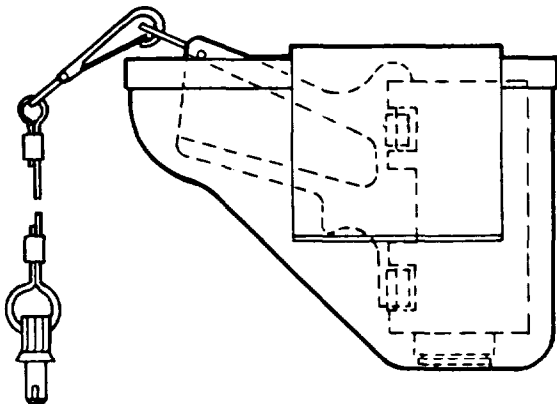


Technical Manual

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE

CONTROLLER'S GUN, SIMULATOR SYSTEM, LASER



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OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT,
AND GENERAL SUPPORT MAINTENANCE MANUAL
FOR
CONTROLLER'S GUN, SIMULATOR SYSTEM, LASER

Current as of 29 August 1981

REPORTING OF ERRORS

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. SCOPE. This manual contains operating and maintenance instructions for the Controller's Gun, Simulator System, Laser, which is part of the Multiple Integrated Laser Engagement System (MILES). Maintenance instructions are for operator/crew, organizational, direct support, and general support maintenance levels.

Appendix A contains a list of references applicable to operation and maintenance of the controller's gun. Appendix B outlines the Maintenance Allocation Chart (MAC). Appendix C contains the Repair Parts and Special Tools List (RPSTL).

1-2. FORMS AND RECORDS. Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

Section 11. DESCRIPTION AND DATA

1-3 DESCRIPTION. The controller's gun (figure 1-1) is a lightweight, hand-held device capable of interrogating MILES man-worn and vehicle-mounted laser detection systems to determine proper operation in the field. The controller's gun assembly has a green controller key and a standard small weapon battery-powered laser transmitter. The gun is carried in a holster attached to the service belt.

The controller's gun transmits three codes to cause (1) a man "kill"; (2) a universal "kill" (man or vehicle); or (3) a "near miss" (man or vehicle). The desired codes for (1) and (2) are selectable by pressing a pushbutton switch on the rear and pulling the trigger at the same time. The selected code is continually transmitted as long as the trigger and switch are pressed.

The near miss code need not be selected; pressing the trigger alone selects "near miss."

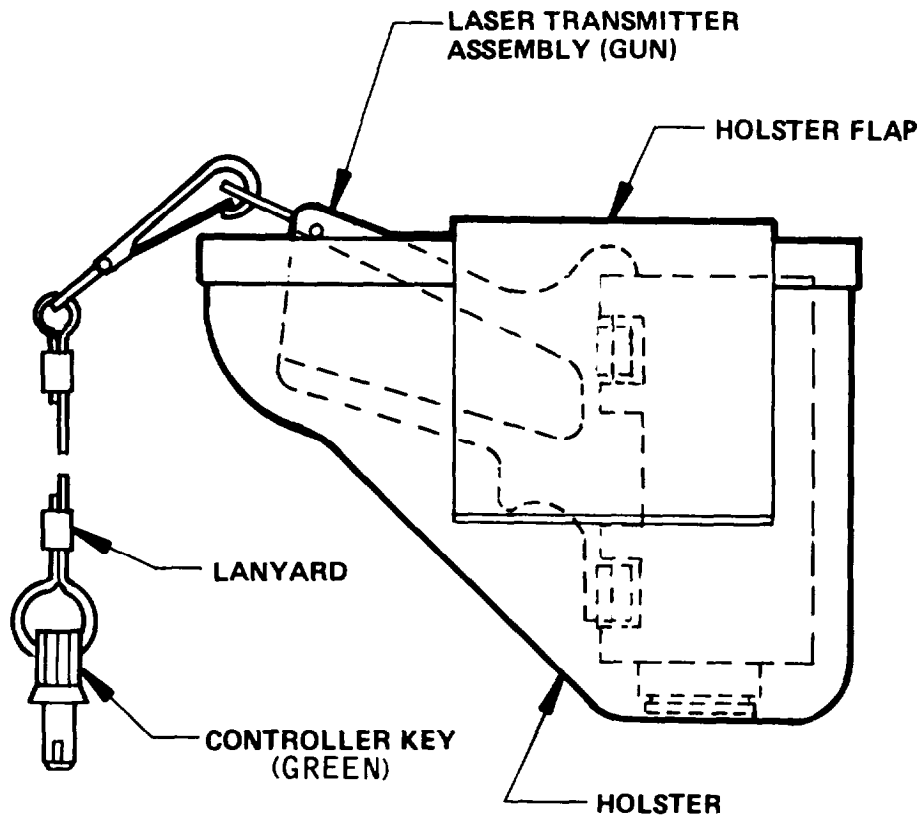
The encoder for the controller's gun is designed as a microprocessor base unit. Inputs to the encoder are:

- Trigger activation
- Man hit switch input
- Universal hit switch input

Outputs from the encoder are:

- Laser load pulse
- Laser fire pulse
- Light emitting diode (LED) trigger

The microprocessor is programmed to an idle mode between encoder operations to conserve power.



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Figure 1-1. Controller's Gun, Simulator System, Laser

Laser transmission is at 3 kHz bit rate for the 11-bit code words used in MILES. The encoder controls and generates one laser load pulse to charge the laser load capacitor, and one laser fire pulse to fire the laser. The firing indicator LED is triggered from the encoder laser fire pulses.

The green controller key is inserted into receptacles located on the various MILES simulators. Depending on which MILES-equipped item is being used, the controller key performs one or more of the following actions:

- Initializes the simulator.
- Turns off audio (vehicle intercom tone) and the visual alarm associated with the combat vehicle kill indicator (CVKI).
- Resets weapon or system for operation.

- Restores a basic ammunition load to a weapon.
- Resets the man worn laser detector (MWLD) when the key is inserted and turned in the MWLD harness key receptacle.

The controller's gun is not rounds-limited, but has a continuous supply of ammunition. When the trigger is pulled, continuous pulses are emitted until the trigger is released. A light-emitting diode (LED) lights during firing.

The controller universal kill code is unique in the MILES because the controller's gun can kill any MILES-equipped man or vehicle.

All electronic components required for providing signals to the laser driver