

Marconi Studio Vision Mixer Type B 3717

The Type B 3717 Mixer has been designed to fulfil the complex needs of present-day studio production, especially where a versatile vision mixer having a colour specification is necessary, capable of receiving a large number of inputs.

The mixer is designed in solid-state modular form and is available in four variants.

B 00-3717-04 Colour—Monochrome Mixer with Special Effects.

B 00-3717-03 Colour—Monochrome Mixer.

B 00-3717-02 Monochrome Mixer with Special Effects.

B 00-3717-01 Monochrome Mixer.

FEATURES

Full colour performance.

A/B mixing, cut and preview facilities.

Optional special effects.

14 input/6 output matrix.

Vertical interval cutting.

625, 525, or 405 line operation.

Automatic or manual emergency by-pass facility, protection against mixing non-synchronous sources.

B00-3717-04 Colour—Monochrome Mixer with Special Effects.

This is an A/B—cut—preview mixer

which accepts up to 12 inputs. Besides vertical interval cutting and additive mixing, input signals may be switched using built-in Type B 3740 series special effects equipment (for detailed description see pages 117 and 118).

The mixer has been designed to handle coded N.T.S.C./P.A.L. colour signals. Differential gain and phase performance is adequate for N.T.S.C. and P.A.L. operation. The mixer may also, of course, be used with monochrome signals.

Selector buttons on the production and engineering control panels operate a 14 input/6 output relay matrix. Output from two rows of the matrix are used for A/B mixing and also form the video inputs to the special effects electronic switch. Two matrix outputs are used for vertical interval cutting and feed a solid-state vertical interval switcher. The fifth output is used for production previewing and also keying the special effects equipment. The sixth row of the matrix is again used for previewing. It is controlled from a separate engineering control panel, and feeds engineering monitors.

The mixer electronics consists of three modules which occupy part of a standard Marconi Type B 4306 modular equipment rack mounting frame. The modules provide the A/B additive mixing and vertical interval cutting. A sync. comparator is also provided.

The latter device senses non-sync. inputs and lights a 'do not mix' warning lamp on the production control panel.

The remainder of the mixer electronics equipment frame contains a Type B 00-3712-01 mixer processing amplifier. (For detailed description see page 101). The processing amplifier provides signal clamping, overall gain control, master fading facilities and three isolated outputs.

Signal timing, of prime importance when colour working, is achieved by means of cable delay lines installed at appropriate points in the system.

Two further modular equipment frames contain the special effects equipment and power supply units.

Ancillary logic circuits are contained in a panel assembly mounted in the equipment rack together with the modular equipment frames.

The complete mixer takes up only 4 ft 10 in. (147.3 cm) of rack space.

B00-3717-03 Colour—Monochrome Mixer.

This is similar to the B 00-3717-04 mixer in that it provides the same A/B mixing, cut and preview facilities. The special effects equipment is not supplied however, and fewer delay lines are necessary for signal timing. The mixer occupies only 4 ft 3 in. (129 cm) of rack space.

B00-3717-02. Monochrome Mixer with Special Effects, and B00-3717-01. Monochrome Mixer.

Marconi B 3717 Studio Vision Mixers for monochrome installations are similar to those supplied for colour except that Mixer processing amplifier Type B00-3717-03 is supplied. This is a specially-designed monochrome processor providing additional facilities such as sync. interlock, sync. regeneration and peak white clipping. (For details see page 101, Mixer Processing Amplifiers).

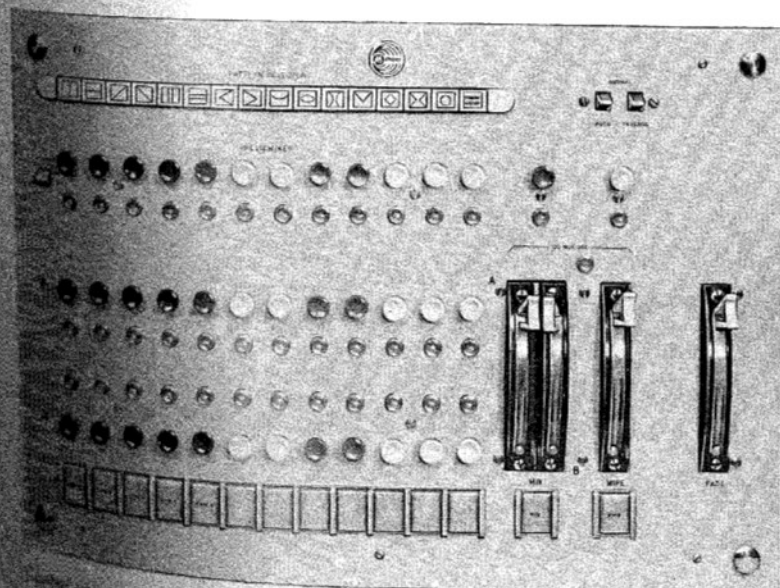
The monochrome mixers provide the same A/B cut, preview facilities as the colour versions, and the B00-3717-02 mixer is complete with special effects equipment.

Since all B 3717 series/mixers are basically suited to colour working, monochrome installations may be converted to colour with minimum capital investment in new equipment.

(Data Summary overleaf)

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Control panel including special effects selection facilities

9690

DATA SUMMARY

1 Facilities Summary

	COLOUR		MONOCHROME			COLOUR		MONOCHROME	
	BB00-3717-04	BB00-3717-03	BB00-3717-02	BB00-3717-01		BB00-3717-04	BB00-3717-03	BB00-3717-02	BB00-3717-01
12 inputs	●	●	○	○	Adjustable white clipping			○	○
3 outputs	●	●	○	○	Sync. regeneration			○	○
Vertical interval cutting	●	●	○	○	Sync amplitude stabilizing			○	○
A/B mixing	●	●	○	○	Clamped outputs	●	●	○	○
Special effects	●		○		Sync interlock facility			○	○
Auto warning of asynchronous inputs	●	●	○	○	Monochrome caption scanner input			○	○
Preview facility	●	●	○	○	Manual/auto emergency by-pass	●	●	○	○
Separate engineering preview	●	●	○	○	Modular, solid-state	●	●	○	○
Master fading to black	●	●	○	○	Power supply modules	4	3	4	3
625, 525, or 405-line operation	●	●	○	○					

2 Technical Data

	COLOUR		MONOCHROME	
	BB00-3717-04 with special effects	BB00-3717-03 basic version	BB00-3717-02 with special effects	BB00-3717-01 basic version
Inputs				
Vision	12 (not required)	12 (not required)	12 2v neg.	12 2v neg.
System Sync.	100-125 or 200-250v	100-125 or 200-250v	100-125 or 200-250v	100-125 or 200-250v
Mains	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Power consumption	c 150 VA	c 100 VA	c 150 VA	c 100 VA
Outputs				
Main video, at 1V standard composite level emergency by-pass facility provided	1	1	1	1
Preview video, at 1V standard composite level	2	2	2	2
Cues, relay contacts brought out to taper-pin blocks for operating tally lights, etc	Yes	Yes	Yes	Yes
Performance				
H.F response	± 0.2 dB to 6 MHz - 3 dB at 10 MHz	± 0.2 dB to 6 MHz - 3 dB at 10 MHz	± 0.2 dB to 6 MHz - 3 dB at 10 MHz	± 0.2 dB to 6 MHz - 3 dB at 10 MHz
L.F response, tilt on 50 Hz square wave	≤ 2%	≤ 2%	≤ 2%	≤ 2%
Processor gain, variable up to max. of	+ 3 dB	+ 3 dB	+ 3 dB	+ 3 dB
Linearity of cross-mix	± 1 dB	± 1 dB	± 1 dB	± 1 dB
White clipper range, standard 1V composite output			95-115%	95-115%
Sync. clipper range, standard 1V composite output			0.2-0.3v	0.2-0.3v
Input impedance	75Ω	75Ω	75Ω	75Ω
Input return loss to 2T pulse and bar	< 24 dB	< 24 dB	< 24 dB	< 24 dB
Output impedance	75Ω	75Ω	75Ω	75Ω
Output return loss to 2T pulse and bar	< 24 dB	< 24 dB	< 24 dB	< 24 dB
Dimensions				
Space required in 19 in. (48.3 cm) equipment rack	4 ft 9½ in. (146.7 cm)	4 ft 2½ in. (129 cm)	4 ft 9½ in. (146.7 cm)	4 ft 2½ in. (129 cm)
	Height	Width	Depth	Weight (approx)
14 × 6 matrix, Type B01-3710	29½ in. (76 cm)	19 in. (48.3 cm)	16½ in. (42 cm)	99 lb (4.5 kN) 22 lb (10 kg) mod. Electronics and processing
Modular equipment rack-mounting frame Type B4306	7 in. (17.8 cm)	19 in. (48.3 cm)	16 in. (40.6 cm)	30 lb (13.6 kg) Special Effects
Logic panel	7 in. (17.8 cm)	19 in. (48.3 cm)	13 in. (33 cm)	36 lb (16.3 kg) Power Supply
Mixer control panel	15½ in. (39.4 cm)	22 in. (55.9 cm)	8 in. (20.3 cm)	8 lb (3.6 kg)
Engineering control panel	2 in. (5.1 cm)	14 in. (35.6 cm)		28 lb (12.7 kg)