

## *PAS 3 or 3X how do I tell?*

Since there are no outward markings on the case or chassis, this question is often asked by people who have just acquired a Dynaco PAS preamplifier. The PAS 3X has special tone controls which are bypassed when set to center. There are several ways to determine which one you have.

**Note:** The following information also applies to a PAS 2 that has been upgraded with a 3X potentiometer kit.

### **Check the amount of control rotation**

An external visual clue is the amount of control pot rotation from stop-to-stop. The tone controls on the PAS 3 rotate about 280 degrees, while those on the PAS 3X only rotate about 210 degrees. Fig. 1 illustrates the difference. It is also quite common for the 3X tone controls to exhibit an audible tick or pop from the speakers as they are moved from, or pass through, the center position.

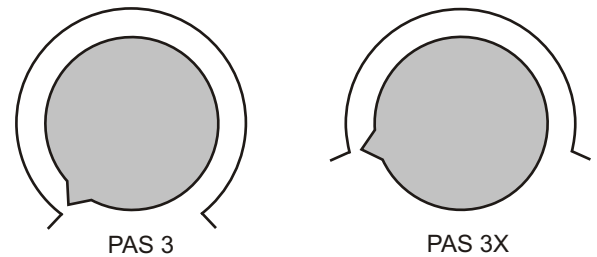


Fig. 1 Tone Control Potentiometer Rotation

### **Look for the 1uF output coupling capacitors**

This is usually the first internal visual clue. The PAS 3X included 1uF electrolytic coupling capacitors connected between eyelets 5 and 12 on the PC-5 board and the lower terminals on the bass pots. Fig. 2 shows the location of these capacitors. Note that these may have been upgraded to film types by former owners. The presence of coupling capacitors alone is not necessarily a 100% certain indication it's a 3X, though. It's not uncommon to find PAS 3's that have been modified to include these capacitors to eliminate DC at the output.

### **Examine the back of the potentiometers**

While the coupling capacitors are a good clue it may be a 3X, it can be confirmed by examining the back of the potentiometers. The back covers have "indents" which serve as stops for the wiper assembly. On the PAS 3 tone control pots there is only one indent. The PAS 3X pots have two indents, located differently on the bass and treble pots. Fig. 3 shows how to identify the potentiometers.

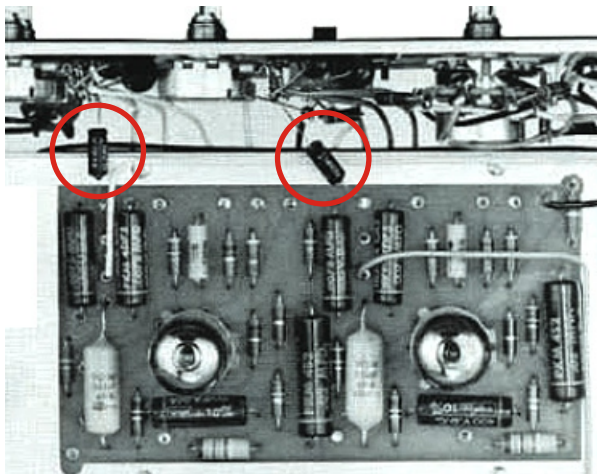


Fig. 2 PAS 3X Output Coupling Capacitors

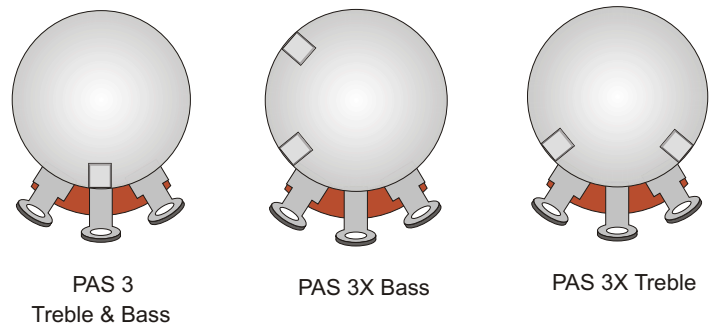


Fig. 3 Tone Control Potentiometer Identification

### **Measure the Potentiometers**

Of course, you can always measure the pots. When set to the center position, the unique PAS 3X potentiometers will quickly reveal themselves. An "in circuit" resistance measurement across the bass pot will show close to 0 ohms, while the treble pot will show open circuit. The PAS 3, on the other hand, will show about 95K on the bass pot, and 400K on the treble pot.