

USERS MANUAL

Classic T90

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Classic LINE

DESIGNED AND DEVELOPED BY EBS SWEDEN AB

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The **EBS ClassicT90** is an all tube amplifier head, extremely easy to dial-in. It is designed to match the EBS ClassicLine cabinets in all styles and situations. The sound of the ClassicT90amp is pure vintage, yet with a recognizable transparent 'EBS' sound that let your playing style and the character of your instrument speak. Versatility is provided by a carefully designed EQ section. These brief tutorials will help you to become acquainted with some of the features of the **EBS ClassicT90**.

GETTING STARTED...

1. Carefully unpack the bass head.
2. Connect a speaker to the head. Make sure that the impedance of the cabinet match exactly with the output of the T90.
3. Turn down the Volume and set all other controls to mid position.
4. Power up the head and wait five(5) minutes for the head to warm up. The tubes should now glow.
5. Connect your instrument to one of the inputs. If your bass is active or has high output it is recommended to use the *active* input, otherwise use the *passive* one.
6. Toggle the *standby* switch so that the associated lamp light up.
7. Move over to the VOLUME knob and adjust for the desired output volume.

BUILDING THE SOUND...

Your **EBS ClassicT90** features a tone shaping circuit that will enable you to create a variety of vintage bass sounds.

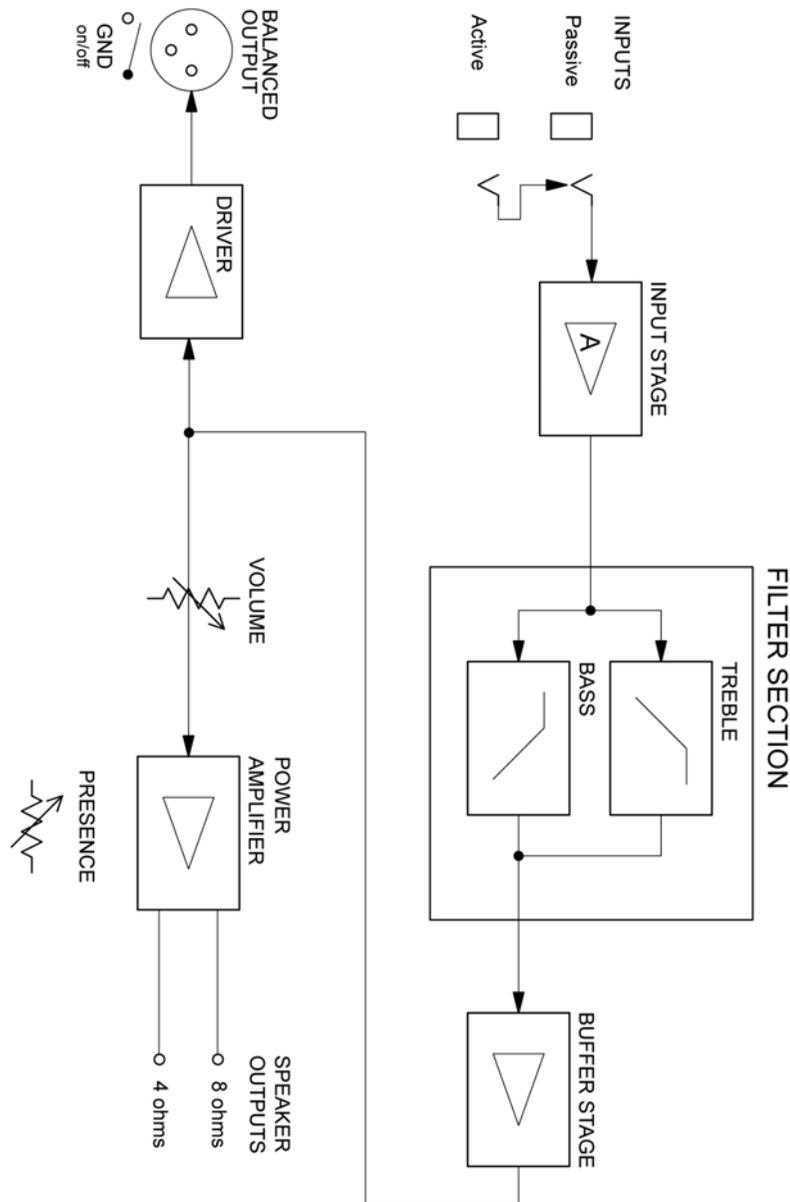
8. The *bass* and *treble* filters are basically of the boost/cut design. This means that the controls practically boost or cut the selected frequency band.
9. Gradually increase or decrease the level and tone controls. Notice how the sound is affected.
10. Proceed to the *prescence* knob. This control adjusts the high frequency response of the power amp and lets you define the "crunch" when distorting the amp.

This was a brief tutorial of **EBS ClassicT90**. As you go on further in this manual, you will learn how to use and utilize all of the useful features that the **EBS ClassicT90** offers you.

GOOD LUCK!

INPUT:	Input Impedance		1 Mohms (passive) 100 kohms (active)
	Nominal Input Level		-20dBv (passive) -8dBv (active)
TONE CONTROLS:	Bass Filter:	Type	Shelving +/- 12 dB @ 80 Hz
	Treble Filter:	Type	Shelving +/- 12 dB @ 8 kHz
PRESCENCE:			0 - +12 dB @ 5 kHz (Pwr amp feedback)
BALANCED OUTPUT:	Output Level	nominal	- 10 dBv
	XLR Connections Options		1-GND, 2-Hot, 3-Cold GND Lift
POWER AMP:	Continuous Output Power Load Impedance		90 W RMS 4 or 8 ohms
TUBE SELECTION:	Input / Filter Balanced Output / Buffer Power Amp Driver Power Amp		1x 7025 low noise 2x 12AU7 1x 12AT7 2x 6550
AUXILIARY INFO:	Power Requirements	max	200 W
	Mains Protection:	Fuse	T1.5A (230/240V) T3.15A (100/120V)
	Dimensions (WxHxD):		537 x 267 x 243 mm 21.1 x 10.5 x 9.57"
	Weight:		17.1 kg (38 lbs.)

Specifications are subject to change without notice!



INPUTS - Connect your instrument to one of these inputs, *active* or *passive*. Use the active input for instruments with high output and the passive one for instruments with low output. If both inputs are connected only the passive input will work.

VOLUME - This knob controls the volume of unit, for the exception of the balanced output (XLR) which is not effected by the this setting.

BASS and TREBLE - These two controls the tone stack of the ClassicT90. The design is purely passive, yet it is designed as a boost/cut filter for best performance. No feedback is present here, and this filter is driven by a class A driving stage. See next page for filter characteristics graph.

PRESENCE - Controls the high frequency response over the poweramp feedback circuitry. Very useful for defining the "edge" or "attack" of a sound. Note that this control does not effect the balanced output..

STANDBY - This switch mutes the amp by disconnecting the high voltage from the tubes. The associated lamp indicated when the amp is operable. When powering up, allow the to amp warm up for a period of 5 minutes prior of activating with standby.

POWER - Powers the amp on or off.

BALANCED OUTPUT - Is a high quality balanced output that functions as a line box for connecting to PA mixing consoles or to studio or broadcast recording units.

Lifting ground is a great aid in many occasions. When required, set the *GND* switch to OFF position to disconnect the ground from the output.

This balanced output is a direct driven tube output for best possible performance.

AC INLET - Connects the amp to the mains. This inlet also houses the mains fuse.

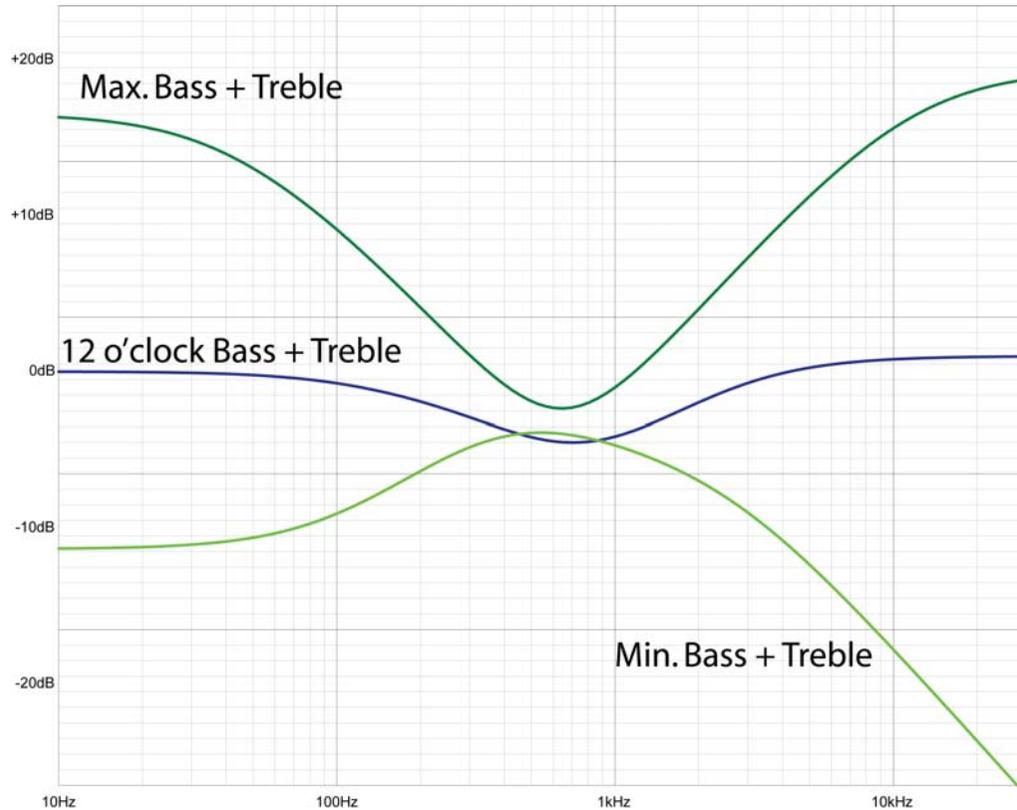
SPEAKER OUTPUTS - The two Speakon® connectors allow you to connect the amp to your favorite cabinets.

IMPORTANT: Use only **ONE** speaker output and the one that is matching the **TOTAL** speaker impedance.



EBS will not take responsibility for eventual hearing damages caused by the powerful ClassicT90.

Typical filter characteristics for Bass and Treble filters:



CHANGING THE TUBES - Although it may not be necessary due to tube malfunction, changing the tubes once in a while will regain the tone and bring back high performance. There are however some points that are important:

1. When changing the power amp tubes, *both* tubes must be changed, and the tubes need to be a matched pair. **Recalibration of the bias is always necessary after installing new power tubes.**
2. The power tube driver, 12AT7 should be changed every second time the power tubes are changed.
3. The input tube, 7025, must be selected for low microphony, low noise and high gain. Alternately, you may use an 12AX7 or ECC83 here.
4. The buffer and balanced out tube must be same type as original, 12AU7.

SETTING THE BIAS - Whenever the power tubes have been changed it is necessary to set the correct bias to ensure long life operation. This is the procedure:

1. Power the amp and let it warm up for 5 minutes.
2. Connect a voltmeter to the bias measurement point VA at the rear panel.
3. Switch on the amp by toggling the standby switch.
4. Adjust with the associated bias trimmer so that the readout on the meter is 35mV +/-2mV.
5. Repeat for other tube using point VB.
6. After first calibration repeat once for verification of bias setting.

IMPORTANT: Incorrectly set bias may cause permanent damage to the amplifier. If you are not 100% sure on how to do this, please get in touch with a service center.

TUBES PLACEMENT:

