



**Australian Government**

**Department of Defence**

**Estate and Infrastructure Group**

# **RANGE LIVE FIRE TARGET EQUIPMENT MAINTENANCE REQUIREMENTS**

Version No:	V1.1
Release Date:	20 Nov 2015

**Authorised By:**

A handwritten signature in black ink, appearing to read "DW Graham".

**Colonel DW Graham**

Director of Operations and Training Area Management

## RANGE LIVE FIRE TARGET EQUIPMENT MAINTENANCE

### INTRODUCTION

1. Range Live Fire Target Equipment (RLFTE), is a system that helps the Australian Defence Force (ADF) meet its core capability training. This instruction details the maintenance of target equipment and systems.
2. Operation of the targets is performed by Range Control Staff / Estate Maintenance and Operation Services (EMOS) personnel. All deeper level maintenance is conducted by the Estate Upkeep Contractors. Engineering and configuration control is managed by the National Fleet Manager – Director of Operations and Training Area Management (DOTAM).

### PURPOSE

3. The purpose of this instruction is to describe the maintenance necessary to:
  - a. maintain capability and keep the range live fire target systems working and available, and
  - b. extend the economic life of target equipment.

### APPLICABILITY

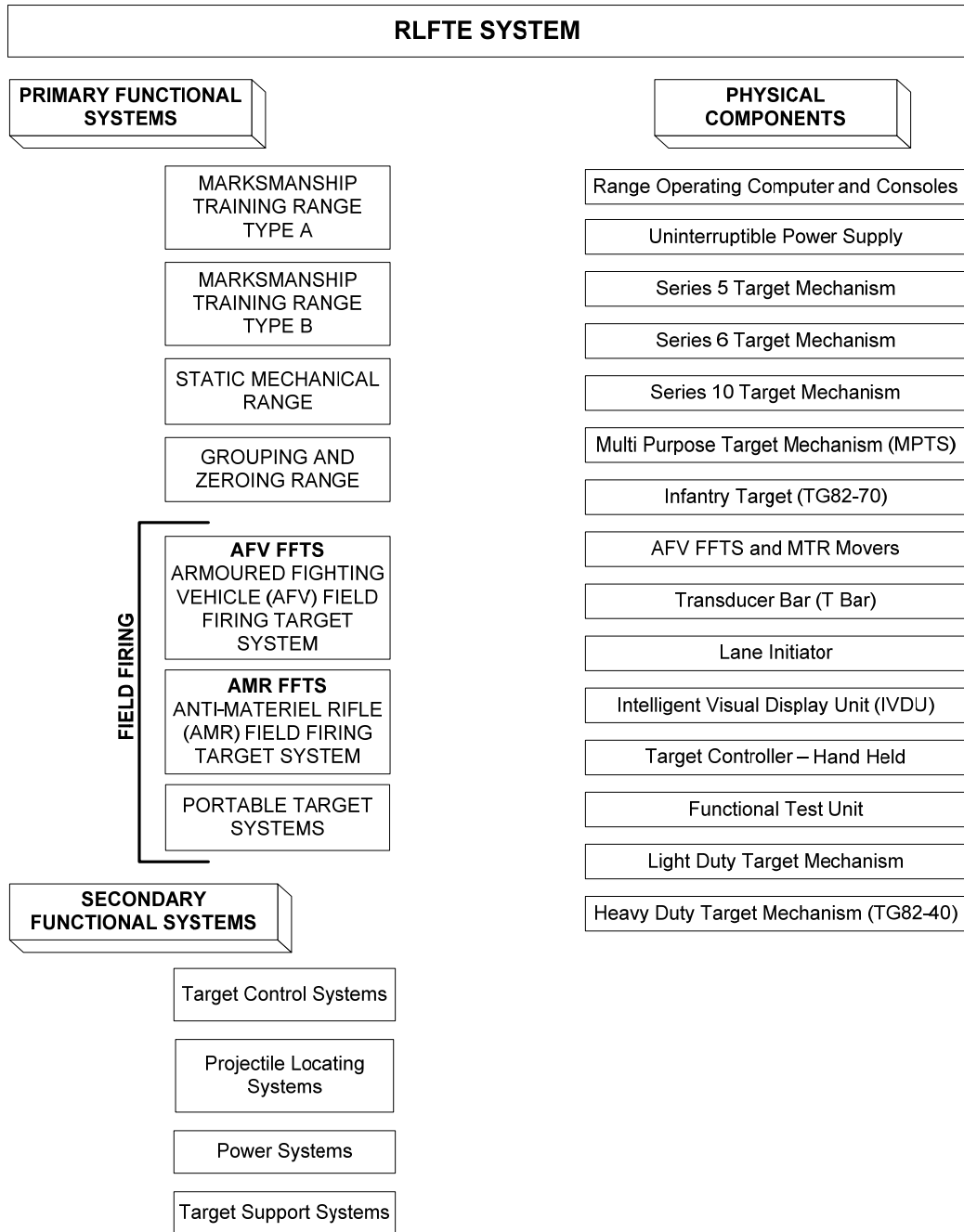
4. This instruction is applicable to:
  - a. Estate Maintenance and Operation Services (EMOS) and
  - b. Estate Upkeep Contractors.

### RLFTE MAINTENANCE

5. Materiel maintenance for the RLFTE System includes:
  - a. **Operating Level Maintenance (OLM).** Operating Level Maintenance involves checking and inspection of equipment before use, between use and after use. It also involves minor fault finding and some component removal and replacement. OLM tasks are performed by appropriately authorised Range Control Staff or EMOS Contractors.
  - b. **Intermediate Level Maintenance (ILM).** Intermediate Level Maintenance involves routine inspection, checking and preventative maintenance of equipment, rectification of faults and component removal and replacement. ILM tasks are performed by qualified RLFTE maintenance personnel.
  - c. **Scheduled Maintenance.** Scheduled Maintenance is maintenance that is planned in accordance with an authorised maintenance policy.
  - d. **Unscheduled Maintenance.** Unscheduled maintenance is initiated by the reporting of a fault (referred to as an Unserviceability) using an AE547 Service Request form through IBIS or Garrison and Estate Management System (GEMS).
6. Scheduled OLM and ILM Maintenance of the RLFTE System are to be conducted at the maintenance intervals detailed in Annex A.
7. Tasks for OLM and ILM are detailed Annex B.
8. Annex C details types of RLFTE equipment.

## RLFTE SYSTEM BOUNDARY

9. The RLFTE System is made up of Functional Systems and Physical Components installed at individual Training Areas. This instruction only deals with higher level systems and generic physical components. The RLFTE System Boundary is diagrammatically represented at Figure 1.



**Figure 1 – RLFTE System Boundary**

## RESPONSIBILITIES

10. **Range Control Officer** is responsible for verifying:
  - a. an adequate level of equipment availability and serviceability to meet training requirements as booked under the Training Area Safety and Management Information System (TASMIS) for their TA;

- b. that RLFTE operation and maintenance is performed in accordance with operating manuals and this instruction.
11. **Regional Estate and Infrastructure (E&I) Management** is responsible for:
- a. inventory accounting on GEMS for maintenance purposes;
  - b. inventory accounting on ROMAN for financial accounting purposes; and
  - c. funding range operation, scheduled and unscheduled maintenance.
12. **EMOS Contractor** is responsible for:
- a. operation of the RLFTE
  - b. operating Level Maintenance (OLM) in accordance with operating manuals and this instruction;
  - c. ensuring staff are trained to conduct operation and maintenance activities;
  - d. reporting equipment failures;
  - e. undertaking the annual inventory and configuration status accounting; and
  - f. ensure that equipment transported to/from the TA is packed to ensure nil damage to equipment during transportation.
13. **Estate Upkeep Contractor** is responsible for:
- a. conducting Intermediate Level Maintenance (ILM) - Scheduled Maintenance at the maintenance intervals and servicing schedules for equipment detailed in this instruction;
  - b. conducting Unscheduled Maintenance as required;
  - c. ensuring that only parts supplied, or authorised for use, by the original equipment manufacturer are used for maintenance and the target equipment configuration is not changed except in accordance with an upgrade authorised by DOTAM;
  - d. retaining records of maintenance and equipment servicing and make these available for examination, analysis or handover;
  - e. ensuring that personnel responsible for RLFTE maintenance are suitably qualified and have undertaken appropriate training;
  - f. maintaining items so as not to void any warranty without prior approval of Regional DSG Management and endorsement of DOTAM;
  - g. forecasting a budget to replace equipment that is still required but is beyond economical repair;
  - h. ensuring that RLFTE maintenance work is conducted in accordance with Defence and CMS Contract Occupational Health and Safety and environmental requirements;
  - i. ensuring that equipment transported to/from the TA is packed to ensure nil damage to equipment during transportation; and
-

- j. booking of Ranges on TASMIS for the conduct of Scheduled and Unscheduled Maintenance and complete post activity reports on TASMIS after maintenance completion;

**Annexes:**

- A. RLFTE Authorised Maintenance Policy
  - B. RLFTE OLM and ILM Servicing Schedules
  - C. RLFTE Types of Equipment
-

## ABBREVIATIONS

ADF	Australian Defence Force
AFV	Armoured Fighting Vehicle
AFVFFTS	Armoured Fighting Vehicle Field Target System
AMR	Anti Material Rifle
CATC	Combined Arms Training Centre
CI	Configuration Item
COTS	Commercial-off-the-Shelf
DDOTAM	Deputy Director Operations and Training Area Management
DOTAM	Directorate/Director of Operations and Training Area Management
DTARP	Directorate/Director Training Area Regulation and Policy
E&IG	Estate and Infrastructure Group
ECP	Engineering Change Proposal
EMOS	Estate Maintenance and Operation Services
GEMS	Garrison and Estate Management System
GZR	Grouping and Zeroing Range
IAW	In Accordance With
ILM	Intermediate Level Maintenance
IVDU	Intelligent Visual Display Unit
MPTS	Multi Purpose Target System
MTR	Marksmanship Training Range
OEM	Original Equipment Manufacturer
OH&S	Occupational Health and Safety
OLM	Operating Level Maintenance
RCO	Range Control Officer
RLFTE	Range Live Firing Target Equipment
SMR	Static Mechanical Range
TA	Training Area
TASMIS	Training Area Safety and Management Information System
T-Bar	Transducer Bar
TRAMM	Technical Regulation of Army Materiel
TSN	Technical Support Network

---

## GLOSSARY OF TERMS

Authorised Maintenance Policy	Policy that details the authorised scheduled maintenance activities that are to be performed on equipment and systems.
Cannibalisation	The removal of a serviceable asset from a higher assembly to be fitted to another higher assembly to make that higher assembly serviceable, when nil spares are available.
Configuration/Engineering Control/Management	The discipline that applies technical and administrative direction to the design, development, production, introduction into service and support of materiel.
Configuration Item	An item that is deemed from an engineering and maintenance aspect that requires concise management.
Continuation Training	Formal refresher training for personnel.
Design Approval	Defence authorisation of an OEM's authorised design.
Design Authority	Authorisation of a OEM design conducted by the OEM Senior Engineer.
Deviation	A variation that deviates from the standard or norm
Functional System	A functional system that identifies the function conducted by a group of Physical Systems or CIs.
Intermediate Level Maintenance	Intermediate Level Maintenance involves inspection and checking of equipment, rectification of faults and component removal and replacement. ILM is conducted by authorised technical/engineering personnel.
Type of Equipment	Type of Equipment is a kind, class or group of equipment, which may be an Assembly, Sub-assembly or Part, typically identified by Part Number.
Technical Support Network	Organisations that are used to provide authoritative and when required independent engineering advice and peer review of requirements, designs, test and certification documentation.
Maintenance Activity	A Maintenance Activity is the term used to identify defined scheduled maintenance processes. Maintenance Activities specifically exclude unscheduled maintenance.
Operating Level Maintenance	Operating Level Maintenance involves inspection/checking of equipment before use, between use and after use and on an as required basis. OLM shall be conducted by trained operators.
Original Equipment Manufacturer	The manufacturer of the product who also owns the IP
Physical System	A physical system identifier that identifies an end composite of many grouped CIs; eg Multi Purpose Target Mechanism, Controller, Transceiver.
Professional Service Providers	Organisations or personnel who provide professional and in some cases specialist services.
Rectification	The action of bring an item of equipment or functional system back to the specified standard laid down in OEM manuals.
Scheduled Maintenance	Maintenance that is planned in accordance with an authorised maintenance policy
Technical Integrity	The state of worthiness of technical equipment such that it can fulfil its intended mission, safely and effectively at any point in its life cycle whilst complying with regulations for environmental protection.

Unscheduled Maintenance	Maintenance that is not performed according to a schedule and is therefore initiated by the reporting of a fault.
Unserviceability	When an item of equipment or functional system does not meet a specified standard laid down in OEM manuals. Often referred to as a fault or failure.
Waiver	The granting of relief from or an exemption from a rule or requirement.
Work Direction	Formal means of authorisation to conduct work.

---