

MILITARY AND COMMERCIAL SPECIFICATIONS, STANDARDS, AGREEMENTS AND HANDBOOKS

The CMC HFE Team is experienced with the numerous Publications, Standards, Agreements and Handbooks, as follows:

Military & Department of Defence Handbooks (MIL-HDBK / DOD-HDBK):

MIL-HDBK-759	Department of Defense Handbook for Human Engineering Design Guidelines
MIL-HDBK-46855A	Human Engineering Program Process and Procedures
DOD-HDBK-743	Anthropometry of US Military Personnel
DOD-HDBK-761	Human Engineering Guide for Management Information Systems
DOD-HDBK-763F	Human Engineering Procedures Guide

Defence Standard (MIL-STD):

DEFSTAN-00-25	Human Factors for Designers of Equipment
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Military Standards (MIL-STD):

MIL-STD-203G	Aircrew Stations Controls and Displays: Location, Arrangement and Actuation of, for Fixed Wing Aircraft
MIL-STD-250	Aircrew Station Controls and Displays for Rotary Wing Aircraft
MIL-STD-411	Aircrew Station Alerting Signals
MIL-STD-490	System/Segment Specification for the Tactical WorkStations
MIL-STD-783	Legends for Use in Aircrew Stations and on Airborne Equipment
MIL-STD-850	Aircrew Station Vision Requirements for Military Aircraft
MIL-STD-882C	System Safety Program Requirements
MIL-STD-1280	Keyboard Arrangements
MIL-STD-1333	Aircrew Station Geometry for Military Aircraft
MIL-STD-1472D/E/F	Human Engineering Design Criteria for Military Systems, Equipment and Facilities
MIL-STD-1521B	Technical Reviews and Audits for Systems, Equipment & Computer Software
MIL-STD-1553	Digital Time Division Command/Response Multiplex Data Bus
MIL-STD-1787	Aircraft Display Symbology
MIL-STD-2525B	Common Warfighting Symbology
MIL-STD-46855	Human Engineering Requirements for Military Systems, Equipment, and Facilities

NATO Standard Agreements (STANAG or NS):

NS 3216 (5)	Layout of Flight Data in Pilots' Displays
NS 3219 (4)	Location and Grouping of Electrical Switches in Aircraft
NS 3329 (6)	Numerals and Letters in Aircrew Stations
NS 3359	Location and Arrangement of Engine Displays in Aircraft
NS 3639	Aircrew Station Dimensional Design Factors
NS 3648 (2)	Electronically and/or Optically Generated Aircraft Displays for Fixed Wing
NS 3705	Human Engineering Design Criteria for Controls and Displays in Aircrew Stations

NS 3994A

Application of Human Engineering to Advanced Aircrew
Systems Aircraft**Air Standardisation Co-ordinating Committee (ASCC) Standards:**

ASCC 10/11H	Location and Arrangement of Flight and Engine Parameter Displays in Aircrew Stations
ASCC 10/12H	Operation of All Controls and Switches at Aircrew Stations
ASCC 10/14F	Location and Grouping of Electrical Switches
ASCC 10/15P	Location and Actuation of Airframe Controls in Fixed Wing Aircraft
ASCC 10/16J	Automatic Flight Control Systems (AFCS)
ASCC 10/20J	Location, Actuation and Shape of Airframe Controls for Rotary Wing Aircraft
ASCC 10/21F	Position of Pilot Operated Navigation and Radio Controls
ASCC 10/22K	Services Operable from Stick Grips
ASCC 10/39C	Numbering of Engines and Their Associated Controls and Displays in Aircraft
ASCC 10/42E	Attitude Indicators
ASCC 10/45G	Horizontal Situation Indicator
ASCC 10/54F	Attitude Director Indicator
ASCC 10/55D	Aircrew Station Dimensional Design Factors
ASCC 10/56D	Electronically and Optically Generated Display Formats and Symbology for Fixed Wing Aircraft"
ASCC 10/67A	Integrated Airspeed and Mach Number Indicators
ASCC 10/72	Electronic Colour Display Systems
ASCC 10/08F	Circular Dial - Type Vertical Speed Indicator (Barometric)

American National Standards Institute/Human Factors Society (ANSI / HFE):

ANSI/HFS 100-1988 HFE of Visual Display Terminal Workstations

Federal Aviation Administration Acquisition System / Society of Automotive Engineers (FAA / SAE)

FAA / SAE	Equivalents of FAR 25 & FAR 29
FAA Advisory Circular 25-11	Electronic Display Systems
SAE ARP4102	Flight Deck Panels, Controls and Displays

Other:

Federal Aviation Administration Acquisition System Toolset - DI-HFAC-80740A-80747A
Guidelines for Designing User Interface Software - ESD-TR-86-278
CTAPS Software User's Manual (SUM) for the HuOperator-System Interface (HMI)
Graphical User Interface (GUI) Design Guidelines for Bellcore Software Products
The Air Force Standard System Center Graphical User Interface Standards
The Department Of Defence HuOperator-System Interface Style Guide
The OSF/Motif Style Guide
User Interface Specifications for Global Command and Control System (GCCS)
User Interface Specifications for the Joint Maritime Command Information System (JMCIS)

DOCUMENT LIBRARY

The CMC HFE Team's document library provides access through both the internet and subscription services to Defence, Engineering, and Aerospace databases for information retrieval and research. Library holdings include a comprehensive section on human factors and includes current copies, or access to current copies of standards including:

- Military Standards;
- NATO Standards Agreements;
- American Society for Testing and Materials (ASTM);
- Institute of Electrical and Electronic Institute (IEEE);
- Society of Automotive Engineers (SAE);
- ISO; and
- Ministry of Defence Standards.

In addition, the CMC Team subscribes to and holds proceedings from HFE-related symposia including:

- Human Factors and Ergonomics Society;
- Human Factors Association Canada/Association of Canadian Ergonomists;
- Aviation Psychology;
- Interservice/Industry Training, Simulation and Education Conference; and
- SAFE.

ISO 9001

The CMC Electronics Inc. (CMC) Quality Management System is registered to ISO 9001 for the design, manufacture, sale and service of high-technology electronic products including commercial and military/defence avionics, communications, surface transportation electronics and specialised electronic components. Accordingly, CMC Electronics Inc. (CMC) Human Factors Engineering (HFE) Team publishes work instructions and task specifications in accordance with ISO standards.