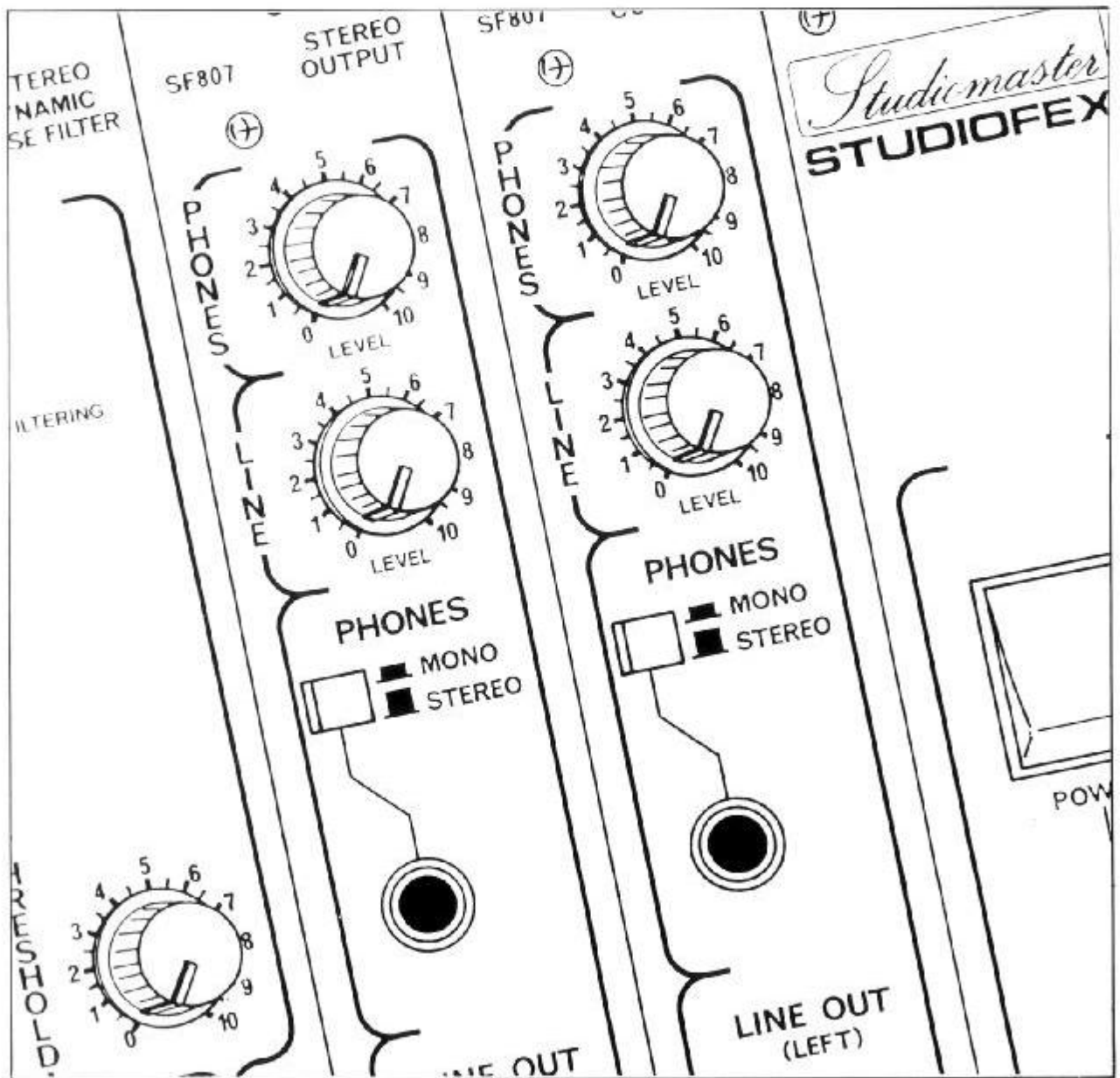


# Studiomaster Studiofex SF808

## Enhancer



# Owners Manual

# *SF808 Enhancer*

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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 SF808 ENHANCER**, 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.

# *Enhancement*

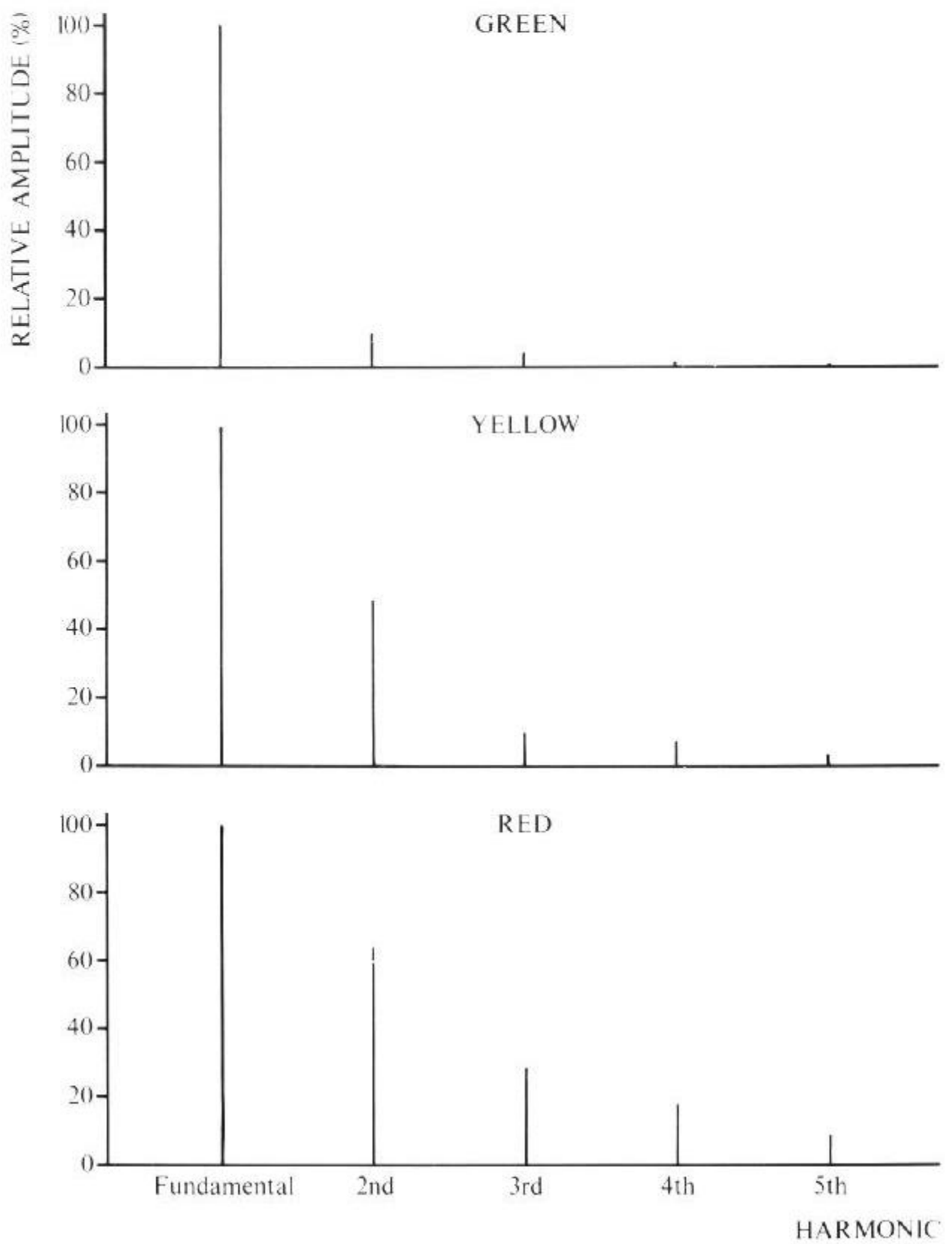
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Enhancement is a complex mixture of HF boost, compression and harmonic generation which are carefully balanced in a combination which improves top-end clarity and brings out indistinct subtleties.

Part of the input signal is tapped-off, high-pass filtered and passed to a harmonic generator, the output from which is compressed by a few dB with a slow attack compressor to add punchiness, and mixed back in with the input signal.

The harmonic generator produces upper harmonics depending on the level of drive signal. FIG 1 demonstrates the typical spectra produced by the generator from a sinewave input at three different **DRIVE** levels, with the **LEVEL** LED showing **GREEN**, **YELLOW** and **RED** respectively.

To make sure that the user is offered the utmost flexibility, the Studiofex SF808 **ENHANCER** boasts not only **DRIVE** and **MIX** control, but also **FREQUENCY** and **CONTOUR** so that a particular instrument or characteristic can be pinpointed for treatment. A **DRY DEFEAT** button is useful when using the enhancer through a mixing console aux send and aux return (it allows a comparison to be made between the normal signal and the enhanced one). The **LEVEL** LED monitors the effectiveness of the control settings.



Typical spectra

Fig 1

# Features

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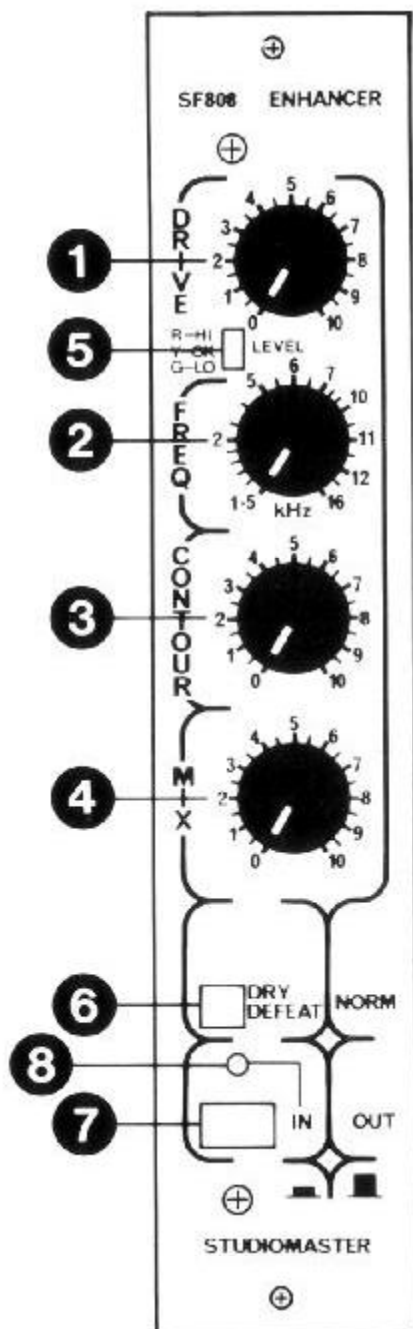
## FRONT (see FIG 2)

- 1 The **DRIVE** control sets the optimum signal level to the enhancer.
- 2 The **FREQUENCY** control allows the area to be enhanced to be pinpointed in the spectrum.
- 3 The **CONTOUR** control determines how broad an area around the selected frequency is affected.
- 4 The **MIX** control determines the amount of enhanced signal added to the original input signal.
- 5 The **LEVEL LED** lights **YELLOW** when the **DRIVE** control has been set correctly. It lights **RED** or **GREEN** when the **DRIVE** is set too high or too low, respectively.
- 6 The **DRY DEFEAT** button removes the "dry" signal leaving only the enhanced version.
- 7 The **IN/OUT** button allows the enhancer to be in-circuit or bypassed. When depressed, the enhancer is in-circuit.
- 8 The **IN LED** lights when the enhancer is in-circuit.

## REAR (see FIG 3)

- 9 **INPUT** jack socket.
- 10 **OUTPUT** jack socket.
- 11 Module identification label.

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



Front

Fig 2 Rear

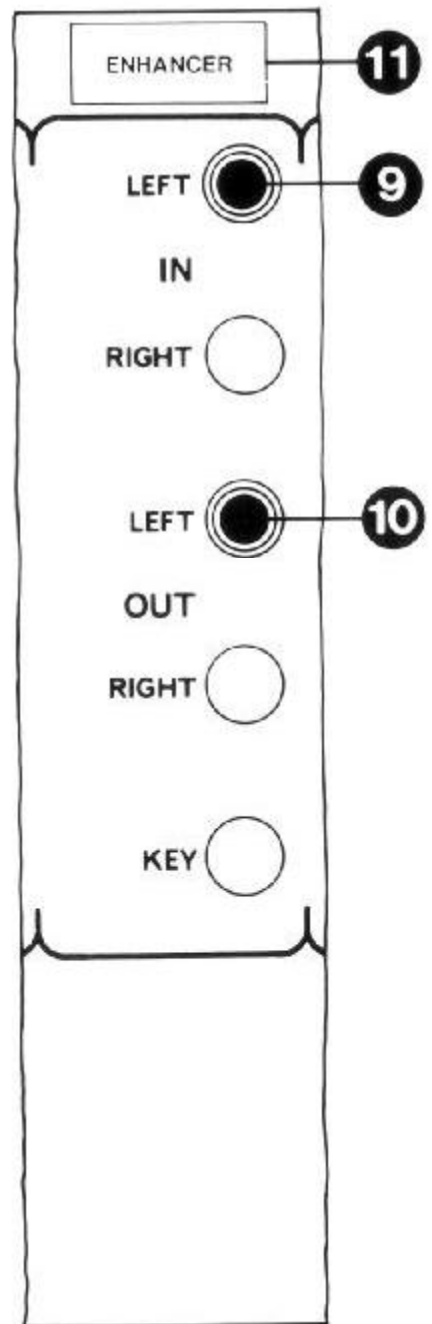


Fig 3

# Operation

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## MODULE IDENTIFICATION

A sheet of labels is supplied. Cut the ENHANCER 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 3 - 11).

## INSTALLATION

To install the SF808 ENHANCER 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, so that the modules are connected in a "daisy-chain" fashion. If a signal is applied to a module to the left of the SF808 ENHANCER, and extracted from a module to its right, then depressing the



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IN/OUT button will bring enhancement into effect. Alternatively, the input and output jack sockets can be connected via jack leads directly to mixing console insert points or a patchbay. The SF808 is a single channel device which defaults to being routed into the LEFT channel, unless the routing is overridden by the use of jack leads. The RIGHT channel normally bypasses the SF808 unaffected.

### SIGNAL LEVELS

The Studiofex SF808 ENHANCER 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 most convenient place for the SF808 to be placed is probably into a mixing console insert point for processing individual instruments, although it may be required on the main console left and right outputs (where a pair would normally be needed).



# *In Use*

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Uses for the SF808 ENHANCER are wide ranging, but the controls are used in a similar manner for all applications. It is critical that the DRIVE control is set correctly for the module to function in a useful way. Once set, it would normally remain at that setting. Re-adjustment may be required however, if FREQUENCY or CONTOUR controls are subsequently adjusted. The DRIVE control should be adjusted until the LEVEL LED shows YELLOW for most of the time. It will probably intermittently show GREEN (in quiet parts) and RED (on some vocal sibilants) - this is normal. Harmonic generation starts once GREEN is indicated, but full, rich generation only starts during YELLOW indication. Nothing bad happens during RED indication, since the compressor shuts down the output from the sidechain at higher levels. This can be particularly advantageous when mixing the effect "over-the-top", where fuzzy vocal sibilants are sometimes encountered: Just turn clockwise the DRIVE control so that the sibilants always indicate RED, then they will instantly become clean and clear. Alternatively, the Studiofex SF810 DE-ESSER could be used.

The FREQUENCY control enables the user to select the area of interest, whether it be a particular instrument in a mix, or a characteristic of a specific instrument being treated on its own. This facility is further extended by the CONTOUR control which then allows very narrow pinpointing of a feature to be achieved. Only experimentation will reveal the best settings of these controls, but as a rule, higher settings of the FREQUENCY control are often the best - especially on vocals. A midrange setting of the CONTOUR control is normal, unless a particular characteristic needs to be emphasised. Very high CONTOUR settings can be used for special

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effects, but the MIX control would usually need to be kept at quite a low setting to prevent any "ringing" becoming too prominent.

The control which should be used with the most care is the MIX control. This enables the sound source to be delicately tinted with enhancement. The biggest, and most tempting mistake is turn the MIX control fully clockwise in the belief that "more must be better". In fact, there is no optimum setting for any given situation, and only experience will reveal the best settings. "Before" and "After" comparisons should be made regularly by pressing in and out the IN/OUT button.

The DRY DEFEAT button would be used only when patching the module directly into a mixing console auxiliary send/return system, where the MIX control should be turned fully clockwise. Then, the amount of "wet" signal mixed back with the "dry" is determined by the console's auxiliary return system. Again, this should be kept to a minimum so that the enhancement is subtle.

Since HF boosting and compression are involved, any noise problem present before the SF808 will have been aggravated by it, so it is normally best to apply the enhancement during recording. However, two good examples of enhancing off-tape are the fantastic results obtained from enhancing double-tracked vocals - preferably not Artificially Double Tracked (ADT) - and when old tapes need to be brightened up by re-synthesising harmonics otherwise lost forever. Noise problems can be overcome by using the Studiofex SF802 STEREO DYNAMIC NOISE FILTER before the SF808.

# *Specifications*

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Frequency Response : 18Hz to 28kHz +/-1dB  
T.H.D. : 0.005% (1kHz, 0dBm)  
Output Noise  
MIX at zero : -90dBm (DIN Audio)  
Output Noise  
ALL controls at 120°C : -86dBm (DIN Audio)  
Maximum Output Level : +17dBm into 600ohm  
+21dBm into 10kohm  
Input Impedance : 100kohm  
Filter Frequency Range : 1.5kHz to 16kHz





# *Service*

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Should your **STUDIOFEX SF808 ENHANCER** 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 SF808 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