Provisions of application

Rules of the air for military aviation

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Introduction

This handbook is a translation of the Swedish *Provisions of application - Rules of the air for military aviation (FM2020-2770:1).* It contains the Rules according to the Swedish Military Regulation - *Rules of the air for military aviation (FFS 2020:4),* Acceptable Means of Compliance (AMC) and Guidance Material (GM). This handbook is intended to provide the framework of rules, directives and policies to support all actors in the Swedish military aviation system, as well as for those who fly according to military traffic rules, how to interpret and comply with the Regulation FFS 2020:4.

If there are any differences between the English and the Swedish handbook, the Swedish edition applies.

Rules, Acceptable Means of Compliance (AMC) and Guidance Material (GM) are identified as follows:

Rules

§ *The rules are a reprint of the rules stated in FFS 2020:4 and are written in this format.*

Acceptable Means of Compliance (AMC)

Acceptable Means of Compliance describes one way to comply to an acting rule, but not the only way possible. It is recommended to follow AMC. If not, the operator must describe the preferred alternative and get an authorization by the Swedish Military Aviation Authority (SE-MAA) before use.

All rules stated are not followed by AMC.

AMC is stated within a black lined box, written in this format.

Guidance Material (GM)

Guidance Material give further explanation and advice how to comply to a rule or AMC, and how it should be perceived.

All rules or AMC’s are not followed by GM.

GM will be stated in a grey box, written in this format.

1 Rationale

1§ *This Regulations contains traffic rules for military aviation.*

The Regulation also applies outside Swedish territory for military aviation if it is compatible with the foreign law stated. If the provisions of the foreign law are more restrictive, those provisions apply.

The Regulation also applies to foreign military aviation operations in Sweden in accordance with chapter 14, 3§ of the Swedish Civil Aviation Regulation (2010:770).

The Regulation regulates Remotely Piloted Aircraft System only to the extent as determined by the Swedish Military Aviation Authority (SE-MAA).

Rules of the Air for Military Aviation follows, as far as possible, the Standardized European Rules of the Air (SERA) and Swedish civilian rules of the air.

1.1.1 When passing national boarders, the “EUROCONTROL Specifications for harmonized Rules for Operational Air Traffic (OAT) under Instrument Flight Rules (IFR) inside controlled Airspace of the ECAC Area (EUROAT)”, shall be applied when applicable.

1.1.2 In the case that Diplomatic Clearance is mandatory, the pilot in command must ensure that this is obtained before departure.

1.1.3 For these flights a flight plan for operational air traffic (FPL/OAT) should normally be used.

1.1.4 Remotely Piloted Aircraft System (RPAS) shall comply to all chapters except chapter 6 and 7. However, these two chapters are to be considered based on the separations stated and the context of air operations in a common airspace.

2§ *When operational needs exist, the rules in this Regulation shall be applied under the conditions specified in each chapter.*

When operational needs exist, other rules may be permitted. The preconditions for this are set out in the respective chapter. The operator must describe the conditions for how the respective provision is applied. It is the operator's responsibility to prove that the rule / procedure allows an acceptable level of risk to be maintained.

Operators other than the Swedish Armed Forces need the Swedish Armed Forces support for such other rules to get an approval by the Swedish Military Aviation Authority (SE-MAA).

3§ *Traffic rules for military aviation aim to avoid collisions between aircraft, as well as between aircraft and terrain or other obstacles.*

4§ *The words and expressions defined of chapter 14 in the Swedish Civil Aviation Act (2010: 500), have the same meaning in this Regulation.*

Appendix 1 to this Regulation defines other terms and abbreviations used in this Regulation.

5§ *The Swedish Armed Forces' regulations and handbooks on traffic rules for military aviation contain more detailed provisions on the application of this Regulation.*

This handbook stipulates these detailed provisions.

1.5.1 The operation of an aircraft in flight, at an aerodrome or at a landing site shall, in addition to these implementing regulations, also comply with applicable local regulations.

2 General

1§ *A military aircraft shall not be maneuvered in such a way that the lives or property of others are endangered.*

When there are operational needs, the provision in the first paragraph does not apply.

2§ *In the implementation of this Regulation, due regard must be paid to the safety of civil aviation, as well as to the protection of life, health and personal safety.*

2.2.1 Minimum flight altitude when flying in supersonic speed is:

a) FL300 over land and coastal area.
b) FL150 over ocean.

2.2.2 When there are operational needs, lower altitudes may be used.

A sonic boom calculation should be done before flying in supersonic speeds to determine the minimum altitude allowed.

3§ *A military aircraft must be equipped for the activities to be performed.*

2.3.1 This applies to all aircraft flying under the rules of air for military aviation.

4§ *The persons covered by this Regulation must be trained and qualified for the activities they intend to perform.*

2.4.1 The operator's requirements for, and design of, training must be stated in the operator's operational manual.

5§ *A common language and common units of measurement shall be used in the application of traffic rules for military aviation.*

*In the planning and execution of flight, coordinated universal time (UTC) shall be used as a time reference. When conducting an exercise, it can be stipulated in the exercise regulations that another time reference must be used.*2.5.1 The following units of measurement below shall be used on air traffic control or fighter control frequency. It must be ensured that the same units are used in the common airspace when participating in the same exercise.	
Distance	Meter (m), Kilometer (km) or Nautical mile (NM)
Altitude	Meters (m), Flight level (FL) or Feet (ft.). Flight level can also be expressed in kilometer (km)
Speed	Kilometer per hour (km/h), knot (kts), or Mach-no (M)
Vertical speed	Meter per second (m/s) or Feet per minute (ft/min)
Altimeter setting	Hektopascal (hPa)

2.5.2 On request, an air traffic control unit leaves the correct time to a pilot in the next full or half minute. Full minute is set from 15 seconds before full minute to 14 seconds after full minute. Half a minute is set from 15 seconds after a full minute to 16 seconds before a full minute.

3 Avoidance of collision

1§ *A military aircraft must not be flown so close to another aircraft that there is a risk of collision.*

When there are operational needs, the provision in the first paragraph does not apply.

2§ *The provisions of this Regulation never deprive a Pilot in Command of his responsibility to take action, including maneuvers based on proposed evasive maneuvers in the Airborne Collision Avoidance System (ACAS), in order to best avoid collisions.*

3§ *Military aircraft must comply to the regulations regarding 'Right of Way' as stated in the Commission Implementing Regulation (EU) No 923/2012 together with the additions specified in chapter 3, 4 and 5§§ below.*

3.3.1 Right of way

1. The aircraft that has right of way shall maintain heading and speed.

2. An aircraft that is aware that the maneuverability of another aircraft is impaired shall give way to that aircraft.

3. An aircraft that is obliged by the following rules to keep out of the way of another shall avoid passing over, under or in front of the other, unless it passes well clear and takes in account the effect of aircraft wake turbulence.

a) Approaching head on. When two aircraft are approaching head on or approximately so and there is danger of collision, each shall alter its heading to the right.

b) Converging. When two aircraft are converging at approximately the same level, the aircraft that has the other on its right shall give way, except as follows:

i. power-driven heavier-than-air aircraft shall give way to airships, gliders and balloons;

ii. airships shall give way to sailplanes and balloons;

iii. sailplanes shall give way to balloons;

iv. power-driven aircraft shall give way to aircraft which are seen to be towing other aircraft or objects.

c) Overtaking. An overtaking aircraft is an aircraft that approaches another from the rear on a line forming an angle of less than 70 degrees with the plane of symmetry of the latter. i.e. is in such a position with reference to the other aircraft that at night it shall be unable to see either of the aircraft's left(port) or right (starboard) navigation lights. An aircraft that is being over-

taken has the right of way and the overtaking aircraft, whether climbing, descending or in horizontal flight, shall keep out of the way of the other aircraft by altering its heading to the right, and no subsequent change in the relative position of the two aircraft shall absolve the overtaking aircraft from this obligation until it is entirely past and clear.

i. Sailplanes overtaking. A sailplane overtaking another sailplane may alter its course to the right or to the left.

d) Taking off and Landing. An aircraft in flight, or operating on the ground or water, shall give way to aircraft landing or in the final stages of an approach to land.

i. When two or more heavier-than-air aircraft are approaching an aerodrome or an operating site for the purpose of landing, aircraft at the higher level shall give way to aircraft at the lower level, but the latter shall not take advantage of this rule to cut in front of another which is in the final stages of an approach to land or to overtake that aircraft. Nevertheless, powered-driven heavier than-air- aircraft craft shall give way to sailplanes.

ii. Emergency landing. An aircraft that is aware that another is compelled to land shall give way to that aircraft.

iii. An aircraft taxiing on the maneuvering area of an aerodrome shall give way aircraft taking off or are about to take off.

iv. An aircraft shall, with the exception of balloons, perform all turns to the left during approach for landing and after start, unless otherwise prescribed or permitted by the air traffic control unit.

4. Surface movement of aircraft, persons and vehicles:

a) In case of danger of collision between two aircraft taxiing on the movement area of an aerodrome or equivalent part of an operating site, the following shall apply:

i. when two aircraft are approaching head on, or approximately so, each shall stop or where practicably alter its course to the right so as to keep well clear;

ii. when two aircraft are on a converging course, the one which has the other one on its right shall give way;

iii. an aircraft that is being overtaken by another aircraft shall have the right of way and the overtaking aircraft shall keep well clear of the other aircraft.

b) At a controlled aerodrome an aircraft taxiing on the maneuvering area shall stop and hold at all runway-holding positions unless an explicit clearance to enter or cross the runway has been issued by the aerodrome control tower.

c) An aircraft taxiing on the maneuvering area shall stop and hold at all lighted stop bars and may proceed further in accordance with (2) when the lights are switched off.

4§ *In addition to what is stated in the Commission Implementing Regulation (EU) No 923/2012 concerning converging aircraft, the following also applies.*

When two military aircraft at, or approximately at the same level converge, the aircraft that has the other aircraft on its right hand side must give way unless the aircraft is in turn giving way to a formation of aircraft or a helicopter.

5§ *When there are operational needs, other rules than stated in chapter 3, 3 and 4§§ may be applied. The terms and conditions must be documented for all types of aircraft and then be authorized by the Swedish Military Aviation Authority (SE-MAA) before use.*

4 Lights to be displayed by aircraft

1§ *Military aircraft shall display anti-collision lights when the engine is running.*

2§ *A military aircraft shall display navigational lights between sunset and sunrise. The same applies in daytime when conditions so require. Lights that can be mistaken for navigational lights shall not to be displayed.*

3§ *If a military aircraft is equipped with taxiing lights, those shall be displayed between sunset and sunrise during taxi.*

4§ *Landing lights shall be displayed between sunset and sunrise or when conditions so require. Landing lights shall also be displayed during taxi if the aircraft does not have taxiing lights.*

5§ *When there are operational needs, anti-collision lights, navigational lights, taxiing lights or landing lights are permitted to be switched off.*

The same applies to ensure safety if the lights:

1. *adversely affect the pilot, or a crewmember assisting the pilot, to perform his duties satisfactorily or*
2. *exposes persons outside the aircraft to dangerous dazzle.*

5 Flight plans

5.1 Information relative to a flight

1§ *Information relative to a flight shall be submitted to an air traffic services unit, or other unit tasked for following up a flight, and shall be in the form of a flight plan.*

For operational flights this information shall be submitted by using a flight plan for operational air traffic (FPL/OAT), a flight program or an order.

A flight plan must be activated and closed.

When there are operational needs, information about a flight may be submitted in another format. The conditions and terms must be documented by the operator and authorized by the Swedish Military Aviation Authority (SE-MAA) before use.

Last paragraph in chapter 5, 1§ shall be interpreted that the Swedish Military Aviation Authority (SE-MAA) must authorize the method for how to document information.

A flight plan can refer to either Operational Air Traffic (OAT) or General Air Traffic (GAT). The civilian regulations for a GAT have been developed for a flight from one airport to another. Since military aviation includes other needs that are not covered by the civilian regulations for GAT, OAT is normally used for military aviation. Examples of such military needs are air refueling, flying in formation, low flying, air combat, etc. When there are operational needs which entails that the following rules cannot be met, alternative methods should be formulated by the operator and communicated to the air traffic control, for example during military operations.

5.2 General information about flight plan, GAT

2§ *A flight plan (FPL/GAT) shall be submitted to the following recipients:*

1. *Before departure: to Stockholm / Arlanda Flight Planning Center (FPC).*
2. *During the flight: to the relevant air traffic control unit.*

If such a flight is of a local nature, the flight plan may be submitted to the air traffic control unit at the departure airport.

3§ *Regarding timings for submission of a flight plan (FPL/GAT), the provisions in the Swedish Transport Agency's regulations and general guidelines on traffic rules for aviation must be applied.*

5.3.1 A flight plan (FPL/GAT) may be submitted no earlier than 120 hours before the estimated off-block time, EOBT. If the flight plan is submitted earlier than 24 hours before EOBT, the date for the flight must be entered in field 18 after DOF/.

5.3.2 The flight plan (FPL/GAT) must be submitted no later than 60 minutes before EOBT. For a flight that is subject to flow planning (ATFM), the flight plan must be submitted no later than 3 hours before EOBT.

5.3.3 For a flight (FPL/GAT) according to VFR that will be performed between Swedish airports, and in its entirety is performed within Swedish FIR, the flight plan may be submitted no later than 30 minutes before EOBT.

5.3.4 For flights of an urgent nature such as ambulances and flying rescue units, flights performed by the Police or the Coast Guard and for flights of a local nature, a later submission can be accepted.

5.3 Contents of a flight plan, GAT

4§ *Regarding the content of a flight plan (FPL/GAT), the provisions in the Swedish Transport Agency's regulations and general guidelines on traffic rules for aviation must be applied.*

5.4.1 FPL/GAT

1. Aircraft identification
2. Flight rules
3. Type of flight
4. Number of aircraft
5. Type of aircraft
6. Wake turbulence category
7. Equipment
8. Departure aerodrome and estimated off-block time
9. Cruising speed(s), Cruising level(s) and route to be followed
10. Destination aerodrome, total estimated elapsed time and alternative aerodrome(s)
11. Other information
12. Additional information
13. Fuel endurance
14. Total number of persons on board
15. Emergency and survival equipment
16. The person submitting the flight plan

5.4.2 Further instructions for filling in an FPL/GAT can be found in the Swedish Transport Agency’s regulations.

5.4 General information about flight plan, OAT

5§ *An operational flight plan (FPL/OAT) shall be submitted before departure to the air traffic control unit at the departure airport. If such a unit does not exist, an operational flight plan (FPL/OAT) shall be primarily submitted to an air traffic control unit at an air force base and secondarily to a Flight Planning Center (FPC).*

A flight plan (FPL/OAT) can be complete or abbreviated. An abbreviated flight plan can be integrated in an air mission order and should, whenever appropriate, continuously be

supplemented with information about e.g. a later decided departure time or change in aerodrome for landing.

An abbreviated flight plan (FPL/OAT) may be submitted for flights in TIZ/TIA or when the intention is to request a clearance for a part of a flight, e.g. flying in TMA or CTR. An abbreviated flight plan should contain at least information about aircraft call sign, flight rule used, type of aircraft, route, altitude and number of persons onboard.

6§ *An operational flight plan (FPL/OAT) must be submitted no later than 30 minutes before calculated departure time.*

During flight, an operational flight plan (FPL/OAT) must be submitted no later than 5 minutes before entering a control area and no later than 2 minutes before entering a control zone (CTR).

For local flights or flights of an urgent nature, a later submission can be accepted.

5.5 Contents of a FPL/OAT

7§ *An operational flight plan (FPL / OAT), flight program or order shall include the following information:*

1. *Aircraft identification.*
2. *Flight rules and type of flight.*
3. *Number and type of aircraft and wake turbulence category.*
4. *Departure aerodrome.*
5. *Estimated off-block time.*
6. *Cruising speed(s).*
7. *Cruising level(s).*
8. *Route to be followed or exercise area.*
9. *Destination aerodrome.*
10. *Total estimated flight time.*
11. *Alternative aerodrome.*
12. *Total number of persons on board.*

The term aerodrome in No 4 and 11 above also refer to other take-off and landing sites.

8§ *When relevant, an operational flight plan (FPL/OAT) shall contain:*

1. *information about munition status,*
2. *information about hot refueling, and*
3. *other essential information.*

9§ *Further instructions for completing an operational flight plan (FPL/OAT) can be found in the current Military Aeronautical Information Publication (MIL AIP) and Aeronautical Information Publication Sweden (AIP Sweden).*

5.6 Compliance of a flight plan

10§ *Unless an air traffic control unit allows or prescribes otherwise, as far as possible, controlled flight on established ATS route shall take place along the specified centerline of the ATS route. On every other flight path, the flight shall take place directly between navigational aids and / or between the points defining the flight path.*

11§ *When a controlled flight is performed along an ATS route that are defined by VOR-stations aircraft shall, if not otherwise stated, change primary navigation aid midways two VOR-stations.*

Deviations from stated procedure must be reported to the appropriate air traffic control unit.

During a controlled flight performed along a section of an ATS route as defined by VOR-stations, an aircraft must, as far as possible and if not a flight control unit allows otherwise, change its primary navigation reference from the navigation aid behind to the nearest navigation aid ahead. This shall be done when the established changeover point is passed or as close to this point as possible. If no changeover point has been determined, it is assumed that the aircraft changes its navigation reference midways the current navigation aids.

Any deviation in accordance with the first paragraph must be notified to the air traffic control unit.

12§ *If an aircraft during a controlled flight has unintentionally deviated from the flight plan, the following measures must be taken.*

If the deviation has occurred from the route, the heading must be changed immediately so that the aircraft is returned to the route.

If at cruising altitude, the average cruising speed between significant points has deviated or is estimated to deviate by plus or minus 5 percent or more compared to the cruising speed provided in the flight plan (TAS), the air traffic control unit must be notified.

If the estimated time over next reporting point, FIR limit or destination airport turns out to be incorrect by three minutes or more compared to the time notified to the air navigation service, a corrected time must be notified to an air traffic control unit as soon as possible.

5.7 Activation of a flight plan

13§ *Upon departure from an aerodrome without air traffic control service, a pilot in command must activate the flight plan to the Area Control Center (ACC) within whose area of responsibility the aerodrome is located, or if this is not possible, to any other air traffic control unit.*

Such take-off message must be given by telephone immediately before departure or sent via radio as soon as possible after take-off and contain information about the aircraft's call sign, departure aerodrome, actual departure time (ATD) and destination aerodrome.

A take-off message does not need to be sent if it has been stated at the submission of the flight plan that EOBT should also be considered as actual departure time, or if a corresponding message has been provided by telephone to the Area Control (ACC) or to another air traffic control unit shortly before departure. The take-off message may also be provided by telephone by a person on the ground following an agreement with the pilot in command.

If the submitted flight plan does not cover the first part of the flight, the flight plan should be activated by radio to an air traffic control unit when crossing the point from which the flight plan applies. At departure from an aerodrome where a mobile air traffic control unit (ATS / R) has been established, the flight plan is activated by ATS / R.

5.8 Changes to a flight plan

14§ *If the planning for a flight is changed, the flight plan for the flight must be changed. All changes to a flight plan must be notified as follows:*

1. *Before departure: to a flight planning center or to an air traffic control unit at the departure aerodrome.*
2. *In flight: to the relevant air traffic control unit.*

5.14.1 When changing the route with an unchanged destination, the following must be announced:

1. Description of the new flight path including the associated flight plan data from the position when the requested change of flight path is intended to take place.
2. Changes in estimated times.
3. Other information that may be needed.

5.14.2 When changing the route with a change of destination, the following must be announced:

1. Description of the changed flight path to the changed destination aerodrome, including associated flight plan data from the position when the requested change of route is intended to take place.
2. Changes in estimated times and alternative airport (s).
3. Other information that may be needed.

5.9 Closing a flight plan

15§ *If the submitted flight plan comprises the complete flight, or the last part of the flight to the destination aerodrome, an arrival report must be sent as soon as possible after landing, or at least not later than 30 min after the estimated time of arrival according to the flight plan.*

If the submitted flight plan covers the entire flight, or the last part of the flight to the destination aerodrome, the flight plan must be closed by the pilot in command ensuring that an arrival report is provided as soon as possible after landing, or at least not later than 30 minutes after the estimated time of arrival according to the flight plan. The arrival report must be sent to the ACC within whose area of responsibility the aerodrome is located, or if this is not possible, to any other air traffic control unit.

16§ *Arrival report shall contain the following items:*

1. *Aircraft identification.*
2. *Departure aerodrome.*
3. *Destination aerodrome according to the flight plan (only in the case of a diversionary landing site).*
4. *Arrival aerodrome.*
5. *Time of arrival.*

17§ *If the flight plan has been submitted for a part of the flight, that does not cover the remaining part of the flight to the destination aerodrome, the flight plan must be closed by the pilot in command ensuring that an arrival report is sent to the relevant air traffic control unit.*

18§ *When landing at an airport where ATC is provided, the flight plan will be automatically closed and the pilot in command does not have to send an arrival report.*

19§ *When landing at an airport where mobile air traffic service is provided (ATS/R), the ATS/R will send an arrival report and close the flight plan.*

5.10 Delayed landing message

20§ *It must be stated in the flight plan if a pilot in command at the submission of the flight plan assesses that a closing of the flight plan will not be possible to perform within the prescribed time (so-called delayed landing message).*

5.20.1 The following procedure shall apply when a delayed landing message is provided:

1. If the pilot in command at the submission of the flight plan assesses that an arrival report will not be sent to the air traffic control within the prescribed time, the estimated last time must be stated in field 18 of the flight plan.
2. During the flight must, if possible, notification be given by radio to an air traffic control unit with the following contents:

    i. Aircraft identification.

    ii. Departure and destination aerodromes.

    iii. New estimated time of arrival.

If the pilot in command knows that the possibility to send an arrival report at the landing aerodrome is insufficient, the arrival report must be sent to a suitable air traffic control unit as close to landing as possible.

6 Visual Flight Rules

1§ *During VFR flight, the pilot must maintain such supervision that the risk of collision with another aircraft or other obstacles is avoided.*

2§ *VFR flights during daytime, except when performed as a special VFR flight, shall be performed so that the aircraft is flown in conditions of visibility and distance to clouds equal or greater than those specified in the table below.*

Altitude/Level	**Airspace class**	**Flight visibility**	**Distance from clouds horizontally**	**Distance from clouds vertically**
At or above FL 100	A, B, C, D, E, F and G	8 km	1 500 m	1 000 ft
Below FL100, and above 3 000 ft AMSL or 1 000 ft AGL, whichever is the higher	A, B, C, D, E, F and G	5 km	1 500 m	1 000 ft
At or below 3 000 ft AMSL or 1 000 ft AGL, whichever is the higher	A, B, C, D and E	5 km	1 500 m	1 000 ft
At or below 3 000 ft. AMSL or 1 000 ft. AGL, whichever is the higher	F and G	5 km	Clear of cloud and with the surface in sight	Clear of cloud and with the surface in sight

In airspace classes F and G (uncontrolled airspace), VFR flights may be performed during daytime with a flight visibility reduced to not less than 3 km, or in the vicinity of an airport to not less than 1,500 meters under the following conditions:

1. *The speed shall not exceed 140 kts IAS and must give the pilot adequate opportunities to detect other traffic or obstacles in time to be able to avoid a collision.*
2. *The probability of conflict with other traffic must be low.*
3. *The flight must be performed clear of clouds and with the surface in sight.*

For Helicopters flight visibility can be reduced to not less than 800 meters at a speed that provide adequate opportunity to observe other traffic or obstacles in time to avoid a collision. Flights may be performed in flight visibility less than 800 meters in special cases, e.g. in ambulances, SAR operations and fire-fighting.

6.2.1 If not a clearance has been obtained for Special VFR flight, the following minima shall be applied for VFR flight in control zone or traffic zone, in addition to what applies to the current airspace class:

1. The ceiling shall not be less than 1,500 ft. AGL.
2. The flight visibility at ground must be at least 5 km.

In a control zone, however, the requirement for vertical distance to clouds according to chapter 6, 2§ do not need to be met as long as the flight is performed clear of cloud and with the surface in sight.

3§ *Except when necessary for take-off and landing, the minimum permitted flight altitude for VFR flight during daytime in airplane is 1000 ft. AGL and in helicopter 500 ft. AGL above the highest obstacle within a radius of 150 meters from the aircraft.*

When flying over densely populated areas and larger crowds minimum flight altitude is 1000 ft. AGL over the highest obstacle within a radius of 600 meters That applies for both airplane and helicopter.

4§ *A military aircraft performing a controlled flight according to VFR shall report to the relevant air traffic control unit when the flight leaves controlled airspace.*

5§ *At a flight level above flight level 195, VFR may only be applied during training in air combat and advanced flight within a designated airspace and in VMC conditions.*

6.1 VFR flights at night

6§ *For VFR flights at night, the following applies:*

1. *A two-way radio communication shall be established and maintained at the appropriate frequency between the aircraft and the air traffic control service, if available.*
2. *The values for flight visibility and distance from clouds in chapter 6, 2§ shall be applied with the following exceptions:*
    a. *The ceiling shall not be less than 1,500 ft. AGL.*
    b. *The provisions regarding lower flight visibility in chapter 6, 2§ shall not be applied.*
    c. *At and below the maximum of 3,000 ft. AMSL or 1,000 ft. AGL, the pilot must continuously have the surface in sight.*

The values for flight visibility and distance from clouds in chapter 6, 2§ shall also be applied for helicopters in airspace class G taking into account the exceptions in a-c, at and below the maximum of 3,000 ft. AMSL or 1,000 ft. AGL, with the flight visibility reduced to not less than 3 km. However, if the pilot has the surface in sight continuously and maintains a speed that provides adequate opportunities to detect other traffic or obstacles in sufficient time to avoid a collision, the flight visibility may be less than 3 km.

7§ *VFR flights at night may be performed with the following minimum flight altitudes:*

1. *Over terrain above 6,000 ft. above sea level, the altitude shall be at least 2,000 ft. above the highest obstacle located within 8 km from the position of the aircraft.*
2. *Over areas other than high terrain, the flight altitude shall be at least 1,000 ft. above the highest obstacle located within 8 km from the position of the aircraft.*

6.2 Special VFR flight

8§ *Special VFR flights may be performed with Military aircraft if the flight is con-ducted clear from clouds and with the surface in sight. Flight visibility at the ground must be at least 3 km during daytime and at least 5 km during night and the ceiling shall not be less than 1,000 ft. AGL*

9§ *For military helicopters, special VFR flight may be performed if the flight takes place clear from clouds and with the surface in sight. Flight visibility at the ground must be at least 1,500 meters during daytime and at least 3 km during night. Flying during daytime may also be allowed with flight visibility reduced to not less than 500 meters, if the pilot has the surface in sight continuously and maintains a speed that provides adequate opportunity to observe other traffic or obstacles in time to avoid a collision.*

6.3 VFR flight when there are operational needs

10§ *When there are operational needs, values other than those specified in this chapter may be applied. The conditions, terms and values must be documented for all types of aircraft and authorized by the Swedish Military Aviation Authority (SE-MAA) before use.*

7 Instrument Flight Rules (IFR)

1§ *Flight must take place according to IFR:*

1. *in instrument weather conditions (IMC),*
2. *in visual meteorological conditions (VMC) at an altitude above flight level 195 or*
3. *in VMC at a flight altitude below flight level 195 when VFR flight may not be performed.*

No 2 does not apply within designated airspace according to chapter 6, 7§.

2§ *IFR flights may not be performed at lower altitudes than the following:*

1. *2,000 ft. above the highest obstacle within 4,5 nm of the aircraft's calculated position if the height of the obstacle exceeds 6,000 ft. AMSL.*
2. *1,000 ft. above the highest obstacle within 4,5 nm of the aircraft's calculated position if the height of the obstacle is less than 6,000 ft. AMSL.*

7.2.1 Clearances and instructions received from the air traffic control unit or instructions from the fighter control unit do not release the pilot in command from the responsibility to ensure that the prescribed vertical obstacle clearance exists, except when an IFR flight is radar-guided or given a direct route in controlled airspace.

7.2.2 Pilot, during IFR flight, who has received clearance for a descent to a place over the airport or other specified location or is radar guided for visual approach, should report "recognized" or "field in sight" to air traffic control, whichever comes first. Such notification means that the pilot requests clearance for visual approach and is ready to take over responsibility for continued navigation until landing.

7.2.3 Information for position and flight altitude as well as other requested information should upon request be provided to the relevant air traffic control unit as soon as possible.

3§ *When there are operational needs, values other than those specified in this chapter may be applied. The conditions terms and values must be documented for all types of aircraft and authorized by the Swedish Military Aviation Authority (SE-MAA) before use.*

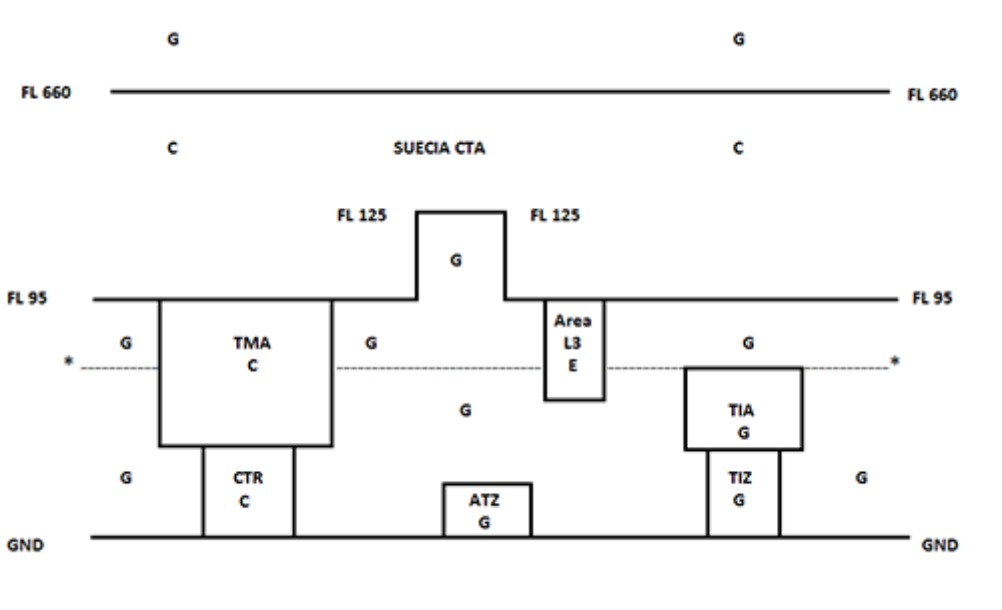
4§ *An aircraft flying in accordance with IFR and intending to transfer to VFR must notify the relevant air traffic control unit that IFR flight is terminated and the changes to be made to the applicable flight plan.*

7.4.1 An aircraft flying in accordance with IFR and flying in or encountering visual weather conditions should continue to fly in accordance with IFR, unless it can be assumed that the flight can be performed continuously for a long time in visual weather conditions and that the intention is to fly in accordance with VFR.

8 Swedish Airspace

1§ *Airspace, within which air navigation services are provided, is divided and classified into airspace classes according to the table in Appendix 2.*

Structure and principle division of the Swedish airspace (FIR).



* = The highest of 5000ft AMSL or 3000ft AGL (transition level)

a. Within TIA and TIZ (RMZ), flight plan and two-way radio communication with ATS is required.
b. In airspace class G, a flight plan and two-way radio connection with ATS are required over the highest of: 5,000 ft. AMSL and 3,000 ft. GND, for VFR at night and for Instrument Flight.
c. RÖNNE TMA:

i. 1 500 ft. AMSL-4 500 ft. AMSL: Airspace class D
ii. 4 500 ft. AMSL-FL 95: Airspace class E

d. KASTRUP CTR (partly situated within Sweden FIR, Malmö AOR) and Rönne CTR: Class D airspace.

e. Over highland terrain in the northwestern part of SWEDEN FIR , the lower limitation of SUECIA CTA is FL 125.

8.1.1 RMZ (Radio Mandatory Zone) requires a two-way radio communication. Before joining RMZ the pilot shall make a first call at the prescribed frequency and leave following information: name of the radio station, call sign, type of aircraft, position, altitude, purpose of flight and other information prescribed by the competent authority.

8.2.2 Internationally, TMZ (Transponder Mandatory Zone, occurs internationally) requires that all flights have SSR transponders mod A and C or mod S, unless alternative provisions have been made by the competent authority.

8.1.3 When flying at a flight altitude that forms the boundary in height between two different ATS airspace classes, the traffic rules in the least restrictive of the two airspace classes should be applied for visual flight. In this case, class A is regarded as the most restrictive and G as the least restrictive.

8.1.4 For fighter aircraft in terminal area the indicated airspeed should normally be 300 kt.

2§ *Chapter 1, 8§ of the Swedish Civil Aviation Act (2010: 500) stipulates that the government or the authority determined by the government may issue regulations, or in an individual case decide on restrictions or prohibitions, on aviation within a certain part of the country, so-called restriction area (R-area).*

Chapter 1, 4 and 5§§ of the Swedish Civil Aviation Regulation (2010: 770) stipulate that the Swedish Transport Agency may issue regulations on restricted areas. Chapter 1, 6§ of the same regulation stipulate that the Swedish Transport Agency may issue regulations, or in an individual case decide, that an area shall be a dangerous area (D-area). Flights within such areas or places may only be performed under the conditions applicable to the area or place or with special permission of the authority responsible for the area. Such restrictions are published in the prescribed way by the responsible authority.

Permanent restrictions on the right to fly or land are published in Aeronautical Information Publication AIP-SWEDEN or AIPSUP. Temporary restrictions may be published in Notice to Airmen NOTAM and for military aviation MIL AIP or MIL NOTAM.

9 Clearance and guidance

1§ *A pilot in command must comply to the clearance given by the air traffic control unit or fighter control unit.*

The pilot in command's obligation under the first paragraph does not apply if, due to an urgent situation, it is necessary to take an action contrary to the clearance or instructions. The pilot in command shall, as soon as practicable, inform the appropriate air traffic control unit or fighter control unit of the situation that has arisen.

9.1.1 Instructions from the air traffic control unit regarding heading and altitude in uncontrolled airspace shall be followed as a clearance. However, these instructions do not exempt the pilot in command from avoiding collisions with the ground or other aircraft.

2§ *Before flying in a controlled airspace or part of a flight performed as a controlled flight, a clearance for the flight must be obtained from the appropriate air traffic control unit.*

A clearance must also be obtained before taxing within a maneuvering area at an airport where airport control service is performed.

Although a clearance is given for a flight from a departure aerodrome to a destination aerodrome, the clearance only applies to those parts of the flight that are performed within controlled airspace and at or near controlled aerodrome. A clearance can also be obtained via the fighter control unit, either as an individual clearance or by an activated training area.

9.2.1 When a mobile air traffic control unit (ATS / R) has been established, air traffic control services are exercised within the temporarily established maneuvering area. An aircraft may not taxi in the maneuvering area without clearance and must follow the instructions provided by ATS / R.

3§ *During formation flight, the formation leader is responsible for ensuring that a clearance / instruction is obtained for all aircraft in the unit.*

9.3.1 Upon request, the number of aircraft / units and the extent of the formation in height, length and width are stated. When the formation leader acknowledges received clearance for the formation, or change of clearance, it should be clear that the acknowledgment refers to the entire formation. It is of the utmost importance that the entire formation directly follows the height clearance obtained, even if the formation is extended in the longitudinal direction. For formation flying in a column, the formation members must follow the formation leader's flight paths to maintain the formation.

4§ *A pilot in command must, if radar service is not performed, notify an air traffic control unit or a fighter control unit when altitude according to a clearance / instruction has been reached.*

5§ *A clearance for flight into a controlled airspace shall be requested by a pilot or a fighter control unit no later than two minutes before entry, if possible.*

The following information must then be given:

1. *Position or the direction and distance to a designated navigation aid or destination aerodrome.*
2. *Height and indicated air speed.*
3. *Intention.*
4. *Transition from VFR to IFR flight and vice versa.*
5. *Other relevant information*

If the pilot intends to land, a request for clearance must also include:

1. *Approach and landing method.*
2. *Presence of ammunition.*
3. *Limitation with regard to residual fuel.*
4. *Other relevant information.*

9.1 Changes in a clearance

6§ *If a clearance/instruction is not satisfactory, the pilot in command shall request for an amended clearance/instruction.*

9.6.1 In addition to the identification of the aircraft, a request for a change of clearance should include the following information:

1. Change of cruising altitude/level.
2. Requested new cruising altitude/level.
3. Cruising speed at that altitude/level if it deviates plus or minus five percent from the previous cruising speed.
4. Where applicable, changed estimated time over the following reporting point or FIR limit.

9.6.2 Emergency descent procedure during controlled flight shall be performed as follows:

If an aircraft suffers a sudden decompression or a (similar) fault, which requires an emergency descent, the pilot in command should, if possible:

1. Make a turn away from the assigned flight path or route before the emergency descent begins.
2. As soon as possible inform the relevant air traffic control unit or fighter control unit of the emergency descent.
3. Set the transponder to code 7700 and, if applicable, set the emergency mode on the DS/data link connection system to air traffic controller - pilot (ADS / CPDLC).
4. Display external lights on the aircraft.

5. Look out for conflicting traffic, both visually and with the help of the Airborne Collision Avoidance System (ACAS) if installed.
6. Coordinate additional intentions with the air traffic control unit or the fighter control unit.

Aircraft should not descend below the lowest published minimum flight altitude that provides a minimum vertical obstacle clearance of 1,000 ft. or, in defined mountain areas, 2,000 ft. over all obstacles within the specified range.

As soon as the air traffic control unit or fighter control unit has perceived that an aircraft is performing an emergency descend, it shall acknowledge the emergency situation and take all necessary measures to ensure the safety of all aircraft concerned.

Depending on the situation, the appropriate unit should:

1. Propose a heading for the aircraft performing the emergency descend to achieve separation from other aircraft.
2. Announce the minimum flight altitude for the area and current QNH, if the altitude the pilot has announced to descend to is lower than the minimum flight altitude.
3. Establish separation as soon as possible to traffic in conflict with the aircraft performing the emergency descend, or provide traffic information on such traffic, as appropriate.
4. If appropriate, send an emergency message (CQ-) that an emergency descend is in progress, or request other units to send such a message, to other aircraft to alert them about the aircraft performing the emergency descend.

9.2 VMC-clearance

7§ *A pilot flying in accordance with IFR and has received a VMC clearance must:*

1. *maintain own separation so that there is no risk of collision, and*
2. *notify an air traffic control unit or a fighter control unit if the weather conditions do not allow for safe flight under visual weather conditions.*

9.3 Clearance within activated training sector

8§ *A pilot that intends to leave an activated training sector within controlled airspace must report the intention to the fighter control unit or the air traffic control unit 5 minutes, but not later than 1 minute, prior to leaving the activated training sector.*

9.8.1 A request for leaving an activated training sector must contain the following information:

1. Position or direction and distance to appropriate navigation aid or landing site and other applicable information.
2. Heading and altitude.
3. Intention.

4. Request for changing from IFR to VFR or vice versa,
5. Information about landing direction and landing method, number of aircraft and type of formation, munition status and any limitations if the intention is to land.

Air traffic control can, when traffic and / or weather conditions so requires, indicate the approach and landing method that should be used.

9§ *In an activated training area within a controlled airspace aircraft may be operated no closer than 2,5nm from the area boundary given in a clearance. In an activated training area within an uncontrolled airspace aircraft should be operated no closer than 2,5nm from the area boundary given in a clearance.*

10§ *In an activated training area within a controlled airspace, aircraft may be operated next to the specified altitude or height limits in a clearance.*

A fighter control unit can in some cases provide pilot assistance with area surveillance during radar vectoring or radar tracking, whereby the pilot remains responsible for maintaining altitude clearance.

10 Special air traffic rules

10.1 Traffic information areas and traffic information zones TIA/TIZ

1§ *Before operation in a traffic information zone (TIZ) or a traffic information area (TIA) a two-way radio communication must be established with the appropriate air traffic services unit. The communication must be established in time for traffic information to be obtained.*

Occasional flights in or out from a TIZ without two-way radio communication is allowed after permission given from an air traffic services unit.

2§ *After establishing a two-way radio communication, a pilot must report geographical location, flight altitude and intention.*

In exceptional cases, a report may be made in another way before the flight, but not only in the flight plan.

The reported flight altitude or flight path shall not be changed during the flight until the air traffic control unit has received and acknowledged a notice of change.

3§ *A report in accordance with chapter 10, 1 and 2§§ can also be made directly between a fighter control unit and the air traffic control unit. In these cases, the pilot does not need to establish a two-way radio communication with the appropriate air traffic control unit.*

10.2 Flying over restricted areas or danger areas

4§ *Flights over restricted areas (R-areas) and danger areas (D-areas) may take place as close as 500 ft. above the height or altitude published for the area. If the published height or altitude exceeds FL 290, 1,000 ft. applies instead.*

10.3 Towing

5§ *An aircraft or other object may be towed after an aircraft.*

An operator must document the conditions and terms for towing and then have an authorization by the Swedish Military Aviation Authority (SE-MAA) before use.

10.4 Weather reports from aircraft

6§ *Weather conditions that is observed during flight that could have an effect on the flight safety must be reported to the appropriate air traffic control unit or meteorological office.*

10.6.1 Examples of conditions that must be reported:

1. Moderate or severe turbulence.
2. Moderate or severe icing.
3. Wake turbulence.
4. Thunderstorms, without hail, which are hidden, blasted, widespread or in line showers.

5. Thunderstorms, with hail, which are hidden, blasted, widespread or in line showers.
6. Wind shear.
7. Heavy dust storm or heavy sandstorm.
8. Volcanic ash.
9. Volcanic activity before or during a volcanic eruption.

10.5 Advanced flying and flying in formation flying within controlled airspace

7§ *Advanced flying in controlled airspace is only permitted after receiving clearance from the appropriate air traffic control unit or fighter control unit.*

8§ *Advanced flying may be performed both at day and night.*

During daytime the flying must be performed with visual references.

During night, without visual references, advanced flying is only permitted with aircraft that are equiped with instruments that give adequate information to the pilot concerning the height (tip) and roll situation.

9§ *A formation shall act as one unit regarding navigation and position reporting.*

10§ *The formation leader and the pilot in command of the aircraft included in the formation are responsible for mutual separation between the aircraft, both within the formation and during join-up and breakaway.*

10.10.1 When eye contact within the unit is lost the formation leader must report the situation to the appropriate air traffic control unit.

10.10.2 Aircraft flying in a radar column and where a pilot has lost radar contact must report the situation to the appropriate air traffic control unit.

10.10.3 Brake away of the formation by means of air traffic control unit or fighter control unit may be performed in accordance with agreed procedures.

11§ *An operator must document the terms and conditions for advanced flight and formation flight within controlled airspace and have an authorization by the Swedish Military Aviation Authority (SE-MAA)) before use.*

10.6 Cruising levels and altimeter settings

12§ *An operator must document the terms and conditions for use of cruising levels and altimeter settings and have an authorization by the Swedish Military Aviation Authority (SE-MAA) before use.*

13§ *The cruising level, that a flight or a portion of a flight is performed, must be in terms of:*

1. *flight levels (FL), for flights operating at or above the lowest usable flight level,*
2. *flight levels (FL) for flights operating over the transition level or*
3. *altitudes (QNH), for flights operating on or below the transition altitude.*

The transition altitude in uncontrolled airspace is the highest of 5000ft MSL or 3000ft AGL.

The cruising altitude at which a flight or part of a flight is performed shall be expressed as:

1. *flight level if the flight is performed at or above the lowest usable flight level or*
2. *altitude (QNH), if the flight is performed below the lowest usable flight level.*

The transition altitude in uncontrolled airspace is the highest of 5,000 ft. MSL or 3,000 AGL.

***14§** Within a designated airspace, a common pressure reference may be used and applied instead of what is stated in chapter 10, 13§.*

***15§** Where radio contact cannot be established with a fighter control unit or an air traffic control unit, a cruising altitude published in the table of cruising levels in the Commission Implementing Regulation (EU) no 923/2012, Appendix 3, shall be used.*

10.15.1 Table 10:1 showing cruising levels as described in chapter 10, 15§ above.

Magnetic track (*)

Tabell 10:1 Table

From 000 deg. till 179 deg.						**From 180 deg. till 359 deg.**					
IFR			**VFR**			**IFR**			**VFR**		
Altitude			**Altitude**			**Altitude**			**Altitude**		
FL	**Feet**	**Meter**	**FL**	**Feet**	**Meter**	**FL**	**Feet**	**Meter**	**FL**	**Feet**	**Meter**
010	1 000	300	-	-	-	020	2 000	600	-	-	-
030	3 000	900	035	3 500	1 050	040	4 000	1 200	045	4 500	1 350
050	5 000	1 500	055	5 500	1 700	060	6 000	1 850	065	6 500	2 000
070	7 000	2 150	075	7 500	2 300	080	8 000	2 450	085	8 500	2 600
090	9 000	2 750	095	9 500	2 900	100	10 000	3 050	105	10 500	3 200
110	11 000	3 350	115	11 500	3 500	120	12 000	3 650	125	12 500	3 800
130	13 000	3 950	135	13 500	4 100	140	14 000	4 250	145	14 500	4 400
150	15 000	4 550	155	15 500	4 700	160	16 000	4 900	165	16 500	5 050
170	17 000	5 200	175	17 500	5 350	180	18 000	5 500	185	18 500	5 650
190	19 000	5 800	195	19 500	5 950	200	20 000	6 100	205	20 500	6 250
210	21 000	6 400	215	21 500	6 550	220	22 000	6 700	225	22 500	6 850
230	23 000	7 000	235	23 500	7 150	240	24 000	7 300	245	24 500	7 450
250	25 000	7 600	255	25 500	7 750	260	26 000	7 900	265	26 500	8 100
270	27 000	8 250	275	27 500	8 400	280	28 000	8 550	285	28 500	8 700
290	29 000	8 850				***300***	30 000	9 150			
310	31 000	9 450				***320***	32 000	9 750			
330	33 000	10 050				***340***	34 000	10 350			

Tabell 10:1 Table											
From 000 deg. till 179 deg.						**From 180 deg. till 359 deg.**					
IFR			**VFR**			**IFR**			**VFR**		
Altitude			**Altitude**			**Altitude**			**Altitude**		
FL	**Feet**	**Meter**	**FL**	**Feet**	**Meter**	**FL**	**Feet**	**Meter**	**FL**	**Feet**	**Meter**
350	35 000	10 650				***360***	36 000	10 950			
370	37 000	11 300				***380***	38 000	11 600			
390	39 000	11 900				***400***	40 000	12 200			
410	41 000	12 500				*430*	43 000	13 100			
450	45 000	13 700				*470*	47 000	14 350			
490	49 000	14 950				*510*	51 000	15 550			
etc.	etc.	etc.				etc.	etc.	etc.			

(*) Magnetic track, or in some polar areas grid routes. The affected polar areas are at latitudes higher than 70 degrees and within extensions of areas which may be determined by the competent Authorities. Grid lines are determined by a network that is parallel to the Greenwich Meridian, placed on a stereo-graphic map where direction towards the north pole is used as grid north.

Flight altitudes in **bold Italic** style refers to RVSM airspace (Reduced Vertical Separation Minimum).

10.7 Dumping and jettison

16§ *Objects or substances liable to cause injury, disease or harm to human health shall not be thrown, dispersed or discharged from an aircraft.*

The restriction does not apply to food and equipment in an emergency situation, ballast in the form of water or fine sand, the dispersion of water or other means of fire-fighting or jettison of the towing line from low altitude when landing.

17§ *Regardless to what is stated in chapter 10, 16§, fuel may be jettisoned when it is necessary for flight safety reasons.*

Before jettison of fuel, the pilot in command must report the situation to the air traffic control unit or fighter control unit. The jettison of fuel may then be carried out according to instructions from the air traffic control unit or fighter control unit.

If an urgent situation arises where jettison of fuel must be performed immediately, the air traffic services unit or air traffic control unit shall be informed as soon as possible after the jettison of fuel has been done.

18§ *The restriction in chapter 10, 16§, first paragraph, does not apply in emergency situations or when there are operational needs.*

In these context, operational needs refer to education, training and operations where dumping / jettison, shooting and firing of fighter system is performed.

10.8 Simulated Instrument Flying

19§ *Simulated instrument flying has to be performed in aircraft equipped with dual controls only.*

A pilot in command who is authorized to operate the aircraft must act as a supervising pilot for the pilot practicing simulated instrument flying.

The supervising pilot must have adequate sight, both horizontal and lateral, or be assisted by a third crew member to ensure the view of sight.

11 Communication and transponder

11.1 Communication

1§ *Communication between an aircraft and a unit on the ground must be established on the basis of the activities to be performed. What is said in the first paragraph applies regardless of whether the activity is performed in controlled or uncontrolled airspace.*

Flight interpreters may be used if necessary.

Any exception from the requirement for a radio communication should be done in accordance with an agreement with air traffic control unit or fighter control unit.

Where the prescribed frequency is missing, 123,450 MHz should be monitored and a blind message sent if necessary.

Aircraft should send a position report when flying over seas and wilderness areas, as follows:

1. For jet aircraft other than military transport aircraft every 20 minutes.
2. For military transport aircraft and helicopters every 40 minutes.

2§ *The use of transponders and other identification equipment as well as procedures in the event of an interruption in a radio communication (so-called radio failure) must be documented by the operator on the basis of the activity intended to be performed in controlled and uncontrolled airspace, respectively.*

The procedures must meet the requirements approved by the Swedish Military Aviation Authority (SE-MAA).

An operator shall inform the air traffic control unit and the fighter control unit of its procedures.

11.2.1 In the event of an interruption in the radio communication, an aircraft constituting airport traffic shall pay attention to optical signals.

11.2.2 When flying on FPL / GAT applies:

Flight according to IFR in VMC that has an interruption in the radio communication, the pilot shall act as follows:

1. Set the transponder to SSR code 7600 which indicates radio loss.
2. Land at the nearest airport and announce their arrival as soon as possible to the ATS unit or continue the flight as below if appropriate.

During IMC or where the pilot judges that the flight cannot be completed in accordance with no 2. above the pilot shall act as follows:

1. Set the transponder to SSR code 7600 and perform actions described in i-iii below.
    a) If ATS does not use monitoring equipment; if it is possible for a period of 20 minutes, maintain at the latest assigned speed and flight level or minimum flight altitude above the sea if it is higher. The twenty-minute period begins at the time when transmission of position report has failed. Thereafter, flight altitude and speed shall be adapted to what is stated in the submitted flight plan.
    b) If the ATS uses monitoring equipment; if possible, maintain at the latest assigned speed and flight level or minimum flight altitude above sea level if this is higher for a period of seven minutes. The seven-minute period begins at the latest of:

        i. the time when the last assigned flight level or minimum flight altitude above sea level is achieved, or
        ii. the time when the transponder is set to the SSR code 7600, or
        iii. the time when the transmission of a position report has failed.

        Thereafter, flight altitude and speed shall be adapted to what is stated in the submitted flight plan.

    c) If the aircraft is vectored or follows the offset route parallel to the specified ATS route according to RNAV without a specified limit; as soon as possible return to the route that is specified in the current flight plan to rejoin not later than at the next significant point, considering the minimum flight altitude.

2. Continue the flight along the flight route submitted in the flight plan to a navigation aid at the destination airport, and when required according to no 3. below, wait over the navigation aid until the descent begins.

3. Commence descend at the navigation aid specified in no 2. at the last announced and acknowledged estimated time of arrival, or as close to this time as possible. If the estimated time of arrival has not been announced, the aircraft shall begin to descend at the estimated time of arrival according to the current flight plan, or as close to this time as possible.

4. Perform the instrument approach procedure published for the navigation aid.

5. Land within 30 minutes at the latest of the following times: the estimated time of arrival according to no 5. or the last acknowledged estimated time of arrival.

11.3.3 When flying on FPL / OAT applies:

1. Set the transponder to SSR code 7600 which indicates radio loss.
2. Continue the flight in VMC and land at the nearest appropriate airport. After landing, notify ATS as soon as possible of the current situation.

If the flight cannot be completed in VMC, attention may be called for in any of the following ways.

1. In case of eye contact with other aircraft:

   a) The pilot flies on a parallel course alongside the other aircraft.
   b) During daytime with wing tipping; during night with repeated regular flashes of the navigational lights.
   c) The pilot who pays attention to the emergency signals acknowledges with the same signal and directs the aircraft to land at a suitable place.

2. In case of no eye contact with other aircraft:

   a) The pilot searches for appropriate area and altitude where the aircraft most possible can be detectable by radar. Appropriate area considering radar coverage and other traffic is in airspace class G just outside a TMA or CTR.
   b) The pilot flies at fuel economy speed in a holding for approx. 3 minutes considering fuel situation and other conditions.
   c) The holding shall be performed in left turns if both transmitter and receiver is out of order or in right turn if only the transmitter is out of order.
   d) The pilot then continues the flight according to the flight plan or clearance to the applicable navigation aid at the destination airport and performs an instrument approach procedure for that navigation aid.

Air traffic control unit or fighter control unit maintain separation between the aircraft affected by radio loss and other aircraft.

11.2 Read back

3§ *A pilot in command must always read back safety related parts of a clearance or instruction.*

Following information must always be read back:

1. *Clearance of flight path.*
2. *Clearance and instructions regarding lining up, land on, take off, hold before crossing, taxi and backtrack on all runways.*
3. *Runway in use, altimeter setting, SSR-codes and frequencies.*
4. *Clearance regarding altitude, heading and instructions for speed.*
5. *Transition level*

Transition levels according to no 5. above must be read back regardless if it is received from an air traffic controller or AFIS-broadcast.

11.3 Transponder

4§ *Transponder mod A + C shall normally be switched on during flight unless otherwise announced or permitted by the air traffic service.*

A pilot in command that has not received an individual transponder setting must before start set:

1. *7400 in Stockholm AOR.*
2. *7300 in Malmö AOR.*

In emergency situations, set:

1. *General emergency: 7700.*
2. *Radio communication failure: 7600.*
3. *Aircraft subjected to unlawful interference: 7500.*

Air traffic control unit or fighter control unit can, if necessary, request switching on and off the transponder as well as IDENT or height reporting (mod C).

11.4.1 To avoid false collision warnings, transponder should be operated in mode A (transponder mode C is switched off) in planned flights closer than 6 NM and altitude difference less than 1000 ft. to aircraft that are suspected to be equipped with collision warning system.

5§ *In case of transponder failure the pilot in command must report the situation on the radio.*

6§ *When flying in formation, the formation leader must have the transponder switched on with the assigned individual code. If the distance between the aircraft is less than 300 meters, the other aircraft in the formation must have the transponder switched off, with the individual code preset. The transponder must be switched on for every aircraft in the formation exceeding 300 meters from the formation.*

7§ *When there are operational needs the transponder may be switched off.*

11.7.1 Operators may restrictively decide on exceptions from the normal use of transponders. Notification of exceptions must be submitted in the flight plan or sent on the radio. An operator must document the terms and conditions for operating without transponder and have an authorization by the Swedish Military Aviation Authority (SE-MAA) before use.

12 Signals

12.1 Emergency signals, distress signals and other urgent messages

1§ *The following signals used either together or separately, mean that an aircraft is in serious danger and immediate assistance is required:*

1. *A signal made by radiotelegraphy or by any other signaling method consisting of the group SOS (. . . - - - . . . in the Morse Code).*
2. *A radiotelephony emergency signal consisting of the spoken word MAYDAY, preferably spoken three times.*
3. *An emergency message sent via data link which transmits the intent of the word MAYDAY.*
4. *Rockets or shells throwing red lights, fired one at a time at short intervals.*
5. *Parachute flare showing a red light.*

If there are special circumstances, help may be called for in other ways.

2§ *The following signals used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance as stated in chapter 12, 1§ above:*

1. *The repeated switching on and off of the landing lights.*
2. *The repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.*

3§ *The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight:*

1. *1. A signal made by radiotelegraphy or by any other signaling method consisting of the group XXX (-..- -..- -..-).*
2. *2. A radiotelephony urgency signal consisting of the spoken words PAN PAN, preferably spoken three times.*
3. *3. An urgency message sent via data link which transmits the intent of the words PAN, PAN.*

12.2 Signals in case of radio failure

4§ *In the event of a radio failure, communication between the aircraft and the air traffic control unit is performed via optical signals. An aircraft must follow the signals coming from the air traffic control service.*

12.4.1 Table 12:1 indicates signals and their significance from ATS to aircraft.

Tabell 12:1.

Directed signal towards aircraft	Aircraft in flight	Aircraft on ground
Steady green light	Cleared to land	Cleared for take-off
Steady red light	Give way to other aircraft and continue circling	Stop
Series of green flashes	Return for landing	Cleared to taxi
Series of red 1) flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use
Series of white flashes	Land at this aerodrome	Return to starting point on the aerodrome
Red pyrotechnic	Notwithstanding any previous instructions, do not land for the time being	---
Flashes with runway- and taxi lights	Pull-up and go around	---

12.4.2 Acknowledgment from aircraft to ATS on received signal as above is done according to one of the following:

1. In the air during daytime, by wing tipping.
2. In the air at night, by switching on and off twice the landing headlights or, if these are missing, by switching on and off twice the navigation lights.
3. On the ground during daytime, by movements with ailerons or rudder.
4. On the ground at night, as in the air at night.

5§ *An aircraft requesting line up at an aerodrome must signal the air traffic control unit by repeated switching on and off the landing lights.*

12.3 Ground and marshalling signals

6§ *Military aircraft is to comply with the signals stated in The Commission Implementing Regulation (EU) No 923/2012.*

Ground signals according to The Commission Implementing Regulation (EU) No 923/2012 as follows.

1 Visual ground signals

1.1 Prohibition of landing

1.1.1 A horizontal red square panel with yellow diagonals (Figure 12:1) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.

Figure 12:1

1.2 Need for special precautions while approaching or landing

1.2.1 A horizontal red square panel with one yellow diagonal (Figure 12:2) when displayed in a signal area indicates that owing to the bad state of the maneuvering area, or for any other reason, special precautions must be observed in approaching to land or in landing.

Figure 12:2

1.3 Use of runways and taxiways

1.3.1 A horizontal white dumb-bell (Figure 12:3) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

Figure 12:3

1.3.2 The same horizontal white dumb-bell as in 3.2.3.1 but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure 12:4) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other maneuvers need not be confined to runways and taxiways.

Figure 12:4

1.4 Closed runways or taxiways

1.4.1 Crosses of a single contrasting color, yellow or white (Figure 12:5), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

Figure12:5

1.5 Directions for landing or take-off

1.5.1 A horizontal white or orange landing T (Figure 12:6) indicates the direction to be used by aircraft for landing and take-off, which shall be in a direction parallel to the shaft of the T towards the cross arm. When used at night, the landing T shall be either illuminated or outlined in white lights.

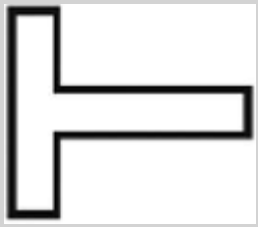


Figure 12:6

1.5.2 A set of two digits (Figure 12:7) displayed vertically at or near the aerodrome control tower indicates to aircraft on the maneuvering area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.

Figure 12:7

1.6 Right-hand traffic

1.6.1 When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous color (Figure 12:8) indicates that turns are to be made to the right before landing and after takeoff.

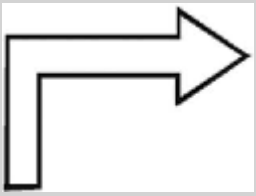


Figure 12:8

1.7 Air traffic services reporting office

1.7.1 The letter C displayed vertically in black against a yellow background (Figure 12:9) indicates the location of the air traffic services reporting office.

Figure 12:9

1.8 Sailplane flights in operation

1.8.1 A double white cross displayed horizontally (Figure 12:10) in the signal area indicates that the aerodrome is being used by sailplanes and that sailplane flights are being performed.

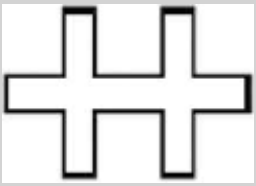


Figure 12:10

1.9 HELIPAD (not published in The Commission Implementing Regulation (EU) No 923/2012)

1.9.1 A horizontal white square with a red ”H” or red square with a yellow ”H” (Figure 12:11) indicates a landing zone for helicopter.

Figure 12:11

Marshalling signals from the signalman/marshaller to an aircraft according to The Commission Implementing Regulation (EU) No 923/2012.

General:

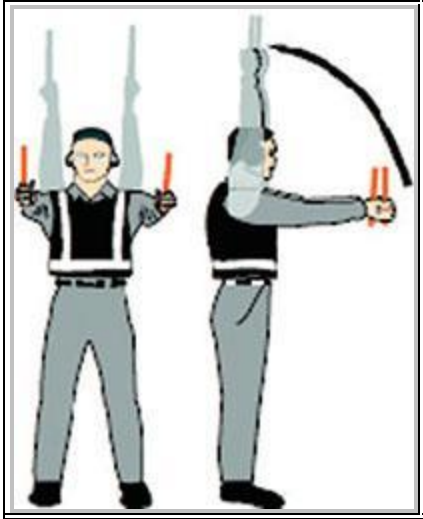
1. These signals are intended for use by the signalman/marshaller to an aircraft.
2. Hands should be illuminated as necessary to facilitate observation by the pilot on the aircraft.
3. The signalman/marshaller must be facing the aircraft and the position shall be:
   a) for fixed-wing aircraft, on left side of aircraft, where best seen by the pilot and
   b) for helicopters, where the signalman/marshaller can best be seen by the pilot.

Prior to using the following signals, the signalman/marshaller shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft might otherwise strike.

1. Wingwalker/guide (*)

Raise right hand above head level with wand pointing up; move left-hand wand pointing down toward body.

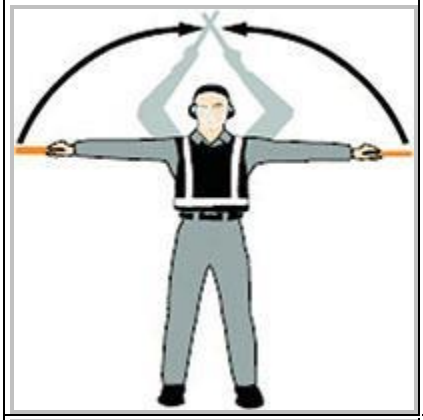
(*) This signal provides an indication by a person positioned at the aircraft wing tip, to the pilot/marshaller/push-back operator, that the aircraft movement on/off a parking position would be unobstructed.



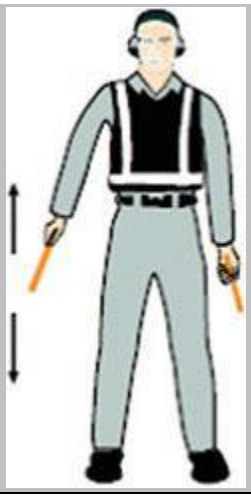
2. **Identify gate**

Raise fully extended arms straight above head with wands pointing up.

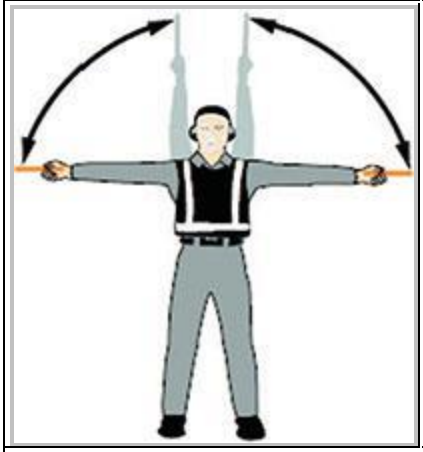
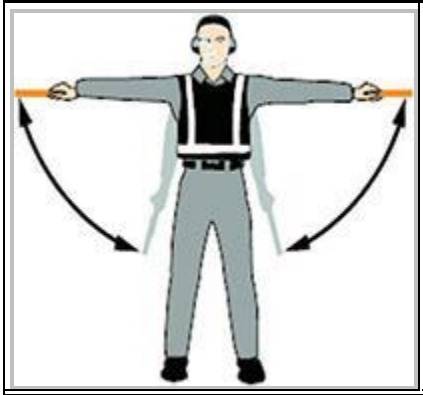
	3. **Proceed to next signalman/marshaller or as directed by tower/ground control** Point both arms upward; move and extend arms outward to sides of body and point with wands to direction of next signalman/marshaller or taxi area.
	4. **Straight ahead** Bend extended arms at elbows and move wands up and down from chest height to head.
	5 a. **Turn left (from pilot's point of view)** With right arm and wand extended at a 90-degree angle to body, make 'come ahead' signal with left hand. The rate of signal motion indicates to pilot the rate of aircraft turn..
	5 b. **Turn right (from pilot's point of view)** With left arm and wand extended at a 90-degree angle to body, make 'come ahead' signal with right hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

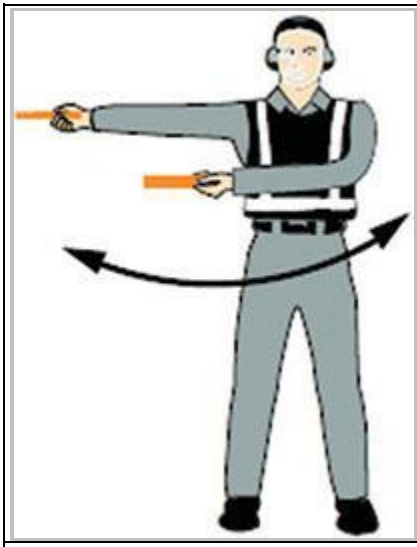
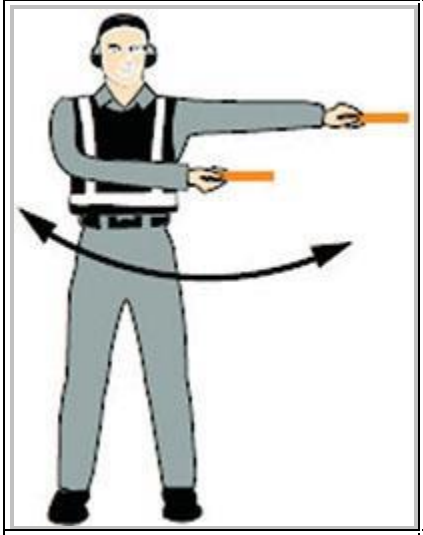
	*6 a.* ***Normal stop*** *Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross*
	6 b. **Emergency stop** Abruptly extend arms and wands to top of head, crossing wands.
	7 a. **Set brakes** Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. **Do not** move until receipt of ‘thumbs up’ acknowledgement from flight crew.
	7 b. **Release brakes** Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. **Do not** move until receipt of ‘thumbs up’ acknowledgement from flight crew.

	8 a. **Chocks inserted** With arms and wands fully extended above head, move wands inward in a ‘jabbing’ motion until wands touch. **Ensure** acknowledgement is received from flight crew.
	8 b. **Chocks removed** With arms and wands fully extended above head, move wands outward in a ‘jabbing’ motion. **Do not** remove chocks until authorized by flight crew.
	9. **Start engine(s)** Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with left arm raised above head level, point to engine to be started.

	10. **Cut engines** Extend arm with wand forward of body at shoulder level; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.
	11. **Slow down** Move extended arms downwards in a ‘patting’ gesture, moving wands up and down from waist to knees.
	12. **Slow down engine(s) on indicated side** With arms down and wands toward ground, wave either right or left wand up and down indicating engine(s) on left or right side respectively should be slowed down.

	13. **Move back** With arms in front of body at waist height, rotate arms in a forward motion. To stop rearward movement, use signal 6 a or 6 b.
	14 a. **Turns while backing (for tail to starboard)** Point left arm with wand down and bring right arm from overhead vertical position to horizontal forward position, repeating right-arm movement.
	14 b. **Turns while backing (for tail to port)** Point right arm with wand down and bring left arm from overhead vertical position to horizontal forward position, repeating left-arm movement.

	15. **Affirmative/all clear (*)** Raise right arm to head level with wand pointing up or display hand with ‘thumbs up’; left arm remains at side by knee. (*) This signal is also used as a technical/servicing communication signal.
	16. **Hover (*)** Fully extend arms and wands at a 90-degree angle to sides. (*) For use to hovering helicopters.
	17. **Move upwards (*)** Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upwards. Speed of movement indicates rate of ascent. (*) For use to hovering helicopters.
	18. **Move downwards (*)** Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands down‰ wards. Speed of movement indicates rate of descent. (*) For use to hovering helicopters.

	19 a. **Move horizontally left (from pilot's point of view) (*)** Extend arm horizontally at a 90-degree angle to right side of body. Move other arm in same direction in a sweeping motion. (*) For use to hovering helicopters.
	19 b. **Move horizontally right (from pilot's point of view) (*)** Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion. (*) For use to hovering helicopters.
	20. **Land (*)** Cross arms with wands downwards and in front of body. (*) For use to hovering helicopters.

	21. **Hold position/stand by** Fully extend arms and wands downwards at a 45-degree angle to sides. Hold position until aircraft is clear for next maneuver.
	22. **Dispatch aircraft** Perform a standard salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with flight crew until aircraft has begun to taxi.
	23. **Do not touch controls (technical/servicing communication signal)** Extend right arm fully above head and close fist or hold wand in horizontal position; left arm remains at side by knee.
	24. **Connect ground power (technical/servicing communication signal)** Hold arms fully extended above head; open left hand horizontally and move finger tips of right hand into and touch open palm of left hand (forming a ‘T’). At night, illuminated wands can also be used to form the ‘T’ above head.

	25. **Disconnect power (technical/servicing communication signal)** Hold arms fully extended above head with finger tips of right hand touching open horizontal palm of left hand (forming a 'T'); then move right hand away from the left. **Do not** disconnect power until authorized by flight crew. At night, illuminated wands can also be used to form the 'T' above head.
	26. **Negative (technical/servicing communication signal)** Hold right arm straight out at 90 degrees from shoulder and point wand down to ground or display hand with 'thumbs down'; left hand remains at side by knee.
	27. **Establish communication via interphone (technical/ servicing communication signal)** Extend both arms at 90 degrees from body and move hands to cup both ears.
	28. Open/close stairs (technical/servicing communication signal) (*) With right arm at side and left arm raised above head at a 45-degree angle, move right arm in a sweeping motion towards top of left shoulder. (*) This signal is intended mainly for aircraft with the set of integral stairs at the front.

Marshalling signals from the pilot to a signalman/marshaller according to The Commission Implementing Regulation (EU) No 923/2012.

General:
These signals shall be used by a pilot in the cockpit with hands plainly visible to the signalman/marshaller, and illuminated as necessary to facilitate observation by the signalman/marshaller.

Brakes:

a) Brakes engaged: raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.
b) Brakes released: raise arm, with fist clenched, horizontally in front of face, then extend fingers.

Chocks:

a) Insert chocks: arms extended, palms outwards, move hands inwards to cross in front of face.
b) Remove chocks: hands crossed in front of face, palms outwards, move arms outwards.

Ready to start engine(s):

Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.

Visual signals should only be used when verbal communication is not possible. The signalman/marshaller must ensure that a confirmation is received from the flight crew with regard to manual signals for technical/servicing signals.

Standard emergency hand signals according to The Commission Implementing Regulation (EU) No 923/2012.

General:

The signals established as the minimum requirements for communication from the incident commander/firefighters to the cockpit/cabin crew in emergency situations. Emergency hand signals should be given from the left front side of the aircraft for the cockpit crew.

	1. **Recommend evacuation** Evacuation recommended based on aircraft rescue and fire-fighting and Incident Commander's assessment of external situation. Arm extended from body, and held horizontal with hand upraised at eye level. Execute beckoning arm motion angled backward. Non-beckoning arm held against body. Night — same with wands.

	
	2. **Recommend stop** Recommend evacuation in progress be halted. Stop aircraft movement or other activity in progress. Arms in front of head — Crossed at wrists Night — same with wands.
	3. **Emergency contained** No outside evidence of dangerous conditions or ‘all-clear.’ Arms extended outward and down at a 45-degree angle. Arms moved inward below waistline simultaneously until wrists crossed, then extended outward to starting position. Night — same with wands.

	4. **Fire** Move right-hand in a ‘fanning’ motion from shoulder to knee, while at the same time pointing with left hand to area of fire. Night — same with wands.

7§ An operator may use additional ground and marshelling signals. Such signals must be approved by the Swedish Military Aviation Authority (SE-MAA) before use.

13 Exemptions

1§ *Swedish Armed Forces may allow exemption from these rules. The Supreme Commander or whom he or she authorizes will decide in matters of exemptions from the rules.*

Appendix 1 Abbreviations and definitions

ACAS	*(Air borne Collision Avoidance System) means an aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.*
Aerobatic flight	*Aerobatic flight means maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed, not necessary for normal flight or for instruction for licenses or ratings other than aerobatic rating.*
Aerodrome	*Aerodrome means a defined area (including any buildings, installations and equipment) on land or water or on a fixed, fixed off-shore or floating structure intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.*
Aerodrome control service	*Aerodrome control service means air traffic control service for aerodrome traffic;*
AFIS	*(Aerodrome flight information service) gives significant advice and information for an aerodrome.*
AGL	*(Above Ground Level) is the vertical distance from the underlying terrain to a level, point or object considered as a point.*

Aircraft	*Aircraft means any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.*
Airspace system	*Airspace system means the airspace that meets the need for aircraft maneuvering, operators including personnel, equipment systems and other aviation products, land, facilities and premises.*
Air traffic	*Air traffic means all aircraft in flight or operating on the maneuvering area of an aerodrome.*
Air traffic control clearance	*Air traffic control clearance means authorization for an aircraft to proceed under conditions specified by an air traffic control unit.*
Air traffic control unit	*Air traffic control unit means a generic term meaning variously, area control center, approach control unit or aerodrome control tower.*
Air traffic service	*Air traffic service (ATS) means a generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).*
Air traffic services unit	*Air traffic services unit means a generic term meaning variously, air traffic control unit, flight information center, aerodrome flight information service unit or air traffic services reporting office.*
Fighter control service	*Fighter control service means the control of military flight units and air surveillance containing*

	esponsibility, resource management, process management and improvement of this activity.
Fighter control unit	*Fighter Control Unit means a generic term meaning variously CRC - Control and Report Center or Command and Control flight information center performing fighter control and air traffic control in a integrated airspace.*
AMSL	*(Above Mean Sea Level) is the vertical distance from the sea level to a level, point or object considered as a point.*
Appropriate ATS Authority	*Appropriate ATS Authority is the authority designated by a State responsible for that Air Traffic Service is provided in the current airspace.*
ATIS	*Automatic Terminal Information Service means the automatic provision of current, routine information to arriving and departing aircraftthroughout 24 hours or a specified portion thereofData link-automatic terminal information service (D-ATIS)' means the provision of ATIS via data link.Voice-automatic terminal information service (Voice ATIS) means the provision of ATIS by means of continuous and repetitive voice broadcasts.*
ATS-route	*ATS route means a specified route designed for channeling the flow of traffic as necessary for the provision of air traffic services.*
Controlled airspace	*Controlled airspace means an airspace of defined dimensions within which air traffic control service is*

	provided in accordance with the airspace classification.
Controlled flight	*Controlled flight means any flight which is subject to an air traffic control clearance.*
Control Zone	*Control Zone (CTR) means a controlled airspace extending upwards from the surface of the earth to a specified upper limit.*
Cruising level	*Cruising level means a level maintained during a significant portion of a flight.*
Danger area	*Danger area means an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.*
Flight information service	*Flight Information Service means a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.*
Flight Level	*Flight level (FL) means a surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013,2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.*
Flight plan	*Flight plan means specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft;*

FIR	*(Flight Information Region) means an airspace of defined dimensions within which flight information service and alerting service are provided.*
GAT	*(General Air Traffic), refers to all operations with civil aircraft as well as state aircraft (including military aircraft, customs and police aircraft) when these operations are performed in accordance with procedures issued by ICAO.*
Height	*Height means the vertical distance of a level, a point or an object considered as a point, measured from a specified datum.*
IFR	*IFR means the symbol used to designate the instrument flight rules.*
IMC	*IMC means the symbol used to designate instrument meteorological conditions.*
Instrument approach procedure	*Instrument approach procedure (IAP) means a series of predetermined maneuvers by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply.*
Level	*Level means a generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.*

Loaded aircraft	*Aircraft equipped with integrated weapon systems that is loaded.*
Local flight	*Local flight means a flight performed no higher than 5 000 ft. AMSL, within terminal area limits, or when TMA is missing, within 25 NM from the aerodrome.*
Maneuvering area	*Maneuvering area means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.*
Night	*Night means the hours between the end of evening civil twilight and the beginning of morning civil twilight. Civil twilight ends in the evening when the center of the sun's disc is 6 degrees below the horizon and begins in the morning when the center of the sun's disc is 6 degrees below the horizon.*
Operational air traffic	*Operational air traffic means all flights when regulations according to GAT is not valid and for which rules and procedures have been specified by responsible national authorities.*
Operator	*Operator means the authority, organization or person, included in the military aviation system, that provides aviation - related services for development, procurement, operation, maintenance and / or decommissioning.*
Special VFR Flight	*Special VFR flight means a VFR flight, cleared by air traffic control, to operate within a control zone in meteorological conditions below VMC.*

Swedish territory	*Swedish territory means Sweden's land areas, lake territory with inland waters and the territorial sea and the airspace over the land areas and sea territory.*
TAS	*True Air Speed.*
The Commission Implementing Regulation	*The Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 on common rules in the field of aviation and air traffic services and procedures, and amending Implementing Regulation (EC) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 is the basis for Provisions of application - Rules of the Air for military aviation.*
Traffic Information Area	*Traffic Information Area (TIA) is a defined uncontrolled airspace that extends upwards to a specified altitude within a specified area where Aerodrome flight information service (AFIS) is provided.*
Traffic Information Zone	*Traffic Information Zone (TIZ) is a defined uncontrolled airspace, within a TIA, that extends upwards to a specified altitude within a specified area where Aerodrome flight information service (AFIS) is provided.*
Uncontrolled aerodrome	*Uncontrolled aerodrome means an aerodrome where aerodrome control service is not in use.*
Remotely piloted aircraft system	*Remotely piloted aircraft system (RPAS) means a system consisting of an unmanned aerial vehicle and*

	other components necessary to be controlled on a distance of one or more persons.
VFR	*VFR means the symbol used to designate the visual flight rules.*
VMC	*VMC means the symbol used to designate visual meteorological conditions.*
VOR station	*Very high frequency Omnidirectional Radio ranges.*

Appendix 2 ATS airspace classes — services provided and flight requirements

Airspace	*VFR/IFR*		*Separation conducted by air traffic control*				*Require Air traffic control*	*Require Clearance*	*Require radio communication*
	VFR	*IFR*	*IFR-IFR*	*IFR-VFR*	*VFR-IFR*	*VFR-VFR*			
A	*No*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*	*Yes*	*Yes*	*Yes*
B	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
C	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*No*[a)]	*Yes*	*Yes*	*Yes*
D	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*	*Yes*	*Yes*	*Yes*
E	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*	*For IFR*	*For IFR*	*For IFR*
F	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*	*N/A*	*No*	*N/A*	*For IFR if required*
G	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*	*N/A*	*No*	*N/A*	*For IFR if required*

a) VFR-VFR separation during night