

duncan | turner acoustic research™

Seymour Duncan and Rick Turner. Two legends who spent years working with musicians, perfecting their tone. Now working together to create innovative products for acoustic musicians.





SOLSTICE™
Mixing-Blending System



Solstice is a high quality two channel preamp mixer that blends virtually any type of sound source. The low-noise hybrid circuitry and internally adjustable gain from 0 to 24db make it suitable for both live and studio use. Solstice is the perfect solution for musicians looking to live-mix up to four sources such as piezo pickups, magnetic pickups, standard mics, and high output condenser mics.

FEATURE

BENEFIT

1/4" and XLR inputs on each channel	Allows either a microphone or pickup input on either channel
Balanced XLR mic input with volume control for optimum headroom and lowest noise	Very low noise and high common mode rejection ratio. Utilizes discrete hybrid circuitry as in high end mixing consoles
Ultra high impedance single ended input for pickups or single ended mics	Preserves the full frequency response of piezo type pickups with no attenuation of low end. Includes true gain control. Very low noise, high current, discrete hybrid circuitry
Clip indicator	Helps set optimum gain for best headroom and signal to noise ratio
Phase reverse switch	Helps control acoustic feedback
Channel effects loop with send and return jacks	Can be used as independent signal output or as insertion point for external signal
Mute switch and mute indicator	Allows complete shut off of rig
Tuner output (unaffected by mute switch)	Allows quiet tuning
Stereo input jack	Allows access to both channels with one stereo cable
External wall mount power supply	Allows AC operation
15V Phantom Power	Provides 15V Phantom Power for microphones
High quality components	Extremely low noise and distortion, audiophile quality sound
Mic stand adapter available as an option	Useful for on-stage applications that use a microphone stand. Allows the performer to have full access to the front panel while facing the audience



Solstice Back Panel

TECHNICAL SPECIFICATIONS

Input

- Two Channel Preamp
- +15 volt phantom power
- Two Ultra-High impedance 10 Meg Ohm stereo 1/4" input jacks
- Two XLR input jacks with 40dB of gain and switchable 20dB pad

Output

- Main XLR output
- Two post EQ balanced XLR outputs
- Single-ended buffered output with very low output impedance
- Master Effects signal output (line level)
- Two 1/4" stereo insertion points
- Tuner / auxiliary output

ACCESSORIES



Shoulder Carry Bag

2-90-901

Attractive, high-quality, black fabric shoulder bag carries one unit of Solstice or Equinox. Padded insides with divider for wall wart. Double zipper. 9"x 9 1/4" x 3 1/4".



Mic Stand Adaptor Kit

2-90-910

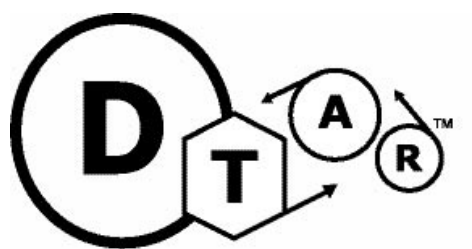
Attaches to underside of Solstice or Equinox allowing the unit to be mounted to a standard microphone stand.

"Wall Wart" Power Supply Replacements

2-90-912 120v replacement for standard USA plug pattern

2-90-913 230v replacement for standard EU (non-UK) plug pattern

SOLSTICE MIXING-BLENDING SYSTEM



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EQUINOX™

Parametric Equalizer Preamp



Equinox is an audiophile quality 3 band parametric equalizer preamp with low noise components and circuit design making it ideal for studio and live use. The frequency sweep control, bandwidth control, and boost/cut control allows musicians to correct or enhance very specific tonal problem areas. Dual notch filters can be used to control or eliminate acoustic feedback. Equinox is the ideal solution for musicians who require precise control of their EQ in any environment.

FEATURE

BENEFIT

3 Band Parametric Equalizer Preamp	Allows precise EQ control to correct or enhance very specific tonal problem areas with frequency sweep control, bandwidth control, and boost/cut control
Two independent notch filters	Eliminate acoustic feedback
20 dB gain switch	Provides instant gain
True bypass switching of non-activated functions	Bypass switch removes entire EQ and notch filter sections from signal chain leaving only high impedance, low noise input and buffered output
High quality components	Extremely low noise and distortion, audiophile quality sound
1/4" stereo input jack	Allows connecting input and output to Solstice on a single, stereo cable
Compact, portable design	Can be used as a stand-alone preamp for ultra portable instrument amplification systems



Equinox Back Panel

TECHNICAL SPECIFICATIONS

Input stage — Extremely low noise and low distortion

Noise

- All controls set “flat”/-116dBV, referred to input with gain set at +20dB
- All controls set “flat”/-106dBV, referred to input with gain set at unity
- “Worst Case” noise — 94dBV, all EQ set to full boost, all Q controls set to full narrow, frequency controls set to highest frequency.

3 Band EQ — each band has adjustable Q (bandwidth) from .58 to 9.4 with 15 dB of boost and cut available

- Low Frequency Band — Frequency adjustable from 39 Hz to 408 Hz
- Midrange Frequency Band — Frequency adjustable from 212 Hz to 2.35 KHz
- High Frequency Band — Frequency adjustable from 1.8 KHz to 20 KHz

Maximum input signal — 8.5 VRMS @ unity gain setting/.85 VRMS @ +20dB gain
 Slew Rate — 22V/us
 Input impedance — 2Meg ohms
 Thd — <.003% @ 1Vo

Notch Filters

- Q (bandwidth) fixed at 9.0 with 15 dB of cut available
- Notch Filter #1: Frequency adjustable from 40 Hz-400
- Notch Filter #2: Frequency adjustable from 80 Hz-800

Misc. Features

- Input Jack — 1/4” Stereo, input on tip / output on ring, allows interface with DTAR Solstice (Acoustic Mixer) using a single, stereo cable.
- Output Jack — 1/4” Mono
- Power Supply — Internal +/- 15V derived from 15VAC external, wall mounted power transformer.

ACCESSORIES



Shoulder Carry Bag

2-90-901

Attractive, high-quality, black fabric shoulder bag carries one unit of Solstice or Equinox. Padded insides with divider for wall wart. Double zipper. 9”x 9 1/4” x 3 1/4”.



Mic Stand Adaptor Kit

2-90-910

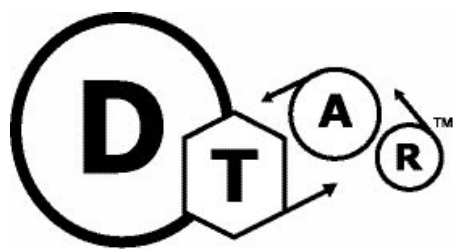
Attaches to underside of Solstice or Equinox allowing the unit to be mounted to a standard microphone stand.

“Wall Wart” Power Supply Replacements

2-90-912 120v replacement for standard USA plug pattern

2-90-913 230v replacement for standard EU (non-UK) plug pattern

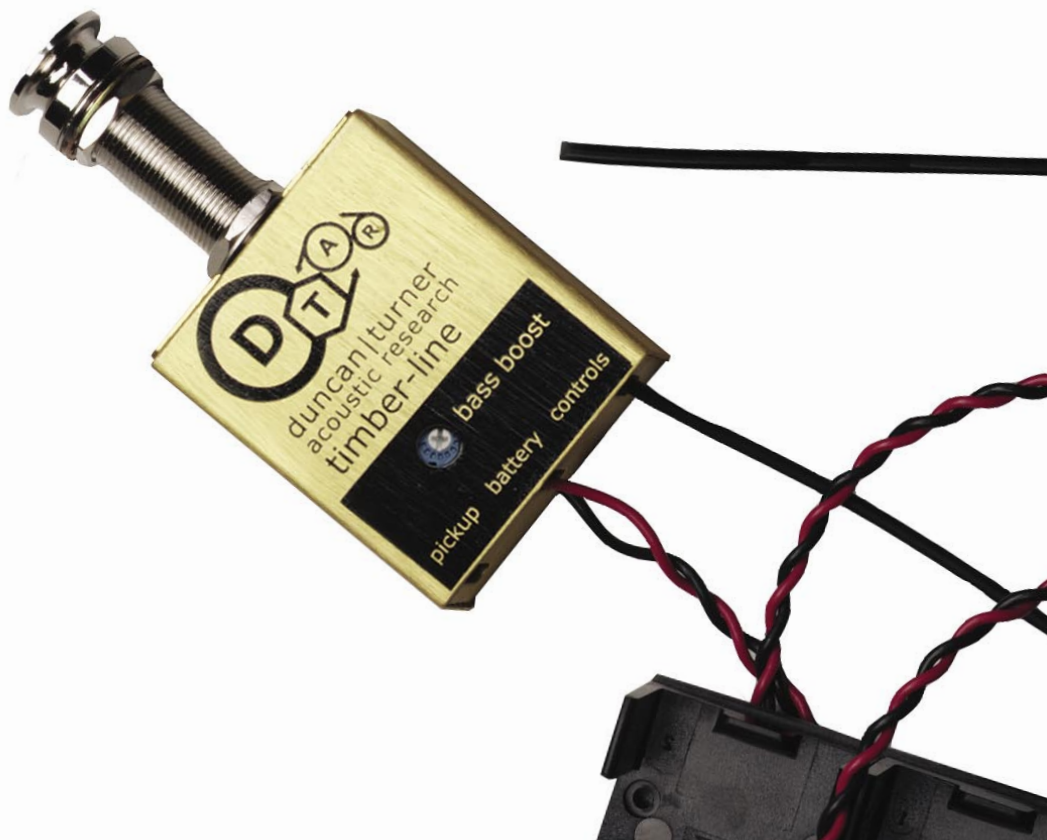
EQUINOX PARAMETRIC EQUALIZER PREAMP



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TIMBER-LINE™

Piezo Cable Pickup



FEATURES

Unitary full length pickup

Co-axial cable design

High headroom

Dual source capability

Easy to install

Adjustable bass boost trim control

Stereo buffer upgradable

Optional volume & tone controls

BENEFITS

Accommodates all string spacings and gets a more even response from the guitar's top

Can get a more complex signature sound of the guitar due to 360° of vibrations along its length

Allows for twice the dynamic range of a 9 V system, hard strumming, and reduces piezo "quackiness"

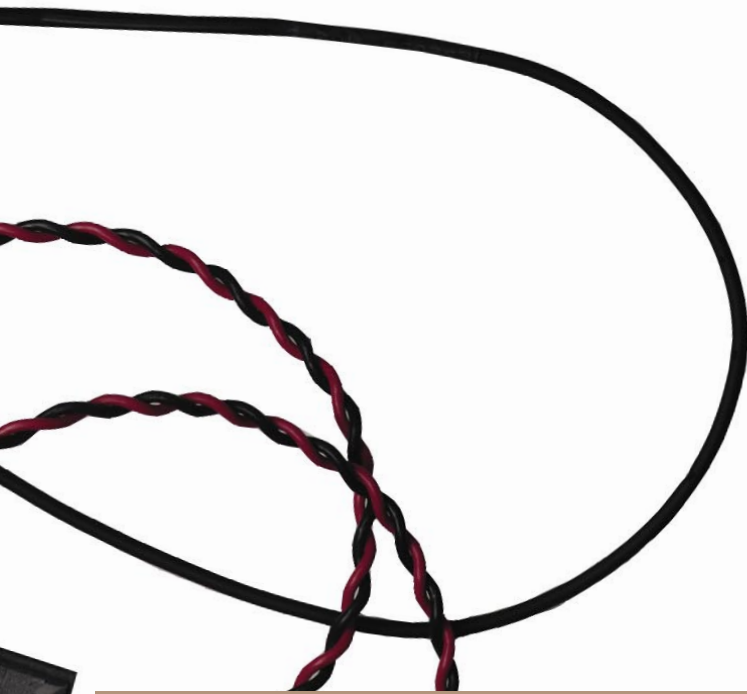
Allow the user to combine with a mic, magnetic or soundboard transducer for greater complexity of signal

Installation intended for guitar builders and luthier-techs

Simulates the air resonance of a typical acoustic guitar, warms up bottom end

Allows buffering a second signal to ensure proper impedance match

Various options available



Timber-line is a piezo cable pickup coupled to an 18 volt, low-noise, high input impedance preamp with twice the dynamic range of 9-volt preamps. The increased dynamic range and adjustable bass trim pot gives musicians a more natural and full sound. Timber-line is the perfect piezo pickup system for musicians who want a more complex signature from their acoustic guitar.

TECHNICAL SPECIFICATIONS

- Power requirements — 9 to 18 Vdc
- Power consumption — 1.0 mA @ 18Vdc
- Battery life — approximately 500 hours @ 18Vdc
- Maximum signal swing, @ onset of clip — 5.5V RMS @ 18Vdc
- Frequency response — -3dB @ <10Hz, 30KHz
- Gain — 14dB

Thd

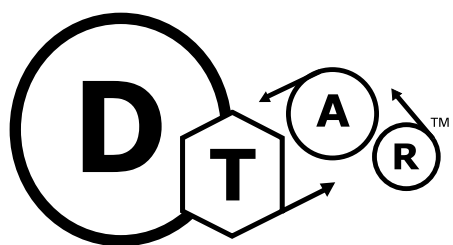
- 1V out, 1KHz — <.005%
- 1V out, 20Hz to 20KHz — <.03%

Noise ref. to input @ 14 dB Gain

- Wideband — -105dBV
- A weighted — -112dBV

- Control function, internal trimpot — Broadband bass boost +4db @ 80Hz
- Control function, external tone — Passive treble cut

TIMBER-LINE PIEZO CABLE PICKUP



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SOUNDSPOTS™
Piezo Crystal Pickups

BENEFITS

- Ultra-sensitive transducer pickup
- Hand ground to extremely fine tolerances
- Versions available for most acoustic instruments
- Extremely natural and warm sounding
- High grade materials for strength and flexibility

PRODUCTS

Twin SoundSpot™ Classic

For Acoustic Bass Guitar, Bongos, Bouzouki, Cello, Piano, Arch Top Guitar, Oud (Arabian fretless lute), Sitar, Guitarra Portuguesa, Steel Drum and others

Twin SoundSpot™ NTX

For Steel String Acoustic Guitar

Twin SoundSpot™ XL

For Double Bass, Cello, Grand Piano, Harp, Sitar and others

Big SoundSpot™

For Berimbau, Classical Guitar, Hammer Dulcimer, Harmonica, Kalimba, Log Drum and others

Hot SoundSpot™

For Congas, Glass Harp, Hand Drums, Mandolin and others

Hot SoundSpot™ - Cymbal

For Cymbals

Violin SoundSpot™

For Violin

Banjo SoundSpot™

For Banjo

Bass SoundSpot™

For Double Bass or Cello



SoundSpots™ are ultra-sensitive transducer pickups suitable for stringed and non-stringed acoustic and ethnic instruments. Unlike other "dot-type" transducer pickups, each SoundSpot™ is hand ground to extremely fine tolerances. This process, along with the selection of materials, renders a pickup with a very thin surface that also maintains its strength and flexibility. The result is a transducer that is ultra-sensitive to an instrument's surface vibrations and, therefore, is extremely natural and warm sounding.

(Banjo SoundSpot shown above)



**Twin Classic
SoundSpot™**

Part No. 2-11-130-DPU-4CLA
For Acoustic Bass Guitar,
Bongos, Bouzouki, Cello,
Piano, Arch Top Guitar,
Oud (Arabian fretless lute),
Sitar, Guitarra Portuguesa,
Steel Drum and others.



**Twin XL
SoundSpot™**

Part No. 2-11-132-DPU-4XL
For Double Bass, Cello,
Grand Piano, Harp, Sitar
and others.



**Twin NTX
SoundSpot™**

Part No. 2-11-131-DPU-4NTX
For Steel String Acoustic
Guitar.



**Bass
SoundSpot™**

Part No. 2-11-138-DPU-4BAS
For Double Bass or Cello.



**Hot
SoundSpot™**

Part No. 2-11-134-DPU-4HOT
For Congas, Glass Harp,
Hand Drums, Mandolin and
others.



**Big
SoundSpot™**

Part No. 2-11-133-DPU-4BIG
For Berimbau, Classical
Guitar, Hammer Dulcimer,
Harmonica, Kalimba, Log
Drum and others.



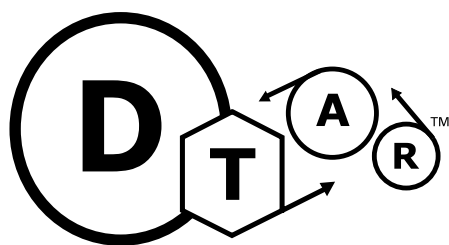
**Banjo
SoundSpot™**

Part No. 2-11-137-DPU-4BAN
For Banjo.



**Violin
SoundSpot™**

Part No. 2-11-136-DPU-4VIO
For Violin.



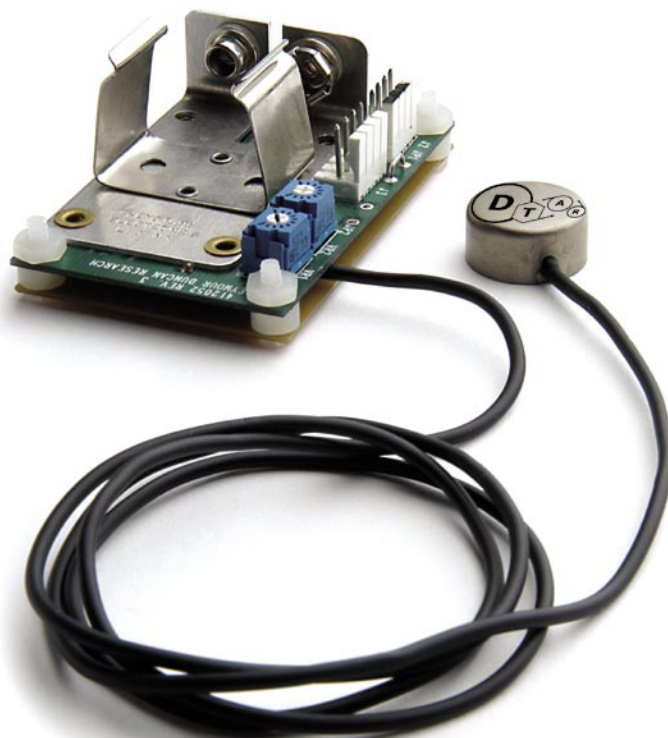
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PERFECT TIMBRE™

DPU-3 Active Soundboard Pickup
For Acoustic Guitar

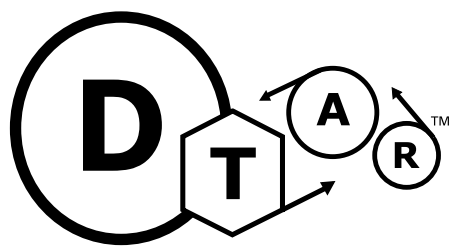
FEATURES

- Highly responsive piezo-film accelerometer
- Low profile design
- Custom on-board pre-amp
- On-board adjustable presence and high-mid frequencies
- Low impedance preamp output can be plugged directly into an amplifier input, line-in jack or mixing console
- 9 volt power source
- Low power consumption
- Captures and preserves the natural timbre of your acoustic guitar
- Design preserves the appearance, action, sustain and feel of the instrument
- Ideal for both live performance and direct-recording applications
- Long battery life



*The **DPU-3** Perfect Timbre system combines a revolutionary, highly responsive piezo-film accelerometer with a custom on-board preamp to capture and preserve the natural timbre of your acoustic guitar. It picks up the warmth and character of your instrument with startling clarity and accuracy, preserving its natural acoustic sound for live performance and direct-recording applications. Just slightly larger than its 9 volt power source, the preamp has excellent dynamic and frequency response, with on-board adjust presence and high-mid frequencies. We call it, "the closest thing to a microphone you'll never bump your guitar into."*

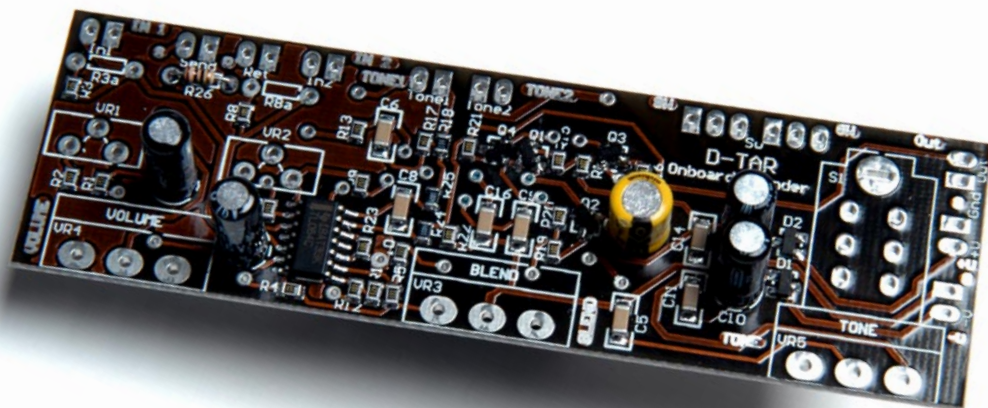
PERFECT TIMBRE SYSTEM



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ECLIPSE™

On-Board Buffer-Mixer



(Shown enlarged,
actual size 1 3/16" x 3 15/16")

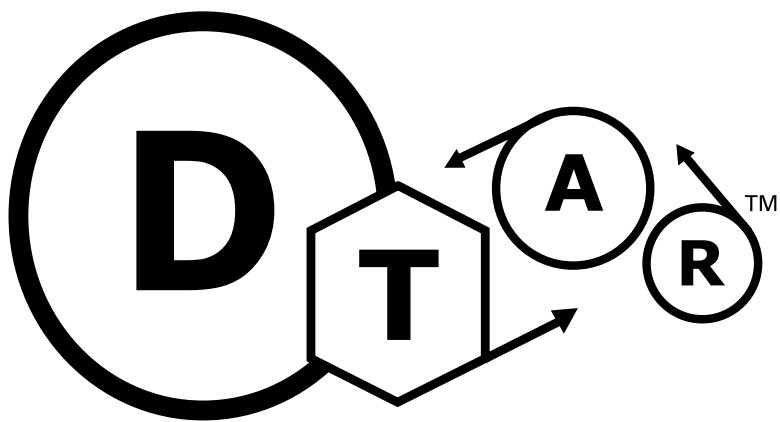
The Eclipse™ Circuit is a versatile preamp/mixer/blender used to blend virtually any type of pickup while preserving the frequency response of the individual pickups. With extremely low noise, high headroom, and up to 12 dB of gain per channel, the Eclipse™ is the highest quality on-board instrument preamp on the market. The impedance match can be tailored to an individual pickup to hit the "sweet spot" where the best and most useful frequency response is to be found.

FEATURE

BENEFIT

Two inputs, blended output, can also be used as single channel	Blends two pickup sources, buffers inputs
Active blending	Prevents pickup loading and harmful interaction
Optional treble roll off tone for each channel (can be concentric)	Allows for independent tone controls, one on each input "quackiness"
18 volt bipolar power, hybrid ultra-low noise design	Very high headroom, audiophile performance
Optional pre-master volume effects or EQ insert points	Allows choices of different EQ or effects on board
Provides switched power for auxilliary PC card	Allows easy addition of EQ card or other effect or power for an electret microphone
Pots can be mounted on or off the PC card	Allows many mounting choices for PC card and pot locations
Master Tone control can have a push/pull DPDT switch	Can be used for coil tap on magnetic pickup, magnetic pickup phase, or any other purpose requiring a DPDT switch. It's use is not fixed to a particular function on the PC card. Solder pads access the switch contacts
Uses Stereo Plus DPDT switching jack	Allows for stereo output independent from power switching

ECLIPSE™ ON-BOARD BUFFER-MIXER



duncan|turner acoustic research™

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Part No 2-91-000

WITH RESPECT TO ACOUSTIC TONE™