
مرکز آموزشهای هوایی هما
HOMA AVIATION TRAINING CENTER

COMMUNICATION

Ali Erfanian

CAE Oxford
Aviation Academy

COMMUNICATIONS
ATPL GROUND TRAINING SERIES

ATPL Book 14 Communications

Annex 10 to the Convention on International Civil Aviation

Aeronautical Telecommunications

Volume II
Communication Procedures including those with PANS status

Seventh Edition, July 2016

Amendment 92, 5/11/2020

CHAPTER 1. DEFINITIONS

- **Aeronautical fixed service (AFS).** A telecommunication service between specified **fixed points** provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

- **Aeronautical mobile service.** A mobile service between **aeronautical stations and aircraft stations**, or between aircraft stations, in which survival craft stations may participate.

- **Aeronautical fixed telecommunication network (AFTN).** A worldwide system of **aeronautical fixed circuits** provided, as part of the **aeronautical fixed service**, for the exchange of messages and/or digital data between aeronautical fixed stations having the same or compatible communications characteristics.

- **Aeronautical station.** A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

- **Aircraft station.** A mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft.

Definitions

- **Air-ground communication.** Two-way communication between aircraft and stations or locations on the surface of the earth.

- **Air-to-ground communication.** One-way communication from aircraft to stations or locations on the surface of the earth.

- **Ground-to-air communication.** One-way communication from stations or locations on the surface of the earth to aircraft.

Definitions

- **Interpilot air-to-air communication.** Two-way communication on the designated air-to-air channel to enable aircraft engaged in flights over remote and oceanic areas out of range of VHF ground stations to exchange necessary operational information and to facilitate the resolution of operational problems.

123.45 MHz

(TIBA: 135.175 MHZ)

CLIPPER 123 — SABENA 901 — INTERPILOT — DO YOU READ

or

ANY AIRCRAFT VICINITY OF 30 NORTH 160 EAST — JAPANAIR 401 — INTERPILOT — OVER

Definitions

- **Blind transmission.** A transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission.
- **Broadcast.** A transmission of information relating to air navigation that is not addressed to a specific station or stations.

Definitions

- **Primary frequency.** The radiotelephony frequency **assigned to an aircraft** as a first choice for air-ground communication in a radiotelephony network.

- **Secondary frequency.** The radiotelephony frequency **assigned to an aircraft** as a second choice for air-ground communication in a radiotelephony network.

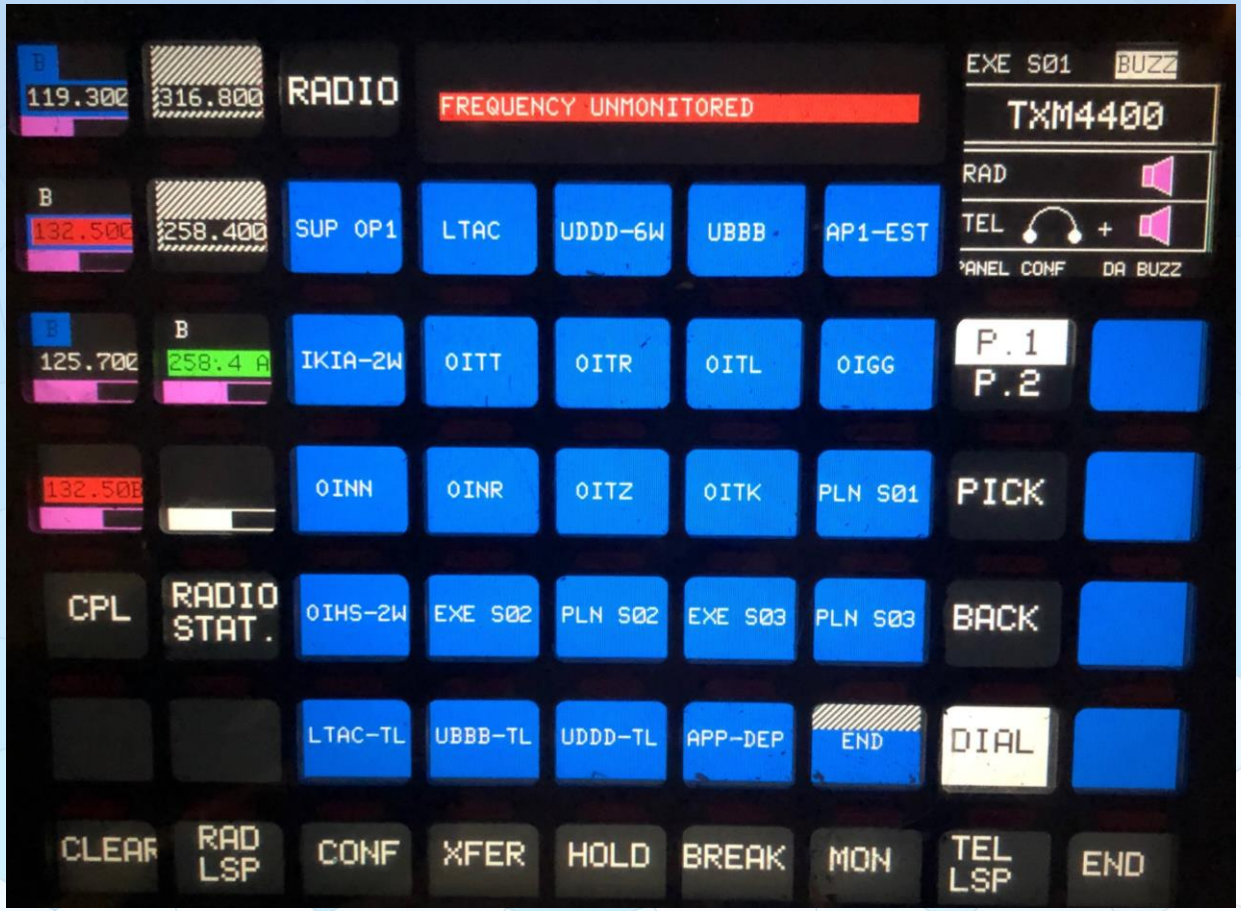
Definitions

- **Readback.** A procedure whereby the receiving station repeats a received message or an appropriate part thereof back to the transmitting station so as to obtain confirmation of correct reception.

- **Hearback????**

Air-report. A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

ATS direct speech circuit. An aeronautical fixed service (AFS) telephone circuit, for direct exchange of information between air traffic services (ATS) units.



Air report:

Position report

FASTAIR 345 ROGER

FASTAIR 345 WICKEN 47 FL 330 MARLO 57 COLIN NEXT

Definitions

- **Flight level.** A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Note 1.— A pressure type altimeter calibrated in accordance with the standard atmosphere:

a) when set to a QNH altimeter setting, ***will*** indicate altitude;

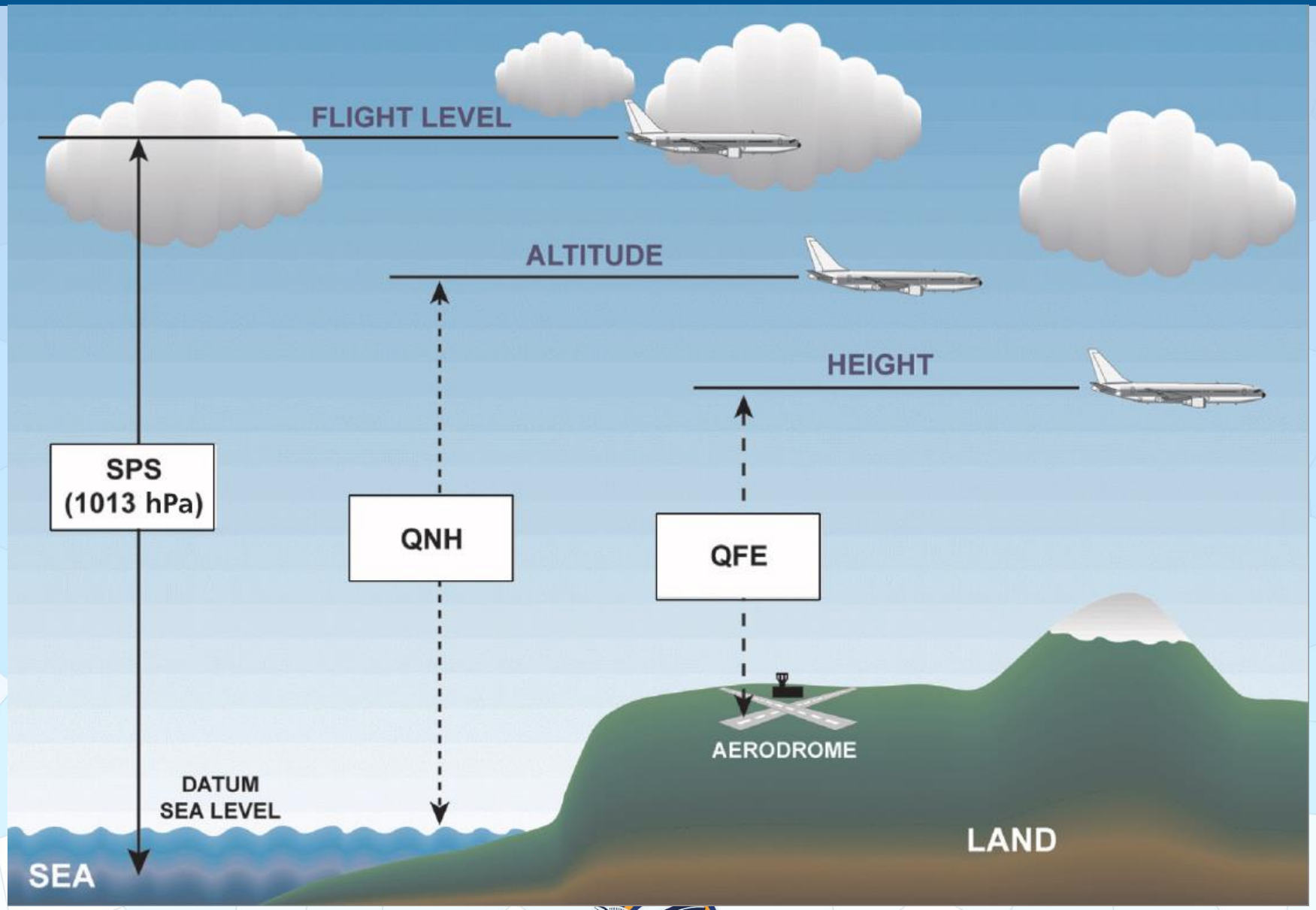
b) when set to a QFE altimeter setting, ***will*** indicate height above the QFE reference datum;

c) when set to a pressure 1 013.2 hPa, ***may be*** used to indicate flight levels.

Note 2.— The terms “height” and “altitude”, used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

Definitions

- **Height.** The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.
- **Altitude.** The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).
- **Location indicator.** A four-letter code group formulated in accordance with rules prescribed by ICAO and assigned to the location of an aeronautical fixed station.


FLIGHT LEVEL
ALTITUDE
HEIGHT
SPS
(1013 hPa)
QNH
QFE
AERODROME
DATUM
SEA LEVEL
SEA
LAND

CHAPTER 2. ADMINISTRATIVE PROVISIONS RELATING TO THE INTERNATIONAL AERONAUTICAL TELECOMMUNICATION SERVICE

2.1 DIVISION OF SERVICE

The international aeronautical telecommunication service shall be divided into four parts:

1) aeronautical fixed service;
2) aeronautical mobile service;
3) aeronautical radio navigation service;
4) aeronautical broadcasting service.

CHAPTER 3. GENERAL PROCEDURES FOR THE INTERNATIONAL AERONAUTICAL TELECOMMUNICATION SERVICE

3.2 EXTENSIONS OF SERVICE AND CLOSING DOWN OF STATIONS

3.2.1 Stations of the international aeronautical telecommunication service shall **extend their normal hours** of service as required to provide for traffic necessary for flight operation.

3.2.2 **Before closing down**, a station **shall notify** its intention to all other stations with which it is in direct communication, confirm that an extension of service is not required and advise the time of re-opening if other than its normal hours of service.

3.4 TIME SYSTEM

3.4.1 Coordinated Universal Time (**UTC**) shall be used by all stations in the aeronautical telecommunication service. **Midnight shall be designated as 2400 for the end of the day and 0000 for the beginning of the day.**

3.4.2 A date-time group shall consist of **six figures**, the first two figures representing the **date of the month** and the last four figures the **hours and minutes** in UTC.

CHAPTER 4.
AERONAUTICAL FIXED SERVICE (AFS)

4.1 GENERAL

4.1.1 The aeronautical fixed service shall comprise the following systems and applications that are used for **ground-ground** (i.e. point-to-point and/or point-to-multipoint) communications in the international aeronautical telecommunication service:

a) ATS direct speech circuits and networks;

b) meteorological operational circuits, networks and broadcast systems;

c) the aeronautical fixed telecommunication network (AFTN);

d) the common ICAO data interchange network (CIDIN);

e) the air traffic services (ATS) message handling services; and

f) the inter-centre communications (ICC).

4.1.2 Material permitted in AFS messages

4.1.2.1 The following characters are allowed in text messages:

- Letters: **ABCDEFGHIJKLMNOPQRSTUVWXYZ**
- Figures: **1 2 3 4 5 6 7 8 9 0**
- Other signs:
  - **-** (hyphen)
  - **?** (question mark)
  - **:** (colon)
  - **(** (open bracket)
  - **)** (close bracket)
  - **.** (full stop, period, or decimal point)
  - **,** (comma)
  - **’** (apostrophe)
  - **=** (double hyphen or equal sign)
  - **/** (oblique)
  - **+** (plus sign)

4.4.1.1 Categories of messages

a) **Distress messages** (priority indicator **SS**).
b) **Urgency messages** (priority indicator **DD**).
c) **Flight safety messages** (priority indicator **FF**)
d) **Meteorological messages** (priority indicator **GG**)
e) **Flight regularity messages** (priority indicator **GG**)
f) **Aeronautical information services (AIS) messages** (priority indicator **GG**)
g) **Aeronautical administrative messages** (priority indicator **KK**)

Priority of messages

Transmission Priority	priority indicator
–1	SS
–2	DD FF
–3	GG KK

(Address) FF OIIIZTZX
(Origin) 031451 OIIXZRZX
(Text) IRA233 CLR DES OIFM FL230 P574

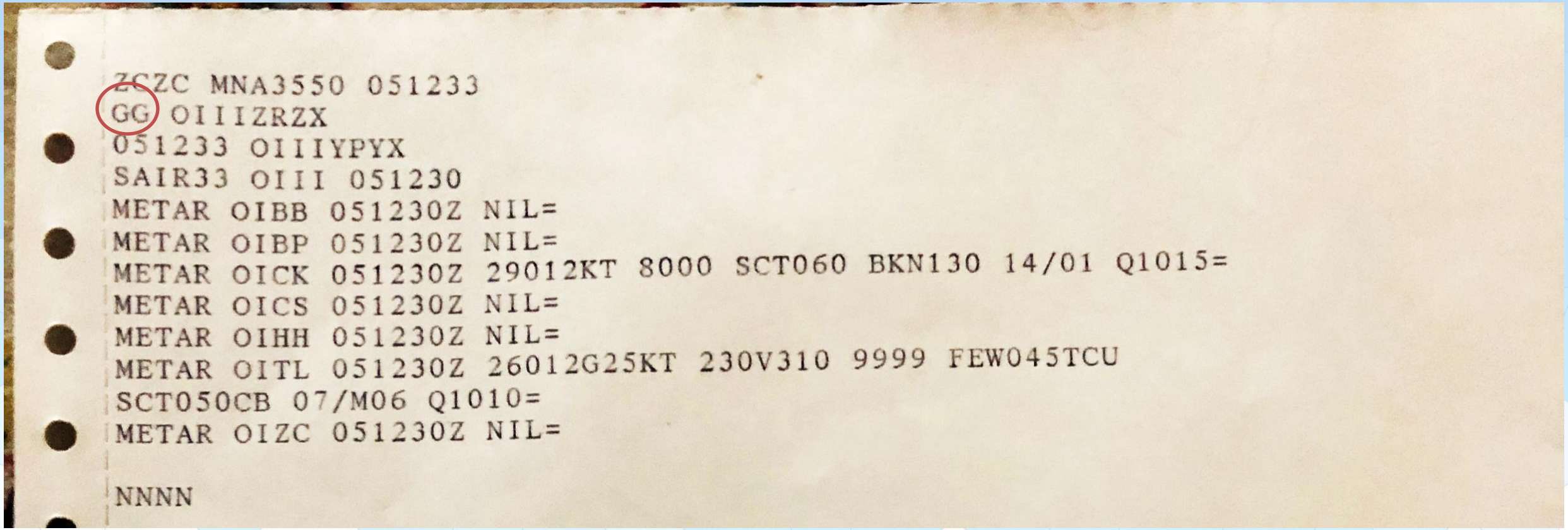
```
ZGZC MNA0239 250114
FF OIIXZQZX OIIXZRZX
250114 VGHSZQZX
(FPL-BBC201-IS
-B788/H-SDE1E3FGHIJ1J2J3J4J5M1P1P2RWXY/LB1D1
-VGSY0400
-N0483F240 DCT SYT W1 NIKLI/N0493F360 W1 DAC G463 RAJ A201 LKN
 R594 DPN G333 MERUN G452 ZDN/N0493F280 G208 TOVUS/N0500F360 UL125
 PAROT/N0489F380 UL125 BUDED UL333 RAKED/N0487F400 UL333 DASIS UL746
 ODERO L621 REVDA DCT BUDOP DCT PATAK DCT LALES DCT SOPGA DCT RAPET
 DCT MASEK DCT PODIP/N0488F430 DCT TORNU DCT BREDA DCT ODVIL DCT
 ABNED L980 LOGAN DCT
-EGLL1117 EGKK
-PBN/A1B1C1D1L1O1S2 DOF/220225 REG/S2AJS EET/VECF0039 VIDF0136
 OPKR0247 OIIX0415 LTAA0641 LTBB0800 LBSR0805 LRBB0815 LHCC0902
 LZBB0919 LKAA0929 EDUU0959 LKAA0959 EDUU1000 EDVV1023 EHAA1032
 EGTT1054 SEL/GKDQ ORGN/DACOVBG RALT/VECC OIZH OIII LTCE EDDF
 EGLL RMK/TCAS II EQUIPPED RQST ADC INDIA BANGLADESH ADC 2100
 PERM BD HQ4458 DATED 28 OCT'21 INDIA DGCA 13007 42 2020 IR
 DATED 22 10 2021 PAKISTAN HQCAA 1088 065 ATNR DATED 29 DEC'21
 UK LHR PMT NO FOP 2021 30584)

NNNN
```

ZCZC MNA1296 210520
GG OIIIZRZX
210519 OIIIYNYX
(A0721/22 NOTAMN
Q)OIIX/QCEAS/I/B/E/000/999/
A)OIIX B)2202270630 C)2202271430
E)REF AIP PAGE ENR 1.6-1, TEHRAN(IMAM KHOMEINI) MSSR RADAR
DERIVED INFORMATION FOR EN-ROUTE NOT AVBL AND RADAR SER
IN SOME PARTS OF THE ACC, SECTOR 1 (FREQ 119.300MHZ, 132.500MHZ)
SECTOR 2 (FREQ 125.700MHZ) AND SECTOR 7 (FREQ 120.700MHZ)
MAY NOT BE AVBL.)

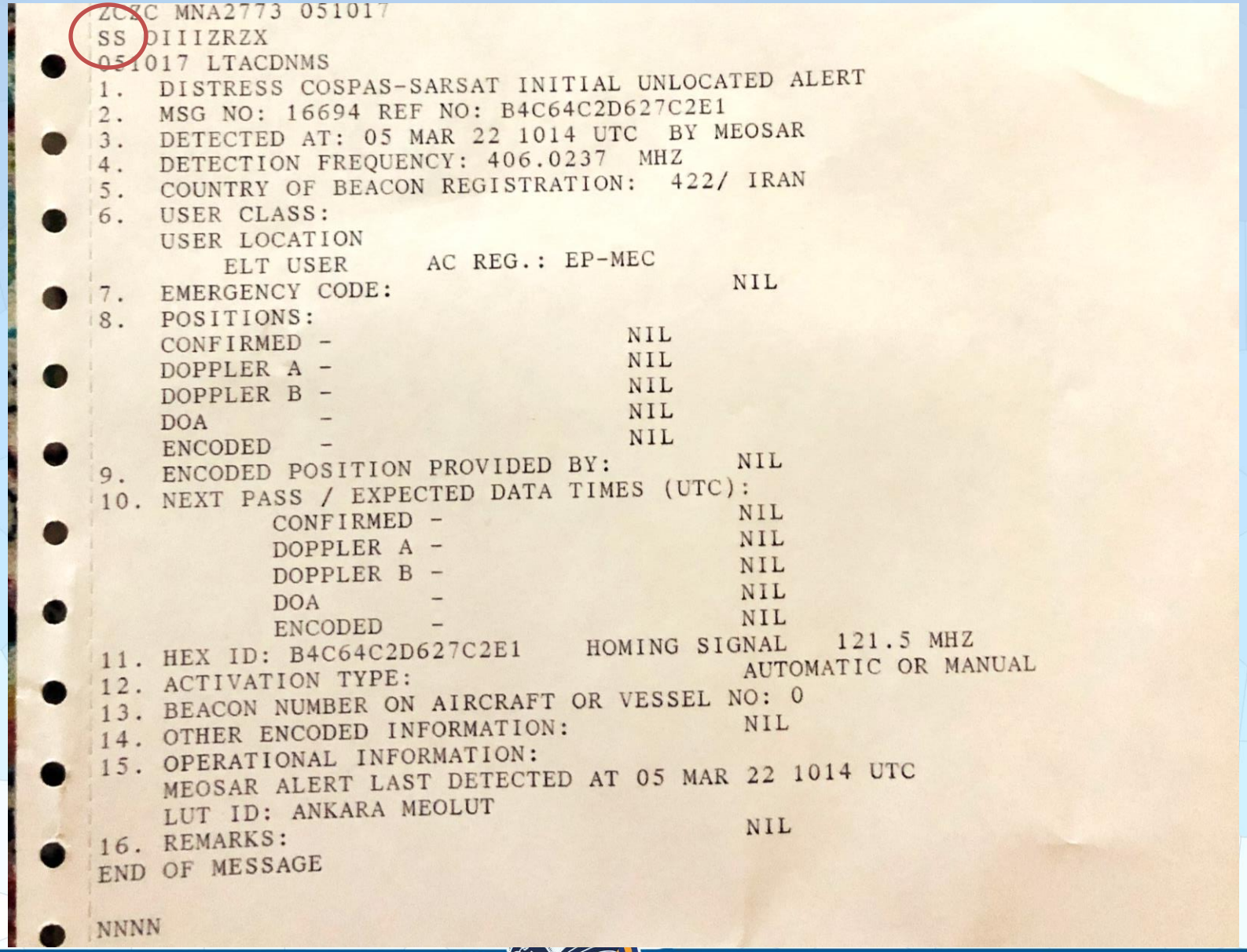
NNNN

5 19207 :
0630 → 1430 UTC
IKA - MSSR Radar U/S



```
ZCZC MNA3550 051233
GG OIIIZRZX
051233 OIIIYPYX
SAIR33 OIII 051230
METAR OIBB 051230Z NIL=
METAR OIBP 051230Z NIL=
METAR OICK 051230Z 29012KT 8000 SCT060 BKN130 14/01 Q1015=
METAR OICS 051230Z NIL=
METAR OIHH 051230Z NIL=
METAR OITL 051230Z 26012G25KT 230V310 9999 FEW045TCU
SCT050CB 07/M06 Q1010=
METAR OIZC 051230Z NIL=

NNNN
```



ZCZC MNA2773 051017
SS DIIIZRZX
051017 LTACDNMS
1. DISTRESS COSPAS-SARSAT INITIAL UNLOCATED ALERT
2. MSG NO: 16694 REF NO: B4C64C2D627C2E1
3. DETECTED AT: 05 MAR 22 1014 UTC BY MEOSAR
4. DETECTION FREQUENCY: 406.0237 MHZ
5. COUNTRY OF BEACON REGISTRATION: 422/ IRAN
6. USER CLASS:
USER LOCATION
ELT USER AC REG.: EP-MEC
7. EMERGENCY CODE: NIL
8. POSITIONS:
CONFIRMED - NIL
DOPPLER A - NIL
DOPPLER B - NIL
DOA - NIL
ENCODED - NIL
9. ENCODED POSITION PROVIDED BY: NIL
10. NEXT PASS / EXPECTED DATA TIMES (UTC):
CONFIRMED - NIL
DOPPLER A - NIL
DOPPLER B - NIL
DOA - NIL
ENCODED - NIL
11. HEX ID: B4C64C2D627C2E1 HOMING SIGNAL 121.5 MHZ
12. ACTIVATION TYPE: AUTOMATIC OR MANUAL
13. BEACON NUMBER ON AIRCRAFT OR VESSEL NO: 0
14. OTHER ENCODED INFORMATION: NIL
15. OPERATIONAL INFORMATION:
MEOSAR ALERT LAST DETECTED AT 05 MAR 22 1014 UTC
LUT ID: ANKARA MEOLUT
16. REMARKS: NIL
END OF MESSAGE

NNNN

CHAPTER 5.
AERONAUTICAL MOBILE SERVICE — VOICE COMMUNICATIONS

5.1 GENERAL

- 5.1.1 In all communications the highest standard of discipline shall be observed at all times.
- 5.1.1.1 ICAO **standardized phraseology** shall be used in all situations for which it has been specified. Only when standardized phraseology cannot serve an intended transmission, **plain language (Level 4)** shall be used.

Doc 4444

PROCEDURES FOR AIR NAVIGATION SERVICES

Air Traffic Management

Chapter 12

PHRASEOLOGIES

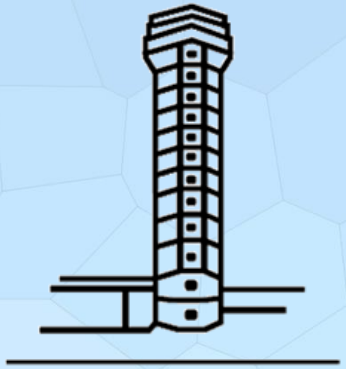
5.1 GENERAL

5.1.3 When it is necessary for a station in the aeronautical mobile service to make **test signals**, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, such signals shall not continue for **more than 10 seconds** and shall be composed of spoken numerals (ONE, TWO, THREE, etc.) in radiotelephony, followed by the radio call sign of the station transmitting the test signals. Such transmissions shall be kept to a minimum.

ATC: AJET1 , TEHRAN RADAR, ONE, TWO, THREE FOUR FIVE, RADIO CHECK
Pilot: TEHRAN RADAR, AJET1, RADIO CHECK, 125.7

1. **Unreadable.**
2. **Readable now and then.**
3. **Readable but with difficulty.**
4. **Readable.**
5. **Perfectly readable.**

STEPHENVILLE TOWER G-ABCD
RADIO CHECK 118.7



STATION CALLING STEPHENVILLE
TOWER
YOU ARE UNREADABLE

or

G-ABCD TOWER READING YOU THREE,
LOUD BACKGROUND WHISTLE

or

G-ABCD TOWER READING
YOU FIVE

5.1 GENERAL

- 5.1.5 ***Recommendation***.— After a call has been made **to the aeronautical station**, a period of **at least 10 seconds** should elapse before a second call is made.

- This should eliminate unnecessary transmissions while the aeronautical station is getting ready to reply to the initial call.

5.1.8 Categories of messages

Message category and order of priority signal	Radiotelephony signal
a) Distress calls, distress messages and distress traffic	MAYDAY
b) Urgency messages, including messages preceded by the medical transports signal	PAN, PAN or PAN, PAN MEDICAL
c) Communications relating to direction finding	-
d) Flight safety messages	-
e) Meteorological messages	-
f) Flight regularity messages	-

Message category and order of priority signal	Radiotelephony	Text
Distress calls, distress messages and distress traffic	MAYDAY MAYDAY FUEL	SS
Urgency messages, including messages preceded by the medical transports signal	PAN, PAN or PAN, PAN MEDICAL	DD
Communications relating to direction finding	-	
Flight safety messages	-	FF
Meteorological messages	-	GG
Flight regularity messages	-	GG
Aeronautical information services (AIS) messages		GG
Aeronautical administrative messages		KK
Service messages		As appropriate

5.1.8 Categories of messages

- **Note 1.**— Messages concerning acts of ***unlawful interference*** constitute a case of exceptional circumstances which may preclude the use of recognized communication procedures used to determine message category and priority.

- **Note 2.**— A ***NOTAM*** may qualify for any of the categories or priorities ***c) to f) inclusive***. **[=FF and GG]**
  The decision as to which priority will depend on the contents of the NOTAM and its importance to the aircraft concerned.

5.1.8 Categories of messages

Flight safety messages shall comprise the following:

- 1) movement and control messages;
- 2) messages originated by an aircraft operating agency or by an aircraft, of immediate concern to an aircraft in flight;
- 3) meteorological advice of immediate concern to an aircraft in flight or about to depart (individually communicated or for broadcast);
- 4) other messages concerning aircraft in flight or about to depart.

5.1.8 Categories of messages

Flight regularity messages shall comprise the following:

- 1) messages regarding the ***operation or maintenance of facilities*** essential for the safety or regularity of aircraft operation;
- 2) messages concerning ***the servicing of aircraft***;
- 3) instructions to aircraft operating agency representatives concerning changes in ***requirements for passengers and crew*** caused by unavoidable deviations from normal operating schedules. Individual requirements of passengers or crew shall not be admissible in this type of message;
- 4) messages concerning ***non-routine landings*** to be made by the aircraft;
- 5) messages concerning ***aircraft parts and materials*** urgently required;
- 6) messages concerning changes in ***aircraft operating schedules***.

5.1.8 Categories of messages

- 5.1.8.6.1 Air traffic services units using direct pilot-controller communication channels shall only be required to handle ***flight regularity messages*** provided this can be achieved **without interference** with their primary role and **no other channels are available** for the handling of such messages.

5.1.8 Categories of messages

- 5.1.8.7 ***Recommendation.***— Messages having the **same priority** should, in general, be transmitted in the order in which they are received for transmission.

- 5.1.8.8 Interpilot air-to-air communication shall comprise messages related to any matter affecting safety and regularity of flight.

5.2 RADIOTELEPHONY PROCEDURES

- 5.2.1.2.1 The air-ground radiotelephony communications shall be conducted in the language **normally used** by the station on the ground **or** in the **English language**.

- 5.2.1.2.2 The **English language** shall be available, on request from any aircraft station, at all stations on the ground serving designated airports and routes used by international air services.

Specified in the AIP

The Radiotelephony Spelling Alphabet

Letter	*Word*	*Approximate pronunciation*	
		International Phonetic Convention	*Latin alphabet representation*
A	**Alfa**	'ælfa	AL FAH
B	**Bravo**	'bra:'vo	BRAH VOH
C	**Charlie**	'tʃɑ:li *or* 'ʃɑ:li	CHAR LEE *or* SHAR LEE
D	**Delta**	'deltɑ	DELL TAH
E	**Echo**	'eko	ECK OH
F	**Foxtrot**	'fɔkstrɔt	FOKS TROT
G	**Golf**	gʌlf	GOLF
H	**Hotel**	ho:'tel	HO TELL
I	**India**	'indi·ɑ	IN DEE AH
J	**Juliett**	'dʒu:li·'et	JEW LEE ETT
K	**Kilo**	'ki:lo	KEY LOH
L	**Lima**	'li:mɑ	LEE MAH
M	**Mike**	maik	MIKE

The Radiotelephony Spelling Alphabet

N	**November**	no'vembə	NO <u>VEM</u> BER
O	**Oscar**	'ɔskɑ	<u>OSS</u> CAH
P	**Papa**	pə'pɑ	PAH <u>PAH</u>
Q	**Quebec**	ke'bek	KEH <u>BECK</u>
R	**Romeo**	'ro:mi·o	<u>ROW</u> ME OH
S	**Sierra**	si'erɑ	SEE <u>AIR</u> RAH
T	**Tango**	'tængo	<u>TANG</u> GO
U	**Uniform**	'ju:nifɔ:m *or* 'u:nifɔrm	<u>YOU</u> NEE FORM *or* <u>OO</u> NEE FORM
V	**Victor**	'viktɑ	<u>VIK</u> TAH
W	**Whiskey**	'wiski	<u>WISS</u> KEY
X	**X-ray**	'eks'rei	<u>ECKS</u> RAY
Y	**Yankee**	'jænki	<u>YANG</u> KEY
Z	**Zulu**	'zu:lu:	<u>ZOO</u> LOO

Note.— In the approximate representation using the Latin alphabet, syllables to be emphasized are underlined.

TRANSMISSION OF NUMBERS

5.2.1.4.1.1 All numbers, except as prescribed in 5.2.1.4.1.2 to 5.2.1.4.1.6, shall be transmitted by **pronouncing each digit separately**.

TRANSMISSION OF NUMBERS

aircraft call signs	*transmitted as*
CCA 238	Air China **two three eight**
OAL 242	Olympic **two four two**
headings	*transmitted as*
100 degrees	heading **one zero zero**
080 degrees	heading **zero eight zero**
wind direction and speed	*transmitted as*
200 degrees 70 knots	wind **two zero zero** degrees **seven zero** knots
160 degrees 18 knots gusting 30 knots	wind **one six zero** degrees **one eight** knots gusting **three zero** knots
runway	*transmitted as*
27	runway **two seven**
30	runway **three zero**

TRANSMISSION OF NUMBERS

5.2.1.4.1.2 **Flight levels** shall be transmitted by pronouncing each digit separately except for the case of flight levels in ***whole hundreds***, which shall be transmitted by pronouncing the digit of the whole hundred followed by the word HUNDRED.

flight levels	*transmitted as*
FL 180	flight level **one eight zero**
FL 200	flight level **two hundred**

TRANSMISSION OF NUMBERS

5.2.1.4.1.3 The **altimeter setting** shall be transmitted by pronouncing **each digit separately** except for the case of a setting of 1 000 hPa which shall be transmitted as ONE THOUSAND.

altimeter setting	*transmitted as*
1009	QNH **one zero zero nine**
1000	QNH **one thousand**
993	QNH **nine nine three**

TRANSMISSION OF NUMBERS

5.2.1.4.1.4 All numbers used in the transmission of **transponder codes** shall be transmitted by pronouncing each digit separately except that, when the transponder codes contain **whole thousands** only, the information shall be transmitted by pronouncing the digit in the number of thousands followed by the word THOUSAND.

transponder codes	*transmitted as*
2400	squawk **two four zero zero**
1000	squawk **one thousand**
2000	squawk **two thousand**

TRANSMISSION OF NUMBERS

5.2.1.4.1.5 All numbers used in the transmission of **altitude**, **cloud** height, **visibility** and runway visual range (**RVR**) information, which contain whole hundreds and whole thousands, shall be transmitted by pronouncing each digit in the number of hundreds or thousands followed by the word HUNDRED or THOUSAND as appropriate.

Combinations of thousands and whole hundreds shall be transmitted by pronouncing each digit in the number of thousands followed by the word THOUSAND followed by the number of hundreds followed by the word HUNDRED.

TRANSMISSION OF NUMBERS

altitude	*transmitted as*
800	**eight hundred**
3 400	**three thousand four hundred**
12 000	**one two thousand**
cloud height	*transmitted as*
2 200	**two thousand two hundred**
4 300	**four thousand three hundred**
visibility	*transmitted as*
1 000	visibility **one thousand**
700	visibility **seven hundred**
runway visual range	*transmitted as*
600	RVR **six hundred**
1 700	RVR **one thousand seven hundred**

TRANSMISSION OF NUMBERS

5.2.1.4.1.6 When providing information regarding **relative bearing** to an object or to conflicting traffic in terms of the 12-hour clock, the information shall be given pronouncing the double digits as **TEN, ELEVEN, or TWELVE [O'CLOCK].**

5.2.1.4.1.7 Numbers containing a decimal point shall be transmitted as prescribed in 5.2.1.4.1.1, with the decimal point in appropriate sequence being indicated by the word **DECIMAL**.

Number	*Transmitted as*
100.3	ONE ZERO ZERO DECIMAL THREE
38 143.9	THREE EIGHT ONE FOUR THREE DECIMAL NINE

TRANSMISSION OF NUMBERS

5.2.1.4.1.8 When transmitting **time**, only the minutes of the hour should normally be required.

Each digit should be pronounced separately.

However, the hour should be included when any possibility of confusion is likely to result.

0920 *(9:20 A.M.)*		TOO ZE-RO
	or	ZE-RO NIN-er TOO ZE-RO
1643 *(4:43 P.M.)*		FOW-er TREE
	or	WUN SIX FOW-er TREE

PRONUNCIATION OF NUMBERS

Numeral or numeral element	*Pronunciation*
0	ZE-RO
1	WUN
2	TOO
3	TREE
4	FOW-er
5	FIFE
6	SIX
7	SEV-en
8	AIT
9	NIN-er
Decimal	DAY-SEE-MAL
Hundred	HUN-dred
Thousand	TOU-SAND

5.2.1.5 TRANSMITTING TECHNIQUE

5.2.1.5.2 Transmissions shall be conducted concisely in a **normal conversational tone**.

5.2.1.5.3 Speech transmitting technique should be such that the highest possible intelligibility is incorporated in each transmission. Fulfilment of this aim requires that air crew and ground personnel should:

a) enunciate each word clearly and distinctly;

b) maintain an even rate of speech not exceeding 100 words per minute. A slight pause preceding and following numerals makes them easier to understand;

5.2.1.5 TRANSMITTING TECHNIQUE

c) maintain the speaking volume at a constant level;
d) be familiar with the microphone operating techniques particularly in relation to the maintenance of a constant distance from the microphone if a modulator with a constant level is not used;
e) suspend speech temporarily if it becomes necessary to turn the head away from the microphone.

STANDARD WORDS AND PHRASES

Word/Phrase	Meaning
ACKNOWLEDGE	"Let me know that you have received and understood this message."
READ BACK	"Repeat all, or the specified part, of this message back to me exactly as received."
AFFIRM	"Yes."
CONFIRM	"I request verification of: (clearance, instruction, action, information)."
APPROVED	"Permission for proposed action granted."
CLEARED	"Authorized to proceed under the conditions specified."
RECLEARED	"A change has been made to your last clearance and this new clearance supersedes your previous clearance or part thereof."

STANDARD WORDS AND PHRASES

Word/Phrase	Meaning
BREAK	"I hereby indicate the separation between portions of the message." Note. — To be used where there is no clear distinction between the text and other portions of the message.
BREAK BREAK	"I hereby indicate the separation between messages transmitted to different aircraft in a very busy environment."
CANCEL	"Annul the previously transmitted clearance."
DISREGARD	"Ignore."

STANDARD WORDS AND PHRASES

Word/Phrase	Meaning
CHECK	"Examine a system or procedure." Note. — Not to be used in any other context. No answer is normally expected.
HOW DO YOU READ	"What is the readability of my transmission?"
CORRECT	"True" or "Accurate".
CORRECTION	"An error has been made in this transmission (or message indicated). The correct version is . . ."
MAINTAIN	Continue in accordance with the condition(s) specified or in its literal sense, e.g. "maintain VFR".

REMAIN THIS FREQUENCY

STANDARD WORDS AND PHRASES

Word/Phrase	Meaning
CONTACT	"Establish communications with . . ."
MONITOR	"Listen out on (frequency)." → MONITORING (frequency);
STAND BY FOR (unit call sign) (frequency);	
STANDBY	"Wait and I will call you." Note.— The caller would normally re-establish contact if the delay is lengthy. STANDBY is not an approval or denial.
I SAY AGAIN	"I repeat for clarity or emphasis."
SAY AGAIN	"Repeat all, or the following part, of your last transmission."

Word/Phrase	Meaning
REPORT	"Pass me the following information . . ."
REQUEST	"I should like to know . . ." or "I wish to obtain . . ."
ROGER	"I have received all of your last transmission." Note.— Under no circumstances to be used in reply to a question requiring "READ BACK" or a direct answer in the affirmative (AFFIRM) or negative (NEGATIVE).
WILCO	(Abbreviation for "will comply".) " I understand your message and will comply with it."
NEGATIVE	"No" or "Permission not granted" or "That is not correct" or "not capable".
UNABLE	"I cannot comply with your request, instruction, or clearance." Note.—UNABLE is normally followed by a reason.

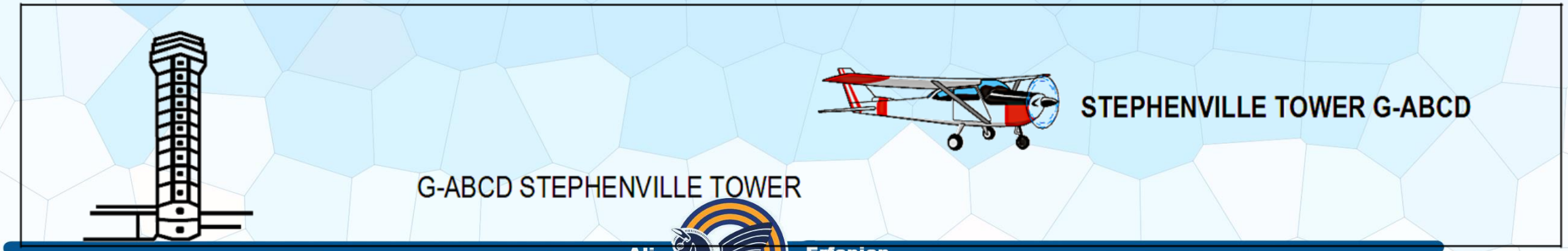
STANDARD WORDS AND PHRASES

Word/Phrase	Meaning
OUT	"This exchange of transmissions is ended and no response is expected." Note.— Not normally used in VHF communications.
OVER	"My transmission is ended and I expect a response from you." Note.— Not normally used in VHF communications.
SPEAK SLOWER	"Reduce your rate of speech."
WORDS TWICE	a) As a request: "Communication is difficult. Please send every word or group of words twice." b) As information: "Since communication is difficult, every word or group of words in this message will be sent twice."

STANDARD WORDS AND PHRASES

Note.– The phrase "GO AHEAD" has been deleted, in its place the use of the calling aeronautical station's call sign followed by the answering aeronautical station's call sign shall be considered the invitation to proceed with transmission by the station calling.

-Tehran, IRA416.
-IRA416, Tehran.



COMPOSITION OF MESSAGES

5.2.1.6.1 Messages shall comprise the following parts in the order stated:

a) call indicating the addressee and the originator

b) text

Note.— The following examples illustrate the application of this procedure:

(call) TEHRAN RADAR, SWISSAIR ONE ONE ZERO
(text) REQUEST SELCAL CHECK

or

(call) SWISSAIR ONE ONE ZERO TEHRAN RADAR
(text) CONTACT MEHRABAD RADAR 125.1

Call signs for aeronautical stations

Aeronautical stations are identified by the name of the location followed by a suffix.

The suffix indicates the type of unit or service provided.

When satisfactory communication has been established, and provided that it will not be confusing, the name of the location or the call sign suffix may be omitted.

Unit or service	*Call sign suffix*
Area control centre	CONTROL
Radar (in general)	RADAR
Approach control	APPROACH
Approach control radar arrivals	ARRIVAL
Approach control radar departures	DEPARTURE
Aerodrome control	TOWER
Surface movement control	GROUND
Clearance delivery	DELIVERY
Precision approach radar	PRECISION
Direction-finding station	HOMER
Flight information service	INFORMATION
Apron control	APRON
Company dispatch	DISPATCH
Aeronautical station	RADIO

Aircraft Call Signs

IZG4004 .A319 .EPZAX

TYPE	Full Call Sign	Abbreviated Call Sign
a	EPZAX	EAX, EZAX Airbus AX, 319 AX Airbus ZAX, 319 ZAX (**model or manufacturer**)
b	IZGPZAX	Zagros AX or Zagros ZAX
c	IZG4004	**NO** abbreviated form

Aircraft call signs

An aircraft call sign shall be one of the following **types**:

Type	*Example*
a) the characters corresponding to the registration marking of the aircraft;	G-ABCD or Cessna G-ABCD
b) the telephony designator of the aircraft operating agency, followed by the last four characters of the registration marking of the aircraft; or	FASTAIR DCAB
c) the telephony designator of the aircraft operating agency, followed by the flight identification.	FASTAIR 345

Note. — The name of the aircraft manufacturer or name of aircraft model may be used as a radiotelephony prefix to the Type a) above.

Aircraft call signs

After satisfactory communication has been established, and provided that no confusion is likely to occur, aircraft call signs may be **abbreviated** as follows:

Type	*Example*
a) the first and at least the last two characters of the aircraft registration;	CD or Cessna CD
b) the telephony designator of the aircraft operating agency followed by at least the last two characters of the aircraft registration;	FASTAIR AB
c) no abbreviated form.	—

Note.— The abbreviated examples correspond to 2.7.2.1.

RADIOTELEPHONY PROCEDURES

5.2.1.7.3.1 An aircraft shall not change the type of its radiotelephony call sign during flight, except temporarily on the instruction of an air traffic control unit in the interests of safety.

5.2.1.7.3.1.1 Except for reasons of ***safety***, no transmission shall be directed to an aircraft during **take-off**, during the last part of the **final approach**, or during the **landing roll**.

RADIOTELEPHONY PROCEDURES

5.2.1.7.3.2.1 **Full** radiotelephony call signs shall always be used when **establishing** communication.

The calling procedure of an aircraft establishing communication shall be in accordance with Table 5-2.

	Type a)	*Type b)*	*Type c)*
Designation of the station called	NEW YORK RADIO	NEW YORK RADIO	NEW YORK RADIO
Designation of the station calling	GABCD**	SPEEDBIRD ABCD**	AEROFLOT 321**

RADIOTELEPHONY PROCEDURES

5.2.1.7.3.2.2 Stations having a requirement to transmit information to all stations likely to intercept should preface such transmission by the ***general call*** **ALL STATIONS**, followed by the identification of the calling station.

Note. No reply is expected to such general calls unless individual stations are subsequently called to acknowledge receipt.

ALL STATIONS ALEXANDER CONTROL,
FUEL DUMPING COMPLETED

ALL STATIONS G-CDAB WESTBOUND
MARLO VOR TO STEPHENVILLE
LEAVING FL 260 DESCENDING TO
FL 150

RADIOTELEPHONY PROCEDURES

5.2.1.7.3.2.4 When a station is called but is uncertain of the identification of the calling station, it should reply by transmitting the following:
STATION CALLING . . . (station called) **SAY AGAIN YOUR CALL SIGN**

Note.— The following example illustrates the application of this procedure:
(PAYAM TOWER station replying)
STATION CALLING PAYAM (pause) **SAY AGAIN YOUR CALL SIGN**

باند فرکانسی VHF از **۱۰۸ تا ۱۳۷ مگاهرتز** را به خود اختصاص داده ولی از ۱۰۸تا ۱۱۷.۹۵مگاهرتز را به VOR و ILS و دیگر دستگاههای کمک ناوبری اختصاص داده اند.

سال‌هاست که از فرکانس VHF به عنوان ابزار مکالمات رادیویی بین کنترلر و خلبان استفاده می‌شود.

رنج فرکانسی رادیوهای VHF در هوانوردی ۱۱۸ تا ۱۳۷ مگاهرتز است.

با مدولاسیون **آنالوگ**، هر کانال فرکانسی‌یک باند **۷ کیلوهرتزی** را اشغال می‌کند ولی برای جلوگیری از تداخل این کانال‌ها، به هر کانال، باندی معادل **۲۵ کیلوهرتز** اختصاص می‌دهند.

بدین‌ترتیب ۷۶۰ کانال فرکانس رادیویی VHF قابل استفاده خواهد بود

۷۶۰=۴۰*(۱۳۷-۱۱۸) .

a) CONFIRM EIGHT POINT THREE THREE;

*b) AFFIRM EIGHT POINT THREE THREE;

با پیشرفت سیستمهای مکالماتی، اروپاییان هر باند ۲۵ کیلوهرتزی را به ۳ قسمت تقسیم کردند یعنی به هر کانال فرکانسی **۸,۳۳ کیلوهرتز** اختصاص دادند و اعلام کردند از ژانویه‌ی ۲۰۱۸ هر هواپیمایی که بخواهد وارد فضای اروپا شود، باید مجهز به سیستم با این قابلیت تفکیک جدید باشد. به این‌ترتیب به جای ۷۶۰ کانال فرکانسی، ۲۲۸۰ کانال فرکانسی حاصل شد.

123.000	123.025	123.050	123.075	123.100
123.005	123.030	123.055	123.080	123.105
123.010	123.035	123.060	123.085	123.110

Station	Main FREQ	Standby FREQ
OKBK	125.3	
OISS	119.0	
OIFM	124.6	
OIBB	119.7	122.5
OIAA	118.1	121.8
OIAW	120.85	121.1
OIAM	118.65	
OISY	123.75	121.8
OICK	118.35	121.9
OIAJ	123.4	
OIFS	118.5	121.7
OIBH	135.025	
OIAH	122.1	129.0
OIBQ	122.1	129.0
OIAG	122.2	123.5
OIAD	123.6	131.4
OIAE	124.7	
OIAI	129.75	
ADOC	127.8	135.1

8.33 Channel spacing

123.000MHz

123.000MHz + 8.33 KHz = 123.00833 → 123.005

123.00833MHz + 8.33 KHz = 123.01666 → 123.010

123.0166MHz + 8.33 KHz = 123.025

123.025MHz+0.833KHz=123.0333 → 123.030

123.0333MHz+0.833KHz=123.04166 → 123.035

123.04166MHz+8.33KHz=123.050

123.050MHz+8.33KHz=123.05833 → 123.055

123.05833MHZ+8.33KHz=123.06666 → 123.060

Indication of transmitting channel

Channel	*Transmitted as*
118.000	*ONE ONE EIGHT DECIMAL ZERO*
118.005	*ONE ONE EIGHT DECIMAL ZERO ZERO FIVE*
118.010	*ONE ONE EIGHT DECIMAL ZERO ONE ZERO*
118.025	*ONE ONE EIGHT DECIMAL ZERO TWO FIVE*
118.050	*ONE ONE EIGHT DECIMAL ZERO FIVE ZERO*
118.100	*ONE ONE EIGHT DECIMAL ONE*

Traffic Information Broadcasts by Aircraft (TIBA)

AIP
ISLAMIC REPUBLIC OF IRAN

ENR 1.2-1
01 JAN 20

ENR 1.2 VISUAL FLIGHT RULES

4.3 Forms of Broadcast

"ALL STATIONS EP-IXX FLIGHT LEVEL 85 NORTH BOUND DIRECT FROM PAYAM AIRPORT TO ZULU POSITION ESTIMATING CROSSING MIKE AT 0012 EP-IXX FLIGHT LEVEL 85 NORTH BOUND OUT"

Before a change in flight level

ALL STATIONS (call sign) (direction) (ATS route) (or DIRECT FROM (position) TO (position)) LEAVING FLIGHT LEVEL (number) FOR FLIGHT LEVEL (number) AT (position and time)

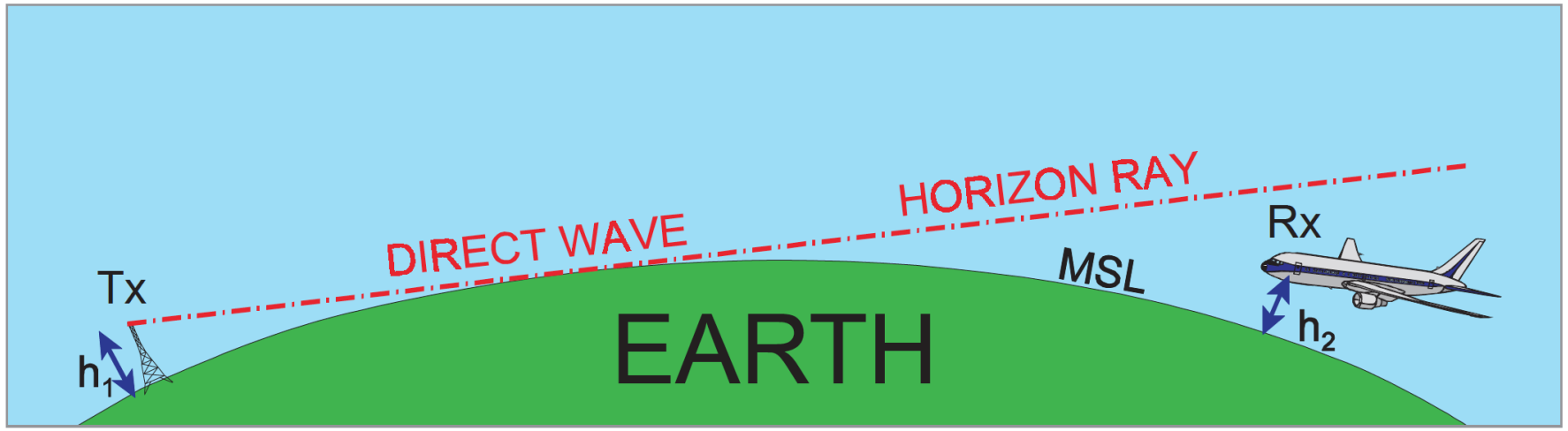


Figure 7.3 Line of sight

A formula used for calculating the maximum range of direct wave reception is:

Range (NM) = $1.23 (\sqrt{h_1} + \sqrt{h_2})$

Where h_1 = height of ground aerial (feet AMSL)

h_2 = aircraft altitude (feet AMSL)

over flat terrain at FL100: 1.23 x (10000)^0.5=123NM

over flat terrain at FL50: 1.23 x (5000)^0.5=85NM

Frequencies	Frequency Band	Wavelength	Facilities
3-30 kHz	VLF (Very Low Frequency)	100 km - 10 km	Very long range navigation
30-300 kHz	LF (Low Frequency)	10 km - 1 km	NDB, Decca
300-3000 kHz	MF (Medium Frequency)	1 km - 100 metres	NDB
3 - 30 MHz	HF (High Frequency)	100 metres - 10 metres	HF R/T
30 - 300 MHz	VHF (Very High Frequency)	10 metres - 1 metre	VHF R/T, VDF, VOR, ILS. marker beacons
300 - 3000 MHz	UHF (Ultra High Frequency)	1 metre - 10 cm	ILS Glidepath, DME, some Surveillance Radar
3 - 30 GHz	SHF (Super High Frequency)	10 cm - 1 cm	PAR, some Surveillance Radar, Doppler Radar, Radio Altimeter AWR
30 - 300 GHz	EHF (Extremely High Frequency)	1 cm - 1 mm	Airfield Surface Movement Radar

The wavelength of a radio aid is 6.97 cm. The corresponding frequency and frequency band are:

4304 MHz SHF

frequency(Hz)=light speed (m/s)/wavelength(m)

=300,000,000/0.0697

=4304x10^6 Hz

= 4304 MHz

CORRECTIONS AND REPETITIONS

5.2.1.9.4.1 When an **error** has been made in transmission, the word "**CORRECTION**" shall be spoken, the last correct group or phrase repeated, and then the correct version transmitted.

5.2.1.9.4.2 If a correction can best be made by repeating the **entire message**, the operator shall use the phrase "**CORRECTION, I SAY AGAIN**" before transmitting the message a second time.

5.2.1.9.4.3 When an operator transmitting a message considers that reception is likely to be difficult, he ***should*** transmit the important elements of the message **twice**.

5.2.1.9.4.4 If the receiving operator is in **doubt** as to the correctness of the message received, he shall request **repetition** either in full or in part.

FASTAIR 345 ROGER

FASTAIR 345 WICKEN 47 FL 330 MARLO
07 CORRECTION MARLO 57

GEORGETOWN, G-ABCD WALDEN
2 500 FEET, I SAY AGAIN 2 500 FEET,
ENGINE LOSING POWER, ENGINE
LOSING POWER

CORRECTIONS AND REPETITIONS

5.2.1.9.4.5 If repetition of an **entire message** is required, the words "**SAY AGAIN**" shall be spoken. If repetition of **a portion** of a message is required, the operator shall state: "**SAY AGAIN ALL BEFORE...(**first word satisfactorily received**)"; or "SAY AGAIN...(**word before missing portion**) TO...(**word after missing portion**)"; or "SAY AGAIN ALL AFTER...(**last word satisfactorily received**)".**

5.2.1.9.4.6 Specific items should be requested, as appropriate, such as "**SAY AGAIN ALTIMETER**", "**SAY AGAIN WIND**".

5.2.1.9.4.7 If, in checking the correctness of a readback, an operator notices incorrect items, he shall transmit the words "**NEGATIVE I SAY AGAIN**" at the conclusion of the readback followed by the correct version of the items concerned.

Doc 9432, Chapter 2

GENERAL OPERATING PROCEDURES

2.8 COMMUNICATIONS

2.8.3 Issue of clearance and read-back requirements

ANNEX 11 3.7.3.1 The flight crew shall read back to the air traffic controller safety-related parts of ATC clearances and instructions which are transmitted by voice.

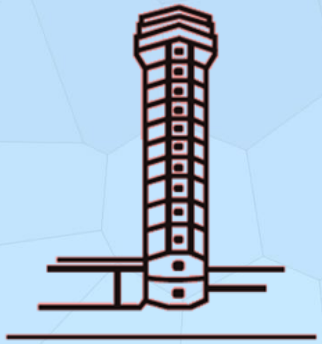
2.8.3.5 The following shall always be read back:

a) ATC route clearances;

b) clearances and instructions to enter, land on, take off from, hold short of, cross and backtrack on any runway; and

c) runway-in-use, altimeter settings, SSR codes, level instructions, heading and speed instructions and, whether issued by the controller or contained in ATIS broadcasts, transition levels.

2.8.3.6 Other clearances or instructions, including conditional clearances, shall be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.



FASTAIR 345 REPORT THE AIRBUS ON FINAL IN SIGHT

FASTAIR 345 AIRBUS IN SIGHT

FASTAIR 345 BEHIND THE LANDING AIRBUS LINE UP AND WAIT BEHIND

BEHIND THE AIRBUS, LINING UP AND WAITING BEHIND, FASTAIR 345

In a readback the last thing you say is your call sign.

Messages to Readback

The ATC messages listed here must be read back in full **by the pilot**.

- Level instructions
- Heading instructions
- Speed instructions
- ATC route clearances
- Runway in use
- Clearance to:
  - Enter, land on, take-off, back-track, cross, hold short of active runway
- SSR operating Instructions
- VDF information
- Frequency changes
- Type of radar service
- Altimeter settings

TAKE OFF vs. DEPARTURE

- "**TAKE OFF**" are only used when an aircraft is cleared to take off or when cancelling a take-off clearance;
- At other times the words: "**DEPARTURE**" and "**AIRBORNE**" are used.

OPERATIONS NORMAL

REPORTS

QRU

5.2.1.9.5 When “operations normal” reports are transmitted by aircraft, they should consist of the prescribed call followed by the words “**OPERATIONS NORMAL**”.

COMMUNICATIONS WATCH HOURS OF SERVICE

5.2.2.1.1 During flight, aircraft stations **shall maintain watch** as required by the appropriate Authority and shall not cease watch, except for reasons of safety, without informing the aeronautical station(s) concerned.

5.2.2.1.1.2 Aircraft shall continuously guard the VHF emergency frequency **121.5 MHz**.

TRANSFER OF VHF COMMUNICATIONS

5.2.2.6.1 An aircraft shall be advised by the appropriate aeronautical station to **transfer from one radio frequency to another** in accordance with agreed procedures. In the absence of such advice, the aircraft station shall notify the appropriate aeronautical station **before** such a transfer takes place.

5.2.2.6.2 When establishing **initial** contact on, or when **leaving**, a VHF frequency, an aircraft station shall transmit such information as may be prescribed by the appropriate Authority.

For aircraft in the **SUPER** or **HEAVY** wake turbulence categories the word “super” or “Heavy” shall be included, as appropriate, immediately after the aircraft call sign in the initial radiotelephony contact between such aircraft and ATS units. When the flight crew have suffixed their call sign with the word “Heavy” or “SUPER”, the controller need not include this word in the first reply to an aircraft radiotelephony call.

FASTAIR 345 CONTACT ALEXANDER CONTROL 129.1

129.1 FASTAIR 345

FASTAIR 345 WHEN PASSING FL 80 CONTACT ALEXANDER CONTROL 129.1

WHEN PASSING FL 80 129.1 FASTAIR 345

Doc 9432, Chapter 2

GENERAL OPERATING PROCEDURES

2.8 COMMUNICATIONS

2.8.2 Transfer of communications

2.8.2.2 An aircraft may be instructed to "stand by" on a frequency when it is intended that the ***ATS unit will initiate communications*** soon, and to "monitor" a frequency on which information is being ***broadcast***.

FASTAIR 345 STAND BY FOR
STEPHENVILLE TOWER 118.9

118.9 FASTAIR 345

FASTAIR 345 MONITOR ATIS 123.250

MONITORING 123.250 FASTAIR 345

VOICE COMMUNICATIONS FAILURE

AIR –GROUND

5.2.2.7.1.1 When an aircraft station fails to establish contact with the appropriate aeronautical station on the designated channel, it shall attempt to establish contact on the **previous channel** used and, if not successful, on **another channel** appropriate to the route. If these attempts fail, the aircraft station shall attempt to establish communication with the appropriate aeronautical station, other aeronautical stations or other aircraft using **all available means** and advise the aeronautical station that contact on the assigned channel could not be established. In addition, an aircraft operating within a **network** shall monitor the appropriate VHF channel for calls from **nearby aircraft**.

VOICE COMMUNICATIONS FAILURE

AIR –GROUND

5.2.2.7.1.2 If the attempts specified under 5.2.2.7.1.1 fail, the aircraft station shall transmit its message **twice** on the designated channel(s), preceded by the phrase "**TRANSMITTING BLIND**".

5.2.2.7.1.2.1 In network operation, a message which is transmitted blind should be transmitted twice on **both primary and secondary channels**. Before changing channel, the aircraft station should announce the channel to which it is changing.

VOICE COMMUNICATIONS FAILURE

Receiver failure

5.2.2.7.1.3.1 When an aircraft station is unable to establish communication due to **receiver failure**, it shall transmit reports at the scheduled times, or positions, on the channel in use, preceded by the phrase "**TRANSMITTING BLIND DUE TO RECEIVER FAILURE**". During this procedure, the aircraft shall also advise the time of its next intended transmission.

5.2.2.7.1.3.3 When an aircraft is unable to establish communication due to airborne equipment failure it shall, ***when so equipped***, select the appropriate **SSR code** to indicate radio failure.

7600

VOICE COMMUNICATIONS FAILURE

GROUND -TO -AIR

5.2.2.7.2.1 When an aeronautical station has been unable to establish contact with an aircraft station after calls on the frequencies on which the aircraft is believed to be listening, it shall:

a) request **other aeronautical stations** to render assistance by calling the aircraft and **relaying** traffic, if necessary;

b) request aircraft on the route to attempt to establish communication with the aircraft and **relay** traffic, if necessary.

5.3 DISTRESS AND URGENCY RADIOTELEPHONY COMMUNICATION PROCEDURES

DISTRESS AND URGENCY

- a) **Distress:** a condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.
- b) **Urgency:** a condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, but which does not require immediate assistance.

5.3.1.2 The radiotelephony distress signal MAYDAY and the radiotelephony urgency signal PAN PAN shall be used at the commencement of the first distress and urgency communication respectively.

5.3.2.1 ACTION BY THE AIRCRAFT IN DISTRESS

5.3.2.1.1 In addition to being **preceded** by the radiotelephony distress signal **MAYDAY**, preferably spoken **three** times, the distress message to be sent by an aircraft in distress shall:

a) be on the air-ground frequency ***in use at the time***;

b) consist of as many as possible of the following elements spoken distinctly and, if possible, *in the following order*:

1) name of the station addressed (time and circumstances permitting);

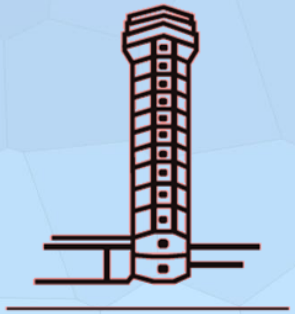
2) the identification of the aircraft;

3) the nature of the distress condition;

4) intention of the person in command;

5) present position, level (i.e. flight level, altitude, etc., as appropriate) and heading.

MAYDAY MAYDAY MAYDAY WALDEN
TOWER G-ABCD ENGINE ON FIRE
MAKING FORCED LANDING
20 MILES SOUTH OF WALDEN.
PASSING 3 000 FEET
HEADING 360



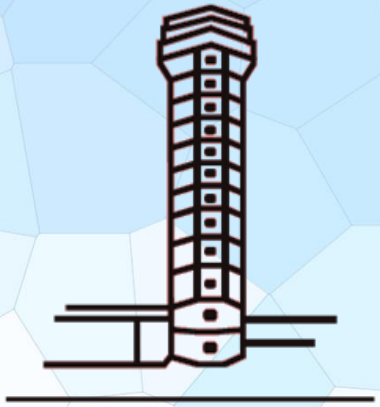
G-ABCD WALDEN TOWER ROGER
MAYDAY WIND AT WALDEN
350 DEGREES 10 KNOTS, QNH 1008

MAYDAY MAYDAY MAYDAY WALDEN TOWER
G-ABCD ENGINE FAILED. WILL ATTEMPT TO LAND
YOUR FIELD, 5 MILES SOUTH, 4 000 FEET
HEADING 360

G-ABCD WALDEN TOWER ROGER MAYDAY CLEARED
STRAIGHT-IN APPROACH RUNWAY 35 WIND 360 DEGREES
10 KNOTS QNH 1008, YOU ARE NUMBER ONE

CLEARED STRAIGHT-IN APPROACH RUNWAY 35
QNH 1008 G-ABCD

PAN PAN, PAN PAN, PAN PAN
WALDEN TOWER G-ABCD C172
2 000 FEET HEADING 190
ABOVE CLOUD UNSURE OF MY
POSITION REQUEST HEADING TO
WALDEN



G-ABCD WALDEN TOWER FLY
HEADING 160

HEADING 160
G-ABCD

PAN PAN, PAN PAN, PAN PAN WALDEN TOWER
G-ABCD 10 MILES NORTH AT 2 000 FEET.
PASSENGER WITH SUSPECTED HEART ATTACK
REQUEST PRIORITY LANDING

G-CD WALDEN TOWER NUMBER 1 CLEARED STRAIGHT-IN
APPROACH RUNWAY 17 WIND 180 DEGREES
10 KNOTS QNH 1008 AMBULANCE ALERTED

CLEARED STRAIGHT-IN APPROACH RUNWAY 17 QNH 1008
G-CD

PAN PAN, PAN PAN, PAN PAN
WALDEN TOWER G-BBCC
INTERCEPTED URGENCY CALL
FROM G-ABCD PASSENGER WITH
SUSPECTED HEART ATTACK
REQUESTING PRIORITY LANDING
WALDEN. HIS POSITION 10 MILES
NORTH AT 2 000 FEET

G-BBCC ROGER

G-ABCD WALDEN TOWER RUNWAY 35 WIND
340 DEGREES 10 KNOTS QNH 1008 NO TRAFFIC

(if G-ABCD does not acknowledge this message
G-BBCC will relay)

FASTAIR 345 POSITION NORTH CROSS NDB
EMERGENCY DESCENT TO FL 100
DUE TO DECOMPRESSION

ATTENTION ALL AIRCRAFT IN THE VICINITY OF NORTH CROSS NDB, EMERGENCY DESCENT IN PROGRESS FROM FL 350 TO FL 100, LEAVE A1 TO THE NORTH IMMEDIATELY

IMPOSITION OF SILENCE

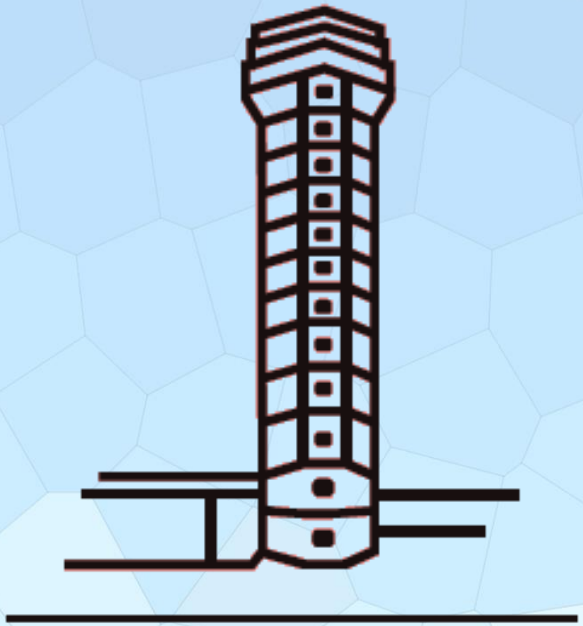
5.3.2.3.1 The station **in distress**, or the station **in control** of distress traffic, shall be permitted to **impose silence**, either on all stations of the mobile service in the area or on any station which interferes with the distress traffic. It shall address these instructions "to all stations", or to one station only, according to circumstances.

In either case, it shall use:

— **STOP TRANSMITTING**;

— the radiotelephony distress signal **MAYDAY**.

5.3.2.3.2 The use of the signals specified in 5.3.2.3.1 shall be reserved for the aircraft station in distress and for the station controlling the distress traffic.



ALL STATIONS WALDEN TOWER
STOP TRANSMITTING. MAYDAY

or

FASTAIR 345 STOP
TRANSMITTING, MAYDAY

ACTION BY ALL OTHER STATIONS

5.3.2.4.1 The distress communications have **absolute priority** over all other communications, and a station aware of them shall not transmit on the frequency concerned, unless:

a) the distress is **cancelled** or the distress traffic is terminated;

b) all distress traffic has been **transferred** to other frequencies;

c) the station controlling communications gives **permission**;

d) it has itself to render **assistance**.

5.3.2.4.2 Any station which has acknowledged of distress traffic, and which cannot itself assist the station in distress, shall nevertheless continue listening to such traffic until it is evident that assistance is being provided.

TERMINATION OF DISTRESS COMMUNICATIONS AND OF SILENCE

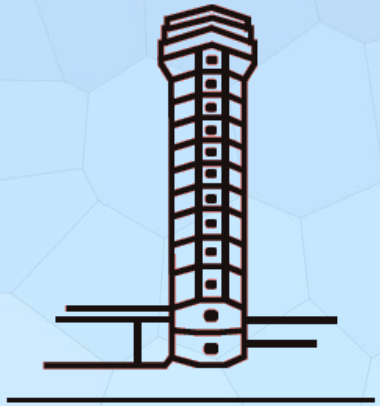
5.3.2.5.1 When an aircraft is **no longer in distress**, it shall transmit a message **cancelling** the distress condition.

5.3.2.5.2 When the station which has controlled the distress communication traffic becomes aware that the distress condition is ended, it shall take immediate action to ensure that this information is made available, as soon as possible, to:

1) the ATS unit concerned;

2) the aircraft operating agency concerned, or its representative, in accordance with pre-established arrangements.

5.3.2.5.3 The distress communication and silence conditions shall be terminated by transmitting a message, including the words "**DISTRESS TRAFFIC ENDED**", on the frequency or frequencies being used for the distress traffic.

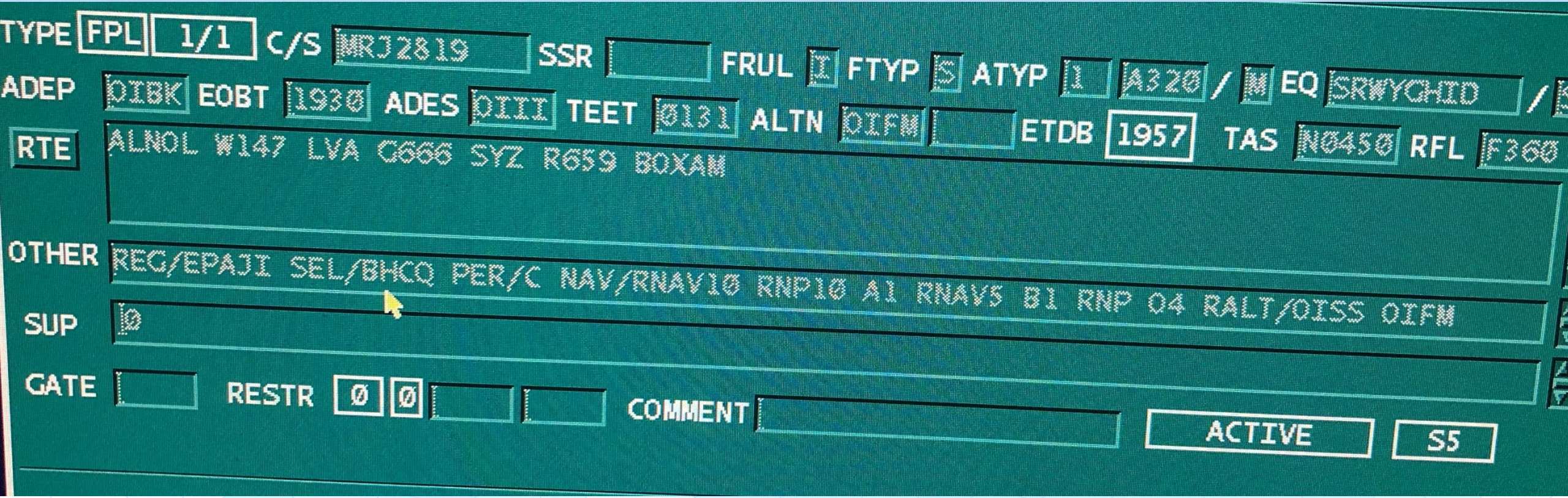


WALDEN TOWER G-CD CANCEL DISTRESS. ENGINE SERVICEABLE, RUNWAY IN SIGHT. REQUEST LANDING

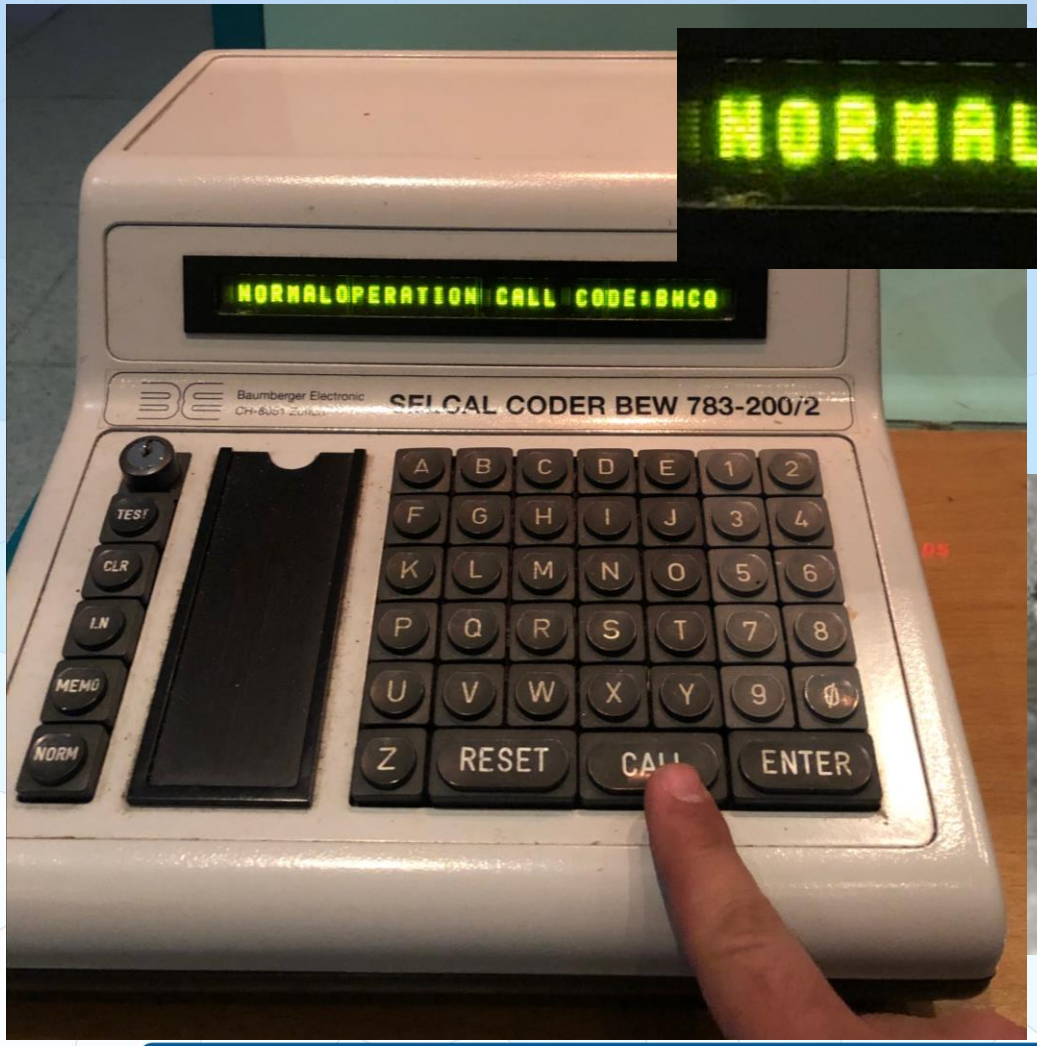
G-CD WIND 350 DEGREES 8 KNOTS, RUNWAY 35 CLEARED TO LAND

RUNWAY 35 CLEARED TO LAND G-CD

ALL STATIONS WALDEN TOWER DISTRESS TRAFFIC ENDED


TYPE FPL 1/1 C/S MRJ2819 SSR FRUL I FTYP S ATYP I A320 / M EQ SRWYGHID /
ADEP OIBK EOBT 1930 ADES OIII TEET 0131 ALTN OIFM ETDB 1957 TAS N0450 RFL F360
RTE ALNOL W147 LVA G666 SYZ R659 BOXAM
OTHER REG/EPAJI SEL/BHCQ PER/C NAV/RNAV10 RNP10 A1 RNAV5 B1 RNP 04 RALT/OISS OIFM
SUP 0
GATE RESTR 0 0 COMMENT
ACTIVE
S5

Selective Calling (SELCAL)



Selective Calling (SELCAL)

- With the selective calling system known as SELCAL, the voice calling is replaced by the transmission of **coded tones** to the aircraft over the radiotelephony channels.
- A single selective call consists of a combination of **four pre-selected audio tones** whose transmission requires **approximately 2 seconds**.
- Due to the limited number of SELCAL codes, **similar code assignments** to multiple aircraft may be expected (10290 codes for 35000 aircraft).
- When an aeronautical station initiates a call by SELCAL, the aircraft replies with its radio call sign, followed by the phrase "**GO AHEAD**".

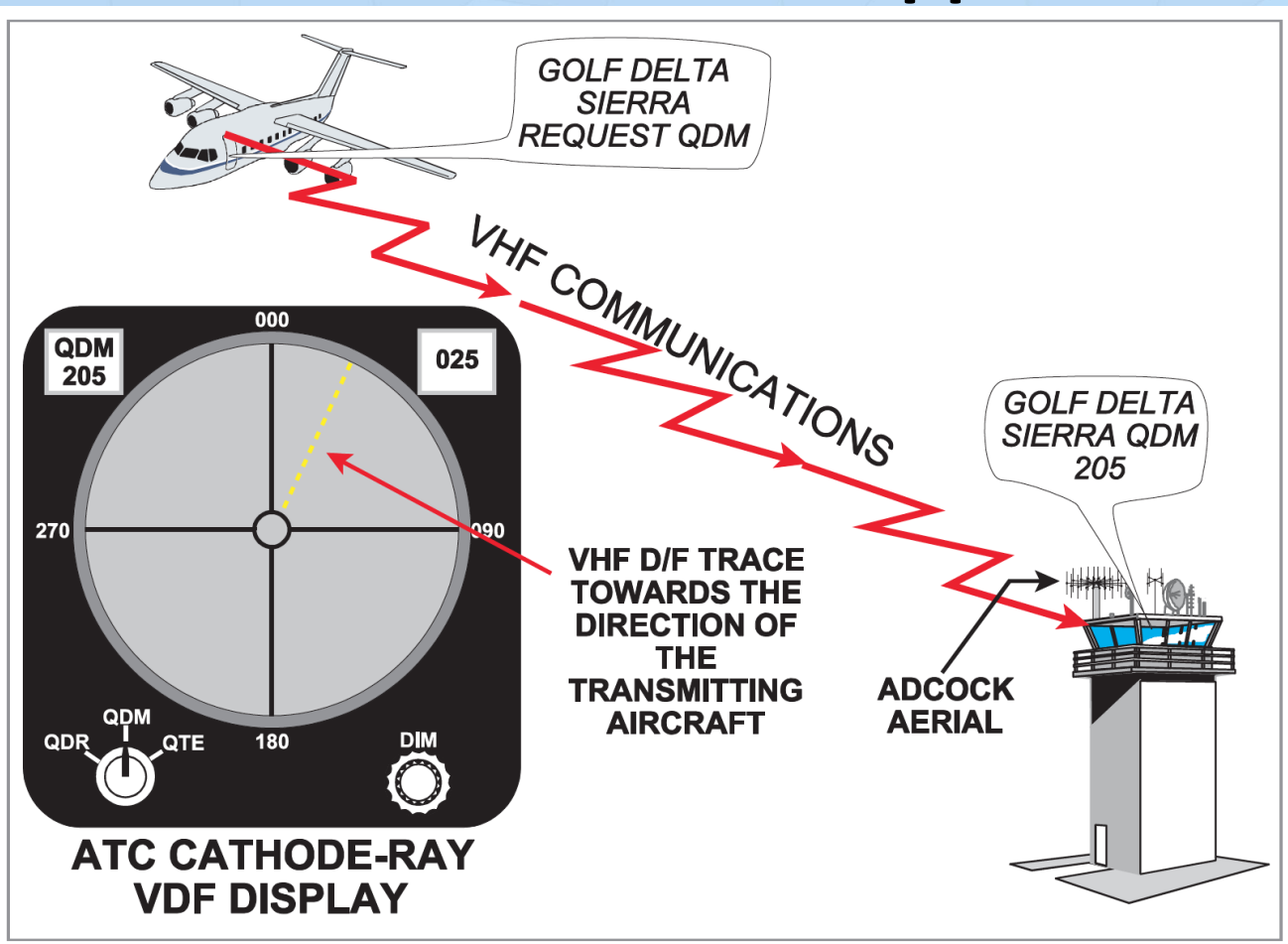
REQUEST SELCAL CHECK

Tone	Freq. (Hz)	Tone	Freq. (Hz)
A	312.6	J	716.1
B	346.7	K	794.3
C	384.6	L	881.0
D	426.6	M	977.2
E	473.2	P	1083.9
F	524.8	Q	1202.3
G	582.1	R	1333.5
H	645.7	S	1479.1

– 'A' through 'S', minus 'I', 'N' and 'O'

VHF DF (VDF)

"QDM QDM QDM Oxford Approach G-BODA request QDM G-BODA"



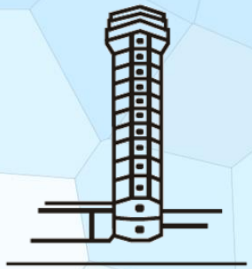
Class A	within ± 2°
Class B	within ± 5°
Class C	within ± 10°
Class D	less accurate than Class C

Direction Finding

STEPHENVILLE TOWER G-ABCD
REQUEST HEADING TO
STEPHENVILLE

G-CD STEPHENVILLE TOWER
HEADING TO STEPHENVILLE
090 DEGREES CLASS A

CLASS A 090 G-CD



STEPHENVILLE TOWER G-ABCD
REQUEST QDM

G-CD STEPHENVILLE TOWER
QDM 090 DEGREES CLASS A

CLASS A 090 G-CD

Abbreviations

- **SAR**: Search and Rescue
- **ATIS**: Automatic Terminal Information Service
- **SSR**: Secondary Surveillance Radar
- **IMC**: Instrument Meteorological Conditions
- **AIS**: Aeronautical information service.
- **MLS**: Microwave landing system.
- **RNAV**: Area navigation.
- **H24**: continuously operation
- **HN**: Between sunset and sunrise.
- **QDM**: A magnetic bearing to the VDF station.
- **UTC**: Co-ordinated universal time (UTC).

Chapter 6. Aeronautical Radio Navigation Service

Chapter 7. Aeronautical Broadcasting Service

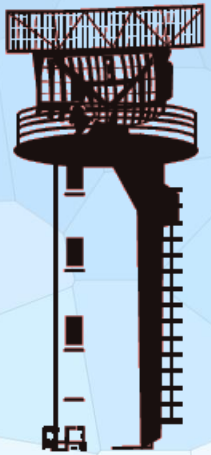
Chapter 8. Aeronautical Mobile Service — Data Link Communications

Doc 9432
AN/925

Manual of Radiotelephony

FASTAIR 345 TIME 0611
or
FASTAIR 345 TIME 0715 AND
A HALF

FASTAIR 345 REQUEST TIME
CHECK



G-AB REPORT LEVEL

G-AB REPORT PASSING FL 80

G-AB MAINTAIN 2 500 FEET

G-AB MAINTAINING 3 000 FEET

G-AB WILCO . . . G-AB PASSING FL 80

MAINTAINING 2 500 FEET G-AB

G-AB CLIMB TO FL 70

LEAVING 2 500 FEET CLIMBING TO FL 70 G-AB

G-AB REQUEST DESCENT

G-AB DESCEND TO FL 60

LEAVING FL 90 DESCENDING TO FL 60 G-AB

FASTAIR 345 AFTER PASSING NORTH CROSS NDB DESCEND TO FL 80

AFTER NORTH CROSS NDB DESCEND TO FL 80 FASTAIR 345

FASTAIR 345 STOP
DESCENT AT FL 150

STOPPING DESCENT AT FL 150 FASTAIR 345

FASTAIR 345 CONTINUE CLIMB TO FL 330

CLIMBING TO FL 330 FASTAIR 345

FASTAIR 345 RECLEARED FL 330

RECLEARED FL 330 FASTAIR 345

FASTAIR 345 EXPEDITE
DESCENT TO FL 80

EXPEDITING DESCENT TO FL 80 FASTAIR 345

FASTAIR 345 CLIMB TO FL 240 EXPEDITE
UNTIL PASSING FL 180

CLIMBING TO FL 240 EXPEDITING UNTIL PASSING
FL 180 FASTAIR 345

or

UNABLE TO EXPEDITE FASTAIR 345

FASTAIR 345 NEXT
REPORT COLIN

FASTAIR 345 WILCO

FASTAIR 345 OMIT POSITION
REPORTS UNTIL FIR BOUNDARY,
NEXT REPORT COLIN

FASTAIR 345 WILCO

FASTAIR 345 RESUME POSITION
REPORTING

FASTAIR 345 WILCO

GEORGETOWN GROUND FASTAIR 345, STAND 24 REQUEST START UP, INFORMATION BRAVO

FASTAIR 345 START UP APPROVED QNH 1009

or

FASTAIR 345 START UP AT 35 QNH 1009

or

FASTAIR 345 EXPECT START UP AT 35 QNH 1009

or

FASTAIR 345 EXPECT DEPARTURE 49 START UP AT OWN DISCRETION QNH 1009

G-CD EXPEDITE TAXI TRAFFIC ON FINAL RUNWAY 24, REPORT RUNWAY 24 VACATED

G-CD EXPEDITING

G-CD RUNWAY VACATED

_ _ _ _ _ _ _ _ _

STEPHENVILLE TOWER G-ABCD AT THE FUEL STATION REQUEST TAXI TO FLYING CLUB

G-ABCD TAXI TO HOLDING POINT RUNWAY 24 VIA TAXIWAY CHARLIE

VIA CHARLIE HOLDING POINT RUNWAY 24 G-ABCD

G-CD APPROACHING HOLDING POINT REQUEST CROSS RUNWAY 24

G-CD HOLD SHORT RUNWAY 24

G-CD HOLDING SHORT

G-CD CROSS RUNWAY 24 REPORT VACATED
CONTINUE TO FLYING CLUB

CROSSING, WILCO G-CD

G-CD RUNWAY VACATED

G-CD ROGER

G-HELI REQUEST AIR-TAXIING FROM FUEL STATION TO APRON

G-HELI AIR TAXI VIA DIRECT FROM FUEL STATION TO APRON
AVOID B747 TAXIING FROM STAND 27 TO HOLDING POINT RUNWAY 24

AIR TAXI DIRECT FROM FUEL STATION TO APRON, TRAFFIC IN SIGHT, G-HELI

GEORGETOWN GROUND FASTAIR
345 HEAVY REQUEST TAXI
INFORMATION CHARLIE

FASTAIR 345 TAXI TO HOLDING
POINT RUNWAY 27 GIVE WAY
TO B747 PASSING LEFT TO RIGHT
QNH 1019

HOLDING POINT
RUNWAY 27 QNH 1019, GIVING WAY
TO B747 FASTAIR 345

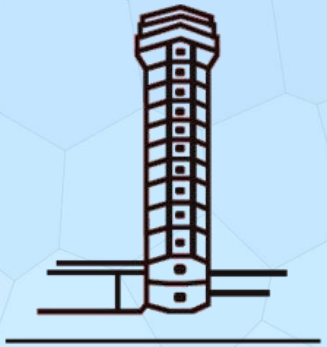
G-CD REPORT WHEN READY
FOR DEPARTURE

G-CD WILCO

G-CD READY

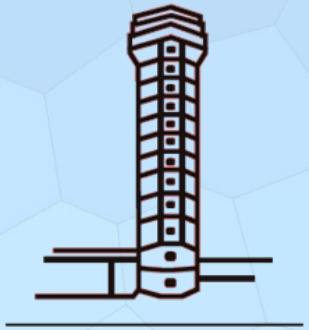
G-CD LINE UP AND WAIT

LINING UP G-CD



G-CD RUNWAY 06 CLEARED
FOR TAKE-OFF

RUNWAY 06 CLEARED FOR TAKE-OFF
G-CD



G-CD ARE YOU READY
FOR IMMEDIATE DEPARTURE

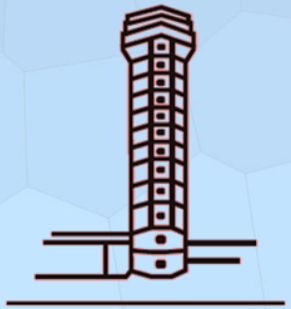
G-CD AFFIRM

G-CD LINE UP. BE READY FOR
IMMEDIATE DEPARTURE

LINING UP G-CD

G-CD RUNWAY 06 CLEARED FOR TAKE-OFF

RUNWAY 06 CLEARED FOR TAKE-OFF G-CD



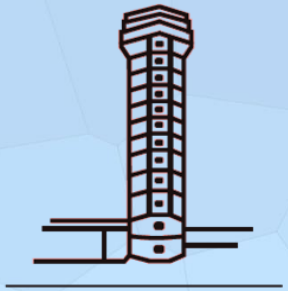
FASTAIR 345 RUNWAY 24
CLEARED FOR
TAKE-OFF REPORT
AIRBORNE

RUNWAY 24 CLEARED
FOR TAKE-OFF
WILCO FASTAIR 345

FASTAIR 345 AIRBORNE 57

FASTAIR 345 CONTACT
DEPARTURE 121.750

121.750 FASTAIR 345



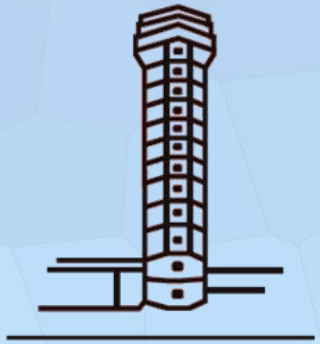
FASTAIR 345 CLIMB STRAIGHT
AHEAD UNTIL 2 500 FEET
BEFORE TURNING RIGHT,
RUNWAY 24 CLEARED
FOR TAKE-OFF

STRAIGHT AHEAD 2 500 FEET
RIGHT TURN CLEARED FOR
TAKE-OFF RUNWAY 24 FASTAIR 345

G-CD REQUEST RIGHT TURN
WHEN AIRBORNE

G-CD RIGHT TURN APPROVED RUNWAY 06
CLEARED FOR TAKE-OFF

RUNWAY 06 CLEARED FOR TAKE-OFF RIGHT TURN G-CD



G-CD TAKE OFF
IMMEDIATELY OR HOLD
SHORT OF RUNWAY

HOLDING SHORT G-CD

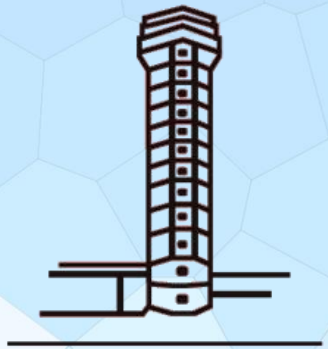
G-CD TAKE OFF IMMEDIATELY OR
VACATE RUNWAY

TAKING OFF G-CD

G-CD HOLD POSITION, CANCEL TAKE-OFF I SAY
AGAIN
CANCEL TAKE-OFF VEHICLE ON RUNWAY

FASTAIR 345 STOP
IMMEDIATELY FASTAIR 345
STOP IMMEDIATELY

STOPPING FASTAIR 345



FASTAIR 345 STOPPING

FASTAIR 345 ROGER

FASTAIR 345 REQUEST RETURN TO RAMP

FASTAIR 345 TAKE NEXT RIGHT RETURN TO RAMP
CONTACT GROUND 118.350

NEXT RIGHT RETURN TO RAMP 118.350 FASTAIR 345

Doc 9432, Chapter 4

AERODROME CONTROL: AIRCRAFT

4.6 AERODROME TRAFFIC CIRCUIT

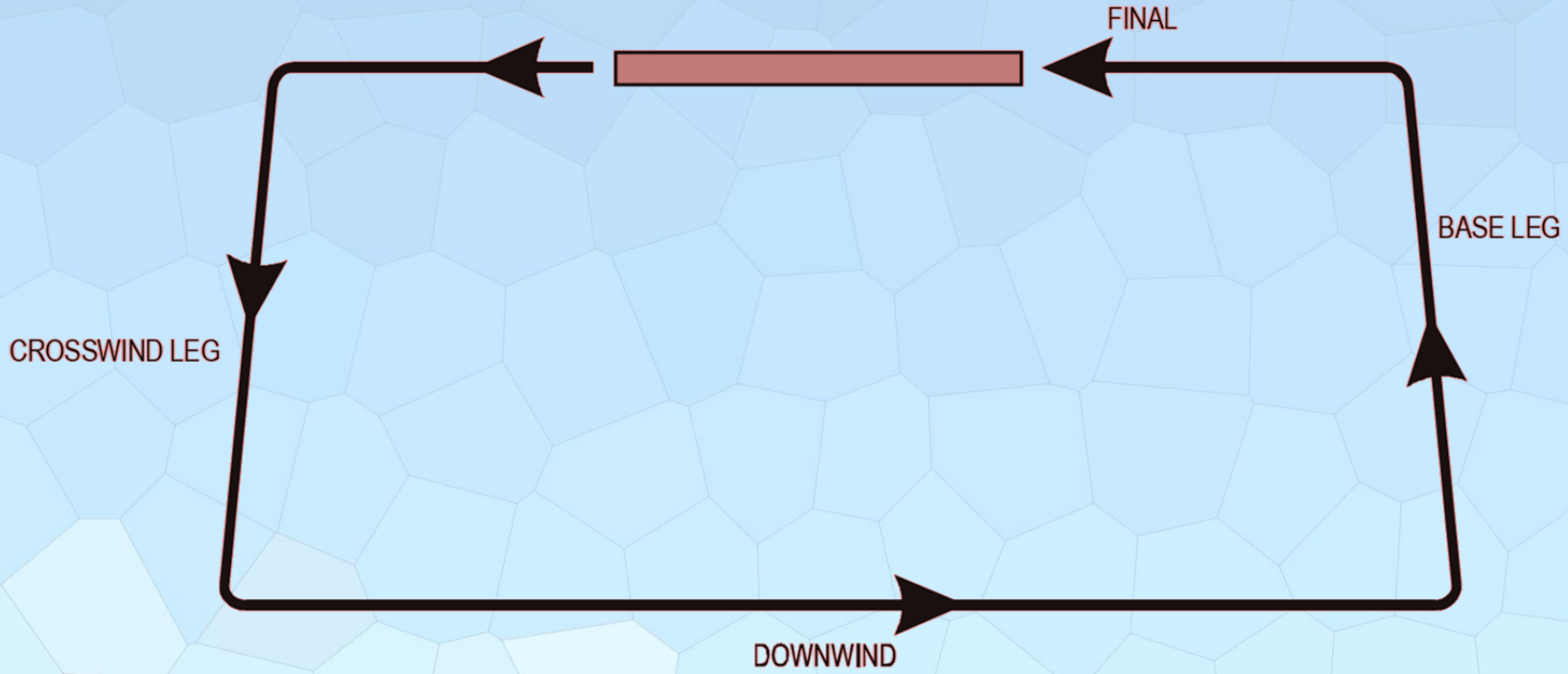
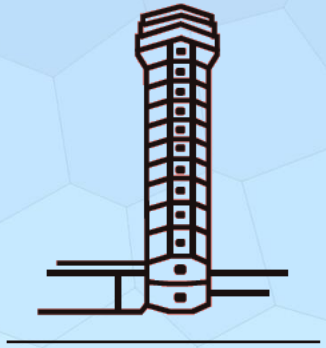


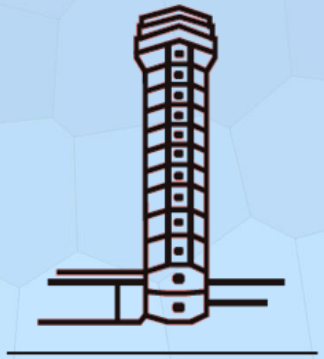
Figure 1. Reporting in the traffic circuit



WALDEN TOWER G-ABCD C172
10 MILES SOUTH 2 500 FEET
FOR LANDING

G-CD JOIN DOWNWIND
RUNWAY 24 WIND 270 DEGREES
5 KNOTS, QNH 1012

JOIN DOWNWIND
RUNWAY 24 QNH 1012 G-CD



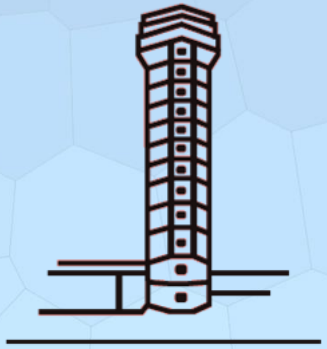
WALDEN TOWER G-ABCD C172
10 MILES NORTH
2 500 FEET INFORMATION
BRAVO, FOR LANDING

G-CD JOIN RIGHT
HAND DOWNWIND RUNWAY 34
WIND 330 DEGREES 10 KNOTS QNH 1012

JOIN RIGHT HAND DOWNWIND RUNWAY 34 QNH 1012 G-CD

G-CD TRAFFIC CHEROKEE TAKING OFF RUNWAY 34
AND A LEARJET DOWNWIND

TRAFFIC IN SIGHT
G-CD



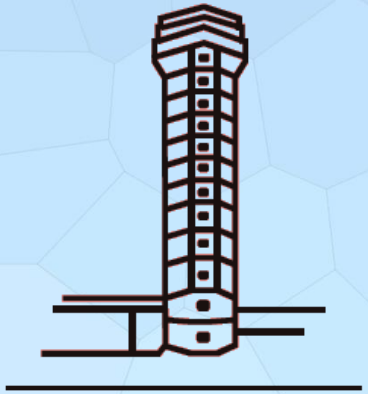
G-CD EXTEND DOWNWIND DUE
WAKE TURBULENCE
B757 LANDING AHEAD

EXTENDING DOWNWIND, G-CD

G-CD HOLD POSITION DUE
WAKE TURBULENCE
AIRBUS DEPARTING AHEAD

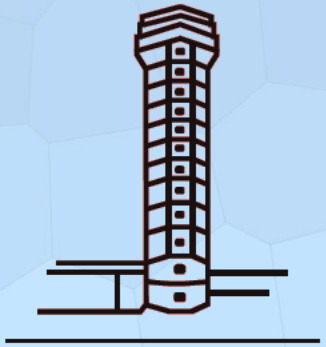
HOLDING G-CD

WALDEN TOWER G-ABCD C172
10 MILES NORTH 2 500 FEET
FOR LANDING



G-CD MAKE STRAIGHT-IN
APPROACH RUNWAY 16
WIND 190 DEGREES 5 KNOTS
QNH 1009

STRAIGHT-IN RUNWAY 16 QNH 1009 G-CD



G-CD DOWNWIND

G-CD NUMBER 2 FOLLOW
CHEROKEE ON BASE

NUMBER 2, TRAFFIC IN SIGHT G-CD

G-CD BASE

G-CD REPORT FINAL

G-CD

G-CD FINAL

G-CD CONTINUE APPROACH
WIND 270 DEGREES 7 KNOTS

G-CD EXTEND DOWNWIND
NUMBER 2 FOLLOW
CHEROKEE ON 4 MILES FINAL

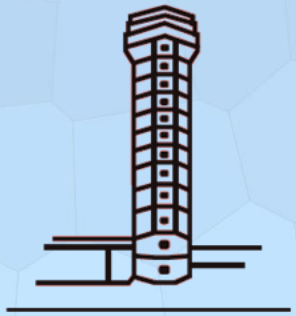
EXTENDING DOWNWIND NUMBER 2
CHEROKEE
IN SIGHT G-CD

G-CD ORBIT RIGHT DUE TRAFFIC ON THE RUNWAY.
REPORT AGAIN ON FINAL

ORBITING RIGHT, WILCO G-CD

G-CD NUMBER 1 MAKE SHORT APPROACH
CHEROKEE ON 6 MILES FINAL

SHORT APPROACH G-CD



FASTAIR 345 LONG FINAL

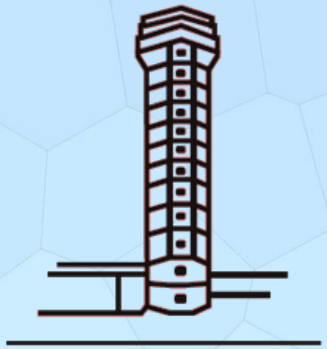
FASTAIR 345 CONTINUE APPROACH
WIND 260 DEGREES 18 KNOTS

FASTAIR 345

FASTAIR 345 FINAL

FASTAIR 345 RUNWAY 27 CLEARED TO LAND
WIND 270 DEGREES 20 KNOTS

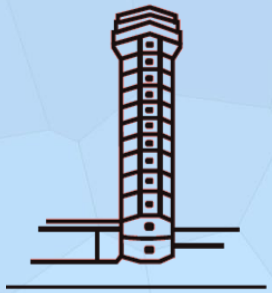
RUNWAY 27 CLEARED TO LAND FASTAIR 345



FASTAIR 345 CLEARED LOW APPROACH RUNWAY 09 NOT BELOW 250 FEET REPORT FINAL

FASTAIR 345 REQUEST LOW APPROACH RUNWAY 09 FOR TRAINING

RUNWAY 09 NOT BELOW 250 FEET WILCO FASTAIR 345



G-CD CLEARED TOUCH AND GO

G-CD REQUEST TOUCH AND GO

CLEARED TOUCH AND GO G-CD

or

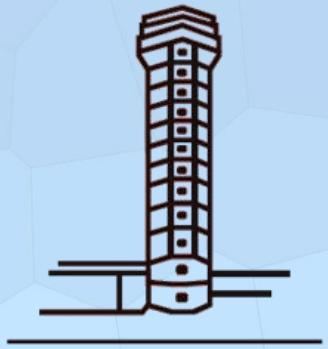
G-CD UNABLE TO APPROVE DUE TRAFFIC CONGESTION MAKE FULL STOP RUNWAY 09 CLEARED TO LAND

RUNWAY 09 CLEARED TO LAND FOR FULL STOP G-CD

or

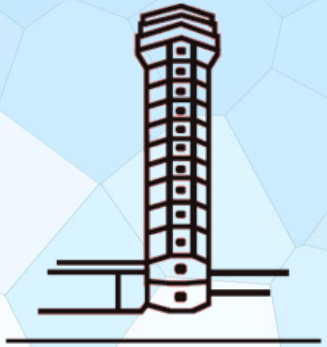
G-CD MAKE ANOTHER CIRCUIT REPORT DOWNWIND

WILCO G-CD



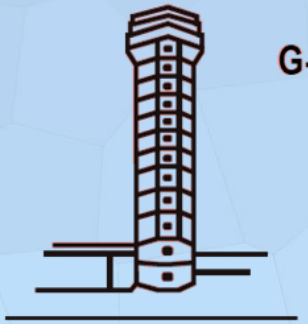
FASTAIR 345 GO AROUND
AIRCRAFT ON THE RUNWAY

GOING AROUND FASTAIR 345



G-CD ROGER REPORT DOWNWIND

GOING AROUND G-CD



G-HELI AIR-TAXI TO HELICOPTER STAND

AIR-TAXI TO HELICOPTER STAND, G-HELI

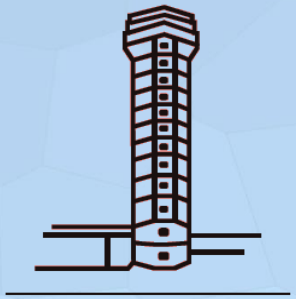
FASTAIR 345 TAKE FIRST RIGHT WHEN VACATED
CONTACT GROUND 118.350

FIRST RIGHT, WILCO 118.350 FASTAIR 345

GEORGETOWN GROUND FASTAIR 345
RUNWAY VACATED

FASTAIR 345 TAXI TO STAND 27 VIA
TAXIWAY ALPHA

STAND 27 VIA TAXIWAY ALPHA FASTAIR 345



FASTAIR 345 CAUTION
CONSTRUCTION WORK
ADJACENT TO GATE 37

ROGER, FASTAIR 345

. . . WORK IN PROGRESS AHEAD NORTH SIDE OF TAXIWAY ALPHA

. . . CENTRE LINE TAXIWAY LIGHTING UNSERVICEABLE

. . . VASIS RUNWAY 27 UNSERVICEABLE

. . . LARGE FLOCK OF BIRDS NORTH OF RUNWAY 27 NEAR CENTRAL TAXIWAY

. . . ILS 09 UNSERVICEABLE

. . . RUNWAY CONDITIONS 09:
AVAILABLE WIDTH 32 METRES, COVERED WITH THIN PATCHES OF ICE, BRAKING ACTION POOR
SNOW UP TO 30 CM ALONG EDGES

Sample phraseologies for Pilots & Air Traffic Controllers

CLIMB TO AND MAINTAIN BLOCK 8000 FT TO 10000 FT

DESCEND TO REACH FL 180 BY SAV
CLIMB TO REACH 9000 FT AT 46

REPORT REACHING FL250
REPORT LEAVING FL250
REPORT PASSING FL250

DESCEND TO 8000 FT AT 1000 FEET PER MINUTE OR GREATER
DESCEND TO 9000 FT AT 1000 FEET PER MINUTE OR LESS

EXPEDITE CLIMB UNTIL PASSING FL 180

DESCEND IMMEDIATELY TO FL 200 DUE TRAFFIC

MAINTAIN OWN SEPARATION AND VMC FROM 8000 FT TO 4000 FT

IF UNABLE MAINTAIN FL150 AND ADVISE

IRA711 CHANGE YOUR CALL SIGN TO EPIFA UNTIL FURTHER ADVISED

EPIFA REVERT TO FLIGHT PLAN CALL SIGN IRA711

RVR RWY27L 800 METERS 1000 METERS 1200 METERS
touchdown zone, midpoint zone and the roll-out/stop end zone

RVR RWY27L TOUCHDOWN ZONE 800 METERS, MIDPOINT ZONE NOT AVAILABLE ROLL-OUT ZONE 1200 METERS

REPORT 20 MILES GNSS FROM ZANJAN
REPORT 20 MILES DME FROM ZANJAN

REPORT PASSING 180 RADIAL ZANJAN VOR;
REPORT GNSS DISTANCE FROM ZANJAN
REPORT DME DISTANCE FROM ZANJAN DME

CAUTION CONSTRUCTION WORK NEAR TWY ALPHA

CAUTION CONSTRUCTION WORK RIGHT SIDES OF RUNWAY 27

BRAKING ACTION REPORTED BY MD82 AT 0946 GOODTO MEDIUM

CONFIRM RVSM APPROVED

AFFIRM RVSM*

NEGATIVE RVSM

UNABLE RVSM DUE TURBULENCE*

UNABLE RVSM DUE EQUIPMENT*

UNABLE ISSUE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN [*or* DESCEND TO, *or* CLIMB TO] *(*FL270*)*;

REPORT WHEN ABLE TO RESUME RVSM

CONFIRM ABLE TO RESUME RVSM;

READY TO RESUME RVSM*

BASIC GNSS UNAVAILABLE [DUE TO (*reason, e.g.* LOSS OF RAIM *or* RAIM ALERT)]

BASIC GNSS (*or* SBAS, *or* GBAS) UNAVAILABLE FOR *(specify operation)* [FROM *(time)* TO *(time)* (*or* UNTIL FURTHER NOTICE)];

CONFIRM GNSS NAVIGATION

AFFIRM GNSS NAVIGATION*

UNABLE RNP *(specify type)* (*or* RNAV) [DUE TO (*reason, e.g.* LOSS OF RAIM *or* RAIM ALERT)].

RECLEARED*VIA UL124 TO ZANJAN* REST OF CLEARANCE UNCHANGED

ENTER CONTROL ZONE VIA *SESMA* AT *FL150*

LEAVE CONTROLLED AIRSPACE AT *FL170* DESCENDING

JOIN *P574* AT *PEKAM*

CLEARED TO *MELMI* DIRECT / VIA W10

T215 NOT AVAILABLE DUE *GUN FIRING* ALTERNATIVE IS *P574* ADVISE

MAINTAIN *FL210* UNTIL *5minutes* AFTER PASSING BJD

MAINTAIN *FL180* WHILE IN CONTROLLED AIRSPACE;

CROSS *BOXAM* ABOVE, *FL200*

CROSS *RARTA* AT *46* OR LATER AT *FL160*

CROSS *30* MILES DME *NORTH* OF *YSJ* BELOW *FL160*

UNABLE, TRAFFIC *EAST* BOUND *MD88 FL310* OVER *TBS* AT *46* CALL SIGN IRM456, ADVISE INTENTIONS.

ADVISE IF ABLE TO CROSS *MAH* AT *FL130*

MAINTAIN MACH 0.*81* OR LESS UNTIL *BONAM*

DO NOT EXCEED MACH *0.79*

CONFIRM ESTABLISHED ON THE TRACK BETWEEN *GESIP* AND *DAPOG* WITH ZERO OFFSET

MAINTAIN TRACK BETWEEN *ZAJ* AND *DASIS* REPORT ESTABLISHED ON THE TRACK

PROCEED OFFSET *5 MILES* RIGHT/LEFT OF *UT36* CENTRE LINE AT *ENEDA*

CANCEL OFFSET *rejoin UT36 AT DEPSU*

AFTER DEPARTURE TURN RIGHT HEADING *270 TO DHN*

TURN RIGHT HEADING *030* TO *FL 160 TO INTERCEPT W130*

TRACK *090* DEGREES MAGNETIC TO *PEKAM* UNTIL REACHING FL*230* BEFORE PROCEEDING ON COURSE

CLEARED *VOR* APPROACH RUNWAY *35*;

CLEARED *NDB APPROACH* RUNWAY *30* FOLLOWED BY CIRCLING TO RUNWAY *12*;

REQUEST VISUAL APPROACH*

CLEARED VISUAL APPROACH RUNWAY *(number)*;

ADVISE IF ABLE TO ACCEPT VISUAL APPROACH RUNWAY *(number)*;

CLEARED VISUAL APPROACH RUNWAY *32*, MAINTAIN OWN SEPARATION FROM PRECEDING A30B HEAVY; CAUTION WAKE TURBULENCE.

REQUEST VMC DESCENT*

REQUEST *(type of approach)* APPROACH [RUNWAY *(number)*]*

HOLD VISUAL OVER *POINT "H"*

CLEARED TO *BUZ* [MAINTAIN *FL170* HOLD AS PUBLISHED EXPECT APPROACH CLEARANCE AT 03:45

REQUEST HOLDING INSTRUCTIONS*

CLEARED TO SADIA MAINTAIN 13000 ft, HOLD INBOUND TRACK *255* DEGREES RIGHT HAND PATTERN OUTBOUND TIME *(1)* MINUTE DO NOT EXCEED 230 KT, EXPECT APPROACH CLEARANCE AT *(33).*

CLEARED TO THE *(075)* RADIAL OF THE *(SYZ)* VOR AT *(17)* DME FIX MAINTAIN 13000 ft, HOLD INBOUND TRACK *255* DEGREES RIGHT HAND PATTERN OUTBOUND TIME *(1)* MINUTE DO NOT EXCEED 230 KT, EXPECT APPROACH CLEARANCE AT *(33).*

NO DELAY EXPECTED;

DELAY NOT DETERMINED DUE TO EMERGENCY FLIGHT.

REVISED EXPECTED APPROACH TIME *(time)*;

STAND NO:102 REQUEST START UP;
STAND NO:102 REQUEST START UP, INFORMATION *D*
EXPECT DEPARTURE *46* START UP AT OWN DISCRETION.
STAND NO:102 REQUEST PUSHBACK
PUSHBACK APPROVED
EXPECT *5* MINUTES DELAY DUE *TRAFFIC*
REQUEST TOW *KARUN F100* FROM *EAST RAMP* TO STAND *NO:102*
TOW APPROVED VIA *TAXIWAY A*
HOLD POSITION;
REQUEST TIME CHECK*
REQUEST DEPARTURE INFORMATION*
RUNWAY 27, WIND *150degrees 08knot* QNH *996 Hectopascals* TEMPERATURE MINUS 02, VISIBILITY *6 Kilometers*

TAXI TO HOLDING POINT RUNWAY *(29L)* CROSS RUNWAY *29R* [TIME *1020*].

REQUEST DETAILED TAXI INSTRUCTIONS

TAXI TO HOLDING POINT RUNWAY *27L* VIA *TAXI WAY A* CROSS RUNWAY *27R*

TAXI TO HOLDING POINT RUNWAY *27L* VIA *TAXI WAY A and C* HOLD SHORT OF RUNWAY *27R*

REQUEST BACKTRACK*

BACKTRACK RUNWAY *(29R)*;

BACKTRACK APPROVED

TAXI STRAIGHT AHEAD

TAXI WITH CAUTION

GIVE WAY TO *F100 on your left*

GIVING WAY TO *(traffic)**

TRAFFIC *F100* IN SIGHT;

FOLLOW *MD88 Ahead*

VACATE RUNWAY RUNWAY VACATED*

EXPEDITE TAXI, TRAFFIC ON FINAL.

[CAUTION] TAXI SLOWER *LOW SPEED AIRCRAFT AHEAD*.

SLOWING DOWN*

CROSS RUNWAY *(29R)* [REPORT VACATED];

EXPEDITE CROSSING RUNWAY *27* TRAFFIC *RJ1H 6* MILES FINAL

ARE YOU READY FOR IMMEDIATE DEPARTURE?;

READY;

LINE UP [AND WAIT];
LINE UP RUNWAY *(27R)*;

RUNWAY *27* CLEARED FOR TAKE-OFF

traffic Piper28 Right Downwind RUNWAY *27* CLEARED FOR TAKE-OFF

TAKE OFF IMMEDIATELY OR VACATE RUNWAY *VIA TWY D*

HOLD POSITION, CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF *UNAUTHORIZED CAR ON THE RUNWAY* HOLDING*

IRA426, STOP IMMEDIATELY, *IRA426* STOP IMMEDIATELY. STOPPING*

JOIN *left downwind runway 27* SURFACE WIND *220 10knots* TEMPERATURE 27 QNH *1012* TRAFFIC *Cesena172R Left Base Runway 27*

NUMBER 3 FOLLOW *Falcon20 Extend Downwind*.

MAKE SHORT APPROACH

MAKE LONG APPROACH (*or* EXTEND DOWNWIND);

REPORT BASE (*or* FINAL, *or* LONG FINAL);

CONTINUE APPROACH [PREPARE FOR POSSIBLE GO AROUND].

RUNWAY *(number)* CLEARED TO LAND;

[RUNWAY *(number)*] CLEARED TOUCH AND GO;

MAKE FULL STOP;

REQUEST LOW PASS *(For visual inspection of the nose gear)**

CLEARED LOW PASS [RUNWAY *(29L)*] *[(NOT BELOW 500 FT)*.

REQUEST LOW APPROACH

CLEARED LOW APPROACH [RUNWAY *(number)*]

GO AROUND;

GOING AROUND*

TAKE (*or* TURN) FIRST (*or* SECOND, *or* CONVENIENT) LEFT (*or* RIGHT) AND CONTACT GROUND *(frequency)*;

RADAR CONTACT *[position]*;

IDENTIFIED *[position]*;

NOT IDENTIFIED *[reason]*, RESUME (*or* CONTINUE) OWN NAVIGATION].

LEAVE *(LAM)* HEADING *(180)*;

CONTINUE HEADING *(180)*;

CONTINUE PRESENT HEADING

FLY HEADING *(three digits)*;

TURN LEFT (*or* RIGHT) HEADING *(180) DUE TRAFFIC.*

TURN LEFT (*or* RIGHT) *(20)* DEGREES *DUE TRAFFIC.*

STOP TURN HEADING *(170)*;

FLY HEADING *(180)*, WHEN ABLE PROCEED DIRECT *(SYZ).*

HEADING IS GOOD.

RESUME OWN NAVIGATION

MAKE A THREE SIXTY TURN LEFT (*or* RIGHT) *[reason]*;

ORBIT LEFT (*or* RIGHT) *[reason]*;

MAKE ALL TURNS RATE ONE (*or* RATE HALF, *or (number)* DEGREES PER SECOND) START AND STOP ALL TURNS ON THE COMMAND "NOW";

TURN LEFT (*or* RIGHT) NOW;

STOP TURN NOW;

REPORT SPEED
MAINTAINING 300 KTS / MACH 0.80

MAINTAIN *290* KNOTS [OR GREATER (*or* OR LESS)] [UNTIL *(ELIDU)*];
DO NOT EXCEED *290* KNOTS.

MAINTAIN PRESENT SPEED

INCREASE (*or* REDUCE) SPEED TO *290* KNOTS [OR GREATER (*or* OR LESS)];

RESUME NORMAL SPEED

REDUCE TO MINIMUM APPROACH SPEED

REDUCE TO MINIMUM CLEAN SPEED

NO [ATC] SPEED RESTRICTIONS

REQUEST VECTORS*

DO YOU WANT VECTORS?;

IF YOU READ *[manoeuvre instructions or SQUAWK (code or IDENT)]*;

(*manoeuvre,* SQUAWK *or* IDENT) OBSERVED. POSITION *(position of aircraft). [(instructions)]*.

RADAR SERVICE (*or* IDENTIFICATION) TERMINATED [DUE *(reason)*] *(instructions);*

WILL SHORTLY LOSE IDENTIFICATION *(appropriate instructions or information);*

IDENTIFICATION LOST *[reasons] (instructions)*.

SECONDARY RADAR OUT OF SERVICE *(appropriate information as necessary)*;

VECTORING FOR *ILS* APPROACH RUNWAY *27L*

VECTORING FOR VISUAL APPROACH RUNWAY 27L REPORT RUNWAY IN SIGHT

ILS APPROACH NOT AVAILABLE DUE FLIGHT CHECK EXPIRED VECTORING FOR VOR/DME

POSITION *55* MILES from ISN TURN LEFT HEADING *125*

YOU WILL INTERCEPT LLZ 6 MILES FROM TOUCHDOWN

REPORT ESTABLISHED ON LOCALIZER

YOU HAVE CROSSED THE LOCALIZER. TURN LEFT (*or* RIGHT) IMMEDIATELYAND RETURN TO THE LOCALIZER.

ADVISE TRANSPONDER CAPABILITY

TRANSPONDER *(as shown in the flight plan)**

NEGATIVE TRANSPONDER*

SQUAWK *(code)*.

RESET SQUAWK *[(mode)] (code)*;

RESETTING *(mode) (code)* *

CONFIRM SQUAWK *(code)*;

SQUAWKING *(code)**

SQUAWK MAYDAY [CODE SEVEN-SEVEN-ZERO-ZERO].

STOP SQUAWK

SQUAWK CHARLIE

CHECK ALTIMETER SETTING AND CONFIRM *(level)*.

STOP SQUAWK CHARLIE WRONG INDICATION

EP-ASB LOW ALTITUDE WARNING, CHECK YOUR ALTITUDE IMMEDIATELY, QNH IS *1021 HECTOPASCAL*

BOOKLET

ICAO Annex 10

Ali Erfanian

1-Which word or phrase shall be used if you want to say "REDUCE YOUR RATE OF SPEECH"?

A. SPEAK SLOWER.
B. WORDS TWICE.
C. REPEAT.
D. SAY AGAIN.

2- Which phrase should a pilot use to inform ATC that he is initiating a missed approach procedure?

A. GOING AROUND.
B. MISSED APPROACH.
C. PULLING UP.
D. OVERSHOOTING.

3- Which phrase shall be used if you want to say "COMMUNICATION IS DIFFICULT, PLEASE SEND EVERY WORD OR GROUP OF WORD TWICE"?

A. WORDS TWICE.
B. SAY AGAIN, SAY AGAIN.
C. REPEAT TWICE.
D. MESSAGE SECOND TIME.

4- Which word shall be used to ask a station whether you have correctly received a message, clearance, instruction?

A. CONFIRM.
B. CORRECT.
C. ACKNOWLEDGE.
D. VERIFY.

5-How shall a pilot inform the control tower that he has to abandon takeoff maneuver?

A. STOPPING.
B. ABANDONING TAKEOFF.
C. ABORTING TAKEOFF.
D. CANCELLING TAKEOFF.

6- What does the instruction “MAHAN 345 STANDBY 118.9 FOR TOWER" mean?

A. MAHAN 345 should standby on the current frequency.
B. MAHAN 345 should change frequency to 118.9 on which aerodrome data are being broadcast.
C. MAHAN 345 should contact TOWER on 118.9.
D. MAHAN 345 should listen on frequency 118.9 on which TOWER will initiate further communications.

7- How long the test signal shall be made?

A. 10 seconds
B. Minimum 10 seconds
C. Maximum 10 seconds
D. All answers are incorrect

8- Which of the following message shall be handled by interpilot air-to-air communication when necessary?

A. Regulatory messages
B. Safety messages
C. Meteorological messages
D. A and B are correct

Annex 10
Interpilot air-to-air communication shall comprise messages related to any matter affecting safety and regularity of flight.

9- How long elapse time is required between the first and second call?

A. 10 seconds
B. At least 10 seconds
C. Maximum 10 seconds
D. None

10- What language shall be used by air-ground radiotelephony communication?

A. Language used by ground station
B. English language
C. A or B are correct
D. A or one of the ICAO languages

11- Which publication shall indicate the languages used by ground station?

A. AIP
B. Annex 10
C. Doc. 4444
D. Annex 2

12- Which phraseology shall a pilot use if he receives an instruction from ATC which he cannot carry out?

A. Unable.
B. Negative instruction.
C. Impossible to make it.
D. Disregard.

13- Which word or phrase shall be used to indicate that a change has been made to your last clearance and this new clearance supersedes your previous clearance or part thereof?

A. RECLEARED.
B. CLEARED.
C. APPROVED.
D. BREAK BREAK.

14- Which word or phrase shall be used to indicate a separation between portions of a message?

A. BREAK.
B. STOP.
C. I SAY AGAIN.
D. OVER.

15- Which word shall be used to indicate that an error has been made in a transmission or message?

A. CORRECTION.
B. CORRECT.
C. NEGATIVE.
D. DISREGARD.

16- What does the word "MONITOR" mean?

A. Examine a system or procedure.
B. Wait and I will call you.
C. Establish radio contact with ...
D. Listen out on (frequency).

17- Which word or phrase shall be used when giving authorization to proceed under specified conditions?

A. APPROVED Permission for proposed action granted.”.
B. GO AHEAD.
C. CLEARED.
D. I SAY AGAIN: PROCEED.

18- Which ICAO annexes specifies the required level of language proficiency?

A. Annex 1
B. Annex 2
C. Annex 6
D. Annex 10

19- How the number of altimeter setting shall be transmitted?

A. Whole thousand (1000)
B. A + whole hundred
C. Each digit separately (1012)
D. All answers are correct

20- How the altitude of 15,500 (ft) shall be transmitted?

A. Fifteen thousand, five hundred.
B. One five thousand, five hundred.
C. One five five zero zero.
D. One five five hundred.

21- The rate of speech should not be?

A. Less than 100 words per minutes
B. Less than 60 words per minutes
C. More than 100 words per minutes
D. More than 60 words per minutes

22- For which of the following phrases "ROGER" is used?

Note.— Under no circumstances to be used in reply to a question requiring “READ BACK” or a direct answer in the affirmative (AFFIRM) or negative (NEGATIVE).

A. READ BACK
B. AFFIRM
C. NEGATIVE
D. NONE

23- If you are requested to "REPORT FLIGHT CONDITIONS", what does that mean?

A. Indicate weather conditions as wind, visibility, temperature.
B. Indicate whether you are flying in IMC or in VMC.
C. Indicate if visibility is sufficient for landing
D. Indicate whether you are flying I FR or VFR.

24- When an aeronautical station broadcasts information to more than one station, the call starts with:

A. "Message to all aircraft on this frequency".
B. "Please listen".
C. "All stations".
D. "General broadcast".

25- The instruction "REPORT" means:

Request?

A. Pass me the following information.
B. File an ATSU report on landing.
C. Return to home base.
D. Read back this clearance.

26- What would you say if you are having trouble with communications and wish to have everything repeated twice?

A. I SAY AGAIN.
B. WORDS TWICE.
C. PLEASE REPEAT.
D. SPEAK TWICE.

27- Certain RT procedures require messages to be broadcast as a general call using a particular frequency. Such messages would be preceded with the phrase:

like 24

A. All aircraft on frequency.
B. All aircraft.
C. Now hear this.
D. All stations.

28- The correct way to say "YES" on the RT is:

A. AFFIRMATIVE
B. AFFIRM
C. YES
D. ROGER

29- The suffix of the call sign of direction finding station is...

A. Information
B. Radio
C. Homer
D. Delivery

30- The suffix of the call sign of an approach control unit providing radar service for departure traffic is:

A. Approach
B. Departure
C. Radar
D. Control

31- The full call sign may consist of radiotelephony designator of the operator and:

A. The full characters of registration mark
B. The last three characters of registration mark
C. The last four characters of registration mark
D. The first and last two characters of registration mark

type a) REG -> abbreviated: first + at least last 2
type b) operating agency + last 4 REG abbreviated -> operating agency +at least the last two
type c) operating agency + flight ID

Note: The name of the aircraft manufacturer or of the aircraft model may be used as a radiotelephony prefix to the type a) call sign

32- Which of the following term may be used for abbreviated call sign?

A. Aircraft operating agency designator
B. Aircraft model
C. Aircraft manufacture
D. All answers are correct

type or agency +2 or 3 last REG

33- How many times during air-ground communication the message shall be transmitted by an aircraft after the phrase "TRANSMITTING BLIND"?

A. One
B. Twice
C. At least one
D. At least two

34- During which case of radio failure, the aircraft station shall advise the time of its next intended transmission?

A. Air-ground
B. Ground-to-air
C. Receiver failure
D. All answers are incorrect

5.2.2.7.1.3.1 When an aircraft station is unable to establish communication due to receiver failure, it shall transmit reports at the scheduled times, or positions, on the channel in use, preceded by the phrase "TRANSMITTING BLIND DUE TO RECEIVER FAILURE". The aircraft station shall transmit the intended message, following this by a complete repetition. During this procedure, the aircraft shall also advise the time of its next intended transmission.

35- How many preselected audio tones may be used to determine "SELCAL"?

A. 4
B. 3
C. 2
D. 1

5.2.4.1.1 PANS.— With the selective calling system known as SELCAL, the voice calling is replaced by the transmission of coded tones to the aircraft over the radiotelephony channels. A single selective call consists of a combination of four pre-selected audio tones whose transmission requires approximately 2 seconds. The tones are generated in the aeronautical station coder and are received by a decoder connected to the audio output of the airborne receiver. Receipt of the assigned tone code (SELCAL code) activates a cockpit call system in the form of light and/or chime signals.

36- Where the "SELCAL" should be submitted?

A. Operational flight plan
B. Operating manual
C. Departure message
D. ATS flight plan

5.2.4.2.3 PANS.— The aircraft should:
a) include the SELCAL code in the flight plan submitted to the appropriate air traffic services unit; and
b) ensure that the HF aeronautical station has the correct SELCAL code information by establishing communications temporarily with the HF aeronautical station while still within VHF coverage.

37- If "SELCAL" remain unanswered, when an aeronautical station may revert to voice communication?

A. After 2 calls on the primary frequencies
B. After 2 calls on the secondary frequencies
C. A and B
D. A or B

5.2.4.5.4 PANS.— In the event the SELCAL signal remains unanswered after two calls on the primary frequency and two calls on the secondary frequency, the aeronautical station should revert to voice calling.

38- When the aircraft radiotelephony call sign may be changed?

A. During IFR
B. Interest of safety
C. Bad weather
D. Emergency

39- Who is authorized to change the aircraft radiotelephony call sign temporarily?

A. Pilot-in-Command
B. Operator
C. ATC unit
D. Dispatcher

5.2.1.7.3.1 An aircraft shall not change the type of its radiotelephony call sign during flight, except temporarily on the instruction of an air traffic control unit in the interests of safety.

40- What is the inter-pilot air-to-air channel?

A. 121.5MHz
B. 123.45 MHz
C. 123.45 kHz
D. 243 kHz

41- Which of the following frequencies, are separated by 25 kHz?

A. 123.45MHz
B. 118.0MHz
C. 119.0MHz
D. All answers are correct

123.000	123.025	123.050	123.075	124.000
123.005	123.030	123.055	123.080	124.005
123.010	123.035	123.060	123.085	123.010

42- Which of the following channel are separated by 8.33 kHz?

A. 121.5 MHz
B. 123.45 MHz
C. 118.025 MHz
D. 133.02 MHz

123.000	123.025	123.050	123.075	124.000
123.005	123.030	123.055	123.080	124.005
123.010	123.035	123.060	123.085	123.010

43- A "FINAL" call is made when the aircraft turns on to final approach within ---- from the landing threshold.

A. 8 NM
B. 8km
C. between 4 NM and 8 NM
D. 4 NM

4.7.1 A “FINAL” report is made when an aircraft turns onto final within 7 km **(4 NM) from touchdown.** If and when the turn onto final is made at a greater distance, a “LONG FINAL” report is made. If the aircraft is making a straight-in approach, a “LONG FINAL” report is made at about 15 km (8 NM) from touchdown. If no landing clearance is received at that time, a “FINAL” report is made at 7 km (4 NM) from touchdown.

44- What does the word “NEGATIVE” mean?

A. I say again.
B. Consider that transmission as not sent.
C. Annul the previously transmitted clearance.
D. That is not correct.

45- What is the radiotelephony call sign suffix for the aeronautical station providing radar service (in general)?

A. RADAR
B. CONTROL
C. RADAR CONTROL
D. RADAR SERVICE

46- What is the radiotelephony call sign suffix for the aeronautical station indicating clearance delivery?

A. CLEARANCE DELIVERY
B. CLEARANCE
C. DELIVERY
D. RADIO

47- What is the radiotelephony call sign for the aeronautical station indicating approach control radar arrival?

A. RADAR
B. CONTROL
C. ARRIVAL
D. APPROACH

48- What is the radiotelephony call sign for the aeronautical station indicating precision approach radar?

A. ARRIVAL
B. APPROACH
C. RADAR
D. Precision

49- What is the radiotelephony call sign for the aeronautical station providing approach control (no radar service)?

A. RADAR
B. ARRIVAL
C. APPROACH
D. CONTROL

50- What is the radiotelephony call sign for the aeronautical station indicating area control center (no radar)?

A. APPROACH
B. CENTER
C. CONTROL
D. RADAR

51- A pilot may file a flight plan with an ATSU during flight. Which air traffic service unit should normally be used for this purpose?

A. FIS
B. RADAR
C. APPROACH
D. TOWER

3.5.1 A pilot may file a flight plan with an ATS unit during flight, although the use of busy air traffic control channels for this purpose should be avoided. Details should be passed using the flight plan format.

52- What is the correct call sign of IRAN AIR 345 in the initial call to the aerodrome control tower and the approach control unit, if the aircraft has a maximum takeoff weight of more than 136 tons?

A. IRAN AIR 345.
B. Heavy IRAN AIR 345.
C. IRAN AIR 345 heavy.
D. IRAN AIR 345 wide body.

53- For which bands of frequencies, the SELCAL should be utilized?

A. VHF + HF
B. VHF + UHF + MF
C. VHF
D. HF only

54- What phrase shall request for verification of numbers?

A. ACKNOWLEDGE the number
B. READ BACK the number
C. SAY AGAIN the number
D. CHECK the number

5.2.1.4.2.1 When it is desired to verify the accurate reception of numbers, the person transmitting the message shall request the person receiving the message to read back the numbers.

55- If an ATC clearance is not suitable to the pilot in command, he may:

A. Proceed according to the operational flight plan.
B. Request and obtain an amended clearance.
C. Follow the given clearance.
D. Both A and C are correct.

56- What is the meaning of “Over” in radiotelephony?

A. My transmission is ended and I expect a response from you.
B. My transmission ended and no response is expected.
C. Repeat all of your last transmission.
D. Pass me the following information

57- What is the abbreviated call sign of ZAGROS 2345?

A. No abbreviated form.
B. ZAGROS 345.
C. ZAGROS 45.
D. 2345.

58- The correct abbreviation for G-ZULU is:

A. GOLF ZULU
B. GOLF LIMA UNIFORM
C. GOLF ZULU LIMA UNIFORM
D. LIMA UNIFORM

first + at least 2

59- ATA 1020, an aircraft in the HEAVY weight category, should make first contact with an ATSU as follows:

A. HEAVY ATA 1020
B. ATA 1020 HEAVY
C. VIRGIN ATA 1020
D. ATA 1020

60- Blind transmission shall be made:

A. On the designated frequency (frequency in use).
B. To all available aeronautical stations.
C. On regional guard frequencies only.
D. During IFR flights only.

61- Test transmissions should include the word(s):

A. TEST
B. RADIO CHECK
C. TEST TRANSMISSION
D. TESTING, TESTING

5.2.1.8.1 PANS.— The form of test transmissions should be as follows:
a) the identification of the station being called;
b) the aircraft identification;
c) the words “RADIO CHECK”;
d) the frequency being used.

62- What is the meaning of “Out” in radiotelephony?

A. My transmission ended and any response is expected.
B. This exchange of transmission is ended and no response is expected.
C. Repeat all of your last transmission.
D. Pass me the following information.

63- What is the meaning of “Say again” in radiotelephony?

A. My transmission ended and no response is expected.
B. Repeat all or the following part of your last transmission.
C. Repeat all of your last transmission.
D. Pass me the following information.

64- When transmitting a message preceded by the phrase "TRANSMITTING BLIND DUE TO RECEIVER FAILURE" during an enroute flight, the aircraft station shall also:

A. Land at the nearest airfield/airport.
B. Join base leg when approaching the airfield for landing.
C. Advise the time of its next intended transmission.
D. Return to the airport of departure.

65- A message preceded by the phrase "TRANSMITTING BLIND DUE RECENER FAILURE" shall be transmitted:

A. On the regional guard frequency.
B. On the frequency presently in use.
C. On the international emergency frequency.
D. On all available aeronautical stations.

66- What is the correct way for the pilot to acknowledge that ATIS Information Golf has been received?

A. Information Golf.
B. Weather Golf received.
C. We have the Information.
D. We have the ATIS Golf.

67- A time of "13:20" hour is transmitted as:

A. One three two zero or two zero.
B. Thirteen twenty hours.
C. Twenty.
D. Twenty past eleven.

68- Before transmitting the pilot should:

A. Make sure that the aircraft is leveled off.
B. Listen out on the frequency to ensure no interference with another station already transmitting will occur.
C. Always write the message and read it during the transmission.
D. Make sure that the emergency frequency is tuned in at the same Time.

69- My message will be more effective and understandable if I:

A. Maintain the speaking volume clear with constant level.
B. Use the words twice method.
C. Stress the end of message in distress message.
D. Stress every beginning of message.

70- What is meant by good microphone technique?

A. Keep the microphone close away since it improves the readability.
B. Speak very loudly into the microphone.
C. Use a normal conversation tone, speak short and distinctly with plain language.
D. Make less use of hesitation sounds as ER.

71- In the event that a pilot is required to make a blind transmission, this should be made:

A. Only once on the designated frequency.
B. Twice on the designated frequency.
C. On the emergency frequency only.
D. During VFR flights only.

72- What shall the pilot read back for ATC instruction "CLIMB TO 2500 FEET"?

A. Climbing to two point five.
B. Up to two thousand five hundred.
C. Climbing to two thousand five hundred feet.
D. Climbing to two thousand five hundred.

73- What is the correct reply to the instruction "CLIMB TO FL280"?

A. Recleared Level Two Eight Zero.
B. Climb Two Eight Zero.
C. Climb to Two Hundred and Eighty.
D. Climb to Flight Level Two Eight Zero.

74- What is the correct reply to an ATC instruction which you cannot comply with?

A. Negative comply.
B. Negative instruction.
C. Negative compliance.
D. Unable.

75- Clearances relating to the runway in use shall be read back only if the aircraft is to:

A. Enter, land on, take off from, cross and backtrack.
B. Enter, cross and backtrack.
C. Land on and take off from.
D. Enter, land on, take off from and backtrack.

76- What does "SQUAWK IDENT" mean?

A. Select the SSR transponder code to 7000.
B. Select the SSR transponder mode to "ALT".
C. Operate the SSR transponder "special position identification" feature.
D. State the aircraft call sign three times.

77- What does the phrase "SQUAWK 1234" mean?

A. Give a short count for DF (direction finder).
B. Select code 1234 on the SSR transponder.
C. Make a test transmission on 123, 4 MHz.
D. Standby on frequency 123, 4 MHz.

78- RADAR instruct aircraft X-BC: "X-BC SQUAWK IDNET" what does this mean?

A. X-BC shall reselect his assigned mode and code.
B. Radar identification has been achieved by correlating an observed radar blip with aircraft XV-ABC.
C. X-BC should perform an identification turn of at least 020 degrees.
D. X-BC shall push the IDENT button.

79- The message addressed to an Area Control Centre "REQUEST RADAR VECTORS TO CIRCUMNAVIGATE ADVERSE WEATHER" is:

A. A meteorological message.
B. A flight safety message.
C. An urgency message.
D. A message relating to direction finding.

4.4.1.1.4 Meteorological messages (priority indicator GG) shall comprise:
a) messages concerning forecasts, e.g. terminal aerodrome forecasts (TAFs), area and route forecasts;
b) messages concerning observations and reports, e.g. METAR, SPECI.

80- A message concerning aircraft parts and material urgently required is:

A. A flight security message.
B. An urgency message.
C. A flight safety message.
D. A flight regularity message.

4.4.1.1.5 Flight regularity messages (priority indicator GG) shall comprise:

…

h) messages concerning parts and materials urgently required for the operation of aircraft.

81- Aeronautical messages are given an order of priority, which of the following statements reflects the correct order of priority?

A. Meteorological messages take precedence over direction finding messages.

B. Flight safety messages will be handled before urgency messages.

C. Messages relating to direction finding take precedence over flight regularity messages.

D. Flight safety messages take precedence over direction finding messages.

Message category and order of priority signal	*Radiotelephony signal*
a) Distress calls, distress messages and distress traffic	MAYDAY
b) Urgency messages, including messages preceded by the medical transports signal	PAN, PAN *or* PAN, PAN MEDICAL
c) Communications relating to direction finding	—
d) Flight safety messages	—
e) Meteorological messages	—
f) Flight regularity messages	—

82- What is the radiotelephony call sign suffix for the aeronautical station indicating aerodrome control service?

A. Apron
B. Control
C. Aerodrome
D. Tower

83- For aircraft call sign "Easy G-ABCD" the correct abbreviation is:

A. Easy Charlie Delta
B. Golf Charlie Delta
C. Easy Golf Charlie Delta
D. Easy Delta

84- RADAR instructs aircraft X-BC: "X-BC SQUAWK STANDBY". What does this mean?

A. X-BC is requested to standby on the frequency.
B. X-BC is requested to switch the transponder to standby position.
C. X-BC is requested to standby for radar vectors.
D. X-BC is requested to standby as the radar controller is busy.

85- RADAR informs aircraft X-BC: "X-BC IDENTIFIED". What does this mean?

A. Radar identification has been achieved.
B. X-BC is not visible on the radar screen.
C. X-BC should perform an identification turn.
D. X-BC should operate the IDENT button.

86- Which one of the following category of message has priority?

A. Urgency.
B. Distress.
C. Safety.
D. Regularity.

87- A Radar Information Service (RIS) provides:

A. Radar separation from all other traffic.
B. Information for IFR traffic only.
C. The bearing, distance and if known, the altitude of conflicting traffic.
D. Traffic information and avoiding action.

88- Which of the following frequencies is an international emergency frequency?

A. 122.500 MHz
B. 121.500 MHz
C. 121.050 MHz
D. 121.005 MHz

89- Which of the messages listed below shall not be handled by the aeronautical mobile service?

A. Meteorological messages.
B. Radio teletype messages.
C. Flight safety messages.
D. Urgency messages.

90- What does the word "CHECK" mean?

A. I understand your message.
B. Confirm your last transmission.
C. Read back my last instruction.
D. Examine a system or procedure.

91- Which phrase shall be used if you want to say "I WOULD LIKE TO KNOW "or "I WISH TO OBTAIN"?

A. Confirm
B. Report
C. Acknowledge
D. Request

92- How shall a pilot inform a radar control unit that the aircraft is not equipped with transponder?

A. No SSR.
B. Negative transponder.
C. Transponder not available.
D. Negative squawk.

93- Which phrase shall be used if the repetition of an entire message is required?

A. What was your message?
B. Repeat your message.
C. Say again.
D. Repeat your last transmission.

94- What does the word "APPROVED" mean?

A. Permission for proposed action granted.
B. That is correct.
C. Authorized to proceed under the conditions specified.
D. I repeat for clarity or emphasis.

95- The phrase "UNDER RADAR CONTROL" means:

A. ATC instructions may be obeyed at the pilot's discretion.
B. ATC instructions must be obeyed unless avoiding immediate danger.
C. ATC information is advisory.
D. ATC will provide information on other traffic but no avoiding action will be given.

96- What phrase shall be used when asking for the readability of a transmission?

A. Read you loud and clear.
B. Read back.
C. Report readability.
D. How do you read?

97- What is meant by the phrase "READABILITY4"?

reading you

A. Readable now and then.
B. Readable.
C. Perfectly readable.
D. Readable but with difficulty.

98- What is meant by the phrase "READABILITY2"?

A. Readable but with difficulty.
B. Readable.
C. Unreadable.
D. Readable now and then.

99- How shall a pilot inform the control tower that he is prepared for takeoff?

A. Ready to go.
B. Ready for takeoff.
C. Ready to line-up.
D. Ready for departure.

100- The expression "TRANSMITTING BLIND DUE TO RECEIVER FAILURE" implies that no answer is expected. It shall be used by:

A. An aircraft station being aware of receiver failure.
B. An aircraft station doing blind transmissions at a "non-towered" airfield.
C. A radar controller performing a PAR or SRE final approach.
D. A ground station broadcasting information to all listening stations.

101- After suffering a radio receiver failure, the pilots should make blind transmissions preceded by the phrase "TRANSMITTING BLIND DUE TO RECEIVER FAILURE" and subsequently:

A. Hold for 5 minutes.
B. Proceed to the pre-planned alternate.
C. Enter the next enroute holding pattern encountered.
D. Advise the time of the next intended transmission.

102- Must a general call be acknowledged?

A. Yes, but only from the station first called.
B. No.
C. Yes, if individual stations are subsequently called to acknowledge receipt.
D. Yes, from all stations in a random sequence.

2.8.1.3 When an aircraft wishes to broadcast information to aircraft in its vicinity, the message should be prefaced by the call “ALL STATIONS”. No reply is expected to such general calls unless individual stations are subsequently called upon to acknowledge receipt.

103- Which elements of instructions or information shall always be read back?

A. QNH, SSR code, approach aid serviceability.
B. QNH, weather information, runway-in-use.
C. ATC clearance, speed instructions, runway state information.
D. SSR code, QNH, takeoff clearance, speed instructions.

104- ATC clears TABAN 345 to descend from FL100 to FL80. What is the correct read back by the pilot?

A. Descending to 80, TABAN 345.
B. Leaving flight level 100 descending to flight level 80, TABAN 345.
C. Down to flight level 80, TABAN 345.
D. Leaving 100 to 80, TABAN 345.

105- The correct phraseology to instruct an aircraft to cease the MODE C SSR reply because of incorrect indications is:

A. SQUAWK STANDBY
B. STOP SQUAWK CHARLIE
C. STRANGLE THE PARROT
D. SELECT MODE ALPHA

106- RADAR instructs aircraft X-BC: "X-BC SQUAWK STANDBY". What does this mean?

A. X-BC is requested to standby on the frequency.
B. X-BC is requested to switch to standby position.
C. X-BC is requested to standby for radar vectors.
D. X-BC is requested to standby as the radar controller is busy.

107- All messages relating to an aircraft's climb or descent to a HEIGHT or ALTITUDE should:

A. Employ the word "TO" follow immediately by the word HEIGHT or ALTITUDE.
B. Avoid using the word "TO" altogether.
C. Employ the word "TO" follow immediately by the QFE or QNH.
D. Be preceded by the required altimeter subscale setting.

108- In case of a SSR transponder failure occurring after departure of an IFR flight, the pilot shall:

A. Land at the nearest suitable aerodrome for repair.
B. Inform the competent ATC unit immediately.
C. Squawk 7600.
D. Continue the flight in VMC.

109- The distress communication and silence conditions shall be terminated by transmitting a message. Which words shall this message include?

A. Disregard distress communication, OUT.
B. Emergency communication finished.
C. MAYDAY traffic ended.
D. Distress traffic ended.

110- Radio silence can be imposed by an aeronautical station in case of:

A. Technical difficulties.
B. Urgency communication.
C. Overload of the frequency.
D. Distress traffic.

111- Which of the following messages shall a station in control of distress use to impose silence?

A. STOP TRANSMITTING, EMERGENCY.
B. STOP TRANSMITTING, DISTRESS.
C. STOP TRANSMITTING, MAYDAY.
D. ALL STATIONS IN THIS FREQUENCY, MAYDAY TRAFFIC.

112- What does the instruction "ORBIT RIGHT" mean?

A. Make 360° turns to the right.
B. Turn right to avoid other traffic.
C. Right-hand circuits are in use.
D. Leave the runway to the right.

113- Which phrase shall be used if you want to say "AN ERROR HAS BEEN MADE IN THIS TRANSMISSION". The correct version is?

A. QNH 1017, negative QNH 1016.
B. QNH 1017, correction QNH 1016.
C. QNH 1017, negative 1016.
D. QNH 1017, negative I say again 1016.

114- What phrase(s) shall be used to confirm that a message has been repeated correctly?

A. That is right.
B. Correct.
C. Affirm.
D. That is affirmative.

115- When an aircraft station receives the call "ALL STATIONS MEHRABAD RADAR, DISTRESS TRAFFIC ENDED" it is requested:

A. To discontinue communication with MEHRABAD RADAR.
B. To impose silence to other stations in its vicinity.
C. To acknowledge receipt of this message.
D. To resume normal communication with MEHRABAD RADAR.

116- The distress signal and the distress message to be sent by an aircraft in distress should be on:

A. The FIS frequency designated for the airspace concerned.
B. The emergency frequency in any case.
C. The regional guard frequency.
D. The air-ground frequency in use at the time.

117- When an aircraft station receives the call "ALL STATIONS MEHRABAD RADAR, STOP TRANSMITTING MAYDAY" it is requested:

A. To continue normal communication on the frequency in use.
B. Not to interfere with the distress communication.
C. To assist Mehrabad RADAR in handling the distress traffic.
D. To leave the frequency in use.

118- In a distress situation it may be necessary to impose silence either on all stations or on a particular station. This action of imposing silence may be performed:

A. Only by the ground station controlling the frequency.
B. By either the aircraft in distress or the station in control of the distress incident.
C. By any station who considers it necessary to impose silence.
D. Only by the distress and diversion cell at the Rescue Control Centre (RCC).

119- On hearing an urgency message a pilot shall:

A. Impose radio silence on the frequency in use.
B. Acknowledge the message immediately.
C. Monitor the frequency to ensure assistance if required.
D. Change the frequency, because radio silence will be imposed on the frequency in use.

120- Which of the following calls is a "GENERAL CALL"?

A. EP-DEF Tehran CONTROL
B. EP-EFG, EP-FGH over.
C. ALL STATIONS Tehran CONTROL.
D. EP-ABC, EP-BCD, EP-CDE Tehran CONTROL.

121- How should aircraft EP-ABC call Shiraz TOWER on initial call?

A. TOWER EP-ABC
B. Shiraz TOWER E-BC
C. Shiraz EP-ABC
D. Shiraz TOWER EP-ABC

122- A signal sent by radiotelephony consisting of the spoken words "PANPAN, PANPAN, PANPAN" means:

A. An aircraft on final approach is starting the missed approach procedure.
B. Imminent danger threatens the aircraft and immediate assistance is required.
C. The aircraft is diverting from the route cleared because of a thunderstorm and asks for immediate preclearance.
D. The aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, but immediate assistance is not required.

123- An aerodrome located at Payam notified as having an Aerodrome Flight Information Service (AFIS) will identify itself to aircraft using the call sign:

A. Payam information
B. Payam radio
C. Payam tower
D. Payam ground

124- Which of the following abbreviated call signs of Cherokee EP-ABC is correct?

A. Cherokee E-BC
B. Cherokee EP-BC
C. Cherokee BC
D. Cherokee E-ABC

125- Aircraft E-BC has been instructed to contact Payam TOWER on frequency 118.4, what is the correct response to indicate that it will follow this instruction?

A. Payam TOWER E-BC.
B. Will change to TOWER E-BC.
C. Changing over E-BC.
D. 118.4 E-BC.

QUESTION	ANSWER	QUESTION	ANSWER	QUESTION	ANSWER	QUESTION	ANSWER
1	A	26	B	51	A	76	C
2	A	27	D	52	C	77	B
3	A	28	B	53	A	78	D
4	A	29	C	54	B	79	A
5	A	30	B	55	B	80	D
6	A	31	C	56	A	81	C
7	C	32	D	57	A	82	D
8	D	33	B	58	B	83	A
9	B	34	C	59	B	84	B
10	C	35	A	60	A	85	A
11	A	36	D	61	B	86	B
12	A	37	C	62	B	87	C
13	A	38	B	63	B	88	B
14	A	39	C	64	C	89	B
15	A	40	B	65	B	90	D
16	D	41	D	66	A	91	D
17	A	42	C	67	A	92	B
18	A	43	D	68	B	93	C
19	C	44	D	69	A	94	A
20	B	45	A	70	C	95	B
21	C	46	C	71	B	96	D
22	D	47	C	72	D	97	B
23	B	48	D	73	D	98	D
24	C	49	C	74	D	99	D
25	A	50	C	75	A	100	A

QUESTION	ANSWER	QUESTION	ANSWER	QUESTION	ANSWER	QUESTION	ANSWER
101	D	108	B	115	D	122	D
102	C	109	D	116	D	123	A
103	D	110	D	117	D	124	A
104	B	111	C	118	B	125	D
105	B	112	A	119	C		
106	B	113	B	120	C		
107	A	114	B	121	D		

End