover (if present) from TR17
12. Desolder and remove TR17 (BU208A transistor)
13. Desolder and remove TR9 (HAN 20430430 transistor)
14. Remove Flyback screws from Flyback bracket and remove bracket
15. Desolder Flyback – Note pins 2 & 3 are not used
16. Remove ground wire from Interface board that is attached to the PCB chassis
17. Unplug green wire near ground from neck board
18. Unplug neck harness from Interface board and Deflection board
19. Desolder the following wires from the Interface board
    a) SP13 (orange)
    b) SP14 (yellow)
    c) SP15 (red)
    d) SP16 (brown)
    e) SP18 (brown)
20. Clean PCBs
21. Replace components as necessary

Hantarex MTC-900E 19” Reassembly Instructions

1. Repeat the Disassembly Instruction in reverse order

Hantarex MTC-900E Interface Board (IE 06) Component Map

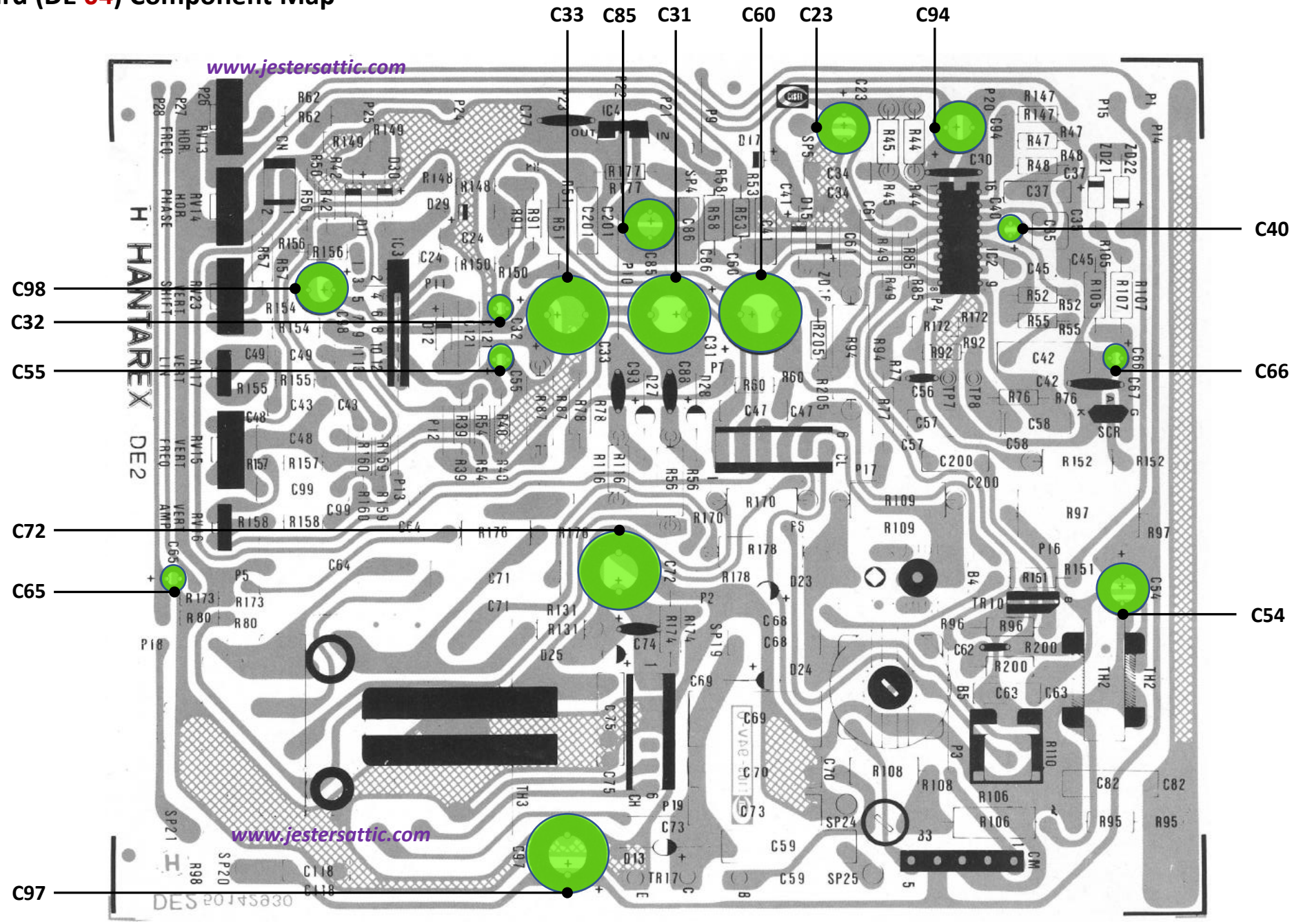
#	Value	Voltage	Type	Installed*	Remarks
C4	220uF	16V	Electrolytic	16V	
C5	220uF	16V	Electrolytic	16V	
C11	330uF	200V	Electrolytic	200V	
C18	4.7uF	16V	Electrolytic	25V	See Note
C19	4.7uF	16V	Electrolytic	25V	See Note
C20	4.7uF	16V	Electrolytic	25V	See Note
C21	10uF	16V	Electrolytic	16V	
C22	10uF	16V	Electrolytic	16V	
C25	47uF	16V	Electrolytic	16V	
C27	10uF	16V	Electrolytic	16V	
C29	10uF	16V	Electrolytic	16V	
C36	22uF	35V	Electrolytic	35V	
C38	10uF	16V	Electrolytic	16V	
C39	10uF	16V	Electrolytic	16V	
C83	47uF	25V	Electrolytic	25V	



NOTE: At the time of this writing, Nichicon did not manufacture a few of the capacitors on this board that were rated for +105C. Although installing capacitors that are rated for +85C as the maximum temperature is perfectly acceptable, I chose to install higher temperature rated capacitors. The "voltage" column in the above list states what voltage the schematic called for. The "Installed" column refers to what voltage the capacitor I opted to install to take advantage of the higher temperature rating.

Hantarex MTC-900E Deflection Board (DE 04) Component Map

#	Value	Voltage*	Type	Installed*	Remarks
C23	100uF	16V	Electrolytic	25V	See Note
C31	1000uF	35V	Electrolytic	35V	
C32	2.2uF	63V	Electrolytic	100V	See Note
C33	1000uF	35V	Electrolytic	35V	
C40	4.7uF	16V	Electrolytic	25V	See Note
C54	4.7uF	250V	Electrolytic	250V	
C55	10uF	25V	Electrolytic	25V	
C60	2200uF	16V	Electrolytic	16V	
C65	4.7uF	16V	Electrolytic	25V	See Note
C66	2.2uF	63V	Electrolytic	100V	See Note
C72	47uF	250V	Electrolytic	250V	
C85	100uF	25V	Electrolytic	25V	
C94	100uF	16V	Electrolytic	25V	See Note
C97	47uF	250V	Electrolytic	250V	
C98	100uF	16V	Electrolytic	25V	See Note



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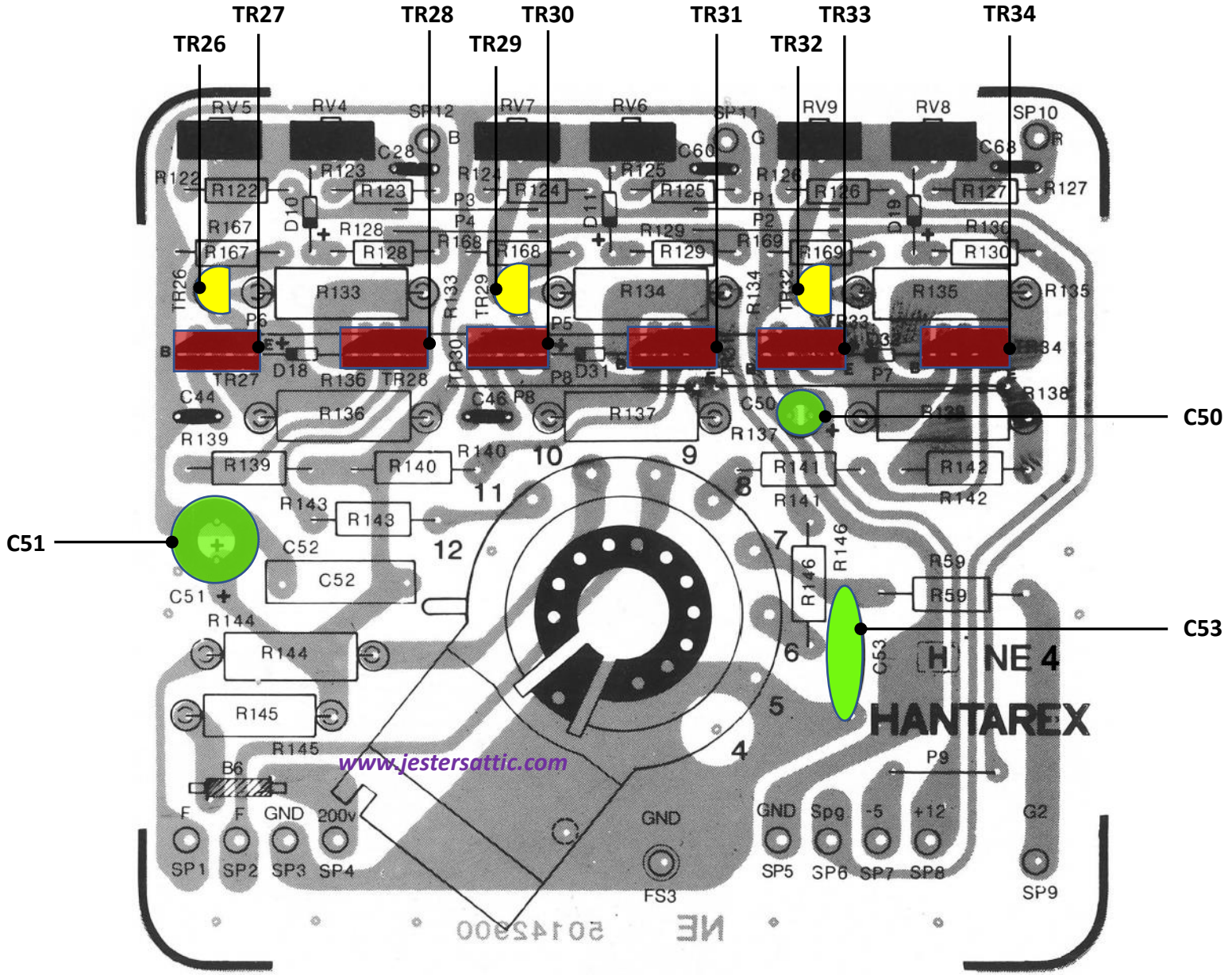
Hantarex MTC-900E Neck Board (NE 04) Component Map

#	Value*	Voltage	Type	Installed*	Remarks
C50	10uF	16V	Electrolytic	16V	
C51	4.7uF	250V	Electrolytic	250V	
C53	6800pF	2000V	Ceramic	2000V	
TR26	BC237B		NPN	BC237B	
TR27	BFG71	300V	NPN	BF871	See Note
TR28	BFG71	300V	NPN	BF871	See Note
TR29	BC237B		NPN	BC237B	
TR30	BFG71	300V	NPN	BF871	See Note
TR31	BFG71	300V	NPN	BF871	See Note
TR32	BC237B		NPN	BC237B	
TR33	BFG71	300V	NPN	BF871	See Note
TR34	BFG71	300V	NPN	BF871	See Note



NOTE: At the time of this writing, the BFG71 transistor was very hard to find (at an affordable price) in the US. I opted to install the BF871 transistor as a suitable replacement, which was readily available and cheaper. The "Value" column in the above list indicated the installed part number the schematic called for. The "Installed" column refers to what part number I opted to install.