CHAPTER 2

OPERATING SIGNALS

DECODE

SECTION A - Q SIGNALS

SIGNAL	QUESTION	ANSWER, ADVICE OR ORDER
QAA		
QAB	May I have clearance (for) from(place and/or control) to(place and/or control) at(figures and units) height above(datum)?	You are cleared (oris cleared) by from (place and/or control) to (place and/or control) at(figures and units) height above(datum).
QAC		
QAD		
QAE		
QAF	Will you advice me when you are (were) at (over)(place)?	I am (was) at (over)(place) (athours) (at(figures and units)) height above (datum).
QAG		Arrange your flight in order to arrive over(place) athours or I am arranging my flight in order to arrive over(place) athours.
QAH	What is your height above (datum)?	I am at(figures and units) height above(datum). Note: An aircraft is permitted to reply to QAH IMI by using any of the answer forms of signals QBF, QBG, QBH, QBK, QBN or QBP. In such cases the signal QAH is omitted from the reply. or Arrange your flight so as to reach(figures and units) height above(datum) at(hours or place).
QAI	What is the essential traffic? Note: Relates to aircraft and not communication traffic.	The essential traffic is Note: Relates to aircraft and not communication traffic.
QAJ		
QAK	Is there any risk of collision?	There is risk of collision. Note: This signal should be followed by appropriate Q signals or ICAO approved abbreviations giving instructions for avoiding collision.

QAL	Are you going to land at(place)?	I am going to land at(place)
	or Has aircraftlanded at(place)? (See also signal QTP.)	(You may) land at(place).
		Aircraftlanded at(place). (See also signal QTP.)
QAM	What is the latest available meteorological observation for(place)?	Meteorological observation made at(place) athours was as follows Note: The information may be given in Q Code form or the AERO form of the International Meteorological Figure Code. When in Q Code, the information is to be given in the following sequence of Q signal answer (or advice) forms: QAN, QBA, QNY, QBB, QNH and/or QFE and, if necessary QMU, QNT, QBJ. It is not normally necessary to precede the QAN, QBA, QNY, and QBB information by these Q signals but this may be done if considered desirable. When in the AERO form of International Meteorological Figure Code the abbreviation AERO is to precede the information.
QAN	What is the surface wind direction and speed at (place)?	The surface wind direction and speed at(place) athours is (direction)(speed figures and units). Note: Unless otherwise indicated in the question, answer (or advise) surface wind direction is given in degrees relative to MAGNETIC North.
QAO	What is the wind direction in degrees TRUE and speed at(position or zone/s) at each of the(figures)(units) levels above (datum)?	The wind direction and speed (position or zone/s) at the following heights above (datum is:(vertical distance in figures and units)degrees TRUE(speed in figures and units)
QAP	Shall I listen for you (or for) onkHz (or (MHz))? Note: If the frequency is given in megahertz, the abbreviation MHz is to be used. (See also signal QSX).	Listen for me (or for) on kHz (MHz). Note: If the frequency is given in megahertz, the abbreviation MHz is to be used. (See also signal QSX).
QAQ	Am I near a prohibited area (orprohibited area)?	You are 1) near 2) flying over a prohibited area (orprohibited area).
QAR	May I stop listening on the watch	You may stop listening on the watch

	frequency forminutes?	frequency forminutes
QAS	requericy forminutes:	requerey forminutes
QAT		
QAU		I am about to jettison fuel.
QAV		1 am about to jettison ruer.
QAW		I am about to carry out overshoot procedure.
QAX		1 um about to earry out overshoot procedure.
QAY	Will you advise me when you pass (passed)(place) bearing 090 (270) degrees relative to your heading?	I passed(place) bearing degrees relative to my heading athours.
QAZ	Are you experiencing communication difficulties through flying in a storm?	I am experiencing communication difficulties through flying in a storm Note: Attention is invited to the possible supplementary use of signals QAR, QBE, QCS, QRM, QRN, QRX, QSZ or the signal CL to amplify the meaning associated with signal QAZ.
QBA	What is the horizontal visibility at(place)?	The horizontal visibility at (place) athours is (distance figures and units).
QBB	What is the amount, type and height	The amount, type and height above official
QDD	above official aerodrome elevation of	aerodrome elevation of the base of the cloud
	the base of the cloud (at(place)?	at (place) athours is:
	and come of any come (munitipliers).	eighths (type)
		at(figures and units)*
		height above official aerodrome elevation.
*NOTE: 7	The cloud amount, type (if reported) and v	vertical distance information is reported in
sequence is	f several cloud layers are present, the orde	er of reporting being from low to high levels
in accorda	nce with the following cloud layer specific	cations:
a)	the lowest individual layer of any am	ount:
b)		mount of which is three-eighths or more (to
,	the nearest eighth);	·
c)	the next higher individual layer the a	mount of which is five-eighths or more (to the
	nearest eighth).	
	EXAMPLE: = QBB CYUL 1300 2	300 FT 3 1500 FT 6 9000 FT =
QBC	Report meteorological conditions as	The meteorological conditions as observed
	observed from your aircraft at	from my aircraft at (position or zone)
	(position or zone) athours	athours at(figures and units) height
	at(figures and units) height	above(datum) are
	above(datum).	Note: The information may be given in
		AIREP, or Q Code form. When given in Q
		Code, the following sequence of Q signal
		QBC answer (or advice) forms is used:
		QMX, QNY, QAO, QDF, QMI, QFT and
<u> </u>	<u> </u>	QNI.

rial. gures and units) I am ascending d units) height
ures and units) I am ascending d units) height
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ures and units) I am ascending d units) height
I am ascending d units) height
d units) height
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at(figures and
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,
of(figures and
naze or fog
S
at(figures and
).
of(figures and
ory at(place)
one) the top of
is (type)
t above
my vicinity and
t above
athours.
ers of cloud and
t above
11 (1)
sible at(place)
your landing.
ud and at
above(datum).
ioove(uatum).
gures and units)
gures and units)
re encountering

QBT	How far, along the runway, from the approach end, can the observer at the runway threshold see the runway lights which will be in operation for my landing (at(place))?	Athours, the observer at the threshold of runway number could see the runway lights in operation for your landing (at(place)) for a distance of(figures and units) from the approach end. Note: If the station inquired of is not equipped to make the special observation requested, the reply to QBT IMI is given by the signal QNO.
QBU		
QBV	Have you reached the (figures and units) height above(datum) (or (area or place))?	I have reached the(figures and units) height above(datum) (or(area or place)). or Report reaching the(figures and units) height above (datum) (or(area or place)).
QBW		
QBX	Have you left the (figures and units) height above(datum) (or(area or place))?	I have left the (figures and units) height above(datum) (or(area or place)). or Report leaving the(figures and units) height above (datum) (or(area or place)).
QBY		, , , , , , , , , , , , , , , , , , , ,
QBZ	Report your flying conditions in relation to clouds.	The reply to QBZ IMI is given by the appropriate answer form of signals QBF, QBG, QBH, QBK, QBN and QBP.
QCA	May I change from(figures and units) to(figures and units) height above(datum)?	You may change from(figures and units) to(figures and units) height above(datum). or I am changing from(figures and units) to(figures and units) height above(datum).
QCB		Delay is being caused by 1) your transmitting out of turn. 2) your slowness in answering. 3) lack of your reply to my
QCC		
QCD		
QCE	When may I expect approach clearance?	Expect approach clearance athours. or No delay expected.
QCF		Delay indefinite. Expect approach clearance not later thanhours.
QCG		
QCH	May I taxi to(place)?	Cleared to taxi to(place). (the place is given in plain language).

QCI		Make a 360-degree turn immediately (turning to the).
		I am making a 360-degree turn immediately (turning to the).
QCJ		
QCK		
QCL		
QCM		
QCN		
QCO		
QCP		
QCQ		
QCR		
QCS		My reception onfrequency has broken down.
QCT		
QCU		
QCV		
QCW		
QCX	What is your full call sign?	My full call sign is or
		Use your full call sign until further notice.
QCY		I am working on trailing aerial.
		or
007		Work on trailing aerial.
QCZ		
QDA	111	71
QDB	Have you sent messageto?	I have sent messageto
QDC		
QDD	_	
QDE		
QDF	What is your D-Value at(position)? or	My D-Value at(position) at (figures and units) height above the 1013.2 millibars datum is(D-Value figures and units) *(specify plus or minus). or
QDG	What is the D-Value at (place or position) athours) for themillibar level?	The D-Value at(place or position) at hours for themillibar level is(D-Value figures and units*(specify plus or minus). Note: When the true altitude (radio altitude) is greater than the pressure altitude PS (plus) is used and when it is less MS (minus) is used.

QDH		
QDI		
QDJ		
QDK		
QDL	Do you intend to ask me for a series of bearings?	I intend to ask you for a series of bearings.
QDM	Will you indicate the MAGNETIC heading for me to steer towards you (or) with no wind?	The MAGNETIC heading for you to steer to reach me (or) with no wind wasdegrees (athours).
QDN		
QDO		
QDP	Will you accept control (or responsibility) of (for) now (or athours)?	I will accept control (or responsibility) of (for)now (or athours).
QDQ		
QDR	What is my MAGNETIC bearing from you (or from)?	Your MAGNETIC bearing from me (or from) wasdegrees (at hours).
QDS		
QDT	Are you flying in visual meteorological conditions?	I am flying in visual meteorological conditions. or Fly at all times in visual meteorological conditions.
QDU		Cancel my IFR flight plan.
QDV	Are you flying in a horizontal visibility of less than (figures and units)?	I am flying in a horizontal visibility of less than (figures and units) at (figures and units) height above(datum).
QDW		, ,
QDX		
QDY		
QDZ		
QEA	May I cross the runway ahead of you?	You may cross the runway ahead of me.
QEB	May I turn at the intersection?	Taxi as follows at the intersection (straight ahead DRT turn left LEFT turn right RITE)
QEC	May I make a 180-degree turn and return down the runway?	You may make a 180-degree turn and return down the runway.
QED	Shall I follow the pilot vehicle?	Follow the pilot vehicle.
QEE	1	•
QEF	Have I reached my parking area? or Have you reached your parking area?	You have reached your parking area. or I have reached my parking area.
QEG	May I leave the parking area? or	You may leave the parking area. or
	Have you left the parking area?	I have left the parking area.

QEH	May I move to the holding position	Cleared to the holding position for runway number
	for runway number?	
	Or Have you moved to the holding	I have moved to the holding position for
	position for runway number?	runway number
QEI	position for runway number:	Tunway number
	May Lagguma nagition for take off?	Classed to hold at take off negition for
QEJ	May I assume position for take-off?	Cleared to hold at take-off position for runway number
	or	or
	Have you assumed position for	I am assuming take-off position for runway
	take-off?	numberand am holding.
QEK	Are you ready for immediate take-off?	I am ready for immediate take-off.
QEL	May I take-off (and make a hand	You are cleared to take-off (turn as follows
-	turn after take-off)?	after take-off).
QEM	What is the condition of the landing	The condition of the landing surface
	surface at(place)?	at(place) is
	,	Note: The information is given by sending
		appropriate NOTAM Code groups.
QEN	Shall I hold my position?	Hold your position.
QEO	Shall I clear the runway (or landing	Clear the runway (or landing area).
	area)?	
	or	or
	Have you cleared the runway(or	I have cleared the runway (or landing area).
	landing area)?	
QEP		
QEQ		
QER		
QES	Is a right-hand circuit in force at(place)?	A right-hand circuit is in force at(place).
QET		
QEU		
QEV		
QEW		
QEX		
QEY		
QEZ		
QFA	What is the meteorological forecast	The meteorological forecast for(flight,
V111	for(flight, route, section of route or	route, section of route or zone) for the
	zone) for the periodhours until	periodhours until hoursis
	hours?	Note: When the forecast is given in Q Code
	iouis:	the following sequence of Q signal answer
		(or advice) forms is to be given: QAO,
		QMX, QMI, QNY, QBA, QMW, QFT and
		QNI.
QFB		The
Λ. D		1110

		1) approach
		2) runway
		3) approach and runway
		lights are out of order.
OEC	What is the amount the time and the	
QFC	What is the amount, the type and the	At(place, position or zone) the base of the
	height above(datum) of the base of	cloud is eighthstype at(figures and
	the cloud at(place, position or	units) height above (datum).
	zone)?	Note: If several cloud layers or masses are
		present, the lowest is reported first.
QFD	1) Is thevisual beacon(at(place))	1) Thevisual beacon (at (place)) is in
	in operation?	operation.
	2) Will you switch on the visual	2) I will switch on the visual beacon
	beacon (at(place))?	(at(place)).
	3) Will you extinguish the aerodrome	3) I will extinguish the aerodrome visual
	visual beacon (at(place)) until I have	beacon (at (place)) until your landing is
	landed?	completed.
QFE	(At(place)) what is the present	At(place) the atmospheric pressure at
	atmospheric pressure at official	official aerodrome elevation is (or was
	aerodrome elevation?	observed athours to be)millibars.
QFF	(At(place)) what is the present	At(place) the atmospheric pressure
	atmospheric pressure converted to	converted to mean sea level in accordance
	mean sea level in accordance with	with meteorological practice is (or was
	meteorological practice?	determined athours to be)millibars.
QFG	Am I overhead?	You are overhead.
QFH	May I descend below the clouds?	You may descend below the clouds.
QFI	Are the aerodrome lights lit?	The aerodrome lights are lit.
		or
		Please light the aerodrome lights.
QFJ		
QFK		
QFL		
QFM	What height above(datum)	1) Maintain (or fly at) (figures and units)
	1) should I maintain?	height above(datum).
		2) I am maintaining(figures and units)
	2) are you maintaining?	height above(datum).
		3) I intend cruising at (figures and units)
	3) do you intend cruising at?	height above(datum).
QFN		
QFO	May I land immediately?	You may land immediately.
QFP	Will you give me the latest	The latest information concerningfacility
	information concerning facility	(at (place)) is as follows
	(at(place))?	Note: The information is given by sending
	('U'//'	appropriate NOTAM Code groups.
QFQ	Are the approach and runway lights	The approach and runway lights are lit.
×- ×	lit?	or
	110	Please light the approach and runway lights.
L		

QFR	Does my landing gear appear damaged?	Your landing gear appears damaged.
QFS	Is theradio facility at(place) in operation?	Theradio facility at(place) is in operation (or will be in operation inhours).
		Please have theradio facility at(place) put in operation.
QFT	Between what heights above(datum) has ice formation been observed (at(position or zone))?	Ice formation has been observed at(position or zone) in the type ofand with an accretion rate ofbetween(figures and units) and(figures and units) heights above(datum).
QFU	What is the magnetic direction (or number) of the runway to be used?	The magnetic direction (or number) of the runway to be used is Note: The runway number is indicated by a two-figure group and the magnetic direction by a three-figure group.
QFV	Are the floodlights switched on?	The floodlights are switched on. or Please switch on the floodlights.
QFW	What is the length of the runway in use in(units)?	The length of runwaynow in use is(figures and units).
QFX		I am working (or am going to work) on a fixed aerial.
QFY	Please report the present meteorological landing conditions (at(place)).	Work on a fixed aerial. The present meteorological landing conditions at(place) are Note: When given in Q Code the information is sent in the following sequence: QAN, QBA, QNY, QBB, QNH, and/or QFE and, if necessary, QMU, QNT, QBJ. It is not normally necessary to precede the QAN, QBA, QNY and QBB information by these Q signals but this may be done if considered desirable.
QFZ	What is the aerodrome meteorological forecast for(place) for the periodhours untilhours?	The aerodrome meteorological forecast for(place) for the periodhours untilhours is Note: When given in Q Code the following sequence of Q signal answer (or advice) forms is to be used: QAN, QBA, QNY, QBB and, if necessary, QMU, QNT and QBJ.
QGA		
QGB		

QGC		There are obstructions to the of runway
QGD	Are there on my track any obstructions whose elevation equals or exceeds my altitude?	There are obstructions on your track(figures and units) height above(datum).
QGE	What is my distance to your station (or to)?	Your distance to my station (or to) is(distance figures and units). Note: This signal is normally used in conjunction with one of the signals QDM, QDR, QTE or QUJ.
QGF		
QGG		
QGH	May I land using (procedure or facility)?	You may land using(procedure or facility).
QGI		
QGJ		
QGK	What track should I make good?	Make good a track from(place) ondegrees(true or magnetic).
	What track are you making good?	I am making good a track from(place) on degrees (true or magnetic).
QGL	May I enter the(control area or zone) at (place)?	You may enter the(control area or zone) at(place).
QGM		Leave the(control area or zone).
QGN	May I be cleared to land (at(place)?	You are cleared to land (at (place).
QGO		Landing is prohibited at (place).
QGP	What is my number for landing?	You are numberto land.
QGQ	May I hold at(place)?	Hold at(place) at(figures and units) height above (datum) and await orders.
QGR		
QGS		
QGT		Fly forminutes on a heading that will enable you to maintain a track reciprocal to your present one.
QGU		Fly forminutes on a magnetic heading ofdegrees.
QGV	Do you see me? or Can you see the aerodrome?	I see you at(cardinal or quadrantal point of direction). or I can see the aerodrome
	or Can you see(aircraft)?	or I see(aircraft).
QGW	Does my landing gear appear to be down and in place?	Your landing gear appears to be down and in place.
QGY		
QGZ		Hold ondirection of facility.
QHA		

QHB		
QHC		
QHD		
QHE	Will you inform me when you are onleg of approach?	I am on 1) cross-wind leg 2) down-wind leg of approach. 3) base leg 4) final leg
QHF		1) mai log
QHG	May I enter traffic circuit at(figures and units) height above(datum)?	Cleared to enter traffic circuit at(figures and units) height above(datum).
QHH	Are you making an emergency landing?	I am making an emergency landing. or Emergency landing being made at(place). All aircraft below(figures and units) height above(datum) and within a distance of (figures and units) leave(place or headings)
QHI	Are you (or is) 1) waterborne? 2) on land?	I am (oris)athours. 1) waterborne 2) on land
QHJ		
QHK		
QHL		
QHM		
QHN		
QHO		
QHP		
QHQ	May I make aapproach (at(place))?	You may make aapproach (at (place)).
	Are you making a approach?	I am making aapproach.
QHR		
QHS		
QHT		
QHU		
QHV		
QHW		
QHX		
QHY		
QHZ	Shall I circle the aerodrome (or go around)?	Circle the aerodrome (or go around).
QIA		
QIB		

QIC	May I establish communication withradio station onkHz. (orMHz.) now (or athours)?	Establish communication withradio station onkHz. (orMHz.) now (or athours).
		I will establish communication withradio station onkHz (orMHz) now (or athours)
QID		uiedib)
QIE		
QIF	What frequency isusing?	is usingkHz. (orMHz).
QIG		
QIH		
QII		
QIJ		
QIK		
QIL		
QIM		
QIN		
QIO		
QIP		
QIQ		
QIR		
QIS		
QIT		
QIU		
QIV		
QIW		
QIX		
QIY		
QIZ		
QJA	Is my	Your
	1) tape)	1) tape)
0.770	2) mark and space) reversed?	2) mark and space) is reversed.
QJB	Will you use	I will use
	1) radio?	1) radio.
	2) cable?	2) cable.
	3) telegraph?	3) telegraph.
	4) teletypewriter?5) telephone?	4) teletypewriter.5) telephone.
	6) receiver?	6) receiver.
	7) transmitter?	7) transmitter.
	8) reperforator?	8) reperforator.
QJC	Will you check your	I will check my
	1) transmitter distributor?	1) transmitter distributor.
	2) auto-head?	2) auto-head.
	3) perforator?	3) perforator.

	1) reperference?	1) reperference
	4) reperforator?	4) reperforator.
	5) printer?	5) printer.
	6) printer motor?	6) printer motor.
	7) keyboard?	7) keyboard.
OID	8) antenna system?	8) antenna system.
QJD	Am I transmitting	You are transmitting
	1) in letters?	1) in letters.
0.77	2) in figures?	2) in figures.
QJE	Is my frequency shift	Your frequency shift is
	1) too wide?	1) too wide.
	2) too narrow?	2) too narrow (byHz).
	3) correct?	3) correct.
QJF		My signal as checked by monitoris
		satisfactory
		1) locally.
		2) as radiated.
QJG	Shall I revert to automatic relay?	Revert to automatic relay.
QJH	Shall I run	Run
	1) my test tape?	1) your test tape.
	2) a test sentence?	2) a test sentence.
QJI	Will you transmit a continuous	I am transmitting a continuous
	1) mark?	1) mark.
	2) space?	2) space.
QJJ	, -	
QJK	Are you receiving	I am receiving
	1) a continuous mark?	1) a continuous mark.
	2) a continuous space?	2) a continuous space.
	3) a mark bias?	3) a mark bias.
	4) a space bias?	4) a space bias.
QJL		•
QJM		
QJN		
QJO		
QJP		
QJQ		
QJR		
QJS		
QJT		
QJU		
_ `		
QJV		
QJW		
QJX		
QJY		
QJZ		
QKA	j	

QKB		
QKC		The sea conditions (atposition) 1) permit alighting but not take-off. 2) render alighting extremely hazardous.
QKD		
QKE		
QKF	May I be relieved (at hours)?	You may expect to be relieved athours by1) aircraft (identification) (type). 2) vessel whose call sign is (call sign) (and/or whose name (is(name)).
QKG	Will relief take place when(identification) establishes 1) visual, 2) communications, contact with survivors?	Relief will take place when (identification) establishes 1) visual, 2) communications, contact with survivors.
QKH	Report details of the parallel sweep (track) search being (or to be) conducted? or In the parallel sweep (track search being (or to be) conducted, what is (are). 1) the direction of sweeps, 2) the separation between 3) the height above the datum, employed in the search pattern?	The parallel sweep (track) search is being (or to be) conducted 1) with direction of sweepsdegrees (true or magnetic). 2) with(distance figures sweeps, and units) separation between sweeps. 3) at a height of (figures) above (datum).
QKI		
QKJ		
QKK		
QKL		
QKM		
QKN		Aircraft plotted (believed to be you) in positionon trackdegrees athours.
QKO	What other units are (or will be) taking part in the operation ((identification of operation))?	In the operation ((identification)) the following units are (or will be) taking part(name of units). or (name) unit is taking part in operation ((identification)) (with effect from hours).
QKP	Which pattern of search is being followed?	The search pattern is 1) parallel sweep. 2) square search. 3) creeping line ahead. 4) track crawl.

		5) contour search.
		6) combined search by aircraft and ship.
		7)(specify).
QKQ		//(specify).
QKR		
QKS		
QKT		
QKU		
QKV		
QKW		
QKX		
QKY		
QKZ		
QLA		
QLB	Will you monitorstation and report	I have monitoredstation and report
	regarding range, quality, etc.?	(briefly) as follows
QLC	- G G	(
QLD		
QLE		
QLF		
QLG		
QLH	Will you use simultaneous keying	I will now key simultaneously
	onfrequency andfrequency?	onfrequency andfrequency.
QLI		
QLJ		
QLK		
QLL		
QLM		
QLN		
QLO		
QLP		
QLQ		
QLR		
QLS		
QLT		
QLU		
QLV	Is theradio facility still required?	Theradio facility is still required.
QLW		
QLX		
QLY		
QLZ		
QMA		
QMB		
QMC		

QMD		
QME		
QMF		
QMG		
QMH		Shift to transmit and receive onkHz (or MHz); if communication is not established within 5 minutes, revert to present frequency.
QMI	Report the vertical distribution of cloud (at(position or zone)) as observed from your aircraft.	The vertical distribution of cloud as observed from my aircraft athours at (position or zone) is: lowest layer Observed *eighths (type) with base of(figures and units) and tops of(figures and units) (*and similarly in sequence for each of the layers observed.) height above(datum). Example: = QMI 1400 11 2 CU 1000 FT 2500 FT 6 SC 6000 FT 10000 FT 5 AC 13000 FT 14000 FT ALT =
QMJ		
QMK		
QML		
QMM		
QMN		
QMO		
QMP		
QMQ		
QMR		
QMS		
QMT		
QMU	What is the surface temperature at(place) and what is the dew point temperature at that place?	The surface temperature at(place) at hours isdegrees and the dew point temperature at that time and place isdegrees.
QMV		
QMW	At(position or zone) what is (are) the height(s) above(datum) of the zero Celsius isotherm(s)?	At(position or zone) the zero Celsius isotherm(s) is (are) at(figures and units) height(s) above(datum).
QMX	What is the air temperature (at (position or zone)) (athours) at the (figures and units) height above (datum)?	At(position or zone) at hours the air temperature is(degrees and units) at (figures and units) height above(datum). Note: Aircraft reporting QMX information will transmit the temperature figures as corrected for airspeed.
QMY		
QMZ	Have you any amendments to the flight	The following amendment(s) should be

	forecast in respect of section of route yet to be traversed?	made to the flight forecast (If no amendments, signal QMZ NIL.)
QNA	yet to be havensed.	amenaments, signar QIVIZ IVIZ.)
QNB		
QNC		
QND		
QNE	What indication will my altimeter give on landing at(place) athours, my sub-scale being set to 1013.2 millibars (29.925 inches)?	On landing at(place) at hours, with your sub-scale being set to 1013.2 millibars (29.92 inches), your altimeter will indicate(figures and units).
QNF		
QNG		
QNH	What should I set on the sub-scale of my altimeter so that the instrument would indicate my elevation if I were on the ground at your station?	If you set the sub-scale of your altimeter to readmillibars (or hundredths of a inch*), the instrument would indicate your elevation if you were on the ground at my station athours. Note: When the setting is given in hundredths of an inch the abbreviation "INS" is used to identify the units.
QNI	Between what heights above(datum) has turbulence been observed at(position or zone)?	Turbulence has been observed at(position or zone) with an intensity ofbetween(figures and units) and(figures and units) heights above(datum).
QNJ		
QNK		
QNL		
QNM		
QNN		
QNO		I am not equipped to give the information (or provide the facility) requested.
QNP		
QNQ		
QNR		I am approaching my point of no return.
QNS		
QNT	What is the maximum gust speed of the surface wind at(place)?	The maximum gust speed of the surface wind at(place) at hours is(speed figures and units).
QNU		
QNV		
QNW		
QNX		
QNY	What is the present weather and the intensity thereof at(place, position or zone)?	The present weather and intensity thereof at(place, position or zone) athours is (See Notes a) and b)).

		Notes: a) When present weather information is transmitted by a ground station, the information shall be selected from the present weather table (Table III) in PANSMET (Doc 7605- MET/526). If none of these conditions prevail the reply shall be QNY NIL.
QNY (Cont'd)		b) When present weather information is transmitted by an aircraft, the information shall be selected from Item 11, AIREP. If none of these conditions prevail the reply shall be QNY NIL or alternatively the appropriate answer (or advice) form of signals QBF, QBG, QBH, QBK, QBN or QBP. The alter-native may also be given in addition to present weather conditions when one or more of the conditions listed in Item 11 prevail.
QNZ		
QOA	Can you communicate by radiotelegraphy (500 kHz)?	I can communicate by radiotelegraphy (500 kHz). (MARITIME USE ONLY)
QOB	Can you communicate by radiotelephony (2182 kHz)?	I can communicate by radiotelephony (2182 kHz). (MARITIME USE ONLY)
QOC	Can you communicate by radiotelephony(channel 16 - frequency 156.80 MHz)?	I can communicate by radiotelephony (channel 16 - frequency 156.80 MHz). (MARITIME USE ONLY)
QOD	Can you communicate with me in 0. Dutch 5. Italian 1. English 6. Japanese 2. French 7. Norwegian 3. German 8. Russian 4. Greek 9. Spanish?	I can communicate with you in 0. Dutch 5. Italian 1. English 6. Japanese 2. French 7. Norwegian 3. German 8. Russian 4. Greek 9. Spanish (MARITIME USE ONLY)
QOE	Have you received the safety signal sent by(name and/or call sign)?	I have received the safety signal sent by(name and/or call sign). (MARITIME USE ONLY)
QOF	What is the commercial quality of my signals?	The quality of your signals is 1) not commercial 2) marginally commercial 3) commercial (MARITIME USE ONLY)
QOG	How many tapes have you to send?	I havetapes to send. (MARITIME USE ONLY)
QOH	Shall I send a phasing signal	Send a phasing signal forseconds.

QOJ Will you listen on kHz (or MHz) for signals of emergency position-indicating radio beacon? I am listening onkHz (or MHz) for signals of emergency position-indicating radio beacon onkHz (or MHz)? I am listening onkHz (or MHz) for signals of emergency position-indicating radio beacon onkHz (or MHz)? I have received the signals of an emergency position-indicating radio beacon onkHz (or MHz)? I have received the signals of an emergency position-indicating radio beacon onkHz (or MHz)? (or MHz). (MARITIME USE ONLY)		forseconds?	(MARITIME USE ONLY)
Will you listen on kHz (or MHz) for signals of emergency position-indicating radio beacon?	QOI	Shall I send my tape?	Send your tape.
Will you listen on kHz (or MHz) for signals of emergency position-indicating radio beacon?			(MARITIME USE ONLY)
Signals of emergency position-indicating radio beacon	QOJ	Will you listen on kHz (or MHz) for	
Rave you received the signals of an emergency position-indicating radio beacon onkHz(or MHz)?		signals of emergency position-	of emergency position-indicating radio
emergency position-indicating radio beacon onkHz (or MHz)? QOL Is your vessel fitted for reception of selective calls? If so, what is your selective calls? If so, what is your selective call number or signal? QOM On what frequencies can your vessel be reached by a selective call? QON to QOS On the series QON to QOS inclusive is reserved for the Maritime Services. QOS OS OR The series QOI to QOZ inclusive is reserved for the Maritime Services. QOZ ORA What is the name of your station? QRB How far approximately are you from my station? QRC By what private enterprise (or State administration) are accounts for charges for your station settled? QRP What is your estimated time of arrival at (or over) (place)? QRG Will you tell me my exact frequency (or that of)? QRG Will you tell me my exact frequency (or that of)? QRI How many radiotelephone calls have you to book?		indicating radio beacon?	beacon. (MARITIME USE ONLY)
emergency position-indicating radio beacon onkHz (or MHz)? QOL Is your vessel fitted for reception of selective calls? If so, what is your selective calls? If so, what is your selective call number or signal? QOM On what frequencies can your vessel be reached by a selective call? QON to QOS On the series QON to QOS inclusive is reserved for the Maritime Services. QOS OS OR The series QOI to QOZ inclusive is reserved for the Maritime Services. QOZ ORA What is the name of your station? QRB How far approximately are you from my station? QRC By what private enterprise (or State administration) are accounts for charges for your station settled? QRP What is your estimated time of arrival at (or over) (place)? QRG Will you tell me my exact frequency (or that of)? QRG Will you tell me my exact frequency (or that of)? QRI How many radiotelephone calls have you to book?	QOK	Have you received the signals of an	I have received the signals of an emergency
Sour vessel fitted for reception of selective calls? If so, what is your selective call number or signal? Source with the proximate delay is selective call? On what frequencies can your vessel be reached by a selective call? On what frequencies can your vessel be reached by a selective call? On the following Frequency(ies) (periods of time to be added is necessary). (MARITIME USE ONLY)			position- indicating radio beacon onkHz
selective calls? If so, what is your selective call number or signal? QOM On what frequencies can your vessel be reached by a selective call? On what frequencies can your vessel be reached by a selective call? My vessel can be reached by a selective call on the following Frequency(ies) (periods of time to be added is necessary). (MARITIME USE ONLY) QON to QOS QOT Do you hear my call; what is the approximate delay in minutes before we may exchange traffic? QOU to QOZ QRA What is the name of your station? QRB How far approximately are you from my station? QRC By what private enterprise (or State administration) are accounts for charges for your station settled? QRD Where are you bound and where are you from? QRE What is your estimated time of arrival at (or over) (place)? QRF Are you returning to (place)? QRG Will you tell me my exact frequency (or that of)? QRH Does my frequency vary? QRI How many radiotelephone calls have you to book? QRJ How many radiotelephone calls have you to book?		beacon onkHz(or MHz)?	(or MHz). (MARITIME USE ONLY)
Selective call number or signal? Signal is(MARITIME USE ONLY)	QOL	Is your vessel fitted for reception of	My vessel is fitted for the reception of
QOM to QOS The series QON to QOS inclusive is reserved for the Maritime Services.			selective calls. My selective call number or
reached by a selective call? On the following Frequency(ies) (periods of time to be added is necessary). (MARITIME USE ONLY) ON to QOS OOT Do you hear my call; what is the approximate delay in minutes before we may exchange traffic? OOU to QOZ ORA What is the name of your station? ORB How far approximately are you from my station? ORC By what private enterprise (or State administration) are accounts for charges for your station settled? ORD Where are you bound and where are you from? ORF Are you returning to (place)? ORF Will you tell me my exact frequency (or that of)? ORF ORF ORF How is the tone of my transmission? ORF ORF How many radiotelephone calls have you to book? ORF ORF How many radiotelephone calls have you to many radiotelephone calls to book.		selective call number or signal?	signal is(MARITIME USE ONLY)
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OON to QOS Cost			of time to be added is necessary).
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at (or over) (place)? Are you returning to (place)? Return to(place). Or Return to(place). Vour exact frequency (or that of) iskHz (or MHz). QRH Does my frequency vary? QRI How is the tone of my transmission? QRJ How many radiotelephone calls have you to book? (place) ishours. I am returning to(place). Your exact frequency (or that of) iskHz (or MHz). Your frequency varies. The tone of your transmission is 1) good. 2) variable. 3) bad. I haveradiotelephone calls to book.	QRE	What is your estimated time of arrival	My estimated time of arrival at(or over)
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QRG Will you tell me my exact frequency (or that of)? Your exact frequency (or that of) iskHz (or MHz). QRH Does my frequency vary? Your frequency varies. QRI How is the tone of my transmission? The tone of your transmission is 1) good. 2) variable. 3) bad. QRJ How many radiotelephone calls have you to book?	QRF	Are you returning to (place)?	I am returning to(place).
QRG Will you tell me my exact frequency (or that of)? Your exact frequency (or that of) iskHz (or MHz). QRH Does my frequency vary? Your frequency varies. QRI How is the tone of my transmission? The tone of your transmission is 1) good. 2) variable. 3) bad. QRJ How many radiotelephone calls have you to book?			or
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QRJ How many radiotelephone calls have you to book? 2) variable. 3) bad. I haveradiotelephone calls to book.	QRI	How is the tone of my transmission?	The tone of your transmission is
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you to book?			3) bad.
· · · · · · · · · · · · · · · · · · ·	QRJ	-	I haveradiotelephone calls to book.
QRK What is the intelligibility of my signals The intelligibility of your signals (or those	QRK	What is the intelligibility of my signals	The intelligibility of your signals (or those

	(or those of)?	of) is
	(0- 11-022 0-111).	1) bad.
		2) poor.
		3) fair.
		4) good.
		5) excellent.
QRL	Are you busy?	I am busy (or I am busy with). Please do
QKL	Are you busy!	not interfere.
QRM	Are you being interfered with?	I am being interfered with
_	, ,	1) nil
		2) slightly
		3) moderately
		4) severely
		5) extremely.
QRN	Are you troubled by static?	I am troubled by static
QIUI	The you troubled by statie:	1) nil
		2) slightly
		3) moderately
		4) severely
		5) extremely.
QRO	Shall I increase transmitter power?	Increase transmitter power.
	1	1
QRP	Shall I decrease transmitter power?	Decrease transmitter power.
QRQ	Shall I send faster?	Send faster (words per minute).
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send atwords per minute.
QRS	Shall I send more slowly?	Send more slowly (words per minute).
QRT	Shall I stop sending?	Stop sending.
QRU	Have you anything for me?	I have nothing for you.
QRV	Are you ready?	I am ready.
QRW	Shall I informthat you are calling him	Please informthat I am calling him
(onkHz(or MHz).	onkHz (or MHz).
QRX	When will you call me again?	I will call you again athours (onkHz (or
	January 1 and 1 angles	MHz).
QRY	What is my turn?	Your turn is number(or according to any
	(Relates to communication.)	other indication). (Relates to
		communication)
QRZ	Who is calling me?	You are being called by(on kHz (or
,		MHz).
QSA	What is the strength of my signals (or	The strength of your signals (or those of)
_	those of)?	is
	,	1) scarcely perceptible.
		2) weak.
		3) fairly good.
		4) good.
		5) very good.
QSB	Are my signals fading?	Your signals are fading.
ZDD	The my signais rading:	1 our digitals are rading.

QSC	Are you a cargo vessel?	I am a cargo vessel.
QSD	Is my keying defective?	Your keying is defective.
QSE	What is the estimated drift of the survival craft?	The estimated drift of the survival craft is(figures and units).
QSF	Have you effected rescue?	I have effected rescue and am proceeding tobase (with persons injured requiring ambulance).
QSG	Shall I sendtelegrams at a time?	Sendtelegrams at a time.
QSH	Are you able to home on your D/F equipment?	I am able to home on my D/F equipment (on station).
QSI		I have been unable to break in on your transmission.or Will you inform(call sign) that I have been unable to break in on his transmission (onkHz. (orMHz)).
QSJ	What is the charge to be collected toincluding your internal telegraph charge?	The charge to be collected to including my internal telegraph charge isfrancs.
QSK	Can you hear me between your signals and if so can I break in on your transmission?	I can hear you between my signals; break in on my transmission.
QSL	Can you acknowledge receipt?	I am acknowledging receipt
QSM	Shall I repeat the last telegram which I sent you(or some previous telegram)?	Repeat the last telegram which you sent me (or telegram(s) number(s)).
QSN	Did you hear me (or (call sign)) on kHz (or MHz)?	I did hear you (or(call sign)) onkHz (or MHz).
QSO	Can you communicate with direct or by relay?	I can communicate withdirect(or by relay through).
QSP	Will you relay tofree of charge?	I will relay tofree of charge.
QSQ	Have you a doctor on board (or is(name of person) on board)?	I have a doctor on board (or (name of person) is on board).
QSR	Shall I repeat the call on the calling frequency?	Repeat your call on the calling frequency; did not hear you (or have interference).
QSS	What working frequency will you use?	I will use the working frequencykHz (normally only the last three figures of the frequency need be given).
QST		
QSU	Shall I send or reply on this frequency (or on kHz (or MHz)) (with emissions of class)?	Send or reply on this frequency(or onkHz (or MHz)) (with emissions of class).
QSV	Shall I send a series of V's on this frequency (orkHz (or MHz))?	Send a series of V's on this frequency (or onkHz (or MHz)).
QSW	Will you send on this frequency (or onkHz (or MHz)) (with emissions of class)?	I am going to send on this frequency (or onkHz (or MHz)) (with emissions of class).
QSX	Will you listen to(call sign(s))	I am listening to(call sign(s)) onkHz (or

	onkHz (or MHz)?	MHz).
QSY	Shall I change to transmission on	Change to transmission on another
	another frequency?	frequency (or onkHz (or MHz)).
QSZ	Shall I send each word or group more	Send each word or group twice(ortimes).
	than once?	
QTA	Shall I cancel telegram number?	Cancel telegram number
QTB	Do you agree with my counting of	I do not agree with your counting of words;
	words?	I will repeat the first letter or digit of each
		word or group.
QTC	How many telegrams have you to send?	I havetelegrams for you (or for).
QTD	What has the rescue vessel or rescue	(identification) has recovered
	aircraft recovered?	1)(number) survivors.
		2)wreckage.
		3)(number) bodies.
QTE	What is my TRUE bearing from you?	Your TRUE bearing from me is
	degrees (athours).	or
	or	Your TRUE bearing from(call sign) was
	What is my TRUE bearing from (call	degrees (athours).
	sign)? or	or
	What is the TRUE bearing of(call	The TRUE bearing of(call sign)
0.000	sign) from(call sign)?	from(call sign) wasdegrees athours.
QTF	Will you give me the position of my	The position of your station according to the
	station according to the bearings taken	bearings taken by the D/F stations which I
	by the D/F stations which you control?	control was latitude longitude (or other
OTC	Will you gond two dashes of tan	indication of position), classathours.
QTG	Will you send two dashes of ten seconds each followed by your call	I am going to send two dashes of ten seconds each followed by my call sign
	sign (repeatedtimes) (onkHz (or	(repeatedtimes) (onkHz (or MHz)).
	MHz))?	or
	or	I have requestedto send two dashes of ten
	Will you requestto send two dashes	seconds followed by his call sign
	of ten seconds followed by his call sign	(repeated times) onkHz (or MHz).
	(repeatedtimes) on kHz (or MHz)?	
QTH	What is your position in latitude and	My position islatitude longitude (or
	longitude (or according to any other	according to any other indication).
	indication)?	
QTI	What is your TRUE track?	My TRUE track isdegrees.
QTJ	What is your speed?	My speed isknots (or kilometers
	(Requests the speed of a ship or aircraft	orstatute miles per hour). (Indicates the
	through aircraft through the water or air	speed of a ship or the water or air
	respectively.)	respectively.)
QTK	What is the speed of your aircraft in	The speed of my aircraft in relation to the
	relation to the surface of the earth?	surface of the earth isknots (orkilometers
0.55		orstatute miles per hour).
QTL	What is your TRUE heading?	My TRUE heading isdegrees.

What is your MAGNETIC heading?	My MAGNETIC heading isdegrees.
At what time did you depart	I departed from(place) athours.
from(place)?	
Are you airborne?	I am airborne.
or	or
Have you left dock (or port)?	I have left dock (or port).
Are you going to alight (or land)?	I am going to alight (or land).
or	or
	I am going to enter dock (or port).
	I am going to communicate with your
	station by means of the international code of
-	signals.
	The correct time ishours.
	I will send my call sign for tuning purposes
1	or so that my frequency may be measured
	now (or athours) onkHz (or MHz).
onKHZ (or MHZ)?	
	The identification signal which follows is
What are the house during which wore	superimposed on another transmission.
station is open?	My station is open from tohours.
Shall I stand guard for you on the	Stand guard for me on the frequency
	ofkHz (or MHz) (fromtohours).
What is the condition of survivors?	Survivors are incondition and urgently
	need
	I will keep my station open for further
	communication with you until further notice
	(or until hours).
	I am proceeding to the position of incident
-	and expect to arrive athours (ondate).
	I am continuing the search for (aircraft,
Are you continuing the search?	ship, survival craft, survivors or wreckage).
Have you news of (call sign)?	Here is news of(call sign).
	Here is the information requested (The units
	used for speed and distances should be
_	indicated.)
	indicated.)
_ = ·	
	The number (or other indication) of the last
`	message I received from you (or from
indication) of the fast message you	illessage i received from you tor from
indication) of the last message you received from me(or from(call	(call sign)) is
	At what time did you depart from(place)? Are you airborne? Or Have you left dock (or port)? Are you going to alight (or land)? Or Are you going to enter dock (or port)? Can you communicate with my station by means of the international code of signals? What is the correct time? Will you send your call sign for tuning purposes or so that your frequency can be measured now (or athours) onkHz (or MHz)? What are the hours during which your station is open? Shall I stand guard for you on the frequency ofkHz(or MHz) (fromtohours)? What is the condition of survivors? Will you keep your station open for further communication with me until further notice (or untilhours)? Are you proceeding to the position of incident and if so when do you expect to arrive? Are you continuing the search? Have you news of (call sign)? Can you give me in the following order information concerning: the direction in degrees TRUE and speed of the surface wind; visibility; present weather; and amount, type and height of base of cloud above surface elevation at(place of observation)? What is the number (or other

QUD	Have you received the urgency signal	I have received the urgency signal sent
	sent by (call sign of mobile station)?	by(call sign of mobile station) athours.
QUE	Can you use telephony in (language), with interpreter if necessary; if so, on what frequencies?	I can use telephony in (language) onkHz (or MHz).
OHE	Have you received the distress signal	I have received the distress signal cent
QUF	sent by (call sign of mobile station)?	I have received the distress signal sent by(call sign of mobile station) athours.
QUG	Will you be forced to alight(or land)?	I am forced to alight (or land) immediately.
	,	or
		I will be forced to alight (or land) at
		(position or place) athours.
QUH	Will you give me the present	The present barometric pressure at sea level
	barometric pressure at sea level?	is(units). Aeronautical Note: Stations of
	Aeronautical Note: Stations of the	the international aeronautical
	international aeronautical	telecommunication service will interpret this
	telecommunication service will	signal as: The present atmospheric pressure
	interpret this signal as: What is the	at the present water level at (place or
	present atmospheric pressure at the	position) athours is(figures and units).
	present water level?	
QUI	Are your navigation lights working?	My navigation lights are working.
QUJ	Will you indicate the TRUE track to	The TRUE track to reach me (or)
	reach you (or)?	isdegrees athours.
QUK	Can you tell me the condition of the sea observed at (place or coordinates)?	The sea at(place or coordinates) is

Aeronautical Note: Stations of the international aeronautical telecommunication service will complete the answer, information or advice form by the use of a numbered alternative as given hereunder, selected according to the average wave height as obtained from the larger well formed waves of the wave system being observed. If observed height coincides with one of the limits, report the lower numbered alternative, e.g. waves with a mean maximum height of 4 meters are to be reported as "5".

Number		Height	
		Meters	Feet (approx.)
0	Calm-glassy	0	0
1	Calm- rippled	0 - 0.1	0 - 1/3
2	Smooth Wavelets	0.1 - 0.5	1/3 - 1 2/3
3	Slight	0.5 - 1.25	1 2/3 - 4
4	Moderate	1.25 - 2.5	4 - 8
5	Rough	2.5 - 4	8 - 13
6	Very Rough	4 - 6	13 - 20
7	High	6 - 9	20 - 30
8	Very High	9 - 14	30 - 45
9	Phenomenal	Over 14	Over 45

QUL	Can you tell me the swell observed	The swell at(place or coordinates) is		
	at(place or coordinates)?			
Aeronautical Note: Stations of the international aeronautical telecommunication service will				
complete the answer, information or advice form by the use of the following numbered				
alternatives:				

Number	Length of Swell	Height	Number	Length of Swell	Height
0	-	-	5	Long	Moderate
1	Short or Average	Low	6	Short	Heavy
2	Long	Low	7	Average	Heavy
3	Short	Moderate	8	Long	Heavy
4	Average	Moderate	9	Confused	-

Additionally, stations of the international aeronautical telecommunication service may indicate the direction of swell by the use of the appropriate cardinal or quandrantal point abbreviation N, NE, E, SE, etc. following the numbered alternate for indicating swell condition. The descriptions in the above numbered alternatives are as follows:

	Length of Swell		
	Meters Feet (Approx.		
Short	0 - 100	0-300	
Average	100 - 200	300 - 600	
Long	Over 200	Over 600	

	Height of Swell		
	Meters Feet (Approx.)		
Low	0 - 2	0 - 7	
Moderate	2 - 4	7 - 13	
Heavy	Over 4	Over 13	

When there is no swell, the numbered alternative "0" is used; when the swell is such that the length and height of the swell waves cannot be determined, the numbered alternative "9" is used.

QUM	May I resume normal working?	Normal working may be resumed.	
QUN	Will vessels in my immediate vicinity	My position, TRUE course and speed are	
	(or in the vicinity oflatitude		
	longitude(or of)) please indicate		
	their position, TRUE course and		
	speed?	Aeronautical Notes:	
	Aeronautical Notes:	a) All stations of the international	
	a) All stations of the international	aeronautical telecommunication service will	
	aeronautical telecommunication service	interpret this signal (in part) as referring to	
	will interpret this signal (in part) as	TRUE TRACK.	

	referring to TRUE TRACK. b) English-speaking stations of the maritime mobile service may interpret this signal (in part) as referring to TRUE HEADING. When communicating with such stations it is recommended that that supplementary use be made of the signal QTI to avoid	b) English-speaking stations of the maritime mobile service may interpret this signal (in part) as referring TRUE HEADING. When communicating with such stations it is recommended that supplementary use be made of the signal QTI to avoid any misunderstanding.
	any misunderstanding.	
QUO	Shall I search for 1) aircraft, 2) ship, 3) survival craft, in the vicinity of latitudelongitude (or according to any other indication)?	Please search for 1) aircraft, 2) ship, 3) survival craft, in the vicinity oflatitude longitude (or according to any other indication).
QUP	Will you indicate your position by 1) searchlight? 2) black smoke trail? 3) pyrotechnic lights?	My position is indicated by 1) searchlight. 2) black smoke trail. 3) pyrotechnic lights.
QUQ	Shall I train my searchlight nearly vertical on a cloud, occulting if possible and, if your aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate your landing?	Please train your searchlight on a cloud, occulting if possible and, if my aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate my landing.
QUR	Have survivors 1) received survival equipment? 2) been picked up by rescue vessel 3) been reached by ground rescue party?	Survivors 1) are in possession of survival equipment dropped by 2) have been picked up by rescue vessel. 3) have been reached by ground rescue party.
QUS	Have you sighted survivors or wreckage? If so, in what position?	Have sighted 1) survivors in water, 2) survivors on rafts, 3) wreckage, in position latitude longitude (or according to any other indication).
QUT	Is position of incident marked?	Position of incident is marked by 1) flame or smoke float. 2) sea marker. 3) sea marker dye. 4)(specify other marking).
QUU	Shall I home ship or aircraft to my position?	Home ship or aircraft(call sign) 1) to your position by transmitting your call sign and long dashes onkHz (or MHz). 2) by transmitting onkHz (or MHz) TRUE

		track to reach you.
QUV		
QUW	Are you in the search area designated as(designator or latitude and longitude)?	I am in the(designation) search area.
QUX	Do you have any navigational warning or gale warnings in force?	I have the following navigational warning(s) or gale warning(s) in force
QUY	Is position of survival craft marked?	Position of survival craft was marked athours by 1) flame or smoke float 2) sea marker 3) sea marker dye 4)(specify other marking).
QUZ	May I resume restricted working?	Distress phase still in force; restricted working may be resumed.
QVA-Q ZZ	The series QVA to QZZ inclusive has no	ot been allocated to date.

CHAPTER 4

MISCELLANEOUS ABBREVIATIONS AND SYMBOLS

SECTION A - DECODE

ABBREVIATION	SIGNIFICATION OF SYMBOL	

AC Altocumulus.
ACC Area control.
ACFT Aircraft
AD Aerodrome.
ADZ Advise.

AERO Aero form of the International Code.

AGN Again.

AIR Relative to air.

ANT Before.

APP Approach control.
APR After...(time or place)

AFRFOR Area forecast. ARR Arrive (or arrival).

AS Altostratus.

ASC I am ascending (to...figures and units) height above...(datum)).

ATC Air traffic control (in general).

ATP At..(time or place).

AWY Airway.

BABS Beam approach beacon system.

BCST Broadcast.

BOH Break-off height.

BRF Short (used to indicate the type of approach desired or required).

BTN Between.

CB Cumulonimbus.
CC Cirrocumulus.
CEN Degrees centigrade.

CI Cirrus

CLA Clear type of ice formation.

CLR Cleared to...
CS Cirrostratus.
CTA Control area.
CTR Control zone.
CU Cumulus.

DB I cannot give you a bearing. You are not in the calibrated sector of this station.

DC The minimum of your signal is suitable for the bearing.

DCT Direct (in relation to flight plan clearances and type of approach).

DES I am descending to...figures and units) height above...(datum)).

DF Your bearing at...hours was...degree in the doubtful sector of this station, with

a possible error of...degrees.

DRT Keep straight ahead.

DS Adjust your transmitter, the mini- mum of your signal is too broad.

DT I cannot furnish you with a bearing, the minimum of your signal is too broad.

DU Position not guaranteed.

DY This station is not able to determine the sense of the bearing. What is your

approximate direction relative to this station?

DZ Your bearing is reciprocal. (To be used only by the control station of a group

of direction-finding stations when it is addressing stations of the same group).

E East or Eastern longitude.

ER Here... Aeronautical Note: In the international aeronautical telecommunication

service ER may also be used to indicate Here with be used to indicate

Herewith..

ERB Landing off runway is permitted.

ETA Estimated time of arrival.
ETD Estimated time of departure.
ETI The information is estimated.

FAH Degrees Fahrenheit.

FBL Light (used to qualify icing, turbulence, interference or static reports.

FIOR Flight forecast.

FIR Flight information region.

FL The indication of vertical distance is given as flight level reference number.

FLT Flight.

FNA Final approach.

FOT Units of English system.

FSL Full stop landing.

FT Feet (dimensional unit).

GCA Ground controlled approach system.

GEO Geographic or true.
GMT Greenwich mean time.
GND Relative to ground.

HBN Hazard beacon. HEL Helicopter.

HF High frequency (3,000 to 30,000 kHz.).

HR Hours (period of time).

IAR Intersection of air routes.

ID Identification.

IFR Instrument flight rules.
ILS Instrument landing system.

IMI Interrogation sign (question mark) (..-..).

IMT Immediately.
INA Initial approach.

INF Below...

INP If not possible.

INS Inches (dimensional unit).

IR Ice on runway.

IRL Intersection of range legs.

IVB If forward visibility is less than... (figures and units). IVR If forward flight visibility remains... (figures and units).

KC, KCS, Kilocycles/kilohertz

kHz per second KG Kilograms. KM Kilometers.

KNH Kilometers per hour.

KT Knots.

LB Pounds (weight).
LEFT Left (direction of turn).

LF Low frequency (30 to 300 kHz.).

LNG Long (used to indicate the type of approach desired or required).

LRG Long range.

LSA Low intensity approach lighting system.
LSB High intensity approach lighting system.

M Meters.
MAG Magnetic.
MB Millibars.

MC, MCS or Megacycles/megahertz

MHz per second.

MER The indication of vertical distance is given as TRUE height above mean sea

level (e.g. after applying the correction for ambient temperature to the altitude

reading of a pressure altimeter set to QNH).

MET Meteorological..

MF Medium frequency (300 to 3,000 kHz.).

MKR Marker radio beacon.
ML Statute mile(s).
MN Minute (or minutes).

MOD Moderate (used to qualify icing, turbulence, interference or static reports).

MPH Statute miles per hour.

MRG Medium range.

MS Minus.

MSL The indication of vertical distance is given as the reading, without correction

for ambient temperature, of a pressure altimeter set to QNH.

MTU Metric units.

MX Mixed type of ice formation (white and clear).

N North latitude. (To be used only with figures indicating latitude, e.g. 4730N.)

Aeronautical Note: In the maritime mobile service, the abbreviation N

signifies No and is used in that service to give a negative sense to Q signals.

NDB Non-directional radio beacon.

NE North-East.

NIL I have nothing to send to you.

NM Nautical mile(s).

NML Normal.

NORTH North (cardinal point of direction).

NR Number.
NS Nimbostratus.
NW North-West.

OPA White type of ice formation.

OPC The control indicated is Operational Control.

ORD Indication of an order.

PLA Practice low approach.

PP Descent through cloud (procedures).

PRES The indication of vertical distance is (or is to be) replaced by the indication of

the pressure, expressed in millibars, at the level and the position of the aircraft.

PREVU The information refers to forecast and not to present conditions.

PSGR Passenger(s).

PS Plus.

PTN Procedure turn.

QUAD Quadrant.

RAD The control referred to is Radio Control.

RCA Reach cruising altitude.

RDO Radio.

REP Reporting point.

RITE Right (direction of turn).

RNG Radio range.
RNWY Runway.
ROFOR Route forecast.
RON Receiving only.

RP Rapid.

RTT Radio-teletypewriter.

RUT Standard regional route transmitting freqs.

S South or Southern latitude. SAP As soon as possible.

SC Stratocumulus. SE South-East.

SEV Severe (used to qualify icing and turbulence reports).

SID Standard instrument departure.

SKED Schedule. SLW Slow.

SOL The indication of vertical distance is given as the reading, without correction

for ambient temperature, of a pressure altimeter set to QFE. (The abbreviation should only be used in the vicinity of the station which provided the QFE

setting.)

SRG Short range. ST Stratus.

STA Straight in approach.

STD The indication of vertical distance is given as the reading, without correction

for ambient temperature, of a pressure altimeter having the sub-scale set to

1013.2 millibars (29.92 inches).

SUP Above... SW South-West.

TAF Abbreviated aerodrome forecast.

TAFOR Aerodrome forecast.

TER The indication of vertical distance is given as TRUE height above official

aerodrome level (e.g. after applying the correction for ambient temperature to

the vertical distance reading of a pressure altimeter set to QFE).

TFZ Traffic zone.

TGL Touch and go landing.

TIL Until.

TIP Until past... (place).

TO To...(place).

TRB It is not necessary to keep to the runways and taxi ways after landing.

TT Teletypewriter.
TWR Aerodrome control.

UAB Until advised by...
UFN Until further notice.

VAN Runway control van.

VIA By way of...

VIO Heavy (used to qualify interference or static reports).

VFR Visual flight rules.

VHR Very high frequency (30,000 kHz. to 300 MHz).

VLR Very long range.

VOR VHF omni-directional radio range. VSA By visual reference to the ground.

W West or Western longitude.

WX Weather.

XS Atmospheric.

YD Yards.

YR Your.

MISCELLANEOUS ABBREVIATIONS AND SYMBOLS

SECTION B - ENCODE

ABBREVIATION OR SYMBOL	SIGNIFICATION	ABBREVIATION OR SYMBOL	SIGNIFICATION
	A	DJ	Dagging daubtful baggues
TAF	Abbreviated aerodrome	Di	Bearing doubtful because of interference.
IAI	forecast	DI	Bearing doubtful in
SUP	Above	DI	consequence of the bad
DS	Adjust your transmitter,		quality of your signal.
DS	the minimum of your	ANT	Before.
	signal is too board.	INF	Below
ADZ	Advise.	BTN	Between.
AERO	Aero form of the	ВОН	Break-off height.
TILKO	International Code.	BCST	Broadcast.
AD	Aerodrome.	BCS1	Dioddedst.
TWR	Aerodrome control.	VSA	By visual reference to the
TAFOR	Aerodrome forecast.	V 5/1	ground.
APR	After(time or place).	VIA	By way of
AGN	Again.	, 111	25 way 61
AIR	Relative to air.		C
ACFT	Aircraft.		
ATC	Air traffic control (in	CC	Cirrocumulus.
	general).	CS	Cirrostratus
AWY	Airway.	CI	Cirrus.
AC	Altocumulus.	CLA	Clear type of ice
AS	Altostratus.		formation.
APP	Approach control.	CLR	Clear to
ACC	Area control.	CTA	Control area.
ARFOR	Area forecast.	CTR	Control zone.
ARR	Arrive (or arrival).	СВ	Cumulonimbus.
SAP	As soon as possible.	CU	Cumulus.
ATP	At(time or place).		
XS	Atmospherics.		D
	В	CEN	Degrees centigrade.
		FAH	Degrees Fahrenheit.
BABS	Beam approach beacon system.	PP	Descent through cloud (procedure).
DO	Bearing doubtful. Ask	DCT	Direct (in relation to
20	for another bearing later		flight plan clearance and
	(or athours).		type of approach).
		I	71L).

	E		I
E ETA	East or Eastern longitude. Estimated time of arrival.	ASC	I am ascending (to(figures and units)
ETD	Estimated time of arrival. Estimated time of departure.	DES	I am descending (to(figures and units)
	F	DT	height above(datum)). I cannot furnish you with a bearing, the minimum
FT FNA	Feet (dimension unit). Final approach.		of your signal is too broad.
FLT FIFOR	Flight. Flight forecast.	DB	I cannot give you a bearing. You are not in
FIR FSL	Flight information region. Full stop landing.	IR	the calibrated sector of this station. Ice on the runway.
	G	ID IVR	Identification. If forward flight visibility
GEO GMT	Geographic or true. Greenwich mean time.		remains(figures and units).
GCA	Ground controlled approach system.	IVB	If forward visibility is
	Н	NIL	less than(figures and units). I have nothing to sent to
HBN	Hazard beacon.		you.
VIO	Heavy (used to qualify interference or static	ORD INP	Indication of an order. If not possible.
HEL	reports). Helicopter.	IMT INS	Immediately. Inches (dimensional
ER	HereAeronautical Note:		unit).
	In the international aeronautical	INA IFR	Initial approach. Instrument flight rules.
	telecommunication service ER may also be	ILS	Instrument landing system.
	used to indicate Herewith	IMI	Interrogation sign (question mark)()
HF	High frequency (3,000 to 30,000kHz.)	IAR IRL	Intersection of air routes. Intersection of range legs.
LSB	High intensity approach lighting system.	TRB	It is not necessary to keep the runways and taxi
HR	Hours (period of time).		ways after landing.
			K
		DRT	Keep straight ahead.

KC, KCS, kHz	Kilocycles/kilohertz per second.		interference or static reports).
KG	Kilograms.		1 0 p 0110).
KM	Kilometers.		N
KMH	Kilometers per hours.		11
KT	Knots.	NM	Nautical mile(s).
KI	Kilots.	NS	Nimbostratus.
	T		
	L	NO	No.
EDD	Y 1: 00 .	NDB	Non-directional radio
ERB	Landing off a runway is		beacon.
	permitted.	NML	Normal.
LEFT	Left (direction of turn)	NORTH	North (cardinal point
FBL	Light (used to qualify		direction).
	icing, turbulence,	NE	North-East.
	interference or static	N	North latitude. (to be
	reports).		used only with figures
LNG	Long (used to indicate the		indicating latitude, e.g.
	type of approach desired		473ON.) Aeronautical
	or required).		NOTE: In the maritime
LRG	Long range.		mobile service, the
LF	Low frequency (30 to		abbreviation N signifies
21	300 kHz.).		No and is used in that
LSA	Long intensity approach		service to give a negative
LOT I	lighting system.		sense to Q signals.
	ngnting system.	NW	North-West.
	M	NR	Number.
	I V1	NDB	Non-directional radio
MAC	Magnatia	NDB	
MAG	Magnetic.		beacon.
MNTN	Maintain.		D
MKR	Marker radio beacon.		P
MF	Medium frequency (300	D.C.C.D.	
	to 3000 kHz).	PSGR	Passenger(s).
MRG	Medium range.	DG	Please advise me if you
MC, MCS	Megacycles/megahertz or		note an error in the
	MHz per second.		bearing given.
MET	Meteorological.	PS	Plus.
M	Meters	DU	Position not guaranteed.
MTU	Metric Units.	DP	Possible error of bearing
MB	Millibars.		may amount todegrees.
MS	Minus.	LB	Pounds (weight)
MN	Minute (or minutes).	PLA	Practice low approach.
MX	Mixed type of ice	PTN	Procedure turn.
	formation (white and		
	clear).		Q
	01041).		×
MOD	Moderate (used to qualify	QUAD	Quadrant
MOD	icing, turbulence,	QUAD	Quadrant
	ionig, turburence,	1	

	R	OPC	The control indicated is
DD 0	5 . 41	7.47	Operational Control.
RDO	Radio.	RAD	The control referred to is
RNG	Radio range		Radio Control.
RTT	Radio teletypewriter.	FL	The indication of vertical
RP	Rapid.		distance is given as flight
RCA	Reach cruising altitude.		level reference number.
RON	Receiving only.	STD	The indication of vertical
AIR	Relative to air.		distance is given as the
GND	Relative to ground.		reading without
REP	Reporting point.		correction for ambient
RITE	Right (direction of turn).		temperature, of a pressure
ROFOR	Route forecast.		altimeter having the sub-
RNWY	Runway.		scale set to 1013.2
VAN	Runway control van.		millibars (29.92 inches).
	Ž	TER	The indication of vertical
	\mathbf{S}		distance is given as
			TRUE height above
SKED	Schedule.		official aerodrome level
SEV	Severe (used to qualify		(e.g. after applying the
	icing and turbulence		correction for ambient
	reports).		temperature to the
BRF	Short (used to indicate		vertical distance reading
210	the type of approach		of a pressure altimeter set
	desired or required).		to QFE).
SRG	Short range.	PRES	The indication of vertical
SLW	Slow.	TIES	distance is (or is to be)
S	South or Southern		replaced by the indication
S	latitude.		of the pressure, expressed
SE	South-East.		in millibars, at the level
SW	South-West.		and the position of the
SIA	Standard instrument		aircraft.
SIL	approach.	MER	The indication of vertical
SID	Standard instrument	WILK	distance is given as
SID	departure.		TRUE height above mean
RUT	Standard regional route		sea level (e.g. after
KU I	transmitting frequencies.		` `
ML	U 1		applying the correction
MPH	Statue mile(s).		for ambient temperature
	Statue miles per hour.		to the altitude reading of
STA	Straight in approach.		a pressure altimeter set to
SC	Stratocumulus.	ETI	QNH).
ST	Stratus.	ETI	The information is estimated.
	T		
TT	T. 1.		TD (C (2.1)
TT	Teletypewriter.		T (Cont'd)
		i	

PREV	The information refers to		
	forecast and not to		\mathbf{W}
	present conditions.		
SOL	The indication of vertical	WX	Weather.
	distance is given as the	\mathbf{W}	West or Western
	reading, without		longitude.
	correction for ambient	OPA	White type of ice
	temperature, of a pressure		formation.
	altimeter set to QFE.		
	(The abbreviation should		Y
	only be used in the		
	vicinity of the station	YD	Yards.
	which provided the QFE	YR	Your.
	setting.)	DF	Your bearing athours
DC	The minimum of your		wasdegrees in the
	signal is suitable for the		doubtful sector of this
	bearing.		station, with a possible
DY	This station is not able to		error ofdegrees.
	determine the sense of the	DZ	Your bearing is
	bearing. What is your		reciprocal. (To be used
	approximate direction		only by the Control
	relative to this station?		Station of a group of
TO	TO(place).		direction-finding stations
TGL	Touch and go landing.		when it is addressing
TFZ	Traffic zone.		stations of the same
			group).
	U		
FOT	Units of English system.		
TIL	Until.		
UAB	Until advised by		
UFN	Until further notice.		
TIP	Until past(place).		

	V		
VHF	Very high frequency		
	(30,000 kHz to 300		
	MHz).		
VOR	VHF omni-directional		
	1.		

radio range.
Very long range.
Visual flight rules.

VLR VFR

CHAPTER 6

DESIGNATION OF EMISSIONS

601. EMISSION DESIGNATION FEATURES

Full designation of emissions will comprise a total of nine alphanumeric symbols, the first seven being mandatory. The symbols provide details of the following characteristics:

- a. <u>Necessary Bandwidth</u>. The first four symbols provide details of the necessary bandwidth which can range from 0.001Hz to 999GHZ.
- b. <u>Classification</u>. The next three symbols provide details of the basic characteristics of the emission.
- c. <u>Additional Characteristics</u>. The last two symbols, which are optional, describe any additional characteristics which may be useful in providing a more complete description of the emission. Where the fourth or fifth symbol is not used, this should be indicated by a dash where each symbol would otherwise appear.

602. NECESSARY BANDWIDTH - THE FIRST FOUR SYMBOLS

The necessary bandwidth shall be expressed by three numerals and one letter. The letter occupies the position of the decimal point; it represents the unit of bandwidth and may be H for hertz, K for kilohertz, M for megahertz or G for gigahertz. In order to avoid a given bandwidth being expressed in more than one way, depending upon the choice of the unit, it is specified that the first character shall be neither zero nor K, M or G. It is further specified that the necessary bandwidth:

- between 0.001 and 999Hz shall be expressed in Hz (letter H);
- between 1.00 and 999kHz shall be expressed in kHz (letter K);
- between 1.00 and 999MHz shall be expressed in MHz (letter M);
- between 1.00 and 999GHz shall be expressed in GHz (letter G).

Examples

Necessary Bandwidth	Method of Designation
23.3Hz	25H3
850Hz	850H

5.45 kHz	5K45
25.45kHz	25K5
16 kHz	16K0
1.25MHz	1M25
2Mhz	2M00
5.65GHz	5G65

603. CLASSIFICATION - THE NEXT THREE SYMBOLS

The next three symbols describe the basic characteristics of the radio emission. It is not possible to give the minimum required information on the emission without the use of all three symbols.

First symbol - type of modulation of the main carrier Emission of an unmodulated carrier (1) N (2) Emission in which the main carrier is amplitude-modulated (including cases where sub-carrier are angle-modulated). Double-sideband (a) Α Single-sideband, full carrier Н (b) (c) Single-sideband, reduced or variable level carrier R (d) Single-sideband, suppressed carrier J Independent sideband (e) В C (f) Vestigial sideband (3) Emission in which the main carrier is angle-modulated F (a) Frequency modulation Phase modulation G (b) Emission in which the main carrier is amplitude and angle- modulated **(4)** either simultaneously or in a pre-established sequence. D Emission of pulses (1) (5) P (a) Sequence of unmodulated pulses

A sequence of pulses

(b)

a.

		(i)	.) :	modulated in amplitude	K
		(ii	i)	modulated in width/duration	L
		(ii	ii)	modulated in position/phase	M
		(ir	-	in which the carrier is angle-modulated during the period of the pulse	Q
		(v	-	which is a combination of the foregoing or is produced by other means	V
	(6)	modulat	ted, e	vered above, in which an emission consists of the main carrier ither simultaneously or in a pre-established sequence, in a of two or more of the following modes: amplitude, angle, pulse	W
	(7)	Cases no	ot oth	nerwise covered	X
b. S	econd	symbol -	- natu	are of signal(s) modulating the main carrier	
	(1)	No mod	lulati	ng signal	0
	(2)	_		nnel containing quantized or digital information without nodulating sub-carrier (2)	1
	(3)	_		nnel containing quantized or digital information with modulating sub-carrier (2)	2
	(4)	A single	e chai	nnel containing analogue information	3
	(5)	Two or 1	more	channels containing quantized or digital information	7
	(6)	Two or 1	more	channels containing analogue information	8
	(7)	digital in	nforn	ystem with one or more channels containing quantized or nation, together with one or more channels containing ormation.	9
	(8)	Cases no	ot otł	nerwise covered.	X
c.	Third	symbol -	- Тур	be of information to be transmitted (3)	
	(1)	No info	rmati	on transmitted	N
	(2)	Telegrap	phy -	for aural reception	A
	(3)	Telegrap	phy -	for automatic reception	В

(4)	Facsimile	C
(5)	Data transmission, telemetry, telecommand	D
(6)	Telephony (including sound broadcasting)	Е
(7)	Television (video)	F
(8)	Combination of the above	W
(9)	Cases not otherwise covered	X

604. <u>ADDITIONAL CHARACTERISTICS - THE LAST TWO SYMBOLS</u>

These symbols describe any additional characteristics useful in providing a more complete description of the emission. The use of these symbols is optional; however, they would not normally be used except where their use could assist in resolving cases of harmful interference to military radio system.

- a. The fourth symbol defines details of signal(s);
- b. The fifth symbol defines nature of multiplexing.

605. FOURTH SYMBOL - DETAILS OF SIGNAL(S)

a.	Two-condition code with elements of differing numbers and/or durations	A
b.	Two-condition code with elements of the same number and duration without error-correction	В
c.	Two-condition code with elements of the same number and duration with error-correction	C
d.	Four-condition code in which each condition represents a signal element (of one or more bits)	D
e.	Multi-condition code in which each condition represents a signal element (of one or more bits)	Е
f.	Multi-condition code in which each condition or combination of conditions represents a character	F
g.	Sound of broadcasting quality (monophonic)	G
h.	Sound of broadcasting quality (stereophonic or quadrophonic)	Н

i.	Sound of commercial quality (excluding categories given in sub-paragraphs (j) and (k) below	J
j.	Sound of commercial quality with the use of frequency inversion or band-splitting	K
k.	Sound of commercial quality with separate frequency-modulated signals to control the level of demodulated signal	L
1.	Monochrome	M
m.	Colour	N
n.	Combination of the above	W
0.	Cases not otherwise covered	X
FIF	TH SYMBOL - NATURE OF MULTIPLEXING	
a.	None	N
b.	Code-division multiplex (4)	C
c.	Frequency-division multiplex	F
d.	Time-division multiplex	T
e.	Combination of frequency-division multiplex and time-division multiplex	W
f.	Other types of multiplexing	X
	j. k. l. n. o. FIF a. b. c. d. e.	and (k) below j. Sound of commercial quality with the use of frequency inversion or band-splitting k. Sound of commercial quality with separate frequency-modulated signals to control the level of demodulated signal l. Monochrome m. Colour n. Combination of the above o. Cases not otherwise covered FIFTH SYMBOL - NATURE OF MULTIPLEXING a. None b. Code-division multiplex (4) c. Frequency-division multiplex d. Time-division multiplex e. Combination of frequency-division multiplex and time-division multiplex

NOTES:

- (1) Emissions, where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation) should be designated under paragraph 603.a.(1) and 603.a.(3).
 - (2) This excludes time-division multiplex.
- (3) In this context the word "information" does not include information of a constant unvarying nature such as provided by standard frequency emissions, continuous wave and pulse radar, etc.
 - (4) This includes bandwidth expansion techniques.

607. THE CLASSIFICATION OF TYPICAL EMISSIONS IS TABULATED AS FOLLOWS:

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Amplitude Modulation	With no modulation		N0N
	Telegraphy without the use of modulating audio frequency (by on-off		A1A (for aural reception
	Telegraphy by the on-off keying of an amplitude modulating audio frequency or audio frequencies, or by the on-off keying of the modulated emission (special case: an unkeyed emission amplitude modulated)		A2A (for aural reception)
	Telephony	Double Sideband Single Sideband,	A3E
Amplitude Modulation (Cont'd)		Full carrier Single Sideband	Н3Е
		Reduced carrier Single Sideband	R3E
		Suppressed carrier	J3E
		Two independent sidebands	B8E
	Facsimle (with modulation of main carrier either directly or by a frequency modulated sub-carrier		A3C
		Single sideband, reduced carrier	R3C
	Television	Vestigial sideband	C3F
	Multi-channel voice frequency telegraphy	Single sideband, reduced carrier	R7B
	Cases not covered by the above, e.g. a combination of telephony and telegraphy	Two independent sidebands	B9W
Frequency (or Phase) Modulation	Telegrapyhy by frequency shift keying without the use of a modulating audio frequency: one of two		$\frac{1^{st} Symbol}{F = frequency}$ $modulation$ $G = Phase$

	frequencies being emitted at		F1A = (for
	any instant.		aural)
			G1A =
			reception
	Telegraphy by the on-off		F2A = (for
	keying of a frequency		aural)
	modulating audio frequency		G2A =
	or by the on-off keying of a		reception
	frequency modulated		i cooption
	emission (special case: an		
	unkeyed emission, frequency		
	modulated.		
	Telephony		F3E
			G3E
	Facsimile by direct frequency		F3C
	modulation of the carrier		G3C
	Television		F3F G3F
	Four-frequency diplex		F7B
	telegraphy		G7B
	Cases not covered by the		FXX (1)
	above, in which the main		11111(1)
	carrier is frequency		
	modulated		
Pulse Modulation	A pulsed carrier without any		P0N
	modulation intended to carry		
	information (e.g. radar)		
	Telegraphy by the on-off		K1A (for aural
	keying of a pulsed carrier		reception)
	without the use of a		1
	modulating audio frequency		
	Telegraphy by the on-off	Audio frequency or	K2A (for aural
	keying of a modulating audio	audio frequencies	reception)
	frequency or audio	modulating the	
	frequencies, or by the on-off	amplitude of the	
	keying of a modulated pulsed	pulses	
	carrier (special case; an		
	unkeyed modulated pulsed		
	carrier).		
		Audio frequency or	L2A (for aural
		audio frequencies	reception)
		modulating the width	
		(or duration) of the	
		pulses	
		Audio frequency or	M2A (for aural
		audio frequencies	reception)

	modulating the phase	
	(or position of the	
	pulses)	
Telephony	Amplitude modulated	K3E
	pulses	
	Width (or duration)	L3E
	modulated pulses.	
	Phase (or duration)	M3E
	modulated pulses	
	Code modulated	V3E
	pulses (after sampling	(for example)
	and quantization)	
Cases not covered by the		FXX (1)
above in which the main		
carrier is pulse modulated		

Notes: 1. The symbols XX are available for systems where for security or other reasons it would be preferable not to disclose details of the emission.