



four inputs and two identical outputs.

**Power Supply Unit B 4205-01**

This unit operates from most mains supplies and provides the voltages required by the Vision Mixer. It occupies 17.8cm (7in.) of rack space.

**Output Processing Equipment**

The Master fade and the by-pass facilities are effected by the Output processing equipment for which a version of the Line Clamp Amplifier Type B4011 is normally supplied (see page 150).

**Data summary**

**Input and Output:** Return loss better than 30dB to T Pulse and Bar.

**Impedance:** nominally 75Ω.

**Input Level:** 1.0V p-p normal.  
1.4V p-p max.

Gain Stability (overall)  
over 1 hour.  $\pm 0.25$ dB.

**Temp Range:** 0° to 45°C.

**Sig. to Noise Ratio:** p-p Signal: to r.m.s weighted noise. >60dB.

**Crosstalk:**

Worst path at 4.43MHz.  
Studio < 52dB, Mobile < 56dB.

**Differential Gain:**

(a) Standard Input Level 2%—Studio  
1%—Mobile  
(b) +3dB Input Level 4%—Studio  
2%—Mobile

**Differential Phase:**

(a) Standard Input Level 1.5°—Studio  
0.5°—Mobile  
(b) +3dB Input Level 3.0°—Studio  
1.0°—Mobile

**L.F Response:** 50Hz Square Wave Tilt is < 0.2% per m sec.

**Mains Input:** 100–125V and 200–250V, 48–62Hz Single Phase.

**Mixed Sync Input:** 1 Standard level

**Rack Space**

In a standard 48.3cm (19in.) wide Rack Cabinet, the sub assemblies will occupy vertical rack space as follows:

Matrix, Store and Output	} 31cm (12.25 in.)—Studio 22.2cm (8.75 in.)—Mobile
Special Effects	
Mixer Electronics	17.8cm (7in.)
Power Supply	17.8cm (7in.)
Output Processing	17.8cm (7in.)
Total: Studio—	102.2cm (40.25in.)
Mobile—	75.6cm (29.75in.)
OR	
93.4cm (36.75in.) with Special Effects.	

Full details are given in TD B3724.

## Special Effects Equipment Type B3740 series

The complete assembly comprises an electronic switch, a pattern generator and a power supply.

Either the electronic switch or the pattern generator can be supplied separately, with or without a power supply.

Control units are provided which can be mounted, for example, on the vision mixer desk.

**Features**

- Full colour performance.
- 15 transitional patterns as standard, 72 optional.
- Self-keying overlay mode.
- Corner insert facility.
- External inlay keying mode.
- Colour caption generating facility (optional for PAL and NTSC).
- All solid-state.
- 0–45°C ambient temperature.
- Modular construction.

### Electronic Switch Type B 3740

The transistorized electronic switch functions as a high-speed changeover switch between two synchronous vision sources. The vision sources may be colour or monochrome. The keying signal which actuates the switch is derived from the associated electronic pattern generator or from an external high contrast source.

**Data summary**

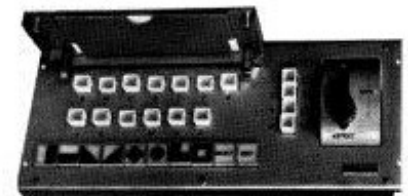
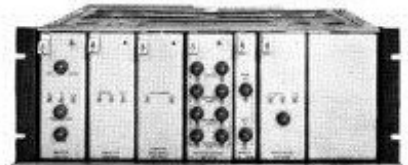
**Video inputs:**

'A' and 'B' Channels—1V p-to-p composite; bridging inputs from 75Ω line. External keying input; bridging 75Ω 0.7V non-composite or 1V composite; Sync. Input—1.5V to 6V negative going composite sync. bridging input from 75Ω line. Subcarrier Input 2V p-to-p  $\pm 1$ dB. bridging input from 75Ω line.

**Power input:** –24V  $\pm 0.5$ V d.c at 0.5 amp.

**Video outputs:**

Two 1V p-to-p comp relative amplitudes within 2%. Return loss 30dB



Multi-pattern selection panel

**Performance:**

H.F Response  $\pm 0.2$ dB to 7MHz.  
L.F Tilt < 0.2% per millisecond.  
Differential gain 0.5%  
Differential phase 0.25° } at 4.43 MHz.  
'A'—'B' Crosstalk better than 55dB below 1V up to 5MHz.

### Pattern Generator Type B 3742

This provides the selected keying signal for the Electronic Switch. The timing of this signal is varied by the wipe control to move the transition across the picture.

Provision is made for the reversal of direction of wipes, and for automatic unidirectional wiping irrespective of the end from which the wipe control is moved. The aspect ratio of corner inserts can be adjusted.

The pattern generator controls normally form part of the vision mixer panel, but may be separate.

Multi-pattern Selector Panel Type B 05–3742 carries similar controls but provides a choice of 72 patterns.

**Data summary**

**Drive inputs:** 1.5V to 6V negative going line and field drive, bridging input from 75Ω.

**External vision input:** 0.7V p-to-p non-composite or 1.0V p-to-p composite,  $\pm 2$ dB bridging input from 75Ω.

**Power input:** 24V  $\pm 0.5$ V d.c at approx 0.5 amp.

**Keying waveform output:**

0.7V p-to-p  $\pm 2$ dB non-composite internal or external, or 1.0V p-to-p  $\pm 2$ dB composite from external only.

**Equipment Power Supplies**

A type B05-4203 power supply module (see page 152) is normally supplied which fits alongside the equipment modules in the same frame.

**Dimensions:****Electronic Switch**

Height	17.8cm	(7in.)
Width	48.3cm	(19in.)
Depth	40.6cm	(16in.)
Weight	*5.18kg	(11.5lb)

**Control Panel**

Height	5.1cm	(2in.)
Width	35.6cm	(14in.)
Depth	8.9cm	(3.5in.)
Weight	0.615kg	(1lb 6oz)

**Pattern Generator**

Height	17.8cm	(7in.)
Width	48.3cm	(19in.)
Depth	40.6cm	(16in.)
Weight	5.18kg	(11.5lb)

**Multipattern Selection Panel**

Height	20.3cm	(8in.)
Width	35.6cm	(14in.)
Depth	14.6cm	(5.75in.)

\* 0.56kg (1.25lb) less for Monochrome version.

Full details are given in TD-3-B3740.

## Black Picture Generator Type B3754

**Introduction**

The B3754 generator is designed to provide a standard level composite black picture including set up and colour reference burst.

A standard black picture is generated when the unit is fed only with system pulses. This may be used, for example, as one input to an A/B mixer used to fade to black.

Alternatively, a standard level composite video signal may be fed through the B3754 which will automatically substitute the standard black picture if the signal sync should fail.

**Facilities**

Colour and Black and White 625/525 operation.

Automatic change to Black Picture if sync fails by connecting video line through unit.

Sync amplitude adjustable from 0.2 to 0.4V peak to peak.

Set up adjustable from 0 to 0.1V.

Burst amplitude adjustable from 0.2 to 0.4V p-p.

Burst phase for PAL alternating 90° line

by line. Leading phase on odd line numbers of first field (even).

Test points are provided on the front panel for sync pulses blanking, burst gate, PAL square wave and subcarrier inputs. A test point is also provided for the composite signal output.

**Data summary****Inputs**

**Mains:** 100-125V or 200-250V, 49 to 61Hz.

**Pulses:** Sync, mixed blanking, burst gate pulse, 2 or 4V negative going.

**Video:** Looped through at 75Ω with auto change to internally generated black picture. Return loss at least 30dB to 2T pulse and bar.

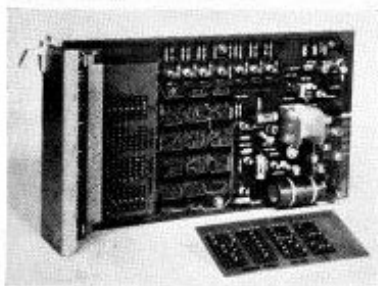
**PAL Square Wave:** Bridging input at 1V p-p.

**Subcarrier:** Bridging input at 1 or 2V p-p in 75Ω. Return loss at least 30dB.

**Dimensions:** The module requires 8.15 cm (3.2in.) of space in a Marconi Type B4306 Modular Equipment Frame 13.3cm (5.25in.) high.

Full details are given in TD B3754.

## Source Identity Generator Type B3755



B3755

A single plug-in module which generates electronically four characters each based on a 5 x 7 matrix of white dots. When displayed on a monitor, the characters appear in the top left hand corner.

The fourth character may be muted independently of the others, for example to indicate that a separate sound source is available.

Normally the output from each source, Studio, Telecine, Tape machine etc, is looped through a B3755 and a lead to the mixer cue circuit ensures that the characters are added to the signal during preview, only.

**Data summary**

**Mains Input:** 117 or 234V  $\pm 15\%$  47-65Hz, 10VA.

**Signal Input:** Bridging connection for source, return loss better than 40dB to 625 line T pulse and bar. Level 1V p-p  $\pm 3$ dB.

**Output:** Character signal added to source output in the form of 0.7V pulses with 100ns rise and fall times and approximately sine squared shape.

**Muting:** Earths to control connections suppress 3 or 4 characters by at least 60dB.

**Size:** The module requires 4.05cm (1.6in.) of space in a Marconi Modular Equipment Frame, 17.8cm (7in.) high. A Back Connector carries the input and output connections.