

The Official Owner's Manual For All Warwick Basses

Congratulations on your purchase of a **Warwick** bass guitar! **Warwick**'s combination of state-of-the-art manufacturing technology with old-world craftsmanship truly yields one of the finest instruments available in the world today. As an owner of a new **Warwick** bass, you probably have some questions regarding your instrument's construction, electronics, and maintenance. This owner's manual has been designed to provide you with all the answers you may need to fully enjoy your new bass.

Welcome to the Warwick family!

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Features Common to Most Warwick Basses

Although each model of **Warwick** bass is very unique, there are some features that are consistent throughout the entire line. By understanding the benefits of these common elements, you will better understand your own bass.

Wenge and Ovangkol Necks:

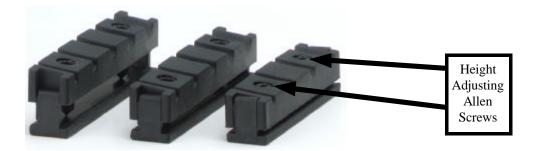
When people comment on the unique sound of **Warwick** basses, they invariably use the word "growl". One reason our basses have such a special sound is because of the wood used to make all of our necks. Wenge (pronounced either "win-gay" or "wen-gee") is a very open-grained, dense wood that offers superior stability and outstanding tonal characteristics. Ovangkol has many of the same tonal traits as wenge, but offers a unique cosmetic look in a closed grain, stable neck wood. The fingerboards are almost always wenge unless the instrument is fretless, in which case **Warwick** uses ebony. We have heard countless stories from **Warwick** players about how they have toured through various countries and climates without having to make significant adjustments to their necks. If you have previously owned a **Warwick** bass with a wenge or ovangkol neck with a wenge fingerboard, then you know how special these woods are. If this is your first **Warwick**, then you are in for a pleasant surprise!

Bell Brass Frets:

All **Warwick** fretted basses come with frets that are made from a special silver/bronze alloy. This material is commonly known as "bell brass" because it is the same material that the bell makers in Europe have been using for many years. Bell brass is an extremely resonant metal that is perfectly suited for use as frets. **Warwick** frets are perfect for musical use with one slight exception. Like any brass product, these frets will tarnish. The tarnish doesn't hurt anything, but if you want to keep them shiny, Cap Cod® polish cloths, Nevr-Dull® Magic Wadding Polish, or the green side of a Chore Boy® sponge and some elbow grease do a great job.

The Just-A-Nut:

All **Warwick** basses come with either a brass Just-A-Nut I or the Wilferite Just-A-Nut II. Both nuts are fully adjustable for easy playing in the first position. The Just-A-Nut II represents a major improvement in engineering over the Just-A-Nut I. This new design allows you to make string height adjustments at the nut without taking the strings off. The two allen screws that are inset on the top of the nut allow you to easily change the nut height. By turning the screws clockwise, you raise the nut. Turning the screws counterclockwise will lower the nut. Now you can experiment with different string gauges without having to go through the hassle or expense of shimming or filing your nut. (See photo below.)



The Fully Adjustable Bridge:

Since every player is unique, basses need to be as flexible as possible to accommodate each bassist's needs. The **Warwick** bridge (see photo below) was designed to give you every possible adjustment, without sacrificing its durability and function. With a simple turn of an allen wrench or phillips screw driver, you can change the overall bridge height, individual string height and contour, and set the individual string intonation. **Warwick** provides the proper 1.5mm and 2.5mm wrenches for the allen screws with every bass. The intonation screws require a fresh #1 phillips head screwdriver with a small shaft.



What makes this bridge even more unique is that you can easily change the string spacing of your **Warwick** bass! You can do this by loosening the allen set screw that locks the saddle insert into the saddle. Once you have done that, you can then slide the insert back and forth in the saddle. Be sure to lock the set screw down after you have found the desired string spacing to ensure that your adjustments you have made stay put.

The Tuning Machines:

All **Warwick** basses come standard with high quality, precision tuning machines. These machines do not require any lubrication or special maintenance to operate properly. The only thing you need to keep in mind when tuning a string is that these machines work best when they are under tension. This means that when you are tuning to a pitch it is best to start below the desired pitch and slowly tune up until you get to where you want to be. Never start from a higher pitch and loosen the tuner until you hit the correct pitch. It will not hold its position as well unless it is set under tension.

The Truss Rod and Easy-Access Truss Rod Plate:

When you need to make a truss rod adjustment, you should not have to mess with a bunch of tiny screws. That is why all **Warwick** basses since 1996 come with an easy-access truss rod plate. Located right above the Just-A-Nut, on the headstock, the truss rod plate can be removed by inserting a 1/8" flat-head screwdriver into the slot and gently popping off the cover. After you have made your adjustments simply snap the cover plate back into place.

The Easy Access[™] Electronics Cover:

If you turn your **Warwick** bass over and look at the back, you will see Easy Access[™] Electronics Cover. Following the same design logic as the truss rod plate, the electronics cover can be removed without having to mess with tiny screws. You do not even need a screwdriver to remove these plates. Just pull back each inset tab (using your fingernail or even a dime) and gently lift out the plate. When you are done, the plate easily snaps back into place. Be careful not to break off the tabs on the cover. It is, unfortunately, easy to do.

The Woods of Warwick

Over the years, **Warwick** has built an unparalleled reputation for selecting exceptional tonewoods to make their basses with. Below you will find a list of the different body woods that **Warwick** uses, as well as the models that they are used on.

Afzelia (Afzelia pachyloba, bipindensis, or africana):

Afzelia is a non-endangered African hardwood that is incredibly dense. Although it is a bit heavier than other woods, it makes for a very punchy low end and very transient highs. *Models: Steamer Stage II*

Bubinga (Guibourtia demeusei, pellegriniana, or tessmannii):

Bubinga is found in Equatorial Africa from southeast Nigeria, through Cameroon and Gabon, to the Congo region. It is a hardwood that is very lustrous and can be highly figured. Acoustically, bubinga is a very resonant wood that offers very clear lows and well-defined upper mids and highs. *Models: Corvette Standard, Thumb Neck-Through*

Ovangkol (Guiboourtia ehie):

Found in most of the same regions of Africa as bubinga, ovangkol is slightly heavier than bubinga yet still offers the same excellent acoustic properties. Its color is dark brown with deep yellow and black stripes. The grain is sometimes very nicely figured with 3D, wavy effects. It also makes a wonderful neck wood. *Models: Thumb Bolt-on, Dolphin Pro I*

Maple/Flamed Maple (Acer, various):

Maple has been used as a body wood for electric basses for many years. It can be found in several regions of the world, with each region producing a different quality of wood. **Warwick** takes great care in selecting only the finest maple, to ensure the great resonance and clarity that people demand from our basses.

Models: Corvette ProLine, Fortress One, Fortress Masterman, Streamer LX, Streamer Pro M, Streamer Stage I

Ash/Swamp Ash (Fraxinus, various):

Like maple, ash is a tried-and-true body wood, that is found in several areas of the world. Ash is the lightest body wood that **Warwick** currently uses. Acoustically, it has wonderful mid-frequency response and a very warm low end.

Models: Fortress Flashback, Corvette FNA

Wenge (Millettia Laurentii):

Warwick pioneered the use of wenge as a neck and fingerboard wood. It is very strong, stable and dense. A wenge or ovangkol neck with a wenge fingerboard is a prime ingredient in the "**Warwick** sound". Wenge is a dark brown wood with blackish streaks. It sometimes has a bleached appearance. It is open to medium grained, hard, dense, and heavy.

The Pick-ups and Electronics

One of the first things you need to do when you get your new **Warwick** bass is to learn what function each knob has, and what pick-ups and onboard electronics your bass comes with. Below you will find a list of definitions for the basic controls that we use on our **Warwick** basses. In the Model Specifics section, you will see a diagram showing the pick-up(s) and controls used on each model, along with a complete parts list and any special notes.

General Definitions:

Basic Volume Control: By rotating this control clockwise, you will increase the volume of your bass.

Push/Pull Volume Control: By rotating this control clockwise, you will increase the volume of your bass. By pulling on the knob, you will activate or deactivate a secondary function (depending on the model of the bass).

Pick-up Pan Control: This control allows you to pan between your neck pick-up and your bridge pick-up. The center detent of the pan control means that you are getting full output from both pick-ups. By rotating the knob clockwise, you get more of the neck pick-up. By rotating the control counterclockwise you get more of the bridge pick-up. When the knob is rotated fully one direction or the other, you are only getting one of the two pickups.

Passive Tone Control: When this control is rotated fully clockwise, you will get the brightest tone from your bass. As you rotate the control counterclockwise, the tone will become less bright.

Stacked Tone Control: This stacked knob controls both the treble and the bass. The top knob boosts or cuts the treble and the bottom knob boosts or cuts the bass. Rotating either control clockwise will boost the respective frequency, while rotating the control counterclockwise will cut the respective frequency.

Stacked Pick-up Pan/Volume Control: The top knob controls the volume of the bass. By rotating this control clockwise, you will increase the volume of your bass. The bottom knob allows you to pan between your neck pick-up and your bridge pick-up. The center detent of the pan control means that you are getting full output from both pick-ups. By rotating the knob clockwise, you get more of the neck pick-up. By rotating the control counterclockwise you get more of the bridge pick-up. When the knob is rotated fully one direction or the other, you are only getting one of the two pickups.

Treble Tone Control: This tone control boosts or cuts the treble frequencies. The center detent is flat, while rotating the control clockwise will boost the treble and rotating the control counterclockwise will cut the treble. On the 2-band preamp, the crossover point is 2kHz. On the 3-band preamp, the crossover point is 8.5kHz.

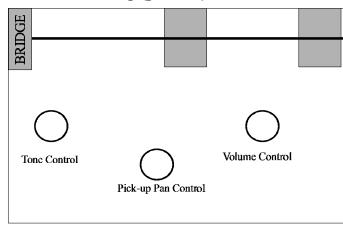
Mid Tone Control: This tone control boosts or cuts the mid frequencies. The center detent is flat, while rotating the control clockwise will boost the mids and rotating the control counterclockwise will cut the mids. On the 3-band preamp, the crossover point is 800 Hz.

Bass Tone Control: This tone control boosts or cuts the bass frequencies. The center detent is flat, while rotating the control clockwise will boost the bass and rotating the control counterclockwise will cut the bass. For both the 2-band and 3-band preamp, the crossover points are set at 100 Hz.

Model Specifics:

Each following diagram is viewed as if you are looking at someone who has the bass strapped on. At the top of each diagram you can see the bottom of the pickups and the G string.

Corvette 4-string (passive)



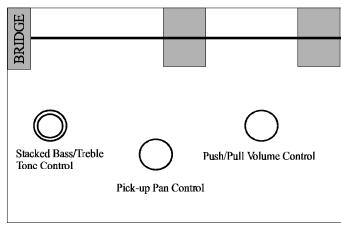
Specifics:

2 Passive MEC Jazz pick-ups. (This model is completely passive.)

1 Volume Control (Part #M83500 - 500K) 1 Pick-up Pan Control (Part #M86252 – 220K)

1 Tone Control (Part #M81500 – 500K Log)

Corvette 4, 5 and 6-string (active)



Specifics:

4-string: 2 Active MEC Jazz pick-ups.

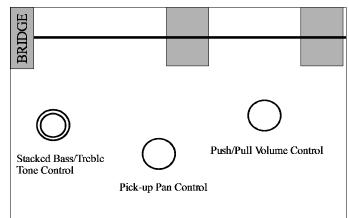
5-string: 2 Active MEC Jazz pick-ups.

6-string: 2 Active MEC Soapbar pickups.

These Corvette basses come with an onboard active preamp.

Push/Pull Volume Control (Part #M84500 - 500K)* Pick-up Pan Control (Part #M85252 - 25K) Stacked Tone Control (Part #M85110 - 2 X 100K) *By pulling on the volume knob, you will bypass the onboard active preamp, which effectively deactivates the tone controls.

Corvette Proline 4, 5 and 6-string



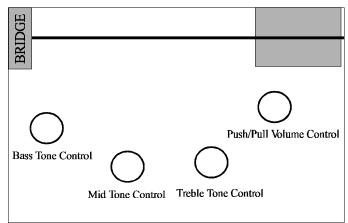
Specifics:

4-string: 2 Active MEC Jazz pick-ups.5-string: 2 Active MEC Jazz pick-ups.6-string: 2 Active MEC Soapbar pickups.

All Corvette ProLine basses come with an onboard active preamp.

Push/Pull Volume Control (Part #M84500 - 500K)* Pick-up Pan Control (Part #M89552 - 2 X 220K) Stacked Tone Control (Part #M85110 - 2 X 100K) *By pulling on the volume knob, you will bypass the onboard active preamp, which effectively deactivates the tone controls.

Corvette FNA 4 and 5-string



Specifics:

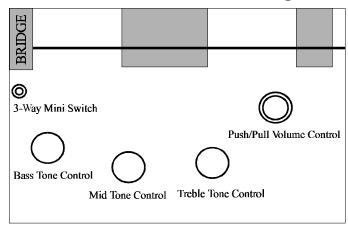
4-string: 1 passive MEC large-pole pick-up. 5-string: 1 passive MEC large-pole pick-up.

All FNA basses come with an onboard active Seymour Duncan Basslines preamp.

Push/Pull Volume Control (Part #M84025 - 22K) Treble Tone Control (Part #M85100 - 100K) Bass Tone Control (Part #M85100 - 100K)

• By pulling on the volume knob you will activate the slap contour EQ curve on the Seymour Duncan Basslines preamp. This curve will boost the bass frequencies and the high frequencies, while slightly cutting the mid frequencies. *Pulling the knob does not deactivate the active preamp.*

Corvette FNA Jazzman 4 and 5-string



Specifics:

4-string: 1 passive MEC large-pole pick-up and 1 passive J pick-up.

5-string: 1 passive MEC large-pole pick-up and 1 passive J pick-up.

All FNA basses come with an onboard active Seymour Duncan Basslines preamp.

Push/Pull Volume/Balance Control* (Part #M88552 - 2X25K)

Treble Tone Control (Part #M85100 – 100K)

Mid Tone Control (Part #M85100 – 100K)

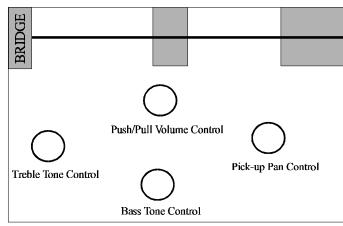
Bass Tone Control (Part #M85100 - 100K)

3-Way Mini Switch** (Part #XE80000)

* Pulling on the volume knob will activate the slap contour EQ curve on the Seymour Duncan Basslines preamp. This curve will boost the bass frequencies and the high frequencies, while slightly cutting the mid frequencies. *Pulling the knob does not deactivate the active preamp.* The balance control allows you to blend the signal between the two pick-ups.

** When the switch is in the up position the bridge pick-up is humbucking and routed in series. When the switch is in the middle position the bridge pick-up is single coil and routed as humcanceling with the neck pick-up. When the switch is in the down position the bridge pick-up is humbucking and routed in parallel.

Fortress One 4 and 5-string



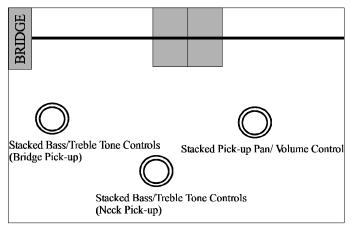
Specifics:

4-string: 1 active MEC P-bass pick-up and 1 active MEC Jazz pick-up. 5-string: 2 active MEC Jazz pick-ups.

All Fortress One basses come with an onboard active preamp.

Push/Pull Volume Control (Part #M84500 - 500K) Pick-up Pan Control (Part #M85252 - 25K) Treble Tone Control (Part #M85100 - 100K) Bass Tone Control (Part #M85100 - 100K)

Fortress Masterman 4 and 5-string



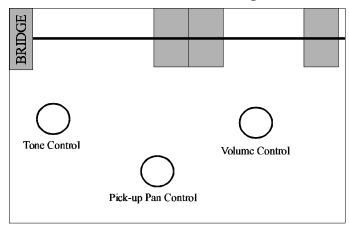
Specifics:

4-string: 1 active MEC Twin-J pick-up. 5-string: 1 active MEC Twin-J pick-up.

All Fortress Masterman basses come with 2 onboard active preamps. (Note: Even though the Masterman bass looks like it has just one humbucking pickup, it actually has two separate J-style pick-ups. Each pick-up has its own individual stacked bass and treble control. The top knob boosts or cuts the treble and the bottom knob boosts or cuts the bass.)

Stacked Pick-up Pan/Volume Control (Part #M88552 - 500K, 2 X 25K) Stacked Tone Controls (Part #M85110 – 2 X 100K)

Fortress Flashback 4 and 5-string



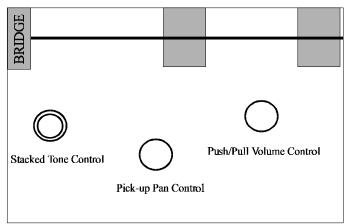
Specifics:

4-string: 1 passive MEC lipstick humbucking pick-up and 1 passive MEC lipstick single pick-up. 5-string: 1 passive MEC lipstick humbucking pick-up and 1 passive MEC lipstick single pick-up.

All Fortress Flashback basses are completely passive.

Volume Control (Part #M83500 - 500K Pick-up Pan Control (Part #M86252 - 220K) Tone Control (Part #M81500 - 500K Log)

Thumb Bolt-on 4, 5 and 6-string



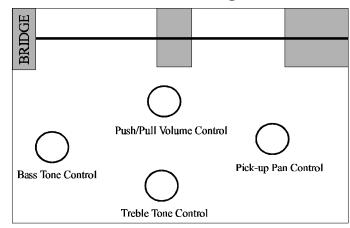
Specifics:

4-string: 2 active MEC Jazz pick-ups.5-string: 2 active MEC Jazz pick-ups.6-string: 2 active MEC soapbar pick-ups.

All Thumb Bolt-on basses come with an onboard active preamp.

Push/Pull Volume Control (Part #M84500 - 500K)* Pick-up Pan Control (Part #M85252 - 25K) Stacked Tone Control (Part #M85110 - 2 X 100K) *By pulling on the volume knob, you will bypass the onboard active preamp, which effectively deactivates the tone controls.

Streamer LX 4, 5 and 6-string



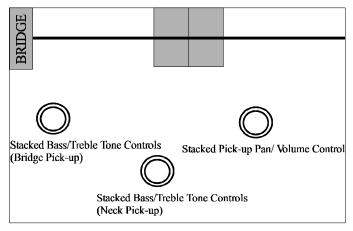
Specifics:

4-string: 1 active MEC P-bass pick-up and 1 active MEC Jazz pick-up.5-string: 2 active MEC Jazz pick-ups.6-string: 2 active MEC soapbar pick-ups.

All Streamer LX basses come with an onboard active preamp.

Push/Pull Volume Control (Part #M84500 - 500K) Pick-up Pan Control (Part #M85252 - 25K) Treble Tone Control (Part #M85100 - 100K) Bass Tone Control (Part #M85100 - 100K)

Streamer Pro M 4 and 5-string



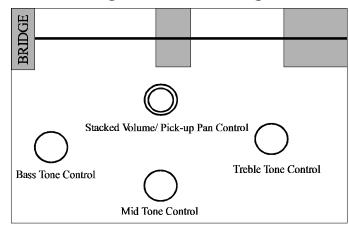
Specifics:

4-string: 1 active MEC Twin-J pick-up. 5-string: 1 active MEC Twin-J pick-up.

All Streamer Pro M basses come with 2 onboard active preamps. (Note: even though the Pro M looks like it has just one humbucking pickup, it actually has two separate J-style pick-ups. Each pick-up has its own individual stacked bass and treble control. The top knob boosts or cuts the treble and the bottom knob boosts or cuts the bass.)

Stacked Pick-up Pan/Volume Control (Part #M88552 - 500K, 2 X 25K) Stacked Tone Controls (Part #M85110 – 2 X 100K)

Streamer Stage I 4, 5 and 6-string



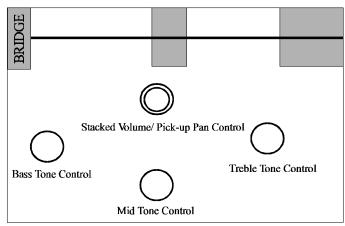
Specifics:

4-string: 2 active MEC Jazz pick-ups.5-string: 2 active MEC Jazz pick-ups.6-string: 2 active MEC soapbar pick-ups.

All Streamer Stage I basses come with an onboard active preamp.

Stacked Pick-up Pan/Volume Control (Part #M88552 - 500K, 2 X 25K) Treble Tone Control (Part #M85100 – 100K) Mid Tone Control (Part #M85100 – 100K) Bass Tone Control (Part #M85100 – 100K)

Streamer Stage II 4 and 5-string



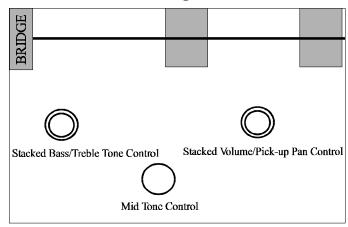
Specifics:

4-string: 2 active MEC Jazz pick-ups. 5-string: 2 active MEC Jazz pick-ups.

All Streamer Stage II basses come with an onboard active preamp.

Stacked Pick-up Pan/Volume Control (Part #M88552 - 500K, 2 X 25K) Treble Tone Control (Part #M85100 – 100K) Mid Tone Control (Part #M85100 – 100K) Bass Tone Control (Part #M85100 – 100K)

Thumb 4, 5 and 6-string



Specifics:

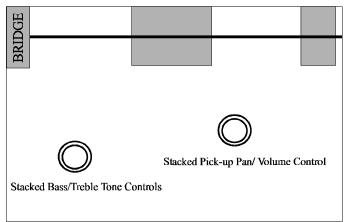
4-string: 2 active MEC Jazz pick-ups.5-string: 2 active MEC Jazz pick-ups.6-string: 2 active MEC soapbar pick-ups.

All Thumb basses come with an onboard active preamp.

Stacked Pick-up Pan/Volume Control (Part #M88552 - 500K, 2 X 25K) Stacked Tone Control (Part #M85110 – 2 X 100K)* Mid Tone Control (Part #M85100 – 100K)

 \ast The top knob boosts or cuts the treble and the bottom knob boosts or cuts the bass.

Dolphin Pro I 4 and 5-string



Specifics:

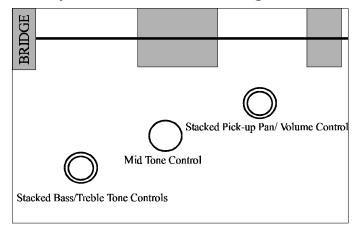
4-string: 1 active MEC Twin-J pick-up and 1 active MEC Jazz pick-up. 5-string: 1 active MEC Twin-J pick-up and 1 active MEC Jazz pick-up.

All Dolphin Pro I basses come with an onboard active preamp.

Stacked Pick-up Pan/Volume Control (Part #M88552 - 500K, 2 X 25K) Stacked Tone Control (Part #M84110 – 2 X 100K)*

*This stacked knob controls both the treble and the bass. The top knob boosts or cuts the treble and the bottom knob boosts or cuts the bass.

Infinity LTD. 2000 4 and 5-string



Specifics:

4-string: 1 active MEC Twin-J pick-up and 1 active MEC Jazz pick-up. 5-string: 1 active MEC Twin-J pick-up and 1 active MEC Jazz pick-up.

All Infinity basses come with an onboard Seymour Duncan Basslines preamp.

Stacked Pick-up Pan/Volume Control (Part #M88552 – 500K, 2 X 25K)* Mid Tone Control (Part #M85100 – 100K) Stacked Tone Control (Part #M84110 – 2 X 100K)**

* Pulling on the volume knob will activate the slap contour EQ curve on the Seymour Duncan Basslines preamp. This curve will boost the bass frequencies and the high frequencies, while slightly cutting the mid frequencies. *Pulling the knob does not deactivate the active preamp.* The balance control allows you to blend the signal between the two pick-ups.

**The top knob boosts or cuts the treble and the bottom knob boosts or cuts the bass. Pulling on the treble knob will coil tap the bridge pick-up. This will turn the Twin-J pick-up into a single J pick-up.

Fine Tuning Your Warwick Bass

Although every **Warwick** bass is meticulously set up prior to shipment, it will eventually become necessary to perform adjustments to your instrument to maintain optimum playability. Many factors can influence your instrument's action, including temperature, humidity and changes in string gauges. It is very common for an instrument to need some degree of truss rod adjustment following shipment to your dealer. No two players have exactly the same needs when it comes to how their bass is adjusted. You can and should adjust your bass according to your own playing needs. The following tools are needed to complete your setup:

One 1.5mm hex key (included with bass) One 2.5mm hex key (included with bass) One 5.0mm hex key (included with bass) A slot screwdriver One #1 Phillips screwdriver One electronic tuner

The first step is to tune your strings to the desired pitches. An electronic tuner is highly recommended for this as to ensure the accuracy of the truss rod adjustment. If the amount of string tension on your neck has just undergone a significant change, the neck should be allowed to settle for at least 30 minutes before adjusting the truss rod. The longer it has to settle, the more you increase your chances of getting your adjustments right the first time.

Inspect your neck. Place your finger on the E (or B) string in the first fret space and another finger on the 12th fret. Using your string as a straight edge, look at the gaps between the string and the tops of the 4th through the 8th frets. Where the largest gap occurs will vary from bass to bass. If the largest gap is more than about .020" or .5 mm, you will probably need to tighten your truss rod. If there is no gap at all, you will most likely need to loosen it. Most people prefer to have their relief set somewhere in between these parameters. A common misconception is that a neck should be perfectly straight for best results. This is simply not true. A bass neck should be very slightly concave as to allow buzz-free action in the first few positions. A properly set up bass always has *some* relief in the neck.

Adjusting Your Truss Rod:

All **Warwick** basses are fitted with a patented snap-fitting truss rod cover that can be easily removed using a slot screwdriver. It is not necessary to loosen the strings during truss rod cover removal or replacement. The truss rod controls the amount of bow, or relief in the neck by counteracting the string tension. Over the years, **Warwick** has used 3 types of truss rods, each of which has its own requirements for an optimal setup. Please read the following to ascertain which truss rod adjustment, it is recommended it be taken to a qualified dealer or repair person. Over adjustment in either direction can cause permanent damage to the instrument and may not be covered under warranty. If you encounter any significant resistance while adjusting your truss rod, do not turn any further.

The only thing you need to remember when making a truss rod adjustment is that "a little goes a long way". The safest way to make an adjustment is to plug your bass into an electronic tuner and check the tuning after every eighth of a turn of the truss rod. If the neck is being bowed back, the strings with go sharp. If the neck is being allowed to relax, then the strings will go flat. Be sure to re-tune the strings and check the string height after every quarter turn, until you have achieved the desired neck set up.

Warwick Fixed Steel Truss Rod: As of July 1998, All **Warwick** basses are equipped with a steelreinforced neck and 2-way fixed steel truss rod. All bolt-on necks since February 1996 also employ this truss rod. The easiest way to tell if your bass has this truss rod design is the presence of a volute, or small heel behind the nut. This truss rod can adjust the neck in either direction (push/pull) and works as one would normally expect. If you are facing the 5mm Allen fitting, turn clockwise to flatten the neck, counterclockwise to introduce more relief. This truss rod should be adjusted in 1/8-turn increments. Rotate 45 degrees in the desired direction and let the neck stabilize. Full stabilization can take from hours to weeks after the tension on the neck is altered, but most of the effect of 1/8 of a turn should manifest itself within an hour. If your neck has much more forward bow than you like, it may require a more substantial amount of adjustment. Loosening your string tension can ease this process if more than ¹/₂ turn is required to straighten your neck to your taste

Warwick Removable 2-way Truss Rod: This truss rod appears in some bolt-on necks from 1992 through January 1996, and some neck-through models from 1992 through 1998. Adjustment should be made in the same manner listed above, but in ¹/₄ turn increments. Because this truss rod is removable, a few have been installed or reinstalled "upside down", necessitating adjustments in the opposite directions of what would normally be expected. This had originally been done to mimic the effects of the original left-handed threaded truss rod, as to not confuse owners of older models.

Original Removable Truss Rod: This can be found on models made in the 1980's through some as late as 1998. The threads allow tightening of this rod only to the left, which may seem somewhat counterintuitive to some. If the adjustment nut comes off when turned clockwise, it is a sure sign that your bass has been fitted with this type of truss rod. The effects of tightening this truss rod depend on whether it has been installed with the threaded side up or down.

Adjusting the Just-A-Nut:

Set the individual string height at the nut so that the strings are as low as they can be without buzzing and rattling when you play the string in your usual playing manner. **Warwick's** new Just-A-Nut II allows adjustment without the removal of the strings. Simply insert your 1.5mm Allen wrench into the fittings on the top of the nut and raise or lower as needed.

Basses equipped with the original brass Just-A-Nut I should be adjusted as follows: Loosen the string slightly, pull the string out of its slot on the nut, then turn the Just-A-Nut screw to raise or lower the action as needed. Replace the string in the nut slot and check the playability.

Adjusting the Saddle:

Fine-tune the individual string heights to taste. This is done by loosening the set screw on the side of each saddle piece and raising or lowering the individual saddle piece by adjusting the two set screws from the top. Be sure to lock the saddles back in place when you are finished. This is also how you make adjustments to the string spacing.

Adjusting the Bridge:

The bridge height should be adjusted according to your individual needs. To raise your bridge, loosen the two locking screws in the center of the bridge, then turn the height adjustment screws on the 4 corners until your desired height is reached. Tighten the center locking screws down when you have finished. Lowering the bridge is done the opposite way, although it is not necessary to loosen the locking screws first. Remember that the harder you hit the string, the higher you will need to set the action to prevent buzzes and rattles. Each instrument is set up in the factory to ensure that it can be played with minimum rattle and buzz in every fret space when played at an average players' mezzoforte, with the possible exception of some notes on the low strings above the 12th fret. After your bridge height has been set, you may need to go back and adjust your truss rod (see the notes on setting your truss rod). A factory setup measures approximately 2 mm between the bottom of the G string and the top of the 24th fret and about 2.5 mm on the bass (B or E) side. Players with a lighter touch may be able to use a lower action, while those using a pick may require a slightly higher action.

Adjusting Pick-up Height:

The pick-ups should be set relatively close to the strings for the best tone. The bridge pickup in particular should be set as close as playing style and intonation will allow. (If the pickups are set ridiculously close to the strings and/or have very strong magnetic fields like the Corvette FNA's pickup, the intonation can get wacky.) Start at 1/4" (6.35mm) or less on the bridge pickup, then set the height of the neck pickup until it approximately balances in output level. If you play hard, and the strings are always slapping against the pickups when you play, then this setup is too close. In general, the closer the pickup is to the strings, the fatter and fuller it will sound. The signal to noise ratio is also optimized.

Second, the output of the pickup varies as the square of the distance from the string. This means that the string-to-string balance of a bass with the pickups set nice and close can be significantly affected by changing the saddle height slightly on a given string. Sight along your bass from the bridge to the neck. Do the string heights approximately follow the radius of the neck? Is one of the strings higher or lower than it should be? Uneven string output can be the result! Some people like the strings to be level from E to G, some people like to follow the fingerboard radius. The pickup can also be tilted as a balancing tactic. Many people lower the bass side slightly, but there are so many variables (i.e. cabinet response, string gauges, room response, playing style) that there is no right setting here.

Setting the Intonation:

Set the intonation for each string so that the harmonic at the 12^{th} fret is the same pitch as the fretted note at the 12^{th} fret. This is best done with an electronic tuner, but can be done by ear. Use the same fretting pressure as you use in normal playing for the best results. If the fretted note is sharp to the harmonic, the string needs to be made longer. Use the individual screw adjustments at the bridge to make each string shorter or longer as needed to get the harmonic and the fretted note the same. Use a phillips screwdriver with a fresh #1 tip.

Body Care Instructions

All natural finish basses come with a tin of **Warwick** wax. All satin finished (colored) basses are completely sealed and do not require waxing. They can be cleaned with a damp cloth or with naphtha to remove grease. The body on all **Warwick** natural wood finish basses should get waxed about once per month. We recommend the **Warwick** beeswax. Just rub in a thin coating, let it dry a little, then buff it out with a clean, dry cloth.

The back of the neck usually gets enough palm grease to keep it from drying out. Fingerboard oil or other drying oils can be used on the back of the neck if desired. The key is how it feels. If it feels sticky, try something else. The fingerboard should be oiled periodically. There are a number of oils that work. Personal preference is going to have to be your guide. You can use Guitar Honey (a fingerboard oil made Gerlitz Guitars) or boiled linseed oil. The key with all of the oils is not to overdo it. A little goes a long way. If the fingerboard seeps oil and won't dry out for days, you used too much.