



*Tactical Radio Products*

***FALCON™  
Series***

*long-range tactical  
communication systems  
for today and tomorrow*

*next level solutions*



# **FALCON**<sup>™</sup> SERIES

## ***Long-range communications from the leader in HF radio***



### ***Harris***

At Harris, we're proud to be one of the leading forces in the development of advanced HF systems for military tactical situations. After all, we pioneered the error-free transmission of data and images over HF. We were one of the first companies to simplify HF operation by offering Automatic Link Establishment (ALE). Harris is constantly developing new technology to meet the needs of our customers for a full spectrum of rugged, reliable radio communications equipment.

### ***The HF advantage***

In recent years, more and more customers have expressed renewed interest in HF communications by purchasing FALCON Series systems from Harris. HF technology offers reliable, cost-effective, point-to-point, long-distance communication without depending on vulnerable system infrastructure or access to satellites. The FALCON Series of HF equipment can be configured for a wide variety of military applications including manportable, vehicular, base station and transit case configurations. These versatile, state-of-the-art systems quickly transmit voice, data, images and fax, overcoming the range limitations of line-of-sight communications.

### ***Superior quality and customer service***

We offer more to our customers than advanced technology. We were one of the first radio communications suppliers to gain ISO 9001 certification. And our outstanding commitment to customer satisfaction continues to earn recognition and awards from appreciative clients around the world.

When you add it all up, it comes down to this: whether you need a single digital transceiver like the RF-5200, or a complete, nationwide communications system, you can count on Harris for outstanding technology, service and support. That's why we've been a worldwide technology leader in our industry for more than 40 years.



# ***Designed for superior performance on the road, off the road and anywhere in between***

## ***The FALCON Family***

In fast-moving tactical situations you need special tools to communicate. That's why military forces around the world use the FALCON HF systems from Harris. These rugged digital radio systems let you send and receive voice and data from virtually anywhere.

The RF-5000 Series HF systems, which are based on the RF-5022R/T(E) transceiver, facilitate high performance vehicular, transportable and base station applications.

The RF-5200 systems are based on the AN/PRC-138 Manpack which is ideal for "jerk-and-run" communications. Conversion from a high-power system to a manportable unit is as simple as the addition of batteries and a backpack.

These highly mobile radio systems also include high-speed internal modems and encryption, eliminating the need to haul hard-to-carry peripherals.

If you're looking for a rugged, mobile communications system that's easy to use, ask for the remarkable FALCON Series today. Whether you're on the road or on foot, you can count on it to get the message through.



## ***Award-winning performance in the field***

The FALCON Series systems are used extensively in numerous military conflicts and peace keeping missions. The success of our tactical communications equipment in Operation Desert Storm is a matter of record. In fact, Harris received a Certificate of Appreciation from the US Army Information Systems Command along with an award for Contractor Excellence in recognition of the outstanding performance of our systems and our service support network.

# Off-the-shelf systems for mobile and stationary applications

## Vehicular systems

**For use in tanks, HMMWVs and military vehicles.**

Rugged, shock-resistant mounting systems provide protection during punishing operations. Optional voltage converters provide operation from 12/24 VDC and 110/230 VAC power sources.



## Transportable systems

**For vehicles and temporary fixed locations.**

Specifically designed for demanding environments, these rugged systems are protected by shock-resistant transport cases. One person can carry a complete system due to the unique case configuration.



## Base station systems

**For long-term and short-term use in both sheltered and field environments.**

Carefully integrated into a sturdy rack, they can be easily mounted on desktops, shelves and floors.



### The RF-5200 And RF-5000: A quick comparison.



#### RF-5200 family



#### RF-5000 family

Frequency Range	1.6 to 60 MHz	1.6 to 30 MHz
Manpack Convertible	Yes	No
Available Power Output (with appropriate power amplifier)	20 Watts 125 Watts (HF only) 150 Watts (HF/60 Watts VHF) 400 Watts (HF only)	20 Watts 125 Watts 400 Watts 1000 Watts
Internal Modems	MIL-STD-188-110A Serial tone Up to 2400 bps Tx 75 bps Rx  39-tone up to 2400 bps  FSK up to 600 bps	MIL-STD-188-110A Serial tone Up to 4800 bps  39-tone up to 2400 bps  FSK up to 600 bps  STANAG 4285
Detachable Front Control Head	No	Yes

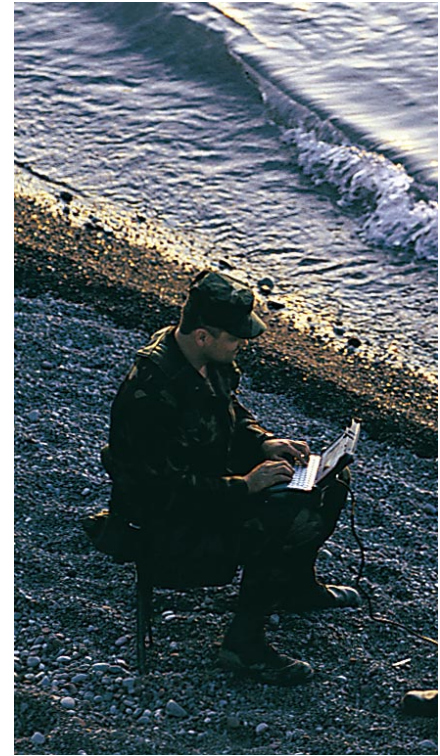
**Easy to use even for inexperienced radio operators**

Automatic channel selection and voice/data detection simplify operation. Operators no longer need extensive training to get the message through.

Simply select the station or net you want to call, and you're on the air. The Man Machine Interface (MMI) provides a user-friendly menu that guides you through the selection of modulation mode, modem presets, encryption keys and squelch setting.

To simplify operation even further, you can configure access to operating modes, parameter selection and radio programming.

As a result, even inexperienced radio operators can quickly learn how to use the FALCON systems on the field of battle or anywhere else.



The backlit keypad and easy-to-read, large-character alphanumeric display provide excellent visibility under all lighting conditions. The FALCON systems are also fully compatible with Night Vision Goggles.

Comprehensive, built-in diagnostics maximize uptime by identifying failed modules and defective circuits.

Automatic antenna tuning matches most whip, long-wire, and NVIS antennas, as well as resonant dipoles.



AN/PRC-138 Manpack

Internal high-speed modems (39-tone, serial tone and FSK) transmit and receive data at rates up to 2400 bps.

Panic Zeroize position erases all channel programming, encryption and TRANSEC keys.

Menu-driven, user-defined, "point and shoot" operation for ease of use.

The rotary mode switch allows easy mode selection.

The channel switch provides access to 10 preprogrammed channels or nets while the keypad provides access to all 100 preprogrammed channels.



# ***Add powerful new capabilities in minutes***

***No bulky  
external boxes.  
No complicated  
upgrades.***

You can quickly upgrade your FALCON transceiver whenever you want, thanks to our plug-in option boards.

## **Simplify HF communications with Automatic Link Establishment (ALE).**

This time-saving feature automatically establishes communication links on the best authorized channels available. The result? It dramatically reduces the need for skilled operators, because it makes the FALCON transceivers as easy to operate as a telephone. ALE also makes unattended and unscheduled operations possible.

## **Transmit data reliably at high speeds.**

With a new, multi-waveform, high-speed HF modem, you can send and receive data up to 4800 bps. The modem includes MIL-STD-188-110A Waveforms, STANAG 4285 Waveform (RF-5022R/T(E) only), and is also compatible with FSK signalling. This advanced modem also includes a programmable data interface which allows you to link your FALCON Series system directly to fax machines, PCs, teletypes and cryptographic devices.

## **Prevent eavesdropping and jamming with state-of-the-art Frequency Hopping.**

Frequency Hopping protects your tactical communications from eavesdropping, jamming and radio direction-finding techniques by randomly changing the communication frequencies 20 times per second. Designed to support digital voice at 800 bps and digital data from 75 to 300 bps with automatic baud rate and voice/data detection, this powerful module delivers the critical voice and data security you need.

## **Provide maximum Voice & Data Security.**

The digital encryption option secures sensitive data and voice information with a unique algorithm that won't be repeated for millions of years. The combination of digital encryption, vocoding techniques and high-performance modem waveforms ensure that your critical communications won't be compromised. Analog Voice Security (AVS) protects your single channel voice communications with no reduction in range or reliability.



# ***Rugged accessories that meet tough, tactical requirements***



RF-6710 Laptop Data Terminal



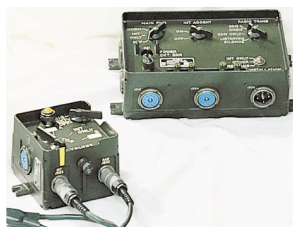
RF-3575 Remote Access Unit (RAU)



RF-382A-15 Fast Tune Antenna Coupler



RF-5051, RF-5052, RF-5055 and RF-5056 Power Supplies



RF-294A Vehicular Intercom

At Harris, we know that communications requirements vary widely from mission to mission. That's why we offer an extensive line of field-proven accessories that can be easily customized to meet your specific requirements.

## ***Data & Imaging***

- PC-based laptop and desktop data terminals and application programs automatically transfer error-free text, data and images over HF, VHF and UHF radio circuits at speeds up to 2400 bps. Adaptive data rate ensures optimum throughput. The MS-Windows interface is available in a variety of languages.
- The Telephone Interface Unit (TIU) and associated Radio Access Unit (RAU) extend communications to virtually any telephone in the world. Incoming and outgoing calls automatically patch into the systems without operator intervention.
- HUIITS Image Transmission Systems send high-resolution photos, diagrams, maps and other images over HF in near real time.

## ***Radio Frequency Accessories***

- RF-382A Antenna Coupler automatically matches the output of the FALCON systems to a variety of whip, longwire, and dipole antennas over the entire HF frequency range.
- RF-5045 Pre/Post Selector helps reduce collocation interference by attenuating interfering signals to facilitate collocated operation of two or more radio systems. Also available as a plug-in option board (RF-5245) for the RF-5200 150 watt system.
- Wide assortment of HF and VHF antennas for a variety of applications and platforms.

## ***Power Supplies***

- Voltage converters and power supplies allow a wide range of DC and AC power sources for portable, vehicular and fixed-site stations.
- "Power-off" feature shuts down DC to DC converter when the ignition is off to prevent accidental battery discharge. Automatic input voltage selection, output current limiting and a rugged design protect against input/output overload, short circuits and mechanical shock.

## ***Audio Interfaces***

- The RF-294A Vehicular Intercom complement allows the FALCON systems to seamlessly integrate crew, radio and landline communications.

**Communications solutions  
for today and beyond**

Harris Corporation is a global communications company, providing solutions that take customers to the next level of competitiveness, productivity, and profitability.

The capabilities, products, and applications at Harris are focused in four communications markets—wireless, broadcast, government systems, and network support. Harris solutions include microwave and wireless loop systems; secure radios, national law enforcement, and air traffic communications systems; analog and digital television and radio systems; enhanced services and digital switching platforms, telecommunication tools and test systems, and network management systems for worldwide communications service providers and broadcasters.

The company's 104-year history of strong technological resources and reputation, with an aggressive concentration on the global communications market, allow it to address the escalating demand for broader bandwidth communications. The corporation has sales and service facilities in nearly 90 countries.



**Wireless**



**Broadcast**



**Government Systems**



**Network Support**