

PORTABLE TARGET PROGRAMMING (PTP®) SYSTEM SIPPICAN PART NUMBER 309065-1

System Overview of the Portable Target Programming (PTP®) System

The MK 39 EMATT Field Programmability System (FPS) designed by Sippican, Inc. gives the MK 39 user total control of the creation and maintenance of run geometries. The user can customize geometries to compensate for changing operational requirements and diverse oceanographic conditions, an important feature not previously achievable with factory programmed targets.

The Portable Target Programming (PTP®) system is a portable storage device that links the field programmable target with the Run Geometry Application (WinRGA). A MK 39 user creates geometries with the WinRGA and downloads a target's three geometries to the PTP® programming system. The PTP® programming system is transported to the stowage location of the target and is used to load the previously created geometries into the target. The battery-powered PTP® programming system can program at least six (6) targets before requiring a charge.

The relationship among the three components of the Field Programmability System is shown below.

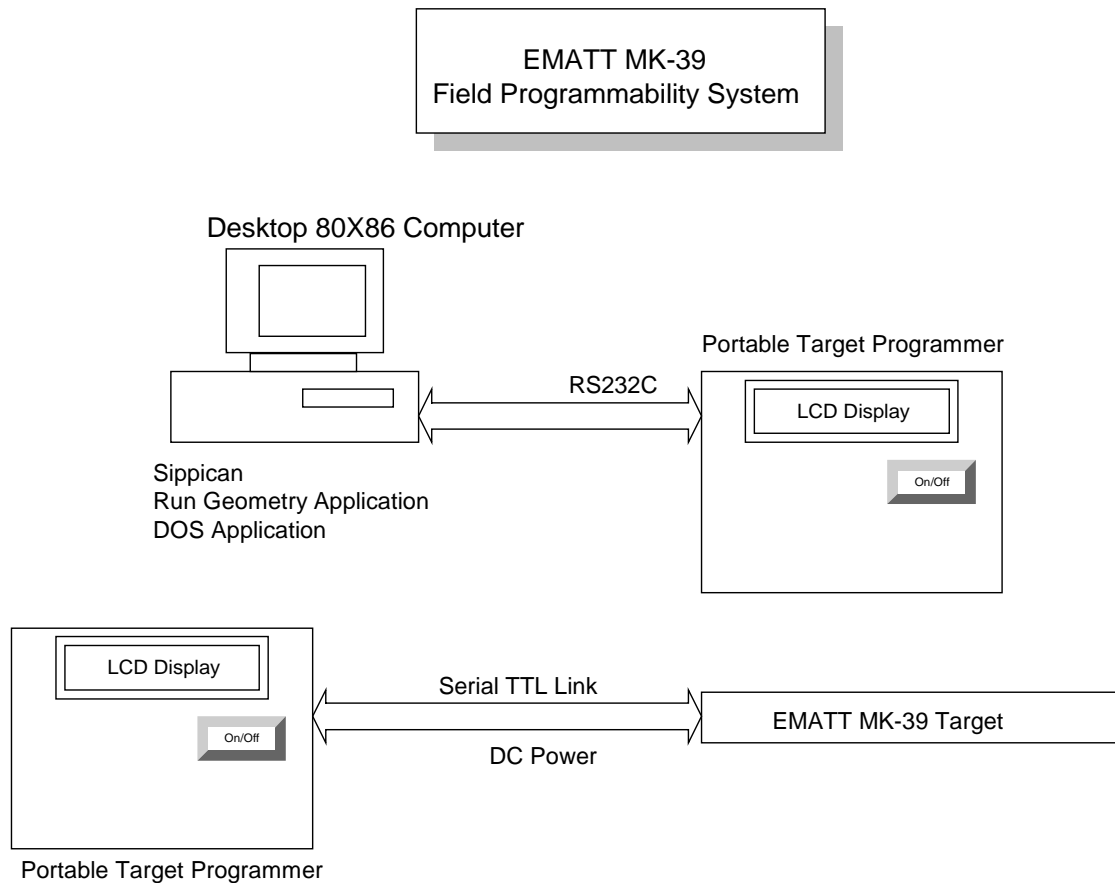


Figure 1-1. Field Programmability System

Features and Specifications

The PTP® programming system is a battery-powered storage device, capable of receiving and transmitting geometries from the Win RGA to the target. Its major features include:

- Embedded controller with LCD display
- Rechargeable, NiCd battery packs
- Smart charging system with discharge-before-charge cycle
- Simple, one-button operation
- Automatic input power switching

PTP® Programming System Features

Embedded Controller

The PTP® programming system uses a miniature controller designed to control power and process data to the MK 39 target.

Rechargeable, NiCd Batteries

The battery subsystem supplies a minimum 30 VDC @ 1 amp to the target as well as supply power to the embedded controller and other special support circuits. The batteries are organized into 3, 10-cell packs. The embedded controller can configure the battery packs in series to power the target or in a parallel configuration for charging. A special circuit monitors the battery and signals the embedded controller when the output voltage dips below the minimum threshold for powering the target.

Smart Charging System

The charging system is designed to industry standards. The PTP® programming system contains three separate charging systems, one for each battery pack. The chargers are designed to recharge a battery pack in about three hours and discharge the pack in about three hours. A full discharge-before-charge cycle takes no more than six hours to complete.

One-Button Operation

The use of an embedded controller has helped make the PTP® programming system a very simple device to use. The only user control is the on/off button. When the PTP® programming system is powered-up, the controller monitors several input lines and changes operation mode accordingly. Connecting the PTP® programming system to a host computer executing the WinRGA switches the PTP® programming system to host link mode; connecting the PTP® programming system to a target switches the PTP® programming system to target link mode. the PTP® programming system informs the user of its status via the LC display.

Automatic Power Switching

The PTP® programming system's internal power supply is used to recharge the batteries and power the embedded controller during recharge. The power supply can accept a wide range of input voltages (85 VAC to 264 VAC) and frequencies (47 Hz to 440 Hz). The user simply connects the appropriate cord set into the PTP® programming system to switch input voltage.

PTP® Programming System Specifications

Environment, Operating

Temperature: 0 - 50 C
Humidity: 10% - 90% non-condensing
Vibration: 1.04g RMS 10-500 Hz
Shock: 1.0g 2-axis

Environment, Storage

Temperature: -5 - 75C
Humidity: 5% - 95% non-condensing

Power Supply

Voltage: continuous 85 VAC to 264 VAC
Frequency: 47 Hz - 440 Hz

Batteries

Technology: Nickel Cadmium
Cell Size: AA
Configuration: 3 packs of 10 cells
Recharge Time (Max.): 3 hours
Discharge Time (Max.): 3 hours

Communications

Host Link Port: RS232C (TxD, RxD, DTR, GND)
Target Link Port: Serial TTL (TxD, RxD, GND)

Dimensions

W x H x D: 13.1804 x 6.000 x 11.1800 in
33.4874 x 15.240 x 28.3972 cm

Weight: 16 lbs (approximate)
7.26 KG

Computer Requirement

386 or Better
VGA Capability

Computer Application

Windows compatible
Program Size ~ 200K

Field Programmability System

EMATT Portable Target Programming system, P/N 309065-1, which includes:

- Portable Target Programming system
- Application Software on 3-1/2 HD Disk
- Host Link Serial Cable
- Target Link Serial Cable
- A/C Power Cord
- 1 Run Geometry Application Manual
- 1 Portable Target Programmer User's Manual