# AA1164 PRINCETON REVERB "BLACKFACE" AMP

## Suggested Mods

Pilot Light

6.3V Center Tap

To All 6.3V Fil

100Ω 10WΩ

1W 5% 100K

Bias Rectifier 1N4007

Bias Board

Note Polarity 100uF 100v Filter

Upgraded Bias Filter Cap

Adjustable Bias

Clockwise = Hotter Bias

Bias 25K Lin

Max Bias Lower Value = Hotter Bias 10K

Power Transformer 125P1B

340-0-340VAC

Twist 6.3v

Red-Yellow HT Center Tap

5v Heater

Twist HV Twist

Primary Twist

Power Amp Ground

18K 2W

D 240V B+4

20/20/20/20 Cap Can

GND A B C

C 320V B+3

B 400V B+2

A 420V B+1

18K 2W

1K 3W

Max Speed 100K Smaller = Faster

Tremolo Intensity 250K Rev log

Tremolo Speed 3M Rev log

Reverb 100K Lin

Bass 250K Log

Treble 250K Log

Volume 1M Log

Input

2 Low 1 High

Ground

Switch Tip Input 1M

Tip Switch

68K 68K

Grid Stoppers

Preamp Chassis Ground

Bundle Tremolo Yellow, Brown & Blue Wires Together Keep Away From Other Control Wires

Bias -34V

6.8K Mid

Preamp Ground Bus

Tone Stack

Power Tube Grid Leak 220K 5% 220K 5%

.1uF 630v Coupling

PI Plate Load 56K

PI Tail Load 56K

PI Grid Leak 1M

PI Cathode 1K 1M

Oscillator Filter .022uF 630v

V4A Plate Load 220K

.1uF 630v Coupling

Tremolo 0.01uF 0.01uF 0.02uF

Tremolo Oscillator 1M

V4A Grid Leak 1M

NFB Tail 47Ω

NFB 2.7K

25uF 25v Bypass 3.3K

V4A Cathode 1.5K

Bypass 25uF 25v

V3A Cathode 1.5K

V3B Cathode 1.5K

25uF 25v Bypass

.1uF 630v Coupling

V3 Plate Load 100K 100K

.003uF 630v Coupling

V3A Coupling

Reverb Attenuation 470K 3.3M 10pF

Reverb Mix

Bright

V2 Grid Leak 1M

Bypass 25uF 25v

V2 Cathode 2.2K

V1B Cathode 1.5K

Bypass 47uF 25v

.02uF 630v Coupling

500pF Reverb Filter

V1 Plate Load 100K 100K

250pF Treble

.047uF 630v Mid

.1uF 630v Bass

100K Slope

V1A Cathode 1.5K

25uF 25v Bypass

Added Grid Stop & Screen Resistors

OT

Screen 470 3W

Grid 5

Plate 3

Cathode 8

1.5K

Fil 1 6

Fil 2 1

PI Grid Stop 470K

Fil 1 9

B 1

A

Fil 2

OT 125A10B 8.5k:8 Ohm

V7 5U4GB

Rectifier

DC B+ Out

V6 6V6GT

V5 6V6GT

V4 12AX7

A Tremolo Oscillator

B Phase Inverter

V3 12AX7

A Reverb Recovery

B Vibrato Preamp 3

V2 12AT7

Reverb Driver

V1 12AX7

Preamp 1 & 2

Reverb Transformer 125A20B 25k:8 Ohm

Safety Ground Bolt

Green = Ground

White = Neutral

Black = Hot

Power Cord

AC Receptacle

(Hot Black On Narrow Slot)

Chassis Ground

.047uF Class Y Death Cap

Delete

Twist

Ground Switch (Delete)

SPDT ON-OFF-ON

1A Slow Blow Fuse

Power DPST

Twist Ground Switch Tip

10" 8 Ohm Speaker

Ground Tip

Aux Speaker

Vibrato Pedal

Reverb Pedal

V3A Grid Leak 220K

Chassis Ground

Reverb Pan Output

Reverb Pan Input

Fender cap specification was 400V unless specified

All resistors 1/2 watt 10% unless specified

O on caps indicates outer foil

By RobRobinette.com V1.3