**FLIGHT DATA ANALYSIS PROGRAM**

| 8 | SERVICEABILITY AND THE FDM SYSTEM | **Issue:** | 00 |
|---|---|---|---|
| 8.1 | INTRODUCTION | **Revision:** | 00 |
| | | **Date:** | 18-FEB-2024 |

# 8 SERVICEABILITY AND THE FDM SYSTEM

## 8.1 INTRODUCTION

1. Cockpit Voice Recorders or CVRs are downloaded and recordings from all channels are monitored for the purpose of integrity, data validity and quality of CVR recordings.

2. Digital Flight Data Recorders or DFDR are downloaded and readouts for all recorded parameters are monitored to check DFDR data integrity, validity, and quality of recordings.

3. A DFDR Test Report is also required to be sent to Engineering for an aircraft's ARC or lease return.

4. DFDRs are used for the purpose of incident investigation.

5. CVRs are only used for the purpose of serious incidents and accident investigation.

### 8.1.1 RESPONSIBILITY

It is the responsibility of the Director of Safety to ensure that the procedure below is adhered to.

It is the responsibility of the Flight Data Specialty to download CVRs and FDRs daily and update their respective databases.

# FLIGHT DATA ANALYSIS PROGRAM

| 8 | SERVICEABILITY AND THE FDM SYSTEM | **Issue:** | 00 |
|---|---|---|---|
| 8.2 | PROCEDURE | **Revision:** | 00 |
| | | **Date:** | 18-FEB-2024 |

## 8.2    PROCEDURE

### 8.2.1    CVR Download and Integrity Check:

1.  CVR's Data is uploaded in the folder of the respective station from where it was downloaded from the aircraft on the sFTP Server.

2.  Flight Data Specialist then downloads these files and stores them on the server. CVRs are maintained in the Back-up server for a period of 05years.

3.  The files downloaded on a particular day are then decompressed using the CVR software as applicable.

4.  Once decompressed, each channel is checked by the FDM-Analyst to check that each channel of the recorder has proper recordings and there is no abnormal noise.

5.  For each CVR received by Safety Office, the "CVR Data" log needs to be updated.

6.  The following details are to be updated in the Log:

    a.    Aircraft Registration

    b.    Flight Number

    c.    Sector

    d.    Incident Remark

    e.    Date of Download

    f.    Date From MCP

    g.    Date in File Name

    h.    Names of Operating Crew

    i.    Sent for SOP Monitoring

    j.    Form Received

    k.    Comments

    l.    Action Taken

7.  Out of these, numbers a, b and d need to be filled according to what was heard on the CVR recordings.

8.  Numbers c, f and h need to be filled from the Movement Control Software or the "Rostering Software".

9.  Once the CVR Log has been updated, an email confirming the receipt of CVR by Safety Department is sent by the FDAP Analyst to the Station in-charge (M&E) of the station from where it was uploaded (and other concerned personnel).

# FLIGHT DATA ANALYSIS PROGRAM

| | |
|---|---|
| 8 SERVICEABILITY AND THE FDM SYSTEM | **Issue:** 00 |
| 8.2 PROCEDURE | **Revision:** 00 |
| | **Date:** 18-FEB-2024 |

10. In case any observation regarding the quality of CVR recording is made, the same is intimated to MCC for further maintenance.

## 8.2.2 DFDR Download and Integrity Check

1. DFDRs are uploaded in the folder of the station from where it was downloaded from the aircraft on the SharePoint/s FTP Server.

2. FDM Analyst then copies these files and places the DFDR file for each aircraft registration in the folder for that registration in the "FDR" folder of the Back-up Drive. DFDRs are maintained in the Back-up Drive for a minimum period of five years.

3. The files downloaded on a particular day are then analyzed using the software "Safety Insight" as applicable.

4. Standard parameters are monitored for their recorded values. The FDAP software (Safety Insight) used has inbuilt capacity of checking synchronization and integrity of data, and provide reports for the same. Also, at the time of event analysis the integrity of recorded parameters is checked.

5. Once the integrity of the equipment is ascertained, the "FDR Data" log needs to be updated. This is an Excel workbook with different worksheets for each year.

6. The following details are to be updated in the Log as per the last leg of flights available in the FDR data:

   a. Aircraft Registration

   b. Download Date

   c. Flight Date

   d. Sector

   e. Station from where the DFDR was uploaded.

7. Out of these, a, b, c, and d need to be filled as per the data from the analysis software.

8. After the DFDR Log is filled, an email confirming the receipt of FDR by Safety Department is sent by the FDM Analyst to the Station in charge of the station from where it was uploaded (and other concerned personnel).

9. If any abnormalities are observed in the received data (for e.g. corrupt data, certain parameters not recorded properly etc.), the matter is escalated to engineering via email by the FDAP-Analyst.

# FLIGHT DATA ANALYSIS PROGRAM

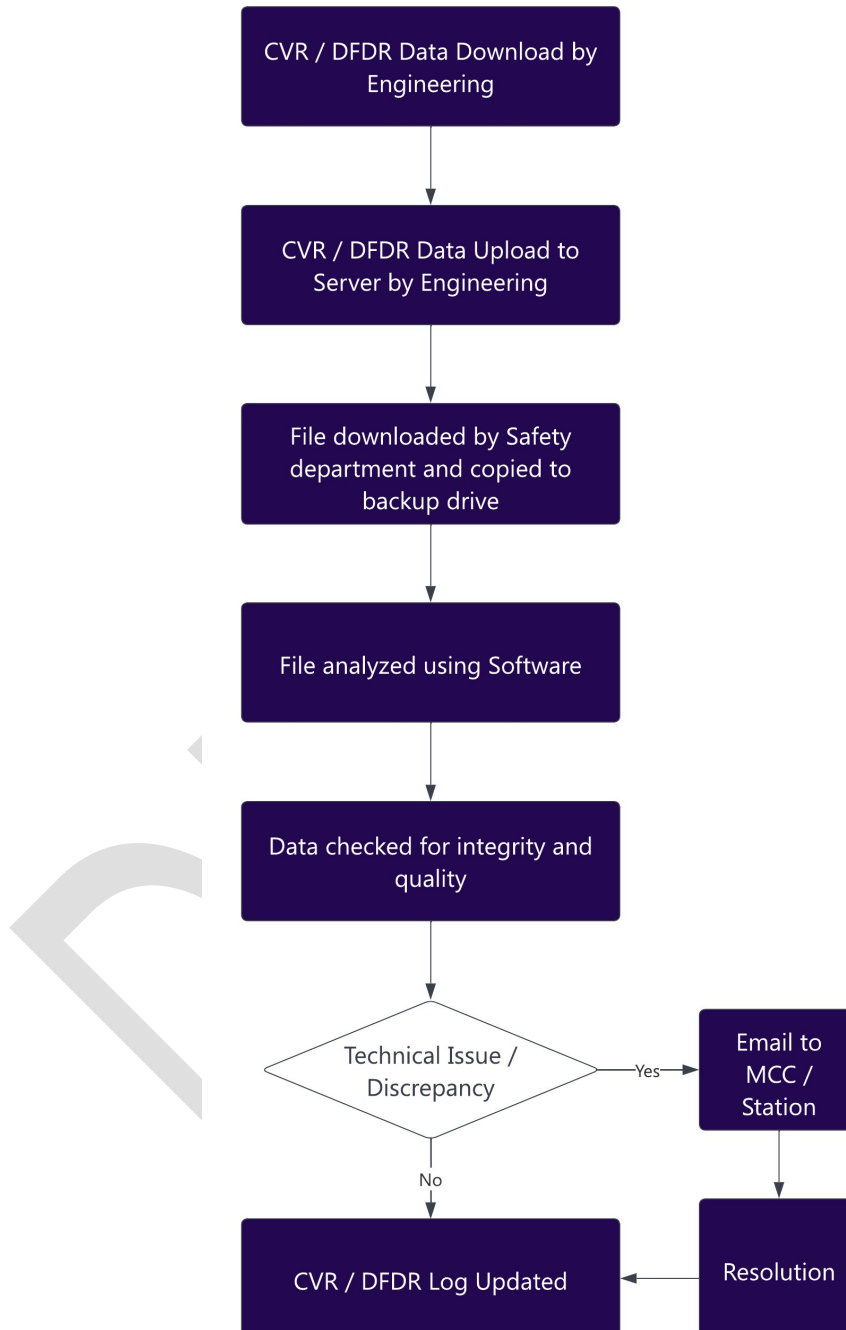| 8 | SERVICEABILITY AND THE FDM SYSTEM | **Issue:** | 00 |
|---|---|---|---|
| 8.3 | CVR/DFDR DOWNLOAD AND INTEGRITY CHECK | **Revision:** | 00 |
| | | **Date:** | 18-FEB-2024 |

## 8.3 CVR/DFDR DOWNLOAD AND INTEGRITY CHECK



*Figure 4 CVR/DFDR Download and Integrity Check*