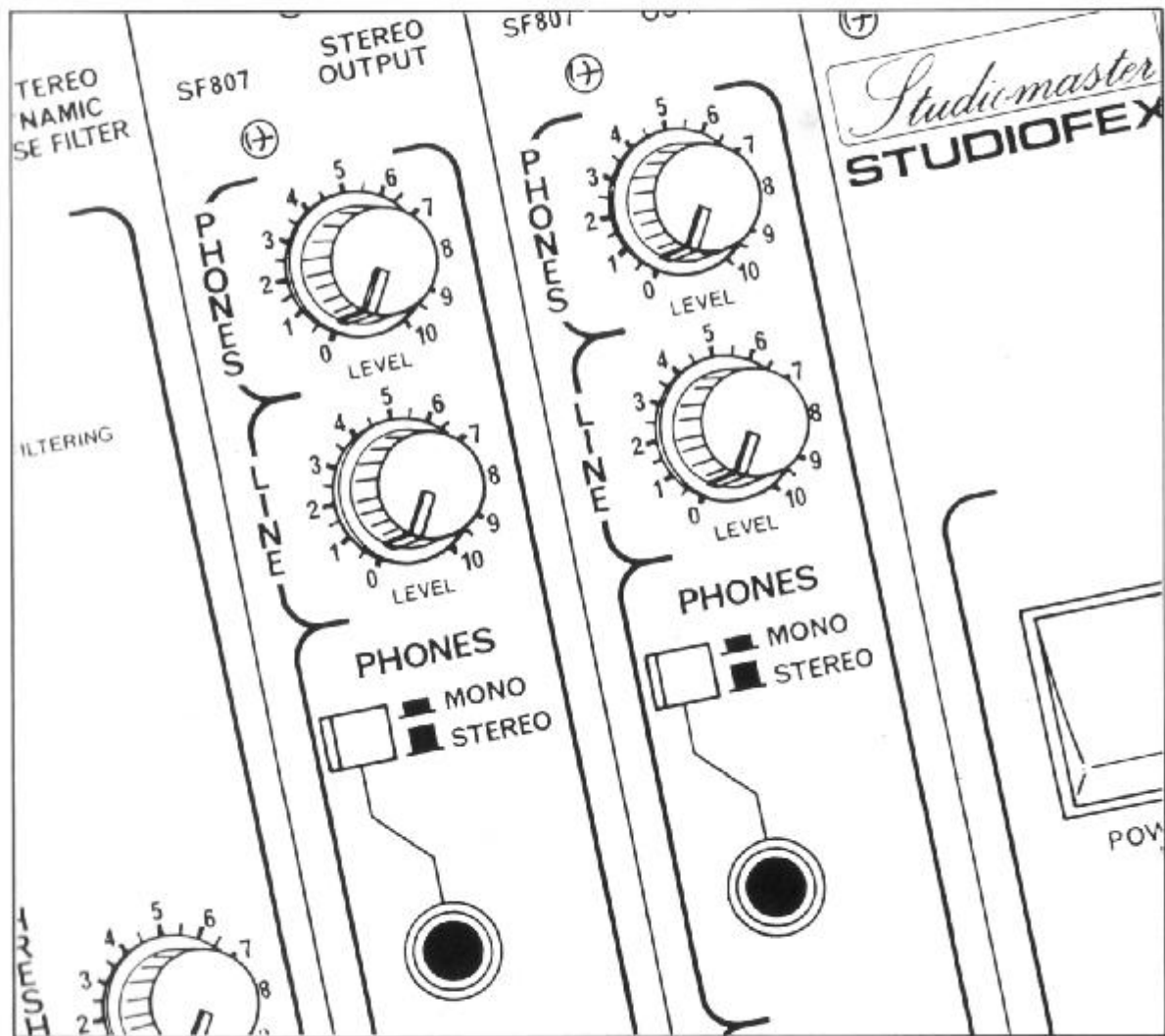


# Studiomaster Studiofex SF802

Stereo Dynamic  
Noise Filter



## Owners Manual

# *SF802 Stereo Dynamic Noise Filter*

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## CONTENTS

INTRODUCTION . . . . .	1
<b>FUNCTION . . . . .</b>	<b>2</b>
<b>FEATURES . . . . .</b>	<b>4</b>
FRONT . . . . .	4
REAR . . . . .	4
<b>OPERATION . . . . .</b>	<b>6</b>
MODULE IDENTIFICATION . . . . .	6
INSTALLATION . . . . .	6
CONNECTIONS . . . . .	6
SIGNAL LEVELS . . . . .	7
POSITION IN THE SIGNAL CHAIN . . . . .	7
ADJUSTMENT . . . . .	7
<b>SPECIFICATIONS . . . . .</b>	<b>8</b>

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STUDIOFEX is a fully modular studio effects system which brings together both the features and the performance which today's music demands. To get the best from the **STUDIOFEX SF802 STEREO DYNAMIC NOISE FILTER**, familiarise yourself with all of its features by reading these instructions thoroughly.

Please also read the instructions which are supplied with the STUDIOFEX MOTHER UNIT.

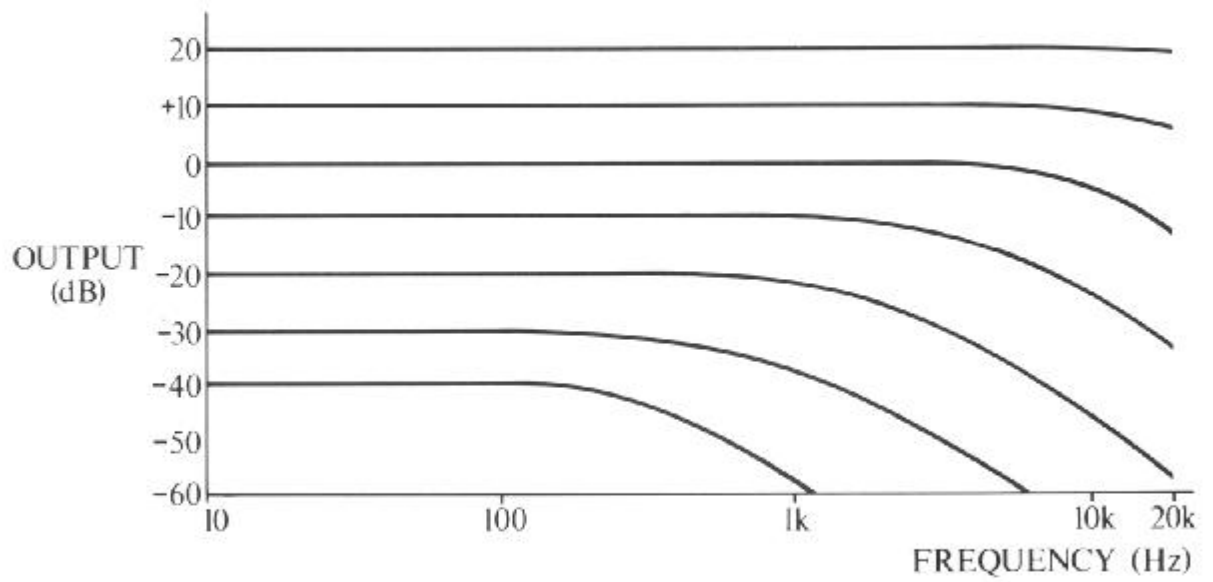
# *Function*

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The **STEREO DYNAMIC NOISE FILTER (DNF)** operates in a similar way to tape noise reduction systems. It alters the high frequency response at low signal levels. The important difference between the Studiofex DNF and a noise reduction system is that a complementary "encode" process is not needed, so the DNF can be used **AFTER** the operator has discovered a noise problem. It can also be used for reducing equipment noise, including digital quantisation noise.

The SF802 acts a little like an automatic HF equaliser control which reduces the HF content when there are no significant high frequencies in the signal to "mask" the noise.

The DNF has two main parts: a variable cut-off frequency low-pass filter and a detector, or **SIDECHAIN**. The sidechain takes some of the input signal, amplifies and filters it, and depending on the high frequency signal level, applies a control signal to the variable filter.



Response curves

Fig 1

# Features

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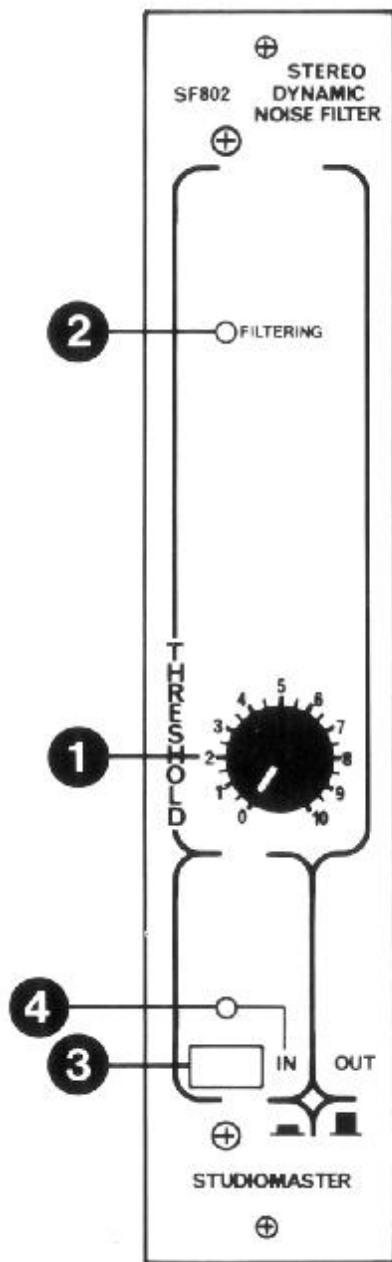
## FRONT (see FIG 2)

- 1 The **THRESHOLD** control determines how sensitive the DNF is to low level signals. As it is turned clockwise, the actual threshold level is lowered making filtering more sensitive, and the DNF would only close down at the very lowest levels.
- 2 The **FILTERING** LED lights when the filters are closed down, indicating that bandwidth and noise are being reduced.
- 3 The **IN/OUT** button allows the DNF to be in-circuit or bypassed. When depressed, the DNF is in-circuit.
- 4 The **IN** LED lights when the DNF is in-circuit.

## REAR (see FIG 3)

- 5 **LEFT** channel **INPUT** jack socket.
- 6 **RIGHT** channel **INPUT** jack socket.
- 7 **LEFT** channel **OUTPUT** jack socket.
- 8 **RIGHT** channel **OUTPUT** jack socket.
- 9 Module identification label.

All jacks are wired Tip = Signal, Sleeve = Ground.



Front

Fig 2 Rear

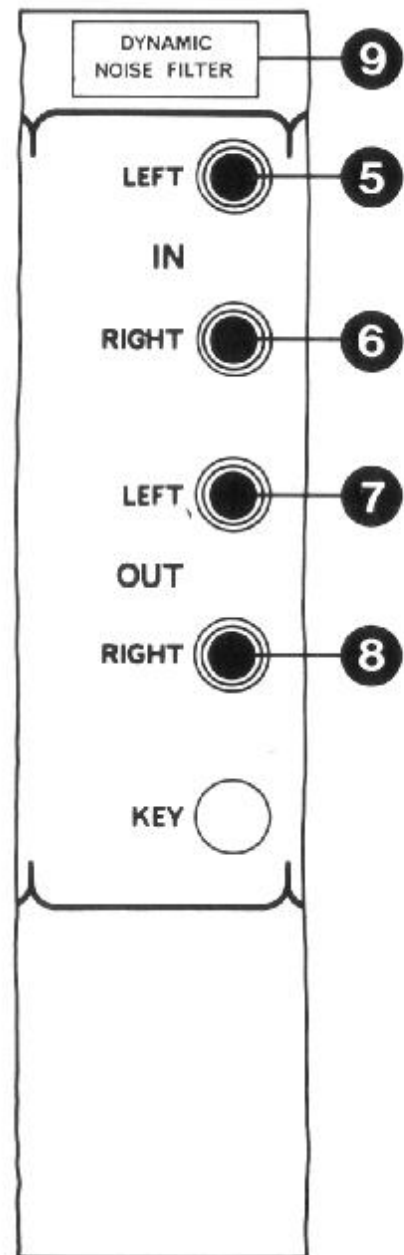


Fig 3

# *Operation*

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## MODULE IDENTIFICATION

A sheet of labels is supplied. Cut the DYNAMIC NOISE FILTER name from the label sheet and stick it above the modules' jack sockets at the rear of the MOTHER UNIT (as shown in FIG 3 - 9).

## INSTALLATION

To install the SF802 STEREO DYNAMIC NOISE FILTER module into the mother unit, firstly make sure that the power is switched off. Then locate the circuit card of the module squarely into the top and bottom guide slots at the desired position in the mother unit. Gently slide it in. If the module comes to a stop part of the way in, gently move it from side to side so that the rear of the card is guided into the rear guide slots. Now push it fully in. If resistance is felt at this stage, remove the module, and check that the wafer connector has not become damaged. Once the module's front panel is located flush with the front of the mother unit, fix it in place with the special posidrive screws supplied with it. The bushes into which the screws are fitted are initially unthreaded, so when first used some resistance will be felt as the special screws cut a thread.

**NOTE:** Make sure the screws go in straight. DO NOT overtighten. Use only the screws provided: STUDIOMASTER Part No FX07018.

## CONNECTIONS

The mother unit incorporates a signal routing system which routes the output from a module to the input of the module to its right. The modules are therefore permanently connected in a "daisy-chain" fashion. If a signal is applied

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to a module left of the DNF, and extracted from a module right of the DNF, then simply pressing the IN/OUT button will bring noise reduction into the daisy-chain. Alternatively, the input and output sockets may be connected via jack leads directly to mixing console insert points or to a patchbay. The SF802 is a stereo device, but it has a single sidechain, so it cannot be used as two separate noise filters. Single channel operation is possible simply by leaving the unused channel unconnected. Take care that the unused input does not receive any other signal (such as from the routing system) or the filtering action will be disturbed. The best way of preventing this occurring is to insert a dummy jack plug in the unused input.

### SIGNAL LEVELS

The Studiofex SF802 has been designed with adequate headroom for operation at +4dBm, but has sufficient dynamic range to allow operation at -10dBV.

### POSITION IN THE SIGNAL CHAIN

The DNF will normally be patched into the main mixing console outputs, although it may be needed on a channel insert point if a particular instrument is noisy (such as a digital keyboard). Generally, the DNF is placed near the end of the signal chain, since any noise generated before the DNF will be eliminated. If the DNF is used in a chain in the mother unit, it should generally be positioned towards the right.

### ADJUSTMENT

If the fidelity of the sound is to be preserved, then the THRESHOLD control must be set carefully. It should be adjusted in quiet



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parts by turning the the control anti-clockwise from the fully clockwise position until the noise just disappears and the **FILTERING LED** glows. If the noise becomes noticable again when the signal level rises, then turn the **THRESHOLD** control anti-clockwise a little more.

## *Specifications*

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Frequency Response : 11Hz to 32kHz +/-1dB  
T.H.D. : 0.01% (1kHz, 0dBm)  
Output Noise : -87dBm (DIN Audio)  
Maximum Output Level : +8.4dBm into 600ohm  
+16dBm into 10kohm  
Input Impedance : 16kohm  
Crosstalk : -75dB 1kHz to 10kHz  
Min Cut-Off Frequency : 1200Hz  
Cut-Off Slope : -12dB/octave  
Input Threshold Range : -8 to +50dBm  
Attack Time : 500 $\mu$ s

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Should your **STUDIOFEX SF802 STEREO DYNAMIC NOISE FILTER** develop a serious fault, DO NOT attempt to rectify it yourself. Service work should only be carried out by qualified and experienced Service Engineers.

For this work to be done, consult the dealer from who you purchased your SF802 or alternatively contact the Service Department at the address below:

The Service Department

**STUDIOMASTER**  
Studiomaster House  
Chaul End Lane  
Luton  
Bedfordshire LU4 8EZ  
ENGLAND

TEL: 0582 570621  
INTERNATIONAL TEL: +44582 570621  
TELEX: 825612 STUDIO G  
FAX: 0582 570242  
INTERNATIONAL FAX: +44582 570242

Or in U.S.A. and Canada:

**STUDIOMASTER INC.**  
1340-G Dynamics Street  
Anaheim  
CA-92806  
U.S.A

TEL: (714) 524 2227  
FAX: (714) 524 5096

The contents of this manual are correct at the time of going to press. The manufacturer reserves the right to change specifications and features without prior notice.

# STUDIOMASTER

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