# Understanding the Taylor Expression System®

Your new Taylor guitar features the Taylor Expression System® (ES) — a groundbreaking concept in acoustic guitar amplification. It combines a state-of-the-art pickup system with a "professional audio"-quality preamp. Taylor Guitars developed proprietary sensing technology for the ES, utilizing the guitar's entire soundboard to create a network of magnetic, surface-sensing microphones. A strategically-placed Dynamic Body Sensor™ captures vibrations in the top of the guitar. A patented Dynamic String Sensor™ mounted beneath the fretboard measures string vibrations and converts them into an electronic signal. The advanced design is seamlessly integrated into your guitar, allowing for total control with three unobtrusive, side-mounted knobs. Your guitar's natural tone will sing loud, clear and true.

*Expression System tone controls: (L-R) Volume, Treble, Bass*

## Connections

The Taylor ES is designed to be plugged-in using a standard quarter-inch guitar cable, which will work in every circumstance: with an acoustic guitar amplifier, a standard direct box, or any other guitar-ready application. The ES also is designed to be "Pro Ready," which means it can be plugged directly into a "balanced line level input" such as an input on a mixer using a TRS to XLR cable. The result is a higher signal level, which translates into the ability to drive long cable distances without any frequency loss, due to the low impedance of the system. With this application, you can plug directly into a stage snake or recording/mixing console without the use of a direct box.

## Tone Controls

Three knobs allow for simple, accurate control of your guitar's amplified tone. Using the knobs to adjust the bass, treble and volume will give you the ability to shape your tone considerably. We encourage you to experiment with different control settings.

## Control Arrangement

**Volume: closest to front of guitar**
**Treble: center position**
**Bass: closest to back of guitar**

All three controls on the ES are designed to indicate a center position, commonly know as a detent. By rotating each knob back and forth, you should feel a small "bump" at the center marker. For bass and treble, the center position indicates the "off" or "flat" mode. The center point of the volume knob indicates half of the highest volume output.

You also can adjust your guitar's amplified tone using an on/off switch that controls a magnetic body sensor affixed to the underside of the guitar's top. The switch is located on the preamp circuit board inside the soundhole, near the red LED battery indicator light. Turning off the body sensor leaves the magnetic neck/string sensor (located beneath the end of the fretboard extension) as the active pickup, giving you a different tonal voice.

## Plugging In

Follow these simple steps to set the proper volume and tone levels for your Taylor ES:

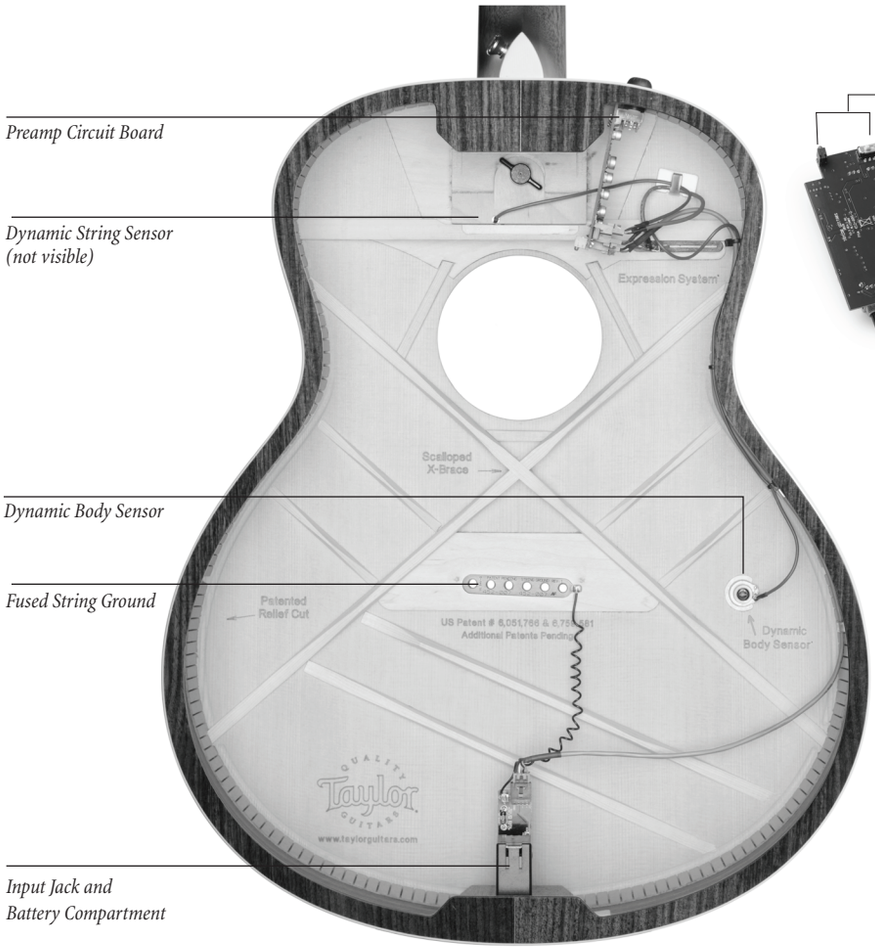
1) Start Position: Turn all three controls on the guitar to the center detent position. In this position the Bass and Treble are flat and the Volume is at the midway point.
2) Turn the volume knob on your amplifier or mixer all the way down. Plug in the guitar.
3) Set the tone controls on your amplifier or mixer to flat or a neutral position. *NOTE: Some acoustic guitar amplifiers **do not** have active EQ (tone controls). In that instance, finding a neutral tone spot can be a bit more challenging but is not impossible. Setting all the tone controls on the same number is a good place to start.*
4) Slowly raise the mixer or amplifier volume level to a comfortable level, then adjust the tone controls on your guitar to suit your personal taste.

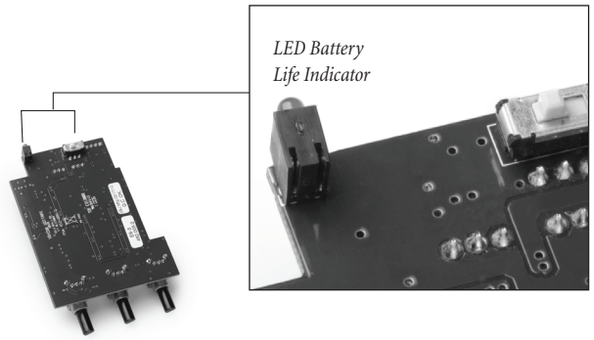
*L-R: Standard quarter-inch TRS cords (straight and right angle); XLR (male) connector*

## Battery Usage

The ES requires one 9-volt battery. Taylor recommends Duracell® for optimal performance and long life. A new battery will provide 40-50 hours of plugged-in use. The ES conserves battery life using a standard, automatic on/off system. The ES is in an "off" state until a cable is inserted, which activates the preamp. Removing the cable will return the system to the "off" mode and conserve battery life. An LED battery life indicator is located inside the soundhole on the preamp circuit board. (If your amplified tone begins to sound distorted, the battery

Copyright 2010 Taylor Guitars. All Rights Reserved.




*A body sensor on/off switch is located on the preamp circuit board and is accessible through the soundhole*

most likely needs to be replaced.)

To change the battery, release the clip on the battery carriage (located along the tail line) by pushing it toward the input jack. Remove the battery and replace with a new one, paying close attention to the positive/negative orientation shown inside the carriage.

*TIP: Batteries can leak if left unused for long periods of time. When you replace the battery, write the date on it with a permanent marker to track how long the battery has been in the guitar.*

## Feedback Resistance

The heart of the ES is a pair of proprietary magnetic pickups. A body sensor is affixed to the underside of the soundboard and can best be described a surface-mounted microphone. The ES is not, however, subject to the usual feedback problems you might encounter when playing into a microphone. The system is uniquely suited to work at high sound pressure levels (SPLs), resisting feedback even at high volume levels. If you are accustomed to using a soundhole plug to prevent feedback, it should not be necessary to use one with the ES.

## Tone-shaping Control

The ES opens up new frontiers in sound, and will enable you to create a wide range of tones using simple adjustments of the onboard controls. The built-in equalizer reacts to subtle changes in bass, treble and volume, emphasizing individual characteristics of the guitar's natural sound.

*NOTE: The absence of a midrange control knob does not mean there is no mid-band control. It's easy to boost or cut the mids simply by turning the Bass and Treble knobs past the center detent in either direction, then adjusting the volume. By turning both the bass and treble up, the midrange is effectively dipped; turning them below the center detent boosts the mids.*

## Pickup Sensor Flexibility

The Taylor ES gives you the ability to voice the guitar differently for various performance applications (different types of venues, band configurations, etc.). By turning off the body sensor, you can create different voicings for different levels of sensitivity and tone. Switching off the body sensor allows you to play solely on the neck pickup if you desire.

The body sensor switch is easily accessible inside the soundhole, on the edge of the preamp circuit board. When the switch is positioned toward the back of the guitar, the sensor is on. Moving it toward the front of the guitar turns it off.

## Fused String Ground Protection

The ES is equipped with a fused string ground, a patented safety feature designed to protect the player from venues or other amplified settings where there may be improper electrical ground. A grounding plate affixed to the underside of the bridge plate is wired to a fuse, which removes the player from the circuit path in the event of a current seeking ground. If current is traveling through the ground, the fuse will blow, but the player will remain unharmed. The ES will continue to work, but the strings will no longer be grounded, leaving the guitar potentially more susceptible to an electrical hum. A blown fuse should be replaced by an authorized Taylor repair technician.

1980 GILLESPIE WAY • EL CAJON, CA 92020-1096 • 800-943-6782

Copyright 2010 Taylor Guitars. All Rights Reserved.