soundsation

DFX 16

# COMPACT FX PROCESSOR

USER MANUAL

Dear customer,

first of all thanks for purchasing a **SOUNDSATION®** product. Our mission is to satisfy all the possible needs of musical instrument and professional audio users offering a wide range of products using the latest technologies for a reasonable price.

We hope you will be satisfied with this item and, if you want to collaborate, we are looking for a **feedback** from you about the operation of the product and for possible improvements to introduce in the next future. Go to our website www.soundsationmusic.com and send an e-mail with your opinion, this will help us to build instruments ever closer to customer's real requirements.

One last thing: read this manual before using the instrument, an incorrect operation can cause damages to you and to the unit. Take care!

The SOUNDSATION Team

FRONT PANEL
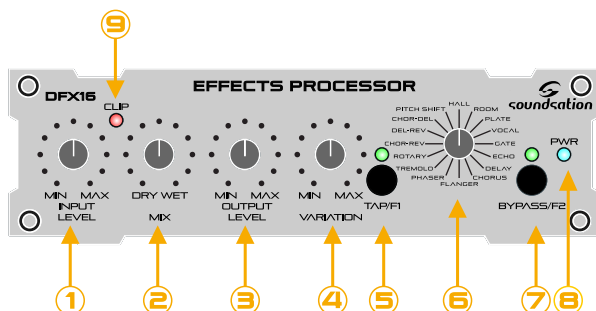
1 - INPUT LEVEL POTENTIOMETER: use the *INPUT LEVEL POTENTIOMETER* to adjust the input signal level. Please be sure to set a level that is sufficiently high but does not overload the unit..

2 - MIX BALANCE POTENTIOMETER: use the *MIX BALANCE POTENTIOMETER* to adjust the ratio of original vs effect signal. Turn the control fully to the right to hear only the processed effect signal. Turn it fully to the left to hear only the unprocessed input signal.

3 - OUTPUT LEVEL POTENTIOMETER: use the *OUTPUT LEVEL* control to adjust the output level.

4 - PARAMETER POTENTIOMETER: use the PARAMETER POTENTIOMETER to adjust the main parameter of the selected EffectWhen you change effects, the new selected effect will be loaded with the previous setting of the main parameter independently form the current position of the PARAMETER POTENTIOMETER.
Once loaded the new effect, if moved the PARAMETER POTENTIOMETER, then the current effect's main parameter will be set at the value corresponding to the new position of the PARAMETER POTENTIOMETER.
For Effects editable on more than one parameter (as the combined ones) the PARAMETER POTENTIOMER will be used for adjusting more parameters joyntly with the use of the Tap/Fx1 and Bypass/Fx2 buttons (see below)

5 - TAP/FX1 BUTTON: Hit the button several times in the tempo of the music piece toadapt the "DELAY" Effects. The TAP LED on top ot the TAP button starts flashing in the corresponding tempo. TAP/FX1 button is also used with extra function for the control/setting of more parameter on REVERBS, GATED REVERB, DELAY/REVERB and ROTARY effects.

6- EFFECT SELECTION ENCODER: use the *EFFECTS SELECTION ENCODER* to select one of the 16 effect available.

7 - BYPASS/FX2 BUTTON: Hit the button to "Bypass" the effects muting them on the outputs.The BYPASS LED on top ot the Bypass button will light ON when muted"Bypassed" the effects. BYPASS/FX2 button is also used with extra function for the control the balance between DELAY and REVERB on DELAY/REVERB effect.

8 - PWR LED: the PWR LED when lighted is indicating that the unit is ON. Switch ON Push Button is located on the rear panel of the DFX16.

9 - CLIP LED: the CLIP LED is indicating the occurrency of a digital overflow at the DSP side. When the CLIP LED will start flashing, please reduce the Input Level.

REAR PANEL
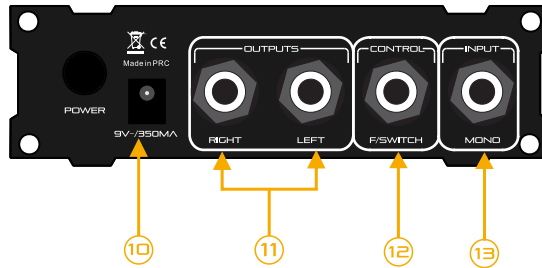
10 - DC PLUG - The DFX16 is connected to the mains using a 2-pole POWER connector jack. A matching mains adaptor is included with the unit.

[To avoid damage to your DFX16 always use the mains adaptor supplied with the unit]

11 - OUTPUTS - The two OUTPUT are on 1/4" TRS connectors and provide an unbalanced left/right signal.

12 - F/SWITCH CONTROL - You can plug a momentary or a typical on/off switch to control the BYPASS of the unit.

13 - INPUT - The INPUT is a 1/4" TS connector and is configured as unbalanced.

NOTE

Merely switching the unit off does not mean that it is fully disconnected from the mains. To disconnect the unit from the mains, pull out the mains connector. Please make sure before installation that the mains connector has not been damaged. If you do not use the unit for an extended period of time, please disconnect it at the mains.

EFFECTS OVERVIEW

The DFX16 comes with 16 classic Effects.
All of them perform a pure Stereo or pseudo-Stereo output.

«APPENDIX» contains a list of the preset effect parameters which can be edited as well as a description of the TAP/FX1 and BYPASS/FX2 buttons' function].

CLASSIC REVERBS

The Classic REVERB effect reproduce the characteristics of natural spaces and a classic artificial reverb as the plate.
The all REVERBS have the possibility through the use of the TAP/FX1 button, to adjust their brightness: pressing the TAP/F1 button when the effect is not in bypass, the potentiometer is no longer used for setting the reverb Decay Time, but for setting the position of an hi-damp filter (low pass…).
  A HALL simulates the reverberation that you can hear in big Hall. This effect is characterized by a long reverb and a considerable amount of Pre-Delay. Good for solo instruments and vocals.
  A ROOM simulates the reverberation in a mid-size Room. The effect can be used for natural instruments such as piano.
  A PLATE simulates the sound of a reverb plate as used in the past in studio as reverb unit. This effect is a sort of modulated reverb and is particularly suited for drums and vocals.

SPECIAL REVERBS

The Special REVERB comprises not natural reverb algorithms. Also these reverbs have the possibility through the use of the TAP/FX1 button, to adjust an extra parameter, as the brightness for the Vocal Rev or the threshold position for the Gated Reverb: pressing the TAP/F1 button when the effect is not in bypass, the potentiometer is no longer used for setting the reverb time, but for setting the position of the Gating threshold.
  A VOCAL REV simulates the reverberation that you can hear in big Hall, but with the addition of samll echoes suitable for better characterizing the voice.
  A GATED REV simulates the reverb type cut off by a gate.
This effect was typically used with snare or kick drums.

DELAYS

The DELAY effect is provided in 2 different shapes, dedicate one expressely to the Vocal use and the other one to the classic Delay use.
  A VOCAL ECHO produces different echoes on the 2 output channels, with not equal delay times, so to simulate "casual" echoes spreading the and sustaining the voice differently on the 2 output channles.
  Te effects is similar to a reverb, where the voice body is maintained dense and well defined.
  A DELAY produces several echoes of the input signal, reducing their amplitude and add the result to the original signal.
  The TAP/FX1 button can be used to set the delay Delay Time and the Leed on top of the TAP/FX1button will blink with the same interval of time used for tapping the TAP.FX1 button, matching theset tapped Delay time.

MODULATIONS

The MODULATION effects set offers the most classic modulation used for "moving" sound.

- CHORUS gives a signal more body and width, moving it in frequency, creating a nice "moving sound" making the sound itslef richer.
- FLANGER it is sot of "extension" of the Chorus, adding to this one a "retro" touch, making the "sound movement" more perceivable than with te chorus.
- PHASER is an effect adding a "phase shifted" copy of the input signal , to the input signal itself. PHASER is a traditional guitar, electric piano and keyboard effect.
- TREMOLO is an effect modulating the input signal amplitude, changings so its "volume" incresing and decreasing it cyclically. TREMOLO is particularly suitable for electric pianos or electric organs.
- ROTARY simulates the rotating movements of a Leslie® loudspeaker system. The fast rotation produces a characteristic shifting of frequencies. Traditionally, this is an effect for electronic organ.

COMBINED EFFECTS

The combined effects are 3 effects combining Reverb, Modulation and Delay in different shapes. The combined effects are set in parallel configuration.
- CHORUS+REV is a combination of the CHORUS and ROOM effects.
- DELAY+REV is a combination of the DELAY and HALL effects.
  For the use of the TAP/FX1 and BYPASS/FX2 buttons allowing to access up tp 3 extra parameters for this effect, please refer to the "APPENDIX".
  Please note that in order the TAP/F1 button to allow the access to the "Mix Volume" and "Rev decay" functions, it is necessary to have the BYPASS/F2 led blinking...so to not having had entered the MUTE condition.
  To make the BYPASS/F2 led blinking need to maintain the BYPASS/F2 button pressed for at least3 seconds.
  To bring back the BYPASS/FX2 to its original BYPASS function, need to maintain the button pressed again for at least 3 seconds.
- CHORUS+DEL is a combination of the CHORUS and Delay effects.

PITCH SHIFTER

- PITCH SHIFT adds another signal to the original signal, below or above the original pitch.

APPENDIX

LIST OF EFFECTS AND PARAMETERS

Sel	Effect	Main Parameter	Extra Parameter Fx1 Button ON Fx2 Button OFF	Extra Parameter Fx1 Button OFF Fx2 Button ON	Extra Parameter Fx1 Button ON Fx2 Button ON
1	HALL	Reverb Decay time	Brightness	---	---
2	ROOM	Reverb Decay time	Brightness	---	---
3	PLATE	Reverb Decay time	Brightness	---	---
4	VOCAL	Reverb Decay time	Brightness	---	---
5	GATED REV	Reverb Decay time	Threshold setting	---	---
6	VOCAL ECHO	Time Displacement	---	---	---
7	DELAY	Decay time Delay time by TAP	---	---	---
8	CHORUS	Speed/Depth	---	---	---
9	FLANGER	Speed/Depth	---	---	---
10	PHASER	Speed/Depth	---	---	---
11	TREMOLO	Speed/Depth	---	---	---
12	ROTARY	Speed/Depth	---	---	---
13	CHORUS+REV	Reverb Decay time	---	---	---
14	DELAY+REV	Delay Decay time	Delay Decay time	Reverb Decay time	Delay/Reverb Mix
15	CHORUS+DEL	Delay vs. reverb ratio	---	---	---
16	PITCH SHIFTER	Semi-tone steps (+/-12)	Chorus%	---	---

List of effects and parameters

NOTE : to toggle the BYPASS/FX2 button from BYPASS use to FX2 use, need to press the button for at least 3 seconds.

TECHNICAL SPECIFICATION

INPUT

Type	1 x ¼" TS connectors, unbalanced
Impedance	approx. 30 kOhm
Max. input level	+9 dBu

OUTPUT

Type	2 x ¼" TRS connectors, impedance balanced
Impedance	approx. 220 Ohm
Max. output level	+9 dBu

EFX/BYPASS

Type	¼" TS footswitch connector

DIGITAL PROCESSING

Converters	24-Bit Delta-Sigma, 128-times oversampling
Sampling rate	48 kHz

SYSTEM SPECIFICATIONS

Frequency response	10 Hz to 22 kHz, -3 dB
Dynamic range	96 dB, 10 Hz to 22 kHz
Distortion	0,01 % typ. @ 0 dBFS
Crosstalk	-75 dB @ 1 kHz
Signal-to-noise ratio	10 Hz to 22 kHz <86 dB @ 0 dBu, A-weighted

POWER SUPPLY

Mains connection	external power supply, 9 VAC - 750 mA
Mains voltage	230 V - 50 Hz
Power consumption	approx. 7,5 W

DIMENSIONS/WEIGHT

Dimensions (H x W x D)	approx.103 mm x 137.5 mm x41mm
Weight	approx.0.473 kg

SOUNDSATION is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or illustrated.

WARRANTY & SERVICE

All SOUNDSATION products feature a limited **two-year warranty**. This two-year warranty is specific to the date of purchase as shown on your purchase receipt.

The following cases/components are not covered from the above warranty :
- Any accessories supplied with the product
- Improper use
- Fault due to wear and tear
- Any modification of the product effected by the user or a third party

SOUNDSATION shall satisfy the warranty obligations by remedying any material or manufacturing faults free of charge at SOUNDSATION's discretion either by repair or by exchanging individual parts or the entire appliance. Any defective parts removed from a product during the course of a warranty claim shall become the property of SOUNDSATION

While under warranty period, defective products may be returned to your local SOUNDSATION dealer together with original proof of purchase. To avoid any damages in transit, please use the original packaging if available. Alternatively you can send the product to SOUNDSATION SERVICE CENTER – Via Enzo Ferrari , 10 – 62017 Porto Recanati - Italy . In order to send a product to service center you need an RMA number. Shipping charges have to be covered by the owner of the product.

For further information please visit www.soundsationmusic.com

WARNING

PLEASE READ CAREFULLY – EU and EEA (Norway, Iceland and Liechtenstein) only

This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2202/96/EC) and your national law.

This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (WEEE) .

Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time , your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources.

For more information about where you can drop off your waste equipment for recycling , please contact your local city office , waste authority , approved WEEE scheme or your household waste disposal service.

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DESIGNED IN ITALY BY SOUNDSATION®

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