



Product Safety Manual

14221-1100-2020

Aug/11



This booklet contains important safety information regarding specific absorption rate (SAR) and RF exposure limits included in United States and international standards. Read the information in this booklet before operating your radio.

XG-75 Series Portable Radios

REV	DATE	DESCRIPTION
-	Aug/11	Initial release

ACKNOWLEDGEMENTS

The software contained in this device is copyrighted by Harris Corporation. Unpublished rights are reserved under the copyright laws of the United States.

This device is made under license under one or more of the following US patents: 4,590,473; 4,636,791; 5,148,482; 5,185,796; 5,271,017; 5,377,229; 4,716,407; 4,972,460; 5,502,767; 5,146,497; 5,164,986; 5,185,795; 5,226,084; 5,247,579; 5,491,772; 5,517,511; 5,630,011; 5,649,050; 5,701,390; 5,715,365; 5,754,974; 5,826,222; 5,870,405; 6,161,089; and 6,199,037 B1. DVSI claims certain rights, including patent rights under aforementioned U.S. patents, and under other U.S. and foreign patents and patents pending. Any use of this software or technology requires a separate written license from DVSI.

CREDITS

Harris, EDACS, OpenSky, and assuredcommunications are registered trademarks and ProVoice is a trademark of Harris Corporation.

RBRC and 1-800-8-BATTERY are registered trademarks of Rechargeable Battery Recycling Corporation.

AMBE is a registered trademark and IMBE, AMBE+, and AMBE+2 are trademarks of Digital Voice Systems, Inc.

All other product and brand names are trademarks, registered trademarks, or service marks of their respective holders.

NOTICE

The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: EAR99; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.

Information and descriptions contained herein are the property of Harris Corporation. Such information and descriptions may not be copied or reproduced by any means, or disseminated or distributed without the express prior written permission of Harris Corporation, PSC Division, 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.



This product conforms to the European Union WEEE Directive 2002/96/EC. Do not dispose of this product in a public landfill. This product should be taken to a recycling center at the end of its life.

The voice coding technology embodied in this product is protected by intellectual property rights including patent rights, copyrights, and trade secrets of Digital Voice Systems, Inc. The user of this technology is explicitly prohibited from attempting to decompile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into human-readable form.

Repairs to this equipment should be made only by an authorized service technician or facility designated by the supplier. Any repairs, alterations, or substitution of recommended parts made by the user to this equipment not approved by the manufacturer could void the user's authority to operate the equipment in addition to the manufacturer's warranty.

This manual is published by **Harris Corporation**, without any warranty. Improvements and changes to this manual necessitated by typographical errors, inaccuracies of current information, or improvements to programs and/or equipment, may be made by **Harris Corporation**, at any time and without notice. Such changes will be incorporated into new editions of this manual. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose, without the express written permission of **Harris Corporation**.

Copyright © 2011 Harris Corporation.

TABLE OF CONTENTS

	<i>Page</i>
1. SAFETY SYMBOL CONVENTIONS	4
2. SAFETY TRAINING INFORMATION	5
2.1 RF EXPOSURE GUIDELINES.....	5
2.2 ELECTROMAGNETIC INTERFERENCE/COMPATIBILITY....	6
2.3 REGULATORY APPROVALS	7
3. OPERATING TIPS.....	7
4. EFFICIENT RADIO OPERATION.....	8
4.1 ANTENNA CARE AND REPLACEMENT	8
4.2 ELECTRONIC DEVICES	8
5. OPTIONS AND ACCESSORIES	9
6. BATTERY PACKS.....	10
6.1 CONDITIONING NIMH BATTERY PACKS.....	10
6.2 CONDITIONING LI-ION BATTERY PACKS	10
6.3 ADDITIONAL INFORMATION	10
6.4 BATTERY DISPOSAL	11
7. IMMERSIBLE XG-75 PREVENTIVE MAINTENANCE	11
8. TECHNICAL ASSISTANCE.....	12
9. WARRANTY.....	12

Harris Corporation, Public Safety and Professional Communications (PSPC) Business continually evaluates its technical publications for completeness, technical accuracy, and organization. You can assist in this process by submitting your comments and suggestions to the following:

Harris Corporation

PSPC Business

or fax your comments to: 1-434-455-6851

Technical Publications

221 Jefferson Ridge Parkway

or e-mail us at: PSPC-techpubs@harris.com

Lynchburg, VA 24501

1. SAFETY SYMBOL CONVENTIONS

The following conventions are used to alert the user to general safety precautions that must be observed during all phases of operation, service, and repair of this product. Failure to comply with these precautions or with specific warnings elsewhere violates safety standards of design, manufacture, and intended use of the product. Harris Corporation assumes no liability for the customer's failure to comply with these standards.



The **WARNING** symbol calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, could result in personal injury. Do not proceed beyond a **WARNING** symbol until the conditions identified are fully understood or met.



The **CAUTION** symbol calls attention to an operating procedure, practice, or the like, which, if not performed correctly or adhered to, could result in a risk of danger, damage to the equipment, or severely degrade the equipment performance.



The **NOTE** symbol calls attention to supplemental information, which may improve system performance or clarify a process or procedure.



The **ESD** symbol calls attention to procedures, practices, or the like, which could expose equipment to the effects of **E**lectro-**S**tatic **D**ischarge. Proper precautions must be taken to prevent ESD when handling circuit modules.

2. SAFETY TRAINING INFORMATION



The Harris Corporation XG-75 portable radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as “Occupational Use Only,” meaning it must be used only during the course of employment by individuals aware of the hazards and the ways to minimize such hazards. This radio is NOT intended for use by the “General Population” in an uncontrolled environment.

The XG-75 portable radio has been tested and complies with the FCC RF exposure limits for “Occupational Use Only.” In addition, this radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- American National Standards Institute (C95.1 – 1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- American National Standards Institute (C95.3 – 1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave.

2.1 RF EXPOSURE GUIDELINES



To ensure that exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

- DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause the FCC RF exposure limits to be exceeded. A proper antenna is the antenna supplied with this radio by Harris or an antenna specifically authorized by Harris Corporation for use with this radio.
- DO NOT transmit for more than 50% of total radio use time (“50% duty cycle”). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “TX” indicator appears in the display. The radio will transmit by pressing the “PTT” (Push-To-Talk) button.

- ALWAYS transmit using low power when possible. In addition to conserving battery charge, low power can reduce RF exposure.
- ALWAYS use Harris authorized accessories (antennas, batteries, belt clips, speaker/mics, etc). Use of unauthorized accessories may cause the FCC Occupational/Controlled Exposure RF compliance requirements to be exceeded.
- As noted in Table 2-1, ALWAYS keep the device and its antenna **AT LEAST** 1.6 cm (0.63 inches) from the body and at least 2.5 cm (1.00 inch) from the face when transmitting to ensure FCC RF exposure compliance requirements are not exceeded. However, to provide the best sound quality to the recipients of your transmission, Harris Corporation recommends you hold the microphone at least 5 cm (2 inches) from your mouth, and slightly off to one side.

Table 2-1: RF Exposure Compliance Tested Distances

RADIO FREQUENCY BAND	TESTED DISTANCES (worst case scenario)	
	Body	Face
VHF (136 - 174 MHz)	1.6 cm	2.5 cm
UHF-L (378-403 MHz)	1.6 cm	2.5 cm

Table 2-2: Distance from Body for Different Carrying Options

CARRYING CONFIGURATION	TESTED DISTANCES (WORST CASE FROM BODY)
Belt Loop	4.2 cm
Belt Clip	1.8 cm
Leather Case with Belt Loop	5.2 cm
Nylon Case with Belt Loop	4.5 cm
Shoulder Strap with D-clip	3.0 cm
Speaker-microphone with antenna	1.6 cm

The information in this section provides the information needed to make the user aware of a RF exposure, and what to do to assure that this radio operates within the FCC RF exposure limits of this radio.

2.2 ELECTROMAGNETIC INTERFERENCE/COMPATIBILITY

During transmissions, Harris radios generate RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radios in areas where signs are posted to do so. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

2.3 REGULATORY APPROVALS

2.3.1 Part 15

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

2.3.2 Industry Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

3. OPERATING TIPS

Antenna location and condition are important when operating a portable radio. Operating the radio in low lying areas or terrain, under power lines or bridges, inside of a vehicle or in a metal framed building can severely reduce the range of the unit. Mountains can also reduce the range of the unit.

In areas where transmission or reception is poor, some improvement may be obtained by ensuring the antenna is vertical. Moving a few yards in another direction or moving to a higher elevation may also improve communications. Vehicular operation can be aided with the use of an externally mounted antenna.

Battery condition is another important factor in the trouble free operation of a portable radio. Always properly charge the batteries.

4. EFFICIENT RADIO OPERATION

Keep the antenna in a vertical position when receiving or transmitting a message.



Do NOT hold onto the antenna when the radio is powered on.

4.1 ANTENNA CARE AND REPLACEMENT



Always keep the antenna at least 0.43 inches (1.1 cm) away from the body and 1.0 inch (2.5 cm) from the face when transmitting to ensure FCC RF exposure compliance requirements are not exceeded.



Do not use the portable radio with a damaged or missing antenna. A minor burn may result if skin comes into contact with a damaged antenna. Replace a damaged antenna immediately. Operating a portable radio with the antenna missing could cause personal injury, damage the radio, and may violate FCC regulations.



Use only supplied or approved antennas. Use of unauthorized antennas, modifications, or attachments could cause damage to the radio unit and may violate FCC regulations.

4.2 ELECTRONIC DEVICES



RF energy from portable radios may affect some electronic equipment. Most modern electronic equipment in cars, hospitals, homes, etc. are shielded from RF energy. However, in areas in which you are instructed to turn off two-way radio equipment, always observe the rules. *If in doubt, turn it off!*

4.2.1 Aircraft



Always turn off a portable radio before boarding any aircraft!

- Use it on the ground only with crew permission.
- DO NOT use while in-flight!!

4.2.2 Electric Blasting Caps



To prevent accidental detonation of electric blasting caps, **DO NOT** use two-way radios within 1000 feet of blasting operations. Always obey the "Turn Off Two-Way Radios" signs posted where electric blasting caps are being used. (OSHA Standard: 1926.900)

4.2.3 Potentially Explosive Atmospheres



Areas with potentially explosive atmospheres are often, but not always, clearly marked. These may be fuelling areas, such as gas stations, fuel or chemical transfer or storage facilities, and areas where the air contains chemicals or particles, such as grain, dust, or metal powders.

Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Turn OFF two-way radios when in any area with a potentially explosive atmosphere. It is rare, but not impossible that a radio or its accessories could generate sparks.

5. OPTIONS AND ACCESSORIES

A complete list of Options and Accessories approved for use with the XG-75 portable radio can be found online in the Operator's Manual 14221-1100-2010 at www.pspc.harris.com. Also reference the maintenance manual or Harris Corporation's Products and Services Catalog for all available options and accessories, including those items that do not adversely affect the RF energy exposure.



Always use Harris authorized accessories (antennas, batteries, belt clips, speaker/mics, etc). Use of unauthorized accessories may cause the FCC Occupational/Controlled Exposure RF compliance requirements to be exceeded.



Always use the correct options and accessories (battery, antenna, speaker/mic, etc.) for the radio. Immersion rated options must be used with an immersion rated radio. Intrinsically safe options must be used with intrinsically safe radios.

6. BATTERY PACKS

The XG-75 series portable radios use rechargeable, recyclable Nickel Metal Hydride (NiMH) and Lithium Ion (Li-Ion) battery packs. Please follow the directions below to maximize the useful life of each type of battery pack.



Do not disassemble or modify Lithium Ion battery packs. The Lithium Ion battery packs are equipped with built-in safety and protection features. Should these features be disabled or tampered with in any way, the battery pack can leak electrolyte, overheat, emit smoke, burst, and/or ignite.



If the battery pack is ruptured or is leaking electrolyte that results in skin or eye contact with the electrolyte, immediately flush the affected area with water. If the battery electrolyte gets in the eyes, flush with water for 15 minutes and consult a physician immediately.

6.1 CONDITIONING NIMH BATTERY PACKS

Condition a new NiMH battery pack before putting into use. This also applies to rechargeable NiMH battery packs that have been stored for long periods (weeks, months, or longer). Conditioning requires fully charging and fully discharging the battery pack three (3) times using the tri-chemistry charger. The first time the battery pack is put into the charger, this unit will condition Nickel-based battery packs by automatically charging and discharging (cycling) the battery. Refer to the appropriate charger manual for details.



Failure to properly condition NiMH battery packs before initial use will result in shortened performance by the battery.

6.2 CONDITIONING LI-ION BATTERY PACKS

Lithium Ion battery packs do not suffer from memory effect and therefore do not require conditioning.



Always use Harris authorized chargers and conditioners. Use of unauthorized chargers and conditioners may void the warranty.

6.3 ADDITIONAL INFORMATION

For more information regarding the proper care of portable radio battery packs or establishing a battery maintenance program, refer to ECR-7367 which may be ordered by calling toll free 1-800-368-3277, then select option 7.

6.4 BATTERY DISPOSAL



In no instance should a battery pack be incinerated. Disposing of a battery pack by burning will cause an explosion.



RECHARGEABLE BATTERY PACK DISPOSAL – The product you have purchased contains a rechargeable battery pack. The battery pack is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery pack into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal. Canadian and U.S. users may call Toll Free 1-800-8-BATTERY® for information and/or procedures for returning rechargeable batteries in your locality.

7. IMMERSIBLE XG-75 PREVENTIVE MAINTENANCE

Preventive Maintenance for Immersion-Rated Radios



XG-75 model radios with Immersion Option MAEV-PKGMR must be serviced by a service center authorized and certified by Harris to perform the necessary tests to verify watertight integrity. As part of a thorough preventive maintenance plan, Harris Corporation recommends Immersion-Rated XG-75 portable radios, at a minimum, be tested and re-certified on an annual basis. Harris Corporation further recommends that the radios be tested on or close to the anniversary of the ship date printed on the Model Number label on the back of the radio.

8. TECHNICAL ASSISTANCE

The Technical Assistance Center's (TAC's) resources are available to help with overall system operation, maintenance, upgrades and product support. TAC is your point of contact when answers are needed to technical questions.

Product specialists, with detailed knowledge of product operation, maintenance, and repair, provide technical support via a toll-free (in North America) telephone number. Support is also available through mail, fax and e-mail.

For more information about technical assistance services, contact your sales representative, or call the Technical Assistance Center directly at:

North America:	1-800-528-7711
International:	1-434-385-2400
Fax:	1-434-455-6712
E-mail:	PSPC-tac@harris.com

9. WARRANTY

Please register this product within 10 days of purchase. Registration validates the warranty coverage, and enables Harris to contact you in case of any safety notifications issued for this product.

Registration can be made on-line at www.pspc.harris.com/CustomerService.

RECHARGEABLE BATTERY WARRANTY

- A. Harris Corporation, a Delaware Corporation, through its RF Communications Division (hereinafter "Seller") warrants to the original purchaser for use (hereinafter "Buyer") that nickel-cadmium, nickel-metal hydride, lithium-ion, and lithium-polymer batteries supplied by Seller shall be free from defects in material and workmanship, and shall conform to its published specifications for a period of twelve (12) months from the date of purchase.
- B. For purposes of this warranty, batteries shall be deemed defective if (1) the battery capacity is less than 80% rated capacity, or (2) the battery develops leakage.
- C. If any battery fails to meet the foregoing warranty, Seller shall correct the failure by issuing a replacement battery upon receipt of the defective battery at an Authorized Service Center (ASC) or Seller factory (for OpenSky[®] Equipment only).
- D. Replacement batteries shall be warranted only for the remaining unexpired warranty period of the original battery. This warranty becomes void if:
1. The battery has been subjected to any kind of misuse, detrimental exposure, or has been involved in an accident.
 2. The battery is used in equipment or service other than the radio equipment for which it is specified.
- E. The preceding paragraphs set forth the exclusive remedies for claims based upon defects in or non-conformity of any battery, whether the claim is in contract, warranty, tort (including negligence), strict liability or otherwise, and however instituted. Upon the expiration of the warranty period, all such liability shall terminate. The foregoing warranties are exclusive and in lieu of all other warranties, whether oral, written, expressed, implied or statutory. **NO IMPLIED OR STATUTORY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE SHALL APPLY. IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, INDIRECT OR EXEMPLARY DAMAGES.**

This warranty applies only within the United States.

To obtain the name and address of an Authorized Service Center (ASC), ask your salesperson, or call one of the factory number(s) printed at the bottom of this page.

Harris Corporation
RF Communications Division
221 Jefferson Ridge Parkway
Lynchburg, VA 24501
1-800-528-7711

Harris Corporation
RF Communications Division
1680 University Avenue
Rochester, NY 14610
1-585-244-5830

ECR-7048D

WARRANTY

- A. Harris Corporation, a Delaware Corporation, through its RF Communications Division (hereinafter "Seller") warrants to the original purchaser for use (hereinafter "Buyer") that Equipment manufactured by or for the Seller shall be free from defects in material and workmanship, and shall conform to its published specifications. With respect to all non-Seller Equipment, Seller gives no warranty, and only the warranty, if any, given by the manufacturer shall apply. Rechargeable batteries are excluded from this warranty but are warranted under a separate Rechargeable Battery Warranty (ECR-7048).
- B. Seller's obligations set forth in Paragraph C below shall apply only to failures to meet the above warranties occurring within the following periods of time from date of sale to the Buyer and are conditioned on Buyer's giving written notice to Seller within thirty (30) days of such occurrence:
1. for fuses and non-rechargeable batteries, operable on arrival only.
 3. for parts and accessories (except as noted in B.1), ninety (90) days.
 4. for P7300, P7200, P7100^{IP}, P5400, P5300, P5200, P5100, P3300, M7300, M7200 (including V-TAC), M7100^{IP}, M5300 and M3300 radios, two (2) years, effective 10/01/2007.
 5. for Unity[®] XG-100P, three (3) years.
 6. for all other equipment of Seller's manufacture, one (1) year.
- C. If any Equipment fails to meet the foregoing warranties, Seller shall correct the failure at its option (i) by repairing any defective or damaged part or parts thereof, (ii) by making available at Seller's factory any necessary repaired or replacement parts, or (iii) by replacing the failed Equipment with equivalent new or refurbished Equipment. Any repaired or replacement part furnished hereunder shall be warranted for the remainder of the warranty period of the Equipment in which it is installed. Where such failure cannot be corrected by Seller's reasonable efforts, the parties will negotiate an equitable adjustment in price. Labor to perform warranty service will be provided at no charge during the warranty period only for the Equipment covered under Paragraph B.3 and B.4. To be eligible for no-charge labor, service must be performed at Seller's factory, by an Authorized Service Center (ASC) or other Servicer approved for these purposes either at its place of business during normal business hours, for mobile or personal equipment, or at the Buyer's location, for fixed location equipment. Service on fixed location equipment more than thirty (30) miles from the Service Center or other approved Servicer's place of business will include a charge for transportation.
- D. Seller's obligations under Paragraph C shall not apply to any Equipment, or part thereof, which (i) has been modified or otherwise altered other than pursuant to Seller's written instructions or written approval or, (ii) is normally consumed in operation or, (iii) has a normal life inherently shorter than the warranty periods specified in Paragraph B, or (iv) is not properly stored, installed, used, maintained or repaired, or, (v) has been subjected to any other kind of misuse or detrimental exposure, or has been involved in an accident.
- E. The preceding paragraphs set forth the exclusive remedies for claims based upon defects in or nonconformity of the Equipment, whether the claim is in contract, warranty, tort (including negligence), strict liability or otherwise, and however instituted. Upon the expiration of the warranty period, all such liability shall terminate. The foregoing warranties are exclusive and in lieu of all other warranties, whether oral, written, expressed, implied or statutory. NO IMPLIED OR STATUTORY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE SHALL APPLY. IN NO EVENT SHALL THE SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, INDIRECT OR EXEMPLARY DAMAGES.

This warranty applies only within the United States.

Harris Corporation
RF Communications Division
221 Jefferson Ridge Parkway
Lynchburg, VA 24501
1-800-528-7711

Harris Corporation
RF Communications Division
1680 University Avenue
Rochester, NY 14610
1-585-244-5830

ECR-7047L

NOTES



Public Safety and Professional Communications
221 Jefferson Ridge Parkway | Lynchburg, VA USA 24501
www.pspc.harris.com | 1-800-528-7711