

# Floyd Rose<sup>™</sup> **SUSTAINER**

OWNER'S MANUAL



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## **INTRODUCTION**

Congratulations on the purchase of your new Kramer Floyd Rose Sustainer guitar. This instrument has been designed to add new dimensions to your guitar playing and has passed all quality control points to assure reliability and playability.

The Kramer Floyd Rose Sustainer guitar is a high quality solid-body electric guitar with an on-board, battery-operated unit that sustains notes virtually indefinitely. You will be able to create sounds that were previously possible only through overdriving your amplifier at high volumes. Now your Floyd Rose Sustainer electronically excites each string, regardless of the volume setting. Selection of any of the three playing modes and adjustment of the Sustain Intensity control will permit the enhancement of every musical style.

The Kramer Floyd Rose Sustainer guitar is a sophisticated instrument with features and components not found on standard electric guitars. We suggest you read this owner's manual carefully to become familiar with these features and components. This manual explains in simple steps how to hook up, play and care for your new Sustainer.

The Kramer Floyd Rose Sustainer guitar is designed to be played with the Sustainer on. However, the guitar can operate independently without the Sustainer. In this position, the Sustainer will work as a standard humbucking pickup. With a flip of a switch, the Sustainer can be activated, with no need to interrupt your performance. You can even change mode selection while playing to truly add new dimensions to your sound.

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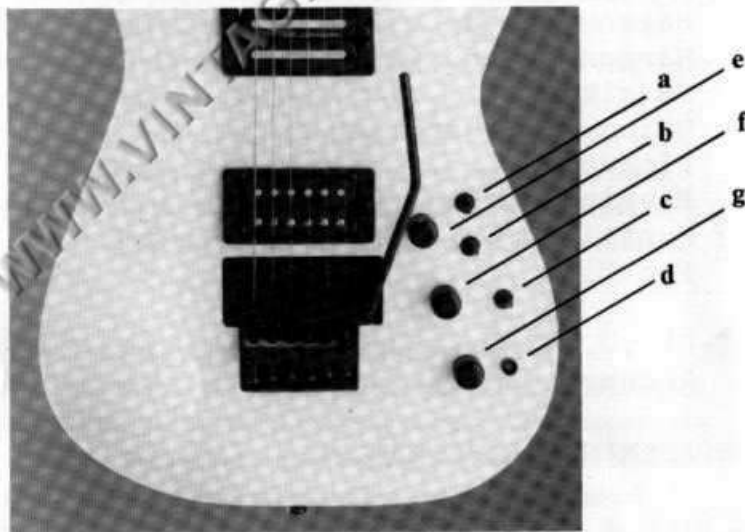
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## HOOKING UP YOUR SUSTAINER \_\_\_\_\_

The Kramer Floyd Rose Sustainer guitar hooks up to the amplifier with a standard guitar cable. For best results, use a professional grade cable.

## CONTROLS \_\_\_\_\_



### Pickup Selector Switch (a)

Forward Position = Neck pickup on.

Middle Position = Bridge pickup on.

Back Position = Bridge pickup with Sustainer on.

### Mode Selector Switch (b)

Up Position = Fundamental Mode.

Middle Position = Harmonic Mode.

Down Position = Harmonic Mode with Increased Sensitivity/Range.

## (CONTROLS CONTINUED)

### Sustainer On/Off Switch (c)

Up Position = Off: While guitar is not in use.

Down = On: Recommended for all playing conditions.

### Power On/Low Battery Indicator (d)

Green Light = Sustainer on.

Red Light = Low battery warning.

(Models prior to 8/89 will indicate low battery power only)

### Volume Control (e)

Standard on all Kramer guitars.

### Tone Control (f)

Varies tone of the bridge and neck pickups.

### Sustain Intensity Control (g)

Allows continuous variable control of the sustain and allows for greater expression. Notes can be selectively sustained, or can be done gradually during a solo to build intensity and dynamics.

## OPERATION \_\_\_\_\_

Along with descriptions of each of the Sustainer's functions there are examples for getting started. Please take your time experimenting with each of the modes. For the full effect, we suggest that after the initial set-up for each example you set up a rhythm section tape and experiment in soloing with your new Kramer Floyd Rose Sustainer Guitar.

## THE FUNDAMENTAL MODE \_\_\_\_\_

The Fundamental mode sustains the resonant frequency of the string vibration, producing a clear, singing sustain. This mode is used to sustain primarily the original note without added harmonics. The strings may vibrate by themselves making dampening techniques essential.

By adjusting the Sustain Intensity control, players can choose between a blended sound (mid-rotation) up to "high-gain" sustain (full rotation).

### EXAMPLE ONE:

1. Put the Sustainer "On/Off" switch in the "on" position. (Down Position)
2. Put the Pickup Selector switch in the back position for bridge pickup with Sustainer "On".
3. Put the Mode Selector switch in the Fundamental mode position. (Up Position)
4. Adjust the Tone knob to the half way point.
5. Adjust the volume to your usual setting.
6. Rotate the Sustain Intensity control to the full up position.
7. Fret the "G" string at the seventh fret to form the note "D". Damp all other strings. Pick note.

Your Sustainer will quickly proceed from normal sustained "D" to the fundamental "D" producing a warm sustain with a "high gain" sound.

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Experiment with this starting point by moving up and down the neck. Start out slowly, since there is some delay involved. Try going from one sustained note to another along the same string. Try varying the Tone knob. Develop your Sustainer techniques by incorporating dampening techniques and tremolo action.

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### EXAMPLE TWO:

1. Start out with the same settings as in EXAMPLE ONE.
2. ONE. Rotate the Sustain Intensity control knob to the half way point.
3. Fret the "G" string at the 7th fret to produce the note "D". Dampen all other strings. Pick the note.

This setting will produce a more natural effect.

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In the Fundamental mode, some notes on lower frets contain considerable second harmonic content (second harmonic being an octave above the fundamental tone). This is true on all guitars. These second harmonics can be "tapped" in with a finger and then sustained to produce a transition from the full fundamental to an octave above.

The Fundamental mode will effect single notes anywhere along the neck and chords within the first two and a half octaves.

Harmonics are present as follows:

- Up to the 5th fret = Fundamental, 2nd + 3rd harmonics.
- Between the 5th and 12th fret = Fundamental + 2nd.
- Above the 12 fret = Fundamental only.

## HARMONIC MODE \_\_\_\_\_

### EXAMPLE ONE:

1. Put the Sustainer On/Off switch in the "on" position. (down position)
2. Put the Pickup Selector switch in the back position for bridge pickup with Sustainer "on".
3. Put the Mode Selector switch in the Harmonic Mode position. (middle position)
4. Rotate the Sustain Intensity control to the fullest point.
5. Fret the "G" string at the 16th fret to play the note "B". Dampen all other strings. Pick note.

In this example, the guitar will quickly proceed from a normal sustained "B" to a sustained sound incorporating mostly even numbered harmonics.

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The Harmonic mode is good for upper fret solo work. For best results, use Harmonic mode with the Sustain Intensity at the fullest rotation. At high intensities, most picked notes will change to harmonics automatically. Generally, the higher position on the neck, the faster the transition to harmonics. At lower intensities, harmonics can be brought out with slightly somewhat advanced picking techniques.

The frequency limit for the Harmonic mode is approximately high "C".

## HARMONIC MODE WITH INCREASED SENSITIVITY \_\_\_\_\_

### EXAMPLE ONE:

1. Put the Sustainer On/Off switch in the "on" position. (down position)
2. Put the Pickup Selector switch in the back position for bridge pickup with Sustainer "on".
3. Put the Mode Selector switch in the harmonic mode with Increased Sensitivity/Range position. (down position)
4. Rotate the Sustain Intensity control to the fullest point.
5. Fret the "B" string at the 17th fret.
6. Perform a quick bend from the note "E" to "F" making sure to dampen all other strings.

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The Harmonic Mode with Increased Sensitivity produces a great biting sound that can really scream. In this mode the Sustainer adds mostly odd numbered harmonics.

Adjustment of the Sustain Intensity control will provide a range of effects in blending the Sustainer's output.

The frequency limit for the Harmonic mode with Increased Sensitivity is approximately high F#.

## **SELECTIONS OF SOUNDS WITH THE SUSTAINER IN THE "OFF" POSITION**

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### **NECK PICKUP ONLY:**

Place the Pickup Selector switch in the forward position to produce a rhythm pickup sound. Use the Tone knob to adjust the tone. Note that there is no need to place the Sustainer On/Off switch to the "off" position.

The Floyd Rose Sustainer will now operate as a humbucking pickup in the neck position.

### **BRIDGE PICKUP ONLY:**

Place the Pickup Selector switch in the middle position to produce a humbuckin bridge pickup sound. Use the Tone knob to adjust the tone. Note that there is no need to place the Sustainer On/Off switch to the Off position.

## **PRO TIPS**

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### **Tip #1**

Developing good dampening technique is essential to great guitar playing. This is even more true when playing the Sustainer. Start out slowly and expand your current technique with more emphasis on dampening. This will not only improve and clean up your guitar playing, it will assist you in performing with the Floyd Rose Sustainer.

### **Tip #2**

Let notes "settle in" to a harmonic prior to using the Floyd Rose Tremolo. Using the tremolo too soon can cause a harmonic to die out easily.

### **Tip #3**

The Sustainer should be on for all playing conditions, however when playing with a clean sound using the Sustainer as a forward pickup, the player can turn the Sustainer "On/Off" switch to the "off" position if undue distortion is present.

### **Tip #4**

It is possible to change from the Fundamental mode to Harmonic modes during performance, with no audible glitches.

### **Tip #5**

If you desire to change from either of the Harmonic modes to the fundamental mode, briefly interrupt performance, switch mode, and resume performance.

### **Tip #6**

Two handed playing techniques work well with the Sustainer, as the technique will keep the string driven.

## SET-UP YOUR SUSTAINER \_\_\_\_\_

### STRING GAUGE:

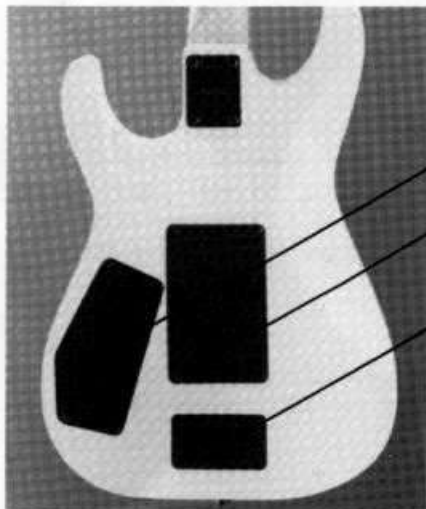
Your Kramer guitar with the Floyd Rose Sustainer and Floyd Rose locking tremolo system is set up for the following string gauges:

.009, .011, .016, .024, .032, .042

Changes from these gauges will require a new intonation adjustment.

For the Sustainer to work efficiently, the action has to be as close to the strings as possible. This can be checked by fretting each "E" strings at the 22nd fret, then pulling back on the tremolo. The string should just clear the Sustainer. Remember that the set-up of the Sustainer pickup is CRUCIAL. Should your Sustainer touch or allow too much clearance, seek the help of a qualified Kramer Service person who is authorized to perform adjustments on your guitar.

## SERVICE + MAINTENANCE \_\_\_\_\_



## BACK COMPONENTS \_\_\_\_\_

### TREMOLO CAVITY (h)

ELECTRONICS CAVITY (i) - DO NOT OPEN.

OPENING THE ELECTRONICS CAVITY AUTOMATICALLY VOIDS THE WARRANTY OF THIS INSTRUMENT.

Components below this plate are sensitive to electrostatic discharge. Handling may result in damage to the unit and should only be done by an authorized Kramer Repair person.

### BATTERY COMPARTMENT (j)

## SETTING UP THE FLOYD ROSE TREMOLO \_\_\_\_\_

The Floyd Rose tremolo should sit in a parallel line to the face of the guitar. The string tension and the spring tension must be balanced for correct tuning to be possible. Authorized Kramer Service Centers are set up to do this type of work and should be contacted for service.

## THE BATTERIES \_\_\_\_\_

The Sustainer requires two nine volt batteries and provides an LED lamp to indicate the following:

When the Sustainer On/Low Battery Indicator on the face of the guitar shines green - this indicates that the Sustainer is on.

When the Sustainer On/Low Battery Indicator on the face of the guitar shines red - this indicates that there is low battery power and the batteries should be replaced.

#### BATTERY LIFE GUIDELINE -

(hrs. represent actual sustain time)  
Maximum Intensity 12 - 15 hours.  
Moderate Intensity up to 40 hours.

#### TO REPLACE THE BATTERIES -

Turn off power switch before replacing batteries to protect against damage.

For maximum efficiency, batteries should be replaced as a set. Batteries should be made by the same manufacturer so that power is matched. The Sustainer comes equipped with two Alkaline batteries.

NOTE: Reversing battery leads will result in damage to your Sustainer, thereby voiding your warranty. When changing batteries check leads thoroughly to avoid this problem.

#### IMPORTANT WARRANTY INFORMATION

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Your Kramer Floyd Rose Sustainer guitar comes complete with a limited warranty. A consumer warranty and registration card is included with each Sustainer purchase. Should your guitar be missing this important item, please contact your authorized Kramer dealer where you made your purchase.

#### ABOUT THE PICKUPS

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The Floyd Rose Sustainer is designed for use in conjunction with Seymour Duncan pickups. If you wish to change bridge pickups, please consult the Kramer factory. Any modifications could void the warranty.