# SAN MARINO (CAA-MNA) CAR OPS 1 Commercial Air Transport

# SUBPART Q FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS

1-January-2019



# **CONTENTS**

	CONTENTS		2		
	OPS 1.1090	Objective and Scope	3		
	OPS 1.1095	Definitions	4		
	OPS 1.1100	Flight and Duty Limitations	5		
	OPS 1.1105	Maximum Daily Flight Duty Period (FDP)	6		
	OPS 1.1110	Rest	7		
	OPS 1.1115	Extension of Flight Duty Period due to In-flight Rest	7		
	OPS 1.1120	Unforeseen Circumstances in Actual Flight Operations — Commander's Discretion	8		
	OPS 1.1125	Standby	8		
	OPS 1.1130	Nutrition	9		
	OPS 1.1135	Flight Duty, Duty and Rest Period Records	9		
	OPS 1.1140	Fatigue Management	10		
AC/AMC/IEM Q FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS					
	AC OPS 1.114		11		
	1 Fatigue	Risk Management System	11		
	2 Fatigue	risk management processes	12		
	3 FRMS sa	fety assurance processes	13		
	4 FRMS pr	omotion processes	13		
	Table 1: OPS	1.1105 (a) – Maximum Daily Flight Duty Period	14		

# OPS 1.1090 Objective and Scope

- (a) The operator shall establish a flight and duty time limitations and rest scheme (FTL) for crew members.
- (b) The operator shall ensure that for all its flights,
  - (1) the flight and duty time limitations and rest scheme is in accordance with both;
    - (i) the provisions of this Subpart; and
    - (ii) any additional provisions that are applied by the Authority in accordance with the provisions of this Subpart for the purpose of maintaining safety.
  - (2) Flights are planned to be completed within the allowable flight duty period taking into account the time necessary for pre-flight duties, the flight and turn-around times.
  - (3) Duty rosters will be prepared and published sufficiently in advance to provide the opportunity for crew members to plan adequate rest.
- (c) Operators' responsibilities
  - (1) The operator shall nominate a home base for each crew member.
  - Operators shall be expected to appreciate the relationship between the frequencies and pattern of flight duty periods and rest periods and give due consideration to the cumulative effects of undertaking long duty hours interspersed with minimum rest.
  - (3) Operators shall allocate duty patterns which avoid such undesirable practices as alternating day/night duties or the positioning of crew members so that a serious disruption of established sleep/work pattern occurs.
  - (4) Operators shall plan local days free of duty and notify crew members in advance.
  - (5) Operators shall ensure that rest periods provide sufficient time to enable crew to overcome the effects of the previous duties and to be well rested by the start of the following flight duty period.
  - (6) Operators shall ensure flight duty periods are planned to enable crew members to remain sufficiently free from fatigue so they can operate to a satisfactory level of safety under all circumstances.
- (d) Crew members' responsibilities
  - (1) A crew member shall not operate an aeroplane if he/she knows that he/she is suffering from or is likely to suffer from fatigue or feels unfit, to the extent that the flight may be endangered.
  - (2) Crew members should make optimum use of the opportunities and facilities for rest provided and plan and use their rest periods properly.
- (e) Responsibilities of Authority
  - The Authority has established the following regulations for the purpose of managing fatigue. These regulations are based upon scientific principles, knowledge and operational experience with the aim of ensuring that flight and cabin crew members are performing at an adequate level of alertness.
- (f) Variations
  - (1) The Authority may grant variations to the requirements in this Subpart in accordance with applicable laws and procedures and in consultation with interested parties.
  - (2) Each operator will have to demonstrate to the Authority, using operational experience and taking into account other relevant factors such as current scientific knowledge, that its request for a variation produces an equivalent level of safety. Such variations will be accompanied with suitable mitigation measures where appropriate.

#### OPS 1.1095 Definitions

For the purposes of this Subpart, the following definitions shall apply:

# Augmented flight crew:

A flight crew which comprises more than the minimum number required for the operation of the aeroplane and in which each flight crew member can leave his/her post and be replaced by another appropriately qualified flight crew member.

#### **Block time:**

The time between an aeroplane first moving from its parking place for the purpose of taking off until it comes to rest on the designated parking position and all engines or propellers are stopped.

#### **Break:**

A period free of all duties, which counts as duty, being less than a rest period.

#### **Duty:**

Any task that a crew member is required to carry out associated with the business of an AOC holder. Unless where specific rules are provided for by this Regulation, the Authority shall define whether and to what extent standby is to be accounted for as duty.

# **Duty period:**

A period which starts when a crew member is required by the operator to commence a duty and ends when the crew member is free from all duties.

# Flight duty period:

A flight duty period (FDP) is any time during which a person operates in an aircraft as a member of its crew. The FDP starts when the crew member is required by the operator to report for a flight or a series of flights; it finishes at the end of the last flight on which he/she is an operating crew member.

#### Home base:

The location nominated by the operator to the crew member from where the crew member normally starts and ends a duty period or a series of duty periods and where, under normal conditions, the operator is not responsible for the accommodation of the crew member concerned.

#### Local day:

A 24 hour period commencing at 00.00 local time.

#### Local night:

A period of eight hours falling between 22.00 and 08.00 local time.

# A single day free of duty:

A single day free of duty shall include two local nights. A rest period may be included as part of the day off.

#### **Operating crew member:**

A crew member who carries out his/her duties in an aircraft during a flight or during any part of a flight.

# **Positioning:**

The transferring of a non-operating crew member from place to place, at the behest of the operator, excluding travelling time. Travelling time is defined as:

- (1) time from home to a designated reporting place and vice versa,
- (2) time for local transfer from a place of rest to the commencement of duty and vice versa.

# **Rest period:**

An uninterrupted and defined period of time during which a crew member is free from all duties and airport standby.

# Standby:

A defined period of time during which a crew member is required by the operator to be available to receive an assignment for a flight, positioning or other duty without an intervening rest period.

# Window of Circadian Low (WOCL):

The Window of Circadian Low (WOCL) is the period between 02.00 and 05.59. Within a band of three time zones the WOCL refers to home base time. Beyond these three time zones the WOCL refers to home base time for the first 48 hours after departure from home base time zone, and to local time thereafter.

# **OPS 1.1100** Flight and Duty Limitations

(a) Cumulative duty hours

The operator shall ensure that the total duty periods to which a crew member is assigned do not exceed:

- (1) 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout this period; and
- (2) 60 duty hours in any seven consecutive days.
- (b) Limit on total block times

The operator shall ensure that the total block times of the flights on which an individual crew member is assigned as an operating crew member does not exceed;

- (1) 900 block hours in a calendar year;
- (2) 100 block hours in any 28 consecutive days.

# **OPS 1.1105** Maximum Daily Flight Duty Period (FDP)

- (a) Except for single-pilot operations and to emergency medical service operations;
  - (1) The operator shall specify reporting times that realistically reflect the time for safety-related ground duties as approved by the Authority.
  - (2) The maximum basic daily FDP is 13 hours.
  - (3) These 13 hours will be reduced by 30 minutes for each sector from the third sector onwards with a maximum total reduction of two hours.
  - (4) When the FDP starts in the WOCL, the maximum stated in point (2) and point (3) will be reduced by 100 % of its encroachment up to a maximum of two hours. When the FDP ends in or fully encompasses the WOCL, the maximum FDP stated in point (2) and point (3) will be reduced by 50 % of its encroachment.

# (b) Extensions

- (1) The maximum daily FDP can be extended by up to one hour.
- (2) Extensions are not allowed for a basic FDP of six sectors or more.
- (3) Where an FDP encroaches on the WOCL by up to two hours extensions are limited to up to four sectors.
- (4) Where an FDP encroaches on the WOCL by more than two hours extensions are limited to up to two sectors.
- (5) The maximum number of extensions is two in any seven consecutive days.
- (6) Where an FDP is planned to use an extension pre and post flight minimum rest is increased by two hours or post flight rest only is increased by four hours. Where the extensions are used for consecutive FDPs the pre and post rest between the two operations shall run consecutively.
- (7) When an FDP with extension starts in the period 22.00 to 04.59 the operator will limit the FDP to 11.45.
- (c) Cabin Crew

For cabin crew being assigned to a flight or series of flights, the FDP of the cabin crew may be extended by the difference in reporting time between cabin crew and flight crew, as long as the difference does not exceed one hour.

## (d) Operational Robustness

Planned schedules must allow for flights to be completed within the maximum permitted flight duty period. To assist in achieving this operators will take action to change a schedule or crewing arrangements at the latest where the actual operation exceeds the maximum FDP on more than 33 % of the flights in that schedule during a scheduled seasonal period.

#### (e) Positioning

- (1) All the time spent on positioning is counted as duty.
- (2) Positioning after reporting but prior to operating shall be included as part of the FDP but shall not count as a sector.
- (3) A positioning sector immediately following operating sector will be taken into account for the calculation of minimum rest as defined in OPS 1.1110 points (a)(1) and (a)(2) below.

# (f) Extended FDP (split duty)

- (1) The Authority may grant approval to an operation based on an extended FDP which includes a break.
- (2) Each operator will have to demonstrate to the Authority, using operational experience and taking into account other relevant factors, such as current scientific knowledge, that its request for an extended FDP produces an equivalent level of safety.

#### **OPS 1.1110** Rest

- (a) Minimum rest
  - (1) The minimum rest which must be provided before undertaking a flight duty period starting at home base shall be at least as long as the preceding duty period or 12 hours whichever is the greater;
  - (2) The minimum rest which must be provided before undertaking a flight duty period starting away from home base shall be at least as long as the preceding duty period or 10 hours whichever is the greater; when on minimum rest away from home base, the operator must allow for an eight hour sleep opportunity taking due account of travelling and other physiological needs;
  - (3) The operator will ensure that effects on crew members of time zone differences will be compensated by additional rest, as regulated by the Authority.
  - (4) Notwithstanding (1) and (2), the Authority may grant reduced rest arrangements. Each operator will have to demonstrate to the Authority, using operational experience and taking into account other relevant factors, such as current scientific knowledge, that its request for reduced rest arrangements produces an equivalent level of safety.
- (b) Rest periods
  - The operator shall ensure that the minimum rest provided as outlined above is increased periodically to a weekly rest period, being a 36-hour period including two local nights, such that there shall never be more than 168 hours between the end of one weekly rest period and the start of the next. As an exception, the Authority may decide that the second of those local nights may start from 20:00 hours if the weekly rest period has a duration of at least 40 hours.

# OPS 1.1115 Extension of Flight Duty Period due to In-flight Rest

- (a) Extension of flight duty period due to in-flight rest may be granted by the Authority providing each operator demonstrates to the Authority, using operational experience and taking into account other relevant factors such as current scientific knowledge, that its request produces an equivalent level of safety:
- (b) The Authority shall set the requirements in connection with the augmentation of a basic flight crew for the purpose of extending the flight duty period beyond the limits in OPS 1.1105 above.
- (c) The Authority shall set the requirements in connection with the minimum in-flight rest by cabin crew member(s) when the FDP goes beyond the limitations in OPS 1.1105 above.

# OPS 1.1120 Unforeseen Circumstances in Actual Flight Operations — Commander's Discretion

- (a) Taking into account the need for careful control of these instances implied underneath, during the actual flight operation, which starts at the reporting time, the limits on flight duty, duty and rest periods prescribed in this Subpart may be modified in the event of unforeseen circumstances. Any such modifications must be acceptable to the commander after consultation with all other crew members and must, in all circumstances, comply with the following:
  - (1) The maximum FDP referred to in OPS 1.1105(a) above may not be increased by more than two hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than three hours;
  - (2) If on the final sector within a FDP unforeseen circumstances occur after take-off that will result in the permitted increase being exceeded, the flight may continue to the planned destination or alternate;
  - (3) In the event of such circumstances, the rest period following the FDP may be reduced but never below the minimum rest defined in OPS 1.1110(a)(2);
- (b) The commander shall, in case of special circumstances, which could lead to severe fatigue, and after consultation with the crew members affected, reduce the actual flight duty time and/or increase the rest time in order to eliminate any detrimental effect on flight safety;
- (c) The operator shall ensure that:
  - (1) The commander submits a report to the operator whenever a FDP is increased by his/her discretion or when a rest period is reduced in actual operation and
  - (2) Where the increase of a FDP or reduction of a rest period exceeds one hour, a copy of the report, to which the operator must add his comments, is sent to the Authority no later than 28 days after the event.

# OPS 1.1125 Standby

- (a) Airport standby
  - (1) A crew member is on airport standby from reporting at the normal report point until the end of the notified standby period.
  - (2) Airport standby will count in full for the purposes of cumulative duty hours.
  - (3) Where airport standby is immediately followed by a flight duty, the relationship between such airport standby and the assigned flight duty shall be defined by the Authority. In such a case, airport standby shall be added to the duty period referred to in OPS 1.1110 under points (a)(1) and (2) for the purposes of calculating minimum rest.
  - (4) Where the airport standby does not lead to assignment on a flight duty, it shall be followed at least by a rest period as regulated by the Authority.
  - (5) While on airport standby the operator will provide to the crew member a quiet and comfortable place not open to the public.
- (b) Other forms of standby (including standby at hotel) shall be regulated by the Authority, taking into account the following:
  - (1) All activity shall be rostered and/or notified in advance.
  - (2) The start and end time of the standby shall be defined and notified in advance.
  - (3) The maximum length of any standby at a place other than a specified reporting point shall be determined.
  - (4) Taking into account facilities available for the crew member to rest and other relevant factors, the relationship between the standby and any assigned flight duty resulting from the standby shall be defined.
  - (5) The counting of standby times for the purposes of cumulative duty hours shall be defined.

#### OPS 1.1130 Nutrition

A meal and drink opportunity must occur in order to avoid any detriment to a crew member's performance, especially when the FDP exceeds six hours.

# OPS 1.1135 Flight Duty, Duty and Rest Period Records

- (a) The operator shall ensure that crew member's records include:
  - (1) block times;
  - (2) start, duration and end of each duty or flight duty periods;
  - (3) rest periods and days free of all duties; and are maintained to ensure compliance with the requirements of this Subpart; copies of these records will be made available to the crew member upon request.
- (b) If the records held by the operator under paragraph (a) do not cover all of his/her flight duty, duty and rest periods, the crew member concerned shall maintain an individual record of his/her:
  - (1) block times;
  - (2) start, duration and end of each duty or flight duty periods; and
  - (3) rest periods and days free of all duties.
- (c) A crew member shall present his/her records on request to any operator who employs his/her services before he/she commences a flight duty period.
- (d) Records shall be preserved for at least 15 calendar months from the date of the last relevant entry.
- (e) Additionally, operators shall separately retain all commander's discretion reports of extended flight duty periods, extended flight hours and reduced rest periods for at least six months after the event.

# **OPS 1.1140** Fatigue Management

(See AC OPS 1.1140)

- (a) The Authority has established FRMS regulations to authorize the operator to use a Fatigue Risk Management System (FRMS) to manage fatigue with the aim of ensuring that flight and cabin crew members are performing at an adequate level of alertness.
- (b) The Authority shall require that the operator, for the purposes of managing its fatigue-related safety risks, establish either:
  - (1) flight time, flight duty period, duty period and rest period limitations that are within the prescriptive fatigue management regulations established by the Authority; or
  - (2) a Fatigue Risk Management System (FRMS) for all operations; or
  - (3) a FRMS for part of its operations.
- (c) Where the operator adopts prescriptive fatigue management regulations for part or all of its operations, the Authority may approve, in exceptional circumstances, variations to these regulations on the basis of a risk assessment provided by the operator. Approved variations shall provide a level of safety equivalent to, or better than that achieved through the prescriptive fatigue management regulations.
- (d) The Authority shall approve the operator's FRMS before it may take the place of any or all of the prescriptive fatigue management regulations. An approved FRMS shall provide a level of safety equivalent to, or better than, the prescriptive fatigue management regulations.
- (e) The Authority shall establish a process to ensure that an FRMS provides a level of safety equivalent to, or better than, the prescriptive fatigue management regulations. As part of this process, the Authority shall:
  - (1) require that the operator establish maximum values for flight times and/or flight duty periods(s) and duty period(s), and minimum values for rest periods. These values shall be based upon scientific principles and knowledge, subject to safety assurance processes, and acceptable to the Authority;
  - (2) mandate a decrease in maximum values and an increase in minimum values in the event that the operator's data indicates these values are too high or too low, respectively; and
  - (3) approve any increase in maximum values or decrease in minimum values only after evaluating the operator's justification for such changes, based on accumulated FRMS experience and fatigue-related data.
- (f) Where the operator implements an FRMS to manage fatigue-related safety risks, the operator shall, as a minimum:
  - (1) incorporate scientific principles and knowledge within the FRMS;
  - (2) identify fatigue-related safety hazards and the resulting risks on an on-going basis;
  - (3) ensure that remedial actions, necessary to effectively mitigate the risks associated with the hazards, are implemented promptly;
  - (4) provide for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions;
  - (5) integrate the FRMS with the operator's SMS; and
  - (6) provide for continuous improvement to the overall performance of the FRMS.

# AC/AMC/IEM Q FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS AC OPS 1.1140

# 1 Fatigue Risk Management System

- 1.1 FRMS policy
- 1.1.1 The operator shall define his FRMS policy, with all elements of the FRMS clearly identified.
- 1.1.2 The policy shall require that the scope of FRMS operations be clearly defined in the Operations Manual.
- 1.1.3 The policy shall:
  - (a) reflect the shared responsibility of management, flight and cabin crews, and other involved personnel;
  - (b) clearly state the safety objectives of the FRMS;
  - (c) be signed by the Accountable Manager of the organisation;
  - (d) be communicated, with visible endorsement, to all the relevant areas and levels of the organisation;
  - (e) declare management commitment to effective safety reporting;
  - (f) declare management commitment to the provision of adequate resources for the FRMS;
  - (g) declare management commitment to continuous improvement of the FRMS;
  - (h) require that clear lines of accountability for management, flight and cabin crews, and all other involved personnel are identified; and
  - (i) require periodic reviews to ensure it remains relevant and appropriate.

#### 1.2 FRMS documentation

- 1.3 The operator shall develop and keep current FRMS documentation that describes and records:
  - (a) FRMS policy and objectives;
  - (b) FRMS processes and procedures;
  - (c) accountabilities, responsibilities and authorities for these processes and procedures;
  - (d) mechanisms for on-going involvement of management, flight and cabin crew members, and all other involved personnel;
  - (e) FRMS training programmes, training requirements and attendance records;
  - (f) scheduled and actual flight times, duty periods and rest periods with significant deviations and reasons for deviations noted; and
  - (g) FRMS outputs including findings from collected data, recommendations, and actions taken.

# 2 Fatigue risk management processes

# 2.1 Identification of hazards

The operator shall develop and maintain three fundamental and documented processes for fatigue hazard identification:

#### 2.1.1 Predictive

The predictive process shall identify fatigue hazards by examining crew scheduling and taking into account factors known to affect sleep and fatigue and their effects on performance. Methods of examination may include but are not limited to:

- (a) operator or industry operational experience and data collected on similar types of operations;
- (b) evidence-based scheduling practices; and
- (c) bio-mathematical models.

#### 2.1.2 Proactive

The proactive process shall identify fatigue hazards within current flight operations. Methods of examination may include but are not limited to:

- (a) self-reporting of fatigue risks;
- (b) crew fatigue surveys;
- (c) relevant flight and cabin crew performance data;
- (d) available safety databases and scientific studies; and
- (e) analysis of planned versus actual time worked.

#### 2.1.3 Reactive

The reactive process shall identify the contribution of fatigue hazards to reports and events associated with potential negative safety consequences in order to determine how the impact of fatigue could have been minimized. At a minimum, the process may be triggered by any of the following:

- (a) fatigue reports;
- (b) confidential reports;
- (c) audit reports;
- (d) incidents; and
- (e) flight data analysis events.

# 2.2 Risk assessment

The operator shall develop and implement risk assessment procedures that determine the probability and potential severity of fatigue-related events and identify when the associated risks require mitigation.

- 2.2.1 The risk assessment procedures shall review identified hazards and link them to:
  - (a) operational processes;
  - (b) their probability;
  - (c) possible consequences; and
  - (d) the effectiveness of existing safety barriers and controls.

# 2.3 Risk mitigation

- 2.3.1 The operator shall develop and implement risk mitigation procedures that:
  - (a) select the appropriate mitigation strategies;
  - (b) implement the mitigation strategies; and
  - (c) monitor the strategies' implementation and effectiveness.

#### 3 FRMS safety assurance processes

- 3.1 The operator shall develop and maintain FRMS safety assurance processes to:
  - (a) provide for continuous FRMS performance monitoring, analysis of trends, and measurement to validate the effectiveness of the fatigue safety risk controls. The sources of data may include, but are not limited to:
    - (i) hazard reporting and investigations;
    - (ii) audits and surveys; and
    - (iii) reviews and fatigue studies;
  - (b) provide a formal process for the management of change which shall include but is not limited to:
    - (i) identification of changes in the operational environment that may affect FRMS;
    - (ii) identification of changes within the organisation that may affect FRMS; and
    - (iii) consideration of available tools which could be used to maintain or improve FRMS performance prior to implementing changes; and
  - (c) provide for the continuous improvement of the FRMS. This shall include but is not limited to:
    - (i) the elimination and/or modification of risk controls have had unintended consequences or that are no longer needed due to changes in the operational or organisational environment;
    - (ii) routine evaluations of facilities, equipment, documentation and procedures; and
    - (iii) the determination of the need to introduce new processes and procedures to mitigate emerging fatigue-related risks.

#### 4 FRMS promotion processes

- 4.1 FRMS promotion processes support the on-going development of the FRMS, the continuous improvement of its overall performance, and attainment of optimum safety levels. The following shall be established and implemented by the operator as part of its FRMS:
  - (a) training programmes to ensure competency commensurate with the roles and responsibilities of management, flight and cabin crew, and all other involved personnel under the planned FRMS; and
  - (b) an effective FRMS communication plan that:
    - (i) explains FRMS policies, procedures and responsibilities to all relevant stakeholders; and
    - (ii) describes communication channels used to gather and disseminate FRMS-related information.

Table 1: OPS 1.1105 (a) – Maximum Daily Flight Duty Period.

	Sectors									
FDP Start	1	2	3	4	5	6	7	8	9	10
00:00 - 04:14	11:00	11:00	10:30	10:00	9:30	9:00	9:00	9:00	9:00	9:00
04:15 - 04:29	11:15	11:15	10:45	10:15	9:45	9:15	9:00	9:00	9:00	9:00
04:30 - 04:44	11:30	11:30	11:00	10:30	10:00	9:30	9:00	9:00	9:00	9:00
04:45 - 04:59	11:45	11:45	11:15	10:45	10:15	9:45	9:15	9:00	9:00	9:00
05:00 - 05:14	12:00	12:00	11:30	11:00	10:30	10:00	9:30	9:00	9:00	9:00
05:15 - 05:29	12:15	12:15	11:45	11:15	10:45	10:15	9:45	9:15	9:00	9:00
05:30 - 05:44	12:30	12:30	12:00	11:30	11:00	10:30	10:00	9:30	9:00	9:00
05:45 - 05:59	12:45	12:45	12:15	11:45	11:15	10:45	10:15	9:45	9:15	9:00
06:00 - 13:00	13:00	13:00	12:30	12:00	11:30	11:00	10:30	10:00	9:30	9:00
13:01 - 13:15	12:52	12:52	12:30	12:00	11:30	11:00	10:30	10:00	9:30	9:00
13:16 - 13:30	12:45	12:45	12:30	12:00	11:30	11:00	10:30	10:00	9:30	9:00
13:31 - 13:45	12:37	12:37	12:22	12:00	11:30	11:00	10:30	10:00	9:30	9:00
13:46 - 14:00	12:30	12:30	12:15	12:00	11:30	11:00	10:30	10:00	9:30	9:00
14:01 - 14:15	12:22	12:22	12:07	11:52	11:30	11:00	10:30	10:00	9:30	9:00
14:16 - 14:30	12:15	12:15	12:00	11:45	11:30	11:00	10:30	10:00	9:30	9:00
14:31 - 14:45	12:07	12:07	11:52	11:37	11:22	11:00	10:30	10:00	9:30	9:00
14:46 - 15:00	12:00	12:00	11:45	11:30	11:15	11:00	10:30	10:00	9:30	9:00
15:01 - 15:15	11:52	11:52	11:37	11:22	11:07	10:52	10:30	10:00	9:30	9:00
15:16 - 15:30	11:45	11:45	11:30	11:15	11:00	10:45	10:30	10:00	9:30	9:00
15:31 - 15:45	11:37	11:37	11:22	11:07	10:52	10:37	10:22	10:00	9:30	9:00
15:46 - 16:00	11:30	11:30	11:15	11:00	10:45	10:30	10:15	10:00	9:30	9:00
16:01 - 16:15	11:22	11:22	11:07	10:52	10:37	10:22	10:07	9:52	9:30	9:00
16:16 - 16:30	11:15	11:15	11:00	10:45	10:30	10:15	10:00	9:45	9:30	9:00
16:31 - 16:45	11:07	11:07	10:52	10:37	10:22	10:07	9:52	9:37	9:22	9:00
17:46 -17:00	11:00	11:00	10:45	10:30	10:15	10:00	9:45	9:30	9:15	9:00
17:01 -17:15	11:00	11:00	10:37	10:22	10:07	9:52	9:37	9:22	9:07	9:00
17:16 -17:30	11:00	11:00	10:30	10:15	10:00	9:45	9:30	9:15	9:00	9:00
17:31 - 17:45	11:00	11:00	10:30	10:07	9:52	9:37	9:22	9:07	9:00	9:00
17:46 - 18:00	11:00	11:00	10:30	10:00	9:45	9:30	9:15	9:00	9:00	9:00
18:01 - 18:15	11:00	11:00	10:30	10:00	9:37	9:22	9:07	9:00	9:00	9:00
18:16 - 18:30	11:00	11:00	10:30	10:00	9:30	9:15	9:00	9:00	9:00	9:00
18:31 - 18:45	11:00	11:00	10:30	10:00	9:30	9:07	9:00	9:00	9:00	9:00
18:46 - 23:59	11:00	11:00	10:30	10:00	9:30	9:00	9:00	9:00	9:00	9:00