

BRIAN MAY



RED SPECIAL

PEDAL

OWNER'S MANUAL

Brian May



DigTech
The Power to Create

DECLARATION OF CONFORMITY

Manufacturer's Name: DigiTech®
Manufacturer's Address: 8760 S. Sandy Parkway
Sandy, Utah 84070, U.S.A.

declares that the product:

Product name: Red Special Pedal
Product option: all (requires Class II power adapter that conforms to the requirements of EN60065, EN60742, or equivalent.)

conforms to the following Product Specifications:

Safety	IEC 60065 (1998)
EMC	EN 55013 (2001 + A1)
	EN 55020 (1998)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC as amended by Directive 93/68/EEC.

Vice-President of Engineering - MI
8760 S. Sandy Parkway
Sandy, Utah 84070, U.S.A.
Date: May 12, 2006

European Contact: Your local DigiTech Sales and Service Office or

Harman Music Group
8760 South Sandy Parkway
Sandy, Utah, 84070 U.S.A.
Ph: (801) 566-8800
Fax: (801) 568-7583

Warning

For your protection, please read the following:

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Do not use this apparatus near water.
5. Clean only with dry cloth.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
9. Unplug this apparatus during lightning storms or when unused for long periods of time.
10. No user serviceable parts inside. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
12. Refer to labels on the unit, including bottom cover, or other markings and pertinent information.

“Congratulations on choosing the DigiTech™ Red Special Pedal!

This piece of gear is, in my opinion, a work of genius! I claim no credit! An amazing DigiTech team led by legend Eddie Kramer have created a device capable of making anybody sound like me! (If you should want to, that is!)

Through an incredible new modeling technique, this pedal captures 14 of the most memorable tones I've achieved for Queen over the years, and places them at your fingertips.

But it does not stop there. Our hope is that you, the guitarists of the future, will use this machine as an aid to creating your own new tones, and inspire you to greater heights. To enable this to happen, each tone setting on this pedal can be adjusted in gain, level, bass, treble, and many other parameters to meet the demands of your wildest dreams!

From the searing harmonically rich solo sound of Bohemian Rhapsody, to the churning saturated thickness of the climax of 'We Will Rock You', to the hitherto inimitable 'Deacy' amp tone, which I've used for years to create 'orchestras' of guitars on record, this device will shock you! The Red Special Pedal puts a new spectrum of tones at your command, whether used as a preamp for a stage set-up, or directly into the board in your studio (the Pedal models the amp cabinets too).

Plug in and turn it up – and ROCK!

Cheers!”



May, 2006

Included Items

The DigiTech® Red Special Pedal includes the following items:

- **DigiTech Red Special Pedal**
- **Red Special Artist Series Gig Bag**
- **Sixpence Plectrum**
- **PS0913B Power Supply**
- **This Owner's Manual**
- **DigiTech Warranty Card**
- **DigiTech Brochure**

Please make sure that all of these items have been included before you get started.

Setup Directions

Follow these setup directions before use:

1. Turn the volume down on the amplifier/mixer you are connecting to.
2. Connect the pedal output to the amplifier/mixer input.
3. Connect the guitar to the pedal input.
4. Connect the power supply to the pedal.
5. Turn up your amplifier/mixer level to your desired listening level.
6. Turn the selected Model on or off by pressing the **TOE SWITCH** or the **HEEL SWITCH**.

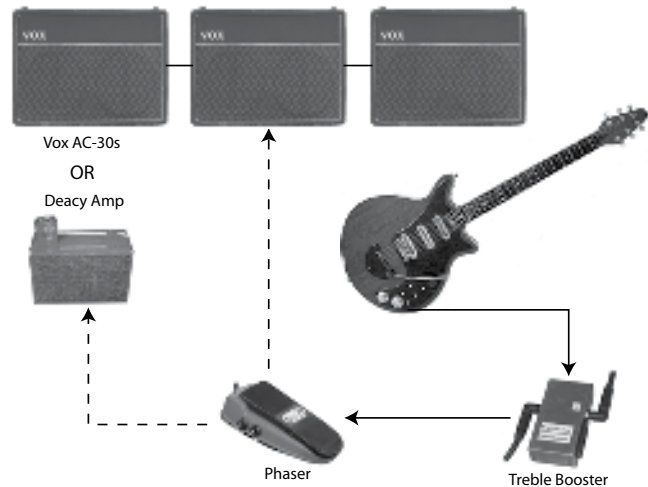
NOTE: To best utilize the built-in treble booster, plug your guitar directly into the Red Special Pedal (instead of placing the Red Special Pedal at the end of your effects chain). The built-in treble booster boosts the high frequencies of the guitar signal and attenuates low frequencies. However, it also has a relatively low input impedance which loads the guitar pickups more than plugging into a high impedance input (like a guitar amp). This has the effect of rolling off a portion of the highs and smoothing out the overall tone. Since this “loading” effect cannot be reproduced digitally, an input loading circuitry is utilized along with digital modeling anytime the signal path in the Red Special Pedal uses a treble booster effect.

For more than 30 years, Brian's signal path has begun with the Red Special guitar and its multitude of pickup selections and phase options.

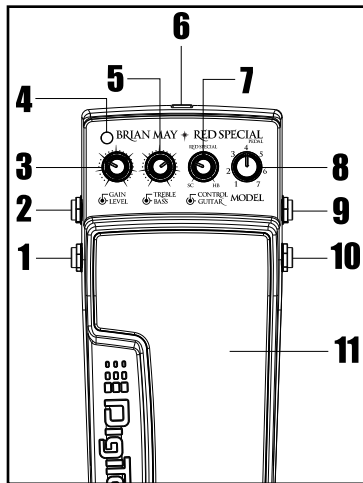
The guitar signal is run almost exclusively through a treble booster and then directly into his customized VoxTM* AC30s. For many of the layered harmony guitar parts heard on numerous Queen recordings, Brian also used the infamous "Deacy," a hand-built battery operated amp designed by Queen Bassist John Deacon.

For effects, Brian has relied on a FoxxTM* phaser, digital harmony pitch shifters, and more recently, chorusing effects using a single "dry" amp and two "wet" amps to create his huge live sound. Some post processing techniques used in the studio included tape flanging, reverb, and an assortment of mics and amp mic'ing techniques that capture Brian's unique and instantly recognizable sound.

Brian May's Signal Path (Example)



CONTROL DESCRIPTIONS



1. OUT 1 (AMP)*

Connect this output jack to your guitar amplifier. Refer to the **Flexible Output Mode™ Setup** section for more information.

2. OUT 2 (MIXER)*

This output has been specifically tailored for use with a full range audio system and is designed to be plugged directly into a mixer or recording device for optimal performance. Refer to the **Flexible Output Mode Setup** section for more information.

3. (Tip) - GAIN

Increases or decreases gain.

(Ring) - LEVEL

Increases or decreases level.

4. INDICATOR LED

This LED indicates the present mode of the model selected:
OFF=bypass, GREEN=toe mode, RED=heel mode. (Please refer to the **Flexible Output Mode™**, and **Calibrating the Expression Pedal** sections for more information.)

5. (Tip) - TREBLE

Increases or decreases treble.

(Ring) - BASS

Increases or decreases bass.

6. POWER SUPPLY JACK

Connect only the included PS0913B (9V AC) power supply to this jack. Note that the Red Special Pedal is not equipped for battery power.

7. (Tip) - CONTROL

Model dependent. Refer to the **Model Control** table for more information.

(Ring) - GUITAR

Transforms your guitar tone to sound more like Brian's, using guitar modeling technology.

SC - Select this setting if you're using a single coil pickup(s), typical of a Stratocaster™* guitar

Red Special - Select this setting if you're playing a Red Special replica (or using Burns™* Tri-Sonic™* pickups).

HB - Select this setting if you're using a humbucker pickup(s), typical of a Les Paul™* guitar.

8. MODEL

This knob selects one of the seven different Models:

1. Keep Yourself Alive
2. Bohemian Rhapsody
3. Tie Your Mother Down

* Use only unbalanced TS instrument cables.

- 4. **We Will Rock You/Champions**
- 5. **Crazy Little Thing Called Love**
- 6. **Brighton Rock Solo - Live**
- 7. **Deacy / A Winter's Tale**

Refer to the **Model Descriptions** section for more information.

9. INPUT

Connect your guitar to this jack.

10. FOOTSWITCH

Plug in the optional FS3X footswitch here. Refer to the **Using the Optional FS3X Footswitch** section to see what the FS3X can do with the Red Special Pedal.

11. EXPRESSION PEDAL

Serves as a variable control for some of the Models. Also used for engaging the **TOE SWITCH**

and the **HEEL SWITCH** (which enable different modes within each Model). Refer to the **Model Control** table for more information about the **EXPRESSION PEDAL**.

To engage the **HEEL** or **TOE SWITCHES**, press firmly on the heel or toe of the **EXPRESSION PEDAL**. The **INDICATOR LED** will light green when the **TOE SWITCH** is engaged or red when the **HEEL SWITCH** is engaged.

If the **EXPRESSION PEDAL**'s range becomes diminished over time, it may be necessary to re-calibrate the pedal. Refer to the **Calibrating the Expression Pedal** section for more information.

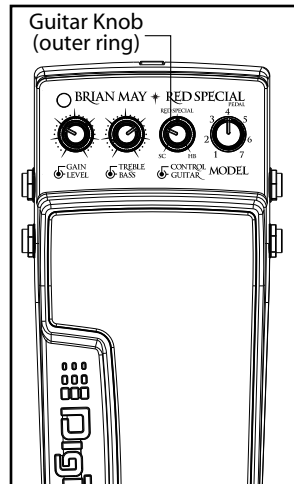
The Guitar Knob

The Red Special Pedal was designed to work in conjunction with Brian's Red Special guitar, but it can also be used with single-coil or humbucker-equipped guitars.

The pedal's proprietary Guitar Knob (outer ring, second knob from the right) uses Guitar Modeling technology to transform your guitar's tone to sound more like Brian's.

If your guitar has single coil pickups (like a Stratocaster™), turn the Guitar Knob to SC. If your guitar has humbucking pickups (like a Les Paul™), turn the Guitar Knob to HB. If you're playing a Red Special replica, turn the Guitar Knob to Red Special.

Note that you can fine tune the Guitar Knob's position between the HB and the Red Special settings, and between the SC and the Red Special settings (they are ranges). But the Red Special setting itself is a single point (not a range).



Model Tone Table

	Model	Tone - Toe Mode (Green LED)	Tone- Heel Mode (Red LED)
1	Keep Yourself Alive	Intro with tape flanger	Solo with tape flanger
2	Bohemian Rhapsody	First solo	Rhythm and finale orchestral fanfare
3	Tie Your Mother Down	Intro	Solo
4	We Will Rock You / We Are the Champions	We Will Rock You solo	We Are The Champions solo
5	Crazy Little Thing Called Love	Acoustic intro	Telecaster™ solo
6	Brighton Rock Solo - Live	Delay (three amps), tight chorus	Orchestral harmonizer with three-part harmony
7	Deacy / A Winter's Tale	Deacy unprocessed	A Winter's Tale solo

Model Control Table

	Model	Expression Pedal - Toe Mode	Expression Pedal - Heel Mode	Control Knob - Toe Mode	Control Knob - Heel Mode
1	Keep Yourself Alive	Tape flanger amount	Tape flanger amount	Midrange	Midrange
2	Bohemian Rhapsody	No function	Cross fade to Deacy	Midrange	Midrange
3	Tie Your Mother Down	No function	No function	Midrange	Midrange
4	We Will Rock You / We Are the Champions	Phaser amount	Phaser amount	Phaser speed	Phaser speed
5	Crazy Little Thing Called Love	No function	No function	Reverb level	Reverb level
6	Brighton Rock Solo - Live	Delay amount	Minor to major 3rd	Delay time	Pitch blend
7	Deacy / A Winter's Tale	No function	No function	Midrange	Effect level - reverb & delay

The GAIN, LEVEL, TREBLE, BASS, and GUITAR knobs are the same for all Models. (Refer to the **Control Descriptions** section for more information.)

Selecting and Enabling an Effect Model

1. Use the **MODEL KNOB** to select a Model. (Refer to the **Model Control** table for a list of Models.)
2. Rock the pedal forward (or back) and press firmly on the **TOE** (or **HEEL**) **SWITCH**. The **INDICATOR LED** lights green (or red) to show that the Model is enabled.
3. To bypass the Model, rock the pedal forward (or back) and press firmly on the **TOE** (or **HEEL**) **SWITCH** again. The **INDICATOR LED** turns off to show that the Model is bypassed.

For a list of Models, refer to the **Model Control Table** and the Model descriptions on the pages that follow.

MODEL DESCRIPTIONS

MODEL 1. “Keep Yourself Alive,” Queen, 1973

Written by Brian, “Keep Yourself Alive” was the first track on Queen’s first album. Brian meant for the lyrics to be ironic, but when Freddie Mercury sang them, they took on a whole new meaning.

Toe (Green) Mode – This is based on the intro tone from the song, which consists of the Red Special run through a treble booster and into a Vox™ AC30 amp. A tape flanging effect was added to the song during production.

Heel (Red) Mode – This is based on the solo tone from the song, also with a tape flanger effect.

Control Knob – Increases or decreases the midrange.

Expression Pedal – Controls the amount of tape flanger effect.

MODEL 2. “Bohemian Rhapsody,” A Night at the Opera, 1975

The multi-part harmonies alone on this landmark recording took over 80 hours to complete. The entire song was recorded in about three weeks. The song's promotional video is widely considered to be the headwater for the entire music video industry, and the song itself frequently appears near or at the top of “best rock song” lists.

Toe (Green) Mode – Based on the vocal-like and sustaining guitar tone from the first solo. The Red Special (with neck and middle pickups turned on and out of phase) is plugged into a treble booster and a Vox™ AC30.

Heel (Red) Mode – Based on the hard rock rhythm and finale tones after the a cappella section. The Red Special (with neck and middle pickups turned on and in phase) is plugged into a treble booster and a Vox AC30.

Control Knob – Increases or decreases the midrange.

Expression Pedal – No function in Toe Mode, but in Heel Mode it gradually morphs into the Deacy tone as you rock it forward.

MODEL 3. “Tie Your Mother Down,” A Day at the Races, 1976

Brian wrote this song's opening riff one morning while working toward a Ph.D. in astronomy in the Canary Islands. He jokingly associated the words “tie your mother down” with the riff because those words had a similar rhythm. But Freddie Mercury loved the line, and the rest of the lyrics grew from it.

Toe (Green) Mode - This is the song's intro tone, with the Red Special's volume backed off to $\frac{3}{4}$, and the bridge and middle pickups turned on. The Red Special is plugged into a treble booster and a Vox™ AC30.

Heel (Red) Mode - This is the solo tone, with the Red Special's volume all the way up and the bridge and middle pickups turned on. The Red Special is plugged into a treble booster and a Vox AC30.

Control Knob – Increases or decreases the midrange.

Expression Pedal – No function for this model.

MODEL 4. “We Will Rock You / We Are the Champions,” News of the World, 1977

Brian May wrote “We Will Rock You” specifically so audiences could participate in the song, and they still do today, both at Queen concerts and at sporting events around the world. “We Are the Champions” was also designed to involve the audience, and it also works well: people love to sing along with it. Brian May has said the song makes a concert “like a football match, but with everyone on the same side.”

Toe (Green) Mode - This model captures the fiery solo tone at the end of “We Will Rock You.” The Red Special guitar (with neck and middle pickups turned on and out of phase) is plugged into a treble booster, a Foxx™ foot phaser, and a Vox™ AC30.

Heel (Red) Mode - This model is based on the solo tone at the end of “We Are the Champions.” It’s the Red Special with the neck and middle pickups turned on and in phase, plugged into a treble booster, a Foxx™ foot phaser, and a Vox AC30.

Control Knob – Increases or decreases the phaser speed.

Expression Pedal – Controls the phaser amount.

MODEL 5. “Crazy Little Thing Called Love,” *The Game*, 1980

Written by Freddie Mercury, “Crazy Little Thing” was recorded so quickly that Brian May almost missed it. He showed up at the studio in Munich just in time to record a solo.

Toe (Green) Mode - This model is based on the acoustic guitar intro portion, which was played by Freddie Mercury.

Heel (Red) Mode - This is a rare instance when Brian did not use the Red Special and a Vox™ AC30. Instead, he used a Fender™ Telecaster™ (owned by Queen drummer Roger Taylor) and a 60’s combo amp for a more rockabilly sound.

Control Knob – Increases or decreases the reverb level.

Expression Pedal – No function for this model.

MODEL 6. “Brighton Rock Solo - Live,” Live at Wembley ‘86, 1992

This song’s famous solo originally appeared in a tune performed by a band named Smile, of which Brian May and Roger Taylor were members. When Queen performed “Brighton Rock” live, the number was often over nine minutes long. During the solo, Brian would send his guitar signal to three banks of amps: one for the main tone, and two for the ping pong (back-and-forth) delay effect.

Toe (Green) Mode – This is Brian’s main live tone. It’s the Red Special (with the neck and middle pickups turned on) plugged into a treble booster and amplified with three Vox™ AC30’s, with a tight chorus and a ping pong delay.

Heel (Red) Mode – This is Brian’s main live tone (as described above) with an orchestral harmonizer that produces a three-part harmony.

Control Knob – Increases or decreases the delay time in Toe Mode, and the pitch blend in Heel Mode.

Expression Pedal – Controls the delay amount in Toe Mode, and in Heel Mode shifts from the orchestral harmonizer from a Minor to a Major 3rd.

MODEL 7. Deacy Tone / “A Winter’s Tale,” Made in Heaven, 1995

The lyrics to “A Winter’s Tale” – the last Freddie Mercury would ever write before his untimely death – are about Montreux, Switzerland. The song’s video also features images of Montreux. The band has a special connection to the Swiss town, having bought a local recording studio there in 1978. After his death, a statue of Freddie was erected in Montreux and still stands there today.

Toe (Green) Mode - This is a model of the one and only Deacy, a battery operated amp designed and built by Queen bassist John Deacon. The Deacy is responsible for the orchestrated guitar overdubs heard on many Queen songs.

Heel (Red) Mode - This model is based on the solo from “A Winter’s Tale.”

Control Knob – Increases or decreases the midrange in Toe Mode, and the effect level (reverb and delay) in Heel Mode.

Expression Pedal – No function for this model.

Flexible Output Mode™

The Red Special Pedal has three Flexible Output Modes™: Mono, Stereo Mixer and Stereo Amp. These modes let you send a mono signal to an amp or mixer, or a stereo signal to two amps or two channels of a mixer.

Mode 1 (MONO) is the default output mode when one cord is plugged into either the OUT 1 (AMP) or OUT 2 (MIXER) output.

Mode 2 (STEREO MIXER) and Mode 3 (STEREO AMP) are enabled when two cords are plugged into both the OUT 1 (AMP) and OUT 2 (MIXER) outputs. Mode 2 (STEREO MIXER) is the default stereo output mode selected from the factory. Mode 3 (STEREO AMP) is enabled by selecting STEREO AMP mode via the Flexible Output Mode Setup. Once Mode 3 is selected, you can return to Mode 2 (STEREO MIXER) using the Flexible Output Mode Setup.

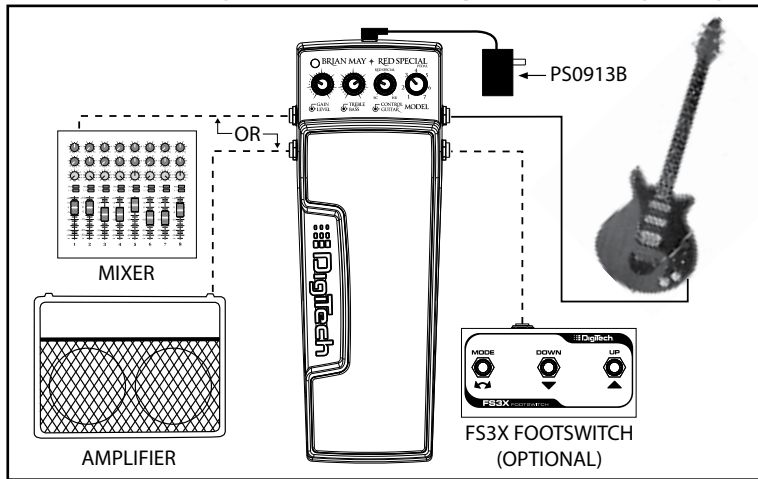
Please refer to the **Flexible Output Mode Setup** section for more information.

Flexible Output Mode™ Setup

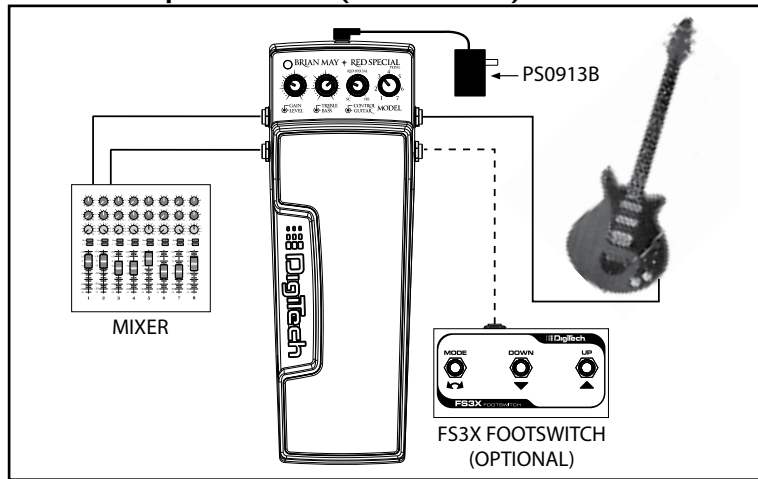
1. Power up the Red Special Pedal.
2. Select Model 7 using the **MODEL** knob.
3. Press and hold the **HEEL SWITCH** for three seconds. The **INDICATOR LED** begins to flash yellow.
4. Release the **HEEL SWITCH**.
5. Turn the **MODEL** knob to Model 6 to select **STEREO AMP** mode, or leave the **MODEL** knob at Model 7 to select **STEREO MIXER** mode.
6. Press the **TOE SWITCH** to exit Flexible Output Mode Setup; the **INDICATOR LED** turns off.

NOTE: Keeping the **MODEL** knob set to Model 7 will leave the pedal in **STEREO MIXER** mode (Flexible Output Mode 2). Selecting any other Models besides 6 or 7 will prevent you from exiting Flexible Output Mode Setup.

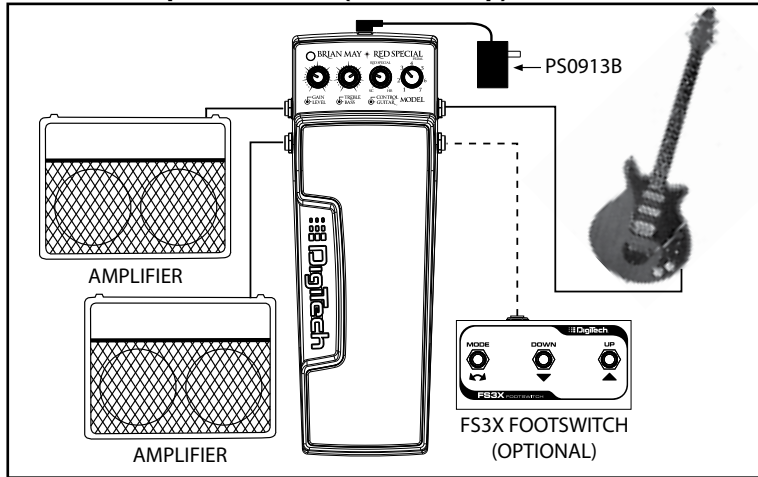
Connections Diagram - Flexible Output Mode™ 1 (Mono)



Connections Diagram - Flexible Output Mode™ 2 (Stereo Mixer)



Connections Diagram - Flexible Output Mode™ 3 (Stereo Amp)



Calibrating the Expression Pedal

If the Expression Pedal's range becomes diminished over time, it may be necessary to re-calibrate the pedal. Here is the procedure for calibration:

1. Begin with the power disconnected from the Red Special Pedal.
2. Select Model 1 using the **MODEL** knob.
3. Insert a standard mono (TS) guitar cable into the **FOOTSWITCH** jack.
4. Connect the power supply to the Red Special Pedal. The **INDICATOR LED** begins flashing yellow.
5. Rock the **EXPRESSION PEDAL** forward (toe down).
6. Select Model 2 using the **MODEL** knob. Wait for the **INDICATOR LED** to begin flashing green.
7. Rock the **EXPRESSION PEDAL** back (toe up).
8. Select Model 3 using the **MODEL** knob. The **INDICATOR LED** should flash green three times if calibration was successful.

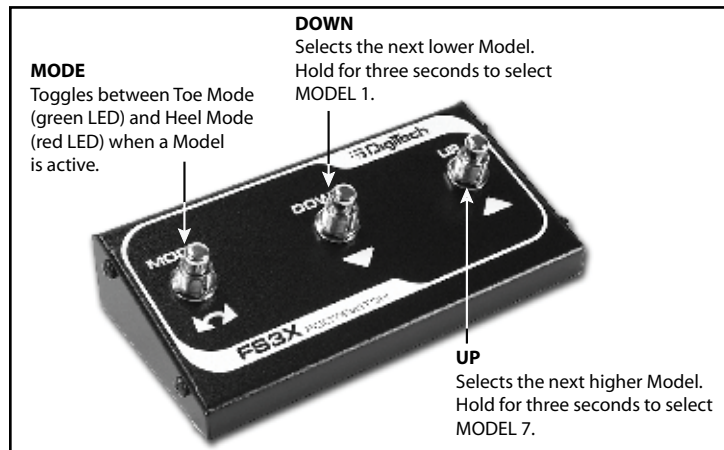
If the calibration procedure fails, the **INDICATOR LED** will flash red instead of green during step 8 and the unit will not return to normal operation until the Expression Pedal has been properly calibrated. Select Model 1 using the **MODEL** knob at this time and repeat steps 5-8 until Expression Pedal calibration is successful.

Using the Optional FS3X Footswitch

The optional FS3X footswitch gives you hands-free access to each of the Red Special Pedal's different models quickly and seamlessly, and lets you switch between heel and toe modes in each. The FS3X comes complete with a 1/4" stereo TRS cable that connects it to the **FOOTSWITCH** jack on the right side of the Red Special Pedal.

Once connected, operation is easy. Press the **UP** switch to change to the next model up. Press and hold the **UP** switch for three seconds to select Model 7. Press the **DOWN** switch to change to the next model down. Press and hold the **DOWN** switch for three seconds to select Model 1. Press the **MODE** switch to cycle through the Toe (Green) mode and the Heel (Red) mode. (The model must be engaged or disengaged using the **TOE** or **HEEL** switch on the pedal.)

FS3X Footswitch (Optional)



WARRANTY: We at **DigiTech®** are proud of our products and back up each one with the following warranty:

1. The warranty registration card must be mailed within ten days after purchase date to validate this warranty.
2. DigiTech warrants this product, when used solely within the U.S., to be free from defects in materials and workmanship under normal use and service.
3. DigiTech liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, provided the product is returned to DigiTech WITH RETURN AUTHORIZATION, where all parts and labor will be covered up to a period of **one** year (this warranty is extended to a period of **six** years when the product has been properly registered by mail or through our website). A Return Authorization number may be obtained from DigiTech by telephone. The company shall not be liable for any consequential damage as a result of the product's use in any circuit or assembly.
4. Proof-of-purchase is considered to be the burden of the consumer.
5. DigiTech reserves the right to make changes in design, or make additions to, or improvements upon this product without incurring any obligation to install the same on products previously manufactured.
6. The consumer forfeits the benefits of this warranty if the product's main assembly is opened and tampered with by anyone other than a certified DigiTech technician or, if the product is used with AC voltages outside of the range suggested by the manufacturer.
7. The foregoing is in lieu of all other warranties, expressed or implied, and DigiTech neither assumes nor authorizes any person to assume any obligation or liability in connection with the sale of this product. In no event shall DigiTech or its dealers be liable for special or consequential damages or from any delay in the performance of this warranty due to causes beyond their control.

NOTE: The information contained in this manual is subject to change at any time without notification. Some information contained in this manual may also be inaccurate due to undocumented changes in the product or operating system since this version of the manual was completed. The information contained in this version of the owner's manual supersedes all previous versions.

Specifications:

- Controls – GAIN/LEVEL, TREBLE/BASS, CONTROL/GUITAR
- Jacks – INPUT, FOOTSWITCH, OUT 1 (AMP), OUT 2 (MIXER)
- Input Impedance – 1M Ohms*
- Output Impedance – 200 Ohms
- Power Consumption – 4.5 Watts
- Dimensions – 10.14"(L) x 3.84"(W) x 2.47"(H)
- Weight – 3.38 lbs.
- Included Power Supply (one of the following):

PS0913B – 100 (100V ~ 50/60Hz)

PS0913B – 120 (120V ~ 60Hz)

PS0913B – 230 (230V ~ 50Hz)

PS0913B – 240 (240V ~ 60Hz)

- * Input impedance is normally 1M Ohms except for models that use the Treble Booster effect, in which case it reflects the desired impedance of Brian May's Treble Booster.

DigiTech®
8760 South Sandy Parkway
Sandy, Utah 84070
PH (801) 566-8800
FAX (801) 566-7005
www.digitech.com
Manufactured in the U.S.A.

Printed 5/2006
Red Special Pedal Owner's Manual 18-0438-A
©2006 Harman International Industries, Incorporated, all rights reserved.

*DigiTech, Production Modeling, CIT, and Flexible Output Mode are trademarks of Harman International Industries, Inc. Other product names modeled in this product are trademarks of their respective companies that do not endorse and are not associated or affiliated with DigiTech. They are trademarks of other manufacturers and were used merely to identify products whose sounds were reviewed in the creation of this product.

 A Harman International Company