

Marshall Turret Board Layouts

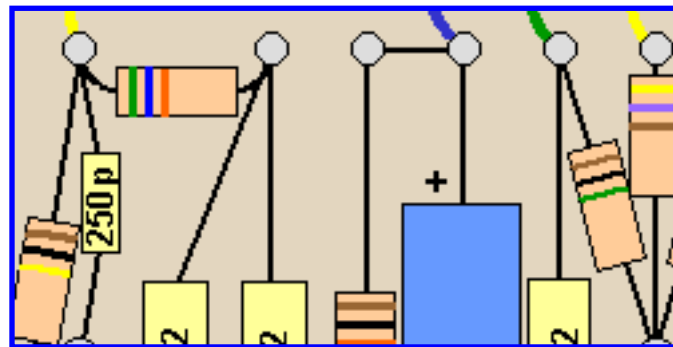
I've had some requests for a diagram of the JTM45 turret board layout, so here it is, along with a couple of later ones. These layouts are closely based on the original Marshall boards. The early amps didn't have a bias adjustment pot, so I've included one on these, otherwise they are the same as the factory layouts. I've broken them down into JTM45, Plexi and metal-face circuits, but there are no hard and fast rules where old Marshalls are concerned and there are probably amps in existence that mix and match elements of all three circuits. Click the pictures below to get the full versions.

Disclaimer: I'm not an authority on vintage Marshalls - this page has been produced from information I've found on the web and in books. Corrections and/or additions are welcome. I haven't shown the rectifier diodes on the Plexi and metal-face layouts - some had the power supply on the end of the turret board, next to the bias circuit, while others had the diodes on a separate board or mounted on the chassis.

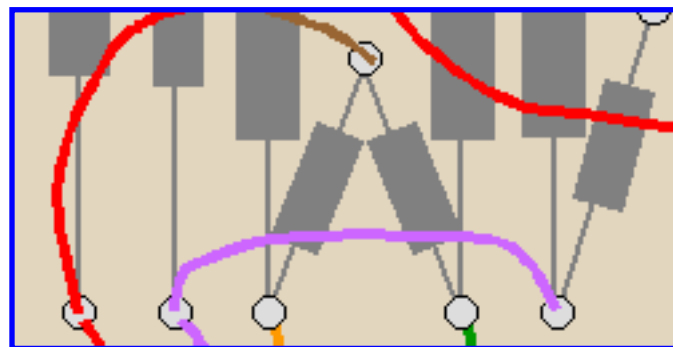
NB: These layouts are for 50W amps. The 100W amps had different power supplies and bias circuits.

JTM45

This is the original JTM45, basically the same as a 5F6-A Fender Bassman. There are minor changes in the power supply, but the circuit is virtually identical.



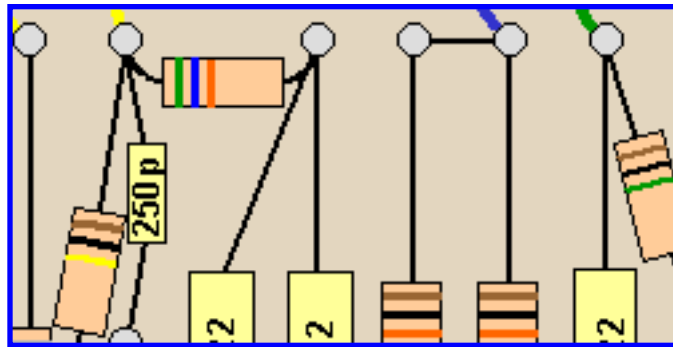
JTM45 Layout



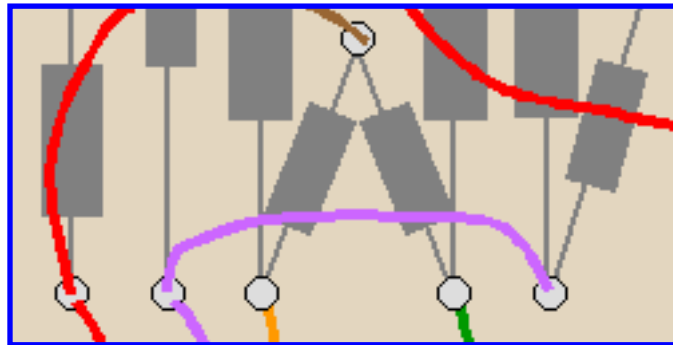
JTM45 Under Board Wiring

Plexi

This is what I consider a Plexi circuit. It's very similar to a JTM45, but with higher B+ voltage, more power supply filtering, 470K mixer resistors, a bypass cap on the bright channel, and less negative feedback. They also changed from valve to solid state rectification and from KT66 to EL34 output valves.



Plexi Layout

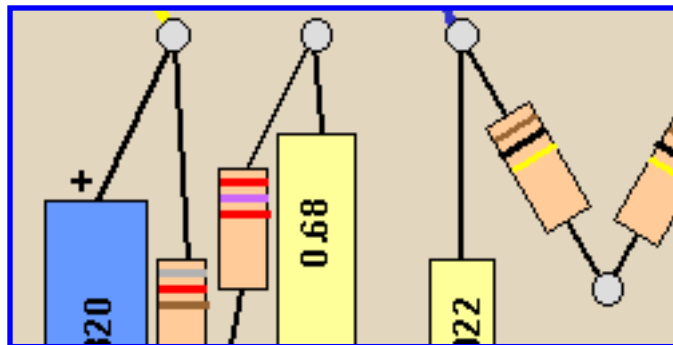


Plexi Under Board Wiring

Metal Face

This is a layout for the metal-face Super Lead amps (June '70 schematic), but is probably what a lot of people would consider a Plexi. The metal-face Super Bass amps were more like the early Plexi layout above. Changes on the Super Lead were as follows:

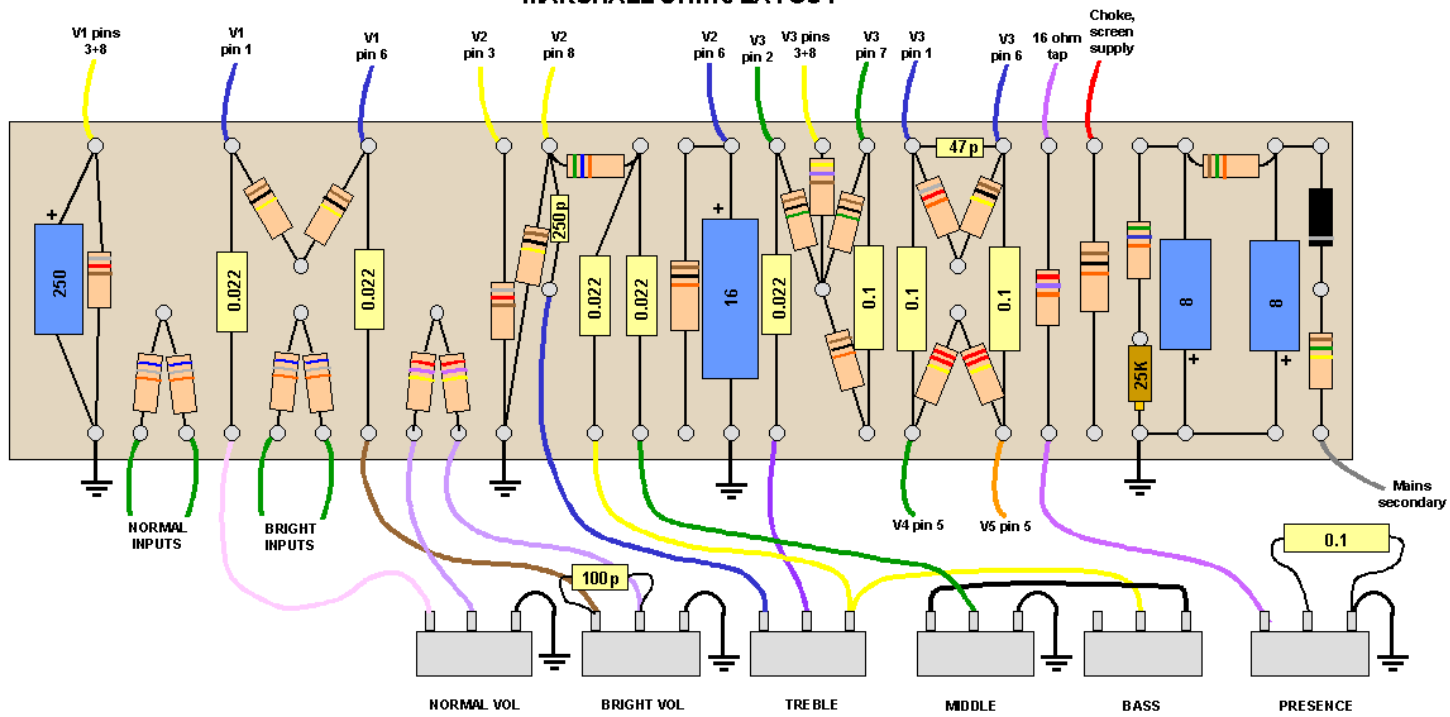
The coupling cap for the first gain stage of the bright channel was changed to $0.0022\mu\text{F}$, which many people find excessively trebly. The cathodes on the first stage are now split, with the bright channel having a $2\text{K}7/0.68\mu\text{F}$ combo. This drastically reduces the bass on the bright channel, compared to the earlier circuits. The bypass cap on the mixer resistor is now 500pF , the treble capacitor is also 500pF and the slope resistor in the tone stack is 33K . The coupling caps from the phase inverter are $0.022\mu\text{F}$, which further reduces bass. worse still, the bypass cap on the bright channel's volume pot was changed to $0.005\mu\text{F}$ (5000pF)! This reduces the effectiveness of the volume control and contributes to the brittle sound of these amps. I would change it to a 100pF cap. Finally, a $0.68\mu\text{F}$ cap is added on V2, which increases gain and midrange. This cap is a good mod for those amps that don't already have it. The under board wiring is the same as for the Plexi layout.



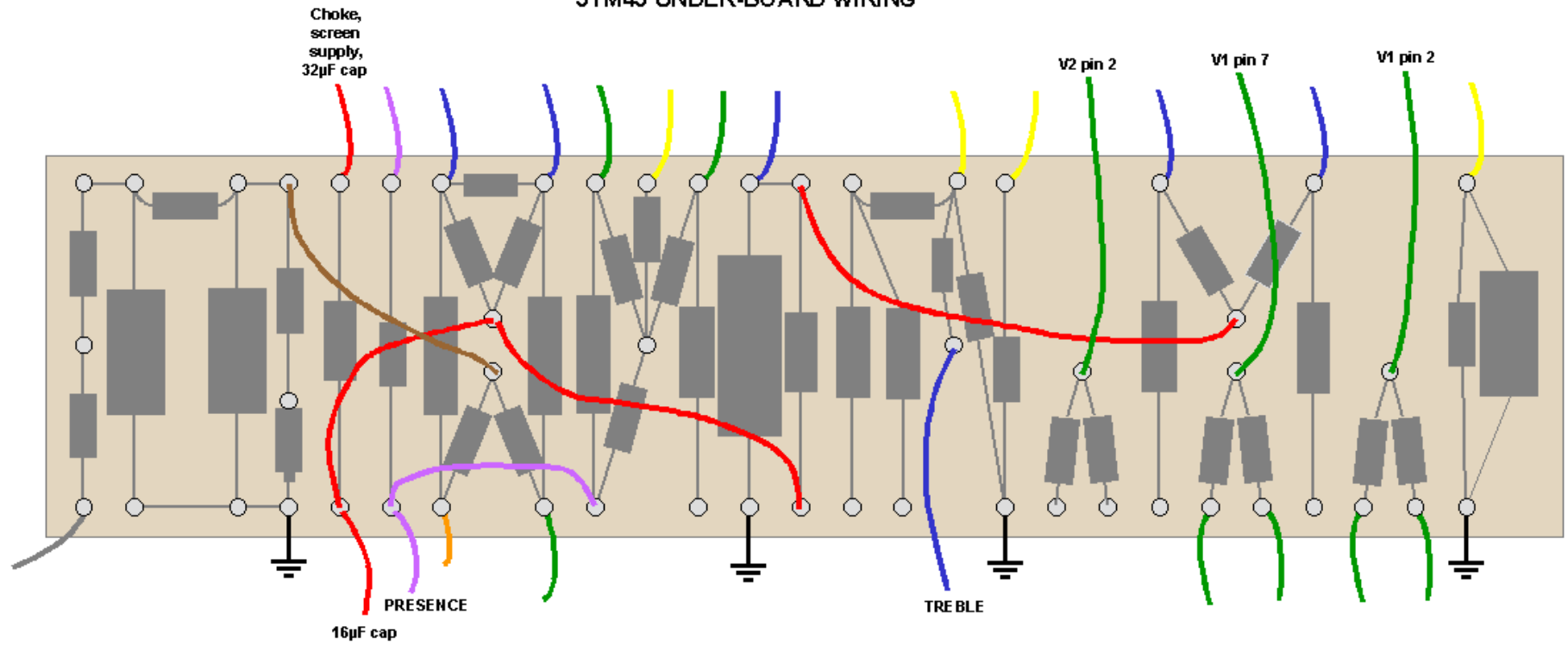
Metal Face Layout

[Amps]

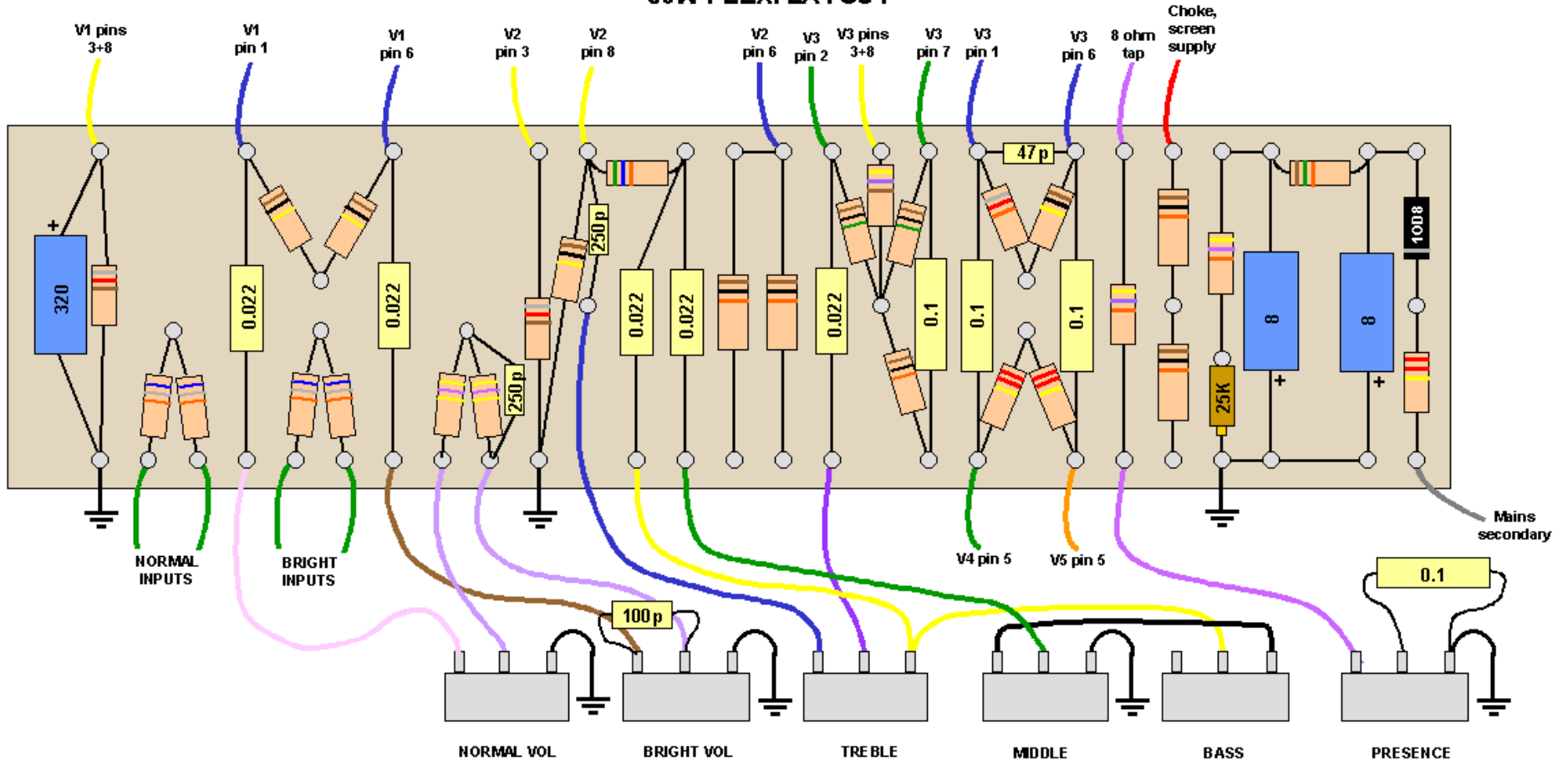
MARSHALL JTM45 LAYOUT



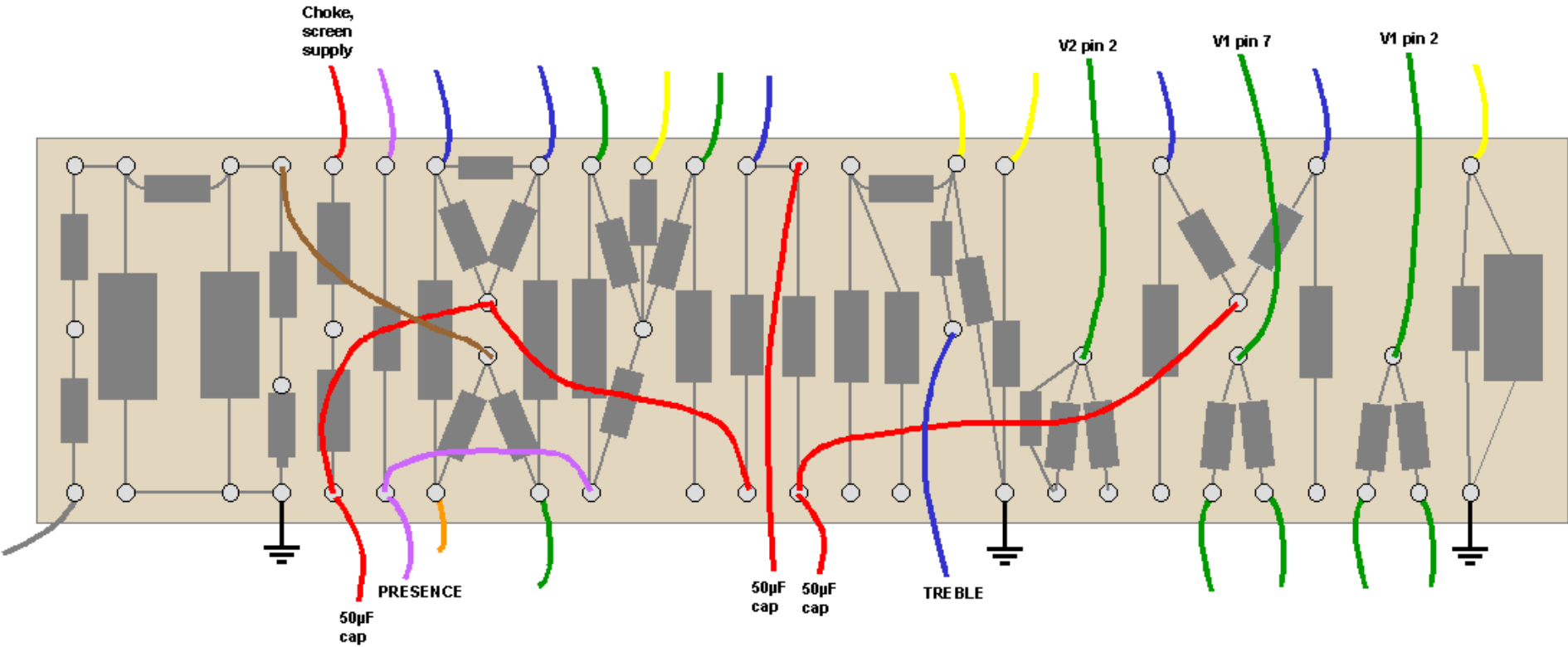
JTM45 UNDER-BOARD WIRING



50W PLEXI LAYOUT



PLEXI AND METAL FACE UNDER-BOARD WIRING



MARSHALL 50W SUPER LEAD LAYOUT

