

Television Test Charts

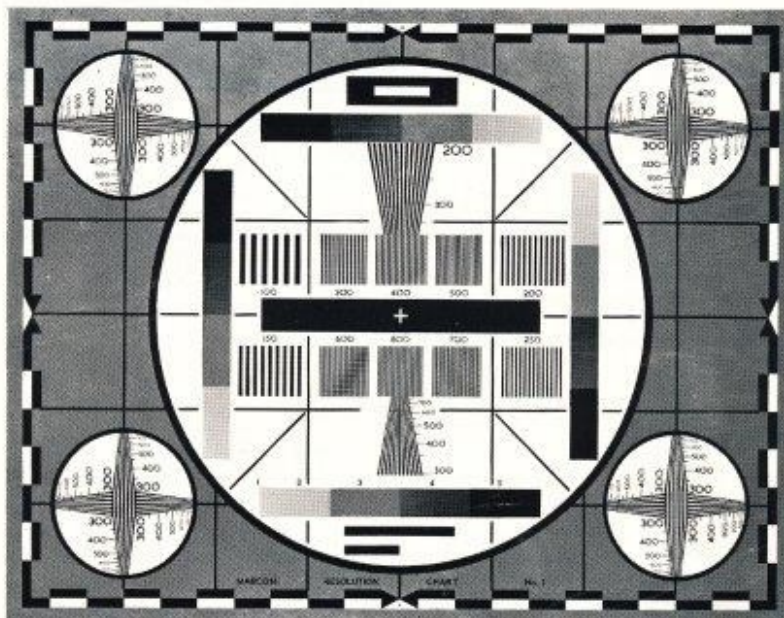
B4190

Introduction

Marconi Communication Systems designs and produces a wide range of television test charts for black-and-white and colour which has been developed in close co-operation with broadcasters, television engineers and manufacturers of photographic materials.

Charts are designed with the care and research necessary to provide precise functional information when setting up or checking camera channel performance. Stringent quality control at all stages of manufacture ensures the highest possible standard of accuracy and uniformity.

The range of standard charts described and illustrated are available in the sizes and materials listed on the back cover, with the normal aspect ratio of 4:3. Each chart is designed to perform a specific function or series of functions which meet the majority of user requirements, but the Marconi service includes the production of charts to order for special purposes.



Resolution Chart No. 1

This is a useful general purpose chart for setting up camera channels, aligning the transmitter chain or home receiver alignment.

The centre line through the border castellations defines the normal chart area, the inner and outer limits of the castellations represent 3% larger or smaller areas. Vertical and horizontal centres are indicated by arrow-heads.

The grey background, 25% of peak white, provides a visual check on shading and the coarse grating assists in checking scanning linearity.

Four corner circles contain horizontal and vertical resolution wedges graded from 300 to 800 lines per picture height.

The white centre circle covering Zone 1 carries diagonals (to check interlace), streaking bars and resolution wedges from 100 to 800 lines. A black bar across the centre provides a pulse to test the low-frequency response of the video amplifier.

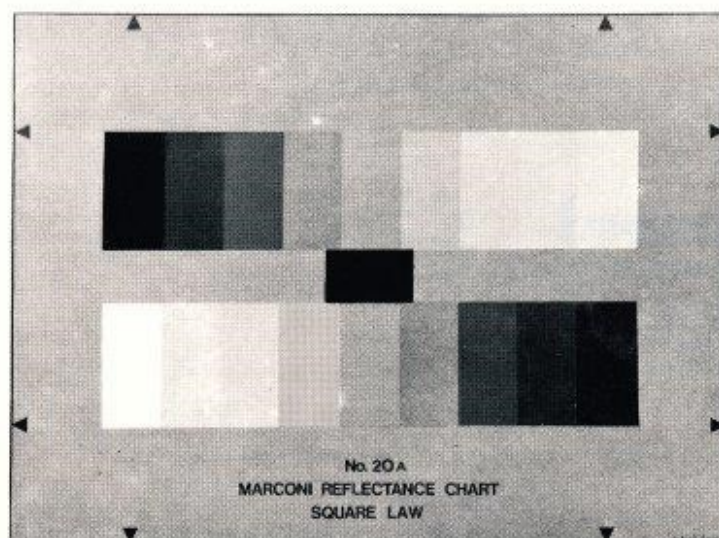
The bottom grey scale and 2 streaking bars can be omitted and station identity details added if required.

Grey Scale Charts Nos. 20, 21, 23

These charts are used to adjust equal response in each video chain of a colour camera channel to ensure accurate colour reproduction.

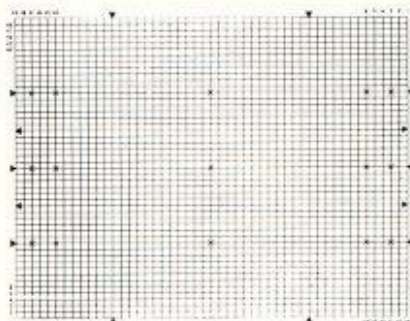
These are produced as reflectance charts or transparencies in linear or square law as indicated on the back cover. Reflectance transmission values for both sets of charts range from 60% peak white to 3% black. A certificate may be requested which gives the true density of each step. A grey scale reflectance chart with a super black (1%) in the centre can also be provided as illustrated (No. 20a or 21a).

Note: Charts with super black are 4 inches in depth to allow for the central 'hole' which provides the super black feature.



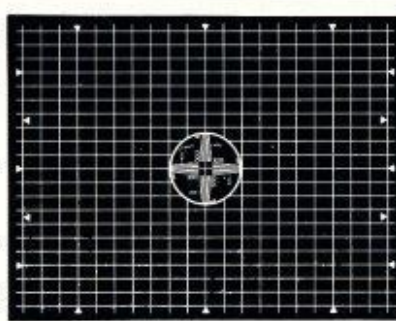
B4190

Broadcasting Division



Grating Chart No.4

This chart provides a precise check of linearity for vertical and horizontal scans. The scanning area is divided into 2304 (48x48) rectangles. The camera signal from this chart may be superimposed on an electronic grating displayed on a monitor to allow adjustments unaffected by non-linearity of the display monitor. Crosses placed at the centre and specific positions each side provide a rapid visual guide for setting up yokes.



Registration Chart No.30

The graticule on this chart is made up of four hundred rectangles (20x20). The chart is designed primarily for registration of the scans in a colour channel. The small central circle of resolution lines is a guide to accurate focusing as well as offering a check on individual colour circuits within a channel.

Ordering Information

To avoid possible delay in our response to your orders or enquiries please ensure that the ordering information is clear. Please state:

1. **Type(s) and quantity of chart required**
i.e. description and type number.
2. **Form(s) of chart (transparency or print).**
If print, whether mounted or unmounted.
3. **Any special requirement**
e.g. station call-sign superimposed on Marconi No.1 chart (at extra cost).

Standard Charts

Chart no.	Description	Availability			
		2x2in transparency	10x12in film transparency	10x12in print, matt surface	20x27in print, matt surface
1	General-purpose chart for camera set-up/system checks	x	x	x	x
3	Chequer-board pattern for checking 'beam pulling'	x	x	x	x
4	48x48 precision grating	x	x	x	x
4b	Inverse of 4	x	x	x	x
5	Black rectangle above white for checking v.l.f effects	x	x	x	x
6	Black vertical bar for checking amplifier l.f response	x	x	x	x
6b	Inverse of 6	x	x	x	x
7/10	Black rectangle on white for checking streaking	x	x	x	x
11a	Horizontal black bars on white for checking streaking	x	x	x	x
11b	Inverse of 11a	x	x	x	x
17	Registration chart with side resolution blocks	x	x	x	x
17b	Inverse of 17	x	x	x	x
20	9-step crossed grey-scale reflectance chart, square law				x
20a	Same as No.20 with addition of super black				x
21	9-step crossed grey-scale reflectance chart, linear law				x
21a	Same as No.21 with addition of super black				x
23	Crossed grey-scale transparency, square law	x			
25	Colour fidelity		x		
28	Automatic registration chart (for Mk VIII camera channels)	x	x	x	x
30	Same as No.17, less resolution block, with central cross	x	x	x	x
30b	Inverse of No.30	x	x	x	x
31	Automatic registration chart (for automatic Mk IX camera channels)		x	x	x
33	Automatic registration chart (for automatic Mk IXB camera channels)		x	x	x

Note Some charts available in 10x8in size to special order.

Marconi
Communication Systems



Broadcasting Division
Chelmsford, England CM1 1PL
Telephone 0245 353221 Telex 99201
Telegrams Expanse Chelmsford Telex



©1982 The Marconi Company Limited Printed in England by Lund Humphries 290782/2500+3000

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.

Overall Size

Size	Active Area
(2x2in)	21.5x28.6mm (0.846x1.125in)
(20x27in)	457x610mm (18x24in)
(12x10in)	254x190mm (10x7.5in)

Test Film

Marconi Resolution Chart No.1 is supplied on 16mm or 35mm film with audio tone sound track 1000Hz, optical recording, in 24 metre lengths.

TD-8-B4190