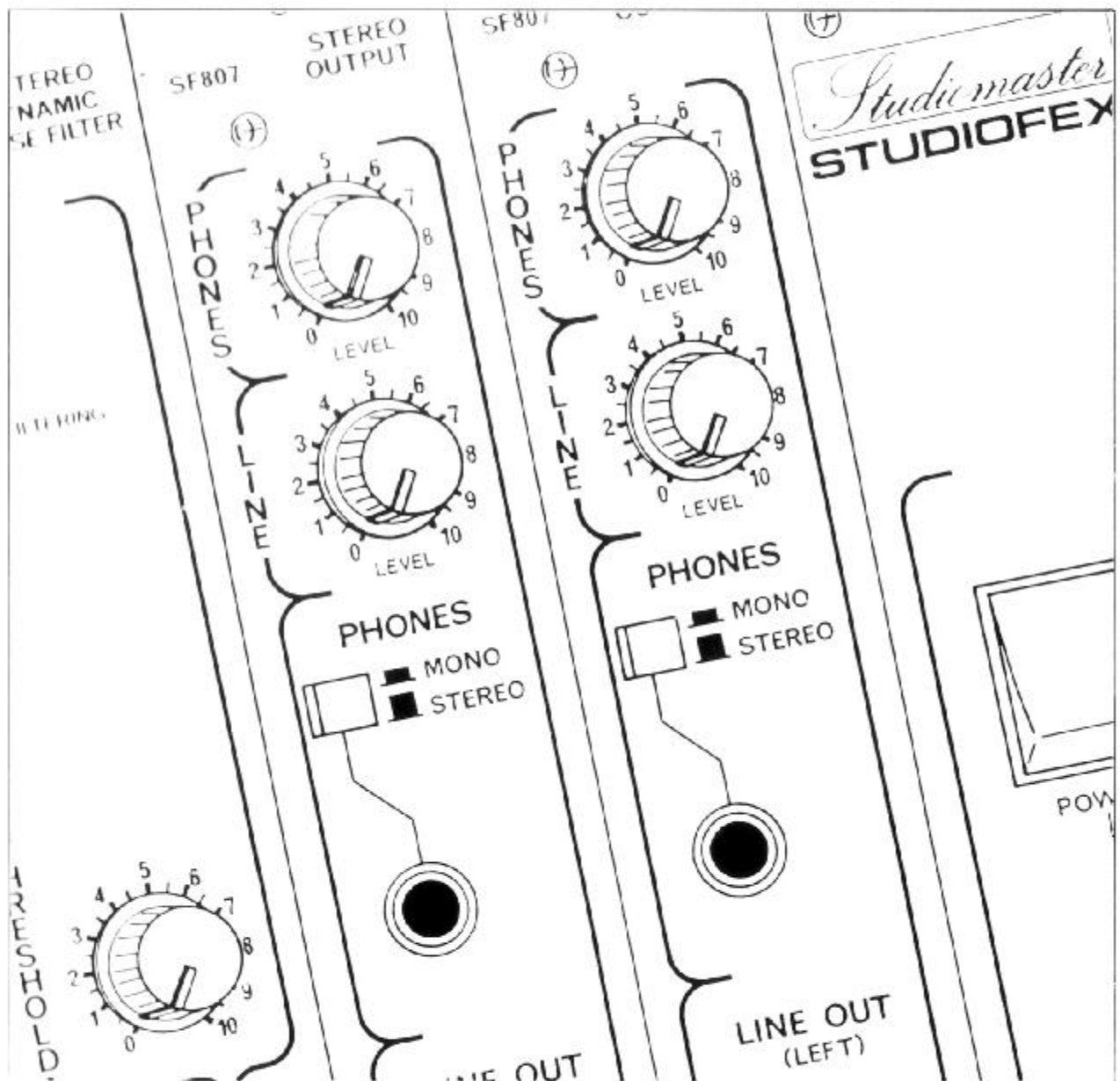


# Studiomaster Studiofex SF805

## Modulation Source



# Owners Manual

# *SF805 Modulation Source*

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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 SF805 MODULATION SOURCE**, 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.

# *Modulation*

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Certain modules in the Studiofex range can be modulated by means of a Direct Current (DC) Control Voltage (CV). The SF805 MODULATION SOURCE is capable of producing not only regular, cyclic voltages with all the smoothness of a sinewave, but also other waveshapes, triggered single sweeps, signal controlled modulation depth and even signal envelope following modulation.

Two outputs are provided, each with an independent DEPTH control so that two devices can be modulated simultaneously.

# Features

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## FRONT (see FIG 1)

- 1 The **RATE** control determines the repetition speed of the cyclic waves.
- 2 The **SHAPE** control determines the waveform that the SF805 produces, variable from a rising ramp, through sinewave to falling ramp (see FIGS 3 to 5).
- 3 The **DEPTH 1** control varies the amplitude of the CV1 output, and hence the **DEPTH** of the modulation.
- 4 The **DEPTH 2** control varies the amplitude of the CV2 output, and hence the depth of the modulation.
- 5 The **KEY DEPTH** button allows the signal at the **KEY/CV** input to control the amplitude of the outputs.
- 6 The **KEY/TRIG** button freezes the cyclic operation until a triggering signal is received by the **KEY/CV** input, then a single cycle is produced.
- 7 This LED lights when the output voltage is at a maximum, and will flash in sympathy with the cycling action.
- 8 The **RUN/HOLD** button allows the oscillator to modulate when depressed (**RUN**), or **HOLDS** it static.
- 9 This LED lights when the oscillator is **RUNning**.

## REAR (see FIG 2)

- 10 **ENVELOPE FOLLOWER** OUTput jack socket.
- 11 **CV1** OUTput jack socket.
- 12 **CV2** OUTput jack socket.
- 13 **KEY/CV** INput jack socket.
- 14 Module identification label.
- 15 Socket identification label.

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

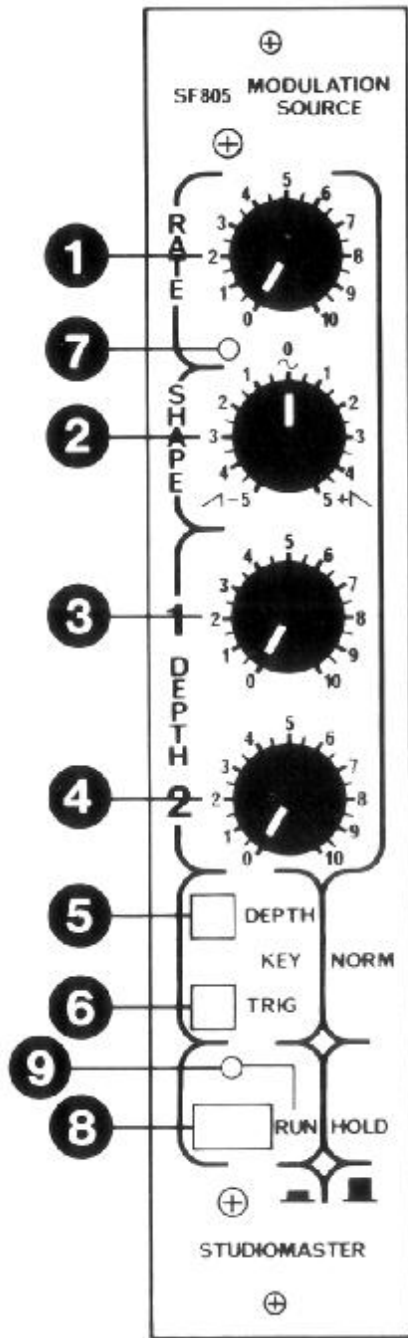


Fig 1 Rear

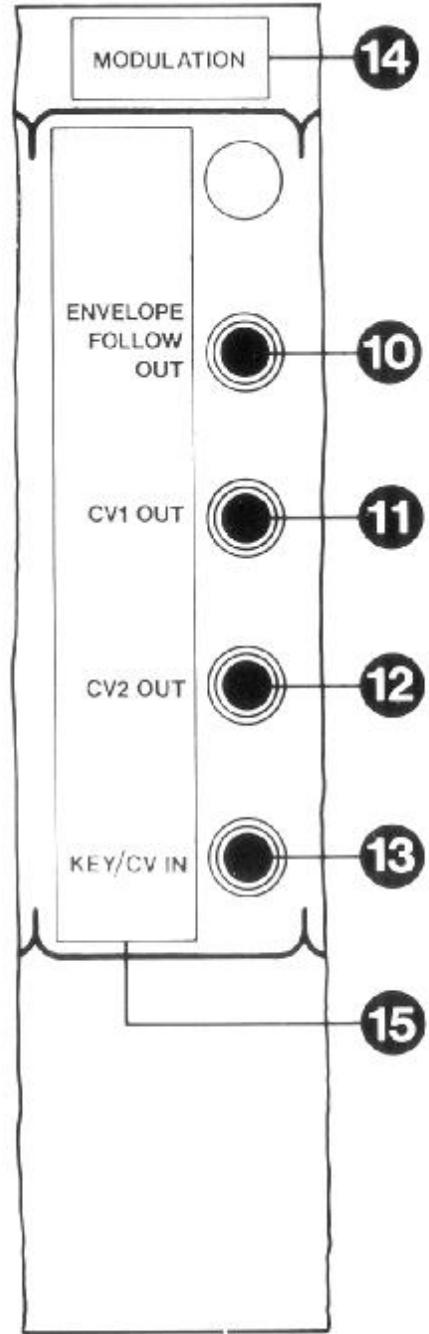


Fig 2

Front

# Operation

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## MODULE IDENTIFICATION

A sheet of labels is supplied. Cut the MODULATION 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 - 14). The socket names printed on the mother unit should be covered by the Socket Identification Label (FIG 2 - 15).

## INSTALLATION

To install the SF805 MODULATION SOURCE 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

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modules are therefore permanently connected in a "daisy-chain" fashion. Since the SF805 does not process the audio signal, the LEFT and RIGHT audio busses pass straight through unaffected.

Connections to and from the modulation source must be made by jack leads. The two CV OUTPUTs can be left permanently patched to the KEY inputs of two modulatable modules such as the Studiofex SF804 FADER-PANNER and SF809 DUAL DELAY FLANGER. If the ENVELOPE FOLLOWER function is required, then this output must be used instead of one of the CV OUTPUTs.

The KEY DEPTH and KEY TRIG buttons bring the KEY/CV INPUT socket into use. This is a dual function input which can accept either a DC control voltage from another SF805 MODULATION SOURCE for instance or an AC signal such as a drum track or drum machine.

#### POSITION IN THE MOTHER UNIT

Since the SF805 does not make use of the mother unit's routing system, apart from allowing other signals to pass straight through, its position in the mother unit is not critical. It makes sense though, to position it close to the modules which it is to modulate.



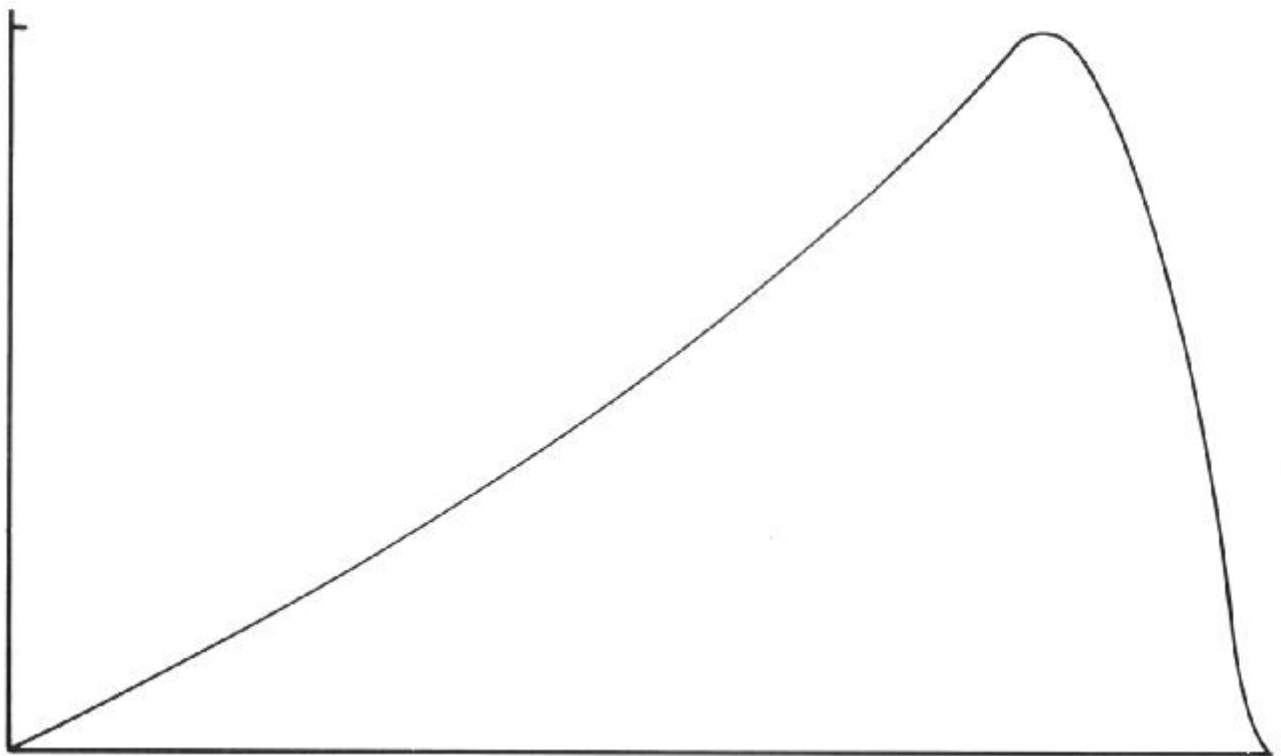
# Applications

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## SMOOTH SWEEPS

The most natural panning (using the Studiofex SF804 FADER-PANNER) and flanging (using the SF809 DUAL DELAY FLANGER) effects are achieved using SINEWAVE modulation. Positioning the SHAPE control centrally at the "0" position will make the SF805 produce a sinewave. Alternative settings of this control should be experimented with as it can offer some interesting non-symmetrical effects. FIGS 3 to 5 show the waveform with the SHAPE control fully anticlockwise, central ("0") and fully clockwise respectively.

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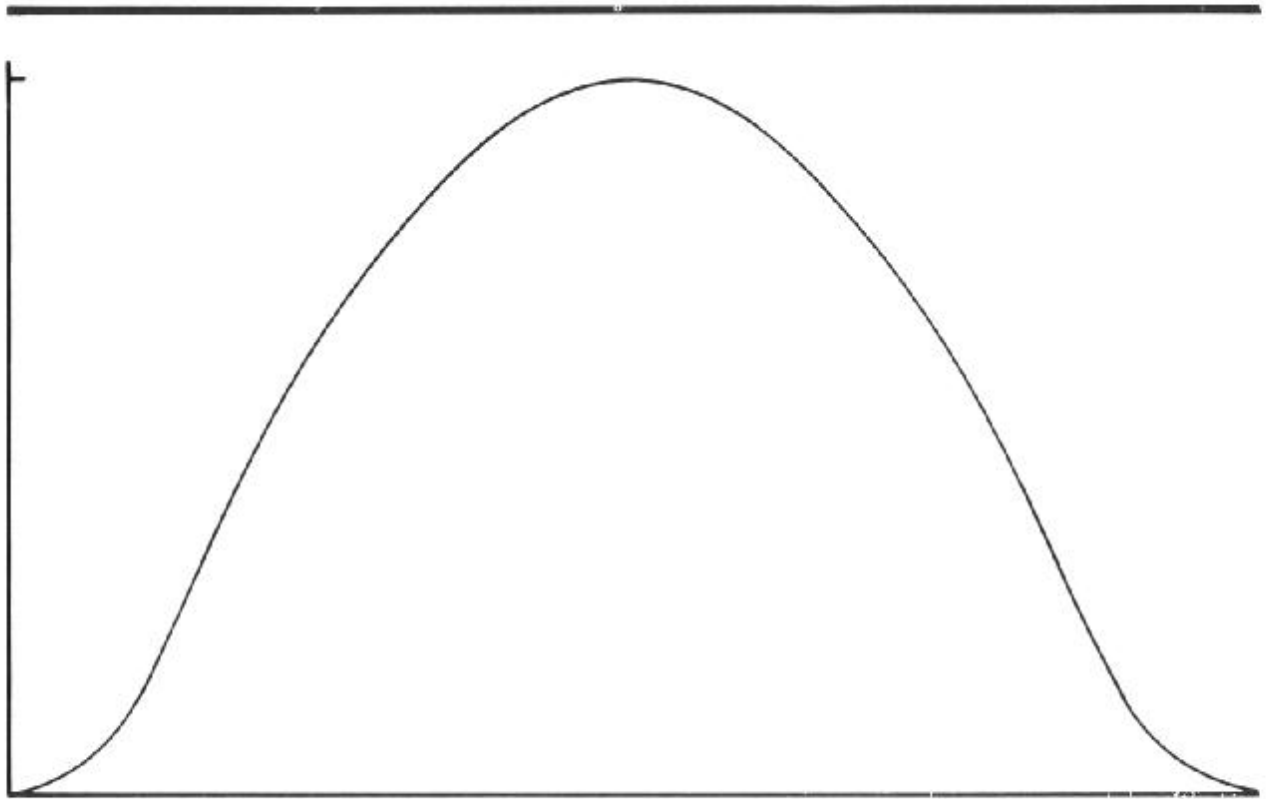


SHAPE Anti-clockwise

Fig 3

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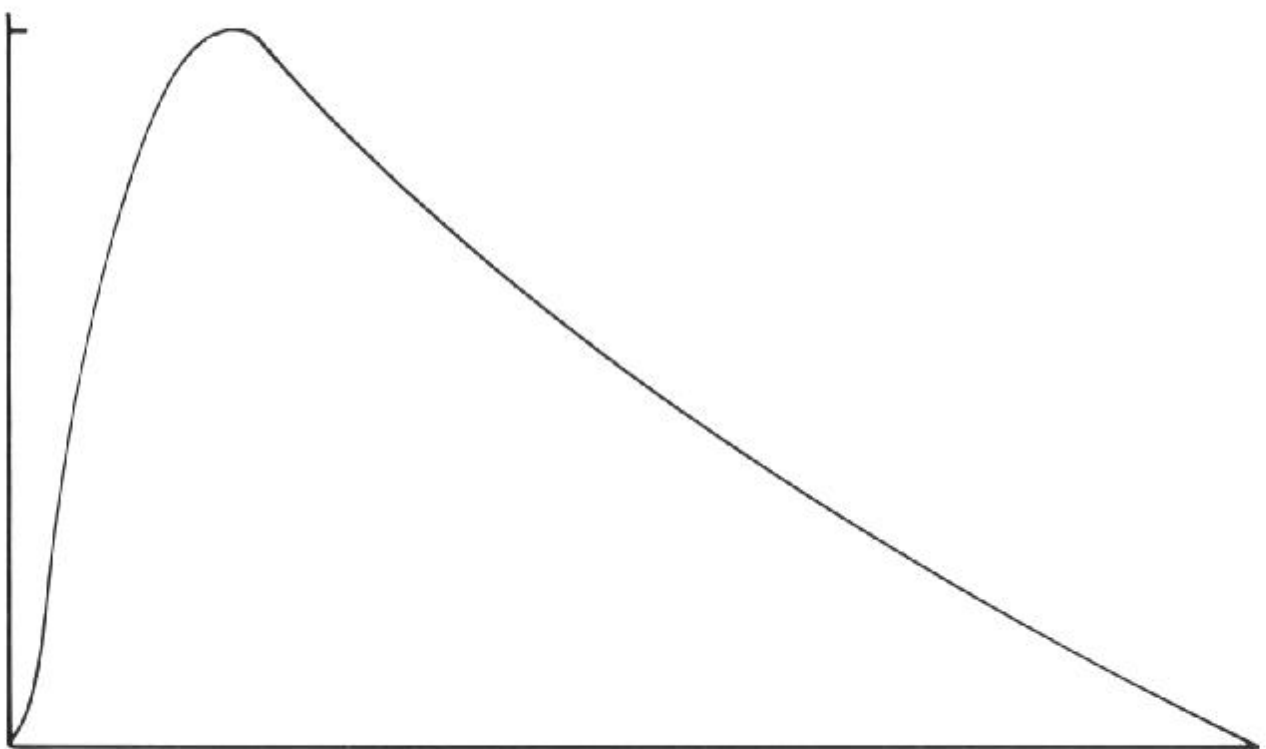




SHAPE Central ("0")

**Fig 4**

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SHAPE Clockwise

**Fig 5**

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Although the DEPTH controls have the range to allow for the full modulation sweep, it will be found that more restrained settings will produce a subtle and more pleasing effect. Smooth, gentle sweeps are again associated more with the lower settings of the RATE control. The further that this control is turned clockwise, the more "frantic" the effect tends to become.

### KEYED OPERATION

When the KEY TRIG button is depressed, the oscillatory action is frozen at the minimum value (ie the "bottom" of the sweep). If a short burst of signal is then applied to the KEY/CV INput, then a single cycle of modulation is produced. One application for this would be to apply the Studiofex SF809 DUAL DELAY FLANGER to a cymbal sound, and to use this same signal to trigger a modulation sweep so that every time the signal is played, it will be characterised by the same shape of flange sweep. Modulation sweeps in fact continue while the KEY signal is above a pre-determined threshold level, so if only sweep is required, the cycle must last longer than the KEY signal that triggers it.

When the KEY DEPTH button is depressed, the amplitude of modulation is reduced to zero but rests at the central modulation point. When a KEY signal is applied, the modulation increases either side of this resting point to a depth determined by the amplitude of the KEY signal. This could be used for example, to control the Studiofex SF804 FADER-PANNER so that the depth of panning is determined by signal amplitude. A guitar sound for example could occupy a panned stereo width which broadens when the guitar is played harder. Since the KEY/CV INput is also responsive to

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DC control voltages, a second SF805 MODULATION SOURCE could be used to modulate the depth of the first, allowing complex modulation patterns to be produced.

If both the KEY DEPTH and KEY TRIG buttons are depressed together, the depth controlled cycle will always start from the same place when triggered.

### ENVELOPE FOLLOWER

This additional output is a function separate from the rest of the modulator, apart from sharing the same KEY/CV INPUT socket. The ENVELOPE FOLLOWER OUTPUT always produces a control voltage proportional to the amplitude of a signal connected to the KEY/CV INPUT, regardless of any front panel control settings. An example of its use would be with the Studiofex SF809 DUAL DELAY FLANGER to produce "flange following", where the flange "pitch" follows the decay envelope of, perhaps, a guitar.

## *Specifications*

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Frequency Range : 0.05 to 12Hz  
Duty Cycle Range : 7% to 93%  
Output Voltage : 0 to +5V  
Input CV : 0 to +5V  
Key Input Sensitivity : -10dBV





# *Service*

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Should your STUDIOFEX SF805 MODULATION SOURCE 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 SF805 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  
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STUDIOMASTER INC., 1340-G Dynamics Street, Anaheim,  
CA 92806. Tel: (714) 524 2227 Fax: (714) 524 5096