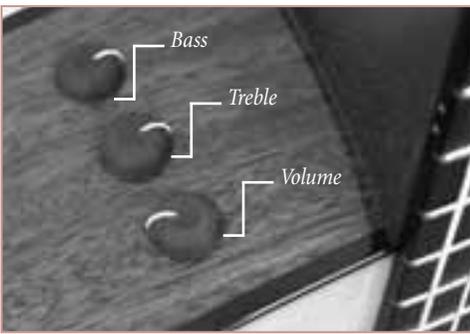




Understanding the Taylor Expression System™



L-R: XLR (female), XLR (male), standard unbalanced cord (straight), TRS (right angle).



Taylor Expression System controls.
L-R: Bass, treble, volume (volume control is closest to the front of the guitar).



Taylor Expression System battery compartment in the position to remove the battery.



Replacing the battery.
With a coin or guitar pick, push in and rotate counter-clockwise 1/8-turn until you hear a click. The above photo indicates how far you should expect to turn.

Your new Taylor guitar features the Taylor Expression System (ES) — a groundbreaking concept in acoustic guitar amplification (500 series and up). It combines a state-of-the-art pickup system with a “professional audio”-quality pre-amp. Taylor Guitars developed proprietary sensing technology for the ES, utilizing the guitar’s entire soundboard to create a network of magnetic surface sensing microphones. The advanced design is seamlessly integrated into your guitar, allowing for total control in the form of three unobtrusive side-mounted knobs. Your guitar’s natural tone will sing loud, clear, and true.

Read on to learn more about the ES, recommended connections, control settings, and battery usage.

Connections

With television or audio equipment, the choice of cords used for connecting components can have a significant impact on the overall quality of the picture and/or sound. The same is true for the ES, which has been designed for optimal performance using a *balanced* output cord. **The ES will still work with any standard *unbalanced* 1/4-inch guitar cord, but it will perform best with a balanced Tip-Ring-Sleeve (TRS) connection into the guitar and an XLR (male) running from the guitar into an amplifier, mixing console or balanced input** (see page 2 for more information). Note: If you use a balanced TRS to XLR cord with the Expression System, **you do not need to use a direct box when connecting to a mixing console.**

Controls

Three knobs allow for simple, accurate control of your guitar’s tone. Adjusting the guitar’s bass, treble, and volume will put you in charge of your tone, so we encourage you to experiment with a variety of different settings.

Control Arrangement

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

All three controls are designed to indicate a center position, commonly known as a detent. By turning each knob back and forth, a small “bump” can be felt 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.

The Taylor ES opens up new frontiers in sound, enabling guitar players 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.

Changing the Battery

The active ES requires two AA alkaline or rechargeable Ni-MH batteries. Taylor uses and recommends Duracell® for optimal performance and long life. To replace batteries, remove the battery cap (located along the tail line) by rotating it 1/8-turn counter-clockwise using a rigid pick or a coin. Remove batteries and insert two new AA batteries, negative side first.

The ES conserves battery life using a standard automatic on/off system. The ES will be in an off position until a jack is inserted, which will activate the system. Removing the jack will return the system to an off position.

Notes from the Electronics Department

The ES is a low-impedance, balanced system operating at 300 ohms. Though it uses the guitar itself as a microphone, it is not subject to the usual feedback problems you might encounter when playing into a microphone. The ES 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. Note that running the onboard controls closer to center or “flat” will enable you to run at higher volumes.

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Cords and Connectors 101

Choosing the right cords and connectors often becomes a lesson in anger management rather than one of audio sciences. When choosing from a never-ending selection of cords that all seem capable of getting the job done, the key is finding the cord that will get the job done *best*. Complicating the subject further, prices can fluctuate widely for cords that appear to be identical. Here's a survival guide to the world of guitar cords and connectors.

Balanced or Unbalanced?

We'll take balanced, please. Simply put, a balanced cord is designed to intercept foreign signals known as RF — such as those generated by radio stations, and cordless phones — and dispose of them before they become the dreaded sonic “buzz” guitarists constantly battle. Balanced cords employ a separate shield around two wires. The shield filters interference and routes it out of the system to a “ground” before it becomes a problem.

Unbalanced cords have a single wire surrounded by a shield. In this case, the shield essentially becomes both a “return” wire and an interference blocker. Unbalanced cords are

generally less effective at filtering out interference as a result.

Making the Connection

Attaching cord to guitar or cord to amplifier is the job of the connector. And, you guessed it, there are a few different types to choose from in this category as well. The preferred connectors for the Expression System are the XLR and Tip-Ring-Sleeve (TRS).

The XLR is one of the most common connector options, also popular for microphone cords. Three prongs make up the male end of an XLR, corresponding with three sockets on the female end. The connection is stable and sturdy, and isn't likely to accidentally come unplugged.

A TRS plug resembles an oversized version of the stereo phone connector you would use to plug headphones into a portable CD player — with one key difference. Inside the TRS connector are three wires connecting to the tip, ring, and sleeve. Two of the three wires transfer a signal. The third wire is the shield. All three connect to the three prongs of the XLR connector (see diagram). Pin 1 on the XLR (below) is the shield. By comparison, a stan-

dard 1/4-inch jack has only a tip and sleeve, yielding a less reliable signal transfer.

Taylor guitars with the ES are designed to use a TRS connection into the guitar. You can use a standard 1/4-inch guitar cord (which is unbalanced), but **we recommend using a balanced cord for optimal performance** (TRS to TRS, or TRS to male XLR connection).

The Ultimate Cord?

Now that we've established that a TRS to male XLR balanced connection cord is the best way to go, that's the end of the story, right? Well, not exactly. Using the right type of cord will make a huge difference when it comes to sound quality, but the materials used within the cord itself can play a role too. High-end cords, such as those with pure silver wiring, will cost more than cords made from other metals (usually quite a bit more). Is it worth it? Here the tonal differences become more subjective and less distinctive. But for those seeking high-end gear from top to bottom, opting for a better quality cord will complete the ultimate guitar setup.

