

Maintenance >>

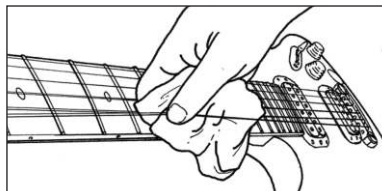
Our congratulations and deepest thanks on making Ibanez your choice of instrument.

Ibanez standards are second to none. All Ibanez instruments are set up to our strict quality control standards before shipping. The purpose of this manual is to explain how to maintain your instrument's finish and to keep your guitar playing as well as it did when it left our factory.

CLEANING

Regular cleaning of your guitar is one of the most important ways you can maintain the finish and lengthen string life. After playing, wipe down your instrument to remove any perspiration from the instrument.

Perspiration can actually contain acids that can be corrosive to the strings and metal parts of the guitar. Gloss finish guitars should be polished with polish formulated specifically for musical instruments, and a soft, treated guitar cloth or a cotton rag. Abrasive rags such as polyester can scratch the finish. Oil finished guitars should be wiped clean immediately after playing with a dry cotton rag only. If your guitar has become discolored due to extended use or heavy perspiration, factory appearance, see a qualified guitar repair person about methods to restore the oil finish to its original factory appearance.



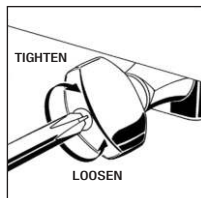
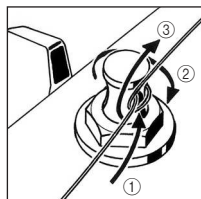
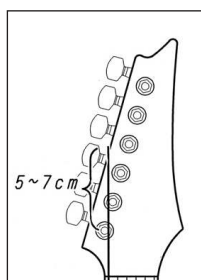
STRINGS AND TUNING MACHINES

If strings become dirty, discolored, or produce a dull sound or buzz, replace the strings with new ones. For best results we recommend replacing one string at a time, this will help to avoid removing the string tension from the neck. When replacing strings with different gauge strings, it may be necessary to adjust the truss rod tension. (We recommend only qualified technicians perform this.) Instruments that have tremolo systems installed may need to be adjusted after string replacement as changes in string tension can cause the tremolo to raise or lower. Ibanez guitars and basses are factory equipped with the following string gauges. Please follow the instructions below for your particular model. The strings should be tightly wound on to the tuning machines from top to bottom with 2 to 3 string wraps around the post. In the case of unwound guitar strings, the ends of the strings should be prepared as shown in the diagram to prevent unintentional slippage from the posts. In the case of tuning machines, where the string ends are inserted into the posts, the string can be cut to length in advance using a pair of string cutters.

If the tuning machines are sealed gear units, they are self-lubricating types. The set screws for the tuning knob are adjustment screws that can be tightened with a small Phillips head screwdriver to increase the tension.

*The use of coarse strings may lead to buzzing and sound distortion. Using strings that have twists or kinks may cause buzzing or decreased sustain. Make sure that the new strings are smooth and free from any defects before installing.

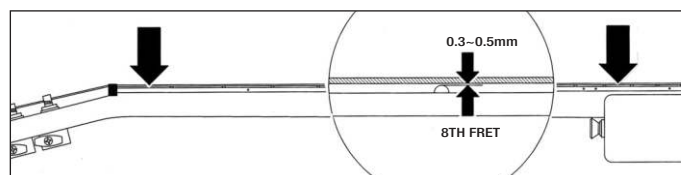
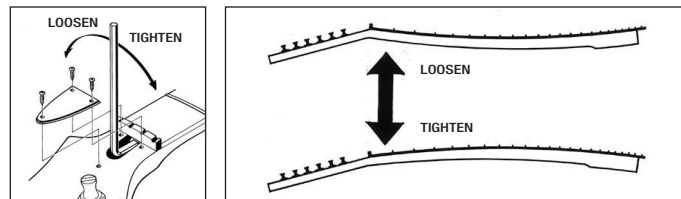
STRING GAUGES	
Artcore Guitars	.010-.046"



NECK

Ibanez steel string models are equipped with adjustable truss rods. The purpose of a truss rod is to adjust the neck to counteract string tension. There are many reasons for truss rod adjustments. One of the most frequent reasons is changing string gauges or tuning pitch which can affect string tension. String tension changes may affect the string height and cause fret buzz or notes that don't ring true. To adjust the truss rod, locate the truss rod nut and adjust it by inserting the correct wrench into the nut and tightening (clockwise) or loosening (counter clockwise) the rod. Truss rod tension can be measured by installing a capo at the first fret the holding the strings down at the fret position where the neck joins the body. Insert a thickness gauge between the string and the fret at the 8th fret. There should be between 0.3 mm to 0.5mm clearance. That clearance is referred to as "neck relief." Too much neck relief can cause the neck to have higher action in the middle of the neck causing poor intonation and uncomfortable playability. No neck relief can cause fret buzz.

*Appropriate care must be taken when adjusting the neck and we recommend only qualified technicians perform this procedure.



ACTION

Ibanez guitar and bass string action is set at the factory. However there are many reasons that an instrument's string height can change. Instruments can be affected by changes in temperature and moisture. High string action can make the guitar difficult to play. If the string action is too low, fret buzz or unclear notes can occur. To remedy this, follow the instructions for the particular type of bridge installed. In the case of string action, make sure the guitar is in tune and the truss rod is adjusted properly. Ibanez action is set at the 14th fret (Basses: 12th fret). The action may also need to be readjusted after the neck has been adjusted or strings have been changed to a different gauge. Follow the instructions in the relevant bridge manual to make adjustments.

*If strings other than those described above are used, gradually increase the action clearance from the treble side through to the bass side.

INTONATION

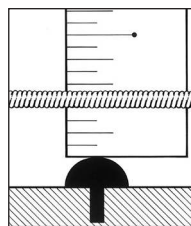
Intonation adjustment is the operation of adjusting the location of the string at the saddle to compensate for different string gauges or different tunings. Follow the instructions of the particular bridge intonation below. Intonation is properly set when the 12th fret note and the 12th fret harmonic are exactly the same note. This is the center point of the scale and the most accurate way of setting a standard scale length. With the harmonic note as the standard, if the fretted note is flat move the bridge saddle forward toward the headstock (a) to decrease the string length. If the fretted note is sharp, move it back away from the headstock (b) to increase the string length intonation adjustments.

*Please note that strings can be broken when the saddle is moved, so always loosen the strings before making adjustments.

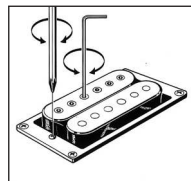
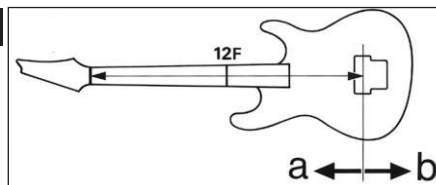
PICKUPS

The output level of the instrument as well as the quality of the signal can be affected by the pickup height. Pickup height should be adjusted until the volume of neck and bridge pickups are almost equal with both volumes wide open. The volume may drop drastically if the pickup height is too low. As the pickups are magnetic, fret buzzing and distortion may occur if the pickup is too close to the strings. Use a small screwdriver to make adjustments to raise or lower the pickup.

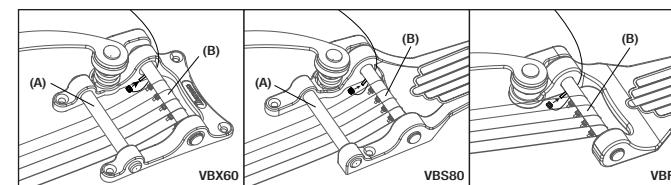
*Instruments that have adjustable pole pieces can be adjusted to balance the output of each string.



	TREBLE SIDE	BASS SIDE
Artcore Guitars	1.7mm	2.3mm
Artcore Basses	2.0mm	2.5mm



Vintage Vibrato >>



For best results we recommend replacing one string at a time. This will help to avoid removing the string tension from the neck and keep the vibrato spring under tension.

To replace the strings on the VBX60 and VBS80, thread the new string under the front tailpiece retainer bar (A). On VBF70 there is no front retainer bar.

The ball end of the string should be threaded over and around the rear tailpiece retainer bar (B). The ball end of the string's hole is inserted into the rear tailpiece retainer bar pin and the string should be pulled tight towards the headstock. Releasing the string tension from the tailpiece may cause the ball end to slip off the pin. Keeping string tension on the string by pulling it towards the headstock will alleviate this problem.

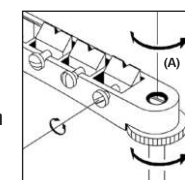
Thread the string through the machine head and while keeping tension on the string, wind the string around the post. Make sure that the string lands on the proper string saddle on the bridge. Once tight, tune the string to pitch. Repeat this process for the other strings.



Bridge >>

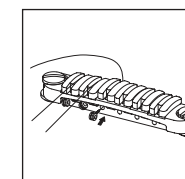
ART1,2 BRIDGE

The intonation can be adjusted by moving the saddle forward or backward using a Slot head (-) screwdriver on the adjustment screw. String height is controlled by raising or lowering the two height adjustment studs or spinners on either side of the bridge (A).

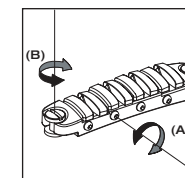


CB3, GIBRALTAR III BASS

REPLACING THE STRINGS : CB30
Install strings by inserting them from the front of the bridge.



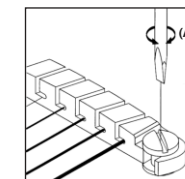
The intonation can be adjusted by moving the saddle forward or backward using an Allen wrench on the adjustment screw at the rear of the bridge (A). String height is controlled by raising or lowering the two height adjustment studs on either side of the bridge (B).



Tailpiece >>

QUICKCHANGE III / QUICKCHANGE III BASS

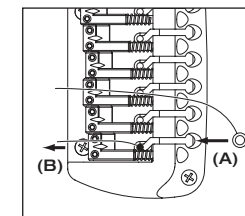
The height adjustment of the tailpiece can be raised or lowered using the two height adjustment studs on either side of the tailpiece (A).



Bridge >>

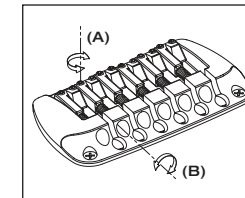
FXB-50

The strings are installed by putting the ball end into the slot (A) and hooking the ball end below the string catch (B).



To raise or lower the string action, insert the correct Allen wrench into the screw (A) at the saddle. To raise the saddle turn the wrench clockwise and to lower the saddle turn the wrench counter clockwise.

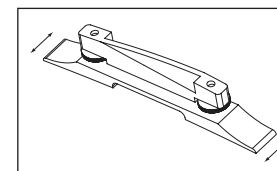
Intonation adjustments can be made by adjusting the intonation screws (B) at the rear of the bridge clockwise to move the saddle back and counter clockwise to move the saddle forward.



ADJUSTABLE ARCH-TOP

The string height of an arch top bridge can be adjusted by turning the thumb wheel screws located on either side of the bridge. Clockwise lowers the string action; counter clockwise raises the string action.

As the bridge is not fixed to the body, intonation can be adjusted by loosening the strings and moving the location of the bridge forward or backward.

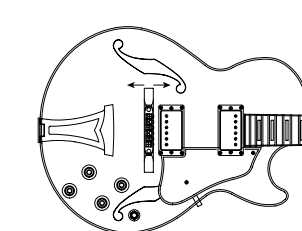
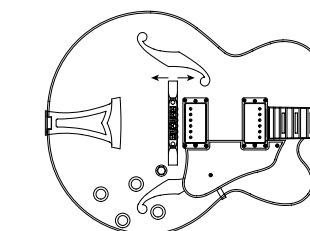


Bridge Location >>

Below is the standard location of the bridge for AF, AFS and AG guitars. Adjust the location to obtain proper intonation.

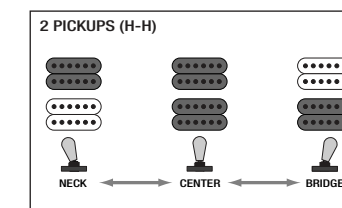
AF, AFS, AK

AG

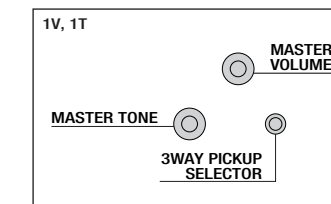
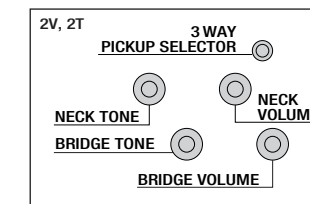


Controls >>

SWITCHING FUNCTION



CONTROLS

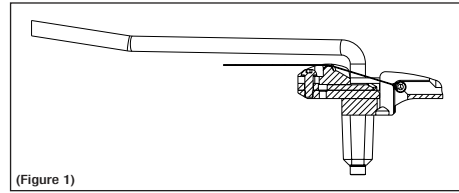


ACT TREMOLO

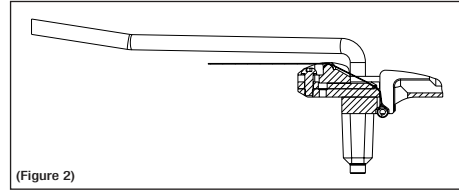
REPLACING THE STRINGS

ACT tremolo allow two styles of string installation.

1) The strings are installed by putting the ball end into the string slot and hooking the ball end below the string catch at the rear of the tremolo unit. (Figure 1)



2) The strings are installed by putting the ball end into the string slot and hooking the ball end in the string catch at the bottom of the tremolo unit. This increases string tension and adds sustain. (Figure 2)



TREMOLO ARM INSTALLATION

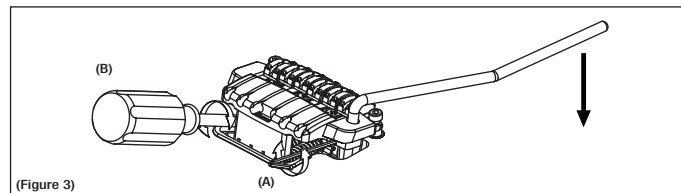
The tremolo arm can be inserted and removed very easily. Insert the arm into the armhole on the tremolo base plate. Pull up on the arm to remove it.

ARM ROTATION TORQUE

The rotation torque of the arm can be adjusted by raising the tremolo and inserting a 2.0mm Allen wrench in the screw (Figure 3, (A)) on the tremolo block. Turning this screw clockwise will tighten the arm torque and turning the screw counter clockwise will loosen the arm torque.

ADJUSTING THE TREMOLO SPRINGS

ACT Tremolo is designed to function optimally when it is installed approximately parallel with the surface of the guitar body. The angle at which the tremolo is attached can be adjusted by changing the length of the tremolo springs under the tremolo unit. Use a Philips (+) screwdriver to turn the tremolo tension adjustment screws to adjust the length of the tremolo springs. (Figure 3, (B)) If the tremolo is tilted forward toward the neck of the guitar, turn the screws clockwise to tighten the springs. Conversely, if the tremolo is tilted backward away from the neck, turn the screws counter-clockwise to loosen the springs. Tune the guitar actually, re-check the angle of the tremolo, and repeat the adjustment until the tremolo angle is correct.

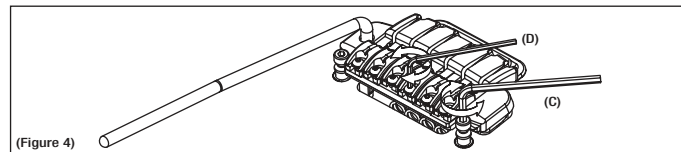


ADJUSTING THE ACTION

To adjust the entire tremolo unit up or down, use a 3.0mm Allen wrench to turn the stud bolt (Figure 4, (C)) located at the left and right of the tremolo unit. (This cannot be adjusted for each individual string.)

ADJUSTING THE INTONATION

Use a 2.0mm Allen wrench to loosen the saddle lock screws (Figure 4, (D)) of each saddle, and move the saddle. Firmly tighten the saddle lock screws, tune the guitar, and then check the intonation. Repeat these adjustments until the intonation is correct.



Ibanez

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This is to certify that the aforementioned equipments fully conform to protection requirements of the following EC council directives.
DIRECTIVES: 89/336/EEC Electromagnetic compatibility



**INSTRUCTION
MANUAL** ARTCORE



Ibanez