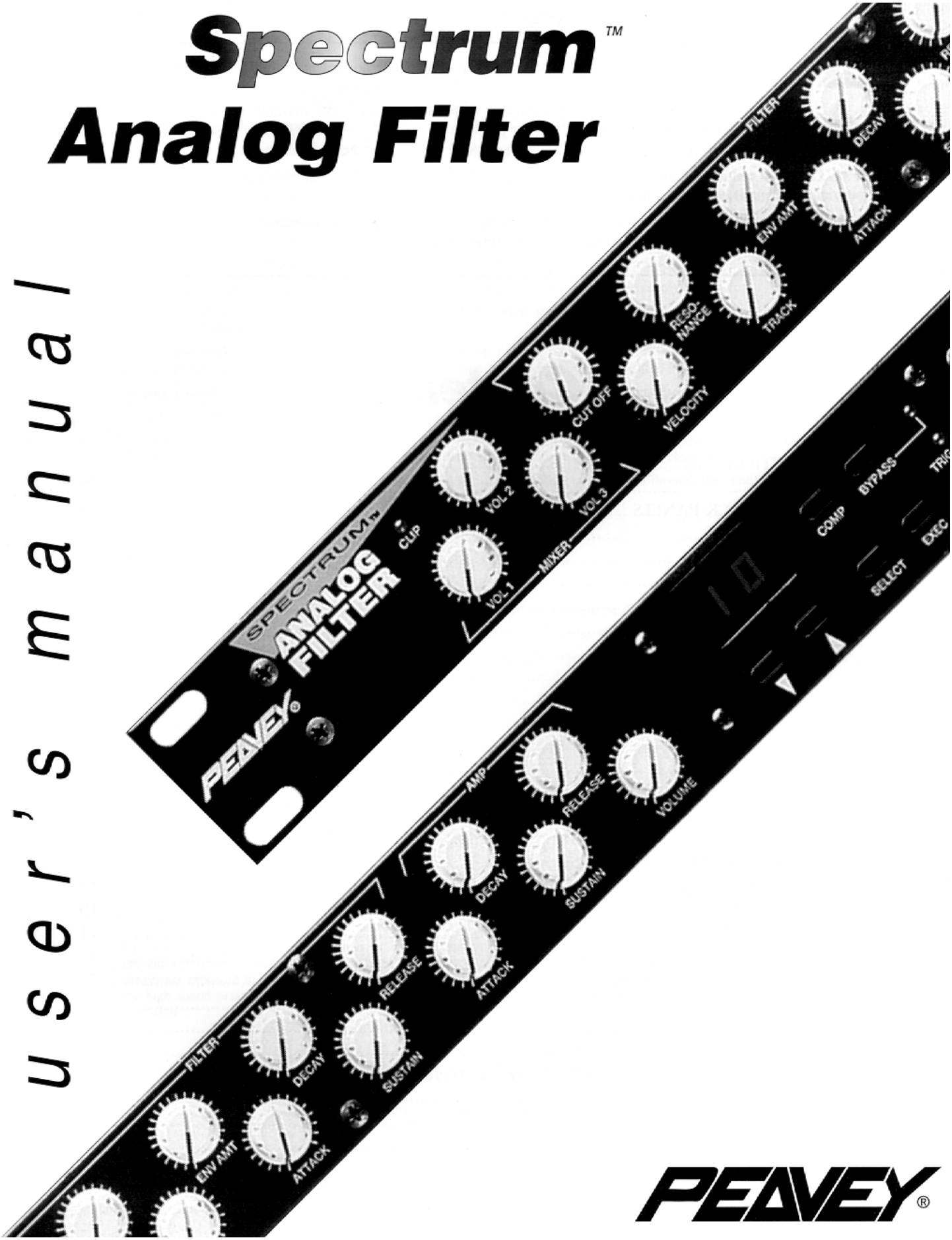
Spectrum™ Analog Filter

user's manual



PEAVEY®

Intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CAUTION Risk of electrical shock — DO NOT OPEN!

CAUTION To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

WARNING To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture. Before using this appliance, read the operating guide for further warnings.

Contents

INTRODUCTION

Congratulations and thank you for purchasing the Spectrum™ Analog Filter and supporting products made in the U.S.A.

The Spectrum Analog Filter was developed in response to the new resurgence towards analog monophonic synthesis. Rather than trying to retrofit an existing analog synth with MIDI circuitry, Peavey has developed a "programmable" analog system that can process any audio sound source.

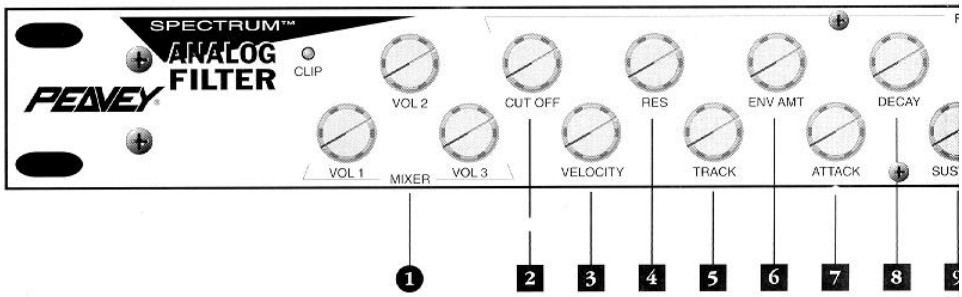
The Spectrum Analog Filter is designed to be used with any MIDI or non-MIDI sound source. It consists of a three-channel input mixer, followed by a "classic American" voltage-controlled filter (VCF), then by a voltage-controlled amplifier (VCA). These three elements compose a classic analog monophonic synth, with the exception of the oscillators. Use any sampler or sound module to drive the Spectrum Analog Filter with harmonically rich square, triangle, etc., waveforms, or any sample. This configuration gives the quality of analog synthesis not obtainable with the digital synth or sampler on its own. The Spectrum Analog Filter is also fully programmable, making it ideal for live applications.

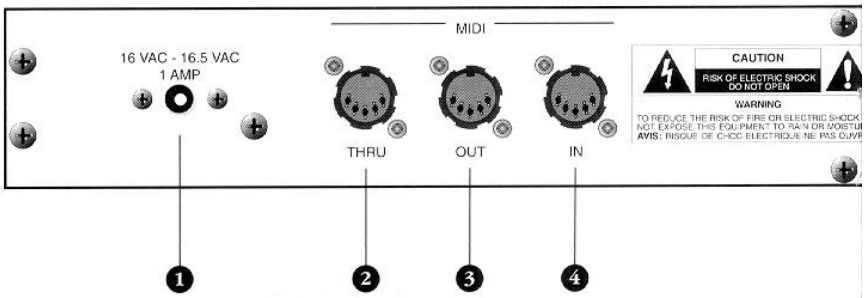
The Spectrum Analog Filter also features an analog signal trigger input which allows non-MIDI instruments to drive it. This allows using the Spectrum Analog Filter to process an electric bass, guitar, kick drum, or any other audio signal.

The Spectrum Analog Filter has also been designed to work with the Peavey CyberBass™. The audio of the CyberBass and the sound module can both be combined and processed using the Spectrum Analog Filter, resulting in a totally new direction for bass.

FEATURES

- Classic analog 4-pole filter design
- 100 programmable presets
- Easy parameter editing using rotary controls
- MIDI controllable
- Programmable 3-channel input mixer
- Audio trigger input
- Adjustable trigger threshold
- Compatible with Peavey CyberBass
- Single rack space

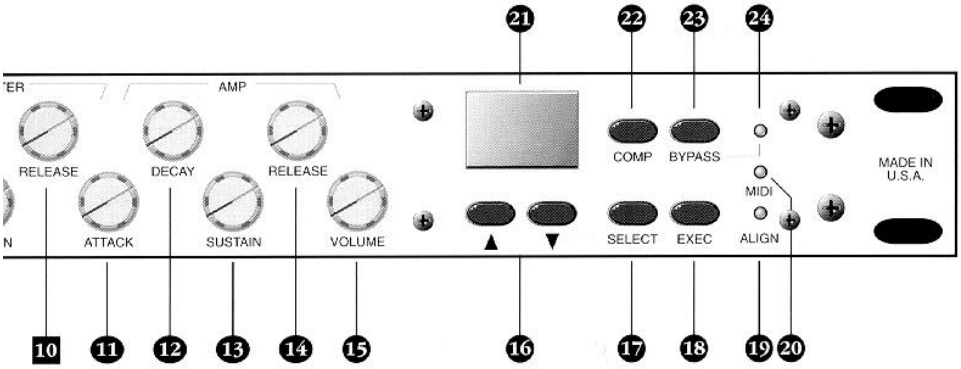


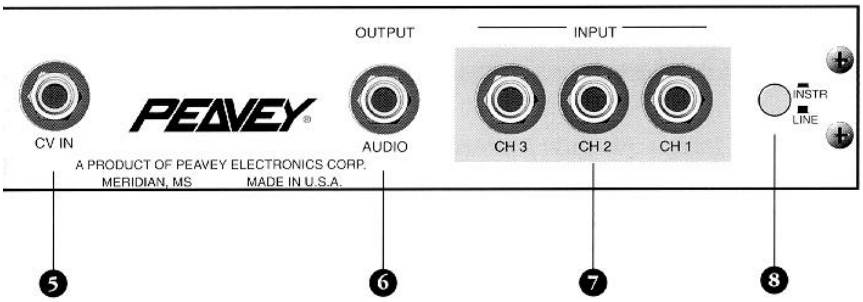


FRONT AND BACK PANELS

The Front

1. **Vol 1, Vol 2, and Vol 3 (Mixer)**
   These are volume controls for the three inputs available on the rear of the Analog Filter.
2. **Cutoff (Filter)**
   This controls the cutoff frequency of the filter.
3. **Velocity (Filter)**
   This controls the amount to which velocity affects the cutoff frequency.
4. **Resonance (Filter)**
   This control the resonance of the filter.
5. **Track (Filter)**
   This controls the keyboard tracking of the Filter.
6. **Env Amt—Envelope Amount (Filter)**
   This controls the amount of envelope on the Filter.
7. **Attack (Filter)**
   This controls the Attack of the filter envelope.
8. **Decay (Filter)**
   This controls the Decay of the filter envelope.
9. **Sustain (Filter)**
   This controls the Sustain of the filter envelope.
10. **Release (Filter)**
    This controls the release of the filter envelope.
11. **Attack (Amp)**
    This controls the Attack of the amplitude envelope.
12. **Decay (Amp)**
    This controls the Decay of the amplitude envelope.





13. **Sustain (Amp)**
    This controls the Sustain of the amplitude envelope.
14. **Release (Amp)**
    This controls the Release of the amplitude envelope.
15. **Volume (Master)**
    This is the master volume control.
16. **Increment/Decrement Buttons**
    This is used to move through options and select parameter settings.
17. **Select Button**
    Use to select a global parameter for editing.
18. **EXEC Button**
    This is used to store patch changes and to execute MIDI data dumps.
19. **Align LED**
    Flashes when the current setting is the same as the stored setting.
20. **MIDI LED**
    This LED lights when the Filter is receiving MIDI data or an audio trigger.
21. **Display**
    This, 7-segment LED, shows the current patch number. It is also used when setting the global parameters.
22. **COMP Button**
    This is a compare button that can be used to compare the current patch to the patch being edited.
23. **Bypass Button**
    Use this to bypass the Filter functions. (The audio plays through the Filter without being altered.)
24. **Bypass LED**
    This is lit when the Filter is in Bypass mode.

The Back

1. **Power Jack**
   Use only the 16.5 volt, 1A, power adapter provided (Peavey part #00710160).

Caution: Use only the Peavey 16.5 volt power supply provided with this product. If the original supply must be replaced, consult your Peavey dealer or the factory for the correct replacement. Failure to use the correct power supply could result in fire, shock hazard, extensive circuit damage, decreased performance or non-operation.

2. **MIDI Thru**
   This is a standard 5-pin DIN jack used to pass MIDI unaltered data through the Analog Filter to the destination device.
3. **MIDI Out**
   This is a standard 5-pin DIN jack used for sending MIDI data from the Analog Filter to the receiving device(s).
4. **MIDI In**
   This is a standard 5-pin DIN jack used for receiving MIDI data from the sending device.
5. **CV Pedal**
   This 1/4″ jack accepts input from a standard Control Voltage Foot pedal. The voltage is added to affect the Cutoff (controlled on the front panel). This would allow you to produce a "wa" type sound.
6. **Audio Output**
   This 1/4″ jack provides mono output.
7. **Ch 1, Ch 2, and Ch 3 (Audio Inputs)**
   Three input channels are provided.
8. **Level Button**
   This button affects the **Ch 1** input jack only! If using an instrument as an input source for **Ch 1**, make sure this button is in the "in" position. For audio sources other than instruments (i.e., line level) make sure the button is in the "out" position.

HOW DO I USE THIS?

The Spectrum Analog Filter is a highly complex piece of equipment requiring many years of study before total mastery can be accomplished or, you can experiment with the sounds produced when each knob is turned and master it in a matter of minutes—it's up to you.

The Analog Filter is one of those devices that is meant to be experimented with, not read about. What we'll do here is cover the basic connections required and explain the "global" settings.

Then it's all yours.

QUICK SETUP

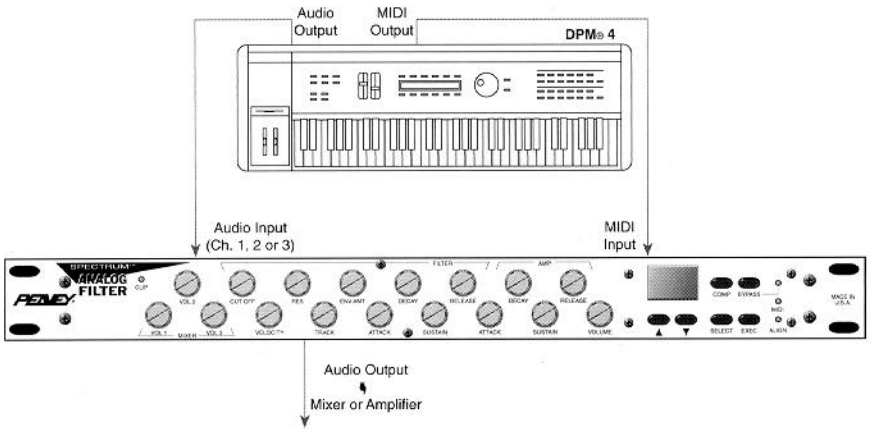
Quick Setup allows you to get up and running with your Spectrum Analog Filter with a minimum amount of reading, just follow these step-by-step instructions.

1. Unpack your Analog Filter.
2. Provide power.
3. Connect an audio source to **Ch 1** and a MIDI source to the **MIDI In** jack.
4. Press the Select button twice and set the configuration (**CF**). Use configuration **01** or **02** if a MIDI source is being used. Use configuration **03** or **04** if no MIDI source is used (i.e., using a non-MIDI guitar, bass, or drums/drum machine).
5. Set the master volume.
6. Start turning the knobs and create a sound you like.

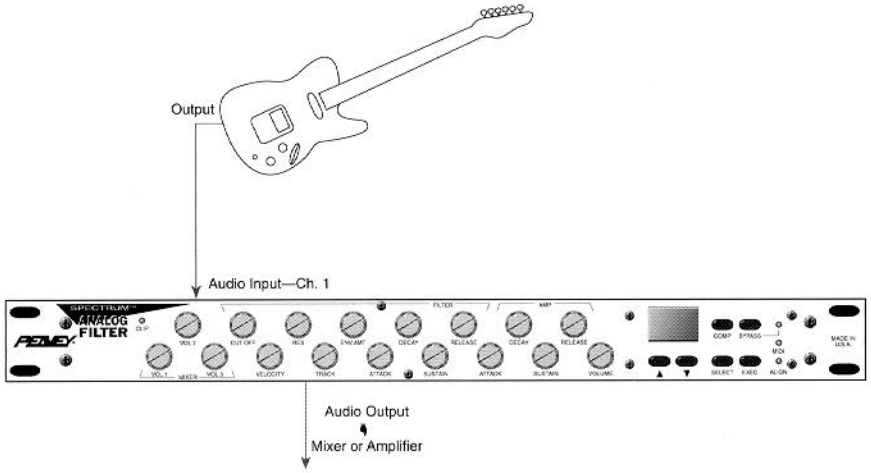
CONNECTIONS

This section covers *what you know*—not *who you know.*

1. Using the Filter with MIDI (Using Configuration CF=1 or CF=2)



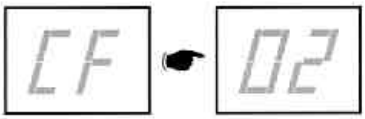
2. Using the Filter without MIDI (Using Configuration CF=3 or CF=4)



GLOBAL SETTINGS

You access the Global parameters by pressing the **Select** button on the front panel. Each time the **Select** button is pressed you move to the next Global parameter. To change the setting of a parameter press either the **up** (▲) or **down** (▼) arrow button.

Configuration Setup (CF)



There are four ways that the Filter can be operated, using a…

01 - MIDI Signal—single trigger (as a Moog)
02 - MIDI Signal—multiple trigger
03 - Channel 1 audio signal—gated trigger
04 - Channel 1 audio signal—envelope follower

Note: Only Channel 1 is used as a trigger signal and Vol1 does not affect the trigger level.

If you have the Filter connected, but don't hear any sounds, this is the first place to look.

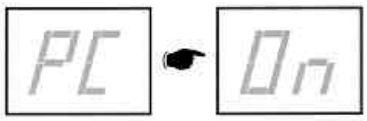
If you are using an audio signal, with no MIDI information, the configuration must be set to either 03 or 04.

Similarly, if you are using a MIDI signal, the configuration must be set to either 01 or 02.

A good rule of thumb is to use configuration 01 or 02 with a synth, configuration 04 with a bass or guitar, and configuration 03 with a drum trigger. You can configuration 03 with a bass or guitar but you must use a monophonic style.

Note: When using configuration 04, some knobs have no effect. For more information on configurations, see page 14.

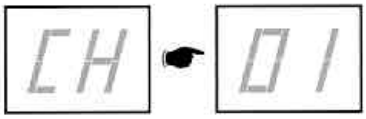
Patch Change Enable (PC)



Setting the Patch Change Enable to **OF** will inhibit the filter responding to patch change MIDI commands. Use this when programming. Setting this to **On** will allow the Filter to respond to patch change commands.

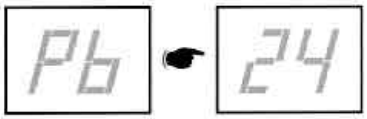
Note: If a MIDI patch number or MIDI bank number greater than 99 is sent, the Filter will automatically switch to the Bypass mode and display **by** in the LED display.

MIDI Channel (CH)



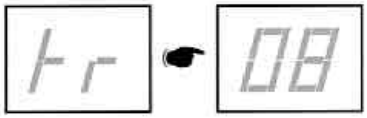
This sets the MIDI channel on which the Filter receives and transmits MIDI data.

Pitch Bend (Pb)



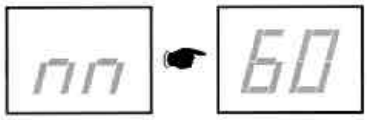
The Filter can be made to respond to pitch bend information with a range in semitones of 0, 2, 8, 12, or 24.

Trigger Level (tr)



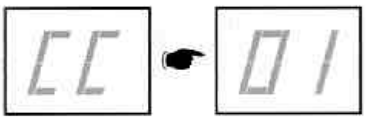
The trigger level setting only affects the Filter if configuration **03** is being used. It determines the sensitivity of the trigger applied to the audio Channel 1. A higher value makes the unit more sensitive. Only use monophonic audio inputs. (e.g., a drum).

MIDI Note Number (nn)



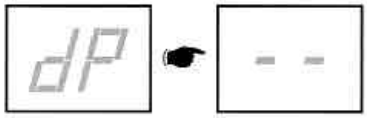
This setting only has an affect when configuration **03** is selected. When a trigger is detected this note number is sent to the MIDI Out connection on the Filter. Its purpose is for triggering drum samples.

Continuous Controllers (CC)



This assigns continuous controller numbers 0-99 as an increase in the control voltage. This affects the cutoff frequency.

MIDI Dump (dP)



When on this screen, pressing the EXEC button will send a System Exclusive MIDI dump.

EDITING AND STORING PATCHES

Editing and creating patches on the Analog Filter is easily accomplished by using the **FP** (front panel) screen. To get to this screen go to patch **00** and press the down arrow button. The display should now show:

This is a WYSIWYG mode in which the knobs on the front panel corresponds to the sound you hear. This is very useful when creating patches for the Filter. From here you can store your patch. See Storing a Patch.

Patch Number

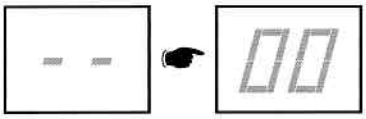
When the Analog Filter is first switched on the front panel will display the current patch number.

Use the up and down arrow buttons to switch from one patch to another.

If you wish edit this patch simply start turning the knobs until you obtain the desired result. This gives you a starting point if you don't want to use the WYSIWYG **FP** mode. By editing a patch you only change a parameter when a knob position is changed. Editing a patch in this manner also allows you to find the original knob positions using the Align LED. When the knob position moves into "alignment" with the original knob position the Align LED will flash. Just press the **Compare** button to hear the original sound, press it a second time to return to the edited sound. You will notice a decimal point when the original patch is edited.

Storing a Patch

Press the Select button one time. After you have edited or created a Filter setup, use this display to store your patch. The display will flash the patch number into which it will be stored. Use the up and down arrow buttons to select the patch number, then press the **EXEC** button to complete the operation.



KNOB KNOWLEDGE

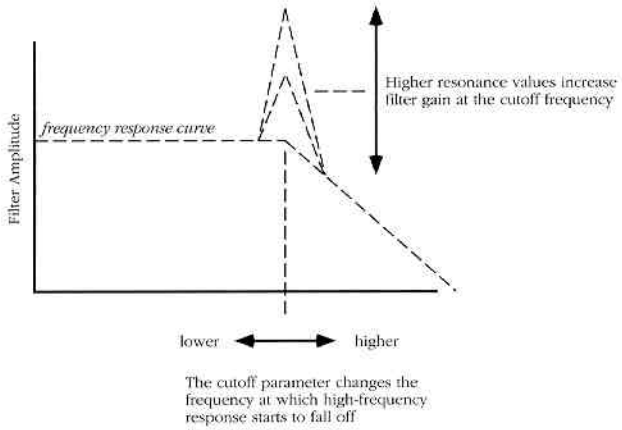
Okay, now that you have a basic understanding of the Analog Filter, let's get into some of the specifics of how you might use it.

But first...

...a little information on the filter.

The Spectrum Analog Filter is a lowpass filter in that it varies a signal's harmonic content by providing progressively greater degrees of attenuation above a specified *cutoff frequency*. Higher cutoff frequencies give a brighter sound; lower cutoff frequencies give a bassier sound, since fewer harmonics are present.

Another filter parameter is *resonance*. This increases the amount of gain at the cutoff frequency, which produces a sharper, more resonant sound at high resonance settings. The following figure correlates the cutoff frequency and resonance parameters.



"Filter" Knobs

The "filter" section of the front panel contains nine knobs. Here we try to give a more detailed definition than you received in the section Front and Back Panels.

Cutoff
This knob allows you to choose the filter's initial cutoff frequency. Progressively lower values (turning the knob counterclockwise) remove progressively more harmonics, giving a more dull sound. Progressively higher values (turning the knob clockwise) let more harmonics through, giving a brighter sounds.

Velocity
Velocity adds to the cutoff frequency. The greater the velocity value (or the harder you hit the key) the brighter the sound. The velocity knob controls the amount of brightness added to the sound.

Resonance
This sets the amount of gain at the filter's cutoff frequency. Higher settings (turning the knob clockwise) give sharper, more "whistling" effects.

Track
This corresponds to the keyboard tracking. As the frequency of the note increases, the frequency of the filter will increase proportionally. When the knob is set to full on (clockwise) the filter will track 1:1. When the knob is set full off (counterclockwise) the filter will not track.

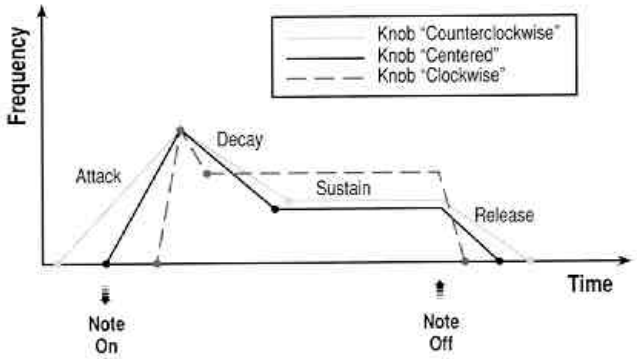
Env Amt
This is like a intensity control for the filter envelope. When at full off (counterclockwise) the envelope will have no affect. When set to full on (clockwise) the envelope will have maximum effect.

Attack
This allows you to adjust how quickly the attack occurs. Turning the knob full counterclockwise produces a very quick attack. Turning the knob full clockwise produces a slow attack. Knob settings in between produce varying effects—try some and see. See the figure following Release.

Decay
This allows you to adjust how quickly the decay occurs. Turning the knob full counterclockwise produces a very quick decay. Turning the knob full clockwise produces a slow decay. Knob settings in between produce varying effects—try some and see. See the figure following Release.

Sustain
This controls the sustain parameter of the filter envelope. Refer to the Basic Filter Envelope Parameters Figure.

Release
This allows you to adjust how long the note will sound once release occurs (after the note is turned off). Turning the knob full counterclockwise produces a very quick release. Turning the knob full clockwise produces a slow release. Knob settings in between produce varying effects—try some and see. See the following figure.



"Basic" Filter Envelope Parameters

"Amp" Knobs

The "amp" section of the front panel has four knobs. These function the same as the "filter" knobs except that they affect the amplitude envelope instead of the filter.

Attack

This allows you to adjust how quickly the attack occurs. Turning the knob full counterclockwise produces a very quick attack. Turning the knob full clockwise produces a slow attack. Knob settings in between produce varying effects—try some and see.

Decay

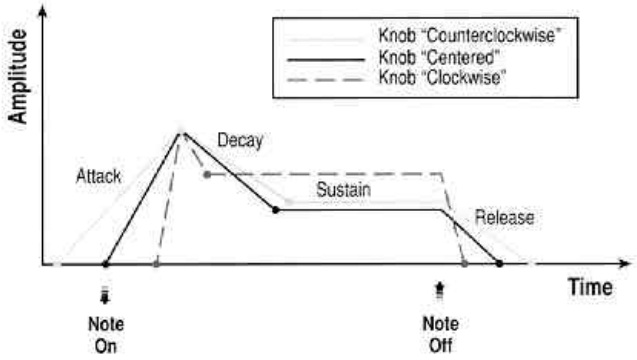
This allows you to adjust how quickly the decay occurs. Turning the knob full counterclockwise produces a very quick decay. Turning the knob full clockwise produces a slow decay. Knob settings in between produce varying effects—try some and see. See the figure following Release.

Sustain

This controls the sustain parameter of the amplitude envelope. Refer to the Basic Amplitude Envelope Parameters Figure.

Release

This allows you to adjust how long the note will sound once release occurs (after the note is turned off). Turning the knob full counterclockwise produces a very quick release. Turning the knob full clockwise produces a slow release. Knob settings in between produce varying effects—try some and see. See the following figure.



"Basic" Amplitude Envelope Parameters

INITIALIZING MEMORY

This operation restores the original factory global settings and restores all patches to the factory patches. *Any edits you have made will be erased.*

Initialization is useful if, for example, you want to restore the factory patches. Initialization is also a service procedure. Sometimes microprocessor-controlled devices will "lockup" due to spikes or surges on the AC line, a static electricity "jolt," or other gremlins. Initialization will reset the unit and in many cases, prevent a trip to the repair shop.

The Analog Filter also has a special initialization that can be used with the CyberBass guitar. This automatically bypasses all but the last sixteen patches.

Remember—*any patches you created will be lost during initialization!* Back up your patches so that your edits will not be lost during initialization. When initialized the factory presets are restored.

To initialize:

1. Remove power from the Analog Filter.
2. Press and hold the **Exec** and **Down** (▼) arrow buttons while reapplying power. The display will show **b1**.

To initialize for CyberBass:

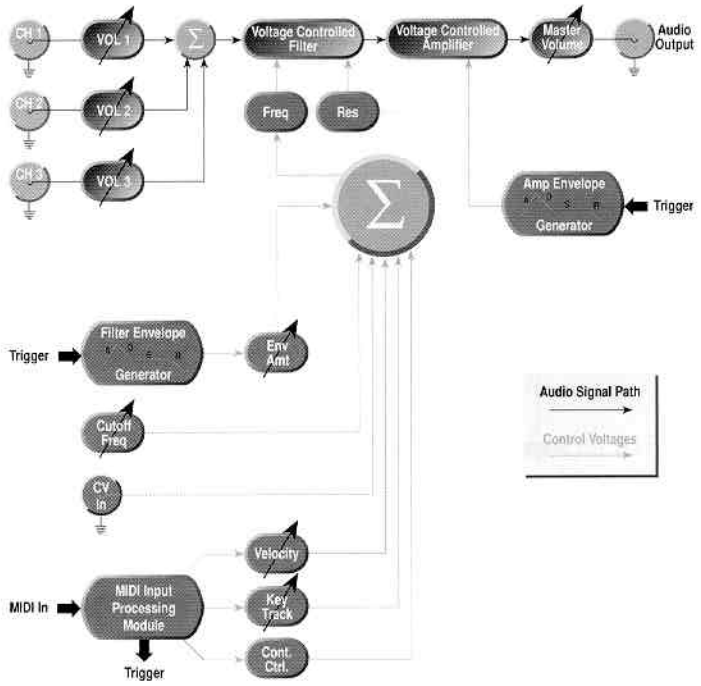
1. Remove power from the Analog Filter.
2. Press and hold the **Bypass** and **Down** (▼) arrow buttons while reapplying power. The display will show **b2**.

MORE ABOUT CONFIGURATIONS

Using Configuration 1 (CF=1)

When using configuration 1 you must have a MIDI input signal on the same MIDI channel the Analog Filter is using in order to trigger the filter and amplitude envelopes. It is also essential to have an audio signal connected to one of the three audio inputs as the Analog Filter does not create sounds but merely modifies them.

The Analog Filter will only trigger off the first note played. As long as that note is held all other note triggers are ignored. This is similar to the way Minimoog's worked.



Spectrum Analog Filter Block Diagram Configurations (CF=1&2)

Using Configuration 2 (CF=2)

This works the same as configuration 1, except accepts multiple triggers. Every time a MIDI Note On command is received the Analog Filter will retrigger the envelopes.

Using Configuration 3 (CF=3)

Configuration should only be used with monophonic signals (polyphonic signals can cause erratic triggering). When using configuration 3 it is recommended that you use a monophonic playing technique if you are using an instrument like a guitar or bass guitar.

No MIDI input is required however, the triggering signal must be on audio input channel 1.

It may be necessary to experiment with the signal level into the unit. Start with the trigger (**tr**) value at eight.

Note: Varying the **Vol1** control does not affect the input signal level that trigger circuit receives. If you want more signal going to the input circuit you must increase the volume on the instrument connected to Channel 1.

If you find that the Analog Filter is overtriggering:

- reduce the input signal
- reduce the trigger value

If you find that the Analog Filter is not triggering:

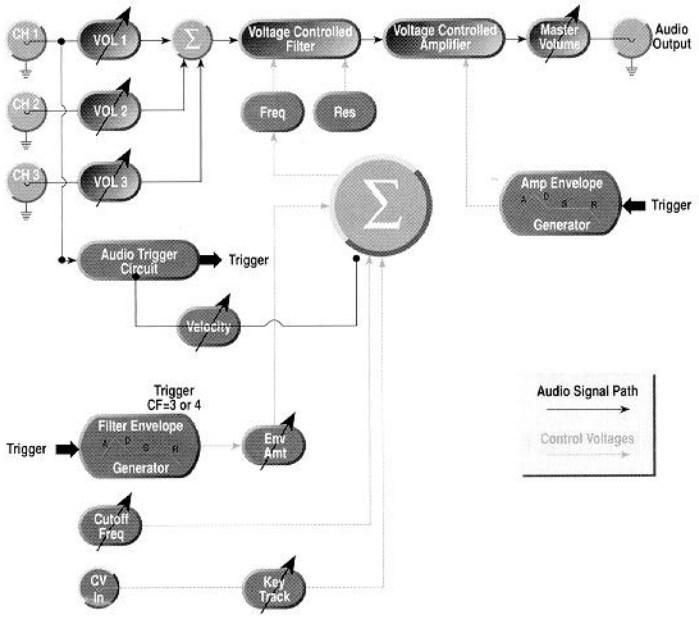
- increase the input signal
- increase the trigger value

For optimum performance when used with a guitar, you may need to split the clean guitar signal. (The Analog Filter should be triggered by a clean signal, not a distorted one.) The second clean signal can then be diverted to a distortion unit or guitar effects unit and fed back into the Analog Filter on either channel 2 or 3. This can produce some really cool sounds. In effect what you have just generated is an monophonic analog guitar synthesizer.

This configuration works very well with drum machines to give "techno" drum sounds. If you mic a drum his signal can be fed to channel 1 as an analog trigger signal. When the drum is struck a MIDI Note On command will be transmitted out of the MIDI Out jack it's note number is determined by the MIDI note number parameter (**nn**). By connecting a MIDI cable from the MIDI Out on the Analog Filter to MIDI In on a Peavey DPM® SP (Sampler) the Analog Filter an be used as a MIDI drum trigger. In turn the output from the sampler can again be routed to audio inputs 2 or 3 and be processed through the Analog Filter's circuitry.

Another useful application is for multitrack recording. For example, the kick drum recording is aurally disappointing. This can be used as a trigger into the Analog Filter which can then, through MIDI, trigger a sample of an alternative kick drum sound. This sample can then be processed through the Analog Filter using audio channels 2 or 3, if desired.

Any audio signal is fair game for the Analog Filter. Experiment and have fun!



Spectrum Analog Filter Block Diagram Configuration (CF=3)

Using Configuration 4 (CF=4)

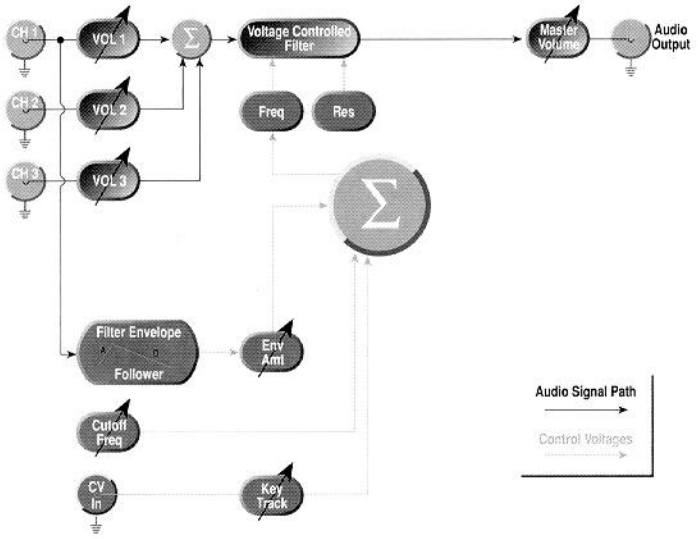
Configuration 4 is an envelope follower. The only knobs that have any affect on parameters in this configuration are:

- Vol1-3
- Cutoff
- Resonance
- Env Amt
- Attack (Filter)
- Decay (Filter)
- Track
- Volume (Master)

The Track parameter affects the CV input range. For example, with the Track knob set to full off (counterclockwise) the CV pedal will have no effect. With the Track full on (clockwise) the CV pedal has a large sweep range.

This configuration is very sensitive to the input level in that striking a guitar note very hard will produce a brighter sound. The amount of brightness is controlled by the **Env Amt** knob.

Any polyphonic input signal will work in this configuration.
This configuration disables the voltage control amplifier.



Spectrum Analog Filter Block Diagram Configuration (CF=4)

SYSTEM EXCLUSIVE

The Spectrum Analog Filter has a System Exclusive implementation which makes it possible to perform rudimentary patch editing for a single patch residing in the edit buffer.

Command Format

F0	System Exclusive Command
00 00 1B	Peavey System Exclusive
02	Keyboard Family ID
0C	Spectrum Analog Filter ID
<CH>	MIDI Receive Channel
<Command>	MIDI Command
<Data>	Parameter data
F7	End of System Exclusive

Note: All data is nibblized. When nibblizing data send the most significant byte (MSB) followed by the least significant byte (LSB).

Command	Data	Description
00	(No Data)	Bulk Dump Request. The Spectrum Analog Filter will respond by sending patches 00 to 99.

01	[Patch#]	Patch Dump Request. The Spectrum Analog Filter will transmit the selected patch. The patch is also loaded into the Filter's edit buffer.
02	[Patch #] [17 Parameters]	Patch Data. All 17 parameters are saved into the selected patch number. Parameters are: Vol1-3 Cutoff Velocity Resonance Track Env Amt Filter Attack Filter Decay Filter Sustain Filter Release Amplifier Attack Amplifier Decay Amplifier Sustain Amplifier Release Bypass All values are 0-63 except Bypass 0-1 (Off-On)
03	[Offset] [Value]	Writes data to the edit buffer one parameter at a time. See the following table for offsets and values.
04	[Patch #]	Stores the edit buffer contents into the selected patch # memory.

Table of Offsets and Values

Offset	Value	Description
0	0-63	Vol1
1	0-63	Vol2
2	0-63	Vol3
3	0-63	Cutoff
4	0-63	Velocity
5	0-63	Resonance
6	0-63	Track
7	0-63	Env. Amt.
8	0-63	Cutoff
9	0-63	Filter Attack
10	0-63	Filter Decay
11	0-63	Filter Sustain
12	0-63	Filter Release
13	0-63	Amplitude Attack
14	0-63	Amplitude Decay
15	0-63	Amplitude Sustain
16	0-63	Amplitude Release
17	0-1	Bypass

IMPORTANT SAFETY INSTRUCTIONS

WARNING When using electric products, basic cautions should always be followed, including the following.

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be retained for future reference.
3. Obey all cautions in the operating instructions and on the back of the unit.
4. All operating instructions should be followed.
5. This product should not be used near water, i.e., a bathtub, sink, swimming pool, wet basement, etc.
6. This product should be located so that its position does no interfere with its proper ventilation. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
7. This product should not be placed near a source of heat such as a stove, radiator, or another heat producing amplifier.
8. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
9. Never break off the ground pin on the power supply cord. For more information on grounding, write for our free booklet "Shock Hazard and Grounding."
10. Power supply cords should always be handled carefully. Never walk or place equipment on power supply cords. Periodically check cords for cuts or signs of stress, especially at the plug and the point where the cord exits the unit.
11. The power supply cord should be unplugged when the unit is to be unused for long periods of time.
12. If this product is to be mounted in an equipment rack, rear support should be provided.
13. Metal parts can be cleaned with a damp rag. The vinyl covering used on some units can be cleaned with a damp rag, or an ammonia-based household cleaner if necessary. Disconnect unit from power supply before cleaning.
14. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation holes or any other openings.
15. This unit should be checked by a qualified service technician if
    a. The power supply cord or plug has been damaged.
    b. Anything has fallen or been spilled into the unit.
    c. The unit does not operate correctly.
    d. The unit has been dropped or the enclosure damaged.
16. The user should not attempt to service this equipment. All service work should be done by a qualified service technician.
17. This product should be used only with a cart or stand that is recommended by Peavey Electronics.
18. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time.

    The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures.

Duration Per Day In Hours	Sound Level dBA, Slow Response
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
¼ or less	115

According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss.

Ear plugs or protectors in the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

SAVE THESE INSTRUCTIONS

THIS LIMITED WARRANTY VALID ONLY WHEN PURCHASED AND REGISTERED IN THE UNITED STATES OR CANADA. ALL EXPORTED PRODUCTS ARE SUBJECT TO WARRANTY AND SERVICES TO BE SPECIFIED AND PROVIDED BY THE AUTHORIZED DISTRIBUTOR FOR EACH COUNTRY.
Ces clauses de garantie ne sont valables qu'aux Etats-Unis et au Canada. Dans tour les autres pays, les clauses de garantie et de maintenance sont fixees par le distributeur national et assuree par lui seion la legislation envigueur.
Diese Garantie ist nur in den USA and Kanada gultig. Alle Export-Produkte sind der Garantie und dem Service des Importeurs des jewelligen Landes unterworfen.
Esta garantia es valida solamente cuando el producto es comprado en E.U. continentales o en Canada. Todos los productos que sean comprados en el extranjero, estan sujetos a las garantias y servicio que cada distribuidor autorizado determine y ofrezca en los diferentes paises.

PEAVEY ONE-YEAR LIMITED WARRANTY/REMEDY

PEAVEY ELECTRONICS CORPORATION ("PEAVEY") warrants this product, EXCEPT for covers, footswitches, patchcords, tubes and meters, to be free from defects in material and workmanship for a period of one (1) year from date of purchase, PROVIDED, however, that this limited warranty is extended only to the original retail purchaser and is subject to the conditions, exclusions, and limitations hereinafter set forth:

PEAVEY 90-DAY LIMITED WARRANTY ON TUBES AND METERS

If this product contains tubes or meters, Peavey warrants the tubes or meters contained in the product to be free from defects in material and workmanship for a period of ninety (90) days from date of purchase; PROVIDED, however, that this limited warranty is extended only to the original retail purchaser and is also subject to the conditions, exclusions, and limitations hereinafter set forth.

CONDITIONS, EXCLUSIONS, AND LIMITATIONS OF LIMITED WARRANTIES

These limited warranties shall be void and of no effect, if:

a. The first purchase of the product is for the purpose of resale; or
b. The original retail purchase is not made from an AUTHORIZED PEAVEY DEALER; or
c. The product has been damaged by accident or unreasonable use, neglect, improper service or maintenance, or other causes not arising out of defects in material or workmanship; or
d. The serial number affixed to the product is altered, defaced, or removed.

In the event of a defect in material and/or workmanship covered by this limited warranty, Peavey will:

a. In the case of tubes or meters, replace the defective component without charge.
b. In other covered cases (i.e., cases involving anything other than covers, footswitches, patchcords, tubes or meters), repair the defect in material or workmanship or replace the product, at Peavey's option; and provided, however, that, in any case, all costs of shipping, if necessary, are paid by you, the purchaser.

THE WARRANTY REGISTRATION CARD SHOULD BE ACCURATELY COMPLETED AND MAILED TO AND RECEIVED BY PEAVEY WITHIN FOURTEEN (14) DAYS FROM THE DATE OF YOUR PURCHASE.

In order to obtain service under these warranties, you must:

a. Bring the defective item to any PEAVEY AUTHORIZED DEALER or AUTHORIZED PEAVEY SERVICE CENTER and present therewith the ORIGINAL PROOF OF PURCHASE supplied to you by the AUTHORIZED PEAVEY DEALER in connection with your purchase from him of this product.
If the DEALER or SERVICE CENTER is unable to provide the necessary warranty service you will be directed to the nearest other PEAVEY AUTHORIZED DEALER or AUTHORIZED PEAVEY SERVICE CENTER which can provide such service.

OR

b. Ship the defective item, prepaid, to:

PEAVEY ELECTRONICS CORPORATION
International Service Center
326 Hwy. 11 & 80 East
MERIDIAN, MS 39301

including therewith a complete, detailed description of the problem, together with a legible copy of the original PROOF OF PURCHASE and a complete return address. Upon Peavey's receipt of these items:
If the defect is remedial under these limited warranties and the other terms and conditions expressed herein have been complied with, Peavey will provide the necessary warranty service to repair or replace the product and will return it, FREIGHT COLLECT, to you, the purchaser.

Peavey's liability to the purchaser for damages from any cause whatsoever and regardless of the form of action, including negligence, is limited to the actual damages up to the greater of $500.00 or an amount equal to the purchase price of the product that caused the damage or that is the subject of or is directly related to the cause of action. Such purchase price will be that in effect for the specific product when the cause of action arose. This limitation of liability will not apply to claims for personal injury or damage to real property or tangible personal property allegedly caused by Peavey's negligence. Peavey does not assume liability for personal injury or property damage arising out of or caused by a non-Peavey alteration or attachment, nor does Peavey assume any responsbility for damage to interconnected non-Peavey equipment that may result from the normal functioning and maintenance of the Peavey equipment.

UNDER NO CIRCUMSTANCES WILL PEAVEY BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS, ANY INCIDENTAL DAMAGES, OR ANY CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, EVEN IF PEAVEY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

THESE LIMITED WARRANTIES ARE IN LIEU OF ANY AND ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE; PROVIDED, HOWEVER, THAT IF THE OTHER TERMS AND CONDITIONS NECESSARY TO THE EXISTENCE OF THE EXPRESSED, LIMITED WARRANTIES, AS HEREINABOVE STATED, HAVE BEEN COMPLIED WITH, IMPLIED WARRANTIES ARE NOT DISCLAIMED DURING THE APPLICABLE ONE-YEAR OR NINETY-DAY PERIOD FROM DATE OF PURCHASE OF THIS PRODUCT.

SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THESE LIMITED WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

THESE LIMITED WARRANTIES ARE THE ONLY EXPRESSED WARRANTIES ON THIS PRODUCT, AND NO OTHER STATEMENT, REPRESENTATION, WARRANTY, OR AGREEMENT BY ANY PERSON SHALL BE VALID OR BINDING UPON PEAVEY.

In the event of any modification or disclaimer of expressed or implied warranties, or any limitation of remedies, contained herein conflicts with applicable law, then such modification, disclaimer or limitation, as the case may be, shall be deemed to be modified to the extent necessary to comply with such law.

Your remedies for breach of these warranties are limited to those remedies provided herein and Peavey Electronics Corporation gives this limited warranty only with respect to equipment purchased in the United States of America.

INSTRUCTIONS — WARRANTY REGISTRATION CARD

1. Mail the completed WARRANTY REGISTRATION CARD to:

PEAVEY ELECTRONICS CORPORATION
POST OFFICE BOX 2898
MERIDIAN, MISSISSIPPI 39302-2898

   a. Keep the PROOF OF PURCHASE. In the event warranty service is required during the warranty period, you will need this document. There will be no identification card issued by Peavey Electronics Corporation.
2. IMPORTANCE OF WARRANTY REGISTRATION CARDS AND NOTIFICATION OF CHANGES OF ADDRESSES:
   a. Completion and mailing of WARRANTY REGISTRATION CARDS — Should notification become necessary for any condition that may require correction, the REGISTRATION CARD will help ensure that you are contacted and properly notified.
   b. Notice of address changes – If you move from the address shown on the WARRANTY REGISTRATION CARD, you should notify Peavey of the change of address so as to facilitate your receipt of any bulletins or other forms of notification which may become necessary in connection with any condition that may require dissemination of information or correction.
3. You may contact Peavey directly by telephoning (601) 483-5365.

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Features and specifications subject to change without notice.

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