INTRODUCTION

This document describes the disassembly of the ‘front end’ of a 180 mm paperless graphic recorder, down as far as the display backlight replacement. Removal of the main ‘micro’ board and backlight inverter board are included, but for replacement/retrofit instructions for i/o boards, the power supply unit and the Serial communications and USB options the document HAHA028908U180 should be referred-to.

SAFETY PRECAUTIONS

Ensure that the recorder is isolated from supply voltage for at least 15 minutes before starting to work on it. This will allow the high voltages associated with the inverter board to dissipate safely and will also allow the power supply unit to cool down. The user should be aware, however, that areas of high temperature may exist even after this period has elapsed.

STATIC ELECTRICITY

CAUTION

These procedures involve the handling of components which are susceptible to damage caused by the discharge of static electricity. All relevant personnel must be aware of static handling procedures. It is recommended that a static safe container be available, into which any circuit board(s) removed from the recorder may be placed.

DUST INGRESS

When replacing the display or backlight, it is essential to keep the front face of the display and the rear face of the touch screen as clean as possible. The use of polythene or latex gloves is recommended when handling the display unit. If possible, the replacement should be carried out in a Clean Area. Particles of dust not only appear unsightly, but can also affect the performance of the touch screen, in extreme circumstances, causing a continuous ‘press’ to be perceived by the recorder.
TOP COVER REMOVAL

With the recorder removed from the panel, remove the top plate, by removing the four Torx-headed screws 'A' and the Pozidrive screw 'B', and then lifting the cover up and out from under the gasket 'C'. The main board can now be accessed.

MAIN BOARD REMOVAL

Disconnect all looms to the main board and undo its four securing screws ('D'). The board may now be removed. If a new main board is to be fitted, and no other work is to be done on the recorder, fit the replacement board and re-assemble the recorder. If further work is to be done continue at 'Display Housing Removal', below.

Note: if the type of memory device is to be changed (from Flash to SD card, or vice versa), a new 'media plate' must be fitted.

DISPLAY HOUSING REMOVAL

Undo the six Torx-headed screws 'E' and carefully move the display housing away from the chassis.

INVERTER BOARD REPLACEMENT

Note: for recorders with status levels prior to B3, inverter board replacement is non-trivial. Refer to the manufacturer's local service centre for advice.

For recorders with status levels B3 or higher, the inverter board is removed by disconnecting the two connectors 'F' and 'G' and removing the two screws 'H'.

MEDIA PLATE REPLACEMENT

The media plate is designed to help the user to guide the flash or SD card into its connector on the main micro board. Fitted at the bottom of the display housing, and retained by the screen plate, this flexible strip also has cutouts for the USB port and for the lock catch (if fitted) and also contains areas which allow the status LEDs to be viewed.

The variants are shown on page 4, as viewed from the inside of the recorder.

Remove the six screws 'J' which secure the backing plate to the display unit. The media plate can now be replaced as required.