

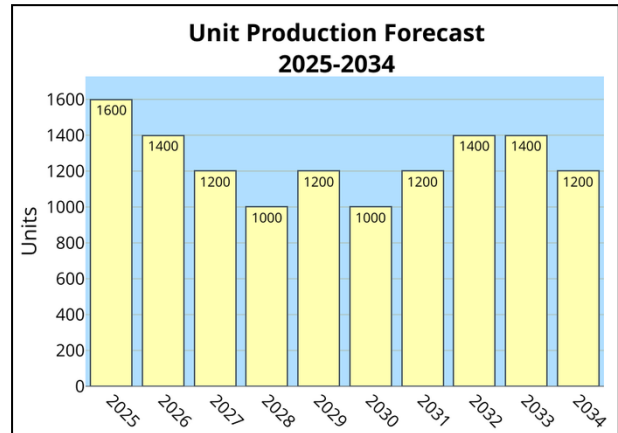
# ARCHIVED REPORT

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## RF-7800S

### Outlook

- RF-7800S military radios produced to meet the short-range communications needs (500 m to 2 km) of U.S. and allied defense forces
- Outside of the U.S., Latin America – in particular Brazil – will likely be a strong buyer



### Orientation

**Description.** The RF-7800S is a software-operated, hands-free, "shirt-pocket-size" military radio.

Tel: + 1 (585) 244-5830

Fax: + 1 (585) 244-2917

#### Sponsor

L3Harris Corporation

RF Communications Division

1680 University Ave

Rochester, NY 14610 USA

Website: <https://www.l3harris.com>

**Status.** In production and service.

**Application.** Communications for dismounted troops.

**Price Range.** Estimated price of one RF-7800S military radio is \$3,500.

### Contractors

**L3Harris - Tactical Communications**

<https://www.l3harris.com>, 1680 University Ave, Rochester, NY 14610 United States, Tel: + 1 (585) 242-3561, Fax: + 1 (585) 242-4483, Email: [RFComm@harris.com](mailto:RFComm@harris.com), Prime

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 75 Glen Road, Suite 302, Sandy Hook, CT 06482, USA; [rich.pettibone@forecast1.com](mailto:rich.pettibone@forecast1.com)

**RF-7800S****Technical Data****General**

**Frequency Range:** 350-450 MHz

**Channel Spacing:** 25 KHz, 500 KHz, or 1.2 MHz

**Net Presets:** 14 programmable presets with talk groups

**Modulation:** 16 kbps FSK or 135/338 kbps GMSK

**Voice Operation**

- Full duplex, three simultaneous talkers
- Unlimited listeners
- Priority break-in
- Selectable VOX or push-to-talk

**Data Operation**

- Simultaneous data and voice
- USB RNDIS device

**Location (self):** Built-in GPS with automatic position report

**Alerts:** Audible network warnings

**Battery:** Rechargeable eight-hour life, optional alkaline battery pack

**Auxiliary Power:** DC input for charging/external powerpack

**Range**

- Open terrain: 1-2 km
- Urban: 500-800 m
- Jungle: up to 500 m

**Software Architecture:** Upgradeable via USB port

**Encryption**

- Selectable
- FIPS-197 AES 256-bit
- Citadel 256-bit

**Color**

- Black (FED-STD-595B 37038) or
- Green (FED-STD-595B 34094)

**Environmental**

(MIL-STD-810F)

**Shock/Vibration:** Ground portable

**Immersion:** 2 m

**Size with Battery (maximum envelope):** 171 x 80 x 35 mm (max)

**Radio Weight:** 300 g

**Temperature:** -30°C to +65°C

**Interfaces**

**USB 2.0 Multifunction:** Data Configuration/Control

**RF:** SMA, 50 ohm nominal, unbalanced

**Transmitter Specifications**

**Power Output:** 2 W, adjustable to 1 W, 0.25 W

**Frequency Stability:** +/- 1 ppm

**Receiver Specifications**

**Sensitivity Audio Output:** 0-75 dbA with standard headphone

**Standard Features**

- Simultaneous, full-duplex voice for multiple speakers
- Automatic whisper mode
- USB digital data interface

**Accessories Included with Transceiver**

- Small whip antenna
- Rechargeable lithium-ion battery
- Operator's card

**RF-7800S**

The L3Harris RF-7800S

Source: L3Harris Corp

## Program Review

Harris Corporation (now L3Harris) introduced its RF-7800S Secure Personal Radio on September 19, 2006, at the Africa Aerospace and Defense exhibition in Cape Town.

The following details program activity since 2008.

On February 19, 2008, Harris announced it had received a \$25 million contract from the Brunei Ministry of Defense to supply tactical radios, accessories, and other equipment to the Royal Brunei armed forces under the Combat Net Radio replacement program. Under the contract, Harris provided a range of equipment, including the RF-7800S. The following day, Harris announced it had obtained a contract from the Defense Forces of Norway to provide several thousand RF-7800S Secure Personal Radios and accessories.

In July 2009, Harris received a contract from Sweden to manufacture and deliver the RF-7800S for Sweden's Inter/Intra Group Radio program. The contract was a multiyear framework agreement. Under the agreement, an initial quantity of 900 radios was delivered in July 2009.

In May 2010, Harris announced it had received an \$11 million order to provide a range of tactical radio systems to a Partnership for Peace nation participating in the NATO-led International Security Assistance Force (ISAF) in Afghanistan. According to Harris, this order would result in one of the largest deployments of the RF-7800S radio to that country.

In July 2010, Harris received orders to supply equipment, including radios and sensors, to a military customer in Asia. Under these orders, Harris would provide RF-7800S, RF-7800M, RF-7800V, RF-7800W, and RF-5800H radios. During the same month, Harris received an \$8 million order to provide communications technology to a customer in the Middle East. As part of this order, Harris would deliver its RF-7800S, RF-7800W, and RF-5800M handheld radios.

In September 2010, Harris received orders totaling \$69 million from a nation in Asia to support the next phase of development of a comprehensive command, control, and intelligence system. These orders included the RF-7800S radio.

In January 2011, Harris was awarded a contract with a potential value of \$475 million to supply a variety of military and land mobile radio systems – including the RF-7800S - to international partners of the U.S. State Department and Department of Defense.

In February 2011, Harris received a \$10 million order to provide the RF-7800S to an international government.

In May 2011, Harris received a \$19 million order from a nation in Asia for an integrated tactical communications system. Vital elements of the system include software-defined military radios from the Harris Falcon III family, including the RF-7800S Secure Personal Radio, the RF-7800V VHF Combat Net Radio, and the RF-7800I vehicular intercom system.

## RF-7800S

During 2012, Harris received about seven radio orders that included the RF-7800S Secure Personal Radio. All orders were placed by or will be deployed by countries outside the United States.

Harris received additional orders in 2013 and 2014 (detailed in **Contracts/Orders & Options**).

In June 2018, Harris, along with Motorola Solutions, Icom America, E.F. Johnson, and Relm Communications, entered to compete for portions of a \$495 million contract for land mobile radio supplies and services. Work locations and funding would be

determined with each order, with an estimated completion date of June 17, 2023.

In February 2019, Harris introduced the Falcon III RF-7850W High-Capacity Line-of-Sight radio with frequency hopping capability and greater transmission security over the entire 4.4- to 5.875-GHz frequency band.

In June 2019, the merger of L3 Communications and Harris was completed, forming the new entity, L3Harris.

In September 2023, L3Harris announced the production of its 50,000th Falcon III HF radio.

## Contracts/Orders & Options

<u>Contractor</u>	<u>Award (\$ millions)</u>	<u>Date/Description</u>
Harris	10.7	Jan 2012 – Orders from Brazil for the Harris RF7800V vehicular radio system and RF-7800S Secure Personal Radio.
Harris	10.70	Mar 2012 – Order to supply tactical radio systems and software to a country in the Middle East. The order included the Falcon III RF-7800S, the RF-7800V VHF Combat Net Radio, and the RF-7800W High-Capacity Line-of-Sight radio, along with RF-5800M multiband and RF-5800H high-frequency tactical radios. Harris would also provide its Falcon Command situational awareness software.
Harris	51.00	Mar 2012 – Order from the government of Iraq to provide tactical communication solutions. Iraq was acquiring radios and accessories from both the Falcon II and Falcon III families for its security forces. As part of the order, Harris would provide Falcon III RF-7800S Secure Personal Radios, Falcon II RF-5800M multiband handheld radios, and RF-5800H high-frequency manpack radios, along with accessories and training services.
Harris	14.30	Mar 2012 – Orders to provide a communications/command and control system to a country in the Middle East. This country was acquiring the system, consisting of Falcon III tactical radios and accessories, to deliver wideband networking capabilities to its security forces. As part of the system, Harris would provide the customer with Falcon III RF-7800M multiband networking radios, RF-7800W High-Capacity Line-of-Sight radios, and RF-7800S Secure Personal Radios, along with networking components, accessories, and spares.
Harris	7.00	Sept 2012 – Order to supply a nation in the Middle East with Falcon III RF-7800S Secure Personal Radios and Falcon II RF-5800H-MP high-frequency manpack radios.
Harris	11.00	Nov 2012 – Order from the Ministry of Defense of a NATO country for the Falcon III RF-7800S. The order was tied to a new framework contract, similar to an IDIQ, with the potential to reach \$20 million in value over the following year. This nation's armed forces acquired the RF-7800S, and advanced headsets and other accessories.
Harris	7.00	Dec 2012 – Order to deliver tactical radios to a nation in Central Asia. The country was acquiring radios from across the Falcon portfolio, including the Falcon III RF-7800S Secure Person Radio, RF-7800M multiband networking radio, and Falcon II RF-5800M handheld and RF-5800H manpack radios.

**RF-7800S**

<u>Contractor</u>	<u>Award (\$ millions)</u>	<u>Date/Description</u>
Harris	11.00	Jan 2013 – Delivery orders to provide international partners of U.S. Southern Command and Northern Command with a range of Falcon tactical radio systems. Harris provided Falcon III RF-7800S Secure Personal and RF-7800V Combat Net radios as well as Falcon II RF-5800H high-frequency and RF-5800M multiband radios.
Harris	500.00	Mar 2013 – Increase in the ceiling value of its 2011 IDIQ contract with the U.S. Army. Under the contract, Harris provides military and land mobile radio systems to international partners of the U.S. departments of Defense and State. The contract enables the organizations to acquire from the entire Harris Falcon radio portfolio, including the RF-7800H, RF-7800M, and RF-7800S radios, as well as Harris Unity and other land mobile radios for public safety and first responder communications.
Harris	23.00	May 2013 – Order from a country in the Middle East as part of its tactical communications modernization program. Harris would provide the country with Falcon III radios, accessories, software, service, and support as part of a wideband tactical communications system. The system integrates a full suite of software-defined radios from the Harris Falcon III RF-7800 family, including the RF-7800S, RF-7800M, and RF-7800W High-Capacity Line-of-sight Internet Protocol radios.
Harris	847.00	Oct 2013 – The U.S. Army increased the ceiling value of a Harris IDIQ tactical communications contract by \$847 million. The initial contract was awarded in 2011. The increase enables the U.S. government to continue to acquire radios to assist international partners of the departments of State and Defense. The contract is part of the FMS program. The contract includes the entire HarrisFalcon family of radio solutions and accessories, including the PRC117G, RF-7800M, PRC-152A, and RF-7800S radios.
Harris	28.00	Dec 2013 – Orders to supply Falcon tactical radios to a nation in Latin America. The nation acquired Falcon III RF-7800S Secure Personal Radios and RF-7800V Combat Net Radios, along with Falcon II RF-5800H high-frequency radios.
Harris	88.00	Sep 2014 – Order to provide a country in the Middle East with radios from the company's RF-7800 family, including the RF-7800H, RF-7850M, and RF-7800S. The order also includes vehicular and base station systems, accessories, spares, and training services.
Harris	N/A	Jun 2018 – Harris (W52P2J-18-D-0008); Motorola Solutions (W52P1J-18-D-0009); Icom America Inc (W52P1J-18-D-0010); E.F. Johnson Co (W52P1J-18-D-0011); and Relm Communications Inc (W52P1J-18-D-0012) would compete for each order of the \$495 million firm-fixed-price contract for land mobile radio supplies and services. Work completed Jun 2023. U.S. Army Contracting Command, Rock Island Arsenal, IL, is the contracting activity.

N/A = Not Available

## Worldwide Distribution/Inventories

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RF-7800S contracts/orders have been announced from the Federative Republic of **Brazil**, the **Brunei Darussalam** Ministry of Defense, the government of **Iraq**, international partners of **U.S. Southern Command** and **U.S. Northern Command**, the Ministry of Defense of a **NATO** country, the **Norwegian Defense Forces**, and the **Swedish Defense**

**RF-7800S**

**Materiel Administration (FMV).** The radio has also been ordered by unidentified customer(s) in **Asia**, the **Middle East**, **Latin America**, and **Central Asia**.

**Forecast Rationale**

The forecast period should see production of the RF-7800S variant – part of the larger L3Harris Falcon III family of handheld radios – to meet the short-range communications needs (500 meters to 2 kilometers) of the U.S. and allied defense forces.

During the past several years, L3Harris has received multiple orders for the RF-7800S from countries outside the U.S. Latin America – in particular Brazil – will likely be a strong buyer.

L3Harris expanded its manufacturing capacity in Brazil to facilitate the production of several models of the Falcon tactical radio, including the RF-7800S, in support

of the country's armed forces. The company has said the increase in capacity is part of an overall company expansion in Brazil, which maintains the largest defense budget in Latin America.

Especially in the U.S., RF-7800 radios are typically ordered under very large, indefinite delivery/indefinite quantity contracts. Open-source contract information rarely, if ever, includes the actual number of radios to be produced for these orders. For this reason, the Ten-Year forecast is speculative in terms of annual totals.

**Ten-Year Outlook**

<b>ESTIMATED CALENDAR YEAR UNIT PRODUCTION</b>												
<b>Designation or Program</b>	<b>High Confidence</b>				<b>Good Confidence</b>			<b>Speculative</b>			<b>Total</b>	
	<b>Thru 2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>		<b>2034</b>
<b>L3Harris - Tactical Communications</b>												
<b>RF-7800S &lt;&gt; Armed Services &lt;&gt; Worldwide</b>												
	65,650	1,600	1,400	1,200	1,000	1,200	1,000	1,200	1,400	1,400	1,200	12,600
<b>Total</b>	65,650	1,600	1,400	1,200	1,000	1,200	1,000	1,200	1,400	1,400	1,200	12,600