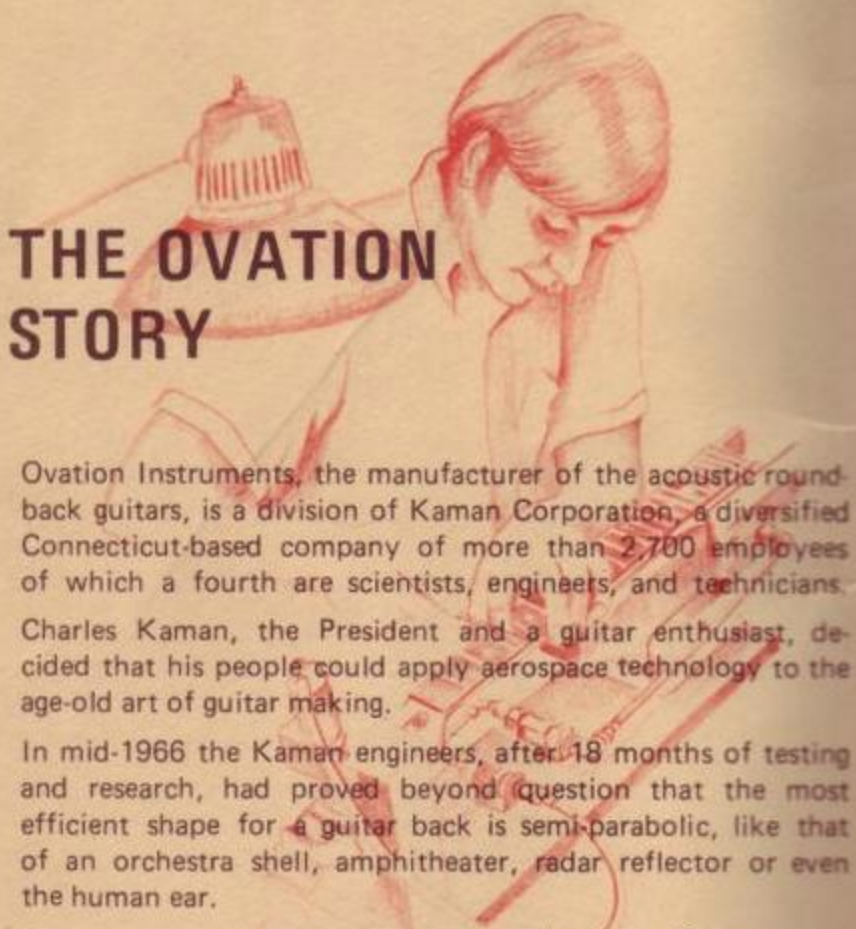


**WILTON**  
**GUITAR  
OWNERS  
INSTRUCTION  
MANUAL**



## THE OVATION STORY

Ovation Instruments, the manufacturer of the acoustic round-back guitars, is a division of Kaman Corporation, a diversified Connecticut-based company of more than 2,700 employees of which a fourth are scientists, engineers, and technicians.

Charles Kaman, the President and a guitar enthusiast, decided that his people could apply aerospace technology to the age-old art of guitar making.

In mid-1966 the Kaman engineers, after 18 months of testing and research, had proved beyond question that the most efficient shape for a guitar back is semi-parabolic, like that of an orchestra shell, amphitheater, radar reflector or even the human ear.

Our acoustic guitar bowls are made of Lyrachord<sup>®</sup>, a patented material. Primarily, it is inner woven layers of glass filaments bonded together with resins. This material is acoustically and structurally superior to wood. Structurally it needs no inner support or internal bracing, thus allowing the sound waves to project from the bowl without any break-up in the sound, due to inner support or braces. Lyrachord<sup>®</sup> being more durable than wood, has the capabilities of eliminating back and side splitting.

A guitar bowl must vibrate to help amplify tone. To vibrate properly, it must be extremely thin, and thin wood is, of course, fragile. Ovation's Lyrachord<sup>®</sup> bowl is only .043" thick, yet after it has been assembled to the top, it is many times stronger than any wood guitar.

A superior instrument requires that both the top and bottom have compatible natural resonance. In a flat back guitar, this cannot be determined until the guitar is completely assembled; thus creating many guitars that do not come under the category of a superior instrument. Ovation's patented Lyrachord<sup>®</sup> has a molecular structure that is chemically "tuned", to have a specific natural resonance, thus making a matched top and bottom on every Ovation guitar.

Sound, like light, reflects best from a smooth surface and wood, like acoustical tile, is porous. The inner surface of an Ovation Lyrachord<sup>®</sup> bowl is a hard glass-like surface that reflects the sound farther with a clean bright ring that is distinctively "Ovation."





## TO THE PROUD OWNER

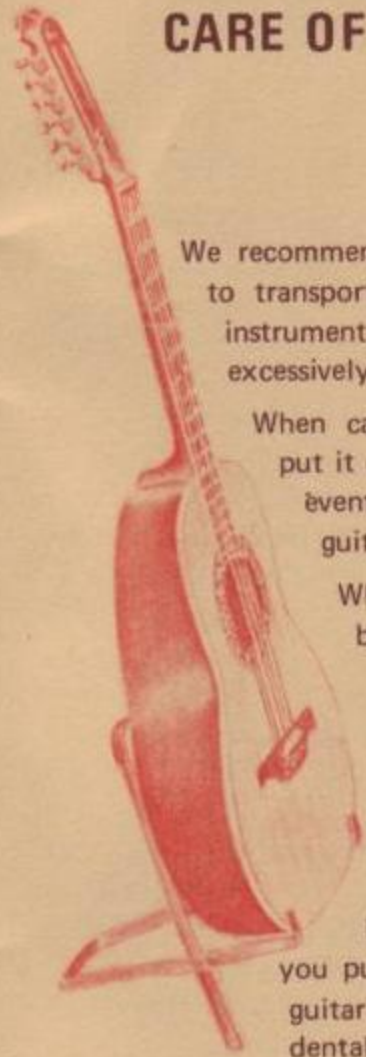
Your new Ovation is a delicately tuned instrument. With the proper care and maintenance, it will give you much pleasure; treat it like a friend.

Being a portable instrument, it will be subjected to various temperature and humidity conditions. By following the instructions, you will obtain the maximum performance that your Ovation was designed to give. We urge you to read your instructions carefully.



**OVATION**

## CARE OF YOUR INSTRUMENT



We recommend that you use an "Ovation" case to transport your guitar. Always store your instrument at room temperature avoiding excessively damp or dry conditions.

When carrying the case in an automobile, put it on the floor to avoid damage in the event of a sudden stop. Do not store the guitar in the trunk of your car.

When placing the guitar in the case, be sure all latches are secured. Carry the case with the lid towards you, to prevent the guitar from falling to the ground in the event the lid does open.

Most accidents happen when the guitar is out of the case and not being played. We recommend that you purchase a specially designed Ovation guitar stand in order to prevent such accidental damage.



## STANDARD PITCH

The tonal range of your Ovation guitar was designed assuming that it would be tuned to "Concert Pitch." "Standard" or "Concert Pitch" is when the unfretted strings are tuned to the frequencies listed below:

## MAINTAINING YOUR GUITAR

Keep the instrument tuned to concert pitch. Leave it tuned to pitch in the case, during normal periods of storage. If the instrument is being stored for a long period of time, release the tension slightly on the strings by turning the machine heads two turns or five turns on the Classical model.

Your instrument performs at its best when it is clean. Dust and other foreign matter will collect on the fret board and the tuning pegs thus reducing the efficiency. Develop a systematic routine for cleaning the instrument, using a soft cloth, and a light coat of Ovation's polish or Johnson's Pledge.

Gold plating, without question, is the richest, most beautiful plating in the world. However, it is highly vulnerable to wear and tear, hand perspiration and body acids. Therefore, it is imperative that gold plated metal parts be wiped clean with a soft cloth after each playing session.

Keep the strings clean. Deposits of foreign matter will accumulate in the windings of the strings causing them to sound dead. Perspiration from your hands on the strings will cause rust and corrosion thus causing excessive fret wear. It is important to wipe the strings clean on the instrument before storing it.

### STANDARD PITCH FOR 6 STRING

The 6th string E — 82.4 cycles per second  
The 5th string A — 110.0 cycles per second  
The 4th string D — 146.8 cycles per second  
The 3rd string G — 196.0 cycles per second  
The 2nd string B — 246.9 cycles per second  
The 1st string E — 329.6 cycles per second

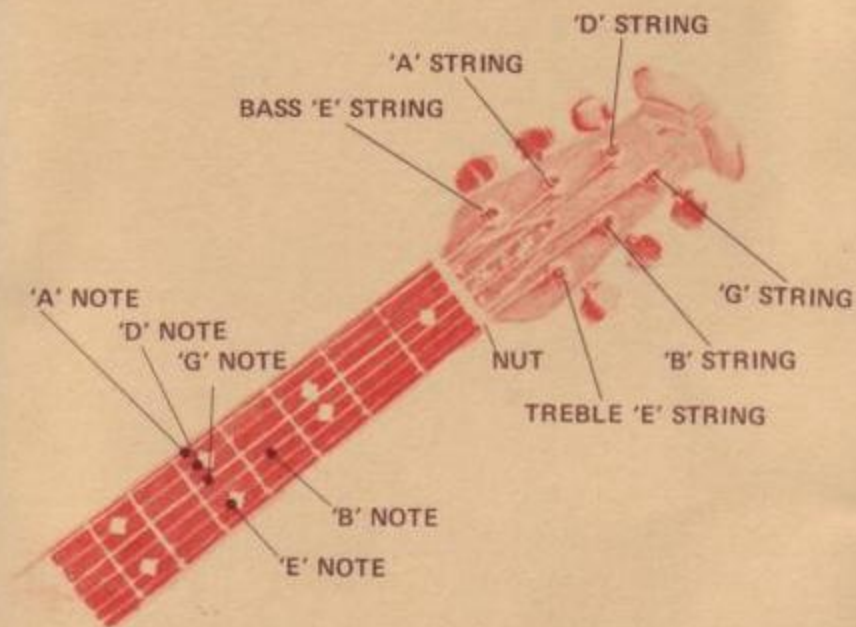
### STANDARD PITCH FOR 12 STRING

The 12th string E — 164.8 cycles per second  
The 11th string E — 82.4 cycles per second  
The 10th string A — 220.0 cycles per second  
The 9th string A — 110.0 cycles per second  
The 8th string D — 293.6 cycles per second  
The 7th string D — 146.8 cycles per second  
The 6th string G — 392.0 cycles per second  
The 5th string G — 196.0 cycles per second  
The 4th string B — 246.9 cycles per second  
The 3rd string B — 246.9 cycles per second  
The 2nd string E — 329.6 cycles per second  
The 1st string E — 329.6 cycles per second

\*Each pair tuned one octave apart.



## TUNING THE GUITAR



The simplest method of tuning is to use a pitch pipe made for the guitar. Another method is to tune the open "A" string with an "A" 440 tuning fork struck and held against the bridge. Then tune the guitar to itself as described below:

The note "A" 110 cycles per second appears in two places on the guitar. The open "A" string and the 6th string fretted at the fifth fret both produce a 110 cycles per second note. When tuning, the 6th string is tuned to "E".

The open 5th string can be tuned to the same pitch as the 6th string fretted at the fifth fret.

The fifth fret on the 5th string can be tuned to the open 4th string because they are both "D" notes.

The fifth fret on the 4th string can be tuned to the open 3rd string.

The fourth fret on the 3rd string is the same note as the open second string. The treble "E" string can be tuned to either the fifth fret on the 2nd string or the bass "E" string.

## CHANGING STRINGS

When to change strings . . . . . Don't wait until the strings b-r-e-a-k, replace strings when they show signs of wear. Old strings will result in improper intonation in the upper ranges of the instrument. Remember that you get the best tonal qualities with new strings. The complete set of strings should be changed at least once a month — or more often, depending on the amount they are used. To obtain the best results in tone, use top quality Ovation strings.

\* The chart below shows the acoustic models and the type of strings installed at the factory.

| Acoustic Guitar Models | Model No. | Type of String               | Characteristics                           |
|------------------------|-----------|------------------------------|---|
| 6 String Acoustic      | 1A        | Bronze Wound<br>Silk & Steel | Very easy action<br>Long sustain          |
| 6 String Acoustic      | 2A        | Light Ga.<br>Bronze          | Best Tone, easy action<br>Greatest volume |
| 6 String Acoustic*     | 3A        | Med. Ga.<br>Bronze           | Good Tone, easy action<br>Good volume     |
| Classics               | 9A        | Nylon                        | Brightest, loudest,<br>Long sustain       |
| 12 String Acoustic     | 11A       | Bronze Wound<br>Silk & Steel | Very easy action<br>Long sustain          |
| 12 String Acoustic*    | 12A       | Med. Ga.<br>Bronze           | Best tone<br>Greatest volume              |



# STRINGING YOUR CLASSIC GUITAR:

## AT THE BRIDGE

Before removing your old strings look to see how they are attached at the bridge. While your old strings are removed, you should clean the fingerboard and peghead.

FIG. 1



FIG. 2

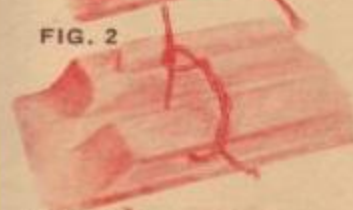


FIG. 3

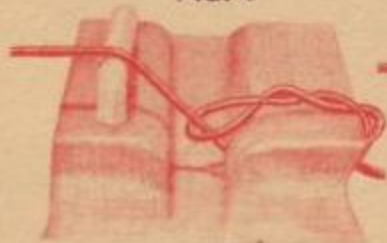


Stringing is easiest if you replace the outside strings first and work towards the middle. So starting with the 1st or 6th string, run the string through its appropriate hole leaving about 3" protruding beyond the rear of the bridge. Then bend up the end of the string around the part of the string that goes to the peghead. Fig. 1.

Now with right hand, wrap the end of the string around itself 3 times as shown in Fig. 2 and do not let go.

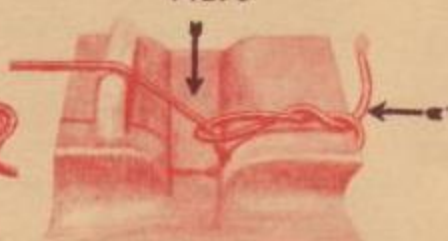
With the left hand, pull the long end of the string to take up the slack, (being careful not to pull the string against itself) as shown in Fig. 3, 4 & 5. Be sure that the last winding is beyond the top rear of the bridge.

FIG. 4



RIGHT

FIG. 5



WRONG

## AT THE PEGHEAD

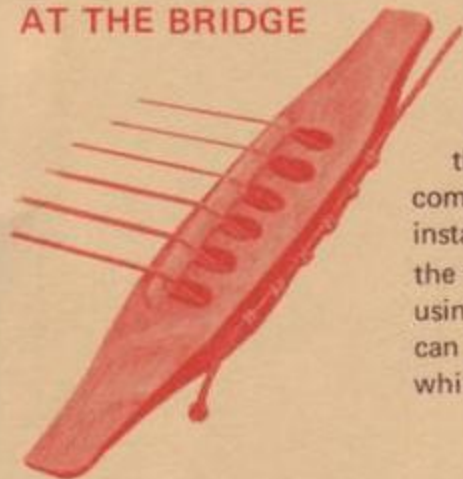


After tying the string at the bridge, pass the other end through the hole in the shaft of the appropriate tuning peg. Then loop the string around itself as shown. Wind the string towards the outside of the peghead allowing the string to wind over the loose end to avoid slippage.



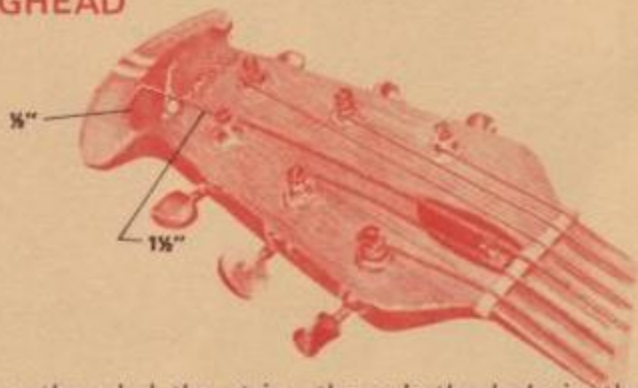
# STRINGING YOUR STEEL STRING GUITAR

## AT THE BRIDGE



Before removing your old strings, look to see how they are attached at the bridge. Then remove the complete set of strings. Before installing the new strings, clean the fingerboard and peghead. By using your old bass string you can hold the ball ends in line while stringing the instrument.

## AT THE PEGHEAD



After you have threaded the string through the hole in the bridge and over the top of the saddle, make a 90° angle bend about 1 1/2" past the appropriate peg. Cut the string 1/2" beyond the bend and insert it from the top or side of the tuning peg. Being sure that the string was inserted in the peg from the center of the peghead.

With the right hand, hold the string down in the appropriate nut slot.

With the left hand, wind string until it is up to pitch.

Replace the outside strings first and then work towards the middle strings.

# ACOUSTIC/ELECTRIC GUITARS

## INTRODUCTION

The purpose of this manual is to acquaint you with our uniquely designed "Acoustic Electric" guitar. It has captured all the features of our Acoustic guitar plus the volume you need to compete with the rest of your group.

After 18 months of researching and testing, we have developed a different method by which to amplify the Acoustic guitar. This was accomplished by means of a compression pick-up mounted in the bridge which is capable of transmitting both the string and top vibrations. One of the unique features of our new pick-up is the individual saddle alignment under each string. It gives the instrument perfect intonation and eliminates intermodulation distortion between strings.

We have researched the four major types of pick-ups, namely contact, top pick-up, microphone and bridge pick-ups. We eliminated the first three methods because of feedback problems and a loss of the true acoustic sound. We feel that our new patent pending pick-up has created a totally new concept of musical sound.

## FET AMPLIFIER

The output of the bridge pick-up goes to a small FET (field effect transistor) amplifier which serves two functions. First, it reduces hum by lowering the impedance and secondly, it balances the tonal characteristics of the bridge pick-up with your amplifier. This was accomplished by using two band rejection filters. The FET amp should never require service as all components are functioning far below their rated voltage.

If the guitar distorts when played normally, the voltage of the battery is below 6 volts and should be replaced. (See battery replacement instructions).



## VOLUME CONTROL

Your Acoustic Electric guitar will perform best if you pick hard and keep the volume of the amplifier turned down. For best results, set the volume control on your Acoustic Electric guitar on "5". Set the amplifier at a desired volume level. Now any change in volume can be done at the guitar. Clockwise rotation of volume control makes volume louder; counter-clockwise rotation softens volume.

If you adjust the volume so it is slightly louder than the sound level in the room, the instrument will sound most like the acoustic guitar. To play the instrument as just an acoustic guitar, turn the volume control knob to "0"; then the amplifier is on standby.

If you turn the volume up to "10", you will have more output than most electric guitars. This will drive the input of your amplifier into distortion and produce unique sounds similar to the music of today.

## BATTERY

### THE BATTERY IS ON WHENEVER THE GUITAR IS PLUGGED IN

The FET amplifier uses an 8.4 to 9.0 volt battery of the type used in transistor radios and will operate with any of the batteries listed.

We recommend either the long life or mercury battery because they maintain full voltage until the battery is 90% used, then the voltage drops sharply. In the carbon zinc battery, the voltage loss is of a constant rate, thus reducing the efficiency.

The chart below shows the voltage drop of different type batteries.

### BATTERY VOLTAGE DROP



## BATTERY

### To Replace the Battery:

- Loosen the bass strings until you can put your left hand inside the sound hole.
  - Turn the external screw at the waist of the guitar  $\frac{1}{4}$  turn counter-clockwise.
- Now the battery case is loose and can be removed with the left hand.
- Remove the old battery and discard.
  - Place the new battery between the spring clip and slide it forward until it snaps into the connectors.
  - Locate the rubber mount of the battery case up against the screw and make  $\frac{1}{4}$  turn clockwise.
  - Tune the strings back up to pitch.

## BATTERY REPLACEMENT

| Type of Battery | Carbon Zinc | Long Life | Mercury |
|-----------------|-------------|-----------|---------|
| BURGESS         | 2U6         | 2MN6      | H146X   |
| EVEREADY        | 216         | 222       | E146X   |
| MALLORY*        |             | 1604*     | TR146X  |
| RCA             | VS323       |           |         |
| RAY-O-VAC       | 1604        |           |         |

\* installed at factory

shaded area indicates preferred type of battery

TO PREVENT UNNECESSARY DRAIN ON THE BATTERY, UNPLUG THE GUITAR WHEN NOT IN USE. The shelf life of the battery is approximately one year. Therefore, to insure continuous operation of your guitar, it is recommended that you purchase an extra 9 volt battery before the battery has been used for a year.





## FEEDBACK

Feedback is caused when either the amplifier is too loud or when the guitar is too close to the amp.

If desired, feedback can be used as a sustaining effect. When playing a note which is susceptible to feedback, simply increase the volume to the right level and the note will last like an organ tone.

If you are playing at a loud level and are receiving undesirable feedback from a note, simply remove your finger from the string after playing.

## NECK ANGLE

All Ovation roundback acoustic guitars except the Classic are constructed so that the neck drops off at a slight angle ( $0^{\circ} 15'$ ) relative to the top. In sighting down the neck, it may appear to have a high point where the neck meets the body. This, however, is not true. At this point the neck merely changes direction, allowing the frets mounted on the top of the guitar to fall away. As any guitar goes through natural aging the tension of the strings bend both the neck and body slightly upwards. This can cause the strings to buzz on the frets which lie over the body and there is no cure for this, short of removing the frets. Another problem found in older guitars is that the action cannot be set low enough because the saddle would have to be set below the top of the bridge to achieve the desired action. We feel that we have solved these problems in our Ovation roundbacks by this built in mechanical advantage.





# THE TENSION ROD

## THE PURPOSE OF THE TENSION ROD

All Ovation acoustic guitars are equipped with a "Tension Rod", that is adjustable at the peghead.

One purpose of the tension rod is to counter-balance the string tension being applied on the neck. The other reason is to make the neck fully adjustable for removing any "Warps" or "Bows" brought about by weather conditions, restringing with different gauge strings, or the movement in the wood imposed by steady string pull.

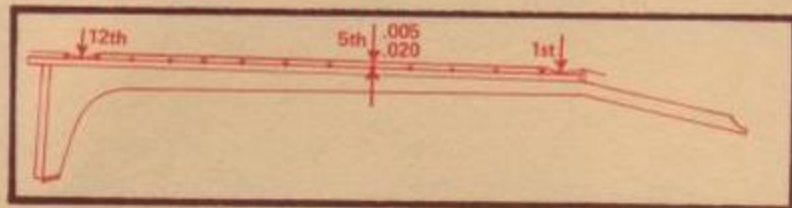
Tension Rod

Check the neck for warp and bow. This must be done before adjusting the tension rod.

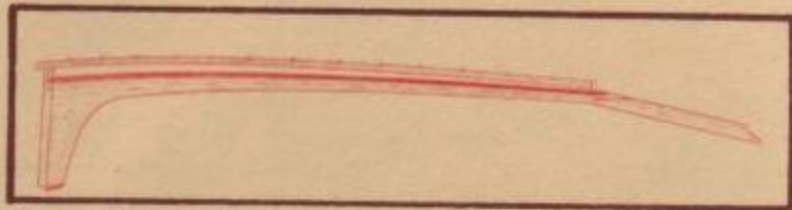
## ADJUSTING THE TENSION ROD

- Hold the low "E" string down between the nut and first fret with your left hand. With your right hand hold the "E" string against the fingerboard at the 11th fret on the nylon and 12 string models and at the 13th fret on the steel string models.
- Check the clearance between the bottom of the string and the top of the 5th fret.
- The clearance should be a minimum of .005" to .020". But, it should not be more than .032 (1/32") or the neck is "WARPED."
- Check clearance of high "E" string in the same manner.
- If either "E" string touches the 5th fret, the neck is "BOWED."

## CLEARANCE



## "BOWED" NECK



This will cause the strings to buzz when played at the first few frets. To correct this condition, loosen the nut on the tension rod by turning it counter-clockwise, until a slight clearance can be seen at the 5th fret.

## "WARPED" NECK



If the clearance is greater than .030", the neck is warped and the tension rod nut should be tightened by turning it clockwise. Make sure that you do not completely lose the clearance for either string. A little extra clearance will help if the strings are buzzing when played.

## NOTE:

- For adjustment of the tension rod nut, use a 1/4" hex nut driver.
- When replacing the tension rod cover, be careful not to strip the screw holes.



## CHECK THE ACTION

"ACTION" is the word used to describe the amount of resistance the string presents to being fretted.

"ACTION" is measured at the 12th fret by determining the distance from the top of the fret to the bottom of the string. The recommended distances are shown in the chart on the next page.

On occasion, other than standard "action" is desired by the player. This is achieved by adding or removing a .030 shim from under the saddle. Each shim will change the "action" 1/64 inch. If the action is still too high, you can sand the bottom of the saddle. It is not uncommon to encounter fret buzzing with lower action. Light gauge strings will give easier action, but, require greater action height to avoid fret buzzing. Buzzing produced by lowering the action is not considered a defect in the instrument.



## STANDARD ACTION PRE-SET AT THE FACTORY

| GUITAR MODEL                             | ACTION MEASURED IN 1/64 OF AN INCH AT 12TH FRET<br>BASS "E" TREBLE "E" |      | CONDITION   |
|--|--|------|---|
| 6 and<br>12 Stringed<br>Steel<br>Guitars | 8/64   | 6/64 | "High Action" for playing with other instruments when volume and tone are most important. |
|  | 7/64   | 5/64 | "OVATION STANDARD ACTION"<br>Set at the factory.  |
| CLASSICS                                 | 6/64   | 4/64 | "Low Action" is good for jazz or finger picking when chords are played up the neck.       |
|  | 10/64  | 8/64 | OVATION STANDARD ACTION, good for most styles.  |

**NOTE:** The "Action" should not be set until the tension rod has been adjusted, because the tension rod adjustment affects the action setting.



# OVATION LIFETIME WARRANTY

The original retail purchaser of this Ovation instrument enjoys the full protection of this Lifetime Warranty against defects in material and workmanship.

Ovation will repair or replace, at its option, any Ovation instrument or part thereof which is found by Ovation to be defective. However, this Warranty shall not apply to defects resulting from neglect, abuse, accident or alteration nor does it apply to service parts such as strings, tuning-pegs, and normal wear of frets.

In order for this Warranty to be effective, the original retail purchaser must:

- Complete and return to Ovation the attached registration card within ten (10) days of purchase;
- If any such defects shall appear, return the instrument to an authorized Ovation dealer or service center together with a report of the trouble;
- Be responsible for all transportation charges.


## IMPORTANT

To assure that this guarantee is in effect, please complete the attached registration card and return within ten (10) days of purchase.

MODEL :

SERIAL # :



**OVATION INSTRUMENTS INC.**

## SERVICE

Your Ovation dealer is equipped to adjust the tension rod and set the action in the event such adjustments are required. We recommend that within ninety (90) days from the date of purchase, the instrument be returned to the dealer for a tension rod adjustment. This is very important to avoid neck warpage.

**FOR SERVICE SEE YOUR LOCAL AUTHORIZED DEALER OR ... WRITE TO:**

Service Department Manager  
Ovation Instruments Inc.  
Greenwoods Road  
New Hartford, Conn. 06057  
Tel. 203-379-0721

For your personal records, in case of theft, loss, resale, or correspondence to Ovation Instruments.

Model #: 1111-4 Serial # \_\_\_\_\_

Date Purchased: Oct. 11, 1974

Dealer: \_\_\_\_\_

Price: \$ 313<sup>00</sup> with tax



## THE OVATION FAMILY

The following is a list of people who play **OVATION**,  
enjoy it, and tell us so:

GLEN CAMPBELL  
ERIC CLAPTON  
GABOR SZABO  
GRASS ROOTS  
TOM T. HALL  
BEE GEES  
OLIVER  
MAC DAVIS  
MEL TILLIS  
DEL REEVES  
IRISH ROVERS  
RICHIE HAVENS  
KENNY LOGGINS  
LYNN ANDERSON  
JOHN MCLAUGHLIN  
BOBBY GOLDSBORO

and many more . . .



**THE BEGINNING OF  
A NEW EXPERIENCE**





**OVATION INSTRUMENTS INC.**

A **KAMAN**  
COMPANY

NEW HARTFORD, CONNECTICUT 06057

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