

POWER REQUIREMENTS

Utilizes included 12V DC power supply, 150mA, center negative. Individual power supplies are provided for specific voltages (100V, 117V, 230V, 240V) with corresponding plugs appropriate for each country. For replacement Tech 21 power supply, please contact your local dealer/distributor, or Tech 21. Maximum power consumption: approx 100mA.

WARNINGS:

- * Attempting to repair unit is not recommended and may void warranty.
- * Missing or altered serial numbers automatically void warranty. For your own protection: be sure serial number labels on the unit's back plate and exterior box are intact, and return your warranty registration card or register online.



Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARRANTY:

ONE YEAR LIMITED. PROOF OF PURCHASE REQUIRED.

Manufacturer warrants unit to be free from defects in materials and workmanship for one (1) year from date of purchase to the original purchaser and is not transferable. This warranty does not include damage resulting from accident, misuse, abuse, alteration, or incorrect current or voltage. If unit becomes defective within warranty period, Tech 21 will repair or replace it free of charge. After expiration, Tech 21 will repair defective unit for a fee.

REPAIRS:

ALL REPAIRS for residents of U.S. and Canada: Call Tech 21 for **Return Authorization Number**. Manufacturer will **not** accept packages without prior authorization, pre-paid freight (UPS preferred) and proper insurance.

FOR PERSONAL ASSISTANCE & SERVICE:

Contact Tech 21 weekdays 10:00 AM to 5:00 PM, EST: 973-777-6996.

TECH 21

DESIGNED AND MANUFACTURED IN THE U.S.A.

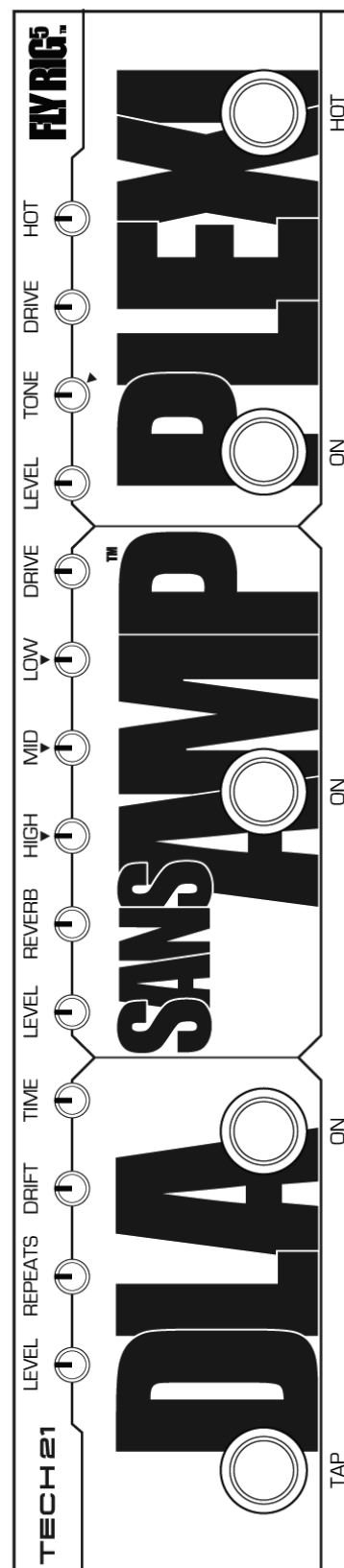
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FLY RIG⁵
TECH 21 · NYC



OWNER'S MANUAL

TECH 21, THE COMPANY

Tech 21 was formed by a guitarist possessing the unusual combination of a trained ear and electronics expertise. In 1989, B. Andrew Barta made his invention commercially available to players and studios around the world. His highly-acclaimed **SansAmp™** pioneered Tube Amplifier Emulation in professional applications for recording direct and performing live, and created an entirely new category of signal processing. There have since been many entries into this niche, yet SansAmp continues to maintain its reputation as the industry standard.

With a full line of SansAmp models, Tech 21 also offers effect pedals and MIDI products, as well as “traditional” style amplifiers for guitar and bass. Each product is thoughtfully and respectfully designed by B. Andrew Barta himself with the player in mind. Our goal is to provide you with flexible, versatile tools to cultivate, control, refine and redefine your own individual sound. Tech 21 takes great pride in delivering consistent quality sound, studio to studio, club to club, arena to arena.

PRODUCT OVERVIEW

The Fly Rig 5 is more than a pedalboard. In a single pedal. And no board. Less than 12 inches long and weighing just over 18 oz., this sleek, compact unit embodies an entire rig. At its heart, is the all-analog SansAmp, which makes it possible to go direct to a PA or mixer. For effects, you have the essentials: a reverb, a delay with tap tempo, a powerful boost, and a muscular distortion. No crackling patch cables, dying batteries or ground loops. No stinkin’ van, heavy flight cases, cable spaghetti, and no dead weight.

With the Fly Rig 5, you can relax. For fly gigs across the globe, jamming at the local hang, and last minute sessions, you’ll be the first one ready to go. You can stop stressing over what to pack and agonizing over what to leave behind. You can stop dreading cheesy backline loaners and overheating at the mere thought of your touring rig going down. Just pop your Fly Rig 5 into your guitar case and head for the door. (Be sure to wipe that smile off your face when the rest of the band shows up sweating and out of breath.)

APPLICATIONS

As a PRE-AMP or STOMPBOX with a guitar amp. You can connect the Fly Rig 5 in-line just as you would a standard distortion pedal. If the pre-amp of your amplifier is imparting too much of its own character on the pedal, plug into the low level input and set the pre-amp as clean and neutral as possible. As most amps tend to be on the bright side, you may need to start with High in the SansAmp section below 12 o’clock and adjust as necessary.

Also, be aware that most tube amps have a tone stack. When everything is on max, they tend to cut the mid-range. So don’t be surprised to find that the flattest sound is achieved with bass and treble at minimum, and mid at max. Since most tube amp passive tone stacks work in a similar fashion, we recommend this as a good starting point and adjusting to taste.

You can also plug into the effects loop return (if the amp has one). This will disable the entire pre-amp of the amp for a truer representation of the sound.

For DIRECT RECORDING or DIRECT to PA. All of the tone shaping and cabinet emulation needed is already incorporated into the SansAmp section of the pedal. The Fly Rig 5 automatically converts your guitar signal to Low Z allowing you to plug into a variety of inputs that would normally load down your guitar’s signal. It can be plugged into mixers (live and studio), workstation/recorders, and even directly into the sound card on a computer.

THE INS AND OUTS

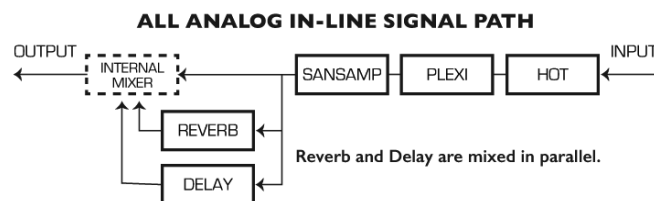
1/4” INPUT: 1megOhm instrument level. For normal operation, signal level to *Input* should be close to that of a standard electric guitar (approx -10dBm / 250mV). The input is designed with the same sensitivity and loading characteristic as a tube amp.

!! WARNING !! DO NOT RUN THE SPEAKER OUTPUT OF ANY AMP directly into a SansAmp input.

Severe damage to the amp and the SansAmp will result.

1/4” UNIVERSAL OUTPUT: Unbalanced 1kOhm Low Z instrument level output. This output can be connected to High Z guitar amplifiers (or effects) as well as Low Z mixer and computer inputs. Output level is unity gain when pedal is in bypass mode. It also drives long cables without loss of signal integrity, even in bypass.

GOOD TO KNOW BEFORE YOU START



RELATIONSHIP OF THE LEVEL CONTROLS

Signal flow is right to left, from the input to the output. Therefore, the Level controls follow in the same order, from Hot to Plexi Level to SansAmp Level.

Be aware that the “last” level in the signal path will determine the overall output level. For instance, when the Plexi and SansAmp sections are engaged, the SansAmp Level determines the overall output level of the unit. If only the Hot and Plexi are engaged, the Plexi Level determines the overall output level of the unit.

The DLA Level control only affects the mix level of the delay, not the overall output level.

SET LEVEL CONTROLS FOR UNITY GAIN

Set the level controls so you have the same volume coming from your speaker/monitor whether the pedal is active or in bypass. This ensures the next device in the signal chain won’t get slammed by a much hotter signal than what would normally come from the instrument. Similarly, you wouldn’t want a drop in volume, either which would force the next device to struggle for enough signal.

CLIP WARNING

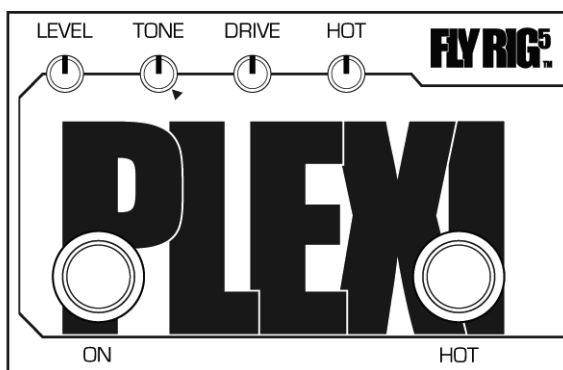
The Level control in the DLA section has a built-in clip warning. Like a VU meter, the DLA’s Level control will flash red to warn you if the circuit is being over loaded.

You can then trim the corresponding control accordingly: Hot, Plexi Level or SansAmp Level. Bear in mind that occasional blinks (peaks) are okay and can be expected when you dig into your strings, but it should not be continuously lit.

SET CONTROLS AT NOON, except Tone in the Plexi section at max, just to get started. Then begin experimenting and checking out the Sample Settings.

GUIDE TO FUNCTIONS and CONTROLS (in order of signal flow)

PLEXI Section



Function #1: HOT

When PLEXI is off/in bypass, Hot works independently to boost the SansAmp and/or DLA sections and/or your amplifier, up to 21dB.

Function #2: PLEXI Distortion

Based upon our own Hot-Rod Plexi pedal and inspired by vintage amps of the same nickname. While those hulking stacks are known to sound best at ear-bleed levels, the PLEXI can painlessly transform your sound at the kick of a switch. You can completely change the personality of a clean amp tone or use it as an instant mod with a dirty amp tone.

When engaged, the PLEXI will be in “Stock mode.” It’s as if you have the signal path from the input jack to the speaker jack of a stock ‘68 Plexi (without the speaker emulation).

When you engage the Hot function, it’s like having an extra “12AX7” pre-amp gain stage. Activated via its own footswitch, you can kick in up to 21dB of pre-amp boost. The range allows you to go from a state of mild overdrive to insane gain.

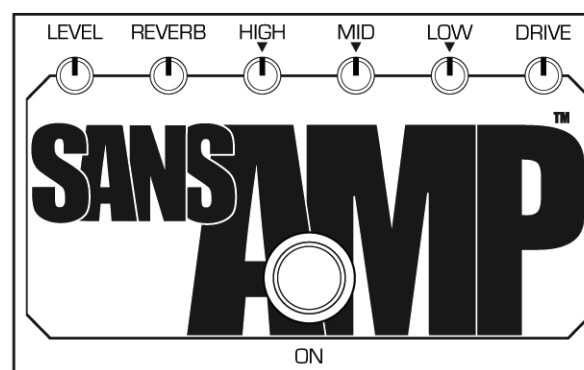
DRIVE: Adjusts the overall amount of gain and overdrive, similar to when the output section of a tube amp is being pushed. Highly interactive with the level of your guitar. For instance, you can clean up the amount of distortion by decreasing the guitar’s volume (except in very extreme settings) without having to change the setting on the pedal. Conversely, you can increase the amount of distortion by simply increasing the guitar’s volume.

TONE: Adjusts the hi-end content of the Plexi section. At max (noted by the indicator), it’s flat. As you reduce the setting, it will decrease the high end.

LEVEL: Adjusts the output level of the PLEXI section.

NOTE: The Plexi section, like the Hot-Rod Plexi pedal, is an effect. It has no speaker emulation incorporated into the circuitry and is not designed or intended to be used alone going direct to a mixer or PA.

SANSAMP Section



Function #3: Tube Amplifier Emulation

The SansAmp technology enables the Fly Rig 5 to run directly into mixers of recording desks and PA systems, as well as augment your existing amplifier set-up. It can also be used to record directly to tape/disc and enhance previously recorded tracks. The SansAmp section of the Fly Rig 5, focuses on clean tones within the tube amplifier sound spectrum. To dirty things up, you have the flexibility of using the Drive control, the Hot function, or you can add distortion from the Plexi section. Or all three. Each method achieves different tones.

Speaker simulation is an integral part of the circuitry. It is designed for a smooth, even response as would be achieved by a multiply-miked cabinet, without the peaks, valleys, and notches associated with single miking. The shape of the speaker curve will not adversely effect or interfere with the frequency response of your own cabinet. The speaker simulation works in tandem with the EQ controls to custom tailor the overall sound.

DRIVE: Adjusts the overall amount of gain and overdrive, similar to when the output section of a tube amp is being pushed. The first half of the rotation will increase the volume as well as the overdrive.

LOW, MID, HIGH: On-board post-EQ section gives you full control, like having a studio mixing board at your fingertips. Unlike passive tone controls that only cut, these active controls cut and boost. At 12 o’clock, they are flat.

LOW is tuned to $\pm 12\text{dB @ } 120\text{ Hz}$.

MID is tuned to $\pm 12\text{dB @ } 500\text{ Hz}$.

HIGH is tuned to $\pm 12\text{dB @ } 3.3\text{ kHz}$.

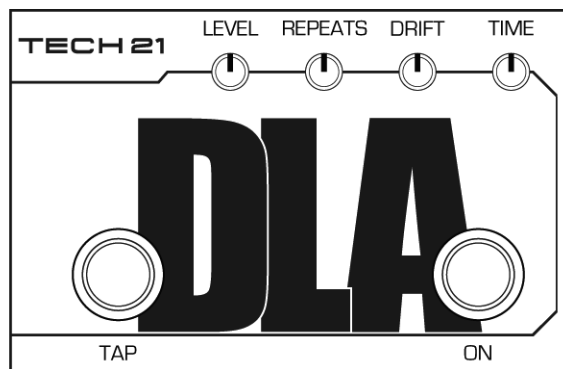
LEVEL: Adjusts the output level of the unit when the SansAmp section is engaged. This control has an exceptionally wide range for maximum compatibility with a variety of equipment.

Function #4: Reverb

This is like having a tube amp with a built-in reverb. It emulates the rich ambiance of a vintage spring reverb, minus the annoying artifacts. This single, continuously-variable control provides a smooth, full sweep to easily dial in the amount of reverb desired.

Reverb Tip: When using the Reverb in front of an amp, the amp will compress the signal and the reverb will become more pronounced. Therefore, you will most likely need to have a lower setting than you would if you went through an effects loop. For instance, a Reverb setting at 10 o’clock through an effects loop may need to be adjusted to 8 o’clock through the front of an amp in order to get the same results.

DLA Section



Function #5: Delay with Tap Tempo

Voiced for the sounds of a vintage tape echo and is based upon our own Boost DLA pedal.

TIME: Controls the amount of delay. This single, continuously-variable control provides a smooth, full sweep, ranging from 28 milliseconds up to 1,000 milliseconds. At 12 o'clock, Time is approximately 300 milliseconds. You can easily dial in the exact amount of delay desired with one turn of the knob. Turning the Time control while playing will transpose the pitch of your guitar note, just like a vintage analog delay.

DRIFT: Rather than evenly modulating the delayed signal, Drift adds a random, unpredictable element to the modulation that is more true to a vintage tape echo. At minimum (7 o'clock), there is no effect. At maximum, there will be a drastic shifting of the pitch, which can be used for special effects.

REPEATS: Feeds back the delayed signal to the input of the delay circuit to generate the number of repeats. At minimum (7 o'clock), you will hear one repeat. As you increase the setting, the repeats will follow accordingly until they are almost infinite. At max, it will self-oscillate.

Repeats Tip: When using the DLA in front of an amp, the amp will compress the signal and the repeats will become more pronounced. Therefore, you will most likely need to have the setting lower than you would when running through an effects loop. For instance, you may find a Repeats setting at 10 o'clock through an effects loop will yield 3 repeats. However, through the front of an amp, you may find a setting of 8 o'clock will give you the same results.

LEVEL: Adjusts the output level of the DLA section only. Also functions as a clip warning (see page 2).

TAP TEMPO: Dedicated footswitch makes it simple to just tap in the delay tempo you want during your performance. Tap Tempo will override the Time setting (and conversely, turning the Time knob will override the Tap Tempo). The Tap Tempo works in Bypass so you can set it ahead of time. A special feature of the Tech 21 Tap Tempo is that it will not change the pitch of your guitar tone when you change the pace from faster to slower or slower to faster. This provides a seamless transition for on-the-fly adjustments if your drummer drifts.

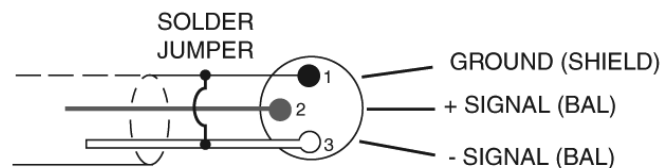
THE HIDDEN CHORUS

You can create a chorus-like effect by turning up the Drift control (refer to The Police-style sample setting). For a preview, use only the DLA section and set Level at max, Repeats at min, Drift at noon, Time at min.

NOTEWORTHY NOTES

1) Using the Fly Rig 5 with headphones. The Fly Rig 5 will drive average headphones at moderate volume. We recommend using a mono 1/4-inch to stereo 3.5mm adapter plug so both sides are operational.

2) Using the Fly Rig 5 with a Power Engine 60. The Power Engine 60 utilizes a ground independent transformer, which may pick up hum from the auto-switching power supply. Therefore, the XLR input of the Power Engine 60 should be grounded. You can accomplish this by modifying a male XLR connector by soldering Pin 1 to Pin 3 and inserting into the XLR input of the Power Engine 60:



3) Tech 21 controls are unusually sensitive and tend to perform well beyond what would be considered "normal." So you need not set everything at max to get maximum results. For instance, to brighten your sound, rather than automatically boosting High all the way up, try cutting back on Low first.

4) To find the best settings for interacting with your other gear, you may need to use radically different settings for each individual way you use it. You need not be discouraged or suspect something is wrong with the unit. If you've got your sound, you've simply found the right balance to complement each individual piece of gear. We recommend you start with the tone controls at 12 o'clock and cut or boost as necessary.

5) Tech 21 pedals have exceptionally low noise levels. However, they may amplify noise emanating from the input source. To minimize noise, we recommend active electronic instruments have the volume set so that the clip light barely comes on when in Bypass, and have the tone controls positioned flat. If you need to boost, do so slowly and sparingly. Also check for pickup interference by moving your guitar or turning the volume off. Be aware single coil pickups are more likely to generate noise.

6) Placement notes: The Fly Rig 5 can be treated as an amplifier or preamp when it comes to setting up your signal chain:

Place the following effects BEFORE the Fly Rig 5:
Booster, Compression, Fuzz, Phaser/Vibe, Overdrive, Wah.

Place the following effects AFTER the Fly Rig 5:
Delay, EQ, Flanger, Phaser (yes, after is good, too), Pitch Shifter, Reverb.

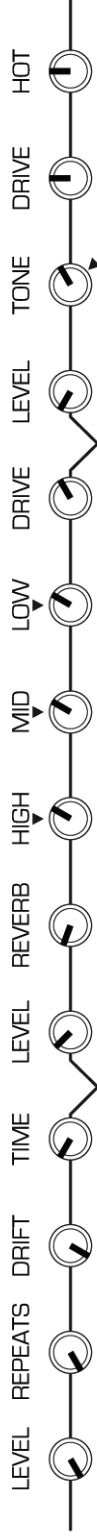
7) Buffered bypass eliminates the shortcomings associated with "true bypass" (pops and clicks, and high-end loss when multiple pedals are connected together), as well as signal loss associated with other types of switching circuits.

8) Custom actuators. All Tech 21 pedals feature smooth, silent-switching actuators that are licensed by other major manufacturers.

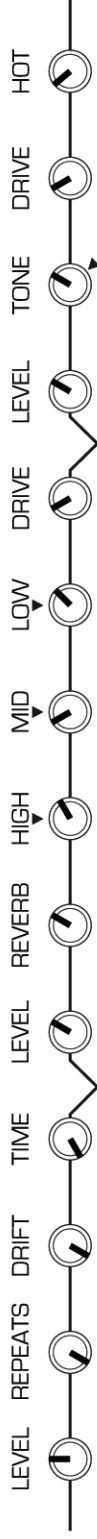
SAMPLE SETTINGS



CLASSIC ROCK



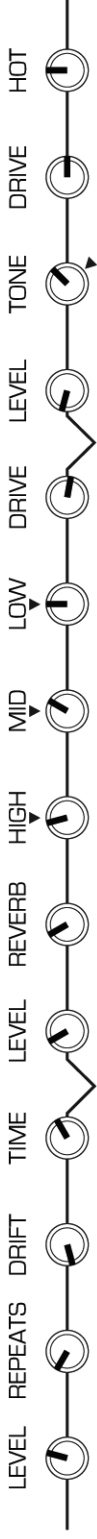
SRV / BLUES-STYLE



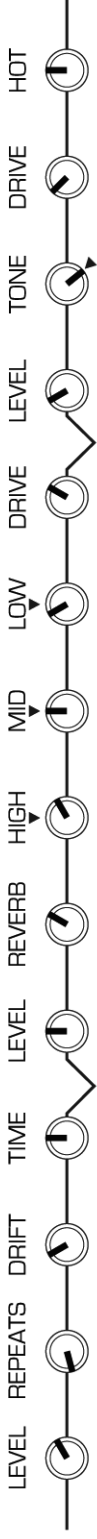
ROCKABILLY ROOTS



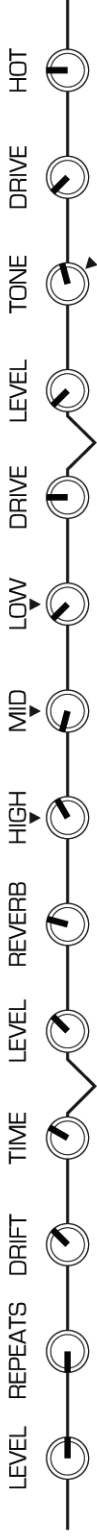
GILMOUR/FLOYD-STYLE



U2/THE EDGE-STYLE



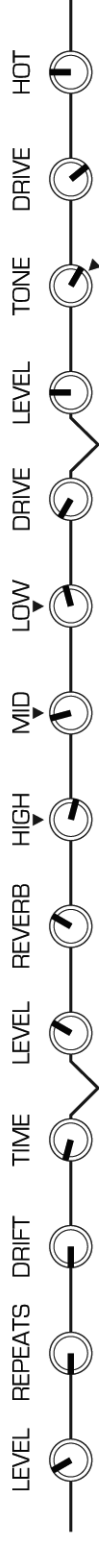
THE POLICE-STYLE



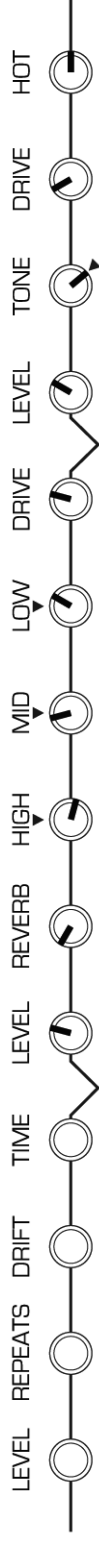
SAMPLE SETTINGS



VAN HALEN-STYLE



AC/DC-STYLE



Sample Settings for the Plexi and DLA will vary when using the Fly Rig 5 with an amp (vs. the SansAmp section).

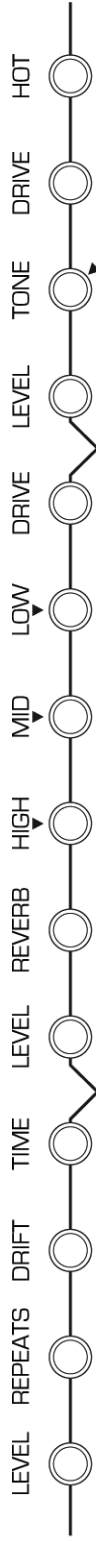
Sample Settings are an approximate guide to get you started. These were determined using a Fender Telecaster and Gibson Les Paul, running the Fly Rig 5 direct into studio monitors. Your results may vary.

Names of Sample Settings are intended for descriptive purposes only and should not be construed as an endorsement or affiliation with the companies, products, or artists named.

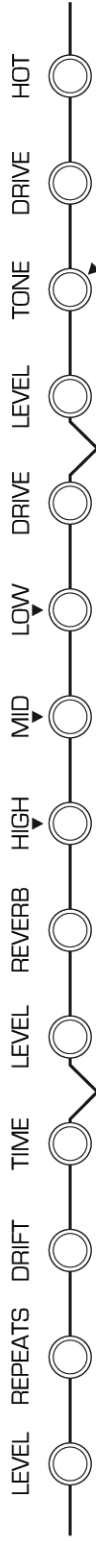
CUSTOM SETTINGS



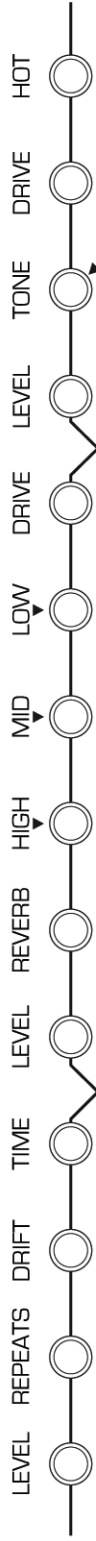
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Name: _____



CUSTOM SETTINGS

DLA _____ **SANSAMP™** _____ **PLEX** _____

Name: _____

LEVEL REPEATS DRIFT TIME LEVEL REVERB HIGH MID LOW DRIVE LEVEL TONE DRIVE HOT

Name: _____

LEVEL REPEATS DRIFT TIME LEVEL REVERB HIGH MID LOW DRIVE LEVEL TONE DRIVE HOT

Name: _____

LEVEL REPEATS DRIFT TIME LEVEL REVERB HIGH MID LOW DRIVE LEVEL TONE DRIVE HOT

DLA _____ **SANSAMP™** _____ **PLEX** _____

Name: _____

LEVEL REPEATS DRIFT TIME LEVEL REVERB HIGH MID LOW DRIVE LEVEL TONE DRIVE HOT

Name: _____

LEVEL REPEATS DRIFT TIME LEVEL REVERB HIGH MID LOW DRIVE LEVEL TONE DRIVE HOT

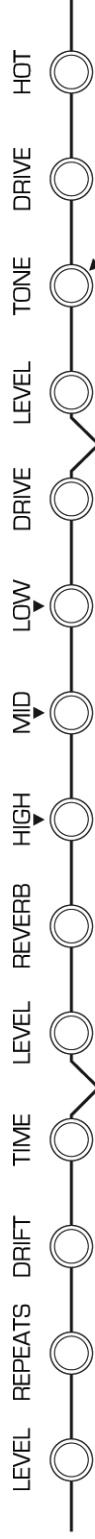
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LEVEL REPEATS DRIFT TIME LEVEL REVERB HIGH MID LOW DRIVE LEVEL TONE DRIVE HOT

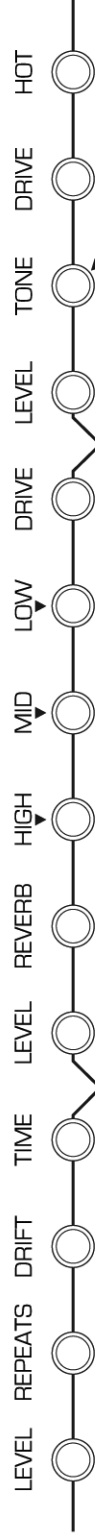
CUSTOM SETTINGS



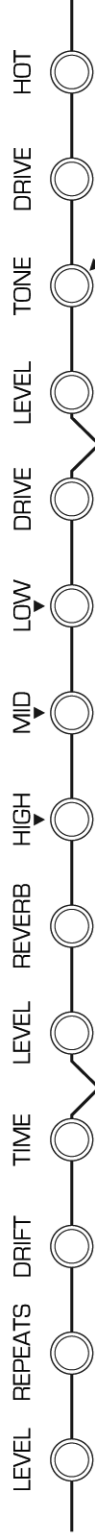
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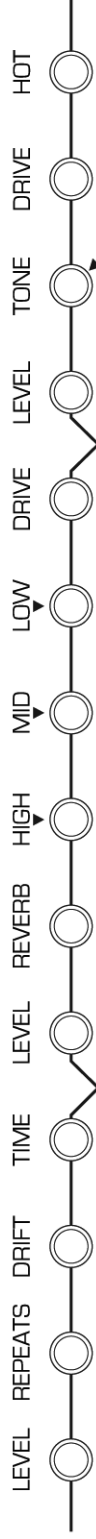
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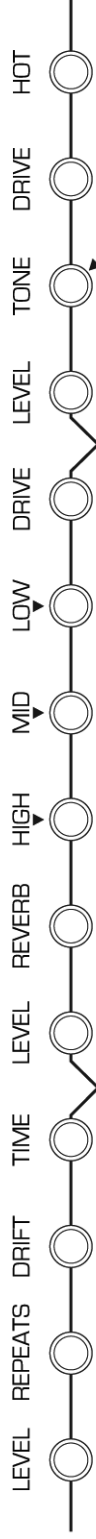
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