-FOOZ-
ANALOG FUZZ
SYNTHESIZER
USER'S GUIDE

FOOZ

ANALOG FUZZ SYNTHESIZER

FOOZ is a Fuzz and Filter effect inspired by our love of classic analog synthesizers.
The goal of this design was a pedal comprised of distinct blocks that can be combined
together in a variety of ways to create a vast array of possible tones and textures,
much like the elements of a synthesizer - (oscillator, filter, LFO, envelope).
To that end, we've included a square-wave fuzz to act as the 'oscillator', a Filter section
inspired by classic Low Pass Filters, and an LFO and envelope follower with which to
modulate the effect.

You can use FOOZ as a straightforward fuzz, add a Low Pass or Band Pass Filter, and
modulate the Filter (and other parameters) with either the Envelope or LFO. Addition-
ally, the Envelope can be used to modulate the LFO Rate and Depth, or an external
expression pedal can be used to control most of the surface functions.
Below is a walkthrough of basic operation of the unit and an explanation of the
controls.

INITIAL SETUP

Power the FOOZ with a 9v DC (center negative) power supply capable of providing at least 100 milliAmps. Connect your instrument to the input jack and send the output to your amplifier, mixer, or interface. If you have an expression pedal you can connect it to the expression input at this time.

FOOZ can produce extreme frequencies at high volumes in some settings. Make sure to set the Level control to '0' before powering on your amplifier (or other device) and engaging the effect.

We suggest starting by setting all controls except for Level at noon. Set Level fully counterclockwise. Set the Tremolo switch, the Filter Type, and Filter Control switches to 'OFF'. You should also check the dipswitches on the back of the pedal to make sure they are all set to 'OFF'.

FUZZ SECTION

Turn on your amp and engage the pedal. Bring up the Level control until the volume is at an ideal level. You should hear an overdriven tone with no additional effects. Adjust the Gain (Fuzz) control to a desired distortion level. In general many of the modulation effects will be more dramatic at higher gain settings, so we recommend you start by setting the Gain high, then adjust it to a lower setting if you prefer. The gain control should range from almost clean with a hint of drive to a massive square wave fuzz tone. Please keep in mind that the volume of the pedal can noticeably increase as you increase the Gain.

LFO

DEPTH   SPEED   WAVE   SHAPE

ENV

SENS.

LEVEL   ON   GAIN
         OFF
         TREM

FUZZ

BPF   FREQ   ENV
OFF   OFF
LPF   LFO   RESONANCE

FILTER

4
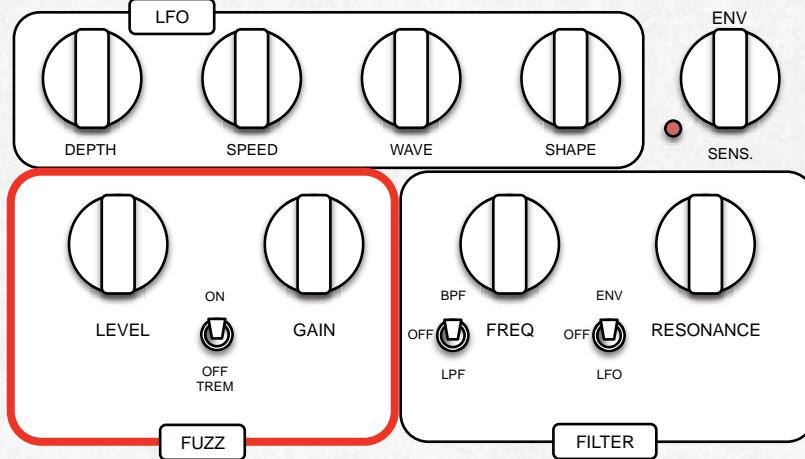
FILTER SECTION

Now we'll explore the Filter section. Set the Frequency Type Switch to 'LPF' and starting from a fully clockwise position, roll the Freq control down – you should hear a pleasant roll-off of high frequencies as you go. Now set the Frequency Type Switch to 'BPF' and try adjusting the Freq control again. You should hear a sweep more similar to a wah pedal.

Once you find a Frequency setting you like, try adding some Resonance. The Resonance control adds harmonics at the Frequency cutoff point. The volume of the effect will be increased as you turn the resonance up, and at higher settings of the Frequency and Resonance controls there is potential to create some unpleasant tones—we felt that having the range to explore was important, but please proceed with caution.

Let's set the Frequency and Resonance controls around noon for now and move on to the next section.

LFO

DEPTH   SPEED   WAVE   SHAPE

ENV

SENS.

LEVEL   GAIN

ON

OFF
TREM

FUZZ

BPF   ENV

OFF   FREQ   OFF   RESONANCE

LPF   LFO

FILTER

6
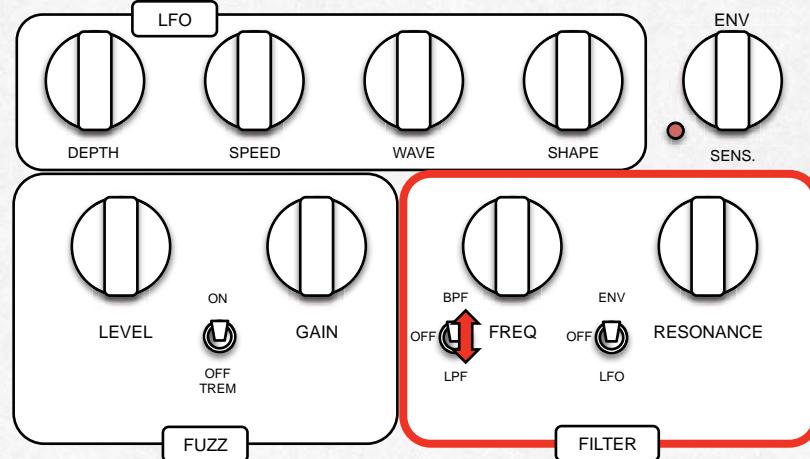
### LFO SECTION PT. I – TREMOLO

Set the Tremolo switch to 'ON'. With the LFO controls set to noon you should hear a standard Tremolo effect applied to the Fuzz. You can adjust the parameters of the LFO for different types of Tremolo.

Depth control: With the control set fully counterclockwise there will be no Tremolo effect. Set it fully clockwise for the most extreme Tremolo effect.

Speed control: Set fully counterclockwise for the slowest speed and fully clockwise for the fastest speed. This control will be superseded when the tap-tempo footswitch is used.

Wave control: Blends between three different wave shapes. Set fully counterclockwise for a Sine wave, at noon for a Triangle wave, and fully clockwise for a Square wave. Sine should occur as fairly smooth, while Square will be choppy, with Triangle falling in the middle.

Shape control: Changes the length of the Rise and Fall time for the Wave. Set it at noon and the Rise and Fall times will be equal. Set fully counterclockwise for a long rise and a short fall time, and fully clockwise for a short rise and a long fall. When set clockwise it can create choppy rhythms, while counterclockwise will create a swell effect.

LFO

DEPTH   SPEED   WAVE   SHAPE

ENV

SENS.

LEVEL   GAIN

ON

OFF
TREM

FUZZ

BPF   ENV

OFF   FREQ   OFF   RESONANCE

LPF   LFO
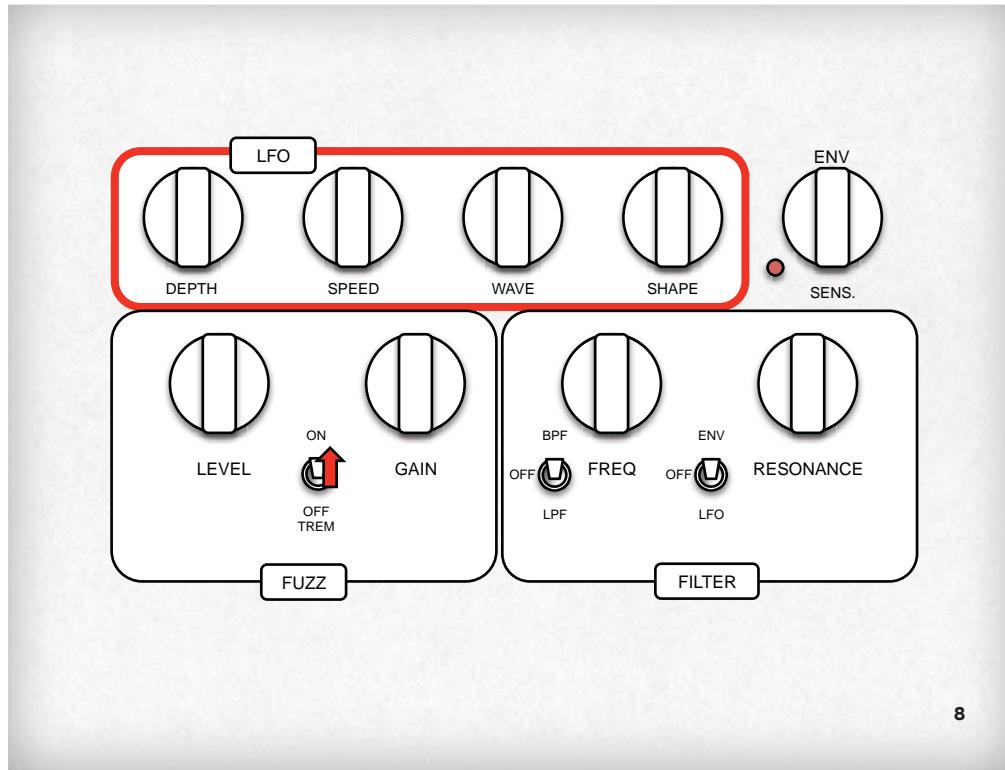
FILTER

LFO SECTION PT. II – MODULATED FILTER

At this point you should have a pretty good idea how the LFO controls work.

Make sure that the Filter switch is set to either 'LPF' or BPF', set the Tremolo switch to 'OFF' and the Filter Control switch to 'LFO'. The LFO wave will now be used to modulate the Filter section. The controls will function the same as they did in Tremolo mode (You can still use the Tremolo function in addition to modulating the Filter as well). With the LFO controls set to noon you should hear something akin to a Phase Shifter effect.

Try playing with the Freq and Resonance controls while the LFO is engaged to get some synthy sounds.

LFO

DEPTH   SPEED   WAVE   SHAPE

ENV

SENS.

LEVEL

ON

OFF
TREM

GAIN

FUZZ

BPF

OFF

LPF

FREQ

ENV

OFF

LFO

RESONANCE

FILTER

10
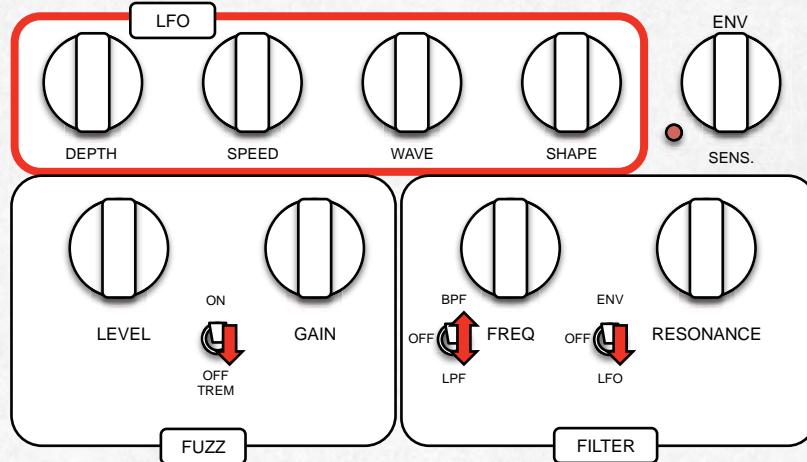
ENVELOPE CONTROL

With the Frequency and Resonance control at noon, set the Filter Control switch to 'ENV'. Hit a note or chord and let it ring out. You should hear the Frequency of the Filter sweep from high to low as the note fades. The effect will be more dramatic with the Resonance control set higher, and it will sweep further if the Sensitivity control is set higher, conversely it will dissipate more quickly with the Sensitivity control set lower.

Using a pick or a small screwdriver, gently switch dipswitch #3 to the 'ON' position (towards the bottom of the pedal). This will reverse the polarity of the Envelope control. With the Filter Control switch still set to 'ENV', try hitting a note or chord again and let it ring out. You should hear a dramatic difference, as the filter is now sweeping in the opposite direction, from low to high.

LFO

DEPTH   SPEED   WAVE   SHAPE

ENV

SENS.

DIPSWITCH SETTINGS

8 7 6 5 4 3 2 1

LEVEL   GAIN

ON
OFF
TREM

FUZZ

BPF
OFF   FREQ
LPF

ENV
OFF   RESONANCE
LFO

FILTER
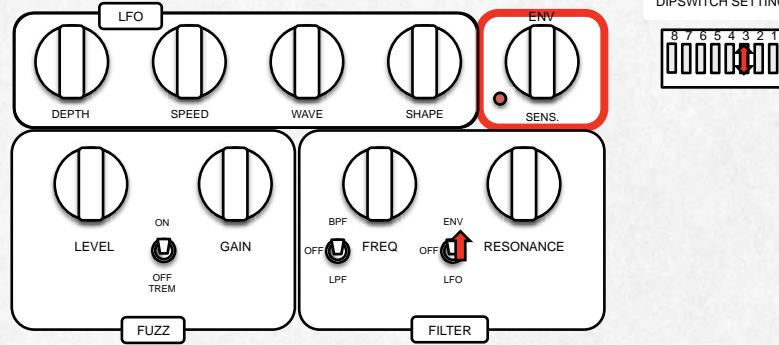
EXPRESSION CONTROL

If you have an expression pedal you can explore the assignable expression functionality of FOOZ now.

FOOZ should be compatible with most commonly available expression pedals – we recommend the Mission Engineering EP-1 or similar.

Connect your expression pedal to the 'EXP In' jack on the back of the pedal. You will need to use the dipswitches to assign the expression control. We suggest starting with the Freq control – set Dipswitch #6 to ON to assign expression control to the Freq control. This will allow you to sweep the Frequency with your expression pedal, which will occur similarly to a wah in BPF mode, or a sweeping synth filter in LPF mode. You can also assign Expression control to the Rate and Depth of the LFO, or to the overall volume of the pedal.

INPUT   EXP IN   EXP ASSIGN | ENV ASSN   OUTPUT   9-18 Vdc

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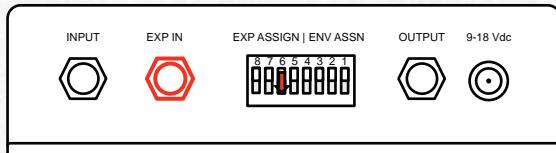
DIPSWITCH FUNCTIONS

You can use the dipswitches on the back of the pedal for a more interactive experience. Dipswitches 1-3 change the functionality of the envelope control, while 4-8 affect external expression control. LFO Depth and Rate can be controlled by the envelope (how hard you play) or by the expression pedal. In order to hear the effect you will need to have either the Tremolo function or the Filter LFO turned on.

DIPSWITCH KEY

Envelope Control Assign

1. ENV > LFO Depth – The Envelope will modulate the Depth of the LFO
2. ENV > LFO Rate – The Envelope will modulate the Rate of the LFO
3. Invert ENV Polarity – Changes the direction of Envelope control

Expression Pedal Assign

4. Invert EXP Polarity – Changes the direction of the Expression pedal control

5. EXP > Volume - The expression pedal will control the volume of the pedal

6. EXP > Freq – The expression pedal will control the Frequency of the Filter

7. EXP > LFO Rate – The expression pedal will control the rate of the LFO

8. EXP> LFO Depth – The expression pedal will control the depth of the LFO

FOOZ PRESETS

Synthscape
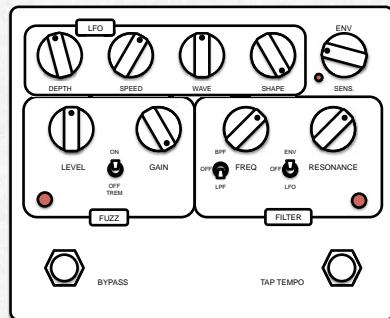

Fuzz-Wah
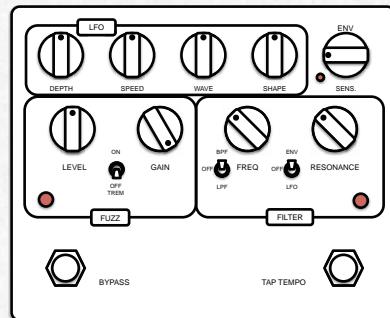
DIPSWITCH SETTINGS
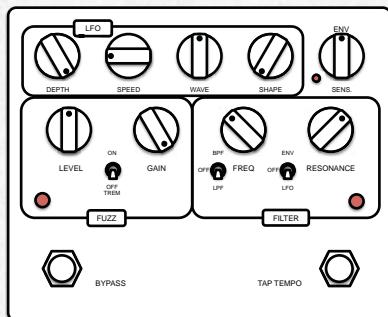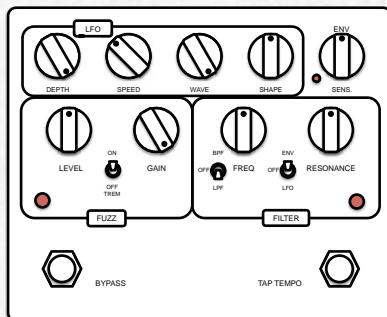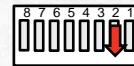
Blooming Filter

LFO

ENV

DEPTH · SPEED · WAVE · SHAPE · SENS.

LEVEL · ON · GAIN · BPF · OFF · LPF · FREQ · ENV · OFF · LFO · RESONANCE

OFF · TREM

FUZZ · FILTER

BYPASS · TAP TEMPO

Randomizer

LFO

ENV

DEPTH · SPEED · WAVE · SHAPE · SENS.

LEVEL · ON · GAIN · BPF · OFF · LPF · FREQ · ENV · OFF · LFO · RESONANCE

OFF · TREM

FUZZ · FILTER

BYPASS · TAP TEMPO

DIPSWITCH SETTINGS

8 7 6 5 4 3 2 1

USER PRESET SHEETS

USER PRESET SHEETS

LFO

ENV

DEPTH   SPEED   WAVE   SHAPE   SENS.

LEVEL   ON   GAIN   BPF   ENV   RESONANCE

OFF   FREQ   OFF

OFF   TREM   LPF   LFO

FUZZ   FILTER

BYPASS   TAP TEMPO

DIPSWITCH SETTINGS

8 7 6 5 4 3 2 1

NOTES

LFO

DEPTH   SPEED   WAVE   SHAPE

ENV

SENS.

LEVEL   ON   GAIN
         OFF
         TREM

FUZZ

BPF   ENV
OFF   FREQ   OFF   RESONANCE
LPF   LFO

FILTER

BYPASS   TAP TEMPO

8 7 6 5 4 3 2 1

NOTES

20

LFO

ENV

DEPTH   SPEED   WAVE   SHAPE   SENS.

DIPSWITCH SETTINGS

8 7 6 5 4 3 2 1

NOTES

LEVEL

ON

GAIN

OFF
TREM

BPF

OFF   FREQ

LPF

ENV

OFF   RESONANCE

LFO

FUZZ

FILTER

BYPASS

TAP TEMPO
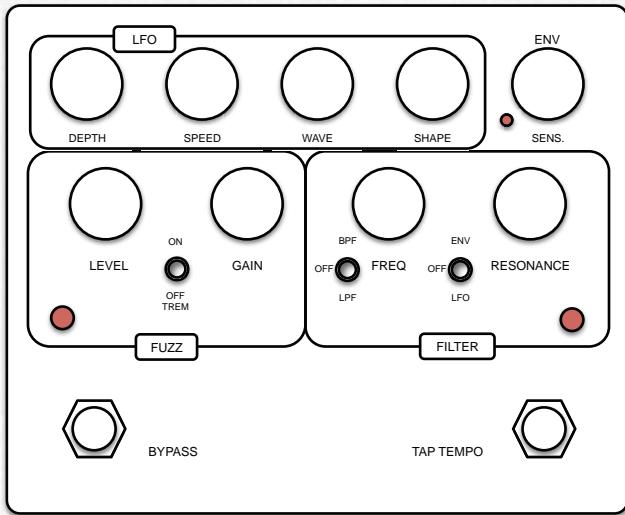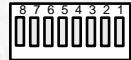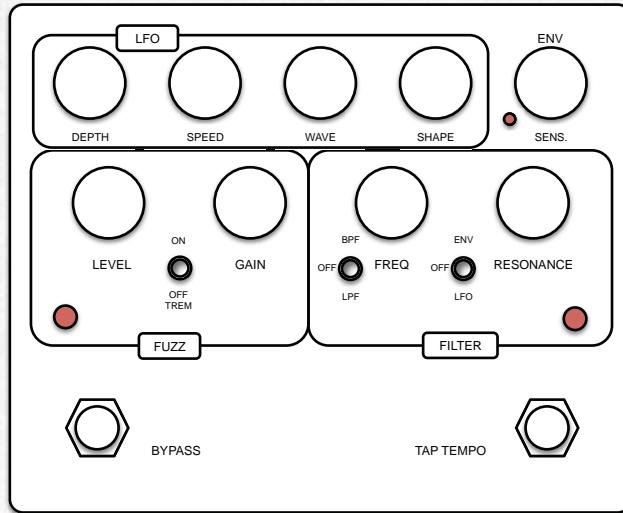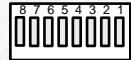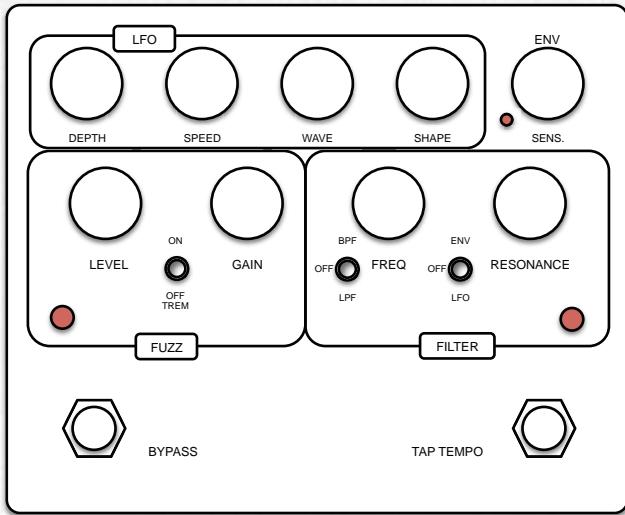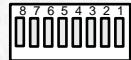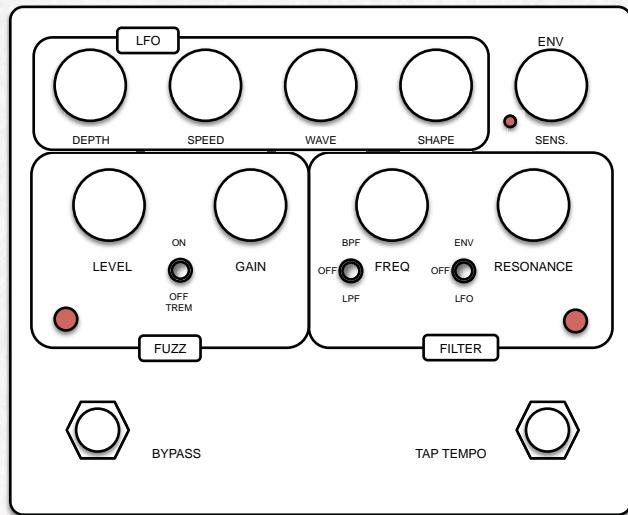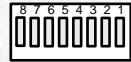
SPECIFICATIONS:

Input Impedance: 1M Ohms

Output Impedance: 1K Ohms

Gain (or Gain Range): 4dB to 72db, plus tremolo and filter gain changes

Noise referred to input: <-118 dBV, 400 Hz to 20 kHz

Synthesizer Filter Tuning Range: 20 Hz to 20 KHz +/-0.5dB

Power: External 9V regulated DC adapter (center pin negative)

Current Consumption: 72mA

Dimensions: 5-5/8 x 5 x 2-1/4, including knobs

Weight: 21oz

COMMITMENT TO QUALITY AND COMMUNITY

Seymour Duncan takes pride in designing and crafting our products to create the most amazing sound possible. Our Made in the USA label designates that the products are designed in Santa Barbara, California and manufactured in the USA with quality parts sourced in the United States and around the world.

With everything we create, our passion and obsession for amazing sound is reflected in its quality and reliability.

DESIGNED IN CALIFORNIA MADE IN THE U.S.A

LIMITED WARRANTY

Seymour Duncan offers the original purchaser a one-year limited warranty on both labor and materials from the day this product is purchased. We will repair or replace this product at our option if it fails due to faulty workmanship or materials during this period. Defective products can be returned to your USA dealer, international distributor, or sent direct to our factory postage prepaid along with dated proof of purchase (e.g., original store receipt) and RMA number. Call or email our factory for an RMA number which must be written on the outside of the box. We reserve the right to refuse boxes without an RMA written on the outside. As you might expect this warranty does not apply if you've modified the unit or treated it unkindly. We can assume no liability for any incidental or consequential damages which may result from the use of this product. Any warranties implied in fact or by law are limited to the duration of this express limited warranty.

DISPOSAL GUIDELINES

In the unlikely event that you ever need to dispose of this product it must be disposed of properly by handing it over to a designated collection point for the recycling of waste electronic equipment. Please contact your local household waste disposal service or the shop where you purchased this product for those locations. Thanks for helping us conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

FCC COMPLIANCE

This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference including interference that may cause undesired operation.

WHAT WE STAND FOR

We stand for great tone:
It's the heart.
The soul. The essence.
The core of the sound.

We stand for musicians.
Because soul matters.
Spirit matters.
Music matters.

We stand for quality.
We're an American original.
An industry leader.
And we're always innovating.

We stand by our work.
Our passion. Our history.
It's in everything we build.
In everything we touch.

We stand for great tone.
Music. Power. Heart. Soul. Tone.
It's who we are. It's what we do.
We are Seymour Duncan.

Seymour Duncan

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