

The new solid body guitar includes a neck with 24 frets which means you can now play two full octaves. Anything you can play within the first 12 frets can be repeated an octave higher between the 12th and 24th frets. Fingerboard markings for each octave are the same to promote ease of playing.

The way the neck joins the body provides easy access to the 24th fret. The neck is attached by the use of bolts rather than wood screws to insure stability and to maintain maximum sustain.

The purpose of the FET pre-amplifier is to simplify the controls and to improve the performance of the instrument. This is accomplished through sophisticated circuitry involving a band rejection filter, volume compensation on all controls and electronic isolation of controls.

Volume remains constant and only the tone changes when the selector switch is used.

The tone control has been isolated in the circuitry so that changes in volume or impedance of a particular amplifier have no effect on the tone control. In most guitars, the tone control greatly diminishes the volume of the treble strings and causes a slight decrease in the volume of the bass strings. Through the use of a FET pre-amplifier, the volume of the bass strings can be increased while the volume of the treble strings can be decreased slightly. You thereby achieve a tone change but no volume loss.

As the result of research on acoustic guitars, it was determined that acoustic guitars reproduce notes in the mid-range, (between 400 and 1,200 cycles per second) with less volume than other notes of the scale. The FET pre-amplifier allows Ovation to use a mid-range notch filter in this region, thus producing new sounds of pleasant quality which have never been attained until now. The notch filter can be put in or taken out without a volume change because the notch switch is volume compensated.

PICK-UPS

After four years of research, Ovation has explored all aspects of guitar pick-up construction. Research has resulted in the new pick-ups which have been designed to give powerful clear sound with full-bodied treble notes and to insure maximum sustain. Normally, pick-ups can be hampered by amplifiers having different impedance. Ovation feels, therefore, that a FET pre-amplifier is the only means of obtaining full performance of the pick-up and the convenience of simple controls.

BRIDGE

The Ovation bridge is of a unique three-point stance design. It allows action adjustments over a wide range but always remains stable. Individual saddles have been designed to allow more adjustment than is usually required to set string intonation. This adjustment is easily accomplished with a pocket screwdriver.

Another outstanding feature of this bridge is that there is no external cover over the strings thus allowing you to use the palm of your hand as a mute while playing.

SELECTOR SWITCH

The selector switch has three positions.

1. The first position is only for the neck pick-up. This is usually the rhythm position. When the selector switch is in this position, volume can be varied by a trim control - see page 3.

2. The center position is the bridge pick-up and is normally the lead position.

3. In the third position, both pick-ups are connected "out of phase" and produce a sound with less bass and more highs. A slight increase in hum can be detected in this position because the volume has been turned up to compensate for the normally weak "out of phase" sound. (There is a trim control inside the guitar to assure maximum "out of phase" effect - see page 3&4.)

THE NOTCH SWITCH

The notch switch is a two-position selector switch which provides two tonal variations. In the first position, the notch or band rejector filter is in effect. This means that the mid-range frequencies have been reduced in volume and a sweeter sound is produced. In the second position, effect of the filter has been removed and you have a flat response as in conventional guitars.

The best way to understand the effect of this switch is to put the selector switch in position two and the notch in position one. Play a full chord and rapidly switch the notch switch from position one to position two and listen for the change taking place.

VOLUME CONTROL

The volume control regulates the loudness of the guitar. It is best to run the volume control in half way position. When the volume control is turned to zero, the guitar is on "standby" and will not feed back from the amp.

TONE CONTROL

The tone control is an Ovation exclusive. It is volume compensated so that you get a boost in bass as well as no loss in treble. With the controls set on ten, the selector switch in position one or two, and the notch switch in position two, you are listening to the sound of the pick-up as if it had been connected directly to your amp without "tone shaping".

OUTPUT JACK

The output jack utilizes a standard $\frac{1}{4}$ " phone plug and has a switch incorporated in the jack so that whenever a plug is in the jack the FET pre-amplifier is "on". To insure battery life, it is important to always disconnect the cord when the guitar is not in use. When plugging the guitar back in, it is normal to experience a few seconds delay before the guitar again reaches full volume.

PICK-UPS

Pick-ups have three adjustment screws which control their position relative to the strings. By turning these screws clockwise, you can raise, lower or tilt the pick-up. In general, it's best to keep the pick-up as close to the strings as possible. This is done because the closer the pick-up is to the strings, the greater the difference between the signal and the inherent hum level of any pick-up. The pick-up may be lowered if it interferes with your pick. Adjustment is made by holding the first and sixth strings down at the 24th fret and adjusting the pick-up so there is a clearance of $\frac{1}{8}$ " between the pick-up and the strings.

The pick-up has six individual adjusting screws, one for each string. By raising and lowering these screws, a degree of volume regulation for each string can be achieved.

TAILPIECE

The tailpiece has two primary adjustments. One is for action and the other is for proper intonation when the strings are fretted.

ACTION ADJUSTMENT

The action is adjusted only after the tension rod adjustment has been made. The action is determined by measuring the distance between the top of the 12th fret and the bottom of the string. (see chart) The action can usually be adjusted by using the two slotted screws on either side of the tailpiece. If the action is not in the adjustment range, the battery door can be removed to expose an adjustment nut which raises or lowers the rear edge of the tailpiece. After adjusting this nut, the additional adjustment can be made with the slotted screws previously used.

INTONATION

Intonation is adjusted by using the screws under the rear of the tailpiece next to the ball ends of the strings. This adjustment should be made with extreme care and by using the procedure described below:

Play the harmonic above the 12th fret by touching the string lightly with the tip of the finger of the left hand directly above the 12th fret while plucking the string. Listen to the tone for a few seconds and then carefully press the string down at the 12th fret. If the two tones are of the same pitch, no adjustment is required. If the tones sound different, stretch the string sideways after it has been fretted at the 12th fret. If the tones come closer together, turn the screw in the tailpiece counter-clockwise. If the tone is already sharp when fretted, turn the adjustment screw clockwise until the tones match. There will always be a difference in sound between the harmonic and the fretted note so it is important to let the harmonic ring for a few seconds before comparing its pitch to the fretted note.

BATTERIES

The Ovation guitar uses two 9 volt transistor radio type batteries. The reason for choosing these batteries is that they are available in a wide variety of stores. Any battery of this size marked 8.4 or 9 volts will work, however, we suggest that you use Mallory 1604 or equivalent. This is an alkaline battery which maintains its voltage longer. The current drain on the battery is so low that if you get a fresh battery, it could last for a year. When the voltage in the battery drops below 6 volts, the guitar will start to distort. When this happens, it's time to replace the battery.

BATTERY REPLACEMENT

To replace the batteries, insert a dime or penny into each of the screws on the battery door and give them 1/4 turn counter-clockwise. Now the battery door can be removed. Notice the location of the batteries. Carefully pull them out and pry off the spring clips. The batteries can only be connected one way, but care must be taken not to damage the battery connector. Replace the batteries as shown in the picture. Replace the battery door and give the screws 1/4 of a turn clockwise.

TRIM CONTROLS ADJUSTMENT

Two volume trim controls are provided to maintain maximum performance. These adjustments have been pre-set and need not be re-adjusted unless desired.

The black control adjusts the volume of the neck pick-up. The neck pick-up is normally louder because there is more string vibration over that pick-up. This control simply lowers the volume of the neck pick-up. Adjustment is made by removing the battery door (see above) and placing a small screwdriver into the hole in the circuit board. You then adjust the volume until there is no volume change when switching the selector switch between the number one and number two positions. (see page 1) If the neck pick-up is used for rhythm only, it would be desirable to adjust the volumes equally when playing lead notes on the bridge pick-up and full chords on the neck pick-up.

The red trim control adjusts for maximum "out of phase" effect. This is accomplished by putting the selector switch in position three (see page 2) and by using a small screwdriver to adjust the control for minimum volume when the strings are strummed. It is important that you find a minimum volume because when the third position of the selector switch is used, the volume will be too loud.

NECK REMOVAL

Normally there would be no reason to remove the neck from your guitar. However, if repair work or replacement is required, simply loosen the strings and remove them from the peghead. Using a Phillips head screwdriver, loosen the four screws on the rear of the body and remove the neck.

When replacing the neck, tighten the screws tightly but do not use excessive force. Alignment should be automatic. If the neck is to be left off the instrument for more than a few days, remove the rod cover and loosen the tension rod adjusting nut. If a new neck has been used for replacement, recheck action and pick-up adjustment and after about a week, check the tension rod adjustment.

SOLID BODY OWNERS MANUAL

FULL TONAL RANGE OF INSTRUMENT

Type of Tone	Tone Setting	Selector Switch	Notch Switch
1. Very deep	0	up	in
2. Deep	10	up	out
3. Mellow	0	middle	in
4. Driving	10	middle	out
5. Sharp	10	down	out
6. Very sharp	10	down	in