

SECTION 15

DEGAUSSING COIL UN1/515

Introduction

The UN1/515 is a mains-operated air-cored coil used in removing residual magnetism (degaussing) from the metalwork in the vicinity of a shadow-mask picture tube and from the metalwork of the tube itself. The need for degaussing shows up as an impairment in colour purity and occurs when the environment of a colour receiver or picture monitor is changed¹.

The change of environment causing magnetisation can occur in a number of ways. For example: moving a colour picture monitor to a new site, turning it in a new direction or switching electrical equipment on or off close to the monitor can all impair purity.

Purity

In a shadow-mask picture tube the beams from each of the electron guns should excite only the phosphor dots of one colour. Stray magnetic fields can cause the beam from one gun to fall onto the dots of more than one colour. This can best be seen as a change in hue over the face of the tube using a blank raster with only one gun switched on. Close examination may reveal the excitation of phosphor dots of an incorrect colour. Each of the three guns should be checked in this way.

General Description

The UN1/515, the circuit of which is given in Fig. 15.1, comprises an 1800-turn coil of no. 28 s.w.g. copper wire connected to the mains input via a micro-switch. The coil consumes 45 watts (108 volt-amps) at 240 volts 50 Hz.

The UN1/515 is constructed on a 12-in. diameter circular wooden former which is 1.5 in. thick.

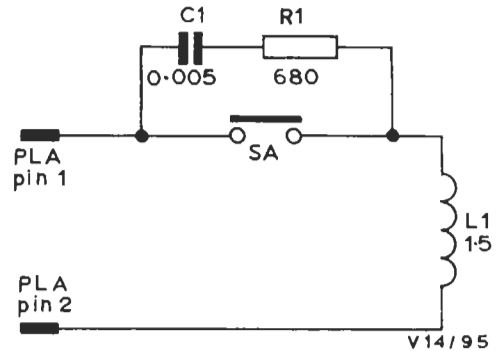


Fig. 15.1 Circuit of the UN1/515

Operation

WARNING: Watches should not be worn while degaussing.

To use the UN1/515 it should be held so that the micro-switch is firmly operated during degaussing. Connect the UN1/515 to the mains and switch on. Press the micro-switch and move the coil over the face of the tube and its surround with a polishing motion as illustrated in Fig. 15.2. Move slowly away from the screen maintaining the movement of the coil and gradually tilting it so that at about 10 feet from the screen it is edge-on to the tube. Now release the micro-switch; also disconnect the UN1/515 from the mains as the micro-switch can sometimes remain on when released.

Bibliography

1. Designs Department Technical Memorandum No. 8.166(64); Installation Procedure of Colour Television Monitors and Receivers.

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See overleaf for Fig. 15.2

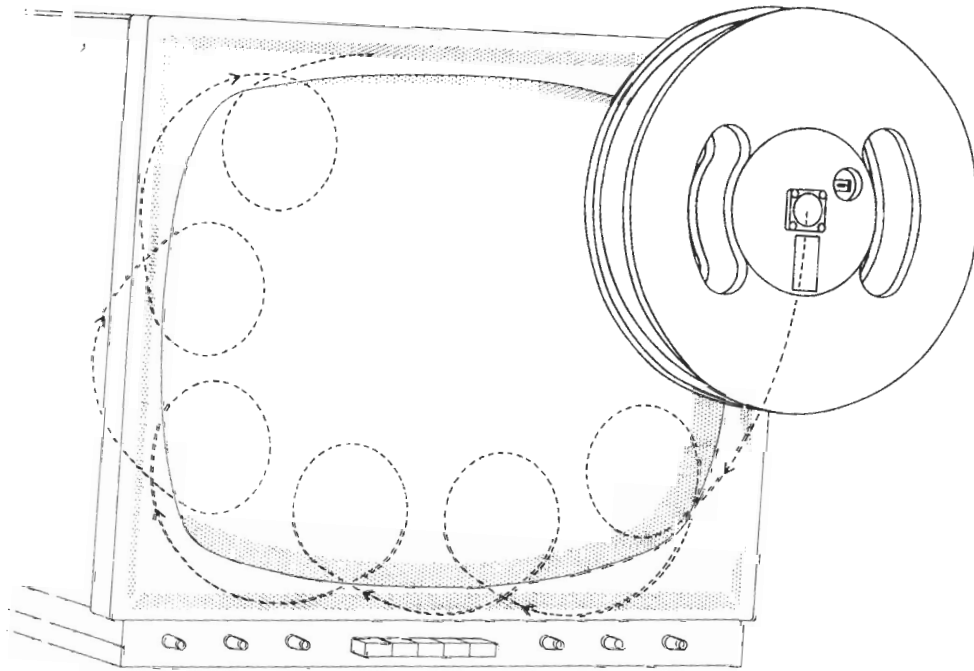


Fig. 15.2 Illustrating the Use of a Degaussing Coil