



ACTIVE SERIES



Theta Pre-Amplifier OWNERS MANUAL

INTRODUCTION

Congratulations on your purchase of the Theta stand alone pre-amplifier. You are now the owner of the most innovative guitar amplifier ever produced. The same innovation and killer sound that you can find in our Theta Head and Theta Combo is now available in one smaller package and is ready for low-end players and shredders of all kinds.

Please read this manual carefully for a through explanation of the THETA Pre-Amplifier and its functions.

PRECAUTIONS

NOTE: IT IS VERY IMPORTANT THAT YOU READ THIS SECTION TO PROVIDE YEARS OF TROUBLE FREE USE. THIS UNIT REQUIRES CAREFUL HANDLING.

All warnings on this equipment and in the operation instructions should be adhered to and all operating instructions should be followed.

Do not use this equipment near water. Care should be taken so that objects do not fall onto and liquids are not spilled into the unit through any openings.

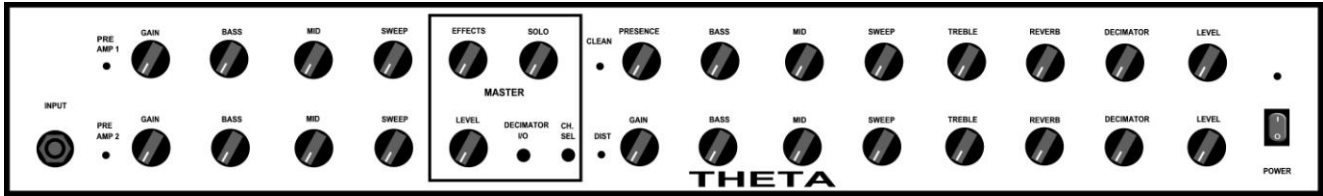
The power cord should be unplugged from the outlet when the unit is left unused for a long period of time.

DO NOT ATTEMPT TO SERVICE THIS EQUIPMENT. THIS EQUIPMENT SHOULD BE SERVICED BY QUALIFIED SERVICE PERSONNEL ONLY. DO NOT MAKE ANY INTERNAL ADJUSTMENTS OR ADDITIONS TO THIS EQUIPMENT AT ANY TIME. DO NOT TAMPER WITH INTERNAL ELECTRONIC COMPONENTS AT ANY TIME. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL VOID THE WARRANTY OF THIS EQUIPMENT, AND MAY CAUSE A SHOCK HAZZARD.

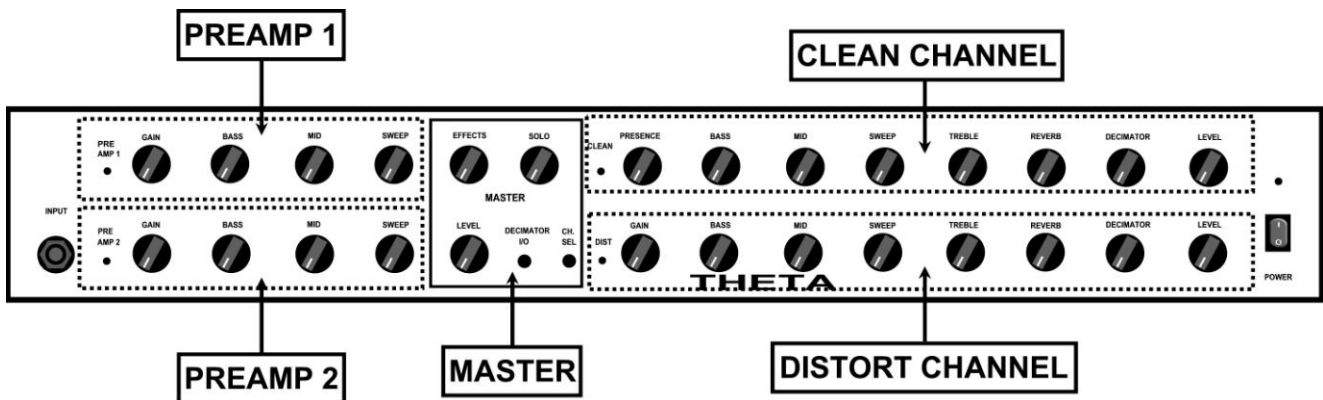
POWER REQUIREMENTS

This unit requires connection to a 120 volt AC outlet. Do not cut or disconnect the ground pin on the power cord. Do not attempt to connect this unit to any power source other than the specified 120VAC. The Theta Combo will typically draw approximately 3 amps of current when driving a 4-ohm load.

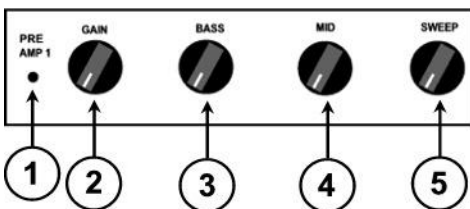
FRONT PANEL



Understanding the THETA amplifier



THETA PREAMP1



1. PREAMP1 ON LED

This led indicates when PREAMP1 is active and in the signal path. NOTE: The **PREAMP1** switch on the FOOTCONTROLLER switches **PREAMP1** on and off. **PREAMP1** is functional only when the CLEAN channel is selected. **PREAMP1** and PREAMP2 will automatically switch with the channel selected.

2. PREAMP1 GAIN CONTROL

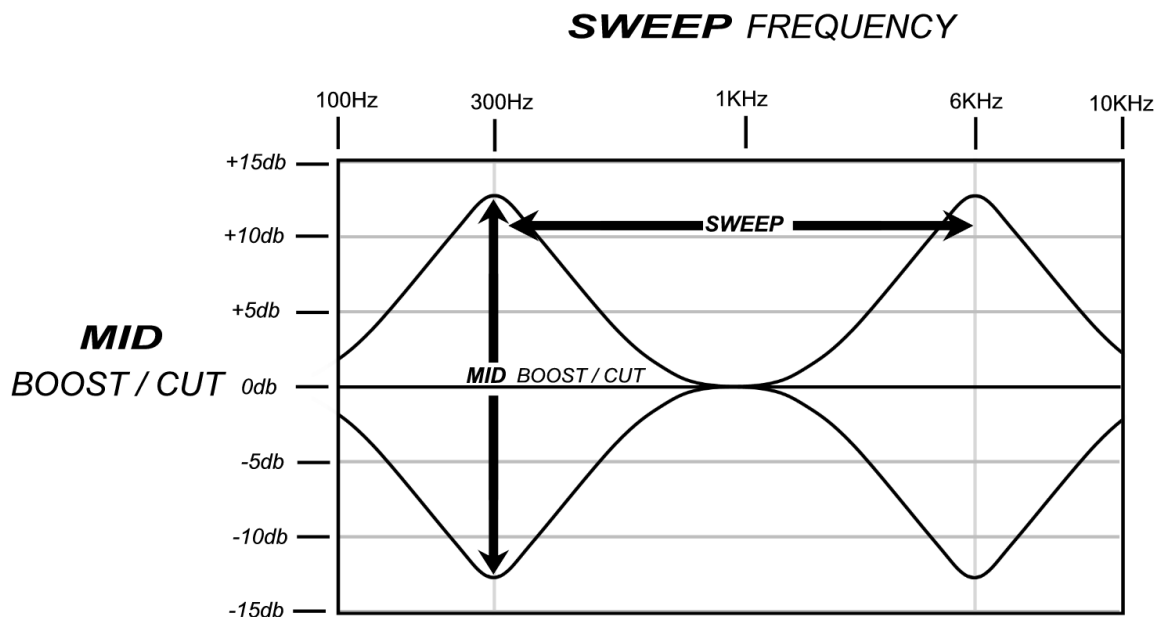
This control adjusts the amount of gain in the signal path of PREAMP1.

3. BASS

This control adjusts the amount of boost or cut in the low frequency portion of the spectrum of PREAMP1. The available BASS boost and cut range is +/-15 decibels.

4. MIDRANGE BOOST/CUT CONTROL

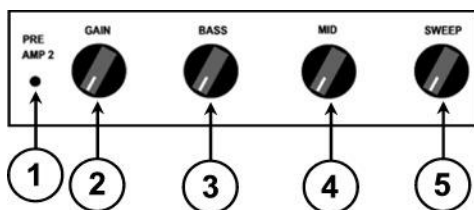
This control works in conjunction with the SWEEP frequency control 5. The MID and SWEEP controls work together to provide a semi-parametric tone control. When the MID control is set at 12:00 straight up there is no boost or cut in the MID frequency portion of the spectrum. The graph below shows the response of the MID boost/cut and SWEEP controls. The MID control allows +/- 12db of boost or cut to be applied at the frequency determined by the SWEEP control.



5. SWEEP FREQUENCY CONTROL

This control works in conjunction with the MID boost/cut control and adjusts the center frequency of the MID boost or cut signal. At the full counter clockwise setting the midrange frequency will be at 300Hz, at the full clockwise setting the center frequency of the midrange will be at 6KHz. NOTE: when the MID control is set at 12:00 straight up the SWEEP will not have any affect on the signal since there is not boost or cut being applied.

THETA PREAMP2

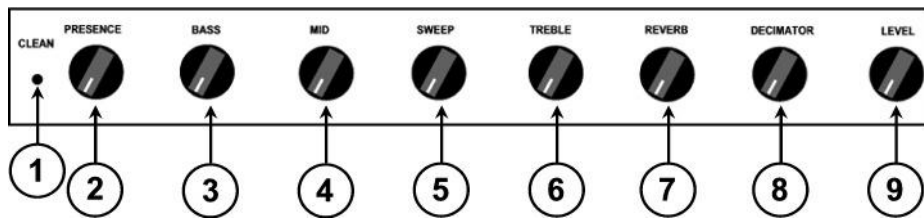


1. PREAMP2 ON LED

This led indicates when PREAMP2 is active and in the signal path. NOTE: The **PREAMP2** switch on the THETA FOOTCONTROLLER switches **PREAMP2** on and off. **PREAMP2** is functional (active) only when the DISTORT channel is selected. **PREAMP2** and PREAMP1 will automatically switch with the Distort or Clean channel is selected.

NOTE: ALL OF THE REMAINING FUNCTIONS OF PREAMP2 ARE IDENTICAL TO PREAMP1 AND WILL NOT BE REPEATED.

THETA CLEAN CHANNEL



1. CLEAN CHANNEL ON LED

This led indicates when the CLEAN CHANNEL is active. NOTE: The **CHANNEL SELECT** switch on the FOOTCONTROLLER switches between the CLEAN CHANNEL and DISTORT CHANNEL. **THE CLEAN** can be selected by using either the FOOTCONTROLLER CHANNEL SELECT switch or by pushing the CHANNEL SELECT switch on the front panel of the Theta amplifier.

2. PRESENCE CONTROL

This control adjusts the amount of high frequency presence in the CLEAN channel. The corner frequency of the PRESENCE control is set at 15Khz with a maximum of 15db of boost.

3. BASS

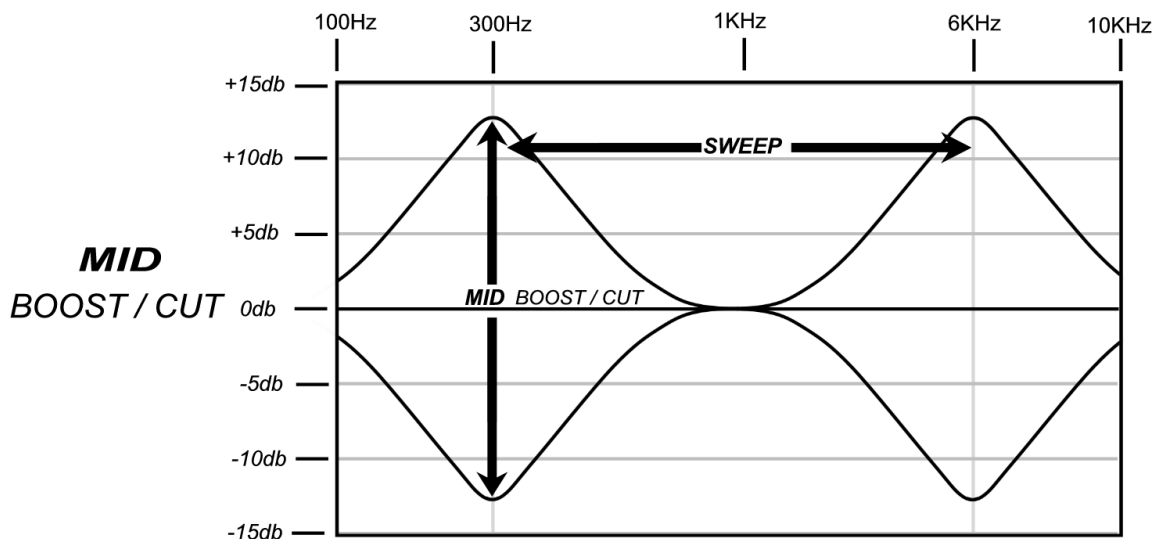
This control adjusts the amount of boost or cut in the low frequency portion of the spectrum of PREAMP1. The available BASS boost and cut range is +/-15 decibels.

4. MIDRANGE BOOST/CUT CONTROL

This control works in conjunction with the SWEEP frequency control 5. The MID and SWEEP controls work together to provide a semi-parametric tone control. When the MID control is set at 12:00 straight up there is no boost or cut in the MID frequency portion of the spectrum. The graph below shows the response of the MID boost/cut and SWEEP controls. The MID control allows +/- 12db of boost or cut to be applied at the frequency determined by the SWEEP control.

5.

SWEEP FREQUENCY



SWEEP FREQUENCY CONTROL

This control works in conjunction with the MID boost/cut control and adjusts the center frequency of the MID boost or cut signal. At the full counter clockwise setting the midrange frequency will be at 300Hz, at the full clockwise setting the center frequency of the midrange will be at 6KHz. NOTE: when the MID control is set at 12:00 straight up the SWEEP will not have any affect on the signal since there is not boost or cut being applied.

6. TREBLE CONTROL

The TREBLE control adjusts the boost or cut that is applied in the high frequency portion of the spectrum of CLEAN CHANNEL. The maximum TREBLE boost and cut range is +/- 15 decibels.

7. REVERB LEVEL CONTROL

The REVERB control adjusts the amount of digital reverb that is added when using the CLEAN channel. The digital REVERB in the Theta amplifier has a bandwidth of 18KHz and also includes a digital implementation of the Decimator noise reduction to ensure that the digital reverb has a dynamic range greater than 110db.

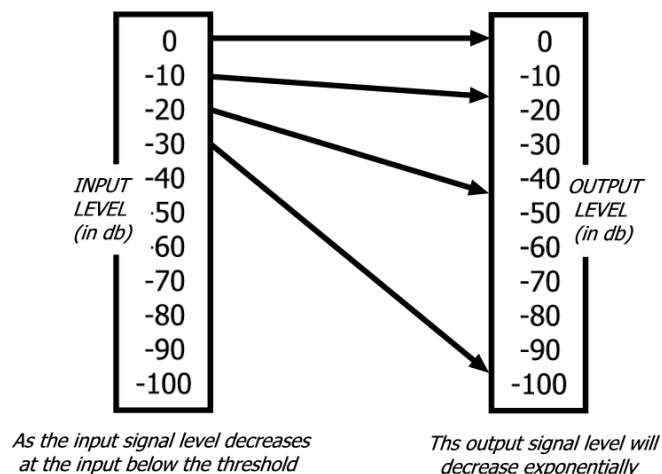
8. DECIMATOR NOISE REDUCTION

The CLEAN channel DECIMATOR control adjusts the threshold of the CLEAN channel noise reduction. The DECIMATOR noise reduction is a down low level downward expander incorporating ISP's patent pending TIME VECTOR PROCESSING.

A BRIEF EXPLANATION OF THE DECIMATOR NOISE REDUCTION SYSTEM

Low Level Downward Expansion is performed by use of a high quality voltage controlled amplifier controlled by an RMS based audio level detection circuit. A Time Vector Processing circuit is used which varies the release response over a 1000 to 1 ratio and controls the release response of the Downward Expander. The release response will be extremely fast, on the order of 2 milliseconds, if the input signal has a fast decaying envelope and upwards of 2 seconds if the input signal has a slow decaying signal. Downward Expansion takes place when the input signal level drops below the preset threshold. For example: if the threshold is set for 0db and input signal of 0db with produce no expansion. As the input signal drops below 0db downward expansion starts and increases exponentially the farther the input signal drops below the threshold point. The figure below shows the response of the Expander with a 0db threshold.

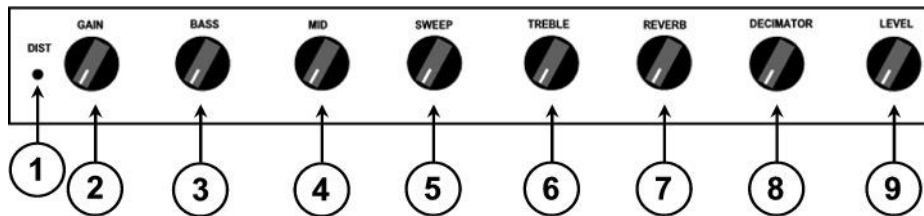
TYPICAL EXPANSION RATIO with a threshold setting of 0db.



9. LEVEL CONTROL

The LEVEL control adjusts the output LEVEL of the CLEAN channel. NOTE: The final output level is determined by the setting of the MASTER LEVEL CONTROL.

THETA DISTORT CHANNEL



1. DISTORT CHANNEL ON LED

This led indicates when the DISTORT CHANNEL is active. NOTE: The **CHANNEL SELECT** switch on the FOOTCONTROLLER switches between the DISTORT CHANNEL and CLEAN CHANNEL. **THE DISTORT CHANNEL** can be selected by using either the FOOTCONTROLLER CHANNEL SELECT switch or by pushing the CHANNEL SELECT switch on the front panel of the THETA amplifier.

2. GAIN CONTROL

This control adjusts the amount of gain in the DISTORT CHANNEL. The maximum amount of gain will be determined by the setting of the DISTORT CHANNEL GAIN and PREAMP2 gain only if PREAMP2 is switched on. The maximum amount of available gain is greater than 140db if PREAMP2 is switched on.

3. BASS CONTROL

This control adjusts the amount of boost or cut in the low frequency portion of the spectrum of the DISTORTION circuit. The available BASS boost and cut range is +/-15 decibels.

4. MIDRANGE BOOST/CUT CONTROL

This control works in conjunction with the SWEEP frequency control 5. The MID and SWEEP controls work together to provide a semi-parametric tone control. When the MID control is set at 12:00 straight up there is no boost or cut in the MID frequency portion of the spectrum. See the graph shown in the CLEAN CHANNEL section, which shows the response of the MID boost/cut and SWEEP controls. The MID control allows +/- 12db of boost or cut to be applied at the frequency determined by the SWEEP control.

5. SWEEP FREQUENCY CONTROL

This control works in conjunction with the MID boost/cut control and adjusts the center frequency of the MID boost or cut signal. At the full counter clockwise setting the midrange frequency will be at 300Hz, at the full clockwise setting the center frequency of the midrange will be at 6KHz. NOTE: when the MID control is set at

12:00 straight up the SWEEP will not have any affect on the signal since there is not boost or cut being applied.

6. TREBLE CONTROL

The TREBLE control adjusts the boost or cut that is applied in the high frequency portion of the spectrum of DISTORTION CHANNEL. The maximum TREBLE boost and cut range is +/-15 decibels.

7. REVERB LEVEL CONTROL

The REVERB control adjusts the amount of digital reverb that is added when using the DISTORTION channel. The digital REVERB in the COMBO amplifier has a bandwidth of 18KHz and also includes a digital implementation of the Decimator noise reduction to ensure that the digital reverb has a dynamic range greater than 110db.

8. DECIMATOR NOISE REDUCTION

The DISTORTION channel DECIMATOR control adjusts the threshold of the CLEAN channel noise reduction. The DECIMATOR noise reduction is a down low level downward expander incorporating ISP's patent pending TIME VECTOR PROCESSING.

Setting the Decimator Noise Reduction System:

Setting the Decimator Threshold for proper use with the Distortion channel is easy if you follow these instructions. Set the Decimator Threshold full counterclockwise. Adjust the Distortion gain and Preamp2 gain as desired for your playing. Slowly increase the Decimator Threshold until the background noise just disappears. This will be the best possible setting for the Decimator. Increasing the Threshold beyond this point will cause expansion to be more aggressive than desirable. Some experimentation may be required to get the best possible Threshold setting.

9. LEVEL CONTROL

The LEVEL control adjusts the output level of the DISTORTION channel. NOTE: The final output level is determined by the setting of the DISTORTION LEVEL and the MASTER LEVEL CONTROL.

THETA MASTER CONTROLS

1. LEVEL / MASTER OUTPUT LEVEL

This control determines the master output LEVEL of the THETA guitar preamplifier.

2. EFFECTS LEVEL CONTROL

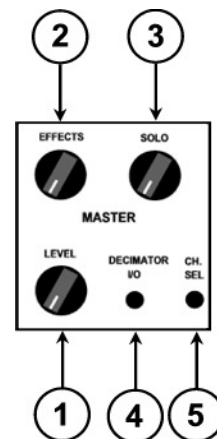
This control adjusts the level of an externally connected effects processor. NOTE: The loop must be turned on via the FOOT CONTROLLER in order for the EFFECTS level to operate.

3. SOLO LEVEL

This control adjusts the amount of boost that will be applied to the output signal when the FOOT CONTROLLER boost switch is activated. This control allows the user to switch on and off via the FOOT CONTROLLER up to 6db of output level boost if desired for soloing

4. DECIMATOR IN/OUT SWITCH

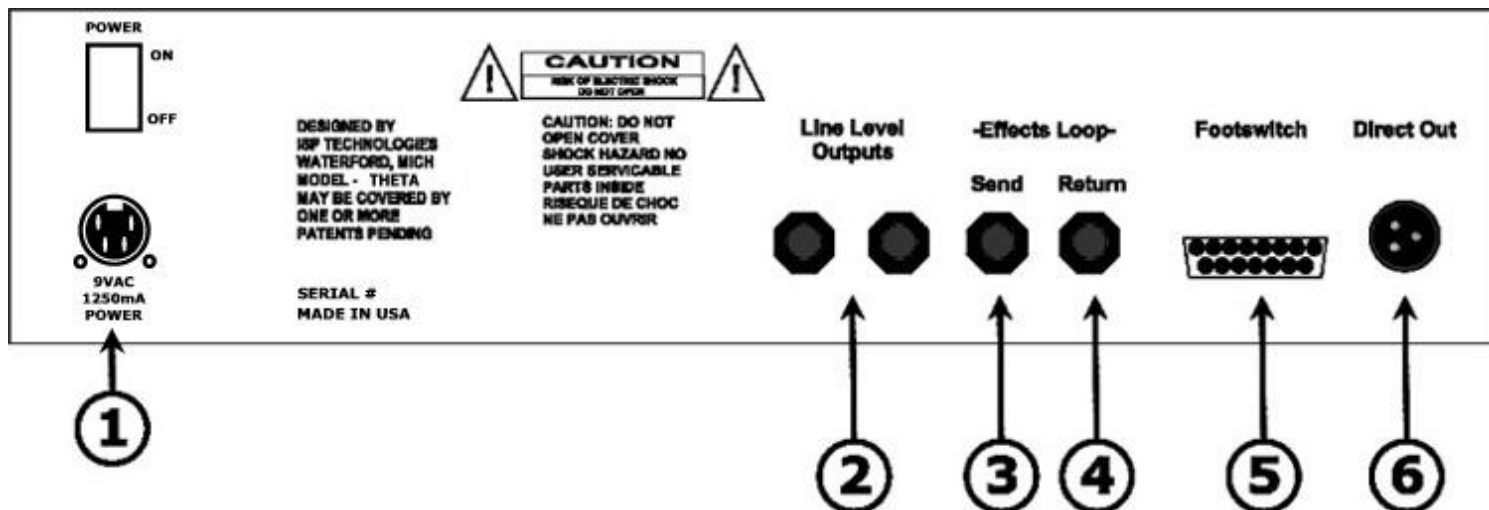
This master DECIMATOR IN / OUT switch activates both the CLEAN channel and DISTORTION channel DECIMATOR noise reduction systems.



5. CHANNEL SELECT SWITCH

The CHANNEL SELECT switch changes the THETA operating channel from CLEAN to DISTORT. The CHANNEL SELECT switch is a momentary switch that changes the channel upon pushing the switch. This switch can be used with or without the FOOT CONTROLLER connected.

BACKPLATE CONTROLS



1. POWER INLET MODULE

This module provides a connection for the power cord.

2. LINE LEVEL OUTPUTS

One 1/4" Connection is linked directly to the power amp section and the other 1/4" connection is provided for hookup to the Vector 212 Extension Cabinet.

3. EFFECTS LOOP SEND

Connects to the input of an external effects device

4. EFFECTS LOOP RETURN

Connects to the output of an external effects device

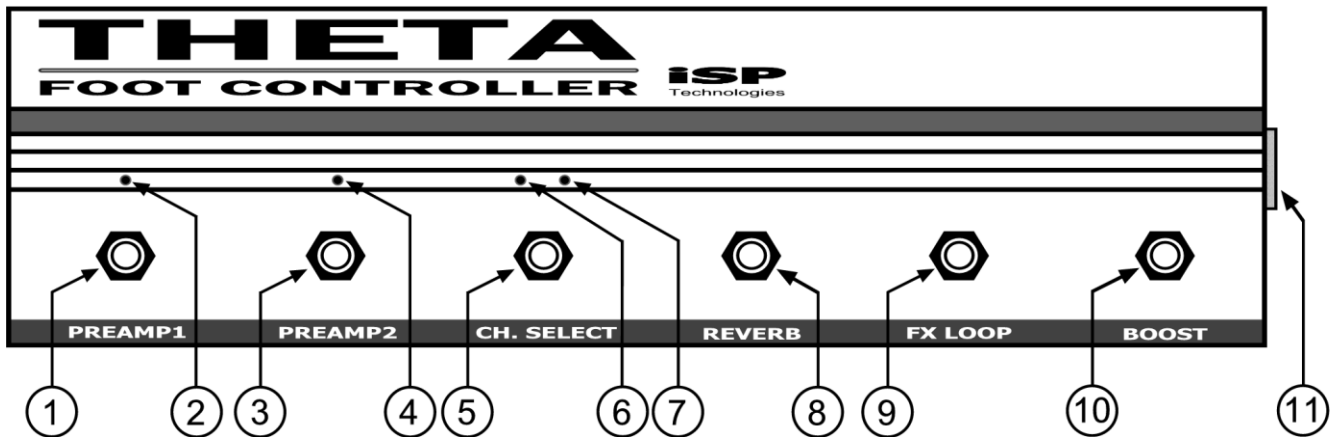
5. FOOTSWITCH

Provides connection to the Theta Foot controller. The THETA FOOT CONTROLLER is connected using the 15-pin Dsub cable supplied with the THETA.

6. DIRECT OUT

Balanced XLR output for recordings or live performances

THETA FOOT CONTROLLER



- 1. PREAMP1 SWITCH**
This switch turns on and off PREAMP1 the CLEAN channel preamp on the THETA.
- 2. PREAMP1 LED**
When this LED in on PREAMP1 is active, switched on.
- 3. PREAMP2 SWITCH**
This switch turns on and off PREAMP2 the DISTORTION channel preamp.
- 4. PREAMP2 LED**
When this LED in on PREAMP2 is active, switched on.
- 5. CHANNEL SELECT SWITCH**
This switch changes the channel selected between CLEAN and DISTORT.
- 6. CLEAN CHANNEL LED (RED)**
This red LED indicates when the CLEAN CHANNEL is on and active.
- 7. DISTORT CHANNEL LED (BLUE)**
This Blue LED indicates when the DISTORTION CHANNEL is on and active.
- 8. REVERB SWITCH**
This switch turns on and off the THETA 's internal digital reverb. NOTE: The digital reverb will only function when the THETA FOOT CONTROLLER is connected and the reverb circuit is switched on.
- 9. FX LOOP**
This switch turns on and off the external effects loop allowing use of an external effects processor. NOTE: The FX LOOP will only function when the THETA FOOT CONTROLLER is connected and the FX LOOP is switched on.
- 10. BOOST**
This switch turns on and off the THETA BOOST function allowing up to 6db of boost of the output level of the amplifier.
- 11. D-SUB CONNECTOR**
Connect the 15-pin D-SUB connector between this connector and the D-SUB connector on the back of the THETA amplifier.

THETA PRE-AMP SPECIFICATIONS

Power:	400 watt RMS
Bass Control /Preamp 1 and 2:	+/-15db at 80Hz
Bass Control /Clean and Distort:	+/-15db at 80Hz
Mid Sweep Frequency /Preamps:	300Hz to 6KHz
Mid Sweep Frequency /Channels:	300Hz to 6KHz
Mid Boost/Cut Range /Preamps:	+/-12db
Mid Boost/Cut Range /Channels:	+/-12db
Presence Range (Clean Channel):	-0db to +18db
Decimator Effective Noise Reduction:	Greater than 80db
Response:	45Hz at (-10dB)
Dimensions:	19" W x 3.5" H x 8" D
Weight:	4 lbs.

WARRANTY AND SERVICE

The Internal Circuitry is fully guaranteed to be free of defects under normal use and service for a period of two years from the date of purchase. The Speakers and Cabinet that are used in this product are fully guaranteed to be free of defects under normal use and service for a period of three years.

Any damage resulting from the misuse or the failure to follow the precautions and instructions will void the warranty.

In the event that the unit needs to be repaired, please return the unit to ISP Technologies directly. Simply repack the unit, send a copy of the original receipt, a note stating the problem, and send it to:

ISP Technologies, LLC
5479 Perry Drive Unit B
Waterford, MI 48329
Attn: Repair Dept.

All shipping charges must be fully prepaid.

ISP will not be responsible for any damages incurred in shipping of any unit. Any claim will need to be settled with the shipping company.

The warranty will be voided if the serial number has been tampered with in any way.

The warranty card must also be filled out and returned in order to activate the warranty.

Should you have any questions for the repair department prior to returning the product please call 1-(248)-673-7790

NOTE: This Product may be covered under one or more of the following patents or patents pending: 7,035,413; 6,944,305; 6,931,134; 6,831,514; 6,091,013



ISP TECHNOLOGIES, LLC
5479 PERRY DRIVE UNIT B
WATERFORD, MI. 48329
248-673-7790
FAX: 248-673-7696
www.isptechnologies.com