

84-50 TUBE AMPLIFIER SEYMOUR DUNCAN

OWNER'S MANUAL



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CAUTION

To prevent electrical shock, do not operate this unit in wet or moist areas. There are no user serviceable parts inside. (See, "Maintenance" and "Tube Chart" sections for user maintenance procedures.)

The 80-50 Tube Guitar Amplifier

Power Output: 50 watts @ 5% THD with 1kHz input.

Power Circuit: (4) EL-84 vacuum tubes.

Input Impedance: 1 meg Ω

Overall Gain @ full output.

Low gain channel - 59dB

High gain channel - 88dB all (boosts disengaged)

Power Amp Signal to Noise Ratio: 90dB typ. referred to full output

Boosts:

Boost #1 - +6 dB @ 1kHz

Boost #2 - +8 dB @ 1kHz

Crunch Boost - +8 dB @ 6kHz

Speaker Options: Seymour Duncan King Tone Classic 12" (50 Watt)
Seymour Duncan King Tone Classic 10" (50 Watt) X 2

Voltage Requirements:

100v - Japan

120v - U.S., Canada

220v - Europe

240v - UK

Weight: 1x12" - 44 lbs. 2x10" - 49 lbs. head - 30 lbs.

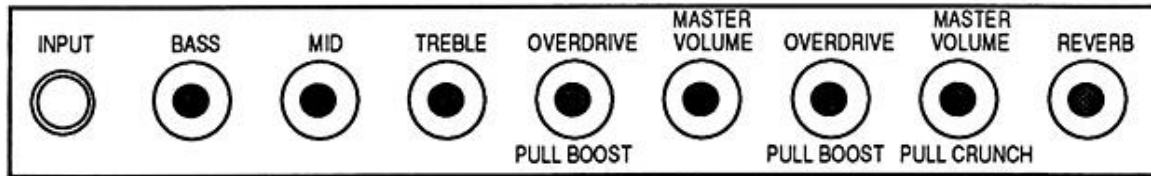
Dimensions: Combos - 22.625" x 17.5" x 9.5"
Head - 22.625" x 9" x 9"

84-50 T U B E

Congratulations on your purchase of the Seymour Duncan Research *84-50 Tube* guitar amplifier. The *84-50* is the product of an intense research and development effort. Our object was to provide guitarists with an affordable, all-tube amplifier, which sounded great.

The *84-50* is based on classic principles of tube guitar amplifier design. An all-tube preamp drives a quartet of EL-84 power tubes, which provide the sweetest, most musical tone possible. The rectangular cabinet shape enhances the spacious "breathing" quality of the sound. Features such as on-board reverb and a buffered effects loop make the *84-50* a simple, functional rig, which can adapt to any musical situation.

Read this manual carefully to familiarize you with the features and operation of the *84-50*. Your new amp will provide years of trouble free performance, great tone and musical fun.



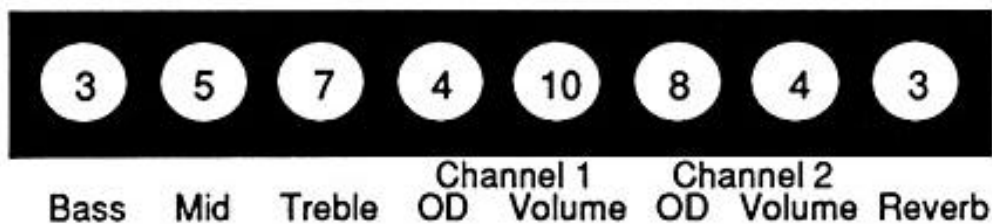
PERFORMANCE APPLICATIONS AND GUIDELINES

The name of the *84-50 Tube* amp reflects its design - the amp uses a quartet of EL-84 type tubes to produce 50 watts of power.

The EL-84 tube was chosen specifically for its rich, sweet tone qualities, especially when pushed to distortion. This tube was widely used in many early amplifiers, but it is most famous for its use in the Vox AC-30. This was the amp used on the early Stones, Beatles and Yardbirds records. The EL-84 has a wonderful musical character - it sings, it growls, and it has great dynamic response. The harder you play, the more it distorts and sustains. Back off on your attack and it "idles", cleaning up the sound. In short, EL-84's are a ton of fun!

The first thing you'll probably notice about your amp is that it's very loud for its size. We wanted to make an amp for the working guitarist - something that could cut it in most club and casual gig situations. The *84-50* has more than enough kick to keep up with a loud drummer and bass player. In fact, when we were testing prototypes in clubs around town, the *84-50* had no trouble holding its own on a stage full of 100-watt amps.

Using the *84-50* live is simple. Just use your ears to dial in the EQ settings you need, depending on the type of pickups in your guitar, the demands of the job, etc. Switch channels to find a balance between clean and overdrive settings. A typical lead/rhythm sound setting might be:



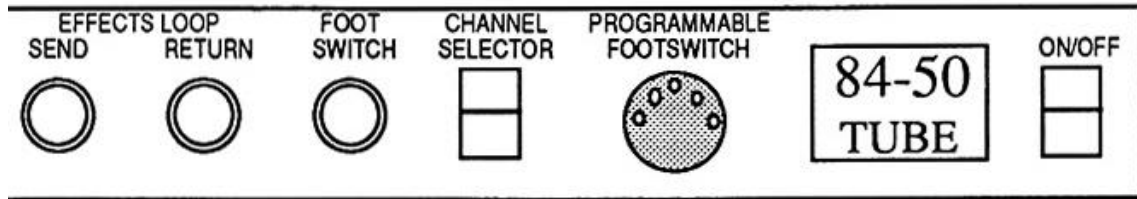
EQ/TONE CONTROLS

Even though both channels share the same tone controls, the *84-50 Tube* amp has been carefully voiced for a smooth natural transition between channels. By switching back and forth a few times and adjusting the gain controls of each channel, it will be easy to get the proper tone and volume balance between clean and distortion sounds.

GAIN BOOSTS

The *84-50* has two gain boosts and a *Crunch Boost*, which are activated, by push-pull pots on the front panel. Pulling out the overdrive control of Channel One activates a subtle 6 dB boost in both channels. Pulling out the OD control on Channel Two activates a

stronger, 8 dB boosts in Channel Two only. In general, these boosts are designed to get more bottom end, punch and sustain when using the amplifier at low volumes. As the volume increases, the need for added low frequency response decreases. Using the boosts at high volume levels may produce unwanted "mushiness" in the sound.



CRUNCH BOOST

This is activated by pulling out the Channel Two volume pot. This adds 8 dB of boost at 6kHz for added definition and bite to your dirty sound.

STONE TIP

Your *84-50 Tube* will get the richest, most dynamic tone when the power amp section is working hard; i.e. when the master volume control is up around 4 or 5. With the preamp volume around 6-7 and the master at 4-5, the *84-50 Tube* will produce a punchy "clean" distortion - plenty of sustain and harmonics, but without too much "fuzz" cluttering up the sound. For maximum overdrive and distortion, run the preamp volume at 10.

REVERB

Reverb adds a spacious quality to your tone. The reverb control affects both channels. Set for the amount of reverb you need.

EFFECTS LOOP

The effects loop allows you to place your effects into the signal path after the preamp, for smoother, quieter operation. To use the effects loop, run a cable from the "send" jack to the input of your effect device. Then come out of the effect to the "return" of the effect loop.

REMOTE ACCESS OF CHANNEL SWITCHING AND GAIN BOOST FUNCTIONS

Channel Switching *and* Gain Boost functions can be accessed in three ways:
1. Manually from the front panel of the 84-50. 2. Via the optional *Quadra Tone* 4-Function Programmable Footswitch. 3. By using the optional Adapter Cable with a MIDI switching device. Note: You can also use any standard 1/4" plug footswitch ("short to ground") to switch channels, but you will not be able to access the Gain Boost functions.

USING THE 84-50 WITH THE QUADRATONE FOOTSWITCH

The optional *Quadra Tone* Programmable Footswitch will give you quick and easy stage access to four different sounds at the touch of a button.

IMPORTANT: In order for the Quadra tone Footswitch to have full control over the various functions, make sure the amp is in the green (clean) channel and all Boosts and Crunch are off (pushed in) on the front panel. Then simply plug the Programmable Footswitch into the "4 Function" DIN jack on the front of your 84-50.

DIP switches inside the footswitch allow you to create the ~ sounds most useful to you. The footswitch comes pre-programmed as follows:

#1 Button - Green Channel = "Fendery" clean with good presence & depth.

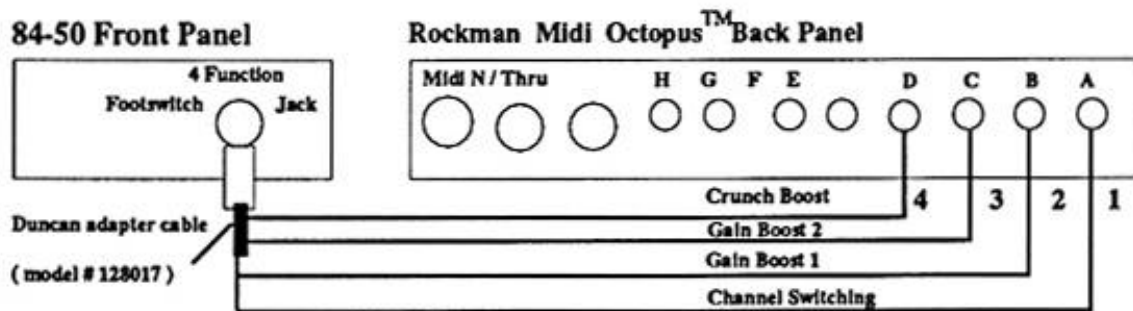
#2 Button - Red Channel = Tight, punchy, dirty rhythm - Fat, bluesy lead.

#3 Button - Red Channel with Boost 2 = Hi Gain lead, smooth, rich in harmonics and lots of sustain.

#4 Button - Red Channel with Boost 1, Boost 2 and Crunch

USING THE 84-50 WITH A MIDI SET-UP

With the addition of a Duncan adapter cable (Model # 128017) and a programmable MIDI switching device such as the Scholz MIDI Octopus, you can place functions of the 84-50 under MIDI control:



Buttons A, B, C and D on the Midi Octopus will now control:

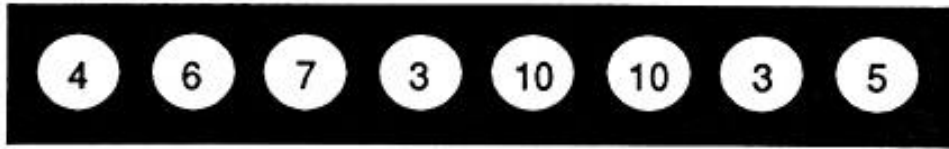
Button A : Channel Switching Button C : Gain Boost 2

Button B : Gain Boost 1 Button D : Crunch Boost

Programming different combinations of A, B, C, D will now be possible via MIDI

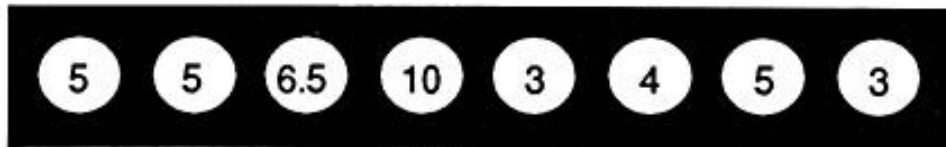
Sample Settings

Top 40 Channel 1 Open & Spacious Clean
Channel 2 Rock&Roll Dirty



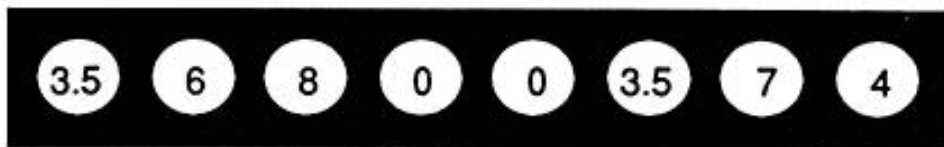
Bass Mid Treble OD Volume OD Volume Reverb

Blues Channel 1 Dirty Clean
Channel 2 Blues Dirty



Bass Mid Treble "Pull"
OD Volume OD Volume Reverb

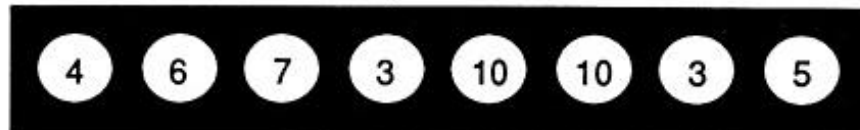
Metal Channel 1 Rock Rhythm
Channel 2 Scorching Lead



Bass Mid Treble "Pull"
OD Volume OD Volume Reverb

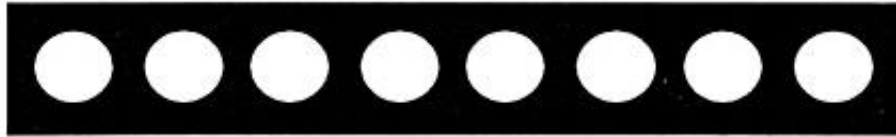
Note: This combination uses the red channel only. GainBoost2 and Crunch Boost are pulled to achieve "Scorching Lead." To achieve remote switching between these sounds, a Quadra Tone programmable footswitch must be used.

Jazz / Fusion Channel 1 Sparkling Clean
Channel 2 Smooth "Sustainy" Lead



Bass Mid Treble OD Volume OD Volume Reverb

Note your favorite 84-50 Tube Tones:



Bass Mid Treble OD Volume OD Volume Reverb



Bass Mid Treble OD Volume OD Volume Reverb



Bass Mid Treble OD Volume OD Volume Reverb



Bass Mid Treble OD Volume OD Volume Reverb



Bass Mid Treble OD Volume OD Volume Reverb



Bass Mid Treble OD Volume OD Volume Reverb

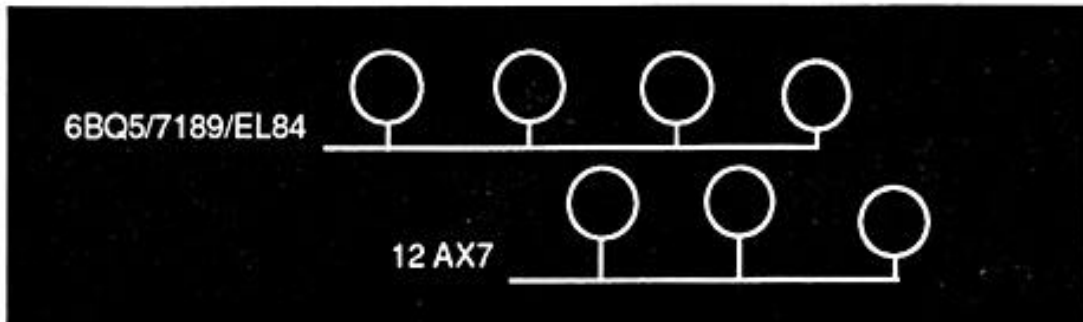
84-50 Tube Amp Rear Panel



1. Primary fuse
 - for 100V & 120V operation, use a 2A/250V slo-blo
 - for 220V & 240V operation, use a 1A/250V slo-blo
2. AC cord
3. 4 ohm speaker output
4. 8 ohm speaker output.

Tube Chart

TUBE PLACEMENT - CAUTION: CHASSIS SURFACE IS HOT.



The *84-50 Tube* uses:

- 3 12AX7 (also known as ECC 83 or 7025) preamp tubes, and
- 4 EL-84 (also known as 6BQ5 or 7189) power tubes.

Note on Tubes:

For the three 12AX7's in the preamp, we use a Chinese **12AX7** in the input position for low noise and microphonics, a Yugoslavian one in the second position for its good overdrive characteristics, and another Chinese one in the third position for the driver. For the power amp, we use a quartet of EL-84's, which go through the most extensive matching process of any tubes available. They are matched for both bias and transconductance, and into very tight bias groupings. This superior matching process delivers more power and dynamic range. And if one of your EL-84's shorts out, you can purchase just one tube from us, with the same rating as the set you have. You'll get the same matched-tube performance without having to pay for an entire set. Also, when it

comes time for you to replace the whole set, if you get a quartet from us with the same rating as the set you have, you won't have to re-bias the amp.

MAINTENANCE

Most maintenance procedures for your amp will involve the tubes. Refer any other necessary work or adjustments to a qualified technician. **THERE ARE NO USER SERVICEABLE PARTS INSIDE.** If your amp requires service, contact the Seymour Duncan factory for the name of your nearest Authorized Service Center. **PLEASE NOTE: WE CANNOT ACCEPT UNITS SHIPPED TO THE FACTORY WITHOUT A RETURN AUTHORIZATION NUMBER.**

The 12AX7 preamp tubes should last up to 2-3 years, depending on the amount of use. Symptoms, which indicate failing pre-amp tubes, include:

- Any intermittent noise (sputtering, ringing, etc.) that seems to come and go as the amp warms up.
- Excessive white noise or hiss.
- Inability to get a clean sound, even at low volume levels.

The EL-84 tubes in the power section of the amp could last up to 2 years, depending on volume levels and hours of use. High volume playing 3-4 hours a day, 5-6 days a week could wear out a set of output tubes in a little as 6 months. Symptoms, which indicate worn power tubes, include:

- Loss of power, punch; amp sounds "mushy" when pushed.
- Excessive hum.

If the outer plates of a tube begin to glow brightly, this tube has shorted. Turn off the amp and replace the tubes, preferably with a matched set. It's OK in an emergency to replace only one output tube, but all four output tubes should be replaced ASAP with a matched set. These are tubes, which have been tested and matched according to their power and performance characteristics (ex. RAM labs tubes, Groove Tubes, etc.). A matched set of power tubes will significantly lower audible hum and increase power output (possibly as much as 10-20 watts). This will offer more clarity on the clean channel and a tighter low-end response for a punchier overdrive sound. Also, when replacing the output tubes on your amp, it is good to have the amp's bias control adjusted to achieve the optimum performance from a set of tubes. **ALWAYS REFER THE AMP TO A QUALIFIED TECHNICIAN FOR BIAS ADJUSTMENT.**

Always store your amp in a dry area. Storage in damp areas will cause corrosion of internal electrical contacts (switches, pots, jacks, etc.) and will in time degrade the performance of the amp. Amps used in damp environments should be periodically cleaned by a qualified technician. Symptoms which may indicate corrosion include:

- Potentiometer rotational noise (volume or tone controls sound "scratchy" when turning). Use of a commercially available tuner spray will work in most cases.
- Intermittent or noisy jacks.
- Intermittent tube noise that is affected by slightly wiggling the tube in its socket.

To maintain the tolex covering on your amp, use "armor-all" type cleaner.

TROUBLESHOOTING

The following chart should help isolate some common problems you may encounter with your amplifier. Some are obvious problems you can remedy yourself, but remember, **THERE ARE NO USER SERVICABLE PARTS INSIDE THE AMP**. If you cannot identify the cause of the problem using the chart, or if it indicates your amplifier to be defective and in need of repair, return the unit to an authorized Seymour Duncan Service Center, or call **(805) 964-9610** for a Return Authorization number. No units will be accepted by Seymour Duncan without an RA number.

Symptom	Cause	Remedy
Amplifier does not come on when power switch is "on"	<ol style="list-style-type: none"> 1. Power not connected 2. Blown amp fuse 3. No source voltage 4. Defective on/off power switch 	<ol style="list-style-type: none"> 1. Ensure power cord is plugged in. 2. Check amp fuse; replace with appropriate value fuse- 1A/250 V for 220V & 240V operation 2A/250V for 100V & 120V operation 3. Verify power source with something you know works. 4. Return unit to authorized service center.
No sound coming from speakers; no audible hum from amplifier, but LED's are on.	<ol style="list-style-type: none"> 1. Master volume and/or overdrive control set too low 2. Speaker output jack not connected 3. Defective speaker or cable 4. Volume controls on instrument down 	<ol style="list-style-type: none"> 1. Increase control settings 2. Connect speaker to 4 ohm or 8 ohm output. 3. Verify if speakers operate properly by using another amp. 4. Increase instrument settings
Distorted sound from one or both channels at low volumes	<ol style="list-style-type: none"> 1. Overdrive control set too high 2. Worn tubes 	<ol style="list-style-type: none"> 1. Reduce control level. 2. See maintenance and tube chart section
No Reverb	<ol style="list-style-type: none"> 1. Reverb control set too low 2. Reverb output wires not connected to send/return inputs or connected backwards 3. Defective spring 	<ol style="list-style-type: none"> 1. Increase control level 2. Ensure reverb output wires properly connected. 3. Refer to authorized

	4. Defective send/return circuits	service center 4. Refer to authorized service center
Amp does not switch channels	1. Defective footswitch 2. Defective manual channel switching switch 3. Defective internal channel switching circuit	1 Replace footswitch. 2 Refer to authorized service center. 3. Refer to authorized service center

SEYMOUR DUNCAN LIMITED WARRANTY
FOR YOUR RECORDS: SERIAL NUMBER _____
DATE OF PURCHASE _____ DEALER _____
KEEP YOUR BILL OF SALE IN A SAFE PLACE.

Please read carefully:
 Seymour Duncan amplifiers (hereinafter referred to as the *Product*) are warrantied against defects in workmanship and materials, excluding tubes covered separately, for a period of one year from date of purchase BY the original purchaser. Tubes are warrantied for 90 days from date of purchase. This warranty is transferable.

Defective parts will be repaired or replaced without charge if the product is returned to the Seymour Duncan factory, at the address below or to a Seymour Duncan Authorized Service Center. In the event a product is to be returned to the Seymour Duncan Factory for repairs, A **RETURN AUTHORIZATION MUST BE OBTAINED PRIOR TO SHIPPING BY CALLING OR WRITING THE COMPANY FOR THE RA NUMBER.**

When returning make certain to include a copy of the bill of sale and a dehe problem. Any product shipped must be returned in the **ORIGINAL SHIPPING CONTAINER WITH ORIGINAL PACKING MATERIAL** and freight prepaid. Transportation charges involved in warranty service are the sole responsibility of the purchaser.

This warranty does not apply to damage caused by misuse, mishandling, negligence in use or maintenance or storage, and is voided if repairs or adjustments are made after purchase by anyone other than the Seymour Duncan factory or a Seymour Duncan Authorized Service Center. Seymour Duncan reserves the right to be the sole judge as to the misuse or abuse of the product.

The company assumes no liability for incidental or consequential damages which may result from the failure of this product. Any warranties implied by law are limited to the duration of this express limited warranty.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation on incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Please return the enclosed warranty card so that we can give you the best warranty service possible.