



dtb Owner's Manual

"dual tone booster"

Intro from Jim Weider

All my life I've been intrigued with the sound of electric guitar amps. Each one has its own personality. Within different brands, there are some that are good and then others that stand out and are amazing and inspiring to play; with tone, touch and feel. In the early 90's playing with the group "The Band" I met and became good friends with Mitch Colby. He would come up to Woodstock, NY to show me classic vintage amps from his collection or tweak one of my amps or bring up something new he just made for me to hear and we would compare tones! Mitch came up one afternoon and asked me to work on developing his unique two EQ channel switching amp dubbed "The Colby", and that was the start of a year and a half project that ended with an amazing rich tone machine that I play everywhere! We compared the amp against all the best of the best classics every inch of the way on every cap & resistor change from the Cleans to its Gain qualities. The feel & touch sensitivity, the huge chimey cleans with body, and the focused gain within your note are everything I've always wanted in one amp to enjoy and make music!! I'm very proud of our outstanding results. I truly believe you will be too once plugged in!!

Jim Weider

Welcome to Colby Amplification. We share something in common, we care deeply about tone. After 40 years of playing guitar and a 40 year career based around guitar amplifiers, I started Colby Amplification with a desire to produce the very best possible tube guitar amplifiers. Colby amplifiers have been designed with tone as the number one focus, period. Everything possible is done to keep the signal path pure, all tube, and sounding great. There is and will never be a compromise when it comes to tone. Adjectives like sparkle, fullness, compression, body, focused gain, smooth, and great feel have all been designed in with the careful selection of components including resistors, capacitors, transformers, chassis and tubes. Colby amps are built to the absolute highest quality standards and are 100% hand-built with care. My designs tend to have a lot of controls but a few things were of paramount

importance to the outcome; the control panel had to be easy to operate and understand; nothing was done if it would compromise tone in any way; and every feature has to be useful. Every Colby amp will achieve these goals otherwise it won't be built!

The **dtb "dual tone booster"** amps took over two years of tonal development before they were finalized. They were built with the help of Jim Weider, Tele player extraordinaire (who played with The Band and Levon Helm for over 20 years as well as his own band Project Percolator and too numerous to mention album and artist credits) and known obsessive tone fanatic. These main goal was to build hand wired, tone-to-the-bone channel switching amps with two channels, each with its own dedicated tone controls (Treble, Mid and Bass). The amps were put through their paces by Jim in both live and recording situations and the development went on until he was more than satisfied!

The first channel (Clean) is "American" based and the tone is chimey and full with a lot of punch. The second channel (OD) starts where the Clean channel leaves off (in fact, with the right settings, the OD channel can sound almost identical to the Clean channel) and goes from there into various amounts of overdrive and distortion. You can dial in full range or smooth tones.

While designing we found that having two differently voiced Boosts on the Overdrive channel gives you five instantly accessible, footswitchable sounds. Read on to find out more and most importantly, have fun!

I know you are excited to get going so here is the **quick start guide**:

- 1) Set the Channel switch to the up position
- 2) Set all other front panel switches to the down position
- 3) Plug in a speaker and set the rear panel impedance switch to the same setting of the speaker
- 4) Set the controls as per the attached picture (insert picture)
- 5) Set the back panel EFFECTS switch to Off
- 6) Turn the amp on (Up) with the back panel ON/OFF switch. Wait 45 seconds and turn the STANDBY switch on (Up).
- 7) Set controls to the desired setting and start wailing!
- 8) The footswitch has three functions; Channel Switching, Boost 1 and Boost 2. When plugged in, *it disables the front panel Channel, Boost 1 and Boost 2 switches.*

Front Panel

The top row (bottom row on combo) left box is the clean channel. It includes (from left):

Channel indicator LED: this will light when the clean channel is selected by the front panel CHANNEL switch (on the right top row of controls) or the foot switch

BRIGHT Switch: down is "normal". Up is on and will increase the brightness of the Clean channel

SHIFT switch: This changes the tone network for a thicker voice. In the up position the notes will have more low mids and more body. The effect is more noticeable with lower settings of the Mid control. There is also a slight emphasis towards the Mid and Bass controls with the Shift switch in the up position. You may want to increase the Treble control setting when you have the Shift in the up position, or not.

VOLUME, TREBLE, MID, and BASS controls work as you would expect but the Mid control will add more mids than a typical “American” sounding amp. Also, you will get no sound if all the tone controls are set to minimum

The top row (bottom row on combo) right box contains the Master functions

PRESENCE: turning clockwise increases the top end by reducing the negative feedback at high frequencies

CHANNEL: Up selects the Clean channel, down selects the OD channel. The appropriate LED on the left side of each channel will light to indicate the selected channel. If the foot switch is plugged in, this switch is disabled

The top row (bottom row on combo) in between the boxes

UNLABELED CONTROL! Not all but most Colby dtb amps have this control. This is an additional Master for the OD channel. This control works with the OD channel Master and various settings of both, even at the same resulting volume level, can give you changes in tone and feel. Try this – set one all the way up and the other to your desired volume level. You will notice an aggressive, bright sound with little compression. Now set one to 1:00 and the other to your desired volume level. You will now notice a smoother top end and a little compression to the feel. I usually set it for the more compressed sound at home and a more aggressive sound on stage. Depends on the sound I’m going for and/or the music I’m playing.

The bottom row (top row on combo) is the OD channel (from left):

Channel indicator LED: this will light when the OD channel is selected by the front panel CHANNEL switch on the right top or the foot switch

BRIGHT Switch: down is “normal”. Up is on and will increase the brightness of the OD channel

SHIFT switch: This changes the tone network for a thicker voice (but in a different way to the Clean channel). When on, low and high mid content is increased and the result is that the notes have more body. This is especially useful with thin sounding guitars at low levels. Depending on the level you are playing at, you may want to have EITHER the Shift in the Up position or the Bass Boost in the up position. Using both the Shift and bass Boost can be a little too fat at medium to high volume levels but nice at low volume settings

VOLUME: Sets the Gain of the first stages of this channel. When set below "2" (with low settings of the Gain control) this channel will produce clean sounds similar (or different) to the Clean channel depending on the settings of the tone controls. Higher settings will give you more gain and distortion

TREBLE, MID, and BASS controls. Please note four things about the Mid control for amps with serial number 11 and below:

- 1) The Mid control does not function unless the Bass control is turned up. As you turn the Bass control up, the Mid control gets more effective
- 2) The Mid control turns on the mids quickly. There are a lot of different sounds that the amp is capable of and judicious use of the Mid control will be integral to getting those different sounds. Try setting the Mids between "0" and "3" at first. Then go for it!
- 3) There are high frequencies in the Mid control's range, so different settings of the Mid will call for different settings of the Treble control
- 4) The Shift switch adds low mids

For amps with serial number 12 and above please note the following:

- 1) The mid control works independently from the bass control
- 2) The mid pot has been changed and gradually increases mid content
- 3) There are high frequencies in the Mid control's range, so different settings of the Mid will call for different settings of the Treble control
- 4) The Shift switch adds low mids

GAIN: sets the amount of drive. Turn up for more distortion or down for less.

NOTE: Depending on the setting of the tone controls and whether you are using the bright switch, you can further tailor the sound of the OD channel by varying the settings of the Volume and Gain controls. For example, with the Bright switch on, low settings of the Volume and high settings of the Gain will give you a brighter sound than high settings of the Volume control and low settings of the Gain control (with an apparent same level of gain and overdrive). Experiment please.....

MASTER: sets the overall level of the OD channel

BASS SWITCH: In the up position there is a slight increase in bass content. This is more noticeable in larger (4x12 cabinets). It is great in conjunction with the Shift switch at low volumes but at high volume levels you may want to use only one or the other.

Boost 1: Boost 1 is a full range gain boost and is engaged in the up position.

Boost 2: Boost 2 is a mid range boost and is engaged in the up position. When Boost 2 is on, the tone controls are disconnected so will have no effect. Boost 2 is great when you want to cut through a live band or a mix.

Note1: Boost 1 and Boost 2 can be used at the same time

Note 2: The Boost 1 and 2 front panel switches are disengaged when the footswitch is plugged in

Back Panel (from left)

Mains connector

Fuses

Tip jacks (plug in a voltmeter to check the bias)

Bias pot

Optional half power switch

dtb50 – on the dtb50, the half power switch achieves half power by switching the operation of the power tubes from Pentode (full power) to Triode (half power). There is a slight decrease in high frequency content, which isn't necessarily a bad thing at lower volumes. You can always turn up the treble and presence.....

dtb100 – on the dtb100, the half power switch achieves half power by effectively taking two of the power tubes out of the circuit. When this is done the primary impedance seen by the output transformer is doubled. Because of this, you should change the setting of the impedance selector for optimum performance. Here is what you do: if your cabinet is 8 ohms, set the amp for 4 ohms. It isn't a problem if you don't set it correctly. The output transformer is capable of handling a slight mismatch. In fact, if you set the impedance as "normal" (for example - 8 ohms into an 8 ohm speaker cab at the half power setting) you will actually only get around 30 watts and a slightly darker sound.

Speaker jacks

Impedance selector

Effects loop SEND and RETURN Level controls

Effects Loop SEND and RETURN jacks

Effects loop ON/OFF switch

Notes on the Loop:

The loop in these amps is all tube so that your tone is preserved. The send is a cathode follower so that you can run long cables without much effect to your tone. The return is a "normal" gain stage. There can be some tonal effect however when you run very long cables through your effects.

However be careful not to overload your pedals if you are using them in the loop. Some pedals are very happy with high signal levels, some are not. Effects that should be used in the loop include reverb, delay

and other time based effects. Other effects such as compression, OD and distortion are better used in front of the amp.

How to set bias

The back panel bias control is used to set the output tube bias so that you can get the best tone and optimum tube life. The preferred bias setting for the stock 6L6GC output tubes is 33 milliamps (mA) for the dtb50 and 65mA for the dtb100. Here's how you do it:

Plug the probes from a voltmeter into the top red tip jack and black tip jack. Set the meter to DC millivolts (mV). Note the reading. Now unplug the probe from the top red tip jack and insert it into the other red tip jack. Note the reading. The two readings should be within 15%. If it is more than 15% off, you might want to get a new set of matched tubes. If they are perfectly matched, set them both for 33mV. It's OK if they are off by a couple of millivolts. For example if one reads 32 and the other 34 you are good to go. If one reads 31 and the other 35, that's fine too. If they are off much more, get a new matched pair of output tubes. If you have a half power switch on your dtb100, set it to high power and bias for 65mV per side.

We have used various 6L6GC tubes including the Groove Tubes GE copy, TAD 6L6GC, Tung Sol 6L6GC and Ruby Tubes 6L6GCMSTR. Recommend vintage tubes are Sylvania (Phillips) 6L6GC, GE, RCA and Sylvania (Phillips) 7581 if you like a wider response and even bigger sound. There are other new tubes that will sound good, but they all sound different. Choose the right ones for your playing style and taste.