



# ESRANGE USER'S HANDBOOK

Volume A  
Abbreviations, acronyms  
and references



## CHANGE LOG

Version	Issued	Changes
1.2	24 August 2022	Doc Id added
1.1	21 May 2021	Minor typos; author and title added in file info
1	7 May 2021	Full re-write of Volume, new issue

## APPROVAL

This version was approved by Mr Lennart Poromaa, Head of Estrange Space Center, on the date of issue.

## PREFACE

Swedish Space Corporation (SSC) owns and operates Estrange Space Center (ESC) located in the north of Sweden, where a multitude of activities are performed in support of space and Earth science research, satellite communications, aerospace technology development and orbital launches. SSC also maintains capabilities to conduct mobile launch activities for stratospheric balloons at Estrange.

Users of Estrange include space agencies, scientific and research organizations, universities, and commercial customers from all over the world.

This Estrange User's Handbook summarizes policies and procedures for facility use and provides a description of the range capabilities to users.

The handbook is divided into 11 volumes, with the three first addressing general information related to the range, safety and range instrumentation, while the next seven address specific facilities, processes and operations related to individual types of activities (e.g., sounding rockets or orbital launch).

Abbreviations and acronyms used throughout the handbook, as well as identified references, are included in Volume A (this volume).

Each new version of an individual volume of the Estrange User's Handbook replaces all previous versions of that particular document (but not any of the other volumes).

The most current version of the complete/consolidated Estrange User's Handbook, and other documents referenced within it, can be found at <http://www.sscspace.com>.

### Volumes in Estrange User's Handbook

Vol. I - General Information

Vol. II - Safety

Vol. III - Launch Range Instrumentation

Vol. A - Abbreviations and References

Vol. IV - Scientific Ground Instruments

Vol. V - UAS

Vol. VI - Stratospheric Balloons

Vol. VII - Sounding Rockets

Vol. VIII - Propulsive Development Testing

Vol. IX - Spaceport

Vol. X - Satellite Telemetry, Tracking & Control

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## 1 ABBREVIATIONS AND ACRONYMS

The following abbreviations and acronyms can be found in volume I - X of Estrange User's Handbook.

ATC	Air Traffic Control
CET	Central European Time
COLA	Collision Avoidance
CONOPS	Concept of Operations
DLR	Deutsches Zentrum für Luft- und Raumfahrt (German Aerospace Center)
EASP	Estrange and Andöya Special Project
ECMWF	European Center for Medium-Range Weather Forecast
EIRP	Equivalent Isotropically Radiated Power
ESA	European Space Agency
ESB	Estrange Safety Board
ESC	Estrange Space Center
ESD	Electrostatic Discharge
ESM	Estrange Safety Manual
ESRANGE	ESRO Sounding Rocket Launching Range [officially used 1964 - 1972] European Space Range [unofficially used 1972 - ca. 1990]
ESRO	European Space Research Organization
EU	European Union
FMV	Försvarets Materielverk (Swedish Defence Materiel Administration)
FSO	Flight Safety Officer
FSS	Flight Safety System
FTS	Flight Termination System
GND/UNL	Ground to unlimited altitude
GPS	Global Positioning System
GSE	Ground Support Equipment
GSO	Ground Safety Officer
HVAC	Heating, Ventilation and Air Conditioning
ID	Identity
IP	Internet Protocol
IRIG	Inter-Range Instrumentation Group
ISO	International Organization for Standardization
ITU	International Telecommunications Union
KEOPS	Kiruna Estrange Optical Platform System
LC	Launch Complex
LC	Launch Control Center
LEOP	Launch and Early Operations
LHC	Left-Hand Circular
LIDAR	Light Detection and Ranging
LSP	Launch Service Provider
LV	Launch Vehicle
LVIB	Launch Vehicle Integration Building
MMH	Mono-Methyl Hydrazine
NOTAM	Notice to Airmen

NOTMAR	Notice to Mariners
NTO	Nitrogen Tetroxide
NTP	Network Time Protocol
NRZ-L	Non-return-to-zero-level
PA	Public Address
PCM	Pulse Code Modulation
POC	Point-of-contact
PPF	Payload Processing Facility
RCC	Range Commander Council
REACH	Registration, Evaluation, Authorisation and restriction of Chemicals
RF	Radio Frequency
RH	Relative Humidity
RHC	Right-Hand Circular
RSO	Range Safety Officer
SC	Subscriber Connector [also called Standard Connector]
SMHI	Swedish Meteorological and Hydrological Institute
SNSA	Swedish National Space Agency
SOC	Safety Operations Center
SSA	Space Situational Awareness
SSC	Swedish Space Corporation
T	Temperature
TBC	To Be Confirmed
TBD	To Be Determined
TC	Telecommand
TCP/IP	Transmission Control Protocol/Internet Protocol
TM	Telemetry
TP	Twisted Pair
TT&C	Telemetry, Tracking and Control
UAV	Unmanned Aerial Vehicle
UDMH	Unsymmetrical Di-Methyl Hydrazine
UN	United Nations
UNOOSA	United Nations Office for Outer Space Affairs
UTC	Coordinated Universal Time
VCR	Visit Clearance Request

## 2 REFERENCES

The following documents and organizations are referenced to in volume I - X of Estrange User's Handbook.

### 2.1 SSC documents

Name	Where to obtain	Reference number	Version
Cryogenic Safety at Estrange Space Center	Can be obtained through SSC Project Manager / POC	SCIENCE-878286732-26684	1.1
Estrange Safety Manual	<a href="https://sscspace.com/news-activities/rockets-and-balloon-activities/">https://sscspace.com/news-activities/rockets-and-balloon-activities/</a>	SCIENCE-60-4208	9
Estrange Weather Report	Can be obtained through SSC Project Manager / POC	SCIENCE-637804196-99	1.1

### 2.2 External documents

Name	Where to obtain	Note
RCC 319-14	<a href="https://www.regulations.gov/document/FAA-2019-0229-0024">https://www.regulations.gov/document/FAA-2019-0229-0024</a>	
Swedish Space Activity Act 1982:963	<a href="https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-1982963-om-rymdverksamhet_sfs-1982-963">https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-1982963-om-rymdverksamhet_sfs-1982-963</a>	In swedish
Swedish Space Activities Decree 1982:1069	<a href="https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-19821069-om-rymdverksamhet_sfs-1982-1069">https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-19821069-om-rymdverksamhet_sfs-1982-1069</a>	In swedish
Swedish Work Environment Act	<a href="https://www.av.se/en/work-environment-work-and-inspections/acts-and-regulations-about-work-environment/">https://www.av.se/en/work-environment-work-and-inspections/acts-and-regulations-about-work-environment/</a>	
UNOOSA Liability Convention	<a href="https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introliability-convention.html">https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introliability-convention.html</a>	

### 2.3 Organizations

Name	Website	Note
DLR - German Aerospace Center	<a href="http://www.dlr.de">www.dlr.de</a>	
European Center for Medium-Range Weather Forecast	<a href="http://www.ecmwf.int">www.ecmwf.int</a>	
ESA - European Space Agency	<a href="http://www.esa.int">www.esa.int</a>	
SSC - Swedish Space Corporation	<a href="http://www.sscspace.com">www.sscspace.com</a>	
Swedish Work Environment Authority	<a href="http://www.av.se">www.av.se</a>	
Swedish Meteorological and Hydrological Institute	<a href="http://www.smhi.se">www.smhi.se</a>	
U.S. Department of Defense Strategic Command	<a href="http://www.stratcom.mil">www.stratcom.mil</a>	
United Nations Office for Outer Space Affairs (UNOOSA)	<a href="http://www.unoosa.org">www.unoosa.org</a>	



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SSC  
Esrangle Space Center  
PO Box 802  
SE-981 28 Kiruna  
SWEDEN  
+46 980 720 00  
info@sscspace.com  
www.sscspace.com