



Model DB 680 Tube Bass Preamp

Congratulations on purchasing Aguilar Amplification's DB 680 Tube Bass Preamp! The DB 680 is designed and manufactured to provide the most discriminating bass player with a studio and live performance tool worthy of a fine instrument. The DB 680 addresses the contemporary bass player's needs in all studio and live applications, and is as effective for recording as a chain of the most desirable classic studio gear.

The DB 680 has **two fully parametric EQs**, *not* semi-parametric, for complete tone shaping possibilities, a tube driven resonance circuit, tube effects loop, and variable balanced outputs. For the road, there's a great sounding crossover, -40 pre and post-eq outputs for the mixing console and footswitchable inputs and master mute (leaves tuner input on for silent tuning). *The chassis of the DB 680 is steel*, and can withstand the bumps and grinds of a tour.

Most importantly, the *ten tube stages* make for a sweet, warm tone and smooth feel beyond compare!

All Aguilar products are hand made in NYC

www.aguilaramp.com

Specifications:

All measurements taken with a line voltage of 120 VAC.

All voltages are RMS.

All noise measurements are unweighted.

Tube complement: Five total; two 12AX7A/7025 high-mu twin triodes and three 12AU7 medium-mu twin triodes

Input Impedance: 1 M ohm (passive mode)
56 K ohm (active mode)

Output impedance: Normal output = 1K ohm.
Balanced output = 600 ohm
Crossover outputs = 75 ohm.

Signal to noise ratio: -80 db

Power requirement: 100-120-220-240 VAC/50-60 Hz.
Internally selectable. Refer to a qualified service technician to change voltage selection.

Power consumption: (at 120 VAC): 0.75 A, 87.75 W

Rack size: 2 spaces

Weight: 17 lbs.

INPUTS:

Two Selectable Inputs:

There are two inputs on the front panel of the DB 680. There is an input selector switch to the right of the inputs. You can switch manually between inputs one and two. The center position (labeled F/S) is for footswitching, using the provided footswitch. This feature allows you to keep two basses plugged in, and be able to switch easily and silently between the two.

Active/Passive Switch:

This switch applies to both inputs. Nine times out of ten you'll use the passive input. If your bass's output distorts the input section, switch to the active position. In the active position, a 12db pad in the signal path will remedy the situation.

Input Gain Control:

This pot controls the gain of the preamp section. Clean sounds are usually achieved by setting the input gain around 11 or 12 o'clock. A little bit of musical distortion will occur if set past one or two o'clock.

Dual Parametric Equalization:

There are two serially arranged active networks, +/-12db. One EQ is set up from 180 Hz, (low mids), fully variable to 1.2K, (high mids), with fully adjustable bandwidth (Q), and level controls. The other EQ is set up to be fully variable from 1.3K to 7.5K, (highs), again with fully variable bandwidth and level (boost and cut). This is the most flexible arrangement for bass.

*What's so great about **fully parametric** equalization?*

Pleasant sounding equalization tends to be broad bandwidth. This means that you're boosting not only the selected "center frequency", but specific surrounding frequencies as well. This makes for a more "musical" effect than a "fixed" narrow bandwidth equalization. So why have bandwidth control? Because many useful "cuts" are narrow or relatively narrow. For example, if you think your bass sound is muddy, you might want to decrease or cut 200 Hz, a frequency in the low-mids area. But you probably don't want to decrease the frequencies around 40 Hz, as that might make your low end sound weak. Other bass preamps offer only "semi" or "quasi" parametric EQ. These types of EQ are not as effective because they don't allow you to "zoom in" as precisely on the frequencies you wish to affect. The DB 680's EQ section is as sophisticated as the finest studio EQs available.

TUBE EQ:

Treble:

Tube driven shelving type, boosts up to 12db. The center frequency is set at 4 kHz.

Bass:

Tube driven shelving type, boosts up to 12db. The center frequency is set at 40 Hz.

Deep Switch:

The deep switch controls a tube driven RLC resonant EQ, fixed at 30 Hz. Two positions are provided for flexibility. In the left setting (+) 30 Hz has a smaller amount of gain than in the right setting (++). The (+) setting is great for "fattening up" a bass sound, while the (++) setting adds loads of bottom.

Bright Switch:

This switch is a passive RC pre-emphasis circuit at 5-7 kHz. The bright switch will add a brighter timbre to the entire range of your bass.

Tube Effects Loop:

The preamp contains a tube parallel effects loop with an adjustable send and mix control. On the front panel the send pot controls the level of your bass going to the effect. The mix pot is actually a tube mixer, which mixes your effected signal back into the preamp. The effects loop is comprised of both halves of a 12AU7 twin-triode. It is set up in a parallel mode. The dry and wet signals are fed into each side of the tube grids and mixed *after* the individual gain stages. This presents the best signal to noise ratio and sound quality. When it is set at 100% your entire bass sound is being processed by the effect in the loop. The loop circuitry is active only when a plug is inserted in either return jack.

Master Output:

This controls the level of the signal going to your power amp.

Crossover section:

The crossover section is to be used with a stereo power amp when you want to separate the low and high frequencies. The top pot in the crossover section sets the crossover point. The low master controls the output level for the frequencies below the crossover point; the high master controls the level for the frequencies above the crossover point.

OUTPUT INTERFACES:**Rear Panel**

The preamp features three output interfaces:

Unbalanced Outputs:

Line level outputs controlled by the master volume control. These are full-range outputs that provide unbalanced tube-buffered output for connection to a power amp. You can use both if you want to send signal to both sides of a stereo amp, or to two different amps.

High and Low Crossover Outputs:

These provide individual crossover outputs for full bi-amping capability.

XLR Balanced Output:

Unlike conventional DI outputs, this balanced configuration allows you to record directly to any line input (i.e. tape, hard disk recording system, etc.). No mic-pre is required! The output level has five positions to cover all possible recording and concert situations. Use the -40db pre-eq setting in a concert situation where the house mixer is taking a signal into the house-mixing console. The house mixer is now getting his feed after the preamp stage, but can use appropriate EQ for the venue. The EQ on stage will still be controlled by your settings. If the house mixer wants your EQ settings included in the mix, set the control to -40 post-eq. The -40 level is the correct output level for going into a preamp on a mixer.

0, +2 and +4 settings are provided for going directly to tape, or any line input. If you have cranked the input level on the preamp and used the (++) position on the deep switch, the overall level of the preamp will be greatly increased, and 0db will be plenty of output gain. If your settings are more conservative, the +2 or +4 settings will provide better output levels.

Our balanced output uses the highest quality Jensen output transformer. If you hear any ground noise, change the position of the ground lift switch on the back of the preamp.

Auxiliary Input:

Located on the rear panel. The extra input on the rear panel is useful in a permanent studio or live rack set-up where one needs to access the unit from behind.

Input thru:

Use this to send the signal from your bass straight through to the input of another bass head (not a power amp). For example, connect with a vintage bass amp that you want to record with a microphone, while taking a direct signal from the DB 680. The signal sent to the input of the amp is a straight pass thru from your bass, unaffected by the DB 680. This pass thru is not muted by the footswitch.

Tuner Input:

This is another input pass thru, which is great to keep a tuner plugged into. Can be used when all the other outputs are muted.

Footswitch:

Included with the preamp is a footswitch with which the player can select inputs one or two. Also on the footswitch is a master mute control that mutes all output signals except those going to the tuner input (an extremely useful feature in live or studio situations), and the input thru.

USER TIPS FOR THE DB 680:

Input Gain:

Set this control between 10 and 1 o'clock, depending on the output level of your bass. If you have active electronics on your bass, you can still use the passive input on the DB 680. If you hear distortion, you are overdriving the first input stage. In that case, set the input selector to active. This position will pad the input on the preamp.

Master Volume:

Depending on the power amp you are using, nominal output level is achieved by setting this potentiometer at approximately 12 o'clock. This pot controls the unbalanced mono outputs only.

High and Low Masters and Frequency Control:

These volume pots control the output levels of the high and low outputs when bi-amping. The frequency control sets the frequency at which the highs and lows are separated and sent to the different outputs. This frequency, the crossover frequency, is set by the characteristics of your speakers and amps, but most players set it around 500 Hz.

F/X Loop:

This is a parallel loop, which means that your F/X are blended in with your main (dry) signal. Use the send control to send the right amount of level to your effect and then use the blend control to add in the desired amount of effect to the dry signal.

EQ:

Start with all the EQs set at 12 o'clock. Set the deep switch in the middle position. In this position there is no bass boost. Set the bright switch in the left position, which is no treble boost.

Deep Switch:

This is a two position switch which provides 3db of broadband boost at 30 Hz when set to the single + position. It provides 8db of boost when set in the ++ position.

Bright Switch:

Set at 5 kHz. Use this switch to add sheen to the entire range of your bass. Use this switch in conjunction with the treble potentiometer.

Parametric EQ Section:

The top row, going from left to right, is as follows: frequency sweep (low to high mid-range), level of cut or boost (-12db to +12db), and bandwidth (two octave range).

The bottom row, from left to right, is as follows: frequency sweep (high mid-range to very high frequencies), level of cut or boost (-12db to +12db), and bandwidth (two octave range).

The reason why the EQs are called fully parametric is because they offer control over the bandwidth of the cut or boost. This means that when you choose to boost a frequency, say 4kHz, you have chosen the center frequency of the boost. If you choose to set the bandwidth control to the left (the wider looking mountain) you will be creating a nice smooth boost because you will be creating a gentle EQ curve. Broadband boost is the key to classic tube equalizers. By contrast, when a narrow band cut is necessary, you can pull out specific frequencies and leave the rest of the frequency range untouched. For example, you can pull out some 500 Hz from the midrange and leave the lows and highs intact if you set the bandwidth towards the right (the narrow mountain) because you are creating a narrow cut. Obviously, the bandwidth can be swept to find the sound you are looking for. Usually the degree of cut or boost will be fairly conservative if the appropriate bandwidth is found. This is because you will find after some experimentation that you are finding just the spots you want to EQ.

The DB 680 preamp was designed for the studio and the road.

The five-position selector switch on the back of the unit has three +4 settings (line level) and two mic-level settings. The line level settings (0, +2 and +4) provide the appropriate output level for any bass, from a vintage Fender to a modern bass with hot output levels. Use these settings to go straight to any line input or fader inputs in the studio. If you are going to a mic-pre on a live show console you can use the -40 pre or post EQ levels. The -40 pre-eq does not send the signal through any of the tube gain stages. The -40 post-eq setting uses the tube gain stages and the EQ section.

Limited Warranty

Aguilar Amplification's DB 680 tube bass preamp is warranted to the original owner for a period of ten years from the date of purchase against defects in materials and workmanship. Tubes are covered by the warranty for a period of one year.

The warranty period starts from the date of purchase from an authorized Aguilar dealer. Your sales slip or purchase invoice is necessary for warranty service.

Before sending your unit to Aguilar for repair, you must receive a return authorization number from us. Contact us via phone, fax, or email (techsupport@aguilaramp.com) with a description of the problem. We will then issue to you a return authorization number.

You are responsible for all shipping charges. You must ship the unit to us freight prepaid. We will return the unit to you freight collect. If the unit is being sent from outside the United States you will also be responsible for customs brokerage, if applicable. Please check with your freight forwarder for assistance.

Aguilar Amplification LLC is not responsible for shipping damage, either to or from our service center. Claims must be filed with the carrier.

The only company authorized to perform work under this warranty is Aguilar Amplification LLC of New York, NY.