



Modulus Quantum Bass Owner's Manual



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Welcome to Modulus® and thank you for choosing one of our instruments. This owner's manual is intended to be a resource to help you understand and fully utilize the features and functions of your new guitar or bass.

Located in the heart of the thriving San Francisco Bay Area music scene, Modulus Guitars began building exceptional handmade instruments in 1978. Our specialty is utilizing innovative materials to better serve the needs of the serious player. Modulus pioneered the use of carbon fiber in the construction of guitar and bass necks. We were the first to combine structural carbon fiber with non-structural tone woods in our *Genesis* guitars and basses. We were also the first to commit to using independently certified woods for every aspect of instrument building.

Innovation is meaningless if it doesn't result in increased playability, sonic integrity and visual beauty. Let's take a look at the many facets of your new instrument and how they work together with your ears, hands, and heart. Music is the reason we are here.

Genesis® and Quantum™ Necks

Modulus instruments feature two types of composite necks, depending on the model. Our original Quantum bass neck is a lightweight, ultra-rigid "D"-shaped shell made from dozens of layers of hand-formed aerospace-grade epoxy-impregnated carbon fiber fibers. With an amazing strength-to-weight ratio and a resonant peak far above the range of the notes on a bass, it is an ideal neck for producing crystal clear, even tone. Because the carbon fiber telegraphs attack more quickly than conventional wood necks, the Quantum neck aids articulation and is dynamically very sensitive.

Genesis guitar and bass necks incorporate a composite spine reaching from the tip of the headstock to deep inside the body. Wrapped with a solid piece of lightweight, resonant tone wood, the Genesis neck combines the best elements of carbon fiber and wood. All string tension is held by the composite central structure to eliminate warping and twisting. Because the carbon fiber is handling the stress of the strings, we're able to use soft woods like red cedar, alder and soma to add warmth and character to the crisp attack characteristics of the composite spine. It's the right neck for players looking for organic, woody sound with the added brilliance of composites.

Fingerboard

Most Modulus basses offer the option of a wood or composite fingerboard, providing players a choice of feel, look and sound. Genesis guitars and basses feature granadillo, chechen or maple fingerboards.

Composite boards are denser and harder than a wood fingerboard, offer similar performance to ebony and will not shrink or crack. The harder material adds a bit of extra high end sizzle on fretted basses, and a tighter focus to the sound of fretless instruments.

Granadillo and chechen are ecologically sustainable, independently-certified Mexican hardwoods with similar characteristics to rosewood and pau ferro. They add a touch of warmth to the midrange of the instrument and provide a more traditional look and feel than a composite fingerboard.

Wood

Modulus instruments are crafted from the finest aerospace-grade composites and hand-selected exotic woods. Wood, whether for the body of a Quantum bass or the neck of a Genesis guitar, is chosen for its tonal characteristics, beauty and long-term stability. Our skilled builders combine woods to create instruments with individual sonic and visual character that maintain the signature Modulus sound: Crisp and clear with warmth and dynamic sensitivity.

Commitment to a Healthy Planet

Modulus Guitars is committed to using ecologically-sustainable, independently certified wood in all its instruments. Our goal is for 100% of the wood in our instruments to be earth-friendly and properly harvested.

Through close cooperation with SoundWood, Scientific Certification Systems and Eco Timber, Modulus pioneers the use of non-traditional woods for electric guitars and basses. Granadillo, chechen, red cedar, chakte kok and soma are a few of the exceptional-sounding, ecologically sound woods Modulus offers. More than any other guitar company, we are on the cutting edge of new materials that improve the performance of the instruments while respecting the environment we all share. Instruments made of 100% certified woods are available on request.

General Maintenance

Cleaning and Storing Your Modulus Instrument

Keep a soft, clean cotton cloth in your case and wipe down the body, hardware and the back of the neck after each playing session. Use a separate cloth to wipe down the strings and fingerboard as well. This will remove body acids and oils that corrode metal parts and will maintain the playability and beauty of the instrument.

All surfaces of your instrument, excluding hardware, pickguards (where present) and fingerboards, are finished with hand-rubbed polyurethane. This finish is extremely tough, but can be scratched or chipped by hard objects such as tools, jewelry or keys. Always store your instrument in its case or gig bag when not in use and keep it on a guitar stand between sets on the gig. In most instances, wiping the finish with a soft cloth after each use will be enough to keep the finish looking new. If you desire greater protection, use an automotive paste wax, such as Turtle Wax twice yearly. We do not recommend spray guitar polish. Never use abrasive polishing or rubbing compounds or solvent-based cleaners on your

guitar. If the body or back of the neck becomes extremely dirty, apply lukewarm soapy water with a soft cloth to the area, wipe clean with water only, then dry immediately.

Do not apply any kind of oil to the composite fingerboard. It will not sink in and may damage the material. Granadillo fingerboards may benefit from an application of gunstock oil or similar light oil, generally during Winter months when humidity is low. Test the granadillo board by dropping one drop of water onto the board to see how long it takes to soak in. If the drop of water takes less than 10-20 seconds to disappear, the board needs a light coat of oil. Use a clean cloth moistened slightly with the oil and gently and evenly rub it into the fingerboard. Allow the oil to soak in for a minute, then wipe off the excess. Avoid getting oil on the strings.

Although the carbon fiber neck is impervious to most temperature and moisture conditions you will encounter, wood and electronics are still vulnerable. We recommend that the instrument be kept at room temperature whenever possible.

Following the adjustment and maintenance procedures in this manual will help ensure peak performance and long-term reliability for your instrument. We suggest you do a monthly inspection of your bass to keep your instrument in top working condition. Unless specifically noted, all procedures in this manual apply to Quantum 4, 5 and 6 string versions.

*As with any situation needing technical expertise or manual dexterity, be honest with yourself about what you do and don't feel comfortable attempting. If you feel the least bit hesitant about making an adjustment, take the instrument to an authorized Modulus dealer or qualified repairperson to have the work done.

Pickups and Electronics

Height Adjustment

Pickup height is set at the factory for even string balance and output. Depending on your playing style and string choice, you may want to change the factory settings.

EMG and Bartolini Pickups

Height adjustment is accomplished by means of two Phillips head screws located at the outside edges of each pickup. Raise the pickup by turning the screws counter-clockwise. Clockwise adjustment of the screws lowers the pickup. Standard height at the factory is 1/8" from the top of the pickup cover to the bottom edge of the string (depressed at the 24th fret) for the back pickup (pickup nearest to the bridge) and 5/32" from the top of the pickup cover to the bottom edge of the string (depressed at the 24th fret) for the front pickup (pickup nearest to the fingerboard). Pickup height for SweetSpot models: Use height specs for front pickup.

Lane Poor Pickups

Lane Poor pickups use a three-point adjusting system allowing for pickup angle as well as height adjustment. Height is set by turning the adjusting screws clockwise to lower the pickup, counter-clockwise to raise the pickup. Pickup angle should be set to be parallel to the strings. Standard height at the factory is the same as for EMG and Bartolini pickups.

Control Functions and Layout

EMG tone systems are available only with EMG pickups

EMG BTS System

The EMG BTS active tone system contains the following controls:

Master volume- Controls the overall output of the bass.

Balance- Blends the output of the bridge and neck position pickups. Center detent for both pickups full on (Note: this control is not present on one pickup SweetSpot models).

Treble- Active treble control centered at 4.5KHz with 12db boost and cut. Center detent at 0 boost/cut. High frequency selectable with dip switches located in control cavity. Refer to chart for frequency selection.

EMG BTS Treble Control Center Frequency Selection Chart

switch 1	switch 2	center freq.
on	on	2.1KHz
on	off	3.5KHz
off	on	4.5KHz
off	off	7KHz

Bass- Active bass control, shelving type, operating frequency of 250 Hz with 10db boost and cut. Center detent at 0 boost/cut.

EMG BQC System

Same as EMG BTS plus active mid control with 12db cut and boost and variable frequency control with range from 300Hz to 3KHz.

Bartolini tone systems are available with Bartolini or Lane Poor pickups

Bartolini NTBT System

The Bartolini NTBT active tone system contains the following controls:

Master volume- Controls the overall output of the bass.

Balance- Blends the output of the bridge and neck position pickups. Center detent for both pickups full on (Note: this control is not present on one pickup SweetSpot models).

Treble- Active treble control centered at 6KHz with 16db boost and cut. Center detent at 0 boost/cut.

Bass- Active bass control centered at 30Hz with 15db boost and cut. Center detent at 0 boost/cut.

Bartolini NTMB System

Same as Bartolini NTBT plus active mid control with 11db cut and boost centered at 400Hz.

Changing the battery

To replace the battery (or batteries) in a Modulus Quantum Bass, first be sure the instrument is not plugged in. Lay the bass face down on a clean soft surface. Use a medium Phillips screw driver to remove the screws in the black plastic control cavity cover plate. Remove the cover plate. Lift the battery carefully out of its compartment and gently pull off the snap-on clip. Do not pull on the wires to remove the clip. Replace the battery, place the fresh battery back in the compartment and install the plastic cavity cover with the Phillips head screws.

*Do not leave your bass plugged in for extended amounts of time when not in use as this will drain the battery. Never plug in or unplug your bass when it is plugged into an amplifier. The loud "pop" as the battery discharges can damage your speakers.

Bridge Adjustments

The bridge on your Quantum bass is adjustable for string height, intonation and string spacing.

Height adjustments are made by turning the set screws located on either side of the string on top of each bridge saddle clockwise to raise the string height, or counter-clockwise to lower the string height. Be sure that both screws are set at the same height so that they contact the base plate equally. Generally, the string action should follow the curve of the fingerboard. Factory specs for string height are:

Quantum 4: 5/64" measured from the top of the 12th fret to the bottom of the "E" string and 4/64" from the top of the 12th fret to the bottom of the "G" string.

Quantum 5: 6/64" measured from the top of the 12th fret to the bottom of the "B" string, 5/64" measured from the top of the 12th fret to the bottom of the "E" string and 4/64" from the top of the 12th fret to the bottom of the "G" string.

Quantum 6: 6/64" measured from the top of the 12th fret to the bottom of the "B" string, 5/64" measured from the top of the 12th fret to the bottom of the "E" string and 4/64" from the top of the 12th fret to the bottom of the "G" and "C" strings.

String spacing at the bridge is varied by moving the hardened steel insert that supports the string side to side. Loosen the set screw located on the rear face of the saddle and slide the insert side to side by pushing the string left or right to the desired position. Re-tighten the set screw once the spacing has been adjusted. Factory spacing for your particular Quantum model is found in the general specs chart on this sheet.

Neck Relief Adjustment

Neck relief on Quantum basses is set at the factory to accommodate most playing techniques and string gauges. Though the Quantum composite neck is able to resist many times the tension of a standard set of strings, we have provided a relief adjusting system to allow for personalized setup of your bass. The Modulus system provides for two-way adjustment (over- and under-bow).

Turning the adjuster clockwise will move the center of the fingerboard closer to the strings. Turning the adjuster counter-clockwise will move the center of the fingerboard farther away from the strings. Use the provided hex wrench to

make relief adjustments. Access to the truss rod adjuster is through the open hole beyond the highest fret and above the Modulus logo. There is a center "dead" spot you will feel when the system is at its neutral point between overbow and underbow adjusting ranges. We recommend having this adjustment made by an authorized Modulus dealer or qualified repairperson.

Intonation Adjustment

Intonation adjustment is made by turning the Phillips head screws at the back of the bridge. Use a digital or strobe tuner to match the pitch of the fretted and twelfth fret harmonic for each string, using a fresh set of the brand and gauge strings you will normally use on the instrument. If the fretted note is flat compared to the harmonic, turn the screw counter-clockwise until the two notes match. If the fretted note is sharp compared to the harmonic, turn the screw clockwise until the two pitches match. Have the intonation set by a qualified repairperson if you are not familiar with this procedure.

String Gauges for Quantum Bass 4, 5 and 6

Quantum Bass 4:45-65-80-100
Quantum Bass 5: 45-65-80-100-130
Quantum Bass 6: 32-45-65-80-100-130
Nickel Roundwound, Extra Long Scale

		String Spacing @ Bridge		Scale Length
Quantum	Nut @ last fret	Center to Center		
4-string	1.60"	2.40"	19mm	35.0"
5-string	1.85"	2.75"	17mm	35.0"
W5-string	2.00"	3.25"	21.5mm	35.0"
6-string	2.00"	3.25"	17mm	35.0"

Customer Assistance

If you need help, and are the original owner, contact the authorized Modulus dealer you purchased the instrument from. They will help you assess the nature of your problem and determine the best course of action.

If you are not the original owner of the instrument, or are the original owner and live more than 100 miles from an authorized Modulus dealer, contact Modulus Customer Assistance at custserv@modulusguitars.com Customer Assistance is available from 9AM to 5PM Pacific Time, Monday through Friday.