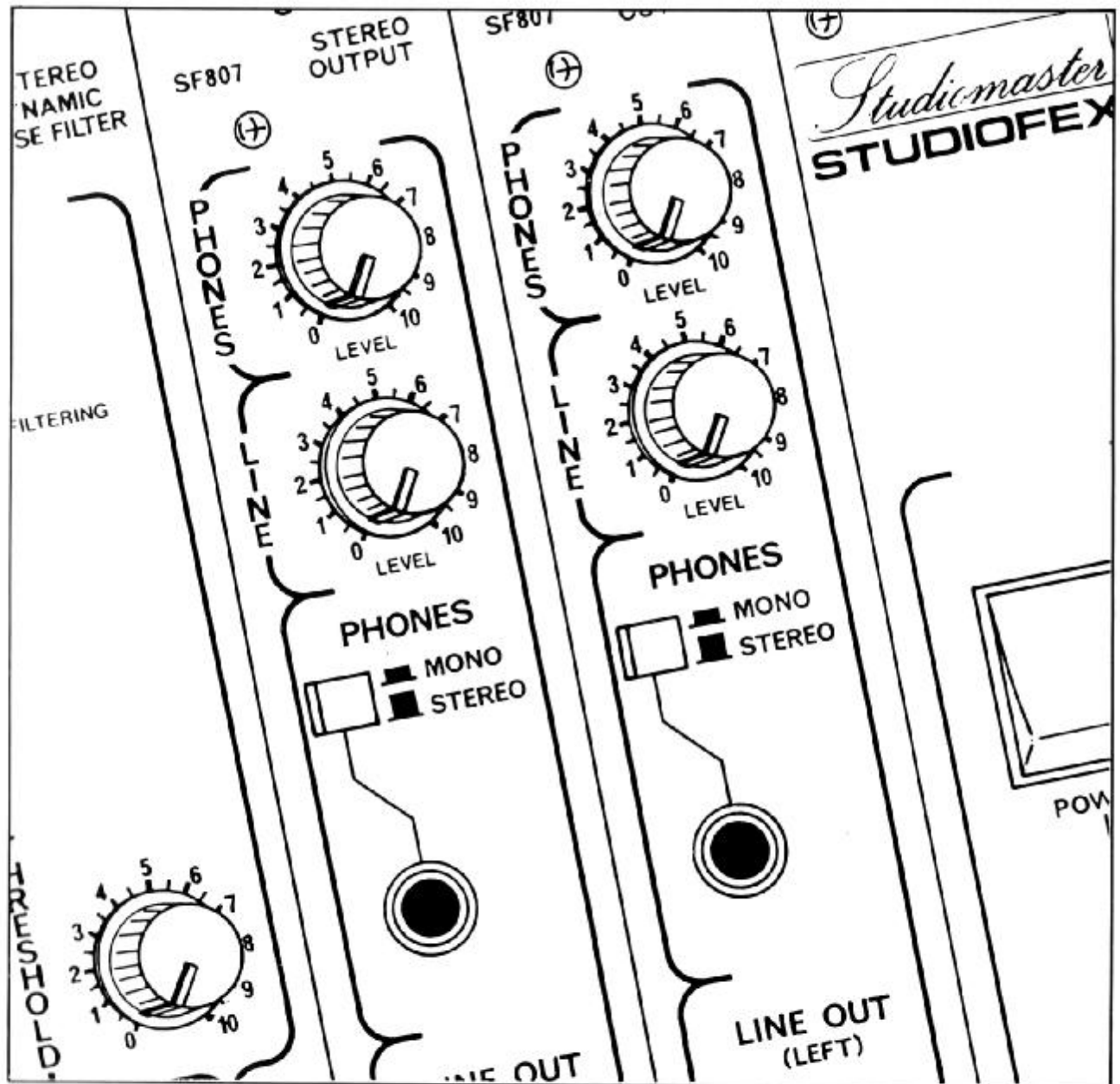


# Studiomaster Studiofex SF804

## Fader-Panner



# Owners Manual

# *SF804 Fader-Panner*

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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 SF804 FADER-PANNER**, 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.

# *Principles*

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The **SF804** incorporates two functions in a single module. Both the functions, panning and fading make use of a pair of Voltage Controlled Amplifiers (VCAs). These are just like automatic level faders which are controlled by a voltage applied to them.

Within the **SF804 FADER-PANNER**, the VCA control voltages are arranged so that they either rise and fall together for fading, or alternately for panning a signal across the stereo field. The SF804 has been provided with controls for the utmost flexibility.

# Features

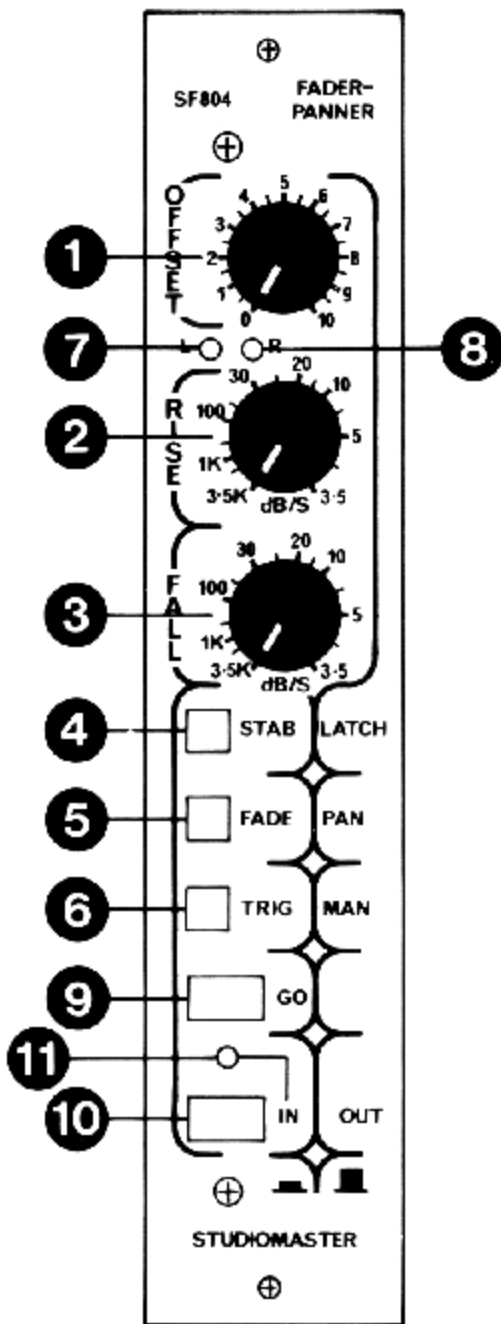
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## FRONT (see FIG 1)

- 1 The **OFFSET** control sets the "centre" position when panning, or sets an upper limit to the gain when fading.
- 2 The **RISE** control determines how quickly the signal level rises when the unit is triggered to fade **UP**, or to pan to the **RIGHT**.
- 3 The **FALL** control determines how quickly the signal falls when the unit is triggered to fade **DOWN**, or to pan to the **LEFT**.
- 4 The **STAB/LATCH** button selects either momentary (single-shot) action, or alternating (latching) action.
- 5 The **FADE/PAN** button selects the operating mode.
- 6 The **TRIG/MAN** button selects whether it is the **GO** button, or the **KEY** input which controls the unit.
- 7 The **LEFT** LED lights when the left channel is faded up (unity gain).
- 8 The **RIGHT** LED lights when the right channel is faded up (unity gain).
- 9 The **GO** button is used to trigger the unit manually.
- 10 The **IN/OUT** button allows the fader-panner to be in-circuit or bypassed. When depressed, the fader-panner is in-circuit.
- 11 The **IN** LED lights when the fader-panner is in-circuit.

## REAR (see FIG 2)

- 12 **LEFT** channel **INPUT** jack socket.
- 13 **RIGHT** channel **INPUT** jack socket.
- 14 **LEFT** channel **OUTPUT** jack socket.
- 15 **RIGHT** channel **OUTPUT** jack socket.
- 16 The **KEY** jack socket allows the unit to be triggered from an external source.
- 17 Module identification label.



Front

Fig 1 Rear

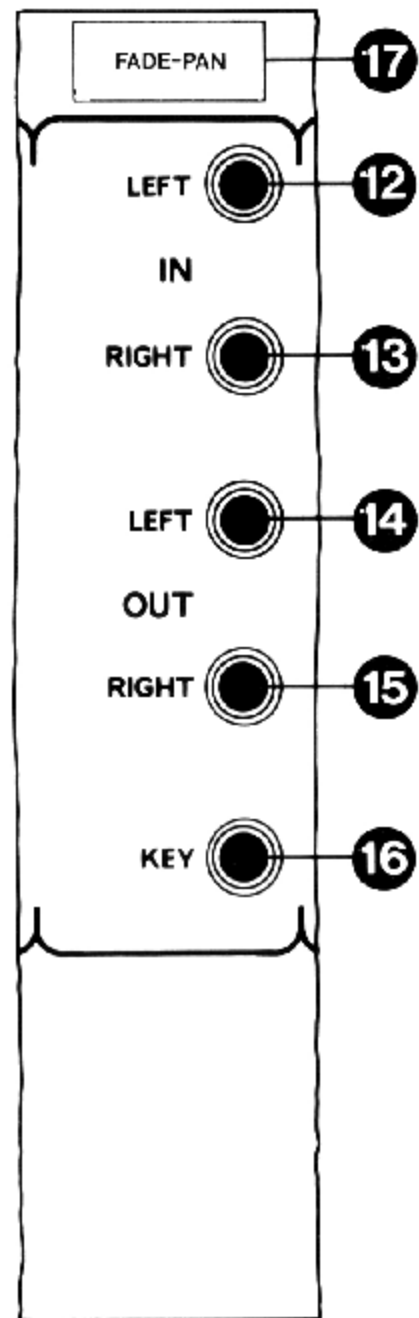


Fig 2

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

# *Operation*

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## **MODULE IDENTIFICATION**

A sheet of labels is supplied. Cut the FADE-PAN name from the label sheet and stick it above the module's jack sockets at the rear of the MOTHER UNIT (as shown in FIG 2 - 17).

## **INSTALLATION**

To install the SF804 FADER-PANNER 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 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 to a module to the left of the fader-panner, and extracted from a module to the right of the

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fader-panner, then simply pressing the IN/OUT button will bring the SF804 into the chain. Alternatively, the input and output sockets may be connected via jack leads direct to a mixing console or to a patch bay. The SF804 is obviously a stereo device, and becomes routed into LEFT and RIGHT channels in the FADE mode. In the PAN mode however, the SF804 defaults to the LEFT channel being routed into both VCAs, whose outputs are then passed on to the inputs of the module to its right. The RIGHT channel can be panned instead by patching to the fader-panner's LEFT input from the RIGHT output of the module on its left-hand side.

When patching directly to the SF804, the PAN mode works differently to when the mother unit's routing system is being used. If a mono signal is to be panned, it is applied to the LEFT input only, with no connection to the RIGHT input. If connections are made to both inputs in PAN mode, then these two signals will be CROSS-FADED. In other words, as the gain from the left channel input to the right channel output decreases, the gain from the right channel input to the right channel output increases (and vice-versa). The stereo connections remain straightforward in FADE mode.

The TRIG switch brings the KEY socket into circuit. This is a dual function input which can accept either a DC control voltage from the Studiofex SF805 MODULATION SOURCE for instance, or an AC signal such as a feed from a drum track or drum machine.

#### SIGNAL LEVELS

The Studiofex SF804 has been designed with adequate headroom for operation at +4dBm, but

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has sufficient dynamic range to allow operation at -10dBV or less.

#### POSITION IN THE SIGNAL CHAIN

For fading, the SF804 would clearly be best patched into the mixing console outputs or subgroup insert points. When panning, it is likely that a mixing console channel signal would be extracted at a pre-fader auxiliary send, and mixed back using a stereo return or alternatively a pair of input channels.



# Applications

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## FADING

Having patched the SF804 into the mixing console, the MANUAL mode will allow the GO button to be used to initiate fading. The RISE and FALL controls are adjusted to set the desired fade-up and fade-down times.

The STAB mode can be selected for temporarily fading out unwanted sounds while the GO button is held. The Studiofex SF805 MODULATION SOURCE connected to the KEY input could be used here for cyclic fading or tremelo effects.

## PANNING

A mono signal applied to the LEFT channel input can be manually panned using the GO button at a rate determined by the RISE and FALL controls. The TRIGGER mode will allow panning to be triggered from a drum track, for instance, so that (in the LATCH mode) alternate beats will be panned to each side of the stereo field, or (in the STAB mode), each beat swings from left to right, the amount of shift depending on the amplitude of the trigger signal. One could move, for instance, a keyboard sound in synchronism with the kick drum; or move tomtoms in synchronism with the snare for some really fast drum work!

The Studiofex SF805 MODULATION SOURCE should be used for regular cyclic panning effects by patching one of its outputs to the fader-panner KEY input. Cyclic panning is achieved either in the LATCH mode, using the RISE and FALL controls to determine the shift rate and stereo width, or probably more favourably, in the STAB mode using the SF805's shape and depth controls to determine relative shift rates and stereo width respectively. The OFFSET control can be put to good use here to

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centralise the panning effect. It will be found that only a little depth is all that is needed to achieve quite a wide sounding stereo field. Rather than always using over-obvious hard image movement, experiment with panning just a reverb or echo signal, leaving the dry signal in the same place - it can be very effective.

Another effect possible when using the Studiofex SF805 MODULATION SOURCE with the fader-panner is signal amplitude controlled cyclic panning width by using the SF805's keyed depth mode.

#### CROSS-FADING

Using both inputs in the PAN mode, two sound sources can be cross-faded, either across the stereo field or, by combining the outputs within the mixing console, in mono. One could, for instance, cross-fade between reverb and flanging effects, either cyclically or under push-button manual control.

# *Specifications*

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Frequency Response : 11Hz to 34kHz +/-1dB  
T.H.D. : 0.05% (1kHz, 0dBm)  
Output Noise Unity Gain : -94dBm (DIN Audio)  
Output Noise Min Gain : -104dBm (DIN Audio)  
Maximum Output Level : +17dBm into 600ohm  
                                  +21dBm into 10kohm  
Input Impedance : 22kohm  
Crosstalk : -83dB (1kHz-10kHz)  
Pan Width : 40dB  
Fade Attenuation : 80dB  
Fade Rate : 3.5 to 3500dB/second  
Key Input Sensitivity : -8dBm



# Notes

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# *Service*

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Should your STUDIOFEX SF804 FADER-PANNER 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 SF804 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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Beds. LU4 8EZ. Tel: (0582) 570370 Fax: (0582) 570242  
Telex: 825612 STUDIO G

STUDIOMASTER INC., 1340-G Dynamics Street, Anaheim,  
CA 92806. Tel: (714) 524 2227 Fax: (714) 524 5096