

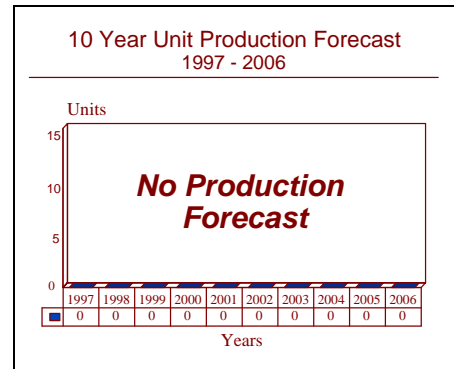
# ARCHIVED REPORT

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## M110 203 mm Self-Propelled Howitzer - 4/97

### Outlook

- The serial production of the M110 is complete
- A total of 1,163 M110 systems was manufactured, but some were converted to the M107 and vice versa
- A minimal amount of modernization and retrofit potential exists for the remaining systems



### Orientation

**Description.** A tracked 203 millimeter self-propelled artillery system

**Sponsor.** The development and United States procurement of the M110 was sponsored by the United States Department of Defense through the United States Army Materiel Command and Armament, Munitions and Chemical Command.

**Contractors.** The M110 was developed and originally manufactured by Pacific Car and Foundry (now PCF Defense Industries); Renton, Washington. Other manufacturers of the M110 were FMC Corporation; San Jose, California, and Bowen-McLaughlin-York (later BMY Combat Systems); York, Pennsylvania; this firm was the last manufacturer of the M110. In 1994, FMC Corporation merged with BMY Combat Systems into a new firm called United Defense Limited Partnership, headquartered in Arlington, Virginia. The major subcontractors include the Allison Transmission Division of General Motors Corporation, Detroit Diesel Corporation and Watervliet Arsenal.

**Licensees.** Komatsu Industries of Yokohama, Japan manufactured the M110 under license for Japan.

**Status.** Production of the last 40 units by the then Bowen-McLaughlin-York was completed in 1984. A United States Army program for the upgrade of all M110 equipment to A2 standard was completed in the late eighties. The licensed production program in Japan is complete.

**Total Produced.** A total of 1,163 M110 systems in all models from all sources was manufactured; however, a number of M107 175 millimeter systems have been converted to the M110, so the actual M110 inventory is a good deal higher.

**Application.** Primary divisional level fire support for the field army.

**Price Range.** The M110A2 was last offered for export at \$1.3 million per unit in 1985 dollars.

## Technical Data

**Crew.** Thirteen: five in the howitzer and eight in the tracked support vehicle.

**Muzzle Brake.** On the M110A2 only - double baffle

**Recoil System.** Hydropneumatic

**Breech Mechanism.** Interrupted screw stepped thread

**Dimensions.** The following data are for the M110 with the M110A2 in parentheses.

	<u>SI units</u>	<u>US units</u>
Length overall	7.47 (10.73) meters	24.50 (35.20) feet
Width	3.15 meters	10.33 feet
Height	2.93 (3.14) meters	9.61 (10.30) feet
Combat weight	26.53 (28.35) tonnes	29.24 (31.25) tons
Fuel capacity	1,137 (984) liters	302.39 (261.70) gallons
Ordnance caliber	203 millimeters	8.00 inches
Ordnance length	5.08 (7.52) meters	16.66 (24.67) feet

**Performance.** The automotive performance is on a metalled road. The greater weight of the long M201 cannon is reflected in the reduced speed and road range of the M110A2.

Maximum speed	56 kilometers per hour	34.8 miles per hour
Maximum range	725 (523) kilometers	450.2 (324.8) statute miles
Step	1.02 meters	3.35 feet
Trench	2.36 (1.91) meters	7.74 (6.27) feet
Slope	30%	30%
Gradient	60%	60%
Fording	1.01 meters	3.31 feet
Elevation	+65°	+65°
Depression	-2°	-2°
Traverse (total)	60°	60°
Maximum ordnance range	16.95 (24.0) kilometers	18,536.7 (26,246.4) yards
Maximum rate of fire	2 rounds per minute	2 rounds per minute
Sustained rate of fire	1 round per minute	1 round per minute

**Engine.** Detroit Diesel Corporation provides the 8V-71T supercharged, liquid-cooled, eight-cylinder diesel engine rated at 302.13 kilowatts (405 horsepower) at 38.34 revolutions per second (2,300 revolutions per minute). The power-to-weight ratio is 11.39 (10.66) kilowatts per tonne (13.85 (12.96) horsepower per ton). A 24-volt electrical system with four 12 volt model 6TN batteries is the electrical fit of the M110.

**Gearbox.** The Allison Transmission Division of General Motors Corporation provides the XTG-411-2A cross drive powershift gearbox with four forward and two reverse gear ratios.

**Ammunition.** The M110 fires the following ammunition types: High Explosive (M106 conventional and M404 and 509/509A1 submunition dispensing), M426 chemical, M422 and M753 nuclear, M650 rocket assisted projectile.

**Suspension and Running Gear.** The M107 uses a torsion bar type suspension with five dual-tired road wheels on each side; the rear road wheel acts as the idler. There are no track return rollers and each road wheel is provided with a hydraulic shock damper.

**Fire Control.** For indirect fires, the gunner is provided with the M115 panoramic sight; for direct fires, the M116C is provided. Other fire control equipment is the M1A1 gunner's quadrant and the M15 elevation quadrant.

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