

Penny & Giles – Product Support

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Document Title : Media Contents Checking
Equipment Affected : OQAR & PQAR
Part Numbers : (All models)
Classification : Information

Note: Although most of the text in this document refers primarily to OQAR, it can also be applied to PQAR, by substituting "PQAR" in place of "OQAR" and "PCMCIA card" in place of "MO Disk", where referenced.

Introduction

The optical disks removed from the Penny & Giles Optical Quick Access Recorders (OQAR), contain a great deal of useful information about the use of the subject optical disk and the immediate and historical 'health' of the OQAR itself. This information should be regarded as the primary method available to the operator to remotely identify the serviceability (or otherwise) of the OQAR fitted to the aircraft. The available status information will provide valuable evidence of the changes in the environment that the OQAR is operating in, the aircraft configuration supplied to the OQAR and the recording performance of the OQAR.

What should be on the disk?

When the root directory of the optical disk is viewed using the standard available Windows Explorer, then the following files and sub-directories should be found (please note the sequence of the files listed will vary depending upon the method used to view the root directory contents, however sequence variations are not significant):

Table 1 - Root Directory Contents

File Name	Description
---RPDAT	Sub-Directory containing the report or message data
---AQDAT	Sub-Directory containing any available ARINC429 data
---FLDAT	Sub-Directory containing any available flight data files
FLASH.ELF	File containing the OQAR event history
--PGOQAR.CS	File containing the OQAR configuration and status information
--PGOQAR.ELF	File containing the Optical Disk event history
PGOQAR.INT	File containing the next OQAR file number

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Notes.

1. The Component Maintenance Manual includes a full technical description of the Optical Disk root directory contents and the structure of the files recorded by the OQAR in the root directory and data directories.
2. In this document the terms, folders, directories and subdirectories are interchangeable and refer to the same object.
3. It is normal for most OQAR operators to set the OQAR Real Time Clock to GMT. If this is the case with your airline then caution should be exercised when evaluating the FLASH.ELF file contents because the event times/dates will be taken from the OQAR RTC and not from any aircraft or Captains clock.

Time and Date Values.

Each entry in the root directory will include the OQAR Real Time Clock (RTC) as the file/folder time and date. Some of the root directory contents will have the time and date corresponding to when the disk was inserted into the OQAR and some will have the time and date corresponding to when the disk was removed from the OQAR - using the powered EJECT system. This data will provide the following information:

- The dates and times for three data directories and the FLASH.ELF file should be the same as the time and date displayed on the OQAR front panel when the disk was inserted into the OQAR.
- The file date and time for the 3 remaining files should be the same as the time and date displayed on the OQAR front panel when the disk was EJECTED from the OQAR.
- The date and time this disk was ejected from the OQAR on the aircraft is also recorded as the first data entry in the --PGOQAR.CS file.

File Definitions.

- FLASH.ELF will contain the event log information retained in the OQAR FLASH storage area, when the disk is first inserted into the OQAR. The actual number of individual events stored is limited and the oldest event will be deleted to make room for more recent events. It should be realised that the event information stored in this file represents the event history that the subject OQAR has experienced prior to the insertion of the disk, the file is actually stored on, into the OQAR.
- Additional events experienced by the OQAR subsequent to the insertion of this disk are retained in the --PGOQAR.ELF file - these events are added to the end of the event log information retained in the OQAR FLASH storage memory to be recorded on the next disk, inserted into the OQAR, as the FLASH.ELF file.
- --PGOQAR.ELF contains the event log information accumulated by the OQAR while this disk was inserted into the OQAR. Therefore the first entry will normally consist of the NEW FLIGHT LEG STARTED event and the last message will normally consist of the DISK EJECT REQUESTED event.

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- --PGOQAR.CS - This file contains the OQAR configuration and status variables that are stored in the OQAR FLASH memory

Additional References.

These additional documents are also available in Adobe Acrobat PDF file format:

Document	Title
PS1183	OQAR Temperature Bands.
PS1231	OQAR BAD MEDIA Message.
PS1245	Restoring the OQAR Default Configuration.
PS1280	OQAR Activity Monitor.
PS1281	OQAR A429 Label Monitor.

Product Support Contact Information

Telephone : +44 (0) 1202 409409
Fax : +44 (0) 1202 484846
Email : support@pennyandgiles.com