

## Genesys UHF Airborne Radio

### For Fixed-Wing and Helicopter Airborne 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 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
- DO-178C: Level A software
- TSO-C128
- 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



### NEXT-GEN UHF RADIO COMMUNICATION SYSTEM

#### KEY BENEFITS

- ✓ Customizable digital software-defined radio platform enables future upgradability
- ✓ Designed to meet stringent FAA requirements
- ✓ Designed as an easy replacement for Honeywell/BendixKing KTR 909 UHF radios
- ✓ Lower SWaP-C than traditional analog UHF radios
- ✓ Frees up space, weight, and power draw for use on other mission essential payloads
- ✓ Field proven robust design, which can handle both fixed-wing and helicopter environments
- ✓ Various radio control panel options available to meet your specific operational needs.

## Specifications

### 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 @  $\pm 8.0$  kHz

-40 dB minimum @  $\pm 17.0$  kHz

-60 dB minimum @  $\pm 22.0$  kHzRX

### Export:

ECCN 7A994

### TSO:

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

### MTBF:

10,515 hours

