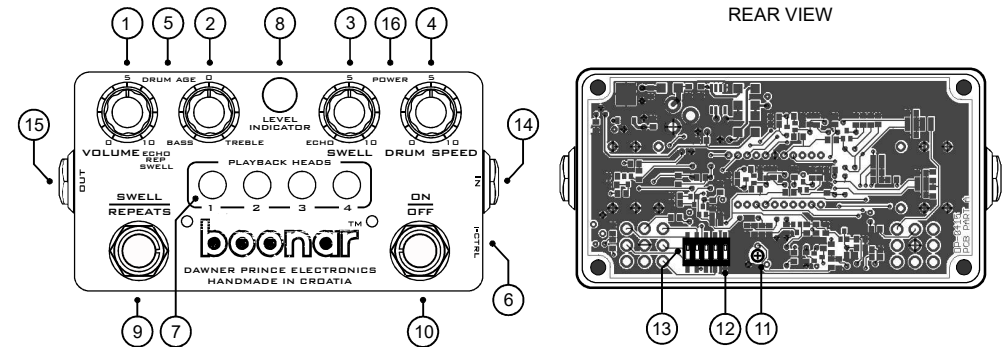


BOONAR™ OWNER'S MANUAL

Congratulations! You have just purchased BOONAR from Dawner Prince Electronics!
 It is an effects pedal precisely designed to deliver the sound and feel of the legendary Binson Echorec, a multi-tap magnetic drum echo machine. Boonar is fully professionally designed and handmade with high-end quality components for superb sound quality and long-term durability.
 Reveal an authentic Binson sound and enjoy in magical echoes of the past!

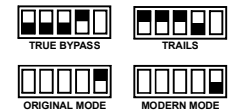
- VOLUME ECHO/REPEAT/SWELL (potentiometer) 1**
 controls the output volume of the delayed signal coming from the playback heads. This control is in correlation with Input Control setting.
- BASS / TREBLE (potentiometer) 2**
 adjusts the EQ of the delay signal. Just like in original Echorec, this effect is subtle, changing from darker to brighter.
- SWELL (potentiometer) 3**
 sets the amount of regeneration/number of repeats from single repeat (slap back delay-Echo mode) of each playback head to infinite. On the edge of self-oscillating, Boonar will start to produce those specific luscious swells that bubble, creating a complex multi-dimensional wall of sound.
- DRUM SPEED (potentiometer) 4**
 sets the rotational speed of the virtual magnetic drum which is directly proportional to the delay time of the machine. Unlike Binson Echorec with fixed drum speed and delay time of 300ms max on the 4th playback head, Boonar provides delay times from ~40 ms on the 1st playback head up to a full second (1000 ms) on the 4th playback head! Fully clockwise setting corresponds to the fastest drum speed hence shortest delay times. Binson Echorec delay time setting is at 3 o'clock.
- DRUM AGE (side trimmer) 5**
 this control adds all those sweet aging characteristics specific to Binson Echorec. When new, Echorec repeats are bright, metallic sounding and repeat pretty accurately since magnetic drum was quite an improvement over magnetic tape. But, with aging there is a slight loss in volume and high frequencies due to a wear/poor heads alignment and a very unique modulation is introduced in the delay signal path. This modulation is mostly caused by worn mechanical parts that start to irregularly drive the memory disc/drum and unlike other delay modulations this one is more of a vibrato than a chorus effect.
 With Drum Age control set to zero (fully clockwise), there is a minimum aging effects present in the delay signal. Increasing it to 12 o'clock will add a subtle amount of modulation producing a pleasant 3D effect, while on maximum will introduce a nice warble with noticeable loss in high frequency and volume on the playback heads. Another important characteristics is that Drum Age modulation frequency (the rate of the warble effect) is directly proportional to the Drum Speed- as the drum speed is increased, so is the rate of the warble and vice versa. If not needed, pot shaft can be pulled out to leave the trimmer control as a set and forget.
- INPUT CONTROL (side trimmer) 6**
 controls the level of the input signal to the delay path. This control enables, Boonar to accept all kinds of instruments with various signal levels on the input. Cranking the Input Control all the way up will produce those beautiful overdrive effects on the delay, specific to the Binson Echorec.
 Pot shaft can also be pulled out and trimmer can be used as a set and forget.
- PLAYBACK HEADS (press button switch) 7**
 Binson Echorec had a 12-position rotational switch that enabled selection of different playback heads and combinations for single and multi-tap delay. We wanted to overcome that limitation and added a separate playback heads switches for a maximum of 16 possible head combinations. All four playback heads outputs are 100% analog.
- LEVEL INDICATOR (LED) 8**
 The Level Indicator called a "magic-eye" displays the level of input signal and repeats.
- SWELL/REPEATS (footswitch) 9**
 switches between standard Repeats mode - a multiple repetitions depending on the Swell control potentiometer and a Swell mode which puts a part of signal from all four playback heads into the output mixer to produce those reverb-like, "cathedral tone" effects.
- ON/OFF SWITCHING SYSTEM - True Bypass/Trails (footswitch/Internal DIP switches) 10, 13**
 Boonar utilizes both True bypass or Trails mode simply interchangeable by setting internal DIP switches (13) according to the provided scheme. Trails mode keeps Boonar's preamp and output buffer engaged keeping that juicy Binson Echorec tube tone always on, and when bypassed echoes keep repeating until they naturally decay, depending on the Swell potentiometer setting. Trails mode is factory preset.
- LEVEL DRY (internal trimmer) 11**
 internal trim pot sets the level of the dry signal coming from the preamp into the output mixer. It is factory set to unity gain.
- ORIGINAL/MODERN (DIP switch) 12**
 internal DIP switch sets the input impedance from very low - 47K Ohm in Original mode (Binson Echorec mode) to 1M in Modern mode which brings more sparkle, dynamics and a bit more output volume. Modern mode is factory preset.
- IN / OUT (jacks) 14, 15**
 IN jack (10) takes the signal from the guitar or the previous effect pedal in chain. OUT (10) jacks deliver signals to the amplifier or to the next effect pedal in the chain.
- POWER (DC jack) 16**
 Use only regulated 9V DC power adapter with minimum of 200mA current output, Center Negative plug. Boonar has built-in power regulation and reverse polarity protection circuitry.



SPECIFICATIONS:

- Input impedance (MODERN): 1 M Ohm
 Input impedance (ORIGINAL): 47 K Ohm
 Output impedance: 100 Ohm
 Power supply: Adapter 9V DC
 Power supply connector type: Barrel, 5.5mm / 2.1mm Center Negative
 Current draw: **180 mA**
 Standard colour: Gold/Mirror black

DIP SWITCH SETTINGS



WARRANTY:

Dawner Prince Electronics warrant this product to be free from defects in materials and workmanship under normal use and service. Dawner Prince Electronics liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, provided the product is returned to Dawner Prince Electronics WITH RETURN AUTHORIZATION, where all parts and labor will be covered up to a period of two (2) years. A Return Authorization number can be obtained from Dawner Prince Electronics by e-mail. Return transportation costs for the service within the warranty period are paid by the owner of goods.
 This warranty does not cover loss or theft of products, and excludes failures caused by misuse, mechanical damage, liquid damage of any kind, device falling, unauthorized modification, shock surge in electricity supply, lightning, improper storage and natural disasters. Dawner Prince Electronics assumes no liability for any damages resulting from the use of this product. Using the product, the customer accepts all conditions set forth hereby. Dawner Prince Electronics reserves the right to make changes in design, or make additions to, or improvements upon this product without incurring any obligation to install the same on products previously manufactured.

NOTE: The information contained in this manual is subject to change at any time without notification. Some information contained in this manual may also be inaccurate due to undocumented changes in the product after this version of the manual was completed. The information in this version of the owner's manual supersedes all previous versions.

**Binson and Echorec are registered trademarks of their respective owners*



If you want to dispose of this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery, and recycling.

Private households in the 25 member states of the EU, in Switzerland and Norway may return their used electronic product free of charge to designated collection facilities or to a retailer (if you purchase similar new one).

For countries not mentioned above, please contact your local authorities for a correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

WARNING

For your protection, read the following:

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Do not use this apparatus near water.
5. Clean only with dry cloth.
6. Install in accordance with manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
9. Unplug this apparatus during lightning storms or when unused for long periods of time.
10. No user serviceable parts inside. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
12. Refer to labels on the unit, including bottom cover, or other markings and pertinent information.