YAMAHA ELECTRIC GUITAR

SE/SJ SERIES
OWNER'S MANUAL

SE150
SE250
SE350
SE350H
SE700E
SE700HE
SJ550HR

YAMAHA

Congratulations on your choice of the Yamaha SE/SJ Series electric guitar, an instrument blending nearly one hundred years of traditional craftsmanship, the latest in sophisticated design and production techniques, and Yamaha's widely lauded quality control standards. With reasonable care, your Yamaha SE/SJ Series guitar will age gracefully and provide many years of superlative musical service.

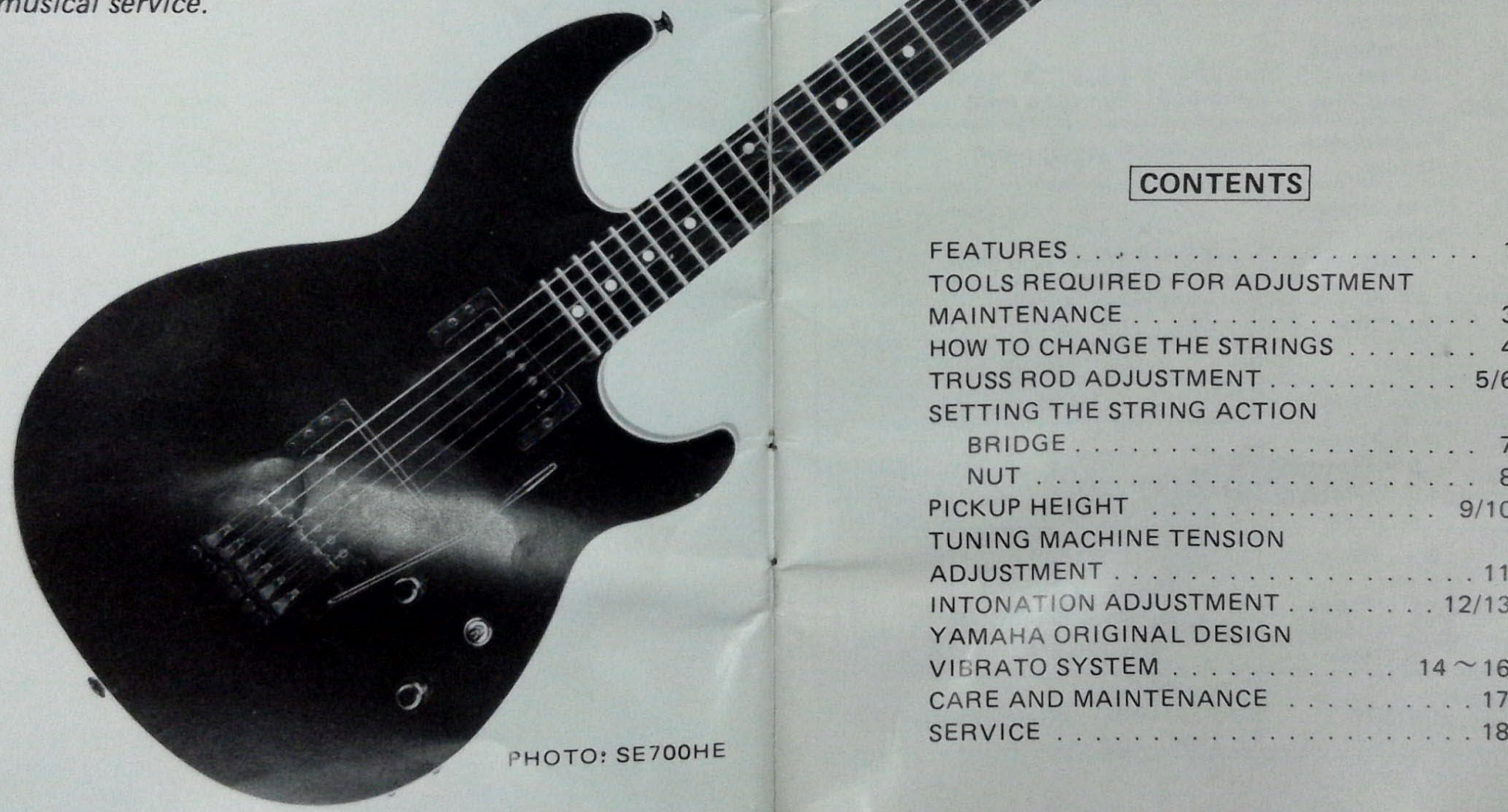


PHOTO: SE700HE

CONTENTS

FEATURES

MODEL		SE150	SE250	SE350
BODY		Campnosperma		
NECK	Wood	Nato		
	Scale (")	25-1/2		
	Type	Detachable		
FIN-GER-BOARD	Wood	Buvinger		
	Inlay	Dot		
	# of Frets	22		
	Width of Fingerboard 0 Fret Final Fret	1-3/5" (41 mm) 2" (514 mm)		
	Fingerboard Radius	R250 (mm)		
	Fret Dimensions Width Height	1/10" (2.5 mm) 1/20" (1.3 mm)		
PICK-UPS	Quantity	1	2	3
	Type	Ferrite		
	Wire Gauge	0.065 mm		
	# of Turns F = Front C = Center R = Rear	6,500Tx2	6,000T(F) 6,500Tx2(R)	6,000T(F) 6,000T(C) 6,500T(R)
	D.C. Resistance F = Front C = Center R = Rear	9.7kΩ	4.1kΩ(F) 9.7kΩ (R)	4.1kΩ(F) 4.1kΩ(C) 9.7kΩ(R)
BRIDGE		Syncronized type	Rockin' Magic II	

SE350H	SE700E	SE700HE	SJ550HR
Campnosperma	Alder		Alder, Birch
Nato	Maple		
25-1/2			
Detachable			
Buvinger	Ebony		Rosewood
Dot			
22			21
1-3/5" (41 mm) 2" (514 mm)			
R250 (mm)			
1/10" (2.5mm) 1/20" (1.3 mm)			
2	3	2	2
Ferrite	Spinex		
0.065 mm	0.06 mm		
6,500Tx2(F) 6,500Tx2(R)	9,000T(F) 9,000T(C) 5,300Tx2(R)	5,300T(F) 5,300T(R)	5,300T(F) 5,300T(R)
9.7kΩ(F) 9.7kΩ(R)	7.5kΩ(F) 7.5kΩ(C) 8.4kΩ(R)	8.4kΩ(F) 8.4kΩ(R)	8.4kΩ(F) 8.4kΩ(R)
Rockin' Magic II	Rockin' Magic		2 way adjustable

We recommend an extra light string set (0.009 – 0.0042) for the SE150, SE250, SE350, SE350H and SJ550HR, and a regular light gauge string set (0.010 – 0.046) for the SE700E and SE700HE.

String	Extra Light	Regular Light
1	0.009"	0.010"
2	0.011"	0.013"
3	0.016"	0.017"
4	0.026"	0.026"
5	0.032"	0.032"
6	0.042"	0.046"

Naturally, individual preferences may vary, and different string gauges can be used, and even mixed to match the players taste and purpose.

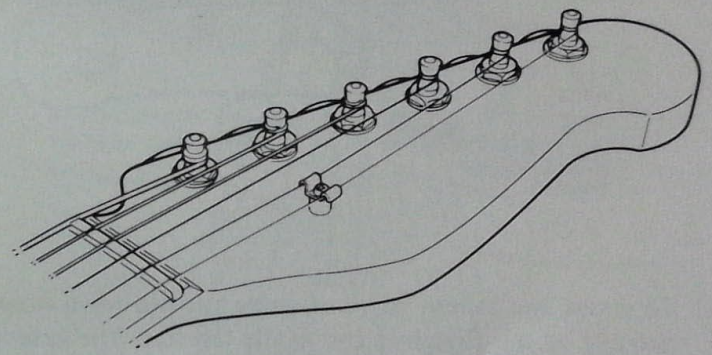
TOOLS REQUIRED FOR ADJUSTMENT MAINTENANCE

Capo (not included)
Automotive mm feeler gauge (not included)
15 cm rule calibrated in 1 - 10 mm (not included)
Screwdrivers (included)
Hexagonal truss rod wrench (included)

Note: Automotive feeler gauge and 15 cm rule can be found at hardware and automotive stores.

HOW TO CHANGE THE STRINGS

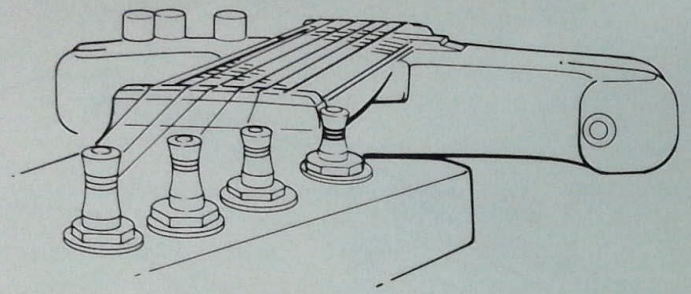
1) Insert the string into the appropriate tailpiece, or bridge making certain that the ball end of each string is tightly seated. Note that on the SJ550HR the strings mount through the body
2) Use the over-locking technique and secure the strings as illustrated.



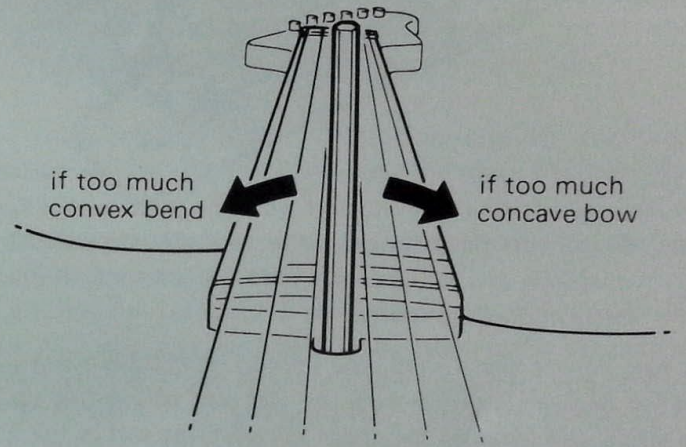
Remember to leave enough slack so that the string can wrap three times around the capstan before proper tuning tension is achieved. If you can lift the string 3 or 4 inches (8 or 9 cm) from the fingerboard at the middle of the neck when the string is first threaded in the capstan, there should be adequate slack to allow the string to be properly tightened. This technique reduces string breakage by creating a smooth radius at the point where the string leaves the capstan.

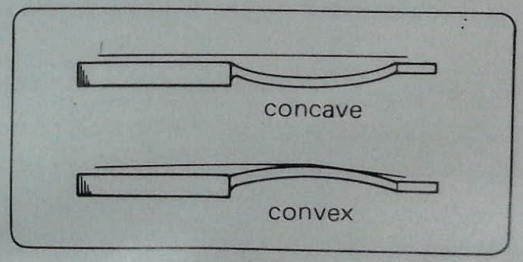
TRUSS ROD ADJUSTMENT

The curvature of the neck should be slightly concave. The practice of sighting down the neck to see whether there is a bow or bend is unreliable, and even experienced guitar technicians can be misled by optical illusions. A better method to check for proper curvature is as follows:



1) To check the extent of warp, press a string down simultaneously at the first fret and at the last fret. The extent of warp is the space between that string and the top of the fret lying half way between the two fretted points. (To free on hand for this method, you might use a capo at the first fret.)
2) There should be approximately 0.015" to 0.020" (0.38 to 0.50 mm) space between the bottom of the string and the top of the fret. This can be checked by slipping an automotive feeler gauge under the string.
3) If the spacing indicates that the curvature is not correct, remove the truss rod cover with the screwdriver end of the tool provided with the guitar. Then adjust the truss rod nut with the hexagonal wrench. Clockwise rotation of the nut tightens the rod and corrects for too much concave bow. Counterclockwise rotation of the nut loosens the rod and corrects for too much convex bend. Make any adjustments gradually. Allow five to ten minutes for setting, and check the curvature after each 1/2 turn of the truss rod nut.

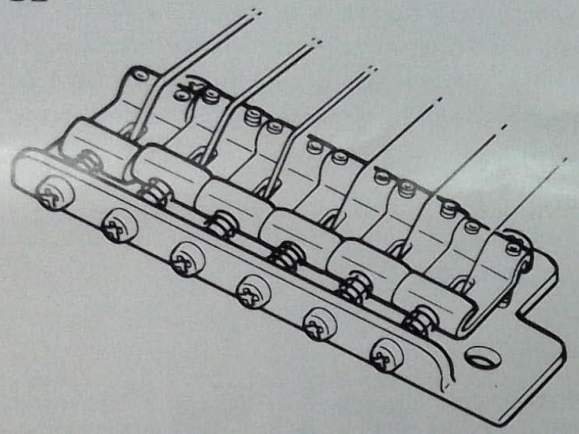




Note: UNLESS YOU HAVE EXPERIENCE WITH TRUSS RODS, WE SUGGEST THAT YOU ENTRUST THIS ADJUSTMENT TO YOUR DEALER.

SETTING THE STRING ACTION

– BRIDGE –



Note: Be sure to perform any necessary adjustments to the truss rod and remove the capo before performing the following adjustments.

Set one end of the 15 cm rule on top of the 22nd fret (21st fret for SJ550HR only) with the flat side of the rule against the string and measure the space between the top of the 22nd fret (21st fret for SJ550HR only) and bottom of each open string. The recommended height for each string should be as follows:

Fret	String	Standard A	Standard B
final	1	1.9 ± 0.2	2.1 ± 0.2
	2	2.0 ± 0.2	2.2 ± 0.2
	3	2.1 ± 0.2	2.3 ± 0.2
	4	2.2 ± 0.2	2.4 ± 0.2
	5	2.3 ± 0.2	2.5 ± 0.2
	6	2.4 ± 0.2	2.6 ± 0.2

Note: Standard A applies to the SE700E, SE700HE and SJ550HR models. Standard B applies to the SE150, SE250, SE350 and SE350H models.

Individual height adjustments for each string are provided in the form of two set screws on each saddle. Clockwise rotation raises saddle height and counterclockwise lowers the saddle.

– NUT –

Note: Any adjustment to string height at the nut are contingent on proper truss rod adjustments and bridge string heights. Be sure to apply the mentioned procedures before proceeding with the nut.

The string height at the nut is measured by inserting the appropriate feeler gauge blade into the space between the top of the first fret and the bottom of each string. The mentioned space should be 0.55 mm ± 0.05 mm for the model whose string action setting is Standard A (0.55 mm +0.1/ −0.05 mm for Standard B setting models). If the space is less than 0.50 mm and the open string buzzes, the nut may need to be replaced. If the space is higher than 0.60 mm (0.65 mm for Standard B setting models) the string slot should be filed down to the correct height. If corrections to the string nut action are necessary, please contact a qualified guitar technician.

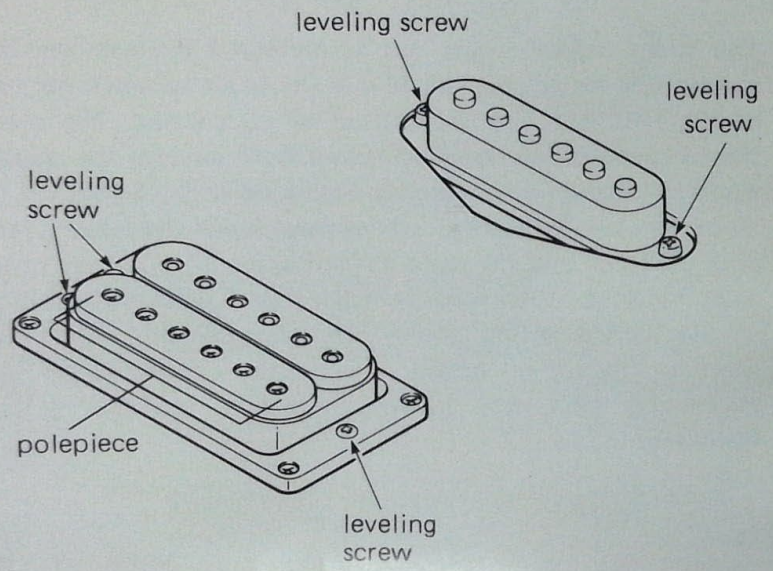
PICKUP HEIGHT

Pickup Height:

Pickup height from polepiece to string should be set to 2.5 ± 1 mm.

Pickup Adjustments:

Proper pickup adjustment ensures maximum output level and uniform response on all strings. To make adjustments, follow the directions below:



1) The overall height of the entire pickup can be raised or lowered by turning the leveling screws appropriately with a Phillips type screwdriver. Normally, even output and response will require the pickup to lay equidistant beneath each string.
2) On humbucking pickups it is also possible to "fine tune" the individual polepieces to insure uniform electrical output from all strings. This will be especially true if normal conditions, as outlined above, do not hold, due for example to player preferences. In this case, it would be wise to make the adjustments while listening to the guitar through an amplifier.
3) Play each string in succession, and listen to the volume, using your screwdriver to adjust the polepieces. The volume should be about the same for each string. If a string is relatively too loud, lower its polepiece. If it's not loud enough, raise its polepiece.

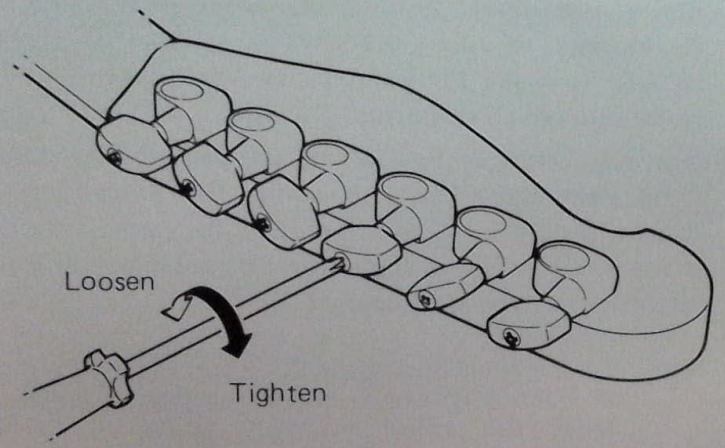
   Note: If a string pressed at the 22nd fret (21st fret in case of SJ550HR only) buzzes against a polepiece, lower the entire assembly using the pickup mounting screws. Then continue with the adjustments.

4) Repeat the same procedure for each pickup.

Note: Single coil pickups do not have polepieces.

TUNING MACHINE TENSION ADJUSTMENT

The tuning machines have spring-loaded mechanisms which automatically take up wear, preventing backlash. However, it is possible to adjust the amount of pressure required to turn the machines. Each machine has a tension adjustment screw, as illustrated.

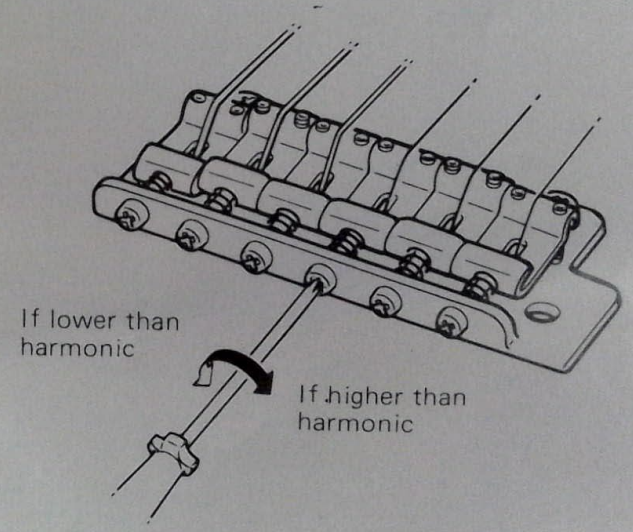


Clockwise screw rotation tightens the machine. The tuning machines should be adjusted to the extent that they are firm, but can turn smoothly. This adjustment is normally unnecessary, and excessive tightening can lead to premature tuning machine wear.

INTONATION ADJUSTMENT

When the string gauge and/or bridge height is changed, or the truss rod is adjusted, it is usually necessary to reintonate the bridge saddles. If the guitar plays out of tune in the higher registers, this adjustment is needed. Check each string in the following way:

To check intonation, compare the harmonic tone (12th fret) to the fretted tone (12th fret). Because the 12th fret is the midway point between the nut and the bridge, a harmonic tone one octave higher than the fretted tone can be generated. This is done by barely touching the string directly above the 12th fret (left hand) and simultaneously plucking the same string (right hand). If the fretted tone is exactly the same pitch as the harmonic tone, no adjustments to the bridge saddles are necessary. However, if the fretted tone is higher in pitch (sharp) or lower in pitch (flat) than the harmonic tone, apply the appropriate adjustment as shown below. Repeat the same procedure for each string.



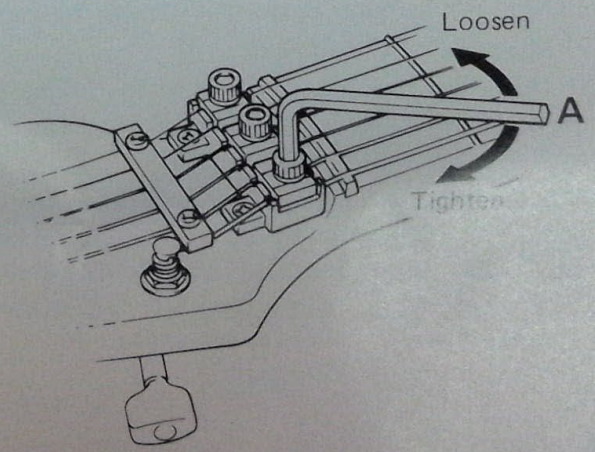
If the fretted note is pitched higher than the harmonic, turn the corresponding saddle adjustment screw clockwise, increasing the active string length. Conversely, if the fretted note is pitched lower than the harmonic, turn the corresponding saddle adjustment screw counterclockwise, reducing the active string length.

For best results, we recommend a tuning scope to compare harmonic tones to fretted tones. If a tuning scope is not available, we recommend that you refer this adjustment to a qualified guitar technician.

YAMAHA ORIGINAL DESIGN VIBRATO SYSTEM

The YAMAHA Vibrato System permits superior pitch stability during the most radical use of the vibrato arm. Even though the strings are locked at the nut and bridge saddle, string replacement is quick and simple due to YAMAHA's unique design. The strings are top-loaded from the rear of the bridge and it is not necessary to cut off the ball end as on other vibrato systems. There are two types of this original design vibrato system. One is Rockin' Magic and is used for SE700E and SE700HE, and the other is Rockin' Magic II and is used for SE150, SE250, SE350 and SE350H.
Following is the procedures for changing strings and adjusting the vibrato system:

a. Loosen the three Allen screws on the lock above the nut. (illustration — A)
b. Loosen the individual string locks on each saddle using the Allen wrench (blade screwdriver for Rockin' Magic). (illustration — B)



c. Replace the old strings with new strings and tune the guitar a little lower than the correct pitch. (See the section "Stringing The Guitar" on p. 3.)
Note that locking the string increases the string tension. Unless tuned a little lower here, the pitch exceeds the adjustable range by the fine tuning thumb screw.

d. Using the supplied Allen wrench (blade screwdriver for Rockin' Magic), lock each string at the saddle. (Illustration—B)
(Before locking the strings, make sure that the fine tuning thumb screws are in the middle of their range of travel.) (illustration—C)

e. Tune the guitar to the correct pitch. (illustration—C)

f. Remove the back plate to gain access to the vibrato strings. Three springs are factory installed and we recommend that these springs be adjusted so that the vibrato bridge plate is parallel to the top of the guitar when it is tuned to correct pitch. Two additional springs are included with the guitar if a stiffer vibrato arm tension is desired.

g. Lock the strings above the nut using the supplied Allen wrench. (This will cause the strings to go slightly sharp in pitch.) (illustration – A)

h. Use the fine tuners at the rear of the bridge to bring the strings back down to the correct pitch. (illustration – C)

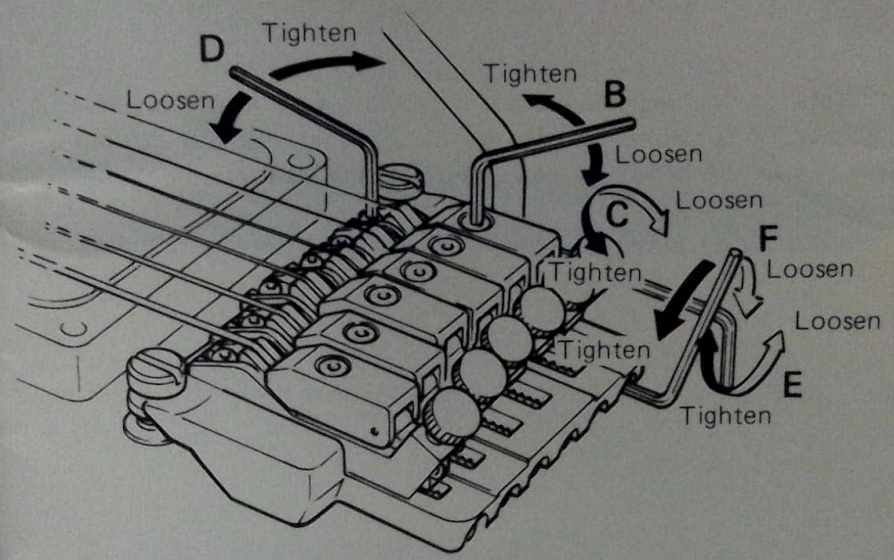
i. Use the Allen wrench (blade screwdriver for Rockin' Magic) to adjust the tension of the vibrato arm. This adjustment screw is located directly behind the point where the vibrato arm screws into the bridge plate. This adjustment will cause the vibrato arm to remain in place during use. (illustration – E)

SERVICE

If your guitar should need any parts or service, or if you need any information, including the address of your nearest Yamaha dealer, contact:

Yamaha International Corporation
Guitar Service Department
Post Office Box 6600
Buena Park, California 90622
714/522-9433

lace the old strings with new strings and tune the
ar a little lower than the correct pitch. (See the
on "Stringing The Guitar" on p. 3.)
e that locking the string increases the string
on. Unless tuned a little lower here, the pitch
eds the adjustable range by the fine tuning thumb
w.
ng the supplied Allen wrench (blade screwdriver for
ckin' Magic), lock each string at the saddle. (Illustra-
n—B)
fore locking the strings, make sure that the fine
ing thumb screws are in the middle of their range
travel.) (illustration—C)
ne the guitar to the correct pitch. (illustration—C)
move the back plate to gain access to the vibrato
ings. Three springs are factory installed and we
commend that these springs be adjusted so that the
brato bridge plate is parallel to the top of the guitar
hen it is tuned to correct pitch. Two additional
rings are included with the guitar if a stiffer vibrato
m tension is desired.
ock the strings above the nut using the supplied Allen
rench. (This will cause the strings to go slightly
harp in pitch.) (illustration — A)
Use the fine tuners at the rear of the bridge to bring
he strings back down to the correct pitch. (illustra-
ion — C)
Use the Allen wrench (blade screwdriver for Rockin'
Magic) to adjust the tension of the vibrato arm. This
djustment screw is located directly behind the point
where the vibrato arm screws into the bridge plate.
This adjustment will cause the vibrato arm to remain
n place during use. (illustration — E)



Intonation Adjustment in Vibrato Bridge

a. Loosen the hex screw located in front of each saddle using the supplied Allen wrench. (illustration — D)
b. Use the Allen wrench (Phillips head screwdriver for Rockin' Magic) to adjust the individual string lengths. These screws are located directly below the string mounting holes. (illustration — F)
c. When the intonation is correct, tighten the hex screw in front of each saddle to insure that its position stays stationary. (illustration — D)

CARE AND MAINTENANCE

With proper treatment, high quality instruments typically retain value well, and often appreciate with age. They also play, look, and sound better. To get the most out of your Yamaha SE be sure to heed the following instructions.

* After playing, wipe the entire guitar down, *including* strings, with a good polishing cloth. This will remove corrosive skin oils and acids, and protect the plating, finish, and strings.
* Avoid exposing the guitar to direct sunlight and extremes of heat and humidity.
* Loosen tension on the strings when storing the guitar for long periods.
* When traveling by airplane, special precautions should be taken. The plush-lined hard case provided with your guitar, while sturdy enough for most everyday uses, was not designed to withstand the exceptional stresses of airline baggage handling. If in fact, like many musicians, you expect to do a lot of traveling, it might be prudent to invest in a specially reinforced travel case.
  In any event, when shipping the guitar, be sure to pad the headstock on both sides. Use a soft cloth or sponges to secure the headstock from moving within the case. This will minimize damage to both headstock and neck if the case should be dropped or violently jarred.

SERVICE

If your guitar should need any parts or service, or if you need any information, including the address of your nearest Yamaha dealer, contact:

Yamaha International Corporation
Guitar Service Department
Post Office Box 6600
Buena Park, California 90622
714/522-9433

SINCE 1887 YAMAHA

International Corp., Box 6600, Buena Park, Calif. 90620

OMD-167 85125 Printed in Japan.

YAMAHA ELECTRIC GU
SE/SJ SERI
OWNER'S MANU

SE1
SE2
SE3
SE350
SE70
SE700
SJ550

YAMAH