



GUARDIAN G25RBV110 110W High Power Base Station Radio



Project 25 Compliant

Government • Military • Public Safety • Business

GUARDIAN™

BY DATRON

THE VITAL CONNECTION



110 watt RF Amplifier
with integrated
ac/dc power supply

**Professional
Desk
Microphone**



High Resolution Display
High-output display can
be read easily in dim
interior lighting

**Software
Defined
Keys**

Large Diameter Speaker
High-output speaker for convenient audio
monitoring in high
noise environments

**Tx/Rx
Indicator**



Easy Grip Knobs
Large rotary knobs
make volume control
and channel selection easy

Programming Keys
Simple to customize
-three keys and a toggle switch

The Guardian G25RBV110 VHF P25 radio system is a high power, feature rich, high-technology base station radio designed for government, public safety, and business applications. The radio is fully digital and meets APCO Project 25 FDMA common air interface (CAI) standards for compatibility with other Project 25 radios. The G25RBV110 also operates as an analog radio, offering full backward compatibility with conventional wideband FM systems.

The G25RBV110 base station unit consists of two boxes, one piece is an integrated package (PA/PS) containing the 110 watt power amplifier and a 110/220 Vac power supply. The other contains a small control console configured to mount conveniently on a desktop. The PA/PS unit can be removed from the control console up to 25 feet, thus allowing the console to be conveniently mounted on the operator's desk. The control console contains a high-output speaker and backlit LCD display that is easy to read in low light environments.

Standard transmission security is provided by DES wide band encryption, while digital encryption (OFB DES) and over-the-air-rekeying (OTAR) are optional features.

- **Remote-Capable P.A.** with 25, 50, and 110W RF outputs and built-in ac power supply
- **Separate control console** for convenient desktop mounting containing 5W R/T Unit
- **Multi-Mode** analog and digital, wideband and narrowband, up to 4 banks, 16 zones, and 256 total channels
- **Full VHF Bandwidth**, 136-174 MHz inclusive
- **Shadow Channels** allow communication using any mode – wide or narrowband, analog or digital, crypto or plain
- **Secure Transmissions** – SBCF DES wideband analog encryption is standard, digital encryption is optional



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GUARDIAN G25RBV110

110W High Power Base Station Radio

MODEL DESIGNATION	GUARDIAN 110W BASE STATION RADIO
Datron Model Number	G25RBV110
Included Equipment	Radio, RF cable, dc power cable, operator's manual, quick reference guide
Frequency Range	136.000 – 174.000 MHz
Banks, Zones, Channel, Shadow	4 banks, 16 zones, 256 channels, 7 shadow
Voice Digital	
• Mode Voice coding	IMBETM 4.4 kb
• Frame Re-sync interval	180 msec
• Error Correction method	RS, Golay, Hamming
Input voltage	110/220 Vac, selectable
Display	High-output LCD
Antenna Port	UHF for 50 ohm antennas
Channel spacing	12.5 and 25 kHz, selectable in 2.5 or 3.125 kHz steps
FCC Type Acceptance Number	B3TG25RMV110, parts 74, 80, 90, 210
Industry Canada	4340A – G25RMV110

RECEIVER (MEASUREMENTS PER TIA/EIA 603 STANDARDS)

Sensitivity	-116 dBm or greater
• Digital Mode, 5% BER	
• Analog mode, 12 dB SINAD	
Spurious	-70 dB
Intermodulation	-70 dB
Audio Output Power	5 Watts, internal; up to 15 Watts, external speaker
Audio distortion (at 1000Hz)	3%
Frequency stability (-30 to + 60 oC)	+/- 1 ppm
Maximum frequency separation	Full band split

TRANSMITTER (MEASUREMENTS PER TIA/EIA 603 STANDARDS)

RF Power Output	3 power levels, selectable – 25/50/110 watts
Spurious and harmonic emissions	-70 dB
FM hum and noise (wide/narrowband)	-48/-47 dB, typical
FCC Modulation designators	11K0F3E, 16K0F3E, 12K6F3E
Frequency stability (-30 to + 60 oC)	+/- 2.5 ppm
Audio distortion (at 1000Hz)	2%
Maximum frequency separation	Full bandwidth

GUARDIAN DES ENCRYPTION

Encryption Keys	16
Code key generator	External
SBCF Analog DES Encryption	Standard feature
OFB DES Digital Encryption	Optional
OTAR	Optional

MECHANICAL / ENVIRONMENTAL

Mounting	Control Console – desktop Power Amplifier – desktop or remote up to 25 feet
Dimensions (HxWxD)	
• Control Console	7.3"W x 6"D x 7.5"H (incl. feet)
• PA/PS Unit	8"W x 11"D x 7.5"H (incl. feet)
Weight	
• Control Console	4.0 lbs
• PA/PS Unit	18.5 lbs
Case	
• Control Console	Metal and plastic
• PA/PS Unit	Metal
Temperature Range	-30 to +60°C (radio only)
Shock, vibration, humidity, fungus, sand & dust, salt fog, altitude	Per MIL-STD-810F (radio)

GUARDIAN ACCESSORIES

Microphone	Desk, Palm, DTMF palm
External speaker	Up to 15 watts

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