



**Routine Scheduled Maintenance**

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**1 Intent & Scope**

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This document describes pocedures that should be undertaken by maintenance staff in setting up a routine maintenance schedule for a DXL system.

**2 Description**

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A regular routine maintenance schedule can help prevent conditions that could lead to system failure as well as identify faults that could cause problems with the sytem operation. A maintenance schedule should include the following:

- i) Back up the configuration files whenever making a change to the system configuration.
- ii) Periodical check the fault list of the system for exchange, card, digital audio trunk, and station faults
- iii) Clean all system fan filters, listen for fan bearing nise, and check for airflow, replacing any fans that are noisy, slow, or stopped.
- iv) Check and replace battery if necessary.

**3 Backing up System Configuration Files**

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Backing up system configuration files does not follow a regular scheduled routine but should be undertaken each time a configuration is modified. Without creating a current backup to the system configuration an error in entering new configuration changes could result in considerable lost time.

**4 Monitoring Fault List**

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On a DXL system go to each exchange DCC and check for a blinking "Fault" LED. If the "Fault" LED is blinking then display the list of faults by pressing "Faults" button. Invesigate the faults and carry out the steps required to clear the faults.

## 5 Checking Fans

Each DCC and DCE in a DXL system has two cooling fans. The fan filters should be cleaned periodically (every 3 months) The time between cleaning the fan filters also depends on the environment that they are operating in i.e. in a dusty room the suggested 3 month interval may be too long. On a more frequent basis maintenance personnel should listen to the fans; determine if there is bearing noise, if the fan is operating at a slow speed, or stopped. The fans should be replaced in each of these cases.

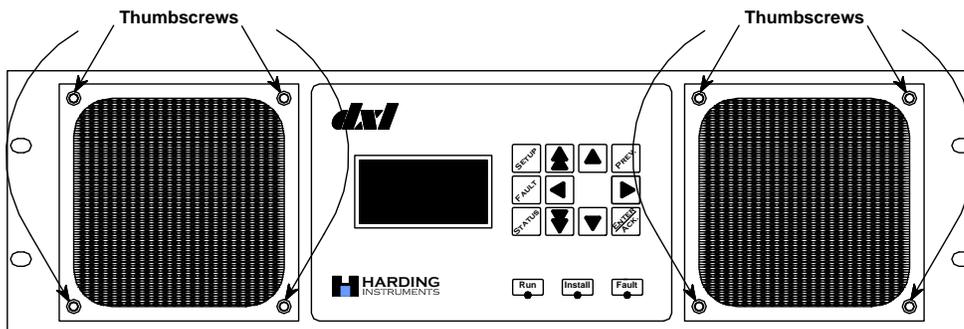
### 5.1 Removing the fan filters

5.1.1 Use the four thumbscrews to remove a fan filter. You can use an air hose or reversed vacuum cleaner to blow out from the back side of the filter any dust that has accumulated. If the deposits are sticky you should wash the filter in warm soapy water and let it dry thoroughly before reinstalling.

### 5.2 Removing the fans

The units contain two fans that are attached to the front plate. If a fan is not working properly it should be replaced.

5.2.1 Follow the steps outlined in Section 5.1.1 to remove the two fan filters.



**Figure 1 Two Fan Filters each Held by Four Thumbscrews**

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- 5.2.2 Using a #1 Phillips screwdriver remove the eight #6-32 x 1/4" recessed flat head black Phillips screws that attach the top cover to the front plate (4 along the top and two on each side).
- 5.2.3 Using a #1 Robertson or a 3/16" flat screwdriver remove the ten #6-32 x 1/4" Robertson slot screws with #6 internal tooth washers from the sides of the enclosure (5 screws on each side, 3 along the bottom and 2 at the back).
- 5.2.4 Slide the top cover back and lift it off the unit.
- 5.2.5 Disconnect the fan cable connector at the PCC (CN 39 for right fan and CN 47 for the left fan).
- 5.2.6 Using a #1 Phillips screwdriver remove the four black self-tapping Phillips screws that attach the fan to the front plate.
- 5.2.7 To reinstall a fan reverse the order of the above steps.

## 6 Check and Replace Battery

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In a DXL system each DCC contains an AA Alkaline battery used to keep the time and date and the system configuration active. **Initially replace the battery when the system is installed on site.** After initially replacing the battery replace the battery anytime a low battery fault is indicated. Normally a battery should last four years and the routine schedule should include replacing the battery every 4 years of service

- 6.1.1 To remove the battery use a slotted screw driver to turn the battery cap holder 90 degrees until it is in a horizontal position.
- 6.1.2 The battery should be inserted with the positive terminal facing outward i.e. the cap should make contact with the positive terminal of the battery. Press the screw cap in and turn the holder cap 90 degrees to a vertical position.

## 7 DXL Card Level Repair and Replacement

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If a DXL or DCC experiences problems and requires repair, the recommended repair procedure is to get a RMA and return the complete DCC or DCE to Harding for repair and testing. Certain circumstances may dictate a repair or replacement of cards in the field is necessary. Replacing card level components can be done by following the DCC/DCE Printed Circuit Board Replacement Instructions (TR-DXL-PCB-REP).