Basic FX Suite

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Basic FX Suite

Basic FX Suite is software consisting of VST3 Plug-ins of various effects and sound processing
developed by Yamaha, some of which fully utilize modeling technology. The Basic FX Suite consists of
three software components: Sweet Spot Morphing Channel Strip, REV-X, and Guitar Amp Classics.
When you install the Basic FX Suite, the following three software programs will be installed.

Sweet Spot Morphing Channel Strip

This processing effect is a multi effect that features a compressor and equalizer.

REV-X

This processing effect is a digital reverb platform
developed by Yamaha for professional audio
devices.

Guitar Amp Classics

This processing effect features guitar amp
simulations developed by Yamaha that fully utilize
modeling technology.

NOTE
Basic FX Suite components do not support iOS devices, such as
iPad.
How to Open the VST Plug-ins

This section covers the two ways with which you can open the VST Plug-ins within Cubase. Please note that the operating procedure will differ depending on the DAW software.

From the Inspector

1. Click [Inserts] on the far left of the inspector in the Project window to show the insert slot.

2. Click the insert slot to show the effects selector.

From the MixConsole

1. [Studio] → [MixConsole] to show the MixConsole.

2. Click [INSERTS] to show the insert slot.

3. Click the insert slot to show the effects selector.

Select Effects

Select effects from the effect selectors. The included effects are sorted into submenus, from which you can easily find desired effects.

<table>
<thead>
<tr>
<th>Effects</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweet Spot Morphing Channel Strip</td>
<td>Dynamics</td>
</tr>
<tr>
<td>REV-X</td>
<td>Reverb</td>
</tr>
<tr>
<td>Guitar Amp Classics Distortion</td>
<td>Distortion</td>
</tr>
</tbody>
</table>

For instructions on using Cubase series programs, refer to the PDF manual, available from [Help] in the Cubase series menu.
Software

Sweet Spot Morphing Channel Strip

Overview
The Sweet Spot Morphing Channel Strip (“Channel Strip” for short) is a multi-effect that combines compression and EQ. Advanced sound engineering know-how is condensed into a number of convenient presets that can be simply and instantly recalled, for professional results.

Note that you cannot use the built-in Channel Strip when the sample rate is set to 176.4 kHz or 192 kHz.

Controls and Functions

Common to Compressor and Equalizer

1. MORPH
   Adjusts the parameter of the Sweet Spot Data. You can simultaneously adjust the compressor and equalizer settings which are set to five points around this knob by turning this knob. When you set the knob between two adjacent points, the compressor and equalizer settings will be set to an intermediate value.

2. Sweet Spot Data
   Selects the Sweet Spot Data.

3. TOTAL GAIN
   Adjusts the total gain of the Channel Strip.
   Range: -18.0 dB – +18.0 dB

4. Level Meter
   Indicates the output level of the Channel Strip.

Options | Description
--- | ---
SOFT | Produces the most gradual change.
MEDIUM | Results in a setting midway between SOFT and HARD.
HARD | Produces the sharpest change.

5. ATTACK
   Adjusts the attack time of the compressor.
   Range: 0.092 msec – 80.00 msec

6. RELEASE
   Adjusts the release time of the compressor.
   Range: 9.3 msec – 999.0 msec

7. RATIO
   Adjusts the ratio of the compressor.
   Range: 1.00 – ∞

8. KNEE
   Selects the knee type of the compressor.

9. SIDE CHAIN Q
   Adjusts the band width of the side chain filter.
   Range: 0.50 – 16.00

10. SIDE CHAIN F
    Adjusts the center frequency of the side chain filter.
    Range: 20.0 Hz – 20.0 kHz

11. SIDE CHAIN G
    Adjusts the gain of the side chain filter.
    Range: -18.0 dB – +18.0 dB

12. COMPRESSOR On/Off
    Turns the compressor on (lit) and off (dark).
Compressor Curve
This graph indicates the approximate compressor response. The vertical axis indicates the output signal level, and the horizontal axis indicates the input signal level.

Gain Reduction Meter
Indicates the gain reduction.

DRIVE
Adjusts the degree to which the compressor is applied. The higher the value, the greater the effect.
Range: 0.00 – 10.00

Gain Reduction Meter
Indicates the gain reduction.

Equalizer Curve
This graph indicates the characteristics of the 3-band equalizer. The vertical axis indicates the gain, and the horizontal axis indicates the frequency. You can adjust LOW, MID, and HIGH by dragging each handle in the graph.

LOW F
Adjusts the center frequency of the low band.
Range: 20.0 Hz – 1.00 kHz

LOW G
Adjusts the gain of the low band.
Range: -18.0 dB – +18.0 dB

MID Q
Adjusts the band width of the middle band.
Range: 0.50 – 16.00

MID F
Adjusts the center frequency of the middle band.
Range: 20.0 Hz – 20.0 kHz

MID G
Adjusts the gain of the middle band.
Range: -18.0 dB – +18.0 dB

HIGH F
Adjusts the center frequency of the high band.
Range: 500.0 Hz – 20.0 kHz

HIGH G
Adjusts the gain of the high band.
Range: -18.0 dB – +18.0 dB

EQUALIZER On/Off
Turns the equalizer on (lit) and off (dark).

REV-X
Overview
REV-X is a digital reverb platform developed by Yamaha for pro audio applications. Three types of REV-X are available: Hall, Room, and Plate.

Controls and Functions
This section uses the Hall type of REV-X as an example.

Reverb Time
Adjusts the reverb time. This parameter links to Room Size. The adjustable range varies depending on the REV-X type.

<table>
<thead>
<tr>
<th>REV-X type</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hall</td>
<td>0.103 sec – 31.0 sec</td>
</tr>
<tr>
<td>Room</td>
<td>0.152 sec – 45.3 sec</td>
</tr>
<tr>
<td>Plate</td>
<td>0.176 sec – 52.0 sec</td>
</tr>
</tbody>
</table>
Initial Delay
Adjusts the time that elapses between the direct, original sound and the initial reflections that follow it.
Range: 0.1 msec – 200.0 msec

Decay
Adjusts the characteristic of the envelope from the moment the reverberation starts to the moment it attenuates and stops.
Range: 0 – 63

Room Size
Adjusts the size of the simulated room. This parameter links to Reverb Time.
Range: 0 – 31

Diffusion
Adjusts the spread of the reverberation.
Range: 0 – 10

HPF
Adjusts the cutoff frequency of the high pass filter.
Range: 20 Hz – 8.0 kHz

LPF
Adjusts the cutoff frequency of the low pass filter.
Range: 1.0 kHz – 20.0 kHz

Hi Ratio
Adjusts the duration of reverberation in the high frequency range by using a ratio relative to the Reverb Time. When you set this parameter to 1, the actual specified Reverb Time is fully applied to the sound. The lower the value, the shorter the duration of reverberation in the high frequency range.
Range: 0.1 – 1.0

Low Ratio
Adjusts the duration of reverberation in the low frequency range by using a ratio relative to the Reverb Time. When you set this parameter to 1, the actual specified Reverb Time is fully applied to the sound. The lower the value, the shorter the duration of reverberation in the low frequency range.
Range: 0.1 – 1.4

Low Freq
Adjusts the frequency of the Low Ratio.
Range: 22.0 Hz – 18.0 kHz

OPEN/CLOSE
Opens and closes the window for adjusting the reverb settings.

Graph
Indicates the characteristics of reverberation. The vertical axis indicates the signal level, the horizontal axis indicates the time, and the Z-axis indicates the frequency. You can adjust the characteristics of reverberation by dragging the handles in the graph.

OUTPUT
Indicates the output level of the REV-X.

MIX
Adjusts the output level balance between the original sound and effect sound.
Range: 0% – 100%

Time Axis Setting
Select the display range of the time (horizontal axis) on the graph.
Display range: 500 msec – 50 sec

Zoom Out
Zooms out the display range of the time (horizontal axis) on the graph.

Zoom In
Zooms in the display range of the time (horizontal axis) on the graph.

HINT
• You can reset certain parameters to their default values by holding the [Ctrl]/[command] key while you click on the appropriate knobs, sliders, and faders.
• You can adjust the parameters more finely by holding the [SHIFT] key while you drag on the appropriate knobs, sliders, and faders.
Guitar Amp Classics

Overview
Guitar Amp Classics are guitar amp simulations that make extensive use of advanced Yamaha modeling technology. Four amp types with different sonic characteristics are provided.

Note that Guitar Amp Classics cannot be used when the sample rate is set to 176.4 kHz or 192 kHz.

Controls and Functions

CLEAN
This amp type is optimized for clean tones, effectively simulating the tight brilliance of transistor amplifiers. The tonal character of this amp model provides an ideal platform for recording with multi-effects. It also features built-in chorus and vibrato effects.

DISTORTION
Adjusts the depth of distortion produced.

TREBLE/MIDDLE/BASS
These three controls adjust the amplifier’s tonal response in the high, middle, and low frequency ranges.

PRESENCE
Can be adjusted to emphasize the high frequencies and overtones.

Cho/OFF/Vib
Turns the Chorus or Vibrato effect on or off. Set to [Cho] to turn the Chorus effect on, or to [Vib] to turn the Vibrato effect on.

SPEED/DEPTH
These controls adjust the speed and depth of the Vibrato effect when it is on.

The SPEED and DEPTH controls only work with the Vibrato effect, and are disengaged when the Cho/OFF/Vib control, above, is set to “Cho” or “OFF.”

BLEND
Adjusts the balance between the direct and effect sound.

OUTPUT
Adjusts the final output level.

CRUNCH
This is the amp type to use when you want lightly overdriven crunch tones. The CRUNCH model simulates the type of vintage tube amplifiers that are favored for blues, rock, soul, R&B, and similar styles.

Normal/Bright
Selects a normal or bright tonal character. The [Bright] setting emphasizes the high-frequency overtones.

GAIN
Adjusts the input level applied to the preamp stage. Rotate clockwise to increase the amount of overdrive produced.

TREBLE/MIDDLE/BASS
These three controls adjust the amplifier’s tonal response in the high, middle, and low frequency ranges.

PRESENCE
Can be adjusted to emphasize the high frequencies and overtones.

OUTPUT
Adjusts the final output level.
The DRIVE amp type provides a selection of distortion sounds that simulate the tonal character of various high-gain tube amplifiers. From mildly overdriven crunch to heavy distortion suitable for hard rock, heavy metal, or hardcore styles, this model offers a wide range of sonic capabilities.

1. **AMP TYPE**
   Six amplifier types are provided. Types 1 and 2 feature relatively mild distortion that allows picking nuances to come through naturally. Types 3 and 4 have more pronounced overtones, resulting in a fat, soft tone. Types 5 and 6 deliver wilder, aggressive distortion with a tight attack. The even-numbered amp types have greater presence and range than the odd-numbered types.

2. **GAIN**
   Adjusts the input level applied to the preamp stage. Rotate clockwise to increase the amount of distortion produced.

3. **MASTER**
   Adjusts the output level from the preamp stage.

4. **TREBLE/MIDDLE/BASS**
   These three controls adjust the amplifier's tonal response in the high, middle, and low frequency ranges.

5. **PRESENCE**
   Can be adjusted to emphasize the high frequencies and overtones.

6. **OUTPUT**
   Adjusts the final output level.

The LEAD amp type simulates a high-gain tube amp that is rich in overtones. It is ideally suited to playing lead guitar lines that will project well in an ensemble, but it can also be set up for crisp accompaniment tones as well.

1. **High/Low**
   Selects the amp output type. The [High] setting simulates a high-output amp, and allows the creation of more distorted tones.

2. **GAIN**
   Adjusts the input level applied to the preamp stage. Rotate clockwise to increase the amount of distortion produced.

3. **MASTER**
   Adjusts the output level from the preamp stage.

4. **TREBLE/MIDDLE/BASS**
   These three controls adjust the amplifier's tonal response in the high, middle, and low frequency ranges.

5. **PRESENCE**
   Used to emphasize the high frequencies and overtones.

6. **OUTPUT**
   Adjusts the final output level.

**HINT**

**Using the GAIN, MASTER, and OUTPUT Controls**

The tonal character of the DRIVE and LEAD amp types can be adjusted over a wide range via the GAIN, MASTER, and OUTPUT controls. GAIN adjusts the level of the signal applied to the preamp stage, affecting the amount of distortion produced. MASTER adjusts the output level from the preamp stage that is then fed to power amp stage. The GAIN and MASTER control settings have a large effect on the final sound, and the MASTER control may need to be turned up fairly high in order to drive the power stage sufficiently for optimum tone. The OUTPUT control adjusts the final output level from the amp model without affecting the distortion or tone, and is useful for adjusting the guitar’s volume without changing any other aspects of the sound.