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DACS

Digital Audio Control System
Complete Communication
Management

DACS

Digital Audio Control System

Canyon's Digital Audio Control System (DACS) is a flexible solution designed to fit the needs of mid- to large-size helicopters and a range of fixed-wing aircraft, performing a broad range of missions.

DACS is software-configurable to the exact audio distribution, control and warnings needed to meet each aircraft's unique mission. Removable legends permit operators to quickly and inexpensively adapt radio updates over an aircraft's lifetime.

DACS is a fully-digital audio processing and control system that provides the most crisp and clear audio quality in our industry. When compared to traditional analog system installations, DACS provides a dramatically simplified installation with reduced wiring and maintenance costs. DACS also provides improved performance with more features, reduced crosstalk, and higher immunity to noise.

System Description

DACS is a communication management system designed to distribute and control all audio in an aircraft, to/from all transceivers, and aural alert sources. The integrated, multi-channel intercom system and programmable user definition allow the audio system to be configured to suit customer-specific requirements.

DACS Features

- Fully-digital audio processing and control
- Designed for tactical operations
- Reduced system weight due to reduced wiring compared to legacy analog systems
- Cockpit/cabin control configurations available
- Manages up to eight receivers and eight transceivers
- Remote-mount management/memory units
- Interface audio levels, discretes, and multiple system functions are on-site software configurable using Device Configuration Software (DevCS)
- Low cost of ownership
- FAA: TSO-C139 (RTCA/DO-214 Class 1b, RTCA/DO-160E,RTCA/DO-178B Level C)
- EASA: ETSO-C50c (RTCA/DO-214 Class 1b, RTCA/DO-160E, RTCA/DO-178B Level C)

Installations

Flexible and configurable, DACS is the perfect audio solution for virtually any aircraft:

- Medium and heavy helicopters
- Civilian special missions
- Intelligence, Surveillance & Reconnaissance aircraft
- Search & Rescue platforms
- Drug interdiction
- Military and Paramilitary

DACS is forward fit on more production helicopters than any other digital audio system in the world, including: H135, H160, H175, H215, H225, AW109SP, AW169, and AW189.

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Audio Management Unit: AMU50

- Termination point for all relevant aircraft system interfaces, radios, Audio Control Panels (ACP) and headsets
- Multiple power supplies
- Multiple audio/interface amplifiers
- DO-178B Level C software
- All audio inputs and outputs are electronic differential type for enhanced crosstalk rejection
- Inputs and outputs reject HIRF and Radio Frequency Interference
- Smart connector pin layout ensures that the failure of one connector does not bring down the entire system
- Eight-channel aural alert generator

Audio Control Panel: ACP53

- Digital Interface Terminal to AMU
- Snap-in Radio Labels
- Individual receive volume adjustment with on/off select
- VOX Setting
- ICS and Receive Audio level adjustments
- Norm/Back-up/Emergency System Mode Selection
- Intercom Isolation Select
- Manual Tx PTT, ICS PTT
- Intercom Isolate and Transmit Indicators
- Cabin Call Indicator
- LED backlighting improving dimming, NVIS optional

Audio Control Panel: ACP51

- Digital Interface Terminal to AMU
- Snap-in Radio Labels
- Individual receive volume adjustment with on/off select
- VOX Setting
- ICS, Receive Audio Level Adjustment
- Manual Tx PTT, ICS PTT
- Intercom "Call" Select
- Patient Normal System/Isolate Mode Selection
- LED backlighting improving dimming, NVIS optional

Remote Memory: RM01

- Stores System Configuration and Aural Alert Files
- Restores AMU50 programmable settings in the unlikely event that an AMU50 must be replaced
- Reduces downtime by simplifying removals
- Allows profile management via a simple box change, reducing downtime

EVERY MISSION MATTERS

Technical Specifications

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Power	27.5 Vdc, 2.5A nominal
Microphone Inputs	7 inputs, 3 impedances selectable: • 5 ohms (250 uV rms) • 75 ohms (850 uV rms) • 150 ohms (250 mV rms)
Headphones	7 outputs, 3 impedances available: • 8 ohms (250 mW) • 150 ohms (250 mW) • 600 ohms (250 mW)
Radio Audio Inputs	16 inputs 1-20 Vrms input range 1000 ohms input impedance
Radio Mic Outputs	8 outputs, 50 mV rms to 1 V rms output range, <60 Ω output impedance
Radio PTT Outputs	8 outputs, active Lo
Direct Audio Inputs	6 inputs, fixed audio output levels, 1-15 V rms input range, 600 Ω input impedance
CVR Outputs	2 CVR outputs, 1 for pilot and 1 for co-pilot, <600 Ω output impedance, 500 mV rms output
Aural Warnings	8 internal alerts, messages are .WAV files, assigned by configuration management software; can be active Hi or Lo
DF Blanking Output	1 blanking output, active Lo
Music Inputs	2 inputs, 2 input ranges - 400 mV rms or 2.5 V rms, 1000 Ω input impedance
ACP/AMU Protocol	RS-422
Lighting	5/28 V standard, 5 V optional, NVIS compliant versions optional

ACP53 weight: 1.76 lbs. max (0.80 Kg)
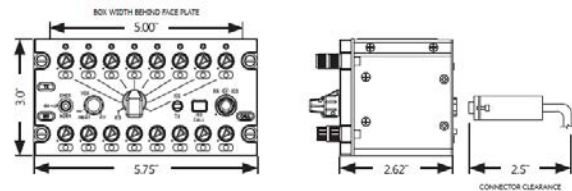
ACP51 weight: 1.01 lbs. max (0.46 Kg)
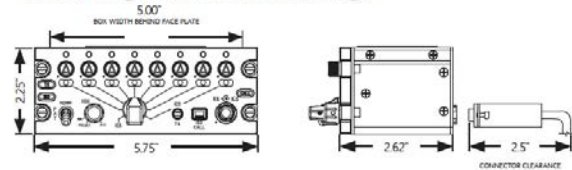
AMU50 weight: 4.11 lbs. max (1.87 Kg)
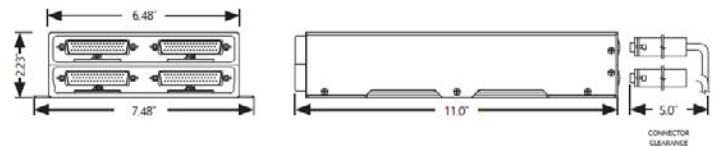
RM01 weight: 0.09 lbs. max (0.04 Kg)

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