

GEN 2. TABLES AND CODES

GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, HOLIDAYS

✎ GEN 2.1.1 Units of measurement

The table of units of measurement show below will be used by aeronautical stations within MONTEVIDEO FIR for air and ground operations.

<i>For measurement of</i>	<i>Units used</i>
Distance used in navigation, position reporting, etc. – generally in excess of 2 nautical miles	Kilometres; Nautical Miles and tenths
Relatively short distances such as those relating to aerodromes (e.g. runway lengths)	Metres
Altitudes, elevations and heights	Metres; Feet
Horizontal speed including wind speed	Kilometres/Hour; Knots
Vertical speed	Metres/Second; Feet per minute
Wind direction for landing and taking off	Degrees Magnetic
Wind direction except for landing and taking off	Degrees True
Visibility including runway visual range	Kilometres or metres
Altimeter setting	Hectopascals
Temperature	Degrees Celsius
Weight	Metric tones or Kilogrammes
Time	Hours and minutes, beginning at midnight UTC

✎ GEN 2.1.2 Temporal reference system

General

Co-ordinated Universal Time (UTC) is used by air navigation services and in publications issued by the Aeronautical Information Service. Reporting of time is expressed to the nearest minute, e.g. 12:40:35 is reported as 1241.



Local time in Uruguay is UTC less 3 (UTC – 3).

✎ GEN 2.1.3 Horizontal reference system

3.1 *Name/designation of datum*

All published geographical coordinates indicating latitude and longitude are expressed in terms of the World Geodetic System – 1984 (WGS-84) geodetic reference datum.

✎ 3.2 *Parameters of the Projection*

✎ Projection is expressed in term of Lambert Conic Conformal.

✎ 3.3 *Ellipsoid*

✎ An ellipsoid is expressed in terms of the World Geodetic System — 1984 (WGS-84) ellipsoid.

✎ 3.4 *Datum*

✎ The World Geodetic System — 1984 (WGS-84) is used.

✎ 3.5 *Area of application*

The area of application for the published geographical coordinates coincides with the area of responsibility of the Aeronautical Information Service, i.e. the entire territory of Uruguay as well as the airspace over the high seas encompassed by the MONTEVIDEO Flight Information Region in accordance with the regional air navigation agreement.

✎ 3.6 *Use of an asterisk to identify published geographical coordinates*

An asterisk (*) will be used to identify those published geographical coordinates which have been transformed into WGS-84 coordinates but whose accuracy of original field work does not meet the requirements in Annex 11, Chapter 2 and Annex 14, Volumes I and II, Chapter 2. Specifications for determination and reporting of WGS-84 coordinates are given in Annex 11, Chapter 2 and in Annex 14, Volumes I and II, Chapter 2.

✎ GEN 2.1.4 Vertical reference system

✎ 4.1 *Name/designation of datum*

✎ The vertical reference system corresponds to mean sea level (MSL).

✎ 4.2 Geoid model

- ✎ The geoid model used is the Earth Gravitational Model 1996 — (EGM-96)

✎ GEN 2.1.5 Aircraft nationality and registration marks

The nationality mark for aircraft registered in Uruguay is the letter CX. The nationality mark is followed by a hyphen and a registration mark consisting of 3 letters, e.g. CX-AAA.

✎ GEN 2.1.6 Public holidays

<i>Name</i>	<i>Date/Day</i>
New Year's Day	01 JAN
Children Day	06 JAN *
Carnival	40 days before Easter (Monday and Tuesday)
Easter	(From Monday to Friday)
Disembarkation of the 33 Orientals	19 APR
Labour Day	01 MAY
Las Piedras Battle	18 MAY
Artigas birthday	19 JUN
Constitution day	18 JUL *
Independence day	25 AUG
America's day	12 OCT
All Soul's day	02 NOV
Christmas Eve	25 DEC

Note: The public holidays are not labor days, but for private companies the ones marked by asterisk () are optional.*

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GEN 2.2 ABBREVIATIONS USED IN AIS PUBLICATIONS

A		ADS-C+	Automatic dependent surveillance - contract
A	Amber	ADSU	Automatic dependent surveillance unit
AAA	(or AAB, AAC, ... etc., in sequence) Amended meteorological message (message type designator)	ADVS	Advisory service
A/A	Air-to-air	ADZ	Advise
AAD	Assigned altitude deviation	AES	Aircraft earth station
AAIM	Aircraft autonomous integrity monitoring	AFIL	Flight plan filed in the air
AAL	Above aerodrome level	AFIS	Aerodrome flight information service
AAR	Air to air refuelling	AFM	Yes or affirm or affirmative or that is correct
ABI	Advance boundary information	AFS	Aeronautical fixed service
ABC	Abbreviations and codes	AFT ...	After ... (time or place)
ABM	Abeam	AFTN+	Aeronáutica Aeronautical fixed telecommunication network
ABN	Aerodrome beacon	A/G	Air-to-ground
ABT	About	AGA	Aerodromes, air routes and ground aids
ABV...	Above ...	AGL	Above ground level
AC	Alto cumulus	AGMC	Aerodrome Ground Movement Chart
ACARS†	(to be pronounced "AY-CARS") Aircraft communication addressing and reporting system	AGN	Again
ACAS†	Airborne collision avoidance system	AIC	Aeronautical information circular
ACC+	Area control centre or area control	AIDC	Air traffic services interfacility data Communications
ACCID	Notification of an aircraft accident	AIM	Aeronautical information management
ACFT	Aircraft	AIP	Aeronautical information publication
ACK	Acknowledge	AIRAC	Aeronáutica Aeronautical information regulation and control
ACL	Altimeter check location	AIREP†	Air-report
ACN	Aircraft classification number	AIRMET†	Information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations
ACP	Acceptance (message type designator)	AIS	Aeronautical information services
ACPT	Accept or accepted	ALA	Alighting area
✈️ACR	Aircraft classification rating	ALERFA†	Alert phase
ACT	Active or activated or activity	ALR	Alerting (message type designator)
AD	Aerodrome	ALRS	Alerting service
ADA	Advisory area	ALS	Approach lighting system
ADC	Aerodrome chart	ALT	Altitude
ADDN	Addition or additional	ALTN	Alternate or alternanting (light alternates in colour)
ADF+	Automatic direction-finding equipment	ALTN	Alternate (aerodrome)
ADIZ†	(to be pronounced "AY-DIZ") Air defence identification zone	AMA	Area minimum altitude
ADJ	Adjacent	AMD	Amend or amended (used to indicate amended meteorological message; message type designator)
ADO	Aerodrome office (specify service)	AMDT	Amendment (AIP Amendment)
ADR	Advisory route	AMS	Aeronautical mobile service
ADS*	The address (when this abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI ADS)	AMSL	Above mean sea level
	(to be used in AFS as a procedure signal)	AMSS	Aeronautical mobile satellite service
ADS-B+	Automatic dependent surveillance - broadcast		

ANC...	Aeronautical chart - 1:500.000 (followed by name/title)	ASPH	Asphalt
ANCS...	Aeronautical navigation chart — small scale (followed by name/title and scale)	AT...	At (followed by time at which weather change is forecast to occur)
ANS	Answer	ATA+	Actual time of arrival
AOC ...	Aerodrome obstacle chart (followed by type and name/title)	ATC+	Air traffic control (in general)
✈AO	Aircraft operator	ATCSMAC...	Air traffic control surveillance minimum altitude chart (followed by name/title)
AP	Airport	ATD+	Actual time of departure
APAPI †	(to be pronounced "AY-PAPI") Abbreviated precision approach path indicator	ATFM	Air traffic flow management
APC	Aircraft parking/docking chart	ATIS†	Automatic terminal information service
APCH	Approach	ATM	Air traffic management
APDC...	Aircraft parking/docking chart (followed by name/title)	ATN	Aeronautical telecommunication network
APN	Apron	ATP ...	At... (time or place)
APP	Approach control office or approach control or approach control service	ATS	Air traffic services
APR	April	ATTN	Attention
APRX	Approximate o approximately	AT-VASIS†	(to be pronounced "AY-TEE-VASIS") Abbreviated T visual approach slope indicator system
APSG	After passing	ATZ	Aerodrome traffic zone
✈APU	Auxiliary power unit	AUG	August
✈APV	Approach procedure with vertical guidance	AUTH	Authorized or authorization
ARC	Area chart (followed by the area represented)	✈AUTO	Automatic
ARFOR	Area forecast (aeronautic meteorologic key)	AUW	All up weight
ARNG	Arrange	AUX	Auxiliary
ARO	Air traffic services reporting office	AVBL	Available or availability
ARP	Aerodrome reference point	AVG	Average
ARP	Air-report (message type designator)	AVGAS†	Aviation gasoline
ARQ	Automatic error correction	✈AWOS	Automated Weather Observation System
ARR	Arrival (message type designator)	AWTA	Advise at what time able
ARR	Arrive or arrival	AWY	Airway
ARS	Special air-report (message type designator)	AZM	Azimuth
ARST	Arresting (specify (part of) aircraft arresting equipment)	B	
AS	Altostratus	B	Blue
✈ASAP	As soon as possible	BA	Braking action
ASC	Ascend to or ascending to	BARO-VNAV†	(to be pronounced "BAA-RO-VEENAV") Barometric vertical navigation
ASDA	Accelerate-stop distance available	BASE†	Cloud base
ASE	Altimetry system error	BCFG	Fog patches
ASHTAM	Special series NOTAM notifying, by means of a specific format, change in activity of a volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to Aircraft operations	BCN	Beacon (aeronautical ground light)
		BCST	Broadcast
		BDRY	Boundary
		BECMG	Becoming
		BFR	Before
		BKN	Broken
		BL...	Blowing (followed by DU = dust, SA = sand or SN = snow)
		BLDG	Building
		BLO	Por debajo de nubes
		BLW ...	Below ...

BOMB	Bombing	CK	Check
BR	Mist	CL	Centre line
BRF	Short (<i>used to indicate the type of approach desired or required</i>)	CLA	Clear type of ice formation
BRG	Bearing	CLBR	Calibration
BRKG	Braking	CLD	Cloud
BS	Commercial broadcasting station	CLG	Calling
BTL	Between layers	CLIMB-OUT	Climb-out area
BTN	Between	CLR	Clear(s) or cleared to . . . or clearance
BUFR	Binary universal form for the representation of meteorological data	CLRD	Runway(s) cleared (<i>used in METAR/SPECI</i>)
C		✈️CLRD	Clearance delivery
... C	Centre (preceded by runway designation number to identify a parallel runway)	CLSD	Close or closed or closing
C	Degrees Celsius (<i>Centigrade</i>)	CM	Centimetre
CA	Course to an altitude	CMB	Climb to or climbing to
CAA	Civil Aviation Authority or Civil Aviation Administration	CMPL	Completion or completed or complete
CAT	Category	CNL	Cancel or cancelled
CAT	Clear air turbulence	CNL	Flight plan cancellation (<i>message type designator</i>)
CAVOK†	(<i>to be pronounced "KAV-OH-KAY"</i>) Visibility, cloud and present weather better than prescribed values or conditions	CNS	Communications, navigation and surveillance
CB+	(<i>to be pronounced "CEE BEE"</i>) Cumulonimbus	COLD	Long Distance Operational Control
CC	Cirrocumulus	COM	Communications
CCA	(or CCB, CCC . . . etc., in sequence) Corrected meteorological message (<i>message type designator</i>)	CONC	Concrete
CCO	Continuous climb operations	COND	Condition
CD	Candela	CONS	Continuous
CDN	Coordination (<i>message type designator</i>)	CONST	Construction or constructed
CDO	Continuous descent operations	CONT	Continue(s) or continued
CDR	Conditional route	COOR	Coordinate or coordination
CF	Change frequency to . . .	COORD	Coordinates
CF	Course to a fix	COP	Change-over point
CFM*	Confirm or I confirm (<i>to be used in AFS as a procedure signal</i>)	COR	Correct or correction or corrected (<i>used to indicate corrected meteorological message; message type designator</i>)
CGL	Circling guidance light(s)	COT	At the coast
CH	Channel	COV	Cover or covered or covering
CH#	This is a channel-continuity-check of transmission to permit comparison of your record of channelsequence numbers of messages received on the channel (<i>to be used in AFS as a procedure signal</i>)	CPDLC+	Controller-pilot data link communications
CHEM	Chemical	CPL	Current flight plan (<i>message type designator</i>)
CHG	Modification (<i>message type designator</i>)	CRC	Cyclic redundancy check
CI	Cirrus	CRM	Collision risk model
CIDIN†	Common ICAO data interchange network	CRP	Compulsory reporting point
CIV	Civil	CRZ	Cruise
		CS	Call sign
		CS	Cirrostratus
		CTA	Control area
		CTAM	Climb to and maintain
		CTC	Contact
		CTL	Control
		CTN	Caution
		CTR	Control zone
		CU	Cumulus
		CUF	Cumuliform
		CUST	Customs

CVR	Cockpit voice recorder	DR	Dead reckoning
CW	Continuous wave	DR ...	Low drifting (<i>followed by DU = dust, SA = sand or SN = snow</i>)
CWY	Clearway	DRG	During
D		DS	Duststorm
D	Downward (<i>tendency in RVR during previous 10 minutes</i>)	DSB	Double sideband
D...	Danger area (<i>followed by identification</i>)	DTAM	Descend to and maintain
DA	Decision altitude	DTG	Date-time group
D-ATIS†	(<i>to be pronounced "DEE-ATIS"</i>) Data link automatic terminal information service	DTHR	Displaced runway threshold
DCD	Double channel duplex	DTRT	Deteriorate or deteriorating
DCKG	Docking	DTW	Dual tandem wheels
DCP	Datum crossing point	DU	Dust
DCPC	Direct controller-pilot communications	DUC	Dense upper cloud
DCS	Double channel simplex	DUPE#	This is a duplicate message (<i>to be used in AFS as a procedure signal</i>)
DCT	Direct (<i>in relation to flight plan clearances and type of approach</i>)	DUR	Duration
DE*	From (<i>used to precede the call sign of the calling station</i>) (<i>to be used in AFS as a procedure signal</i>)	D-VOLMET	Data link VOLMET
DEC	December	DVOR	Doppler VOR
DEG	Degrees	DW	Dual wheels
DEP	Depart or departure	DZ	Drizzle
DEP	Departure (<i>message type designator</i>)	E	
DEPO	Deposition	E	East or eastern longitude
DER	Departure end of the runway	EAT	Expected approach time
DES	Descend to or descending to	EB	Eastbound
DEST	Destination	EDA	Elevation differential area
DETRESFA†	Distress phase	EDTO	Extended diversion time operations
DEV	Deviation or deviating	EC	En-Route chart
◀DF	Direct to a fix	EEE#	Error (<i>to be used in AFS as a procedure signal</i>)
DF	Direction finding	EET	Estimated elapsed time
DFDR	Digital flight data recorder	EFC	Expect further clearance
DFTI	Distance from touchdown indicator	EFIS†	(<i>to be pronounced "EE-FIS"</i>) Electronic flight instrument system
DH	Decision height	EGNOST†	(<i>to be pronounced "EGG-NOS"</i>) European geostationary navigation overlay service
DIF	Diffuse	EHF	Extremely high frequency [30 000 to 300 000 MHz]
DINACIA	Dirección Nacional de Aviación Civil e Infraestructura Aeronáutica (Civil Aviation Authority)	ELBA†	Emergency location beacon — aircraft
DIST	Distance	ELEV	Elevation
DIV	Divert or diverting	ELR	Extra long range
DLA	Delay or delayed	ELT	Emergency locator transmitter
DLA	Delay (<i>message type designator</i>)	EM	Emission
DLIC	Data link initiation capability	EMBD	Embedded in a layer (<i>to indicate cumulonimbus embedded in layers of other clouds</i>)
DLY	Daily	EMERG	Emergency
DME+	Distance measuring equipment	END	Stop-end (<i>related to RVR</i>)
DNG	Danger or dangerous	ENE	East-north-east
DOF	Date of flight	ENG	Engine
DOM	Domestic	ENR	En route
DP	Dew point temperature		
DPT	Depth		
DPTAL	Departamental (political-administrative division)		

ENRC...	Enroute chart (<i>followed by name/title</i>)	FLUC	Fluctuating or fluctuation or fluctuated
EOBT	Estimated off-block time	FLW	Follow(s) or following
EQPT	Equipment	FLY	Fly or flying
☛		FM	Course from a fix to manual termination (used in navigation database coding)
ESE	East-south-east	FM	From
EST	Estimate or estimated or estimation (<i>message type designator</i>)	FM...	From (<i>followed by time weather change is forecast to begin</i>)
ETA*+	Estimated time of arrival or estimating arrival	FMC	Flight management computer
ETD+	Estimated time of departure or estimating departure	FMS+	Flight management system
ETO	Estimated time over significant point	FMU	Flow management unit
EUR RODEX	European regional OPMET data exchange	FNA	Final approach
EV	Every	FPAP	Flight path alignment point
EVS	Enhanced vision system	☛FPL	Flight plan
EXC	Except	FPM	Feet per minute
EXER	Exercises or exercising or to exercise	FPR	Flight plan route
EXP	Expect or expected or expecting	FR	Fuel remaining
☛EXTD	Extend or extending or Extended	FREQ	Frequency
F		FRI	Friday
F	Fixed	FRNG	Firing
FA	Course from a fix to an altitude	FRONT†	Front (<i>relating to weather</i>)
FAC	Facilities	FROST†	Frost (<i>used in aerodrome warnings</i>)
FAF	Final approach fix	FRQ	Frequent
FAL	Facilitation of international air transport	FSL	Full stop landing
FAP	Final approach point	FSS	Flight service station
FAS	Final approach segment	FST	First
FATO	Final approach and take-off area	FT	Feet (<i>dimensional unit</i>)
FAX	Facsimile transmission	FTE	Flight technical error
FBL	Light (<i>used to indicate the intensity of weather phenomena, interference or static reports, e.g. FBL RA = light rain</i>)	FTP	Fictitious threshold point
FC	Funnel cloud (<i>tornado or water spout</i>)	FTT	Flight technical tolerance
FCST	Forecast	FU	Smoke
FCT	Friction coefficient	FZ	Freezing
FDPS	Flight data processing system	FZDZ	Freezing drizzle
FEB	February	FZFG	Freezing fog
FEW	Few	FZRA	Freezing rain
FG	Fog	G	
FIC	Flight information centre	G	Green
FIR+	Flight information region	G...	Variations from the mean wind Speedy (gusts) (<i>followed by figures in METAR/SPECI and TAF</i>)
FIS	Flight information service	GA	Go ahead, resume sending (<i>to be used in AFS as a procedure signal</i>)
FISA	Automated flight information service	☛GA	General aviation
FIZ	Flight information zone	G/A	Ground-to-air
FL	Flight level	G/A/G	Ground-to-air and air-to-ground
FLD	Field		
FLG	Flashing		
FLR	Flares		
FLT	Flight		
FLTCK	Flight check		

GAGAN†	GPS and geostationary earth orbit augmented navigation	HBN	Hazard beacon
GAIN	Airspeed or headwind gain	HDF	High frequency direction-finding station
GAMET	Area forecast for low-level flights	HDG	Heading
GARP	GBAS azimuth reference point	HEL	Helicopter
GBAS†	(to be pronounced "GEE-BAS") Ground-based augmentation system	HF+	High frequency [3 000 a 30 000 kHz]
GCA+	Ground controlled approach system or ground controlled approach	HF	Holding/racetrack to a fix
GEN	General	HGT	Height or height above
GEO	Geographic or true	HJ	Sunrise to sunset
GES	Ground earth station	HLDG	Holding
GLD	Glider	HLS	Helicopter landing site
GLONASS†	(to be pronounced "GLO-NAS") Global orbiting navigation satellite system	HM	Holding/racetrack to a manual termination
GLS†	GBAS landing system	HN	Sunset to sunrise
GMC ...	Ground movement chart (followed by name/title)	HO	Service available to meet operational requirements
GND	Ground	HOL	Holiday
GNDCK	Ground check	HOSP	Hospital aircraft
GNSS+	Global navigation satellite system	HPA	Hectopascal
GOV	Government	HLP	Heliport
GP	Glide path	HR	Hours
GPA	Glide path angle	HS	Hot spot
GPIP	Glide path intercept point	HS	Service available during hours of scheduled operations
GPS+	Global positioning system	HUD	Head-up display
GPU	Ground power unit	HUM	Humanitarian
GPWS+	Ground proximity warning system	HURCN	Hurricane
GR	Hail	HVDF	High and very high frequency direction-finding stations (at the same location)
GRAS†	(to be pronounced "GRASS") Groundbased regional augmentation system	HVY	Heavy
GRASS	Grass landing area	HVY	Heavy (used to indicate the intensity of weather phenomena, e.g. HVY RA = heavy rain)
GRIB	Processed meteorological data in the form of grid point values expressed in binary form (meteorological code)	HX	No specific working hours
GRVL	Gravel	HYR	Higher
GS	Ground speed	HZ	Haze
GS	Small hail and/or snow pellets	HZ	Hertz (cycle per second)
GUND	Geoid undulation	I	
H		IAC ...	Instrument approach chart (followed by name/title)
H	High pressure area or the centre of high pressure	IAF	Initial approach fix
H...	Significant wave height (followed by figures in METAR/SPECI)	IAO	In and out of clouds
H24	Continuous day and night service	IAP	Instrument approach procedure
HA	Holding/racetrack to an altitude	IAR	Intersection of air routes
HAPI	Helicopter approach path indicator	IAS	Indicated airspeed
		IBN	Identification beacon
		ICAO	International Civil Aviation Organization

ICE	Icing	KMH	Kilometres per hour
ID	Identifier or identify	KPA	Kilopascal
IDENT†	Identification	KT	Knots
IF	Intermediate approach fix	KW	Kilowatts
IFF	Identification friend/foe		
IFR+	Instrument flight rules	L	
IGA	International general aviation		
ILS+	Instrument landing system	...L	Left (<i>preceded by runway designation number to identify a parallel runway</i>)
IM	Inner marker	L	Locator (<i>see LM, LO</i>)
IMC+	Instrument meteorological conditions	L	Low pressure area or the centre of low pressure
IMG	Immigration	L	Litre
IMI*	Interrogation sign (question mark) (<i>to be used in AFS as a procedure signal</i>)	LAM	Logical acknowledgement (<i>message type designator</i>)
IMPR	Improve or improving	LAN	Inland
IMT	Immediate or immediately	LAR	Latin american regulations
INA	Initial approach	LAT	Latitude
INBD	Inbound	LCA	Local or locally or location or located
INC	In cloud	LDA	Landing distance available
INCORP	Incorporated	LDAH	Landing distance available, helicopter
INCERFA†	Uncertainty phase	LDG	Landing
INFO†	Information	LDI	Landing direction indicator
INOP	Inoperative	LEN	Length
INP	If not possible	LF	Low frequency [30 to 300 kHz]
INPR	In progress	LGT	Light or lighting
INS	Inertial navigation system	LGTD	Lighted
INSTL	Install or installed or installation	LIH	Light intensity high
INSTR	Instrument	LIL	Light intensity low
INT	Intersection	LIM	Light intensity medium
INTL	International	LINE	Line (<i>used in SIGMET</i>)
INTRG	Interrogator	LLZ	Locator, middle
INTRP	Interrupt or interruption or interrupted	LM	Radiofaro de localización, intermedio
INTSF	Intensify or intensifying	LMT	Local mean time
INTST	Intensity	LNAV†	(<i>to be pronounced "EL-NAV"</i>) Lateral navigation
IR	Ice on runway	LNG	Long (<i>used to indicate the type of approach desired or required</i>)
IRS	Inertial reference system	LO	Locator, outer
IRU	Inertial reference unit	LOC	Localizer
ISA	International standard atmosphere	LONG	Longitude
ISB	Independent sideband	LORAN†	LORAN (<i>long range air navigation system</i>)
ISOL	Isolated	LOSS	Airspeed or headwind loss
		LPV	Localizer performance with vertical guidance
J		LR	The last message received by me was . . . (<i>to be used in AFS as a procedure signal</i>)
JAN	January	LRG	Long range
JTST	Jet stream		
JUL	July		
JUN	June		
K			
KG	Kilograms		
KHZ	Kilohertz		
KIAS	Knots indicated airspeed		
KM	Kilometres		

LS	The last message sent by me was . . . or Last message was . . . <i>(to be used in AFS as a procedure signal)</i>	MF	Medium frequency [300 to 3 000 kHz]
✈LTA	Lower control area	✈MHA	Minimum holding altitude
LTD	Limited	MHDF	Medium and high frequency direction-finding stations <i>(at the same location)</i>
LTP	Landing threshold point	MHVDF	Medium, high and very high frequency direction-finding stations <i>(at the same location)</i>
✈		MHZ	Megahertz
LV	Light and variable <i>(relating to wind)</i>	MID	Mid-point (related to RVR)
LVE	Leave or leaving		
LVL	Level	MIFG	Shallow fog
LVP	Low visibility procedures	MIL	Military
LYR	Layer or layered	MIN*	Minutes
M		MIS	Missing . . . <i>(transmission identification)</i> <i>(to be used in AFS as a procedure signal)</i>
... M	Metres <i>(preceded by figures)</i>	MKR	Marker radio beacon
M ...	Mach number <i>(followed by figures)</i>	MLS+	Microwave landing system
M ...	Minimum value of runway visual range <i>(followed by figures in METAR/SPECI)</i>	MM	Middle marker
MAA	Maximum authorized altitude	MNM	Minimum
MAG	Magnetic	MNPS	Minimum navigation performance specifications
MAHF	Missed approach holding fix	MNT	Monitor or monitoring or monitored
MAINT	Maintenance	MNTN	Maintain
MALSR	Medium-intensity Approach Lighting System with Runway Alignment Indicator Lights	MOA	Military operating area
MAP	Aeronautical maps and charts	MOC	Minimum obstacle clearance <i>(required)</i>
MAPT	Missed approach point	MOCA	Minimum obstacle clearance altitude
MAR	At sea	MOD	Moderate <i>(used to indicate the intensity of weather phenomena, interference or static reports, e.g. MODRA = moderate rain)</i>
MAR	March		
✈		MON	Above mountains
MATF	Missed approach turning fix	MON	Monday
✈MATZ	Military aerodrome traffic zone	MOPSt	Minimum operational performance standards
MAX	Maximum	MOV	Move or moving or movement
MAY	May	MPS	Metres per second
MBST	Microburst	MRA	Minimum reception altitude
MCA	Minimum crossing altitude	MRG	Medium range
✈MCTR	Military control zone	MRP	ATS/MET reporting point
MCW	Modulated continuous wave	MS	Minus
MDA	Minimum descent altitude	MSA	Minimum sector altitude
MDF	Medium frequency direction-finding station	MSAS†	<i>(to be pronounced "EM-SAS")</i> Multifunctional transport satellite (MTSAT) satellite-based augmentation system
MDH	Minimum descent height	MSAW	Minimum safe altitude warning
MEA	Minimum en-route altitude	MSG	Message
✈MEDEVAC	Medical evacuation flight	MSL	Mean sea level
MEHT	Minimum eye height over threshold <i>(for visual approach slope indicator systems)</i>		
MET†	Meteorological or meteorology		
METAR†	Aerodrome routine meteorological report <i>(in meteorological code)</i>		
MET REPORT	Local routine meteorological report <i>(in abbreviated plain language)</i>		

MSR#	Message . . . (<i>transmission identification</i>) has been misrouted (<i>to be used in AFS as a procedure signal</i>)	NOTAM†	A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations
MSSR	Monopulse secondary surveillance radar	✈NOTAMC	Cancelling NOTAM
MT	Mountain	✈NOTAMN	New NOTAM
✈MTOM	Maximum take-off mass	✈NOTAMR	Replacing NOTAM
MTU	Metric units	NOV	November
MTW	Mountain waves	NOZ	Normal operating zone
MVDF	Medium and very high frequency direction-finding stations (<i>at the same location</i>)	NPA	Non-precision approach
MWO	Meteorological watch office	NR	Number
MX	Mixed type of ice formation (<i>white and clear</i>)	NRH	No reply heard
N		NS	Nimbostratus
N	No distinct tendency (<i>in RVR during previous 10 minutes</i>)	NSC	Nil significant cloud
N	North or northern latitude	NSE	Navigation system error
NADP	Noise abatement departure procedure	NSW	Nil significant weather
NASC†	National AIS system centre	NTL	National
NAT	North Atlantic	NTZ+	No transgression zone
NAV	Navigation	NW	North-west
✈NAVAID	Navigation aid	NWB	North-westbound
NB	Northbound	NXT	Next
NBFR	Not before	O	
NC	No change	OAC	Oceanic area control centre
NCD	No cloud detected (<i>used in automated METAR/SPECI</i>)	OAS	Obstacle assessment surface
NDB+	Non-directional radio beacon	OAS	Organization of American States
NDV	No directional variations available (<i>used in automated METAR/SPECI</i>)	OBS	Observe or observed or observation
NE	North-east	OBSC	Obscure or obscured or obscuring
NEB	North-eastbound	OBST	Obstacle
NEG	No or negative or permission not granted or that is not correct	OCA	Obstacle clearance altitude
NGT	Night	OCA	Oceanic control area
NIL*†	None or I have nothing to send to you	OCC	Occulting (light)
NM	Nautical miles	OCH	Obstacle clearance height
NML	Normal	OCNL	Occasional or occasionally
NN	No name, unnamed	OCS	Obstacle clearance surface
NNE	North-north-east	OCT	October
NNW	North-north-west	OFZ	Obstacle free zone
NO	No (negative) (<i>to be used in AFS as a procedure signal</i>)	OGN	Originate (<i>to be used in AFS as a procedure signal</i>)
NOF	International NOTAM office	OHD	Overhead
✈NONSTD	Non-standard	OIS	Obstacle identification surface
NOSIG†	No significant change (<i>used in trend-type landing forecasts</i>)	OK*	We agree or It is correct (<i>to be used in AFS as a procedure signal</i>)
		OLDI†	On-line data interchange
		OM	Outer marker

OPA	Opaque, white type of ice formation	PO	Dust/sand whirls (<i>dust devils</i>)
OPC	Control indicated is operational control	POB	Persons on board
OPMET†	Operational meteorological (<i>information</i>)	POSS	Possible
OPN	Open <i>or</i> opening <i>or</i> opened	PPI	Plan position indicator
OPR	Operator <i>or</i> operate <i>or</i> operative <i>or</i> operating <i>or</i> operational	PPR	Prior permission required
OPS†	Operations	PPSN	Present position
O/R	On request	PRFG	Aerodrome partially covered by fog
ORD	Order	PRI	Primary
OSV	Ocean station vessel	PRKG	Parking
OTP	On top	PROB†	Probability
OTS	Organized track system	PROC	Procedure
OUBD	Outbound	PROP	Propeller
OVC	Overcast	PROV	Provisional
P		PRP	Point-in-space reference point
P...	Maximum value of wind speed or runway visual range (<i>followed by figures in METAR/SPECI and TAF</i>)	PS	Plus
P...	Prohibited area (<i>followed by identification</i>)	PSG	Passing
PA	Precision approach	PSN	Position
PALS	Precision approach lighting system (<i>specify category</i>)	PSP	Pierced steel plank
PANS	Procedures for air navigation services	PSR+	Primary surveillance radar
PAP†	Precision approach path indicator	PSYS	Pressure system(s)
PAR+	Precision approach radar	PTN	Procedure turn
PARL	Parallel	PTS	Polar track structure
PATC ...	Precision approach terrain chart (<i>followed by name/title</i>)	PWR	Power
PAX	Passenger(s)	Q	
PBC	Performance-based communication	QDL	Do you intend to ask me for a series of bearings? <i>or</i> I intend to ask you for a series of bearings (<i>to be used in radiotelegraphy as a Q Code</i>)
PBN	Performance-based navigation	QDM+	Magnetic heading (<i>zero wind</i>)
PBS	Performance-based surveillance	QDR	Magnetic bearing
PCD	Proceed <i>or</i> proceeding	QFE+	Atmospheric pressure at aerodrome elevation (<i>or at runway threshold</i>)
PCL	Pilot-controlled lighting	QFU	Magnetic orientation of runway
PCN	Pavement classification number	QGE	What is my distance to your station? <i>or</i> Your distance to my station is (<i>distance figures and units</i>) (<i>to be used in radiotelegraphy as a Q Code</i>)
PCR	Pavement classification rating	QJH	Shall I run my test tape/a test sentence? <i>or</i> Run your test tape/a test sentence (<i>to be used in AFS as a Q Code</i>)
PCT	Per cent	QNH+	Altimeter sub-scale setting to obtain elevation when on the ground
PDC+	Pre-departure clearance	QSP	Will you relay to ... free of charge? <i>or</i> I will relay to ... free of charge (<i>to be used in AFS as a Q Code</i>)
PDG	Procedure design gradient	QTA	Shall I cancel telegram number ...? <i>or</i> Cancel telegram number ... (<i>to be used in AFS as a Q Code</i>)
PER	Performance	QTE	True bearing
PERM	Permanent		
PIB	Pre-flight information bulletin		
PJE	Parachute jumping exercise		
PL	Ice pellets		
PLA	Practice low approach		
PLVL	Present level		
PN	Prior notice required		
PNR	Point of no return		

QTF	Will you give me the position of my station according to the bearings taken by the D/F stations which you control? or The position of your station according to the bearings taken by the D/F stations that I control was . . . latitude . . . longitude (or other indication of position), class . . . at . . . hours (to be used in radiotelegraphy as a Q Code)	☛RDOACT	Radioactive
QUAD	Quadrant	RDH	Reference datum height
QUJ	Will you indicate the TRUE track to reach you? or The TRUE track to reach me is . . . degrees at . . . hours (to be used in radiotelegraphy as a Q Code)	RDL	Radial
R		RDO	Radio
...R	Right (preceded by runway designation number to identify a parallel runway)	RE	Recent (used to qualify weather phenomena, e.g. RERA = recent rain)
R	Rate of turn	REC	Receive or receiver
R	Red	REDDIG	Red de Comunicaciones Digitales (Digital Network)
R...	Restricted area (followed by identification)	REDL	Runway edge light(s)
R...	Runway (followed by figures in METAR/SPECI)	REF	Reference to . . . or refer to . . .
R*	Received (acknowledgement of receipt) (to be used in AFS as a procedure signal)	REG	Registration
☛R...	Radial from VOR (followed by three figures)	RENL	Runway end light(s)
RA	Rain	REP	Report or reporting or reporting point
RA	Resolution advisory	REQ	Request or requested
RAC	Rules of the air and air traffic services	ERTE	Re-route
RAFC	Regional area forecast centre	RESA	Runway end safety area
RAG	Runway arresting gear	RF	Constant radius arc to a fix
RAG	Ragged	☛RFFS	Rescue and fire fighting services
RAI	Runway alignment indicator	RG	Range (lights)
RAIM†	Receiver autonomous integrity monitoring	RHC	Right-hand circuit
RASC†	Regional AIS system centre	RIF	Reclearance in flight
RASS	Remote altimeter setting source	RIME†	Rime (used in aerodrome warnings)
RAU	Reglamento Aeronáutico Uruguayo (Uruguayan Air Regulation)	☛	
RB	Rescue boat	RL	Report leaving
RCA	Reach cruising altitude	RLA	Relay to
RCC	Rescue coordination centre	RLCE	Request level change en route
RCF	Radiocommunication failure (message type designator)	RLLS	Runway lead-in lighting system
RCH	Reach or reaching	RLNA	Request level not available
RCL	Runway centre line	RMK	Remark
RCLL	Runway centre line light(s)	RNAV†	(to be pronounced "AR-NAV") Area navigation
RCLR	Recleared	RNG	Radio range
RCP+	Required communication performance	RNP+	Required navigation performance
		ROBEX†	Regional OPMET bulletin Exchange (scheme)
		ROC	Rate of climb
		ROD	Rate of descent
		RON	Receiving only
		RPDS	Reference path data selector
		RPI+	Radar position indicator
		RPL	Repetitive flight plan
		RPLC	Replace or replaced
		RPS	Radar position symbol
		RPT*	Repeat or I repeat (to be used in AFS as a procedure signal)
		RQ*	Request (to be used in AFS as a procedure signal)
		RQMNTS	Requirements
		RQP	Request flight plan (message type designator)

RQS	Request supplementary flight plan (<i>message type designator</i>)	SBAS†	(<i>to be pronounced "ESS-BAS"</i>) Satellite-based augmentation system
RR	Report reaching	SC	Stratocumulus
RRA	(<i>or RRB, RRC . . . etc., in sequence</i>) Delayed meteorological message (<i>message type designator</i>)	SCT	Scattered
RSC	Rescue sub-centre	SD	Standard deviation
RSCD	Runway surface condition	SDBY	Stand by
✶RSP+	Required surveillance performance	SDF	Step down fix
RSP	Responder beacon	SE	South-east
RSR	En-route surveillance radar	SEA	Sea (<i>used in connection with sea-surface temperature and state of the sea</i>)
RSS	Root sum square	SEB	South-eastbound
RTD	Delayed (<i>used to indicate delayed meteorological message; message type designator</i>)	SEC	Seconds
RTE	Route	SECN	Section
RTF	Radiotelephone	SECT	Sector
RTG	Radiotelegraph	SELCAL†	Selective calling system
RTIL	Runway threshold identification lights	SEP	September
RTHL	Runway threshold light(s)	SER	Service or servicing or served
RTN	Return or returned or returning	SEV	Severe (<i>used e.g. to qualify icing and turbulence reports</i>)
RTODAH	Rejected take-off distance available, helicopter	SFC	Surface
RTS	Return to service	SG	Snow grains
RTT	Radioteletypewriter	SGL	Signal
RTZL	Runway touchdown zone light(s)	SH...	Shower (<i>followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS= small hail and/or snow pellets or combinations thereof, e.g. SHRASN = showers of rain and snow</i>)
RUT	Standard regional route transmitting frequencies	SHF	Super high frequency [3 000 to 30 000 MHz]
RV	Rescue Wessel	SI	International system of units
✶RVA	Radar vectoring area	SID†	Standard instrument departure
RVR+	Runway visual range	SIF	Selective identification feature
RVSM+	Reduced vertical separation minimum (300 m (1 000 ft)) between FL 290 and FL 410	SIG	Significant
RWY	Runway	✶SIGMET†	Information concerning en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations
S		SIMUL	Simultaneous or simultaneously
S	South or southern latitude	SIWL	Single isolated wheel load
S...	State of the sea (<i>followed by figures in METAR/SPECI</i>)	SKC	Sky clear
SA	Sand	SKED	Schedule or scheduled
SALS	Simple approach lighting system	SLP	Speed limiting point
SAN	Sanitary	SLW	Slow
✶		SMC	Surface movement control
SAR	Search and rescue	SMR	Surface movement radar
SARPS	Standards and Recommended Practices [ICAO]	SN	Snow
SAT	Saturday	SNOCLO	Aerodrome closed due to snow (<i>used in METAR/SPECI</i>)
✶SATCOM†	Satellite communication (used only when referring generally to both voice and data satellite communication or only data satellite communication)		
✶SATVOICE†	Satellite voice communication		
SB	Southbound		

SNOWTAM†	Special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format	T	Temperature
SOC	Start of climb	...T	True (<i>preceded by a bearing to indicate reference to True North</i>)
SPECI†	Aerodrome special meteorological report (<i>in meteorological code</i>)	TA	Traffic advisory
SPECIAL†	Local special meteorological report (<i>in abbreviated plain language</i>)	TA	Transition altitude
SPI	Special position indicator	TAA	Terminal arrival altitude
SPL	Supplementary flight plan (<i>message type designator</i>)	TACAN†	UHF tactical air navigation aid
SPOC	SAR point of contact	TAF†	Aerodrome forecast (<i>in meteorological code</i>)
SPOT†	Spot wind	TA/H	Turn at an altitude/height
SQ	Squall	TAIL†	Tail wind
SQL	Squall line	TAR	Terminal area surveillance radar
SR	Sunrise	TAS	True airspeed
SRA	Surveillance radar approach	TAX	Taxiing or taxi
SRE	Surveillance radar element of precision approach radar system	TC	Tropical cyclone
SRG	Short range	TCAC	Tropical cyclone advisory centre
SRR	Search and rescue region	TCAS RA†	(<i>to be pronounced "TEE-CAS-AR-AY"</i>) Traffic alert and collision avoidance system resolution advisory
SRY	Secondary	TCH	Threshold crossing height
SS	Sandstorm	TCU	Towering cumulus
SS	Sunset	TDO	Tornado
SSB	Single sideband	TDZ	Touchdown zone
SSE	South-south-east	TECR	Technical reason
SSR+	Secondary surveillance radar	TEL	Telephone
SST	Supersonic transport	TEMPO†	Temporary or temporarily
SSW	South-south-west	TF	Track to fix
ST	Stratus	TFC	Traffic
STA	Straight-in approach	TGL	Touch-and-go landing
STAR†	Standard instrument arrival	TGS	Taxiing guidance system
STD	Standard	THR	Threshold
STF	Stratiform	THRU	Through
STN	Station	THU	Thursday
STNR	Stationary	TIBA	Traffic information broadcast by aircraft
STOL	Short take-off and landing	TILT†	Until
STS	Status	TIP	Until past . . . (<i>place</i>)
STWL	Stopway light(s)	TKOF	Take-off
SUBJ	Subject to	TL...	Till (<i>followed by time by which weather change is forecast to end</i>)
SUN	Sunday	TLOF	Touchdown and lift-off area
SUP	Supplement (<i>AIP Supplement</i>)	TMA+	Terminal control area
SUPPS	Regional supplementary procedures	TN...	Minimum temperature (<i>followed by figures in TAF</i>)
☛SVC	Service (message type only)	TNA	Turn altitude
SVCBL	Serviceable	TNH	Turn height
SW	South-west	TO ...	To . . . (<i>place</i>)
SWB	South-westbound	TOC	Top of climb
SWY	Stopway	TODA	Take-off distance available

TODAH	Take-off distance available, helicopter	UAC	Upper area control centre
TOP†	Cloud top	UAR	Upper air route
TORA	Take-off run available	UAS	Unmanned aircraft system
TOX	Toxic	UDF	Ultra high frequency direction-finding station
TP	Turning point	UFN	Until further notice
TR	Track	UHDT	Unable higher due traffic
TRA	Temporary reserved airspace	UHF+	Ultra high frequency [300 to 3 000 MHz]
TRANS	Transmits or transmitter	UIC	Upper information centre
TREND	Trend forecast	UIR+	Upper flight information region
TRL	Transition level	ULM	Ultra light motorized aircraft
TRG	Training	ULR	Ultra long range
TROP	Tropopause	UN	United Nations
TS	Thunderstorm (in aerodrome reports and forecasts, TS used alone means thunder heard but no precipitation at the aerodrome)	UNA	Unable
TS...	Thunderstorm (followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS = small hail and/or snow pellets or combinations thereof, e.g. TSRASN = thunderstorm with rain and snow)	UNAP	Unable to approve
TSUNAMI†	Tsunami (used in aerodrome warnings)	UNL	Unlimited
TT	Teletypewriter	UNREL	Unreliable
TUE	Tuesday	UP	Unidentified precipitation (used in automated METAR/SPECI)
TURB	Turbulence	U/S	Unserviceable
T-VASIS†	(to be pronounced "TEE-VASIS") T visual approach slope indicator system	UTA	Upper control area
TVOR	Terminal VOR	UTC+	Coordinated Universal Time
TWIL FROM	Beginning of civil morning twilight		
TWIL TO	End of civil evening twilight	V	
TWR	Aerodrome control tower or aerodrome control	...V...	Variations from the mean wind direction (preceded and followed by figures in METAR/SPECI, e.g. 350V070)
TWY	Taxiway	VA	Heading to an altitude
TX ...	Maximum temperature (followed by figures in TAF)	VA	Volcanic ash
TXL	Taxilane	VAAC	Volcanic ash advisory centre
TXT*	Text (when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT) (to be used in AFS as a procedure signal)	VAC ...	Visual approach chart (followed by name/title)
TYP	Type of aircraft	VAL	In valleys
TYPH	Typhoon	VAN	Runway control van
U		VAR	Magnetic variation
U	Upward (tendency in RVR during previous 10 minutes)	VAR	Visual-aural radio range
UA	Unmanned aircraft	VASIS	Visual approach slope indicator systems
UAB ...	Until advised by ...	VC ...	Vicinity of the aerodrome (followed by FG = fog, FC = funnel cloud, SH = shower, PO = dust/sand whirls, BLDU = blowing dust, BLSA = blowing sand, BLSN = blowing snow, DS = duststorm, SS = sandstorm, TS = thunderstorm or VA = volcanic ash, e.g. VCFG = vicinity fog)
		VCY	Vicinity
		VDF	Very high frequency direction-finding station
		VER	Vertical
		VFR+	Visual flight rules
		VHF+	Very high frequency [30 to 300 MHz]
		VI	Heading to an intercept

VIP+	Very important person	WILCO†	Will comply
VIS	Visibility	WIND	Wind
VLF	Very low frequency [3 to 30 kHz]	WIP	Work in progress
VLR	Very long range	WKN	Weaken or weakening
VM	Heading to a manual termination	WNW	West-north-west
VMC+	Visual meteorological conditions	WO	Without
VNAV†	(to be pronounced "VEE-NAV") Vertical navigation	WPT	Way-point
☛VOL	Volume (followed by I, II...)	WRNG	Warning
VOLMET†	Meteorological information for aircraft in flight	WS	Wind shear
VOR+	VHF omnidirectional radio range	WSPD	Wind speed
VORTAC†	VOR and TACAN combination	WSW	West-south-west
VOT	VOR airborne equipment test facility	WT	Weight
VPA	Vertical path angle	WTSPT	Waterspout
VPT	Visual manoeuvre with prescribed track	WWW	Worldwide web
VRB	Variable	WX	Weather
VSA	By visual reference to the ground	☛WXR	Weather radar
VSP	Vertical speed		
VTF	Vector to final	X	
VTOL	Vertical take-off and landing		
VV ...	Vertical visibility (followed by figures in METAR/SPECI and TAF)	X	Cross
		XBAR	Crossbar (of approach lighting system)
W		XNG	Crossing
		XS	Atmospherics
W	West or western longitude	Y	
W	White		
W...	Sea-surface temperature (followed by figures in METAR/SPECI)	Y	Yellow
WAAS†	Wide area augmentation system	Y CZ	Yellow caution zone (runway lighting)
WAC ...	World Aeronautical Chart — ICAO 1:1 000 000 (followed by name/title)	YES*	Yes (affirmative) (to be used in AFS as a procedure signal)
WAFC	World area forecast centre	YR	Your
WB	Westbound	Z	
WBAR	Wing bar lights		
WDI	Wind direction indicator	Z	Coordinated Universal Time (in meteorological messages)
WDSPR	Widespread		
WED	Wednesday		
WEF	With effect from or effective from		
WGS-84	World Geodetic System — 1984		
WI	Within		
WID	Width or wide		
WIE	With immediate effect or effective immediately		

† When radiotelephony is used, the abbreviations and terms are transmitted as spoken words.

+ When radiotelephony is used, the abbreviations and terms are transmitted using the individual letters in non-phonetic form.

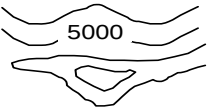
* Signal is also available for use in communicating with stations of the maritime mobile service.

Signal for use in the teletypewriter service only.

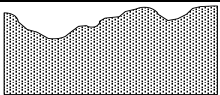
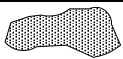
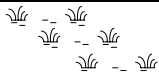
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GEN 2.3 CHART SYMBOLS

1. Topography

Contours	
Sand area	
Elevation, Highest elevation on chart	
	

2. Hydrography

Shore line	
Large river (perennial)	
Small river (perennial)	
Rivers and stream (non-perennial)	
Lakes (perennial)	
Rice field	

3. Vegetation

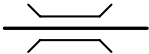
Trees	
Vegetation in general	

4. Constructions

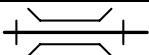
4.1 Built-up areas

Large urbanization	
City	
Town	
Buildings	

4.2 Highways and roads

Main highway	
Secondary road	
Road	
Bridge on road	

4.3 Railroads

Railroad	
Bridge on railroad	

5. Aerodromes

5.1 *Charts other than approach charts*

Civil (land)	
Civil (water)	
Joint civil and military (land)	
Joint civil and military (water)	
Military (land)	
Military (water)	
Emergency aerodrome or aerodrome with no facilities	
Abandoned or closed aerodrome	
Sheltered anchorage	
Aerodrome. Used on charts on which aerodrome classification is not required.	
Heliport	

5.2 *Approach charts*

Aerodrome on which the procedure is based	
Aerodromes affecting the traffic pattern on the aerodrome on which the procedure is based	

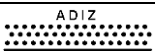
6. Radio navigation aids

Basic radio navigation aid symbol		
Non-directional radio beacon (NDB)		
VHF omnidirectional radio range (VOR)		
Distance measuring equipment		
Collocated VOR and DME radio navigation aids (VOR/DME)		
Instrument landing system (ILS)	Plan view	
	Profile	
Radio marker beacon		
Compass rose		

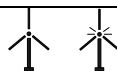
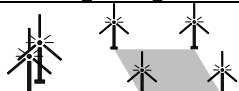
7. Air traffic services

Flight information región (FIR)						
Aerodrome traffic zone						
Control area						
Airway						
RNAV						
Control zone						
Scale-break (on ATS routes)						
	✈ Conventional Navigation		✈ Area Navigation			
	On request fly-by	Compulsory fly-by	On request fly-by	Compulsory fly-by	On request flyover	Compulsory flyover
VFR reporting point						
Intersection INT						
VOR						
VOR/DME						
NDB						
Waypoint WPT						
ATS/MET reporting point (MRP)				Compulsory		
				On request		
Final approach fix (FAF)						
Altitudes/flight levels	Altitude/flight level “window”			$\frac{\text{FL 245}}{900}$		
	“At or above” altitude/flight level			$\frac{\text{FL 245}}{\quad}$		
	“At or below” altitude/flight level			$\quad \frac{900}{\quad}$		
	“Mandatory” altitude/flight level			$\frac{\text{FL 245}}{\quad}$		
Airspace clasification						
				Between “GND” and 600 M: class “G”; between 600 M and FL 195: class “C”; between FL 195 and FL 245: class “A”		
				$\begin{array}{l} \text{A } \frac{\text{FL 245}}{\quad} \\ \text{C } \frac{\text{FL 195}}{\quad} \\ \text{G } \frac{600 \text{ M}}{\quad} \\ \text{GND} \end{array}$		

8. Airspace restrictions

Restricted airspace (prohibited, restricted or danger areas)	
Common boundary of two areas	
✈ Air defence identification zone (ADIZ)	

9. Obstacles

Obstacle	
Lighted obstacle	
Group obstacles	
Lighted group obstacles	
Exceptionally high obstacle (higher than 300 M above terrain)	
Exceptionally high obstacle - lighted	
Elevation of top  52 Height above specified datum  (15)	
Wind turbine – unlighted and lighted	
Wind turbines – minor Group and Group in major area, lighted.	

10. Visual aids

Marine light	
Aeronautical ground light	

11. Aerodrome charts

Hard surface runway	
Unpaved runway	
Stopway	
Taxiways and parking areas	
Aerodrome reference point (ARP)	
Helicopter alighting area on an aerodrome	
VOR check-point	
Runway visual range (RVR) observation site	
Point light	
	
Obstacle light	
Wind direction indicator (lighted)	
Wind direction indicator (unlighted)	
Landing direction indicator (lighted)	
Landing direction indicator (unlighted)	
Runway-holding	
 Intermediate holding position	
 Hot spot	

12. Symbols for aerodrome obstacle charts – Type A, B and C

Tree or shrub		Identification number
Pole, tower, spire, antenna, etc.		
Building or large structure		
Railroad		
Transmission line or overhead cable		
Terrain penetrating obstacle plane		
Stopway (SWY)		
Clearway (CWY)		

13. Various

Transmission line or overhead cable	
Isogonal	
Minimun sector altitude (MSA)	MSA CRR VOR
Holding pattern	
Direct approach	
Missed approach track	
Runway	
Radio navigation aid (type of aid and its use in the procedure to be annotated on topo of the symbol)	
Radio marker beacon (type of beacon to be annotated on top of the symbol)	
DME fix	

GEN 2.4 LOCATION INDICATORS

The location indicators marked with an asterisk () cannot be used in the address component of AFS messages*

1. ENCODE		2. DECODE	
<i>Location</i>	<i>Indicator</i>	<i>Indicator</i>	<i>Location</i>
ANCHORENA / Ad	SUAN *	SUAA	MONTEVIDEO / Ad Ángel S. Adami
ARTIGAS / Intl	SUAG	SUAG	ARTIGAS / Intl
BELLA UNION / Ad	SUBU *	SUAN *	ANCHORENA / Ad
BOISO LANZA / Ad	SUBL	SUAY *	TERMAS DEL ARAPEY / Ad
CANELONES / Ad	SUCN *	SUBL	BOISO LANZA / Ad
CARDONA / Ad	SUCD *	SUBU *	BELLA UNIÓN / Ad
CARMELO / Intl	SUCM *	SUCA	COLONIA / Intl "Laguna de los Patos"
CHALKLING / Ad	SUPC *	SUCD *	CARDONA / Ad
CHUY / Ad	SUCH *	SUCH *	CHUY / Ad
COLONIA / Intl "Laguna de los Patos"	SUCA	SUCL *	LA CALERA - MINAS / Ad
DOLORES / Ad	SUDL *	SUCM *	CARMELO / Intl
DURAZNO / Santa Bernardina Intl de Alternativa	SUDU	SUCN *	CANELONES / Ad
EDIFICIO LIBERTAD / Heli	SUEL *	SUDL *	DOLORES / Ad
EL MIRADOR - ESTANCIA / Ad	SUEM *	SUDU	DURAZNO / Santa Bernardina Intl de Alternativa
E.T.A. / Heli	SUET *	SUDR *	SARANDI GRANDE / Ad Dos Robles
FLORIDA / Ad	SUFL *	SUEL *	EDIFICIO LIBERTAD / Heli
FRAY BENTOS / Ad	SUFB *	SUEM *	EL MIRADOR - ESTANCIA / Ad
FRIGORÍFICO TACUAREMBÓ / Ad	SUFT *	SUEO	MONTEVIDEO / ACC
GENERAL ARTIGAS - E.M.A. / Ad	SUGA	SUEO	MONTEVIDEO / FIR
GUICHÓN / Ad	SUGN *	SUET *	E.T.A / Heli

1. ENCODE		2. DECODE	
<i>Location</i>	<i>Indicator</i>	<i>Indicator</i>	<i>Location</i>
JOSE PEDRO VARELA / Ad	SUJP *	SUFB *	FRAY BENTOS / Ad
JUAN LACAZE / Ad	SUJL *	SUFL *	FLORIDA / Ad
LA CALERA - ESTANCIA / Ad	SULC *	SUFT *	FRIGORÍFICO TACUAREMBÓ / Ad
LA CALERA - MINAS / Ad	SUCL *	SUGA	GENERAL ARTIGAS - E.M.A. / Ad
☛	☛	SUGN *	GUICHÓN / Ad
LA PALOMA - ROCHA / Ad	SULP *	SUJL *	JUAN LACAZE / Ad
LASCANO / Ad	SULA *	SUJP *	JOSÉ PEDRO VARELA / Ad
MALDONADO / Intl C/C Carlos A. Curbelo "Laguna del Sauce"	SULS	SULA *	LASCANO / Ad
MELO / Intl de Cerro Largo	SUMO	SULC *	LA CALERA - ESTANCIA / Ad
MERCEDES / Dptal Ricardo Detomasi	SUME *	☛	☛
MINAS / Ad	SUMI *	SULP *	LA PALOMA - ROCHA / Ad
MONTEVIDEO / Intl Carrasco - "Gral. Cesáreo L. Berisso"	SUMU	SULS	MALDONADO / Intl C/C Carlos A Curbelo "Laguna del Sauce"
MONTEVIDEO / ACC	SUEO	SUME *	MERCEDES / Dptal Ricardo Detomasi
MONTEVIDEO / Ángel S. Adami	SUAA	SUMI *	MINAS / Ad
MONTEVIDEO / FIR	SUEO	SUMO	MELO / Intl de Cerro Largo
NUEVA MEHLEM - ESTANCIA / Ad	SUNM *	SUMU	MONTEVIDEO / Intl Carrasco - "Gral. Cesáreo L. Berisso"
OMBÚES DE LAVALLE / Ad	SUOL *	SUNM *	NUEVA MEHLEM - ESTANCIA / Ad
PASO DE LOS TOROS / Ad	SUPT *	SUOL *	OMBÚES DE LAVALLE / Ad
PAYSANDÚ / Intl Tydeo Larre Borges	SUPU	SUPC *	CHALKLING / Ad
PROGRESO / Ad	SUPR *	SUPE	PUNTA DEL ESTE / Dptal "El Jagüel"
PUNTA DEL ESTE / Dptal "El Jagüel"	SUPE	SUPR *	PROGRESO / Ad
RESIDENCIA SUÁREZ / Heli	SURS *	SUPT *	PASO DE LOS TOROS / Ad
		SUPU	PAYSANDÚ / Intl Tydeo Larre Borges

1. ENCODE		2. DECODE	
<i>Location</i>	<i>Indicator</i>	<i>Indicator</i>	<i>Location</i>
RIO BRANCO / Ad	SURB *	SURB *	RÍO BRANCO / Ad
RIVERA / Intl Presidente General (Piloto Aviador Militar) don Oscar D. Gestido	SURV	SURO *	ROCHA / Ad
ROCHA / Ad	SURO *	SURS *	RESIDENCIA SUÁREZ / Heli
SALTO / Intl Nueva Hespérides	SUSO	SURV	RIVERA / Intl Presidente General (Piloto Aviador Militar) don Oscar D. Gestido
SAN GREGORIO / Ad	SUSG *	SUSG *	SAN GREGORIO / Ad
SAN JOSÉ / Ad	SUSJ *	SUSJ *	SAN JOSÉ / Ad
SARANDI DEL YÍ / Ad	SUYI *	SUSO	SALTO / Intl Nueva Hespérides
☛ SARANDI GRANDE / Ad Dos Robles	SUDR *	SUTB	TACUAREMBÓ / Ad
TACUAREMBÓ / Ad	SUTB	SUTD *	TRINIDAD / Ad
TERMAS DEL ARAPEY / Ad	SUAY *	SUTG *	TOMÁS GOMENSORO / Ad
TOMÁS GOMENSORO / Ad	SUTG *	SUTR *	TREINTA Y TRES / Ad
TREINTA Y TRES / Ad	SUTR *	SUVE *	VERGARA / Ad
TRINIDAD / Ad	SUTD *	SUVO *	VICHADERO / Ad
VERGARA / Ad	SUVE *	SUYI *	SARANDÍ DEL YÍ / Ad
VICHADERO / Ad	SUVO *	SUYN *	YOUNG / Ad
YOUNG / Ad	SUYN *		

Note: Heli = Heliport.

RECEIVER INDICATORS AND DESIGNATORS OF OFFICIAL ENTITIES EN AERONAUTICAL SERVICES

According to AN2/16 1-87/47 attached of ICAO

1.- AERONAUTICAL AUTHORITIES AND SERVICES - Montevideo

SUMUYAYX Civil Aviation General Director of DGAC
 SUMUYGYX General Director of Aviation Infrastructure of DGIA
 SUMUYJYX Air Circulation Director (DGIA)
 SUMUYHYX Airport Director (DGIA)

☛ SUMUYIYX Carrasco Intl Airport Director (DGIA)
☛ SUMUYKYX Administration and Finance Director (DGIA)
☛ SUMUYQYX Electronic Director (DGIA)
☛ SUMUYTYX Air Telecommunications Director
VSUMUYNXX NOTAM Office - Uruguay
☛ SUMUYEYX Air Traffic Division
☛ SUMUYCYX Search and Rescue Coordinating Centre - SAR
☛ SUMUYUYX South Region (DGIA)
☛ SUMUYRYX North Region (DGIA)
☛ SUMUYMYX Meteorological Office, Carrasco Intl Airport (DGMU)
☛ SUMUZRZX Montevideo Area Control Centre - General
☛ SUMUZQZX Montevideo Area Control Centre - referred to IFR flights
☛ SUMUZFZX Montevideo Area Control Centre - referred to VFR flights
☛ SUMUZZBX Repetitive Flight plans Centre - Montevideo

2.- AERONAUTICAL AUTHORITIES AND SERVICES - Generic

☛ (1) YAY Civil aviation authority
☛ (1) YBY Meteorological Telecommunication Network of Operations in Europe
☛ (1) YCY Search and Rescue Coordinating Centre (RCC)
☛ (1) YDY Administrative Authority of Aerodrome
☛ (1) YFY Aeronautical Fix Station
☛ (1) YGD Corporación Centroamericana de Servicios de Navegación Aérea (COCESNA)
☛ (1) YLY Authority responsible for investigating aviation accidents
☛ (1) YMY Meteorological Office
☛ (1) YNY International NOTAM Office
☛ (1) YOY Aeronautical Information dependencies
☛ (1) YSY Aeronautical Moving Station (AMS)
☛ (1) YTY Telecommunications Service
☛ (1) YWY Military Operations in Flight Control Center
☛ (1) YXY Military Services or Organizations *
☛ (1) YYY Agency which is not exclusively assigned an ICAO designator *
☛ (1) YZY Data Bank

☛ (1) ZAZ Approach Control Office
☛ (1) ZBZ Repetitive Flight Plans Office
☛ (1) ZDZ Air Traffic Flow regulator dependency
☛ (1) ZEZ Flight information data base
☛ (1) ZFZ Centre in charge of a Flight Information Region or a Superior Flight Information Region (either an ACC or FIC) when the message is relevant to a VFR flight (see ZQZ)

☛ (1) ZGZ Air Traffic Control (in general)
☛ (1) ZIZ Flight Information Centre (FIC)
☛ (1) ZOZ Oceanic Air Traffic Control
☛ (1) ZPZ Air Traffic Flow notification dependency
☛ (1) ZQZ Centre in charge of a Flight Information Region or a Superior Flight Information Region (either an ACC or FIC) when the message is relevant to a IFR flight (see ZFZ)
☛ (1) ZRZ Area Control Centre

- ✈ (1) ZSZ SARSAT Centre
- ✈ (1) ZTZ Aerodrome Control Tower
- ✈ (1) ZUZ Superior Area Control Centre
- ✈ (1) ZYZ Aerodrome Security Services
- ✈ (1) ZZZ Aircraft in flight **

✈* Must be placed at the beginning of the message text the name of the Agency, Service, or government agency

✈** Must be placed at the beginning of the message text, the identification of the flight

(1) Place in the four-letter location indicator for the recipient / originator of the message here (see GEN 2.4-1 GEN 2.4-3)

GENERAL NOTE

The destination indicator contains the location indicator of the destination locations, followed immediately by the ICAO three-letter designator identifying the department or agency of destination

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GEN 2.5 LIST OF RADIO NAVIGATION AIDS

ID	Station name	Aid	Purpose	Station name	Aid	ID	Purpose
AR	Carrasco	L	A	Adami	NDB	ASI	✖ A
ASI	Adami	NDB	✖ A	Carrasco	ILS	ICAR	A
✖	✖	✖	✖	Carrasco	ILS	IMVD	A
CA	Carrasco	L	A	Carrasco	L	AR	A
CRR	Carrasco	VOR/DME	AE	Carrasco	L	CA	A
✖	✖	✖	✖	Carrasco	VOR/DME	CRR	AE
DUR	Durazno	VOR/DME	AE	✖	✖	✖	✖
✖ IDUR	Durazno	ILS	A	Curbelo	VOR/DME	LDS	AE
ICAR	Carrasco	ILS	A	✖	✖	✖	✖
IMVD	Carrasco	ILS	A	✖	✖	✖	✖
✖	✖	✖	✖	✖	✖	✖	✖
LDS	Curbelo	VOR/DME	AE	✖ Durazno	ILS	IDUR	A
✖	✖	✖	✖	Durazno	VOR/DME	DUR	AE
✖	✖	✖	✖	✖	✖	✖	✖
✖	✖	✖	✖	✖	✖	✖	✖
✖	✖	✖	✖	✖	✖	✖	✖
✖	✖	✖	✖	✖	✖	✖	✖
✖	✖	✖	✖	✖	✖	✖	✖
✖	✖	✖	✖	✖	✖	✖	✖
✖	✖	✖	✖	✖	✖	✖	✖

Purpose.....: A = Aerodrome
E = En-route

GEN 2.5-1 LIST OF LOCATION INDICATORS ASSOCIATED WITH EACH AERODROME/HELIPORT

1. ENCODE		2. DECODE	
<i>ID</i>	<i>Location Indicator</i>	<i>Location Indicator</i>	<i>ID</i>
AN	SUAN	SUAA	ASI
ASI	SUAA	SUAG	AT
AT	SUAG	SUAN	AN
AY	SUAY	SUAY	AY
BL	SUBL	SUBL	BL
BU	SUBU	SUBU	BU
CD	SUCD	SUCA	COL
CH	SUCH	SUCD	CD
CL	SUCL	SUCH	CH
CM	SUCM	SUCL	CL
CN	SUCN	SUCM	CM
COL	SUCA	SUCN	CN
CR	SUCR	SUCR	CR
CRR	SUMU	SUDL	DL
DL	SUDL	SUDR	DR
DUR	SUDU	SUDU	DUR
DR	SUDR	SUEL	EL
EL	SUEL	SUEM	EM
EM	SUEM	SUET	ET
ET	SUET	SUFB	FB
FB	SUFB	SUFL	FL
FL	SUFL	SUFT	FT
FT	SUFT	SUGA	GA
GA	SUGA	SUGN	GN
GN	SUGN	SUJL	JL
JL	SUJL	SUJP	JP
JP	SUJP	SULA	LA
LA	SULA	SULC	LC
LC	SULC		
LDS	SULS	SULP	LP
		SULS	LDS
LP	SULP	SUME	ME
ME	SUME	SUMI	MI
MI	SUMI	SUMO	MLO
MLO	SUMO	SUMU	CRR
NH	SUNH	SUNH	NH
NM	SUNM	SUNM	NM
OL	SUOL	SUOL	OL
PC	SUPC	SUPC	PC
PE	SUPE	SUPE	PE
PN	SUPU	SUPR	PR
PR	SUPR	SUPT	PT
PT	SUPT	SUPU	PN
RB	SURB	SURB	RB

1. ENCODE		2. DECODE	
<i>ID</i>	<i>Location Indicator</i>	<i>Location Indicator</i>	<i>ID</i>
RO	SURO	SURO	RO
RS	SURS	SURS	RS
RVA	SURV	SURV	RVA
SG	SUSG	SUSG	SG
SJ	SUSJ	SUSJ	SJ
STO	SUSO	SUSO	STO
TD	SUTD	SUTB	TMB
TG	SUTG	SUTD	TD
TMB	SUTB	SUTG	TG
TR	SUTR	SUTR	TR
VE	SUVE	SUVE	VE
VO	SUVO	SUVO	VO
YI	SUYI	SUYI	YI
YN	SUYN	SUYN	YN

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GEN 2.6 CONVERSION TABLES

NM to KM 1 NM = 1.852 KM		KM to NM 1 KM = 0.54 NM		FT to M 1 FT = 0.3048 M		M to FT 1 M = 3.281 FT	
NM	KM	KM	NM	FT	M	M	FT
0,1	0,185	0,1	0,05	1	0,305	1	3,28
0,2	0,370	0,2	0,11	2	0,610	2	6,56
0,3	0,556	0,3	0,16	3	0,914	3	9,84
0,4	0,741	0,4	0,22	4	1,219	4	13,12
0,5	0,926	0,5	0,27	5	1,524	5	16,40
0,6	1,111	0,6	0,32	6	1,829	6	19,69
0,7	1,296	0,7	0,38	7	2,134	7	22,97
0,8	1,482	0,8	0,43	8	2,438	8	26,25
0,9	1,667	0,9	0,49	9	2,743	9	29,53
1	1,852	1	0,54	10	3,048	10	32,81
2	3,704	2	1,08	20	6,096	20	65,62
3	5,556	3	1,62	30	9,144	30	98,43
4	7,408	4	2,16	40	12,192	40	131,23
5	9,260	5	2,70	50	15,240	50	164,04
6	11,112	6	3,24	60	18,288	60	196,85
7	12,964	7	3,78	70	21,336	70	229,66
8	14,816	8	4,32	80	24,384	80	262,47
9	16,668	9	4,86	90	27,432	90	295,28
10	18,520	10	5,40	100	30,480	100	328,08
20	37,040	20	10,80	200	60,960	200	656,17
30	55,560	30	16,20	300	91,440	300	984,25
40	74,080	40	21,60	400	121,920	400	1 312,34
50	92,600	50	27,00	500	152,400	500	1 640,42
60	111,120	60	32,40	600	182,880	600	1 968,50
70	129,640	70	37,80	700	213,360	700	2 296,59
80	148,160	80	43,20	800	243,840	800	2 624,67
90	166,680	90	48,60	900	274,320	900	2 952,76
100	185,200	100	54,00	1 000	304,800	1 000	3 280,84
200	370,400	200	107,99	2 000	609,600	2 000	6 561,68
300	555,600	300	161,99	3 000	914,400	3 000	9 842,52
400	740,800	400	215,98	4 000	1 219,200	4 000	13 123,36
500	926,000	500	269,98	5 000	1 524,000	5 000	16 404,20
				6 000	1 828,800		
				7 000	2 133,600		
				8 000	2 438,400		
				9 000	2 743,200		
				10 000	3 048,000		

From decimal minutes of an arc to seconds of an arc

<i>MIN</i>	<i>SEC</i>	<i>MIN</i>	<i>SEC</i>	<i>MIN</i>	<i>SEC</i>	<i>MIN</i>	<i>SEC</i>
0,01	0,6	0,26	15,6	0,51	30,6	0,76	45,6
0,02	1,2	0,27	16,2	0,52	31,2	0,77	46,2
0,03	1,8	0,28	16,8	0,53	31,8	0,78	46,8
0,04	2,4	0,29	17,4	0,54	32,4	0,79	47,4
0,05	3,0	0,30	18,0	0,55	33,0	0,80	48,0
0,06	3,6	0,31	18,6	0,56	33,6	0,81	48,6
0,07	4,2	0,32	19,2	0,57	34,2	0,82	49,2
0,08	4,8	0,33	19,8	0,58	34,8	0,83	49,8
0,09	5,4	0,34	20,4	0,59	35,4	0,84	50,4
0,10	6,0	0,35	21,0	0,60	36,0	0,85	51,0
0,11	6,6	0,36	21,6	0,61	36,6	0,86	51,6
0,12	7,2	0,37	22,2	0,62	37,2	0,87	52,2
0,13	7,8	0,38	22,8	0,63	37,8	0,88	52,8
0,14	8,4	0,39	23,4	0,64	38,4	0,89	53,4
0,15	9,0	0,40	24,0	0,65	39,0	0,90	54,0
0,16	9,6	0,41	24,6	0,66	39,6	0,91	54,6
0,17	10,2	0,42	25,2	0,67	40,2	0,92	55,2
0,18	10,8	0,43	25,8	0,68	40,8	0,93	55,8
0,19	11,4	0,44	26,4	0,69	41,4	0,94	56,4
0,20	12,0	0,45	27,0	0,70	42,0	0,95	57,0
0,21	12,6	0,46	27,6	0,71	42,6	0,96	57,6
0,22	13,2	0,47	28,2	0,72	43,2	0,97	58,2
0,23	13,8	0,48	28,8	0,73	43,8	0,98	58,8
0,24	14,4	0,49	29,4	0,74	44,4	0,99	59,4
0,25	15,0	0,50	30,0	0,75	45,0		

From seconds of an arc to decimal minutes of an arc

<i>SEC</i>	<i>MIN</i>	<i>SEC</i>	<i>MIN</i>	<i>SEC</i>	<i>MIN</i>	<i>SEC</i>	<i>MIN</i>
1	0,02	16	0,27	31	0,52	46	0,77
2	0,03	17	0,28	32	0,53	47	0,78
3	0,05	18	0,30	33	0,55	48	0,80
4	0,07	19	0,32	34	0,57	49	0,82
5	0,08	20	0,33	35	0,58	50	0,83
6	0,10	21	0,35	36	0,60	51	0,85
7	0,12	22	0,37	37	0,62	52	0,87
8	0,13	23	0,38	38	0,63	53	0,88
9	0,15	24	0,40	39	0,65	54	0,90
10	0,17	25	0,42	40	0,67	55	0,92
11	0,18	26	0,43	41	0,68	56	0,93
12	0,20	27	0,45	42	0,70	57	0,95
13	0,22	28	0,47	43	0,72	58	0,97
14	0,23	29	0,48	44	0,73	59	0,98
15	0,25	30	0,50	45	0,75		

GEN 2.7 SUNRISE/SUNSET TABLES

1. The tables on the following pages have been prepared by the Dirección de Meteorología Aeronáutica of Uruguay and are reproduced here with their permission. The tables include the values of Sunrise and sunset for all the country.

1.1 The tables indicate the time for beginning of civil morning twilight (TWIL FROM), sunrise (SR) sunset (SS), and end of civil evening twilight (TWIL TO) for the years from 2024 to 2028.

1.2 The times indicated for the beginning of civil morning twilight and end of civil evening twilight are calculated for an altitude of the Sun 6° below the horizon, as commonly used. The hours are expressed in UTC.

1.3 The tables are calculated for the year 2024, which is used as an “average year” for the years from 2024 to 2028. In this period, the times on an arbitrary date and place will deviate less than 2 minutes from the times on the same date and place in the “average year”

2. Alphabetical index

<i>Location</i>	<i>Page</i>	<i>Location</i>	<i>Page</i>
Montevideo/Uruguay 350000S/0561500W	GEN 2.7-2		

3. Sunrise-Sunset tables

3.1

MONTH DAY	TWIL FROM	SR	SS	TWIL TO	MONTH DAY	TWIL FROM	SR	SS	TWIL TO
JAN 1	0805	0834	2302	2332	FEB 15	0852	0918	2240	2306
- 2	0806	0835	2302	2332	- 16	0853	0919	2238	2305
- 3	0807	0836	2302	2332	- 17	0854	0920	2237	2304
- 4	0807	0837	2303	2332	- 18	0855	0921	2236	2303
- 5	0808	0838	2303	2332	- 19	0856	0922	2235	2301
- 6	0809	0838	2303	2332	- 20	0857	0923	2234	2300
- 7	0810	0839	2303	2332	- 21	0858	0924	2233	2259
- 8	0811	0840	2303	2332	- 22	0859	0925	2232	2258
- 9	0812	0841	2303	2332	- 23	0900	0926	2230	2256
- 10	0813	0842	2302	2332	- 24	0901	0927	2229	2255
- 11	0814	0843	2302	2331	- 25	0902	0928	2228	2254
- 12	0815	0844	2302	2331	- 26	0903	0929	2227	2253
- 13	0816	0845	2302	2331	- 27	0904	0930	2225	2251
- 14	0817	0846	2302	2331	- 28	0905	0931	2224	2250
- 15	0818	0847	2302	2330	- 29	0906	0932	2223	2249
- 16	0819	0848	2301	2330					
- 17	0820	0849	2301	2330	MAR 1	0907	0933	2222	2247
- 18	0821	0850	2301	2329	- 2	0908	0933	2220	2246
- 19	0822	0851	2300	2329	- 3	0909	0934	2219	2245
- 20	0823	0852	2300	2328	- 4	0910	0935	2218	2243
- 21	0824	0853	2259	2328	- 5	0910	0936	2216	2242
- 22	0825	0854	2259	2327	- 6	0911	0937	2215	2241
- 23	0827	0855	2258	2327	- 7	0912	0938	2214	2239
- 24	0828	0856	2258	2326	- 8	0913	0939	2212	2238
- 25	0829	0857	2257	2325	- 9	0914	0940	2211	2236
- 26	0830	0858	2257	2325	- 10	0915	0940	2210	2235
- 27	0831	0859	2256	2324	- 11	0916	0941	2208	2234
- 28	0832	0900	2255	2323	- 12	0917	0942	2207	2232
- 29	0833	0901	2255	2323	- 13	0918	0943	2205	2231
- 30	0834	0902	2254	2322	- 14	0918	0944	2204	2229
- 31	0835	0903	2253	2321	- 15	0919	0945	2203	2228
					- 16	0920	0945	2201	2227
FEB 1	0837	0904	2252	2320	- 17	0921	0946	2208	2225
- 2	0838	0905	2252	2319	- 18	0922	0947	2258	2224
- 3	0839	0906	2251	2318	- 19	0923	0948	2157	2222
- 4	0840	0907	2250	2317	- 20	0923	0949	2156	2221
- 5	0841	0908	2249	2317	- 21	0924	0949	2154	2220
- 6	0842	0909	2248	2316	- 22	0925	0950	2153	2218
- 7	0843	0910	2248	2315	- 23	0926	0951	2151	2217
- 8	0844	0911	2247	2314	- 24	0927	0952	2150	2215
- 9	0845	0912	2246	2313	- 25	0927	0953	2149	2214
- 10	0847	0913	2245	2312	- 26	0928	0953	2147	2212
- 11	0848	0914	2244	2311	- 27	0929	0954	2146	2211
- 12	0849	0915	2243	2309	- 28	0930	0955	2144	2210
- 13	0850	0916	2242	2308	- 29	0931	0956	2143	2208
- 14	0851	0917	2241	2307	- 30	0931	0957	2142	2207

MONTH DAY	TWIL FROM	SR	SS	TWIL TO	MONTH DAY	TWIL FROM	SR	SS	TWIL TO
MAR 31	0932	0957	2140	2206	MAY 17	1007	1034	2048	2115
APR 1	0933	0958	2139	2204	- 18	1008	1035	2048	2115
- 2	0934	0959	2138	2203	- 19	1009	1036	2047	2114
- 3	0934	1000	2136	2201	- 20	1009	1037	2046	2114
- 4	0935	1001	2135	2200	- 21	1010	1037	2046	2113
- 5	0936	1001	2133	2159	- 22	1011	1038	2045	2113
- 6	0937	1002	2132	2157	- 23	1011	1039	2045	2112
- 7	0938	1003	2131	2156	- 24	1012	1039	2044	2112
- 8	0938	1004	2129	2155	- 25	1013	1040	2044	2111
- 9	0939	1005	2128	2154	- 26	1013	1041	2043	2111
- 10	0940	1005	2127	2152	- 27	1014	1041	2043	2110
- 11	0941	1006	2125	2151	- 28	1014	1042	2042	2110
- 12	0941	1007	2124	2150	- 29	1015	1043	2042	2110
- 13	0942	1008	2123	2148	- 30	1016	1043	2042	2109
- 14	0943	1008	2122	2147	- 31	1016	1044	2041	2109
- 15	0944	1009	2120	2146	JUN 1	1017	1045	2041	2109
- 16	0944	1010	2119	2145	- 2	1017	1045	2041	2109
- 17	0945	1011	2118	2144	- 3	1018	1046	2041	2108
- 18	0946	1012	2117	2142	- 4	1018	1046	2040	2108
- 19	0947	1012	2115	2141	- 5	1019	1047	2040	2108
- 20	0947	1013	2114	2140	- 6	1019	1047	2040	2108
- 21	0948	1014	2113	2139	- 7	1020	1048	2040	2108
- 22	0949	1015	2112	2138	- 8	1020	1048	2040	2108
- 23	0950	1016	2111	2137	- 9	1021	1049	2040	2108
- 24	0950	1016	2109	2135	- 10	1021	1049	2040	2108
- 25	0951	1017	2108	2134	- 11	1022	1050	2040	2108
- 26	0952	1018	2107	2133	- 12	1022	1050	2040	2108
- 27	0953	1019	2106	2132	- 13	1022	1051	2040	2108
- 28	0953	1020	2105	2131	- 14	1023	1051	2040	2108
- 29	0954	1020	2104	2130	- 15	1023	1051	2040	2108
- 30	0955	1021	2103	2129	- 16	1023	1052	2040	2108
MAY 1	0956	1022	2102	2128	- 17	1024	1052	2040	2108
- 2	0956	1023	2101	2127	- 18	1024	1052	2040	2108
- 3	0957	1024	2100	2126	- 19	1024	1052	2040	2109
- 4	0958	1024	2059	2125	- 20	1024	1053	2041	2109
- 5	0959	1025	2058	2124	- 21	1025	1053	2041	2109
- 6	0959	1026	2057	2124	- 22	1025	1053	2041	2109
- 7	1000	1027	2056	2123	- 23	1025	1053	2041	2110
- 8	1001	1028	2055	2122	- 24	1025	1053	2042	2110
- 9	1002	1028	2054	2121	- 25	1025	1053	2042	2110
- 10	1002	1029	2054	2120	- 26	1025	1054	2042	2110
- 11	1003	1030	2053	2120	- 27	1025	1054	2043	2111
- 12	1004	1031	2052	2119	- 28	1026	1054	2043	2111
- 13	1004	1031	2051	2118	- 29	1026	1054	2043	2111
- 14	1005	1032	2050	2117	- 30	1026	1054	2044	2112
- 15	1006	1033	2050	2117	JUL 1	1026	1054	2044	2112
- 16	1007	1034	2049	2116	- 2	1025	1054	2045	2113

MONTH DAY	TWIL FROM	SR	SS	TWIL TO	MONTH DAY	TWIL FROM	SR	SS	TWIL TO
JUL 3	1025	1053	2045	2113	AUG 20	0953	1019	2118	2144
- 4	1025	1053	2046	2114	- 21	0952	1017	2118	2144
- 5	1025	1053	2046	2114	- 22	0950	1016	2119	2145
- 6	1025	1053	2047	2115	- 23	0949	1015	2120	2146
- 7	1025	1053	2047	2115	- 24	0948	1014	2121	2146
- 8	1025	1052	2048	2116	- 25	0947	1012	2121	2147
- 9	1024	1052	2048	2116	- 26	0945	1011	2122	2148
- 10	1024	1052	2049	2117	- 27	0944	1010	2123	2148
- 11	1024	1052	2049	2117	- 28	0943	1008	2124	2149
- 12	1024	1051	2050	2118	- 29	0942	1007	2124	2150
- 13	1023	1051	2051	2118	- 30	0940	1006	2125	2150
- 14	1023	1050	2051	2119	- 31	0930	1004	2126	2151
- 15	1022	1050	2052	2119					
- 16	1022	1050	2053	2120	SEP 1	0938	1003	2126	2152
- 17	1022	1049	2053	2121	- 2	0936	1002	2127	2153
- 18	1021	1049	2054	2121	- 3	0935	1000	2128	2153
- 19	1021	1048	2054	2122	- 4	0934	0959	2129	2154
- 20	1020	1047	2055	2123	- 5	0932	0958	2129	2155
- 21	1020	1047	2056	2123	- 6	0931	0956	2130	2155
- 22	1019	1046	2057	2124	- 7	0929	0955	2131	2156
- 23	1018	1046	2057	2124	- 8	0928	0953	2131	2157
- 24	1018	1045	2058	2125	- 9	0927	0952	2132	2157
- 25	1017	1044	2059	2126	- 10	0925	0950	2133	2158
- 26	1016	1044	2059	2126	- 11	0924	0949	2134	2159
- 27	1016	1043	2100	2127	- 12	0922	0948	2134	2200
- 28	1015	1042	2100	2128	- 13	0921	0946	2135	2200
- 29	1014	1041	2101	2128	- 14	0928	0945	2136	2201
- 30	1014	1040	2102	2129	- 15	0918	0944	2136	2202
- 31	1013	1040	2103	2130	- 16	0917	0942	2137	2202
					- 17	0915	0940	2138	2203
AUG 1	1012	1039	2104	2130	- 18	0914	0939	2139	2204
- 2	1011	1038	2104	2131	- 19	0912	0938	2139	2205
- 3	1010	1037	2105	2132	- 20	0911	0936	2140	2205
- 4	1009	1036	2106	2132	- 21	0909	0935	2141	2206
- 5	1009	1035	2107	2133	- 22	0908	0933	2142	2207
- 6	1008	1034	2107	2134	- 23	0907	0932	2142	2208
- 7	1007	1033	2108	2135	- 24	0905	0930	2143	2208
- 8	1006	1032	2109	2135	- 25	0902	0929	2144	2209
- 9	1005	1031	2110	2136	- 26	0903	0927	2145	2210
- 10	1004	1030	2110	2137	- 27	0901	0926	2145	2211
- 11	1003	1029	2111	2137	- 28	0859	0925	2146	2211
- 12	1002	1028	2112	2138	- 29	0858	0923	2147	2212
- 13	1001	1027	2113	2139	- 30	0856	0922	2148	2213
- 14	1000	1026	2113	2139					
- 15	0958	1025	2114	2140	OCT 1	0855	0920	2148	2214
- 16	0957	1023	2115	2141	- 2	0854	0919	2149	2215
- 17	0956	1022	2115	2141	- 3	0852	0918	2150	2215
- 18	0955	1021	2116	2142	- 4	0851	0916	2150	2216
- 19	0954	1020	2117	2143	- 5	0849	0915	2151	2217

MONTH DAY	TWIL FROM	SR	SS	TWIL TO	MONTH DAY	TWIL FROM	SR	SS	TWIL TO
OCT 6	0848	0913	2152	2218	NOV 23	0758	0826	2237	2305
- 7	0846	0912	2153	2219	- 24	0757	0826	2238	2306
- 8	0845	0911	2154	2220	- 25	0757	0825	2239	2307
- 9	0844	0909	2155	2220	- 26	0756	0825	2240	2308
- 10	0842	0908	2156	2221	- 27	0756	0825	2241	2309
- 11	0841	0907	2156	2222	- 28	0756	0825	2242	2310
- 12	0840	0905	2157	2223	- 29	0755	0824	2242	2311
- 13	0838	0904	2158	2224	- 30	0755	0824	2243	2312
- 14	0837	0903	2159	2225	DEC 1	0755	0824	2244	2313
- 15	0835	0901	2200	2226	- 2	0755	0824	2245	2314
- 16	0834	0900	2201	2227	- 3	0755	0824	2246	2315
- 17	0833	0859	2201	2228	- 4	0755	0824	2247	2316
- 18	0832	0858	2202	2228	- 5	0754	0824	2248	2317
- 19	0830	0856	2203	2229	- 6	0754	0824	2249	2318
- 20	0829	0855	2204	2230	- 7	0754	0824	2249	2319
- 21	0828	0854	2205	2231	- 8	0754	0824	2250	2320
- 22	0826	0853	2206	2232	- 9	0755	0824	2251	2320
- 23	0825	0852	2207	2233	- 10	0755	0824	2252	2321
- 24	0824	0850	2208	2234	- 11	0755	0824	2252	2322
- 25	0823	0849	2209	2235	- 12	0755	0825	2253	2323
- 26	0822	0848	2210	2236	- 13	0755	0825	2254	2324
- 27	0820	0847	2210	2237	- 14	0755	0825	2255	2324
- 28	0819	0846	2211	2238	- 15	0756	0825	2255	2325
- 29	0818	0845	2212	2239	- 16	0756	0826	2256	2326
- 30	0817	0844	2213	2240	- 17	0756	0826	2256	2326
- 31	0816	0843	2214	2241	- 18	0757	0827	2257	2327
NOV 1	0815	0842	2215	2242	- 19	0757	0827	2258	2327
- 2	0814	0841	2216	2243	- 20	0758	0827	2258	2328
- 3	0813	0840	2217	2244	- 21	0758	0828	2259	2328
- 4	0812	0839	2218	2245	- 22	0759	0828	2259	2329
- 5	0811	0838	2219	2246	- 23	0759	0829	2300	2329
- 6	0810	0837	2220	2247	- 24	0800	0830	2300	2330
- 7	0809	0836	2221	2248	- 25	0800	0830	2300	2330
- 8	0808	0835	2222	2249	- 26	0801	0831	2301	2330
- 9	0807	0835	2223	2251	- 27	0802	0831	2301	2331
- 10	0806	0834	2224	2252	- 28	0802	0832	2301	2331
- 11	0805	0833	2225	2253	- 29	0803	0833	2302	2331
- 12	0805	0832	2226	2254	- 30	0804	0834	2302	2331
- 13	0804	0832	2227	2255	- 31	0805	0834	2302	2332
- 14	0803	0831	2228	2256					
- 15	0802	0830	2229	2257					
- 16	0802	0830	2230	2258					
- 17	0801	0839	2231	2259					
- 18	0800	0829	2232	2300					
- 19	0800	0828	2233	2301					
- 20	0759	0828	2234	2302					
- 21	0759	0827	2235	2303					
- 22	0758	0827	2236	2304					

**INTENTIONALLY
LEFT BLANK**