

GENESYS DIGITAL RADIO

UHF AIRBORNE RADIO

FOR FIXED-WING AND HELICOPTER PLATFORMS

The Genesys UHF Airborne Radio system is a remote-mount radio ideal for trainers, maritime patrol, NGO & contract military utility operation, and other special mission aircraft. The radio was designed as an easy replacement for the Honeywell/BendixKing KTR-909 UHF radio and controller.

The Genesys radio covers 225 to 400 MHz AM for military air-to-air and ATC operations. There are two transmit power options and includes two receivers that deliver full-time main and guard receive monitoring. Radio control is accomplished with Genesys' discrete control displays or via multi-function military communications controllers.

Features of the GDR® radio include:

- High SWaP-C savings (Small, light weight, with high reliability)
- 16 or 25 watts transmit power
- 225.000 to 399.975 MHz
- MIL-STD-810G and DO-160G environmental qualifications
- MIL-STD-704E; 28VDC Power
- TSO-C128, DO-178C: Level A software
- Embedded RS-232 and ARINC 429 control bus
- UHF main and guard full time reception
- Tunable UHF guard receiver with selectable on/off
- Non-ITAR

Dimensions:

Width: 2.22" (56.39mm) (including single tray)
Height: 7.10" (180.34mm) (including single tray)
Depth: 11.60" (294.64mm) (including single tray)
Weight: 5.6 lbs (2.54 kg) (including single tray)

Environmental Compliance:

RTCA/DO-160G
MIL-STD: 810G

Power Requirements:

MIL-STD: 704EG; 28 VDC
5.6 amps typical TX @ 28 VDC
10 amps maximum TX @ 18 VDC
0.8 amp typical RX @ 28 VDC

Control Buses:

2 each ARINC 429 RX, 1 ea. ARINC 429 TX
2 each RS-232

Antenna Connectors:

1 BNC for UHF main and guard receivers

Discrete Inputs:

On/off control, on when pulled low
Emergency tuned to 243 MHz when pulled low, frequency fully programmable

Built In Test:

Supplied with PBIT and CBIT

Main Receiver:

Range 225.000 to 399.975 MHz

Guard Receiver:

Fully UHF band tunable on shared antenna port

Preset Channels:

Up to 100, dependent on control display

Channelization:

25 kHz step size

TX Duty Cycle:

20%, 1 min. on 4 min. off

TX Power:

16 Watts: Model # GDR-1624U
25 Watts: Model # GDR-2524U

Audio Loads:

150 to 600 Ohm loads permitted, factory set for 100 mW into 150 Ohm load

AM Modulation:

>85% with 0.25 to 3.0 Vrms audio input, ALC

TX Modulation:

Audio Flat -3 to +1 dB from 0.3 to 2.5 KHz

TX Distortion:

<5% at 1 KHz AM with 85% AM

Frequency Stability:

<2 PPM

Audio outputs:

Main RX audio 10 to 100 mW bench adjustable
Sidetone audio 10 to 100 mW bench adjustable

RX Performance:

DO-187 B Class D Receiver compliant with 25 kHz channel spacing

Rx sensitivity:

>-105 dBm typical, 30% AM 6dB SINAD

RX Selectivity:

-6 dB maximum @ ±8.0 kHz
-40 dB minimum @ ± 17.0 kHz
-60 dB minimum @ ± 22.0 kHzRX

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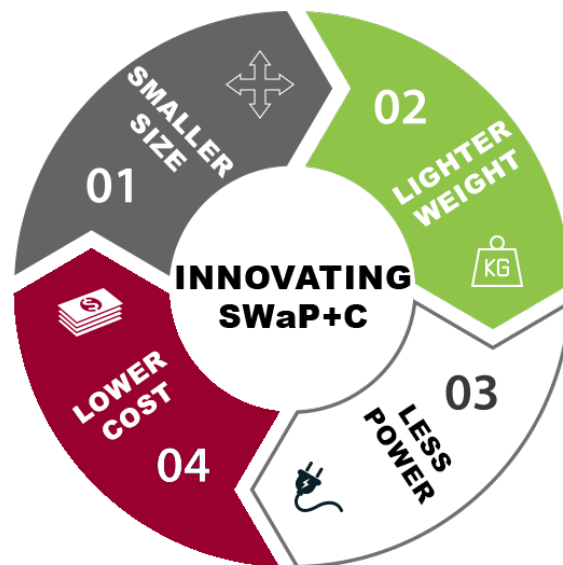
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TSO:

TSO-C128: Devices that prevent blocked channels used in two-way radio communication due to unintentional transmissions.

MTBF:

10,515 hours



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