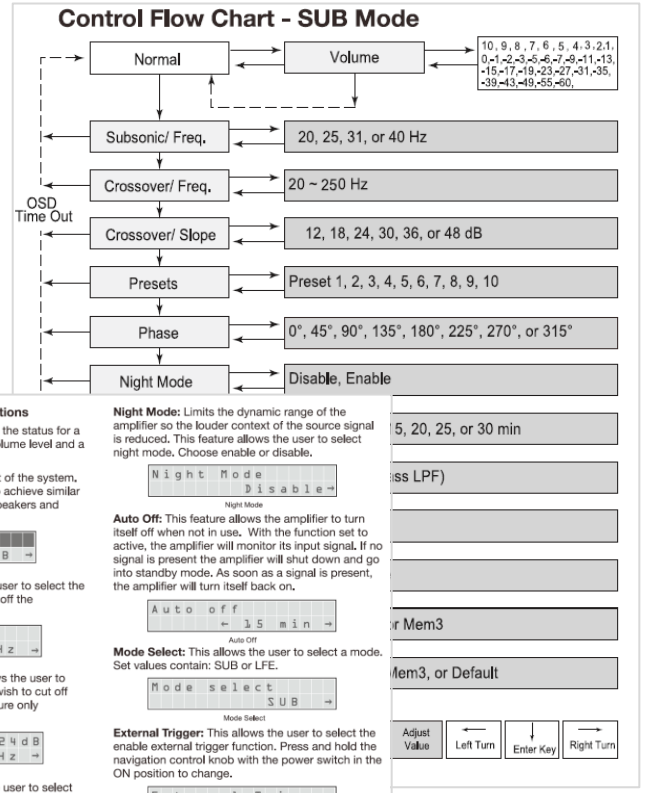
Setup Guidelines for SMP500 DSP and SMP1000 DSP

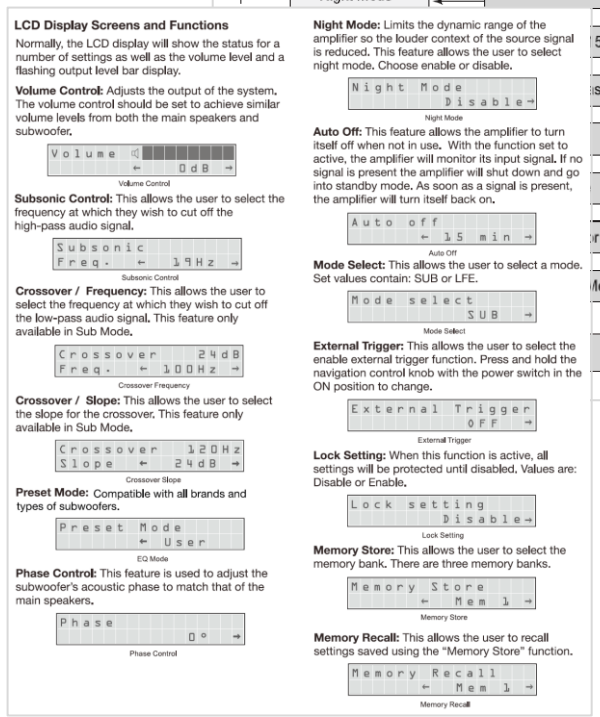
SMP500 Mono-Channel Class D Subwoofer Amplifier, Digital, Onboard DSP 400W 4 -8Ω ETL and CE Certified

FEATURES & SPECIFICATIONS

. Mono Class D Dedicated Subwoofer Amp
. 1000W Peak /400W RMS @ 4 ohm
. Variable High Cut Filter 30Hz-150Hz, front panel knob . Additional Front Panel Control: Phase Switch and Volume Control
. Choice of Signal Level Input or LEF (Low-Frequency Effects)
. Turn On Choice: Music Sensing, Manual On or 12V Trigger
. Adjustable Gain/Volume Control Limiter
. Signal (low level) and Speaker Level (high level) inputs
. 110/220V switchable ETL, CE

OSD Audio SMP500DSP Class D Subwoofer Amp is designed for use with higher wattage passive subwoofers such as in-wall subs that require external power. It is rack mountable and 1U chassis. This sturdy sub amplifier is not for the faint of heart. It serves up 1000 watts of power peak and 400W RMS @ 4 ohms, so to say that it is powerful is an understatement.

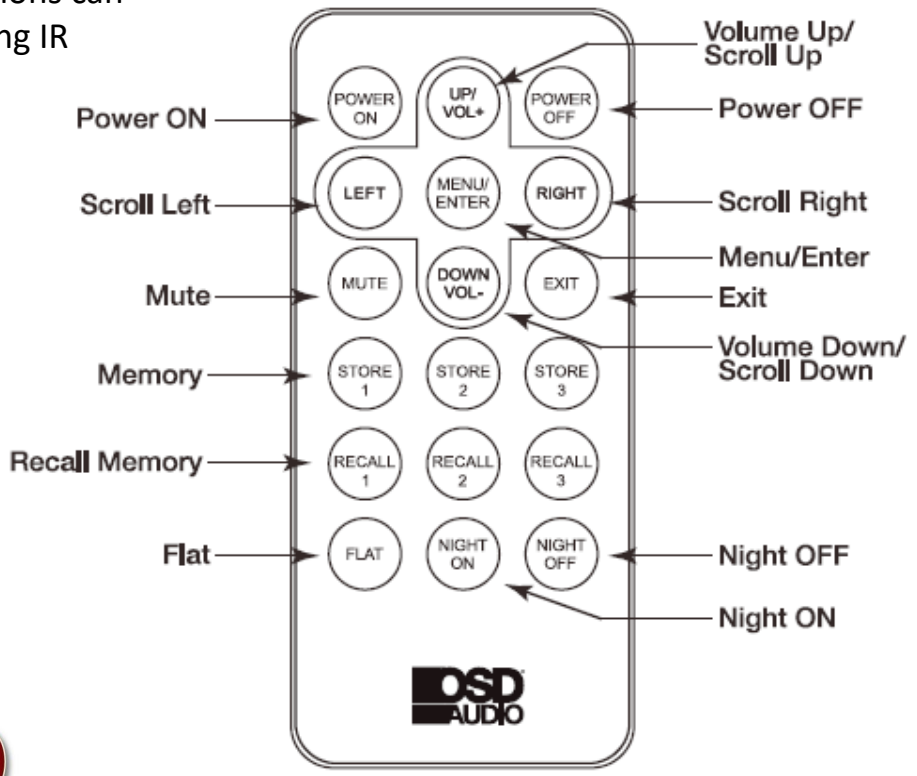




Specifications

- Mono Class D dedicated Subwoofer Amplifier
- 1000 Peak Power / 400W Continuous RMS @ 4 ohm
- Variable High Cut Filter 30Hz-150Hz; front panel Knob
- Additional Front panel controls: Phase Switch and Volume Control
- Choice of Signal Level Input or LFE (Low-Frequency Effects)
- Three Turn on Choices: Music Sensing, Manual On or hard 12 Volt Trigger
- Back Panel Adjustable Gain /Volume Control Limiter
- Both Signal (Low Level) and Speaker (High Level) Pass through Input/outputs
- Maximum Output: two 8-ohm Sub Woofers or Single 8-ohm DVC Woofer
- 110/220V switchable
- Total Harmonic Distortion (THD): <1%
- 2-Year Warranty
- D*H*W: 17.125” W x 1.77” H x 9.5”D
- 7.6 pounds
- Auto Off Time: 20 minutes
- Auto-on Sensitivity: 5 mV
- Remote control included

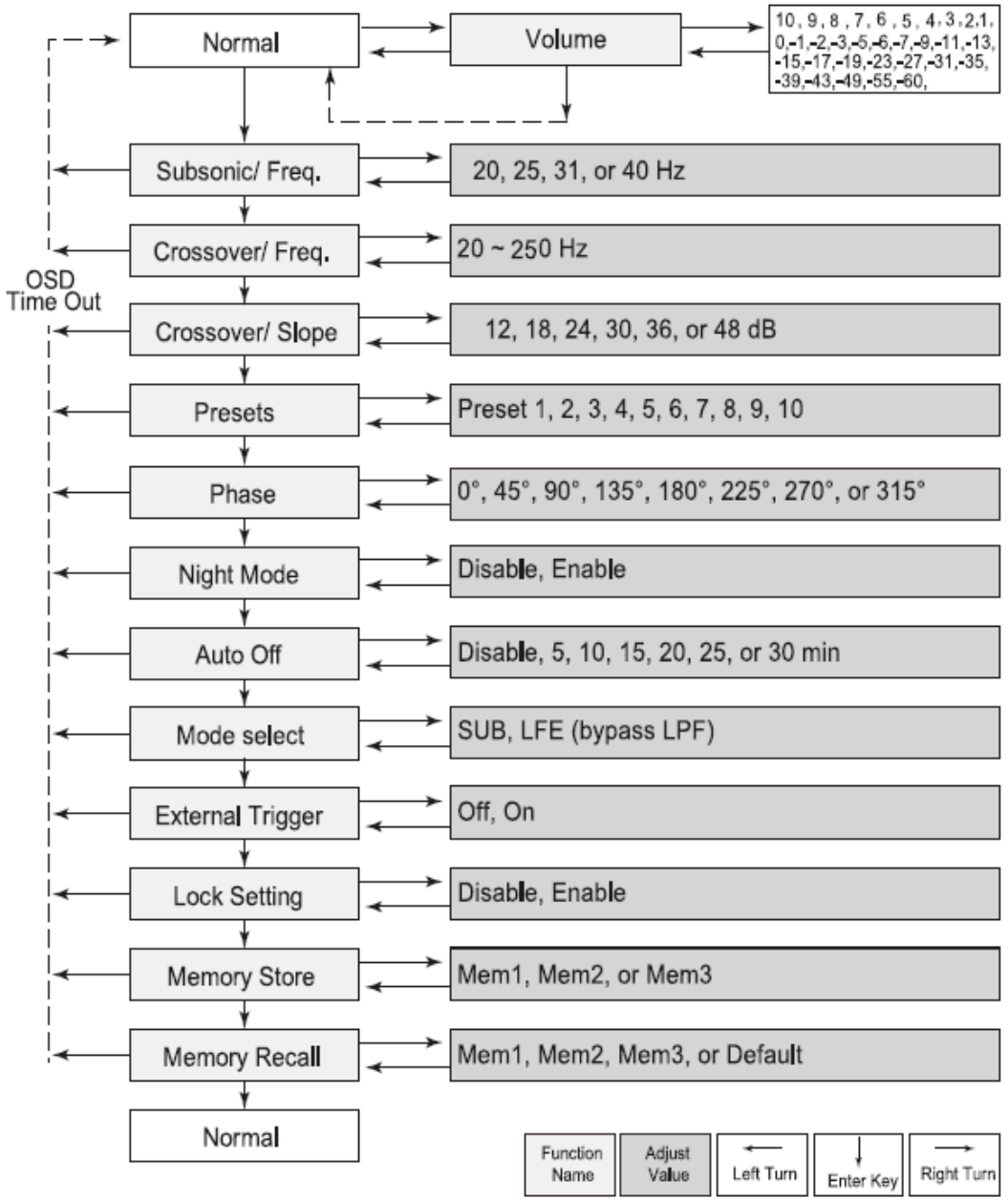
Some DSP functions can be accessed using IR Remote Control



Volume and Control/Selection Knob

DSP Display

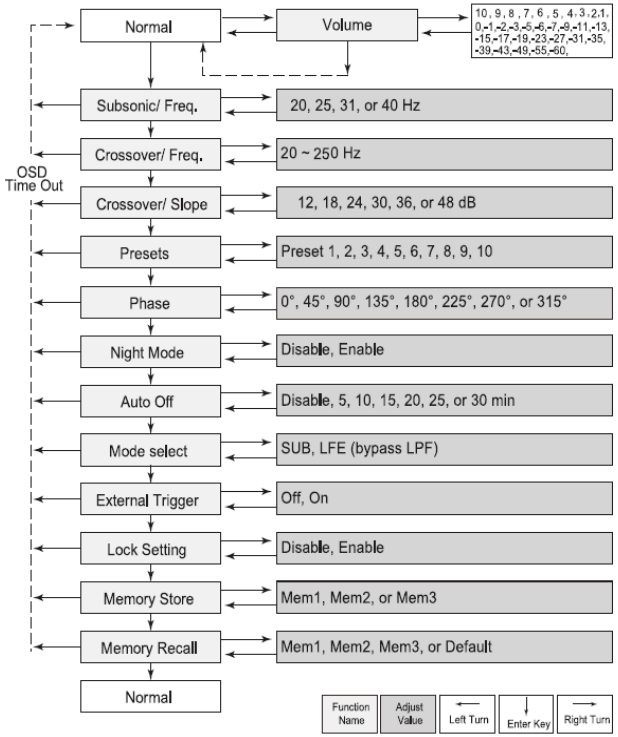
Control Flow Chart - SUB Mode



Volume and Control/Selection Knob

DSP Display

Control Flow Chart - SUB Mode



OSD AUDIO

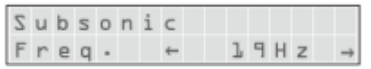
LCD Display Screens and Functions

Normally, the LCD display will show the status for a number of settings as well as the volume level and a flashing output level bar display.

Volume Control: Adjusts the output of the system. The volume control should be set to achieve similar volume levels from both the main speakers and subwoofer.

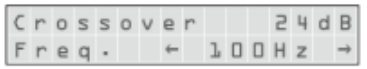
Volume Control

Subsonic Control: This allows the user to select the frequency at which they wish to cut off the high-pass audio signal.



Subsonic Control

Crossover / Frequency: This allows the user to select the frequency at which they wish to cut off the low-pass audio signal. This feature only available in Sub Mode.



Crossover Frequency

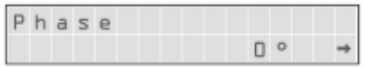
Crossover / Slope: This allows the user to select the slope for the crossover. This feature only available in Sub Mode.

Crossover Slope

Preset Mode: Compatible with all brands and types of subwoofers.

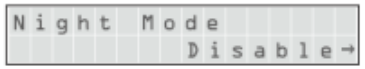
EQ Mode

Phase Control: This feature is used to adjust the subwoofer's acoustic phase to match that of the main speakers.



Phase Control

Night Mode: Limits the dynamic range of the amplifier so the louder context of the source signal is reduced. This feature allows the user to select night mode. Choose enable or disable.



Night Mode

Auto Off: This feature allows the amplifier to turn itself off when not in use. With the function set to active, the amplifier will monitor its input signal. If no signal is present the amplifier will shut down and go into standby mode. As soon as a signal is present, the amplifier will turn itself back on.

Auto Off

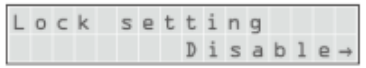
Mode Select: This allows the user to select a mode. Set values contain: SUB or LFE.

Mode Select

External Trigger: This allows the user to select the enable external trigger function. Press and hold the navigation control knob with the power switch in the ON position to change.

External Trigger

Lock Setting: When this function is active, all settings will be protected until disabled. Values are: Disable or Enable.



Lock Setting

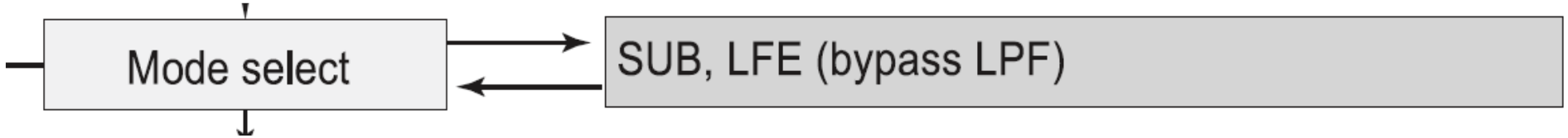
Memory Store: This allows the user to select the memory bank. There are three memory banks.

Memory Store

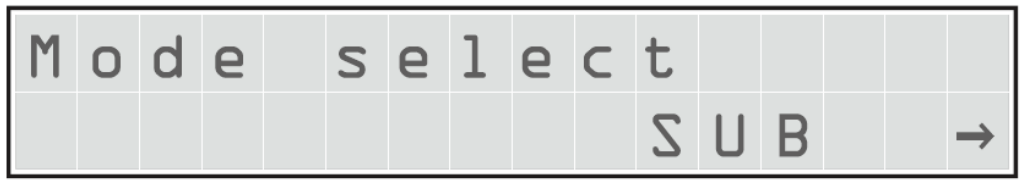
Memory Recall: This allows the user to recall settings saved using the "Memory Store" function.

Memory Recall

1) You need to set the Mode first, this will determine if you will need to make additional adjustments (Sub Mode) or some controls will be locked out (LFE Mode). You select between Sub where you will be making adjustments to the Crossover Frequency and Crossover Slope and the LFE setting where these two controls are bypassed. The LFE (Low Frequency Effects) is typically found om Audio Video Receivers for Home Theater. The Crossover setting are adjusted in the Audio Video Receiver before arriving at the SMP500

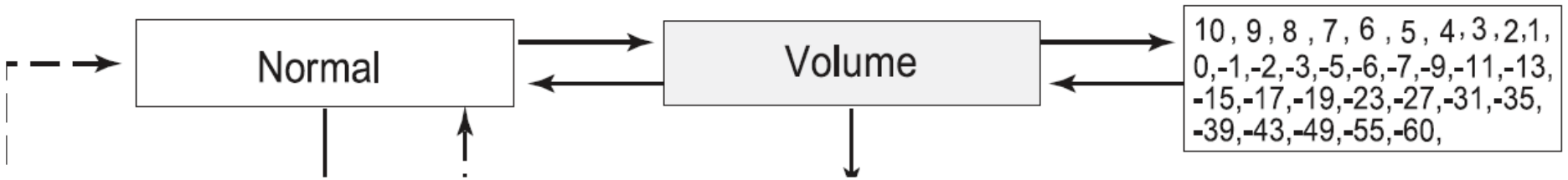


Mode Select: This allows the user to select a mode.
Set values contain: SUB or LFE.

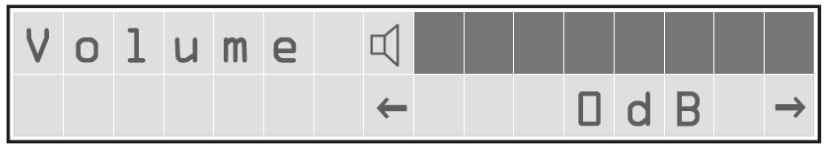


Mode Select

2) The Volume should be adjusted, so the
levels are the same as the main speakers. You also need it to high enough so you can hear the changes you will be making. You will jockey between the Crossover Frequency and Volume levels when in the Sub Mode when making your final adjustments

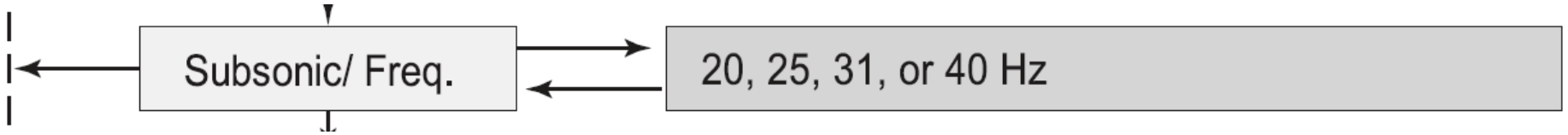


Volume Control: Adjusts the output of the system. The volume control should be set to achieve similar volume levels from both the main speakers and subwoofer.

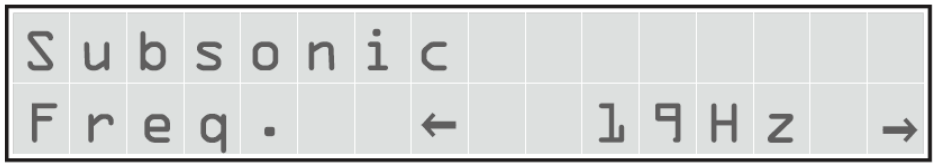


Volume Control

3) Set the Subsonic/Freq to 20Hz. A Subsonic filter is supposed to cut off any information below the select frequency. Most information below the select point is noise and wastes power. You only need to make this setting once. By eliminating these subsonic frequencies, it makes the amplifier more efficient

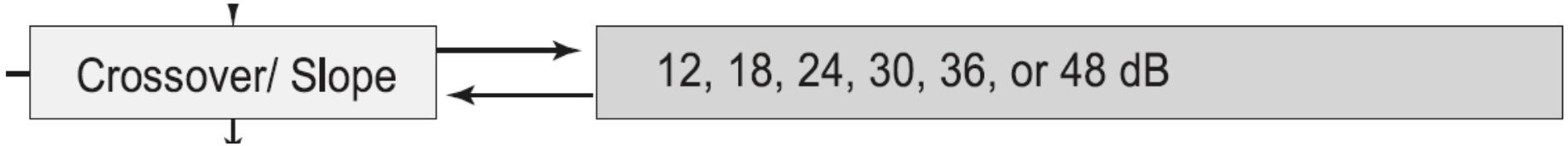


Subsonic Control: This allows the user to select the frequency at which they wish to cut off the high-pass audio signal.

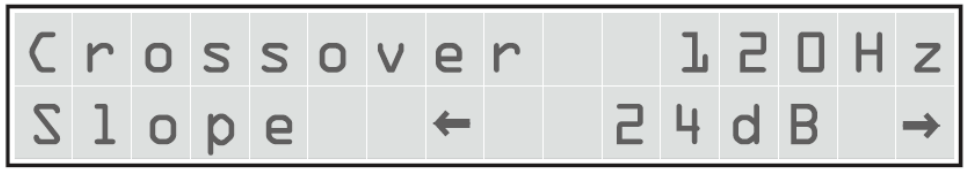


Subsonic Control

4) I would set the Crossover slope to 24dB, the most popular step upsetting. Whatever crossover point you select, the slope will start at an octave below (half of the select point), and by the time it crosses over the selected frequency point, the signal will be 24 dB down. Once you have set this point, you should not have to adjust it every time. It is relative to the quality of the Passive Subwoofer you are driving. As a rule of thumb,12dB would be for the more affordable Sub Drivers, whereas the 48dB would be for the High-End Passive Components.

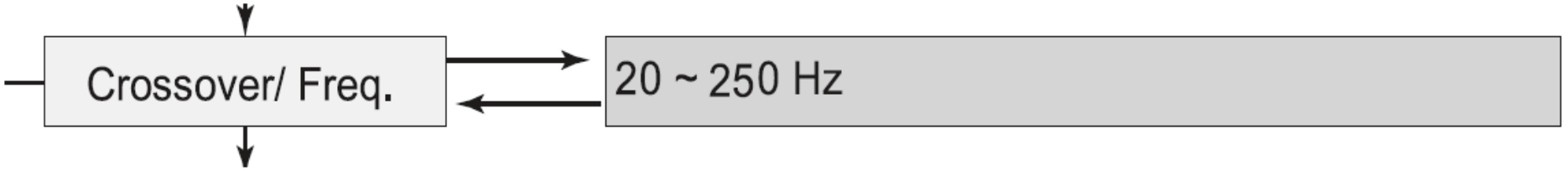


Crossover / Slope: This allows the user to select the slope for the crossover. This feature only available in Sub Mode.



Crossover Slope

5) Both this and the Volume Controls are the two controls you will adjust the most during setup, and if you want to make changes going forward. I would start right in the middle selecting the 135Hz frequency. You will want to experiment with several different settings before you find the one you like the best.



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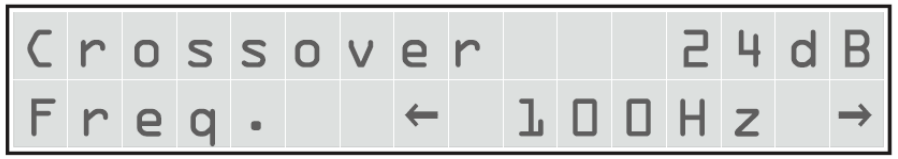
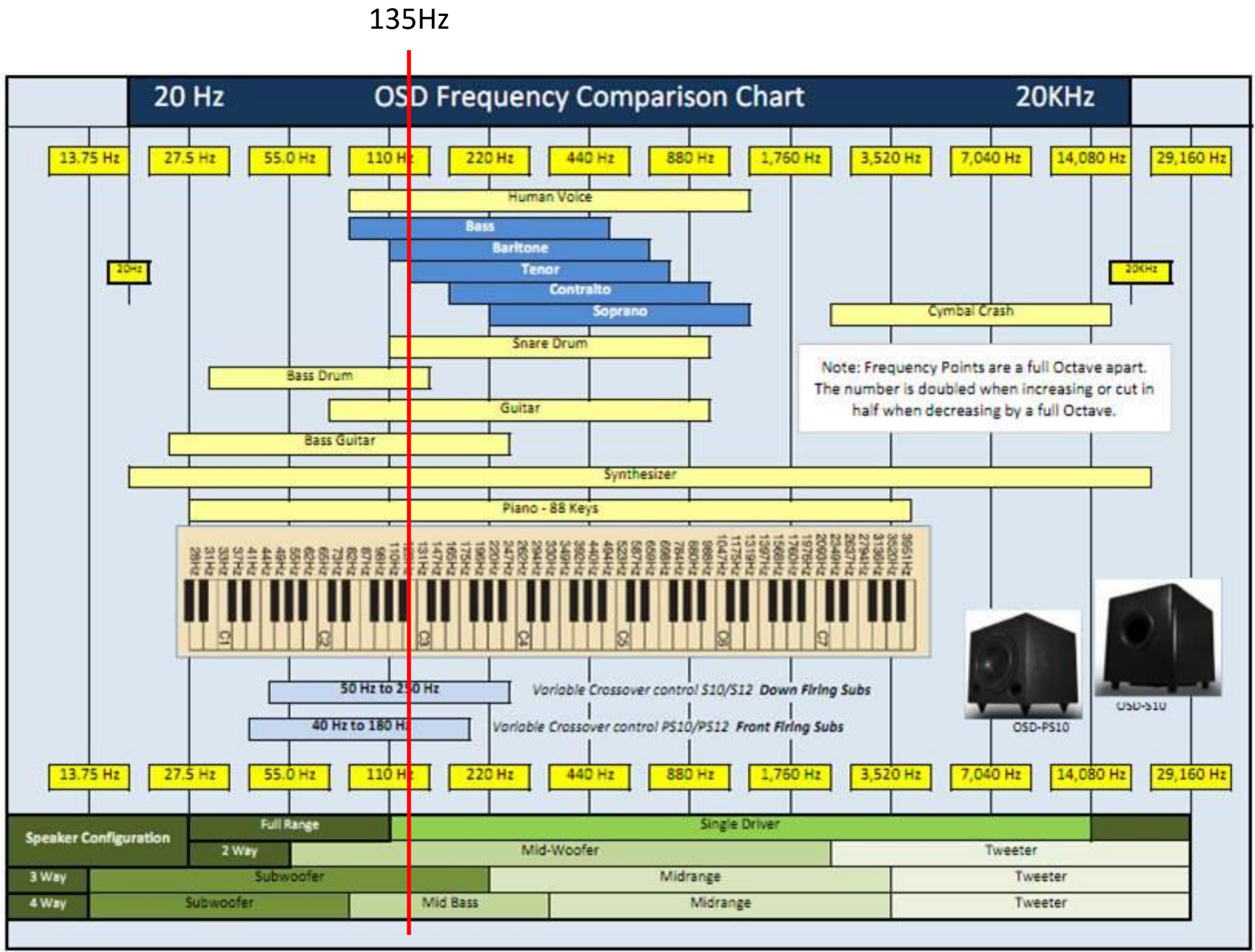


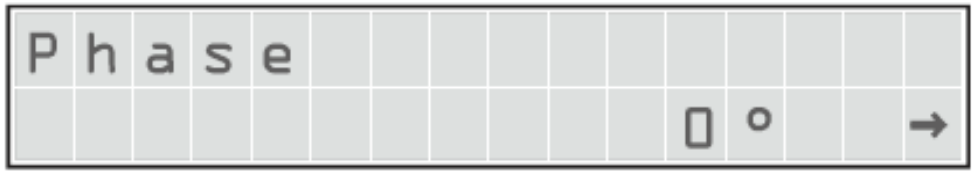
Crossover Frequency

The red line signifies where 135Hz falls on the Frequency chart. The chart shows where musical and vocal elements fall across the Frequency Response spectrum. Note: the Frequency setting only applies in the Sub Mode. It is disabled in the LFE (Low-Frequency Effects) Mode. The Audio Video Receiver controls the LFE settings.



6) **Phase:** This puts a slight delay on the signal sent to your subwoofer. Since the main amplifier drives the main speakers with a full range sound, the main speakers are reproducing bass frequencies along with the sub. If you have a front-firing sub that is in the same plane as the mains, then the phase can be set to 0°. Down-firing, rear-ported, or subs placed away from the main speakers will smear the bass tones, and the frequencies will cancel each other out as they bounce around the room. Try different settings and walk around your listening area for the optimum configuration. You set this to the optimum setting then forget it.

Phase Control: This feature is used to adjust the subwoofer's acoustic phase to match that of the main speakers.



Phase Control

7) "Night Mode" limits the maximum output for viewing in the evening, or when you are just not in the mood for loud bass. Selecting Nigh Mode saves having to adjust the volume manually. It is a nice feature if you have roommates whom you do not want to disturb at night.

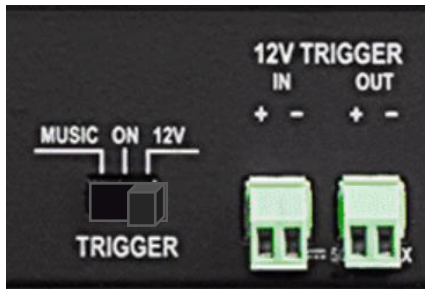
Night Mode: Limits the dynamic range of the amplifier so the louder context of the source signal is reduced. This feature allows the user to select night mode. Choose enable or disable.

Night Mode

8) External Trigger, you have the option to hardwire a 12 Volt trigger from another component equipped with a 12 Volt Trigger Output. There is 12 Volt Output as well to send a turn-on signal to an additional audio component. Note: The power button must be in the On Position, Pushed in, and showing the Active Green Power LED. *Make sure to disable this feature if not in use.*

External Trigger: This allows the user to select the enable external trigger function. Press and hold the navigation control knob with the power switch in the ON position to change.

External Trigger

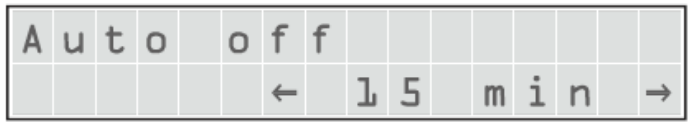


When switch set to 12V then Unit will only turn on from 12Volt Trigger signal

Power Button must be “On” for “12VTrigger” or “Auto On” to function

9) Music Turn-On: Your amplifier will come out of Standby when it senses an active signal. Once that signal is deactivated, there is an adjustable time before the Amp goes to Auto –Off then starts at 5 Minutes and increase 5-minute increments up to 30 minutes. Disable the Auto-Off if you have the turn-on mode set to either “12Volt Trigger” or “On.” The Power switch on the front panel must be on for this Turn-On mode to work.

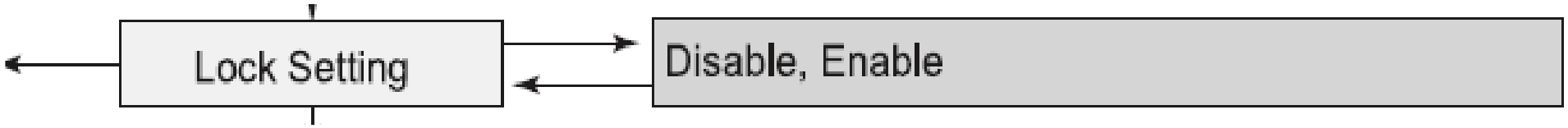
Auto Off: This feature allows the amplifier to turn itself off when not in use. With the function set to active, the amplifier will monitor its input signal. If no signal is present the amplifier will shut down and go into standby mode. As soon as a signal is present, the amplifier will turn itself back on.



Auto Off

Power Button must be “On” for “12VTrigger” or “Auto On” to function

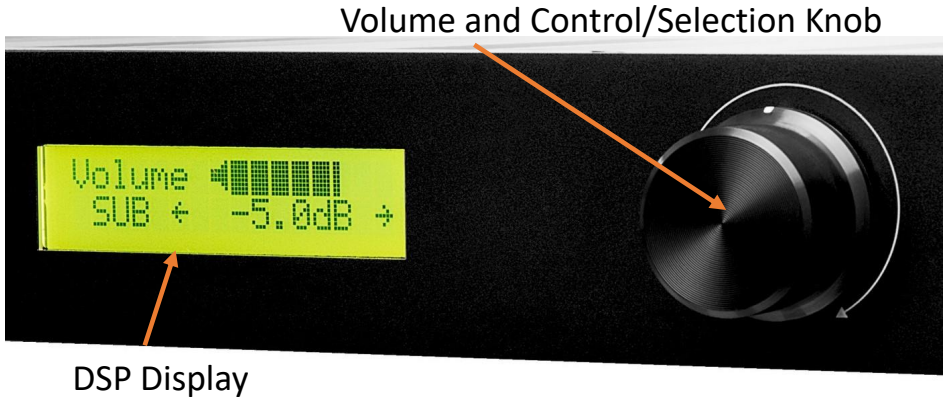
10) Lock Setting allows you to protect your settings, so once you have finalized your adjustments, enable the Lock settings. You will need to disable the Lock Settings to make changes.



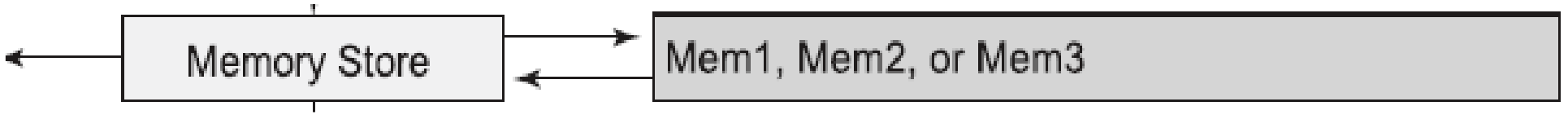
Lock Setting: When this function is active, all settings will be protected until disabled. Values are: Disable or Enable.

Lock Setting

11) Once you have finalized your settings, the SMP500, you will be able to save up to three different settings in the Memory Bank; Mem 1, Mem 2, and Mem 3. You could save the setting for the LFE Mode and one for the Sub Mode. You can access the Memory bank with either the Volume Control/Selection knob or using the IR Remote Control.



IR Remote

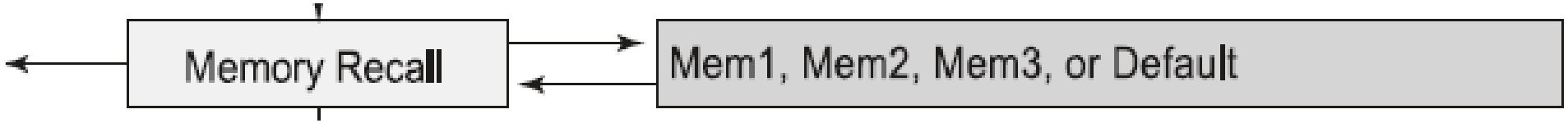


Memory Recall: This allows the user to recall settings saved using the "Memory Store" function.

Memory Recall

Memory Store: This allows the user to select the memory bank. There are three memory banks.

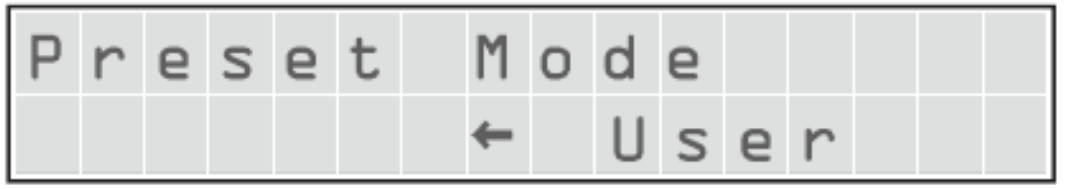
Memory Store



12)Presets: You can set up one touch

1. 6.
2. 7.
3. 8.
4. 9.
5. 10.

Preset Mode: Compatible with all brands and types of subwoofers.



EQ Mode

Default: USER?