

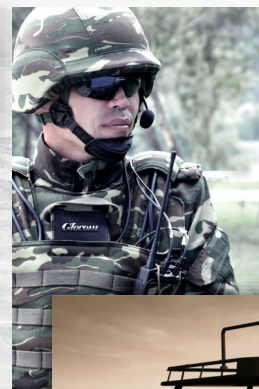
GR-150 HF Tactical Manpack/Mobile Radio

Frequency Hopping, Digital Secure EPM Software Defined Radio



[Key features]

- 1.6~30MHz ■ CW/voice/data/SMS ■ Digital frequency hopping ■ MELP1000
- AES256 digital encryption ■ 20W RF power ■ 3G ALE ■ NVIS antenna compatible
- VHF-HF relay function ■ Remote control function (2Km) ■ Wireless fill-gun (OTAR) ■ Built-in GPS ■ Advanced calling modes



The GR-150 is a rugged fully featured tactical transceiver solution delivering reliable field deployable communications with unparalleled value. ■ **[Lightweight and Compact Design]**-Using the latest lightweight alloys the GR-150 weight 4kg(4.9kg with 11Ah/12V, Li-Ion battery pack). Its small physical size makes it comfortable to wear and operate when deployed as a tactical manpack. Designed for the harshest field environments, the GR-150 complies with MIL-STD-810G and is fully immersible to a depth of 1 meter ■ **[Advanced calling feature]**-The GR-150 radio supports advanced selective calling, banish calling, automatic mode exchange, 5 digit SMS, Beacon, GPS tracking which are included as standard ■ **[Remote control]**-The GR-150 radio has full operation access to the radio with remote control unit up to 2Km. ■ **[Enhanced DSP noise reduction]**-MELP1000 vocoder system provides outstanding voice quality by reducing radio frequency interference (RFI), and the effects of electrical interference by enhancing audio signals to provide easier listing. The level of noise reduction can be easily selected to suit prevailing conditions. ■ **[Automatic antenna tuner]**-Whips and untuned wire antennas are simply deployed using the inbuilt, fully automatic antenna tuner. For temporary fixed station and tunable tactical antennas are available. ■ **[Intuitive operation]**-Glocom's well known intuitive operator interface ensures that operating the GR-150 very simple. Principal key functions are performed using a keyboard array mounted on the front panel. The operator is guided by 128x32 LCD graphics display. The display has adjustable backlighting, allowing maintenance of night vision or high levels of luminescence in poor visibility. Network station addresses and radio numbers are stored

in easily accessible address books and as little as two key strokes will initiate a call. ■ **[Extended operation time]**-The low current consumption of the GR-150 radio enables it to operate for over 20 hours on one battery pack. Spare quick change battery packs are small and lightweight. The battery packs contains the charger management system and can be charged when connected to the radio or separately with charger including grid charger, solar charger. ■ **[Automatic Link Establishment(ALE)]**-The GR-150 is available with full MIL-STD-188B ALE. When selected, the radio searches and selects the best channels. ■ **[Digital Encryption and scrambling]**-The GR-150 can be fitted with a variety of scrambling and digital encryption functions for voice and data security. The GR-150 includes secure calling(an innovative narrow band voice scrambler providing secure point to point or point to multipoint communication), AES 256 bit digital encryption assuring secure voice and data operation ■ **[Frequency Hopping]**-The unique, easy to use frequency hopping function requires no central synchronization station, has short entry or late entry time delay and requires no hopping handshakes. Hopping rate of 10 hops per second, using 25 digit hopping encryption key, and user selectable hopping bandwidth to suit the antenna type in use, the system provides excellent protection against Electronic Warfare (EW) attacks. ■ **[Modem]**-The GR-150 fitted with STANAG 5066 internal data modems supporting high speed data and email transmission, with effective data rates up to 4800bps. Data modems are supplied with PC software which provides email, file transfer and short text message functions.

[Operation mode]

■[Clear mode]-CW, voice, SMS ■[Secure mode]-CW, encrypted digital voice/data, SMS ■[FH mode]-CW, encrypted digital voice/data, SMS

General specifications

Frequency range	1.6 ~ 30MHz
Fine tuning	10Hz
Preset channels	100 channels
Modulation	SSB, AME, BPSK, QPSK
Data rate	110bps~4800bps
TRANSEC(FH)	10hps (Digital Frequency Hopping)
COMSEC (Encryption)	AES256, customized algorithm
Vocoder	MELP 1000
Link Establishment	MIL-STD-188-141B 3G ALE
Frequency stability	±1ppm
RF impedance	50Ω
Power supply	10~15VDC, Over-voltage, polarity protection
Data interface	RS-232C, Bluetooth
Remote control	PC, Tablet (Android), RCU
Programming	PC, wireless fill-gun (OTAR), KB
Dimension	230mm x 90mm x 230mm
Weight	≤4Kg (4.9Kg with battery)

Receiver

Sensitivity	-113dBm @ 10dB SINAD
Image & IF rejection	≥85dB
Adjacent channel rejection	≥45dB
Non-linear distortion	≤5%

Transmitter

RF power	100mW~20W
Harmonic suppression	≥50dBc
Spurious outputs	≤-60dBc typical

Environment

Operating temperature	-30°C ~ +60°C
Storage temperature	-50°C ~ +70°C
Humidity	95%

GR-150/GR-150VH Available options

Tactical headset	GA-11A
Remote control unit	GA-153A
External speaker with cable	GA-40A
100W power supply unit	GA-33A
320W power supply unit	GA-34A
NVIS Roof rack antenna	GA-114A
ITCCS Software	GS-930

GR-150 HF Tactical Manpack Set



The Glocom GR-150 HF Tactical Manpack Set is ideal for extended portable field operations providing the tactical user with effective, secure and comprehensive communications with remote sited

command locations. It includes all necessary handset, headset, antennas, batteries and rucksack carrying system. The standard set comprises:-

• HF 20W EPM SDR	GR-150E
• Officer handset	GA-10A
• HF 2.4m whip antenna	GA-111A
• HF 15m line antenna	GA-112A
• HF 20m x 2 dipole antenna	GA-113A
• GPS antenna	GA-50A
• Clone cable	GA-21A
• Li-Ion battery pack(2pcs)	GA-31D
• Battery charger	GA-32D
• CW key	GA-121A
• Rucksack	GA-122A
• User Manual	GA-131A

GR-150VH HF Tactical Mobile Set



The Glocom GR-150 HF Tactical Mobile Set upgrades the GR-150 by providing a convenient vehicle installation kit and transmitter power amplification to 100W PEP. With options for power supply system and the flexibility of dismounted use of GR-150 radio when not in the vehicle (additional accessories may be required), the GR-150VH HF Tactical Mobile Set can be installed in a wide range of vehicle types with antenna options to suit. The standard set comprises:-

• HF 20W EPM SDR	GR-150E
• Officer handset	GA-10A
• HF 2.4m whip antenna	GA-111A
• HF 15m line antenna	GA-112A
• HF 20m x 2 dipole antenna	GA-113A
• HF 4.2m mobile antenna	GA-115B
• GPS antenna	GA-50A
• Clone cable	GA-21A
• Li-Ion battery pack(2pcs)	GA-31D
• Battery charger	GA-32D
• CW key	GA-121A
• Rucksack	GA-122A
• User Manual	GA-131A
• HF 100W amplifier with cables	GR-151C
• HF 100W ATU with cables	GR-152C
• Mobile installation kit	GR-101C10-ITK



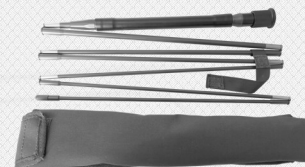
GA-10A Officer Handset

Officer handset can be used as the audio terminal for Glocom radio sets. The product has the rugged structure, and it is easy to operate, it also has the better performance of water-proof and moisture-proof.



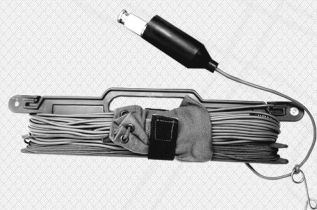
GA-11A Tactical Headset

Tactical Headset adopts structure of head ring soft strap, it is audio terminal. It has the features of small in dimension, light in weight, good water proof performance, high environment adaptability.



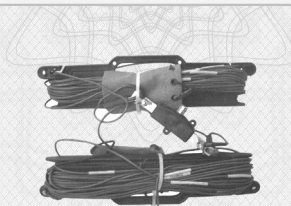
GA-111A HF 2.4m Whip Antenna

1.6~30MHz, 40W, Impedance:50Ω, Contact resistance: ≤120mΩ, Length:2400mm, Draw back length: 365mm, ≤0.7Kg, Interface: BNC fixed with threading sheath.



GA-112A HF 15m Line Antenna

This antenna can be used for communication on actual combat. This antenna is used for HF radio set or long distance emergency communication. It has the features of high radiation efficiency, easy carrying and installation.



GA-113A HF 20m x 2 Dipole Antenna

This antenna can be used for communication on actual combat. This antenna is used for stationary HF radio set or long distance emergency communication.



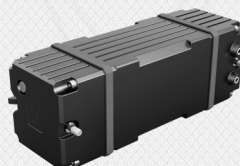
GA-50A GPS Antenna

This is high gain, low loss, active, extra low current consumption, small size GPS antenna. It supports SMA plug and magnetic mounting or screw mounting. It's useful for mobile application with GR series radios.



GA-21A Clone Cable

This is RS-232C data communication cable for GR series radios. It is used for data communication, radio programming and radio control by computer etc.



GA-31D Li-Ion Battery Pack

Capacity: 11.1VDC/10A, Weight: 0.9Kg, Size: 235mmx90mmx60mm, Working current: 6A, Peak current: 9A, Operating temperature: 0~45°C



GA-32B Battery Charger

This is a Li-Ion battery charger. It is controlled by microcontroller and supports the fast charge function, regular charge function, overvoltage protection, automatic charge off function etc.



GA-121A CW Key

This is a morse code key for GR-100 series HF radios. It's designed to use in rigid environment, so very strong mechanically. It is very small and light for easy carrying.



GA-122A Rucksack

This is a rucksack for GR series man-pack radio system. It is very compatible for soldier to carry radio with all accessories. It can keep antenna, batteries, handset, headset etc...



GA-115A HF Mobile Antenna

This is HF vehicle communication antenna. The antenna is composed of three parts. The antenna is light weight, good flexibility, endurable for corrosion.



GA-114A NVIS Antenna

This is mobile antenna which radiates NVIS propagation. It is designed to realize the communication during movement and effectively solve the problem of "communication blind area" in near distance of HF band.



GA-153A/203A Remote Control Unit

This is Remote Control Unit for GR-150. It can control GR-150 up to 2Km remotely. Radio and RCU is connected with twist-pair cable. It is easy to install in tunnel, mobile and ship.



GA-33A 100W Power Supply Unit

This is 100W AC/DC converter to supply power into GR-150 system. It is very useful in stationary, mobile or ship environment.



GA-34A 320W Power Supply Unit

This is 320W AC-DC/DC-DC converter to supply power into GR-series mobile radio system. It supports very high efficiency, over-voltage protection, polarity protection.



GR-101C-ITK Mobile Installation Kit

This is a set of installation kit. It can be used to install GR series radio system into various kind of vehicles, ships or stationary. It is very simple to install or uninstall on the vehicles.

MEMO



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