

TMS, DMS and CMS Usage Guide for Falcon BMS 4.38.1

Carlos “Metal” Nader

Version 0.3.0.1+20260115 | Progress: Chapters 3/7 | Tables Chapter 5 and 4.2 | January 2026

Contents

1 Introduction	3
1.1 Development timeline and status	3
1.2 Scope and purpose	3
1.3 Version, authorship and AI assistance	3
1.4 Sources and references	3
1.5 Document structure and how to read it	3
1.5.1 Part A: Foundational Sections	3
1.5.2 Part B: Switch-Specific Sections	3
1.5.3 Part C: Training and Visual Reference	3
1.5.4 Part D: Appendices	3
2 HOTAS fundamentals	3
2.1 Sensor of Interest (SOI) and display logic	3
2.2 Short vs long presses and timing	3
2.3 Master modes and context-sensitive behaviour	3
2.4 Overview of TMS, DMS and CMS	3
3 TMS – Target Management Switch	3
3.1 Concept and general behaviour	3
3.2 TMS and Situational Awareness displays	3
3.3 TMS in Air-to-Air	3
3.4 TMS in Air-to-Ground	3
3.5 TMS in weapon employment	3
3.6 TMS – Block / variant notes	3
4 DMS – Display Management Switch	3
4.1 Concept and Sensor of Interest (SOI)	3
4.1.1 SOI Definition and Scope Across Displays	3
4.1.2 Role of the DMS in SOI Selection	3
4.1.3 HUD as SOI in A-A and HMCS Capabilities	3
4.2 DMS Up: HUD Designation as SOI	3
4.2.1 DMS Up Effectiveness in All Master Modes	3
4.2.2 DMS Up Usage Table	3
4.2.3 DMS Up Exception States	3
4.3 DMS Down: HUD Designation as SOI	3
4.4 DMS Left/Right	3
5 CMS – Countermeasures Management Switch	3
5.1 Concept and Interaction with CMDS / ECM / RWR	3
5.1.1 Concept	3
5.1.2 Interaction with CMDS / ECM	3
5.2 CMS Switch Actuation	3

5.2.1	CMS Actuation with CMDS	3
5.2.2	CMS Actuation with ECM	3
5.2.3	CMS Consent and Constraints	3
5.2.4	Important Operational Notes	3
5.3	CMS Block and Variant Notes	3
5.3.1	ECM Configurations present in BMS	3
6	Training references and practical flows	3
6.1	How to use this guide with BMS training missions	3
6.2	Recommended progression	3
6.3	Example flows for typical missions	3
7	HOTAS visual reference	3
7.1	F-16 HOTAS overview	3
7.2	TMS diagrams	3
7.3	DMS diagrams	3
7.4	CMS diagrams	3
A	Block / variant overview	3
A.1	F-16CM Block 50/52	3
A.2	F-16C/D Block 40/42	3
A.3	F-16AM/BM MLU	3
A.4	F-16I Sufa and Israeli variants	3
A.5	Other export variants	3
B	Tables index	3
B.1	TMS tables	3
B.2	DMS tables	3
B.3	CMS tables	3

1 Introduction

- 1.1 Development timeline and status
- 1.2 Scope and purpose
- 1.3 Version, authorship and AI assistance
- 1.4 Sources and references
- 1.5 Document structure and how to read it
 - 1.5.1 Part A: Foundational Sections
 - 1.5.2 Part B: Switch-Specific Sections
 - 1.5.3 Part C: Training and Visual Reference
 - 1.5.4 Part D: Appendices

2 HOTAS fundamentals

- 2.1 Sensor of Interest (SOI) and display logic
- 2.2 Short vs long presses and timing
- 2.3 Master modes and context-sensitive behaviour
- 2.4 Overview of TMS, DMS and CMS

3 TMS – Target Management Switch

- 3.1 Concept and general behaviour
- 3.2 TMS and Situational Awareness displays
- 3.3 TMS in Air-to-Air
- 3.4 TMS in Air-to-Ground
- 3.5 TMS in weapon employment
- 3.6 TMS – Block / variant notes

4 DMS – Display Management Switch

- 4.1 Concept and Sensor of Interest (SOI)
 - 4.1.1 SOI Definition and Scope Across Displays
 - 4.1.2 Role of the DMS in SOI Selection
 - 4.1.3 HUD as SOI in A-A and HMCS Capabilities
- 4.2 DMS Up: HUD Designation as SOI
 - 4.2.1 DMS Up Effectiveness in All Master Modes
 - 4.2.2 DMS Up Usage Table
 - 4.2.3 DMS Up Exception States