

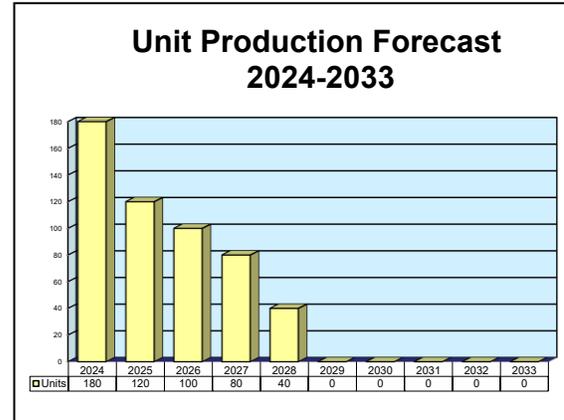
# ARCHIVED REPORT

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## PRC-150

### Outlook

- While existing purchases will continue to be supported, there is only a limited possibility of significant of PRC-150 radios for both international operator base and, to a lesser extent, U.S. forces
- System will likely be replaced by the newer, L3Harris-produced PRC-160 during later years of the forecast period



### Orientation

**Description.** The PRC-150 is a manpack, vehicular, and base station military radio.

**Status.** Limited production and service, ongoing support.

**Sponsor**

L3Harris  
 RF Communications Division  
 1680 University Ave  
 Rochester, NY 14610 USA  
 Tel: + 1 (585) 244-5830  
 Fax: + 1 (585) 242-4755  
 Website: <http://rf.harris.com>

**Application.** Dismounted soldiers, tactical vehicles, and other land-based platforms.

**Price Range.** The average price of one PRC-150 radio is estimated to be \$25,000.

**Note:** Among other factors, price appears to vary according to the number of radios ordered (the larger the quantity ordered, the lower the price).

### Contractors

**Prime**

<p><b>L3Harris - Tactical Communications</b></p>	<p><a href="http://www.l3harris.com">http://www.l3harris.com</a>, 1680 University Ave, Rochester, NY 14610 United States, Tel: + 1 (585) 242-3561, Fax: + 1 (585) 242-4483, Email: <a href="mailto:RFComm@harris.com">RFComm@harris.com</a>, Prime</p>
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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)

**PRC-150****Technical Data****General**

**Frequency Range:** 1.6 to 59.999 MHz

**Net Presets:** 75, fully programmable

**Frequency Stability:**  $\pm 0.5 \times 10^{-6}$

**RF Input/Output Impedance:** 50 ohm nominal, unbalanced

**Power Input:** 26 VDC (21.5 to 32 VDC)

**Data Interface:** Synchronous or asynchronous (RS-232C; MIL-STD-188-114A)

**Dimensions (with battery case):** 10.5 in W x 3.5 in H x 13.2 in D (26.7 cm x 8.1 cm x 34.3 cm)

**Radio Weight:** 10 lb (4.7 kg) without batteries

**Transmitter**

**Power Output:** 1, 5, 20 W PEP/Average -1/+2 dB (1-, 5-, 10-W FM)

**Audio Input:** 1.5 mV at 150 ohm or 0 dBm at 600 ohm for full-rated output

**Carrier Suppression:** Greater than 60 dB below PEP output (J3E mode)

**Undesired Sideband Suppression:** Greater than 60 dB below PEP output

**Spurious Outputs:** -50 dB relative to rated output, except harmonics, which are -40 dB

(Greater than 20 kHz from Fc) - Minimum for fo = 1.6-30 MHz

**Antenna Tuning Capability:** OE-505 10-ft (3 m) whip (1.6 to 60 MHz)

RF-1936P (AS-2259) NVIS (3.5 to 10 MHz)

RF-1940-AT001/RF-1941 dipole

**Receiver**

**Sensitivity - SSB:** -113 dBm (0.5  $\mu$ V) minimum for 10 dB SINAD

**Audio Output:** 15 mW at 1000 ohm to external handset

**Squelch:** Front panel adjustable, active squelch selectable

**IF Rejection:** Greater than 80 dB

**Image Rejection:** Greater than 80 dB (first IF image)

**Intermodulation Distortion:** -80 dB or better for two -30 dBm signals separated 30 kHz or more

**Overload Protection:** Receiver protected to 32 VRMS

**COMSEC Interoperability**

ANDVT/KY-99, ANDVT/KY-100, KG-84C, KY-57 VINSON (VHF), CITADEL (coalition)

**Environmental**

**Test Method:** Per MIL-STD-810E

**Vibration:** Ground tactical

**Immersion:** 3 feet (0.9 m) of water

**Operating Temperature:** -40°C to +70°C

**HF Features**

**Encrypted Data:** HF – MIL-STD-188-110B Appendix C (9,600 bps and 12,800 bps uncoded)

Appendix B 39 tone (to 2,400 bps)

Serial tone (to 9,600 bps)

STANAG 4285 (2,400 bps), STANAG 4415 (75 bps)

STANAG 4539 (9,600 bps), FSK (600 bps)

VHF: FSK (16 kbps)

**Automatic Link Establishment:** STANAG 4538 FLSU, MIL-STD-188-141B Appendix A with Appendix B AL-1 LP, including the scope command telephony call type

**Frequency Hopping:** Serial Tone ECCM

**Vocoder:** HF – LPC-10-52E (600/2400) MELP (600/2400); VHF – CVSD

**Datalink Layer Protocol (ARQ):** STANAG 4538 (3G), pFED-STD-1052

**VHF Features**

**Data:** Wideband FSK (16 kbps)

**Voice Digitization:** CVSD (16 kbps)



PRC-150

Source: Harris Corp

## Program Review

Harris Corporation introduced its PRC-150(C) radio in 2000. In the summer of 2001, Harris began shipping the radios to the U.S. Army's 82nd Airborne Division, which selected the PRC-150(C) radio in large part because of its embedded communications security (COMSEC).

The following summarizes orders and contracts for the PRC-150 received by Harris since 2001.

In September 2001, Harris announced that the National Security Agency (NSA) had certified the PRC-150(C) radio for communications security. In April 2002, Harris announced that it had received a \$17 million contract from the U.S. Special Operations Command (USSOCOM) for the PRC-150(C). In October 2002, Harris began shipping its PRC-150(C) radio to the U.S. Army Reserve.

In January 2005, the U.S. Army awarded Harris service contracts valued at more than \$30 million for the PRC-150(C). In March 2005, the U.S. Marine Corps awarded Harris an indefinite delivery/indefinite quantity (IDIQ) contract for the supply of PRC-150(C) radios, spares, and training. In December 2005, the Marine Corps increased the maximum value of this contract to \$586 million from \$75 million.

In March 2006, Harris received a \$58 million order for PRC-150(C) radios from the Army (Harris said the order was awarded to the company under the terms of a previously awarded IDIQ contract). During the same

month, Harris said the USMC had replaced some of its legacy radios with PRC-150(C)s.

Also in March, the USMC awarded Harris orders totaling approximately \$140 million for its PRC-150(C) and PRC-117F(C) radios (the USMC awarded these orders under two previously announced contracts). According to Harris, the USMC's orders replaced the following legacy radios: the PRC-104, PRC-113, and PSC-5.

In June 2006, the Army purchased more radios, awarding Harris contracts totaling approximately \$50 million for the PRC-150(C).

Harris received a delivery order in August 2006 totaling \$35 million from the U.S. Marine Corps Systems Command for PRC-150(C) radios. These radios were ordered to replace legacy radios (specifically, the MRC-138 and GRC-193) used by Marine Corps active-duty and reserve components.

In September 2006, Harris received a delivery order from the General Services Administration under previously awarded contract M67854-06-A-7034 for spares specific to the Marines' High Frequency Manpack Radio, also known as the PRC-150(C).

Harris received a \$130 million order in October 2006 from the U.S. Army for PRC-150(C) radios. One month later, the Marine Corps awarded Harris a delivery order (0038) against a previously awarded contract (M67854-

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05-D-7015) for 995 PRC-150(C) radios and 293 TRC-209 150-W high-frequency base stations.

In February 2007, Harris received a \$16 million contract from the U.S. Navy for VRC-110, VRC-103, and VRC-104 vehicular radio systems, possibly including the PRC-150(C).

In April 2007, the U.S. Navy awarded Harris an IDIQ contract for PRC-117F and PRC-150 radios and for the VRC-103, VRC-104(V)2, VRC-104(V)3, and VRC-104(V)4 vehicular radio systems.

In May 2007, Harris received a five-year IDIQ contract (with a not-to-exceed value of \$422 million) from the U.S. Special Operations Command to provide radios from its Falcon line of high-frequency multiband radio systems. Under this order, Harris was to deliver PRC-150(C) radios and related vehicular and base station systems, as well as provide installation and training, over a five-year period.

Harris received a \$45.2 million order in March 2008 to supply the U.S. Air Force with a complete suite of radios for the service's fleet of Mine Resistant Ambush Protected (MRAP) vehicles. Under this order, Harris supplied VRC-103 and VRC-104 vehicular radio systems, and possibly the PRC-150(C). In April 2009, Harris received a contract from the Polish Ministry of National Defense for PRC-152(C), PRC-117F(C), and PRC-150(C) radios.

In December 2009, Harris received a \$228 million order from the USMC to provide VRC-104 vehicular radio systems for use in U.S. DoD MRAP-All Terrain Vehicles (M-ATVs). This order included the PRC-150(C).

In February 2010, Harris received another order from the Marine Corps for VRC-104 systems for use in its M-ATVs. The order was valued at \$78 million.

In April 2010, Harris received an order from the Australian Department of Defence for PRC-152(C) handheld radios and PRC-117F, PRC-117G, and PRC-150(C) manpack radios.

In May 2010, the U.S. Department of Defense awarded Harris a \$139 million order for VRC-104 radio systems. This VRC-104 system includes the PRC-150(C). The radios would be installed in new standard-size MRAP vehicles and M-ATVs.

In September 2010, the U.S. Navy awarded Harris a \$70 million ceiling increase modification to a previously awarded contract for the procurement of PRC-117, PRC-150, and PRC-152 radios, plus ancillary parts. One month later, the U.S. Army awarded the company a \$9 million order for PRC-150(C) radios.

In February 2011, Harris received a \$9 million order for PRC-150(C) radios from the U.S. Army.

Harris then announced that from April through July 2011, the company had received some \$58.1 million in orders from the U.S. Army for VRC-104 radio systems for use in MRAP vehicles.

In July 2011, Harris received orders totaling \$16 million to supply the U.S. DoD with a range of military radios, including the PRC-117G, PRC-152(C), RF-310M-HH, and VRC-104.

In December 2011, the U.S. Navy awarded Harris a modification to a previously awarded contract (N00039-07-D-0001) for the procurement of its handheld, manpack, fixed-mount, vehicular and/or base station radio families, including the PRC-117, PRC-150, and PRC-152, plus ancillary parts.

In January 2012, Harris received a \$235 million order to deliver military radios to the Australian Department of Defence. Under the order, Harris would supply the ADF principally with PRC-152(C) radios, but also the PRC-150(C).

In August 2012, the U.S. Navy awarded Harris a \$297 million IDIQ contract to deliver tactical radio systems. The five-year contract enabled the Navy to acquire Harris's Falcon tactical radios and accessories. The contract covered all major radio types and frequency ranges in the Falcon family, including the PRC-117G wideband manpack, PRC-152 multiband handheld, and PRC-150(C) high-frequency manpack radios.

In September 2012, Harris received a \$10 million order to supply the Polish Ministry of National Defense with PRC-117G multiband manpack and PRC-150(C) high-frequency manpack radios.

Harris made two announcements in December 2013 regarding orders for its PRC-150 radio. The first was a \$100 million order to supply PRC-150(C)s and PRC-152s to the Australian Department of Defence. This order marked the latest phase of the Australian DoD's Joint Project 2072 communications modernization program. The second announcement was a \$36 million order to provide PRC-150(C) radios to an unnamed NATO country.

In March 2015, Harris received a \$16 million order from a NATO nation for PRC-117, PRC-152A, and PRC-150 radios.

In September 2015, Harris received a \$13 million order to supply the U.S. Air National Guard (ANG) with radio systems. Each system would include multiple PRC-117(G) radios, the PRC-150 radio, and the XG-100M radio. The radios are networked with the

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Harris RF-7800I Advanced Vehicular Intercom System and integrated into the ANG's HMMWVs.

In April 2016, Harris announced it had received two orders totaling \$29 million to provide its Falcon family of tactical radios to a customer in Europe as part of an ongoing standardization program designed to ensure interoperability during coalition operations. Harris would supply PRC-152A handheld radios, PRC-117(G) manpack radios, and PRC-150(C) tactical radios.

In February 2017, Harris announced it had been awarded a five-year, \$403 million IDIQ contract to provide tactical radio spares and components for DLA Land and Maritime and the U.S. Army Communications-Electronics Command. The contract is a continuation and expansion of previous contracts with the Defense Logistics Agency and allows the Army to secure spare and replacement parts as necessary to support Harris's PRC-117G, PRC-150(C), VRC-104, PRC-152, and VRC-114 radios.

In February 2017, Harris announced that the RF-300H manpack is replacing the U.S. Type 1 PRC-150(C).

In May 2017, Harris announced it had received contracts valued at \$90 million from a European nation

for tactical radios – including the PRC-150(C) and PRC-152(A) – as part of the country's communications readiness program.

In late 2019, the newly formed L3Harris announced that a newer manpack radio, the PRC-160(V), with next-generation HF technologies would be offered for new procurement over the PRC-150(C) moving forward. In December 2019, the company received a \$50 million follow-on delivery order for the PRC-160(V) from the U.S. Marine Corps.

In December 2021, L3Harris was awarded a \$45.8 million contract to integrate the PRC-160 into Special Operations Forces MH-47 and MH-60 aircraft.

Two years later, in December 2023, the U.S. State Department approved a Foreign Military Sale to Poland of communications equipment and related elements of logistics and program support for an estimated cost of \$255 million. The request comprised systems including PRC-117G, PRC-152A, PRC-158, PRC-160, PRC-163, and PRC-167 radios; Global Positioning System (GPS) receivers enabled by Selective Availability Anti-Spoofing Module (SAASM) or M-Code; support equipment; spare parts; technical manuals and other related elements of logistics and program support.

## Contracts/Orders & Options

<u>Contractor</u>	<u>Award (\$ millions)</u>	<u>Date/Description</u>
Harris	78.00	Feb 2010 – Order from the USMC to manufacture and deliver VRC-104 vehicular radio systems for use in its MRAP-ATVs. The VRC-104 system includes the PRC-150(C).
Harris	112.00	Apr 2010 – Order from the Australian DoD for PRC-152(C) handheld and PRC-117G, PRC-117F, and PRC-150(C) manpack radios. The bulk of the order is for the PRC-152(C).
Harris	139.00	May 2010 – Order from the U.S. DoD for VRC-104 radio systems for the Joint MRAP Vehicle program. The VRC-104 system includes the PRC-150(C).
Harris	9.00	Feb 2011 – Order from the U.S. Army for the PRC-150(C).
Harris	20.40	Apr 2011 – Order from the U.S. Army for VRC-104 radio systems for use in MRAP vehicles. The VRC-104 system includes the PRC-150(C).
Harris	19.90	May 2011 – Contract from the U.S. Army for VRC-104 radio systems for use in MRAP vehicles. The VRC-104 system includes the PRC-150(C).
Harris	17.80	Jul 2011 – Order from the U.S. Army for VRC-104 radio systems for use in MRAP vehicles. The VRC-104 system includes the PRC-150(C).
Harris	16.00	Jul 2011 – Orders totaling \$16 million to supply the U.S. DoD with a range of military radios, including the PRC-117G, PRC-152(C), RF-310M-HH, and VRC-104. The VRC-104 system includes the PRC-150(C).

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<u>Contractor</u>	<u>Award (\$ millions)</u>	<u>Date/Description</u>
Harris	46.80	Dec 2011 – Modification to a previously awarded IDIQ, firm-fixed-price contract (N00039-07-D-0001) from the U.S. Navy for the procurement of its handheld, manpack, fixed-mount, vehicular and/or base station radio families, including the PRC-117, PRC-150, and PRC-152, plus ancillary parts. Work was completed Sep 2012. The Space and Naval Warfare Systems Command, San Diego, CA, was the contracting activity.
Harris	235.00	Jan 2012 – Order to deliver military radios to the Australian DoD. Under the order, Harris would supply the ADF principally with PRC-152(C) radios, but also the PRC-150(C). Harris would support radio delivery, installation, and training.
Harris	296.70	Aug 2012 – FFP, IDIQ contract from the U.S. Navy for the following handheld, manpack, fixed-mount, vehicular and/or base station radio families: PRC-117, PRC-150, and PRC-152, plus ancillary parts. Work was completed Sep 2017. The Space and Naval Warfare Systems Command, San Diego, CA, was the contracting activity. (N00039-12-D-0001)
Harris	10.00	Sep 2012 – Order to supply the Polish MoND with PRC-117G and PRC-150(C) radios.
Harris	36.00	Dec 2013 – Order from an unnamed NATO country for PRC-150(C) radios. Harris would provide the radios in both manpack and vehicular configurations.
Harris	16.00	Mar 2015 – Order from a NATO nation for PRC-117, PRC-125A, and PRC-150 radios.
Harris	13.00	Sep 2015 – Order to supply the U.S. Air National Guard with radio systems, including the PRC-117G, PRC-150, and XG-100M. The radios are networked with the Harris RF-7800I Advanced Vehicular Intercom System and integrated into the ANG's HMMWVs. Harris also would provide installation, training, and ongoing service and support.
Harris	29.00	Apr 2016 – Harris received two orders totaling \$29 million to provide its Falcon family of tactical radios to a customer in Europe. Harris will supply PRC-152A handheld radios, PRC-117G manpack radios, and PRC-150© tactical radios.
Harris	403.00	Feb 2017 – Harris received a five-year, \$403 million IDIQ contract to provide tactical radio spares and components for DLA Land and Maritime and the U.S. Army Communications-Electronics Command. The contract allows the Army to secure spare and replacement parts for PRC-117G, PRC-150(C), VRC-104, PRC-152, and VRC-114 radios.
Harris	90.00	May 2017 – Harris received contracts valued at \$90 million from a European nation for tactical radios to equip the country's communications readiness program. The contracts include the provision of PRC-150(C) and PRC-152A radios.
Harris	90.00	Jun 2020 – Modification (P00019) to contract W91CRB-16-D-5006 to procure radios, ancillaries, spare parts, and services. Work completed Jun 2021. The U.S. Army Contracting Command, Aberdeen Proving Ground, MD, was the contracting activity.

**Worldwide Distribution/Inventories**

Thus far, L3Harris has sold its PRC-150(C) radio to the **U.S. Department of Defense** and to the **U.S. Air Force, Air National Guard, Army, Army Reserve, Marine Corps, Navy, and Special Operations Command**. It has also sold the radio to the **Polish Ministry of National Defense** and the **Australian Department of Defence**, and to an unnamed NATO country (possibly more than one).

## Forecast Rationale

The forecast period may see production and support of PRC-150(C) radios for international users and, to a lesser extent, U.S. forces, driven mostly by the likely need for replacement systems.

While prime contractor L3Harris still supports the PRC-150(C), the newer PRC-160(V) manpack, with next-generation HF technologies, is also being offered. In December 2019, the company received a \$50 million follow-on delivery order for the PRC-160(V) from the U.S. Marine Corps.

In December 2021, L3Harris was awarded a \$45.8 million contract to integrate the PRC-160 into Special Operations Forces MH-47 and MH-60 aircraft.

Two years later, in December 2023, the PRC-160 was included in a Foreign Military Sale to Poland of a wide variety of radios. That the PRC-150 was not included, but had been previously acquired by the nation, would strongly suggest that future FMS activity will likely see similar replacement activity.

## Ten-Year Outlook

ESTIMATED CALENDAR YEAR UNIT PRODUCTION												
Designation or Program	High Confidence					Good Confidence			Speculative			Total
	Thru 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
<b>L3 Harris</b>												
<b>PRC-150 Classified (C) &lt;&gt; Armed Services &lt;&gt; Worldwide</b>												
	6,555	100	80	100	80	40	0	0	0	0	0	400
<b>PRC-150 Classified (C) &lt;&gt; United States &lt;&gt; Department of Defense</b>												
	19,456	80	40	0	0	0	0	0	0	0	0	120
<b>Subtotal</b>	26,011	180	120	100	80	40	0	0	0	0	0	520
<b>Total</b>	26,011	180	120	100	80	40	0	0	0	0	0	520