



TECHNICAL MANUAL

**Operating and Maintenance
Instructions for**

V94 BULK TAPE DEGAUSSER

TECHNICAL MANUAL

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Production Standard

ZZ 009 415

WARNING To help minimise the possibility of electrical shock hazards under no circumstances should any panels be removed

CAUTION It is recommended that magnetic storage media is kept at least two metres from the degausser

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V94 SPECIFICATION

| | |
|--|--|
| Depth of Erasure | -75dB on 850 Oersted tape |
| Media Capacity | Reels - 1/4", 1/2", 1" maximum diameter 15" Cassettes - most oxide cassettes including VHS, Betacam, Umatic, DC600, DC2000, 3480, S-VHS. Floppy Disks - all formats |
| Power Requirements (factory set) | |
| Line voltage | 220/240v |
| Line frequency | 50Hz |
| Current (typical) | 2.5A |
| Protection | |
| Fuse | 5A |
| Antisurge | |
| Erasure time (Double pass) | 10 seconds |
| Run time | 10 minutes typical |
| Duty cycle | 30 % to 50% depending on ambient air temperature |
| Mounting | Free standing table top |
| Overall Dimensions | Depth 14.3 inches (363mm) Width 13.9 inches (353mm) Height 4.9 inches (124mm) |
| Weight | approximately 10.5Kg |

2 INTRODUCTION TO THE V94 DEGAUSSER

A magnetic recording process is almost always preceded by an erasing process, either by bulk degaussing or by magnetic head erasure. Erasure is a fundamental step in achieving high quality recordings.

Bulk erasure is the preferred method due to the considerable reduction in time involved plus the otherwise use of expensive record/reproduce/erase equipment.

The V94 bulk degausser functions like a large electro magnet, its erasing field originating as leakage flux from a large gap in the field structure, the V94 structure is basically a U section. The field intensity decreases rapidly as the distance from the degausser surface increases. For example at a distance of approximately 2.75 inches from the degausser's surface a field strength of only 30 oersteds exists. Furthermore, the erasing field present at the front edge nearest the operator is also very low. It is therefore recommended that care should be taken to ensure the entire width of tape to be erased is exposed to the effective field.

3. INSTALLATION

3.1 Unpacking

Unpack the degausser carefully, and inspect it for signs of physical damage. If damage is apparent, a claim should be filed with the courier.

3.2 Power Requirements

Check the power supply requirements on the label attached to the back of the equipment with the available supply. The unit is supplied with a flying 3 wire cable which, when plugged into a properly wired receptacle, earths the unit. It is essential that a proper earth connection is made to assure safe operation.

Caution:

A good electrical ground must be connected to the degausser. The unit must be connected to the correct power supply. Failure to do so may result in permanent damage.

Connections

| Wire Colour | 50Hz unit |
|--------------|-----------|
| Brown | Live |
| Blue | Neutral |
| Yellow/Green | Earth |

4 OPERATION

WARNING

**STRONG MAGNETIC FIELDS ARE GENERATED.
REMOVE WATCHES BEFORE USE**

**OPERATING PERIODS IN EXCESS OF SPECIFIED
DURATION WILL RESULT IN EXTERIOR SURFACES
BECOMING VERY HOT.**

The V94 degausser has been designed for simplicity of operation in that it consists basically of a flat bed over which the magnetic media is passed or rotated. Control is via a single on/off switch and indicator.

4.1 Media should be erased as follows:

VHS Cassettes:

1. Switch bulk eraser unit ON.
2. Bring cassette slowly to the right hand side of the bulk eraser surface.
3. Using the guide bar, slide the cassette across the eraser surface in a continuous movement taking approximately 4/5 seconds, removing the cassette from the left hand side.
4. Turn cassette through 90 degrees and repeat steps 2 and 3.
5. Turn cassette over and repeat steps 2, 3 and 4.
6. If no further cassettes are to be erased, switch bulk eraser OFF to conserve power and reduce the risk of accidental erasure.

5 INDICATORS/FEATURES

5.1 Indicator

The erase indicator is provided to give an indication of degausser coil energisation. Certain circumstances can arise when, although the unit is switched on, the degauss coils may not be energised.

5.2 Cooling

Forced air cooling of the degaussing coil is provided to maximise the run time. The fan operation is thermostatically controlled.

5.3 Overheat Protection

The high energy field developed by the V94 necessitates the generation of a considerable amount of heat.

The degausser coil is monitored for excessively high temperatures and should this condition occur its operation will be inhibited until the coil has cooled sufficiently.

5.4 Protection

The unit is protected by a 5 Amp fuse of the slow blow or antisurge type.

6 MAINTENANCE/SERVICING

The unit is basically maintenance free but periodic checks should be made to ensure the good condition of the power cable and correct operation of the cooling fan.

Note

To reduce the risk of shock hazard disconnect the degausser from the mains voltage supply before carrying out any maintenance or servicing.

6.1 Fuse replacement

To replace the fuse, rotate the cap in an anticlockwise direction and remove the cap complete with the fuse. Renew the fuse and replace the cap and tighten in a clockwise direction.

6.2 Internal Components

Most of the internal components are replaceable, ie the tuning capacitor and the thermal switch mounted on the degausser coil.

To access the components inside the degausser the laminate cover must be removed. This entails breaking the adhesive seal using a sharp blade.

6.3.1 Thermal Switch Replacement

Care must be exercised when replacing switches on the degausser coil. The switches are fitted with an epoxy resin and it is recommended that the new switch be fitted in a new position on the coil and the old switch be left in place. The wire connections are of the 'push on' spade type and are easily transferred to the new switch. A high temperature epoxy resin part no. EA 200 001 should be used to secure the new switch.

6.3.2 Tuning Capacitor

The capacitor is secured by a simple screw clip and connections are made via push on spade connectors, allowing easy replacement in the event of failure.

6.3.3 Cover replacement

The formica cover should be cleaned of old adhesive before refitting, using the sealant part no. EA 100 007.

7 BASIC FAULT FINDING Table 1

Note

The table assists fault finding down to component levels.

| Function | Symptoms | Possible Fault | Location |
|------------------------|--------------------------|---|--|
| Fails to degauss media | Fuse F1 repeatedly blown | Incorrect supply voltage/frequency | User source |
| | | Faulty switch corner | Front left hand |
| | | Faulty degauss coil L1 and/or tuning side capacitor C1 | Inside centre and left hand |
| Power lamp | Fails to illuminate | Loss of mains supply F1 fuse blown Faulty switch | User source Rear panel Front panel |
| | | Unit overheated Faulty temperature sensor. side Faulty lamp. | Secured to coil L1 front left hand |

CURRENT MONITOR TESTS

The following table contains typical current values to be measured at specific points in the equipment.

The values given are in amperes and may differ slightly from those actually measured due to component tolerance plus effects due to operating temperature.

**Current monitor Test Points
(refer to circuit diagram)**

| Model Voltage/Frequency | TEST POINT | |
|----------------------------|------------|------|
| | 1 | 2 |
| 220/240v 50Hz | 2.5A | 5.8A |

V94 BULK TAPE DEGAUSSER**8 PARTS LIST (220/240v 50Hz)**

| Designation | Part no. | Quantity | Description |
|--------------------|-----------------|-----------------|------------------------|
| | CA 100 005 | 1 | Cable gland 16mm |
| F1 | FF 100 001 | 1 | Fuse 5A |
| F1 | FF 200 006 | 1 | Fuse holder |
| | FM 100 037 | 1 | Ventilation grill 80mm |
| F1 | FM 100 013 | 1 | Fan 80mm |
| | HS 100 101 | 4 | Feet |
| IND1 | OI 100 005 | 1 | Indicator |
| C1 | CC 100 093 | 1 | Capacitor 41uf |
| | MP 002 141 | 1 | Coil Stack Assembly |
| | MP 001 588 | 1 | Capacitor Clip |
| SW1 | SW 100 014 | 1 | Switch, red |
| SW2 | SW 100 060 | 2 | Thermal Switch 90deg |
| SW3 | SW 100 062 | 1 | Thermal Switch 50deg |
| | XX 002 503 | 1 | Top Cover |
| | XX 001 142 | 1 | Guide bar |

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