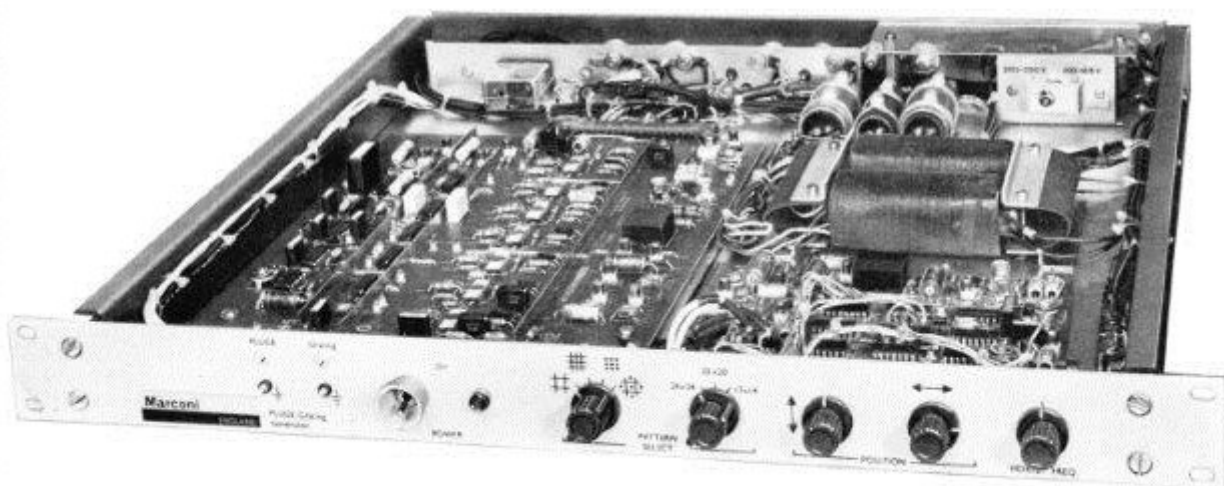




## Grating and PLUGE Generator

## B4110



### Features

Three editions:

Grating only

Grating plus PLUGE

PLUGE only

Self-contained 1 3/4 x 19in unit

Two types of PLUGE waveform

Grating selection

Shift and frequency controls

625 or 525

### Description

The B4110 Grating and PLUGE (Picture Line Up Generator) Unit is the ideal waveform generator for setting up both colour and monochrome picture monitors and for checking camera horizontal and vertical linearity. The equipment consists of a power supply unit, grating and dot generator printed wiring board, and a PLUGE printed wiring board. It can be supplied in any of three versions: Grating only, PLUGE only, or Grating plus PLUGE. The unit is designed for 483mm (19in) rack mounting and is self contained requiring only the addition of a mains supply, syncs and blanking.

#### Grating

The grating generator is provided with front panel controls which enable selection of:

- Coarse grating either 24 x 24, 20 x 20, or 17 x 14 (17 x 15 on 525 lines)
- Fine grating either 48 x 48, 40 x 40, or 34 x 28
- Fine dots either 48 x 48, 40 x 40, or 34 x 28
- Grating + dots either 24 x 24, 20 x 20, or 17 x 14 (17 x 15 on 525 lines).

The grating can be moved both horizontally or vertically for alignment when superimposing a camera picture for linearity checks.

The output signal is a 1.0V composite video output into 75  $\Omega$ . The grating output signal can be remotely controlled to changeover to a PLUGE signal.

#### PLUGE

The PLUGE waveforms generated are shown on page 2. Two alternative waveforms are available selected by internal links, standard PLUGE which has one grey level and greyscale PLUGE which has three.

The waveform produces a display on a picture monitor which consists of an overall pedestal with two small narrow pulses and a wide bar on the right hand side.

In order to set up a picture monitor correctly, the brightness control is adjusted until the black pulse is at the point of extinction and the white pulse is just visible. The pulse amplitudes are 20mV being 2-86% of normal video and thus provide an accurate reference for setting monitor brightness.

If the brightness is too high then both the black and the white pulse will be visible, whereas if the brightness is too low neither pulse will be visible.

When the monitor brightness has been correctly set the contrast control is adjusted to produce the required brightness from the peak white bar. The purpose of the pedestal is to facilitate the adjustment of monitors in a reasonable ambient light condition such as would be experienced in a control room.

### Ordering Information

To ensure that you are supplied with equipment exactly to your requirements please state:

- A.C. voltage and frequency employed.
- Edition of unit required, i.e. grating only, PLUGE only, or grating plus PLUGE.
- If more than one manual is required.
- If spares are required.
- If 19in rack rear fixing brackets are required.
- For PLUGE modules specify working system (525 or 625 lines).

## Data Summary

### Inputs

A.C. 100-125V or 200-250V 48-62Hz.  
Consumption 25VA. Cannon EP4 connector.  
Sync 1.4V-4V p-p bridging input.  
BNC connector. Return loss to 2T pulse and bar better than 34dB.  
Blanking as for sync input.

### Outputs

Grating: 1.0V composite video into 75Ω BNC connector.

Return loss to 2T pulse and bar better than 34dB.

No set up provided. Rise times 100ns. Grating waveform output may be switched to PLUGE by remote control. Control is such that connecting two pins provides PLUGE waveform.

PLUGE. 1.0V composite video into 75Ω. BNC connector. Return loss to 2T pulse and bar better than 34dB. Waveforms as shown, 20 mV set up provided.

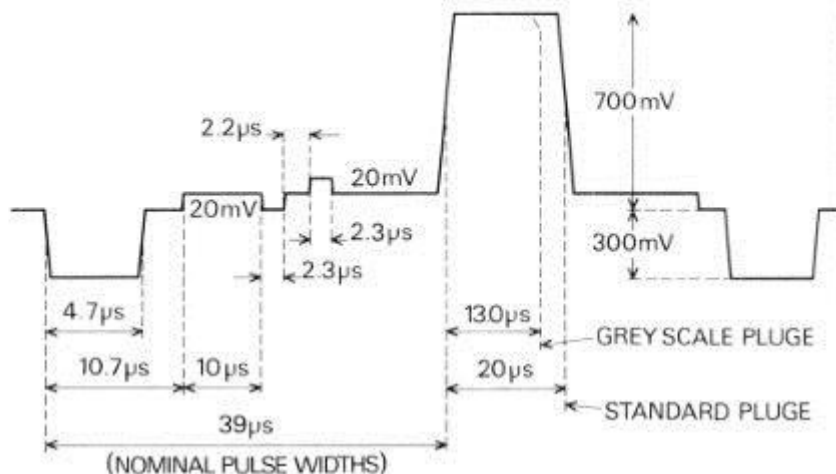
### Ambient temperature

- i) Storage -20° to +60°C
- ii) Equipment may be switched on without damage over the range -20°C to +45°C
- ii) PLUGE amplitude stability is ± 1% for any 10°C change in the range -10°C to +45°C.

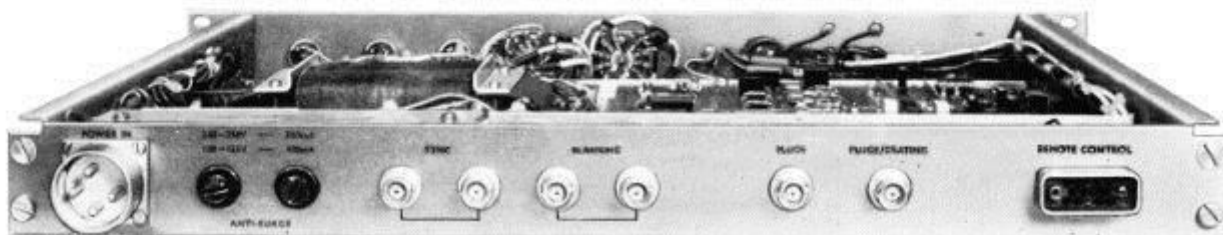
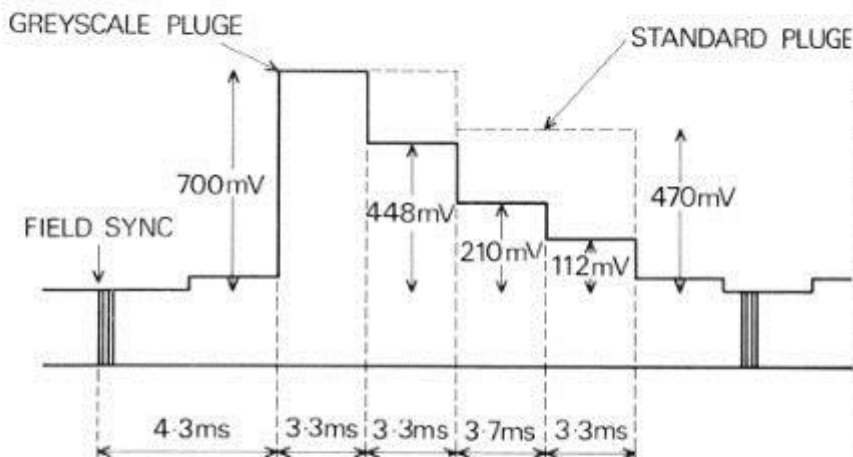
### Dimensions

Height 44.5mm (1.75in)  
Width 483mm (19in)  
Depth 483mm (19in)  
Weight 4.5kg (10lb)

## PLUGE LINE WAVEFORM



## PLUGE FIELD WAVEFORM



This document gives only a general description of the product(s) and shall not form part of any contract. From time to time changes may be made in the products or in the conditions of supply.

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TD-2-B4110