



INTRODUCTION

The Amateur Radio Service is a radio-communication service used for self-training, inter-communication and technical investigations carried out by amateurs, or authorised persons interested in radio techniques solely with a personal aim and without pecuniary interests.

Amateur Radio services may provide alternatives for emergency communication in times of natural disasters.

In Brunei Darussalam, the Amateur Radio service is regulated by the Authority for Info-communications Technology Industry of Brunei Darussalam (AITI), and is recognised as an important part of the radio community. The International Telecommunication Union (ITU) has allocated frequency bands for Amateur Radio service internationally in a sharing basis and Brunei Darussalam is in the region 3 and zone 28.

Individuals wishing to obtain an amateur station licence which authorises him/her to establish and operate a station must first satisfy that he/she has the necessary qualifications and skills to operate an amateur station without causing any radio interference to other users or radio services.

This booklet is an introductory guide for persons who wish to operate an amateur radio station in Brunei Darussalam which outlines and explains the licensing requirements, operating procedures and licensing conditions.

REGULATORY POWERS

The AITI Order, 2001, gives AITI the power to regulate:

- Section 6 (1) (h) allows AITI to exercise licensing and regulatory functions in relation to telecommunications and radio-communications equipment systems and services in Brunei Darussalam
- Section 6 (1) (i) allows AITI to exercise licensing and regulatory functions in relation to the allocation and use of the radio frequency spectrum in Brunei Darussalam for all purposes
- Section 27 in the Second Schedule of the AITI Order 2001 provides AITI may conduct or supervise the conduct of proficiency examinations leading to certificates of competency for any person for the purpose of operating any telecommunication system and service or for the grant of a licence by the Authority

The Telecommunication Order, 2001, provides AITI with the following powers:

Section 5 provides any equipment to be used for connection to any telecommunication system or equipment shall be approved by AITI.

Section 9 provides any telecommunication system or equipment to be used shall be approved by AITI.

AMATEUR RADIO LICENCE CATEGORY

AITI issues two (2) types of Amateur Radio Licence.

1. Standard Class Licence

This is for all amateur radio operators. Those holding this licence are only allowed to transmit and receive in the VHF frequency band in the range of 144.000 MHz to 148.000 MHz.

2. Advanced Class Licence

Standard Class licence can upgrade their licence to Advanced Class Amateur Radio. The upgrade is subject to the conditions contained in paragraph 4.2. This operator is able to operate in the frequency band stated in the licence.

Licences that are issued by AITI are only valid to be used in the Brunei Darussalam territory.

LICENCE APPLICATION

Amateur radio station licences can only be applied by applicants who have attended and passed their Amateur Radio Examination.

Standard Class Licence Criteria

Applicant is required to submit the Amateur Radio application form together with the following documents:

Local

- A signed copy of identity card (I.C.)
- A valid amateur radio examination result slip
- Proof of purchase of amateur radio equipment

If the applicant is unable to submit the application personally, he/she shall provide his/her representative with:

- An authorisation letter signed by the applicant
- The application form must be signed by the applicant

Minors

- Applicants who are between the age of fourteen to seventeen (14-17) years may apply Standard Class licence
- A signed copy of I.C.
- A signed letter of consent from parents or guardians to allow them to apply for Amateur Radio Station Licence
- Applicants should also have a letter of consent and a signed copy of the guarantor's I.C. from a guarantor who holds a valid amateur radio station licence
- A valid amateur radio examination result slip
- Proof of purchase of amateur radio equipment

Foreign Class Licence

- Provide a valid Amateur radio station licence issued by his or her home country authority
- A signed copy of I.C. or passport
- Applicants should also have a letter of consent and a signed copy of the guarantor's I.C. from a guarantor who holds a valid amateur radio station licence
- Proof of purchase of amateur radio equipment



AITI Authority for
Info-communications
Technology Industry of Brunei Darussalam

LESEN STESEN RADIO

Dibahaskan dibawah Perintah Telekomunikasi 2001
dan Peraturan-Peraturan dibawahnya

RADIO STATION LICENCE

Issued in accordance with the Telecommunication Order 2001
and Regulations made thereunder

Number Lesen (Licence Number): AMS-L-Y00112233-01-2012-123456	Tarikh Mula Lesen (License Start Date): 01/01/2012	Tarikh Akhir Lesen (Licence End Date): 31/12/2012
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Kelas (Class): STANDARD	Isyarat Panggilan (Callsign): V892T	Jumlah Mst (Egof Quority): 1
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Lesen ini diberikan kepada (This license is issued to):

JOHN DOE

Alamat Perhubungan (Correspondence Address):

NO. 1, PERUMAHAN ABC,
GADONG, BE1118,
NEGARA BRUNEI DARUSSALAM

Alamat Pemasangan (Installation Address):

NO. 1, PERUMAHAN ABC,
GADONG, BE1118,
NEGARA BRUNEI DARUSSALAM

Jalur Frekuensi Frequency Band (MHz)	Kwasa Pancaran Power output (Watts)	Celatan Remarks
144 000 – 146 000	150	Simplex
146 0125 – 148 000	150	Duplex

BRAND: ICOM IC-V8000
SN: 123456

Bayaran (Payment): \$25.00	Dil. Resit (Receipt Number): 101181	Tarikh Bayaran (Payment Date): 01/01/2012
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Lesen ini tidak boleh dipindah milik
This license is non-transferable



LESEN INI TIDAK SAH TANPA BUKTI PEMBAYARAN PADA MUKASURAT INI
THIS LICENCE IS INVALID WITHOUT PROOF OF PAYMENT ON THIS PAGE

www.aiti.gov.bn

Block B12, Simpang 325 Kampung Ayerkelek Desa, Jalan Banjar, 858 88711, Negara Brunei Darussalam. Tel: (673) 2222032 Fax: (673) 2081223

Advanced Class Licence Criteria

Existing Standard Class Licence holders before June 2007

- They shall sit for another Amateur Radio examination and pass the Amateur Radio examination
- Provide a copy of Amateur Radio examination slip
- A copy of Standard Class licence where it must be active and valid
- Provide their Amateur Radio logbook for the previous six (6) months

New Standard Class Licence holders after June 2007

- The licensee must hold the Standard Class licence for a minimum period of six (6) months
- Provide a copy of Amateur Radio examination slip
- A copy of Standard Class licence must be active and valid
- Provide their Amateur Radio logbook for the previous six (6) months

Eligible Guarantor

An eligible guarantor for minor and foreign national applicants must:

- be a citizen or permanent resident of Brunei Darussalam
- hold a valid amateur radio station licence
- provide a letter of consent
- provide a signed copy of their I.C.
- be responsible for any activities including any payment required by the licensee
- the guarantor's letter of consent shall be valid until the expiry date of the licence

Validity

Each Amateur radio station licence comes into force on the registered date and is valid for the duration specified on the licence unless suspended or cancelled by AITI.

The Amateur radio station licence is only valid for:

- The named licensee
- The ownership and operation of radio-communication stations for the category described on the licence

Termination

If the licensee(s) decides to terminate his or her licence before the expiry date, they shall complete the termination form and submit to AITI, and be liable for any remaining amateur radio licence fees.

Failure to renew before the expiry date will result in the licence being terminated on the expiry date without further notice to the Licensee.

AMATEUR RADIO EQUIPMENT

Applicants are advised not to proceed with the purchase of equipment and installation of the station until their amateur radio station licence has been issued.

Amateur radio equipment can be purchased from authorised local dealers or from overseas.

Importation

For amateur radio equipment imported from overseas, he/she should seek for AITI's approval before purchase of the equipment.

AITI requires documents for further processing from the Government agency responsible for retaining equipment upon entry (or) in the case if the equipment being detained, AITI requires the "Detention receipt" or "Notice of seizure" issued by the Royal Brunei Customs & Excise, Ministry of Finance, Brunei Darussalam.

Fees

- Payment should be made in Brunei dollars, cash and is not refundable.
- Payment for Amateur radio station licence is charged per equipment basis

The charges can be seen in the table below:

No.	Types	Fee per year
1	Fixed Home Base Station	B\$ 25.00
2	Mobile Station	B\$ 25.00
3	Handheld	B\$ 25.00
4	Repeater Station	B\$ 100.00

Other payments are shown as below:

- Type Approval
B\$50.00 a unit (B\$300.00 for subsequent units)
- Import Permit
B\$20.00 per unit (valid for two (2) weeks)

OFFENCES AND PENALTIES

- A person who operates amateur radio without a valid licence in Brunei Darussalam shall be guilty of an offence under section 35 (1) of the Telecommunications Order 2001
- A person who operates amateur radio without unapproved equipment in Brunei Darussalam shall be guilty of an offence under section 34 of the Telecommunications Order 2001
- A person guilty of an offence shall be liable to a fine not exceeding Ten Thousand Brunei dollars (B\$10,000), imprisonment for a term not exceeding three (3) years or both

AMATEUR RADIO EXAMINATION

The Amateur Radio Examination is part of a procedure in obtaining an Amateur Radio licence. This is to ensure the licensee is familiar with the regulations, technical procedures and the operation of an Amateur Radio Station.

AITI will conduct Amateur Radio Examinations twice in a year. The date for the Amateur Radio Examination will be announced in local newspapers and on AITI's website.

Eligibility

For eligibility on Amateur Radio Examination applications, please refer to (page 6)

Registration and Submission

Applicants who are interested in applying for the Amateur Radio examination shall submit their application form to:

Customer Counter

*The Authority for Info-communications Technology Industry in Brunei Darussalam
Block B13, Simpang 32-5,
Kg Anggerek Desa, Jalan Berakas,
Bandar Seri Begawan BB3713
Negara Brunei Darussalam*

Working hours:*

Monday-Thursday: 8.15am -12pm, 1.30 - 3.45pm

Friday: 8.15 - 11.30am, 2.30 - 3.30pm

**Subject to change*

Applicants will only be guaranteed a place in the examination after they send out their application, payment and confirm their entry before the deadline.

Applicants must submit:

- the necessary registration form
- a signed copy of I.C.

Late registration will not be accepted and entertained.



Fees

The registration fee is Ten Brunei dollars (B\$10.00), with payment being non-refundable.

Applicant(s) will receive an acknowledgement receipt for proof of payment.

Examination Procedures

- Candidates must be inside the examination venue fifteen (15) minutes before the commencement of the examination. Candidates who arrive late will not be allowed to sit for the exam.
- The duration of the examination is two (2) hours. Candidates may leave the examination hall thirty (30) minutes from the start of the examination with the approval of the exam supervisor.
- Candidates must return the question paper and answer sheet to the exam supervisor before leaving the examination hall.
- Candidates must fill in their index and I.C. number on both question and answer sheets.
- Failure to attend the Amateur Radio Examination will be considered as withdrawal and payment for the examination fee will not be refunded.
- Any mobile phone or other types of communication devices brought by candidates must be switched off for the duration of the examination.
- Any candidate who do not comply with the rules and regulations of the examination, will automatically be disqualified.
- Candidates must only write on the provided answer papers in BLUE or BLACK INK.



- The use of electronic calculators are allowed. Other devices such mobile phones are not allowed to be used for any calculations during the exam.
- Each candidate is only given One (1) Question Paper and One (1) Answer Sheet.
- All/any calculations must be done on the question paper.
- The date of the examination result will be announced during the examination.
- Both question and answer sheets must be returned to the exam supervisor.
- Candidates must attend the examination in smart casual shirts, smart long pants and smart shoes.

Amateur Radio Examination consists of two (2) types examination:

The Amateur Radio Examination consists of a written and practical examination which will be conducted on different dates:

Written Examination

Duration : 2 hours

Amateur Radio Written Examination consists of two (2) sections with thirty (30) questions in each section:

- Section A:** Licensing conditions, operating procedures with practices and transmitter interference
- Section B:** Elementary theory of electricity, communication and transmitting techniques.

Practical Examination

The practical examination shall be conducted on an individual basis.
Duration : 1 hour

Amateur Radio Practical Examination consists of three (3) sections:

Section A:	Assembling & Identifying
Section B:	Amateur Radio Etiquette & Communication
Section C:	Summarising the procedures and sketches of assembled equipment

Amateur Radio Examination Past Papers

The Amateur Radio Written Examination Past Papers can be downloaded from AITI's website.

Examination Results

Results will be announced within a maximum period of one (1) month from the date of examination and will be available at AITI's Customer Service Counter or AITI's website.

Marking/Scoring (for written exam only)

Candidates must pass both section A and section B. Failure in either section will result in the overall failing of that examination paper. The passing mark for both the written and practical examination is 60%.

Result slip

Candidates can view their results using their examination index number when available on AITI's website at an announced date. The registered candidate(s), either pass or fail, shall receive an Amateur Radio Examination Result Slip and must collect it from AITI's Customer Counter.



AMATEUR RADIO RULES AND CONDITIONS

RULES AND CONDITIONS GOVERNING THE OPERATION OF AN AMATEUR RADIO STATION

The Telecommunications (Radio-communication) Regulation

The licensee shall observe and comply with the relevant provisions of the Telecommunications (Radio-communication) Regulations and any amendments made thereof.

International Requirement

The licensee shall observe and comply with the relevant provisions of the Radio Regulations of the International Telecommunication Convention.

Frequency Bands and Classes of Emission and Transmitting Power

The transmitting frequency bands allowed from an amateur radio station shall be at the discretion of AITI but within the limits prescribed by the Radio Regulations, annexed to International Telecommunication Convention of the International Telecommunication Union. AITI has waived the frequency application, processing fees and the annual fees for use of a frequency in operating an amateur radio station.

Table 1 shows lists of frequency bands use and power output of emission allowed in each band for amateur radio in Brunei Darussalam. The maximum power allowed from an amateur transmitter shall be at the discretion of AITI and shall be specified in the licence.

Table 1 – List of Amateur Radio Frequency

HF/VHF Frequency Band (MHz)	Power Output Watts	Remarks
1.800 – 2.000	10	
3.500 – 3.900	150	
7.000 – 7.100	150	
10.100 – 10.150	150	Secondary Basis
14.000 – 14.350	150	
18.068 – 18.168	150	
21.000 – 21.450	150	
24.890 – 24.990	150	
28.000 – 29.700	150	
144.0000 – 146.000	150	Simplex
146.0125 – 148.000	150	Duplex

Log Book Requirement

A permanent record will be kept in a log-book and serially numbered (not loose leaf) showing the following:

- date and time of commencement and ending of every call made from the station
- call sign of the stations from which messages addressed to the station are received or to which messages are sent
- time (local/GMT) of commencement and termination of radio traffic
- test transmission of the station
- frequency band(s) and class or classes of emission in each case

No gaps shall be left between entries and all entries shall be made at the time of sending and receiving.

Inspection of Station

The licensee of an amateur station shall at any reasonable time, permit an authorized officer of AITI to inspect and test the station equipment.

Operational Conditions

A licensee shall observe the following conditions:-

- The licenced station shall only be operated at locations approved by AITI and as shown in the licence.
- The station shall in all cases be operated by the licensee or by other licenced amateurs in the presence of the licensee, or, in the case of a training institution, by members of such institution in the presence of the licensee. The licensee will at all times be responsible for the proper operations of the station.
- The tuning of the transmitter shall be accomplished by methods which ensure a high degree of accuracy and all emissions shall be maintained within the authorised bands so that no appreciable energy is radiated on any frequency outside the limits of the authorised bands.
- A satisfactory method of frequency stabilisation shall be employed in sending equipment comprised in the station. Equipment shall be provided capable of verifying that the sending equipment comprised in the station is operating with emissions within the authorised bands.
- The station shall always be equipped with receiving as well as transmitting equipment.
- All equipment used or intended to be used by the licensee shall be erected, fixed, placed and used, so as not to interfere with the efficient and convenient working of other authorised stations.
- The licensee shall seek the approval of AITI in writing of any change of equipment, antenna installation, location and address of the licensee.
- The licensee shall be identified by the transmission of a call sign assigned to him by AITI at the beginning and end of each period of transmission.

Transmission, Procedure & Limitation

- The station may be operated at any time provided that no period of uninterrupted transmission shall exceed ten minutes.
- Messages may be exchanged with other licenced amateur stations except where the Government has prohibited communication of this nature.
- Messages shall be sent in plain language and shall relate solely to the licensee's experiments or to the licensee's personal affairs (not being business affairs or transactions) or to such personal affairs of the person with whom the licensee is communicating. The station shall not be used for sending news, advertisements, communications of a business or non-experimental characters, messages for pecuniary rewards, or messages for or on behalf of a third party.
- No message which is grossly offensive or of an indecent or obscene character shall be sent.
- Before making any call or test transmission, the frequency on which it is proposed to transmit should be monitored to ensure the transmission will not cause interference to other stations.
- In calling another station, the call sign of that station shall be sent at least three (3) times but not more than eight (8) times after which the signal `de' for `from' shall be sent once and the call sign of the calling station three (3) times. When a station called does not reply to a call sent three (3) times at intervals of two (2) minutes, the calling shall cease and may not be resumed until after an interval of fifteen (15) minutes.
- In answering a call, the call sign of the calling station shall be sent three (3) times, the signal `de' once and the call sign of the answering station three (3) times.
- The licensee shall use the accepted practice of transmitting messages and shall be conversant with the accepted international Q codes.

AMATEUR RADIO CALL SIGN

CALL SIGN

All radio-communication transmissions shall be capable of being identified by identification signals or by other means.

For a radio-communication station that is opened to the international public correspondence and capable of causing harmful interference beyond its national boundary as in the case of the Amateur Radio Service, the station shall carry a call sign in conformity with the International Call Sign Series 1 allocated to the administration by the International Telecommunity Union (ITU).

The ITU clearly defines the formation of call signs for the Amateur Radio Service in *Article 19 of the ITU Radio Regulations*.

English is the Mandatory Language to be used for Call Signs, particularly for Amateur radio operators who must transmit their call sign from the beginning and at the end of the conversation.

Formation of the Amateur Radio Service Call Sign

The ITU has allocated the prefixes V8 to Brunei Darussalam for all stations that are opened to international public correspondences and other stations that are capable of causing harmful interference beyond the Brunei Darussalam boundary.

In the case of the Amateur Radio service, the call sign for an Amateur Radio Service station is formed by two (2) characters followed by a digit and a group of not more than three (3) letters. Thus, the call sign of a station in the Amateur Radio Service in Brunei Darussalam would be:-

V	8	L1	L2	L3	L4
---	---	----	----	----	----

where :

V8 is National prefixes

L1 is any digit from 2 to 9

L2 L3 L4 is any letter from A to Z

Example : V84ITI

**1 Appendix 42 (WRC2007) Table of allocation of international call sign series

Allocation of Brunei Darussalam Amateur Radio Service Call Sign

The Amateur Radio Service will be allocated with a call sign as in Table 1 as follows:-

Table 1: Brunei Amateur Radio Service Call Sign

Prefix for (Advanced Class)	Prefix for (Standard Class)
V85LL	-
V85LLL	V89LLL

Interested applicants may state his/her preference for a specific call sign.

AITI will consider the request on a first come first served basis.

In the case whereby the preferred call sign is not available or the applicant does not state his preference, AITI will allocate a call sign as deemed fit.

No changes in call sign shall be allowed except for upgrading from the Standard Class to Advanced Class.

Furthermore, a payment of One hundred Brunei dollars (B\$100.00) shall be made before a new call sign can be issued.

A Bruneian or Permanent Resident who holds a valid Amateur Radio licence issued by a foreign authority may be allocated with a Call Sign in Brunei Darussalam subject to the validation and verification.

Call Signs for Special Events and Purposes

For special events such as Jamborees On The Air and experimental station operations, Amateur Radio Club, Beacons and Repeaters, the call signs could be allocated according to the following format:-

Table 2: Brunei Amateur Radio Service Call Sign for Special Events and Purposes

Event/Purpose	Bruneian Amateur Radio Service Call Sign
Experimental	V84ELL
Special Events	V84SLL
Amateur Radio Beacons	V84BLL
Amateur Radio Club	V84CLL
Amateur Radio Gateways	V84GLL
Amateur Radio Repeaters	V84RLL

Where LL may represent any letter from A to Z

Revocation and Reallocation of Call Signs

Standard Class call signs must be upgraded to Advanced Class call signs once the licence holder progresses to Advanced Class call signs. An Amateur Radio Service licence holder who fails to renew the expiry of his Amateur Radio station licence will have his call sign revoked. In the event of the demise of an Amateur Radio station licence holder, the allocated call sign may be revoked.

The revoked call signs may be re-allocated to new applicants after a period of five (5) years.

Foreign Amateur Radio Operator Call Sign

A visiting foreign Amateur Radio Service operator who holds a valid Amateur Radio Service licence issued by the authority of his country would be allocated with a call sign during the period of his residency in Brunei as follows:-

Prefix for (Advanced Class)	Prefix for (Standard Class)
V85/home country call sign	V89/home country call sign

Reserved Call Sign

The combination of certain letters in a call sign may depict unacceptable words such as V8L1SEX or sound indecent such as V8L1AQR or cause confusion with the Q code series which are reserved by the ITU for the Maritime Mobile Service.

Advanced Class			Standard Class		
Prefix V82	Prefix V86	Prefix V88	Prefix V83	Prefix V87	Prefix V89
V82QAA	V86QAA	V88QAA	V83QAA	V87QAA	V89QAA
To	To	To	To	To	To
V82QAZ	V86QAZ	V88QAZ	V83QAZ	V87QAZ	V89QAZ
V82ASS	V86ASS	V88ASS	V83ASS	V87ASS	V89ASS
V82GAY	V86GAY	V88GAY	V83GAY	V87GAY	V89GAY
V82SEX	V86SEX	V88SEX	V83SEX	V87SEX	V89SEX
V82SOS	V86SOS	V88SOS	V83SOS	V87SOS	V89SOS
V82XXX	V86XXX	V88XXX	V83XXX	V87XXX	V89XXX

NOTE:

- The reserved call sign is not limited to the above call signs in the above table.
- Award of requested call sign is subjected to AITI approval.

ANNEXES – OPERATING SIGNALS FOR AMATEUR RADIO USERS

ANNEX 1 - Phonetic alphabet and numbers

When using telephony, words and call signs may be misunderstood because of phonetic similarity. To overcome this difficulty, the phonetic alphabet has been introduced. Emphasis should be placed on the syllable which is shown in capital letters.

The tables below show a list of operating signals:

Phonetic Alphabet

Letter	Code Words	Spoken As	Letter	Code Words	Spoken As
A	Alpha	AL fah	N	November	No Vern ber
B	Bravo	BRAH voh	O	Oscar	OSS cah
C	Charlie	CHAR lee or SHAR lee	P	Papa	Pah PAH
D	Delta	DELL tah	Q	Quebec	Keh BECK
E	Echo	ECK oh	R	Romeo	ROW me oh
F	Foxtrot	FOKS trot	S	Sierra	See AIR rah
G	Golf	GOLF	T	Tango	TANG go
H	Hotel	Hoh TEL	U	Uniform	YOU nee form
I	India	IN DEE AH	V	Victor	VIC tah
J	Juliet	JU lee ETT	W	Whisky	WISS key
K	Kilo	KEY loh	X	X-ray	ECKS ray
L	Lima	LEE mah	Y	Yankee	YANG key
M	Mike	MIKE	Z	Zulu	ZOO loo

Phonetic Numbers

Numbers	Spoken As	Numbers	Spoken As
1	WUN	6	SIX
2	TOO	7	SEVEN
3	THUH-REE	8	AIT
4	FO-WER	9	NINER
5	FI-YIV	10	ZERO

ANNEX 2 - Morse Code

Letters

A	•-	ditdah	J	•--	ditdahdahdah	S	•••	ditditdit
B	-•••	dahditditdit	K	--•-	dahditdah	T	-	dah
C	-•••	dahditdahdit	L	••••	ditdahditdit	U	••-	ditditdah
D	-••	dahditdit	M	--	dahdah	V	•••-	ditditditdah
E	•	dit	N	-•	dahdit	W	•--	ditdahdah
F	••••	ditditdahdit	O	---	dahdahdah	X	-••-	dahditdahdah
G	--•	dahdahdit	P	••••	ditdahdahdit	Y	-••-	dahditdahdah
H	••••	ditditditdit	Q	--•-	dahdahditdah	Z	-•••	dahdahditdit
I	••	ditdit	R	•••	ditdahdit			

Figures

1	•-----	ditdahdahdahdah	6	-••••	ditdahdahdah
2	••-----	ditditdahdahdah	7	--••••	dahditdah
3	•••-----	ditditditdahdah	8	----•••	ditdahditdit
4	••••-----	ditditditditdah	9	-----•	dahdah
5	•••••	ditditditditdit	0	-----	dahdit

Full Stop	•••••-	ditdahditdahditdah
Comma	--•••-	dahdahditditdahdah
Oblique or slash (/)	-••••	dahditditdahdit
Question mark (?)	••••••	ditditdahdahditdit

Procedural Signals

Commencing / Beginning signal	-•••-	dahditdahditdah
End of Transmission	•••••	ditdahditdahdit
Error	••••••••	ditditditditditditditdit

Spacing and Length of Signals

- A dash is equal to three (3) dots.
- The space between the signals forming the same letter is equal to one (1) dot.
- The space between two (2) letters is equal to three (3) dots.
- The space between two (2) words is equal to seven (7) dots.

ANNEX 3 - Q CODES

Operators often use the Q code as a form of abbreviation. Q signals can be in the form of a question or response and often use suffixes to convey additional information.

Below is an example on how Q code works and how to use it.
 Question; QTH? (What is your location?)
 Answer; QTH Subok (My location is Subok.)

The table below shows a list of Q signals that are commonly used:

Q Code	Meaning	
	Question	Statement
QRA	What is the name of your station?	The name of my station is
QRG	Will you tell me my exact frequency (or that of ...?)	Your exact frequency is ... kHz.
QRH	Does your frequency vary?	Your frequency varies.
QRI	What is the tone of my transmission?	The tone of my transmission is ... (a) good (b) variable (c) bad
QRK	What is the intelligibility of my signals?	The intelligibility of your signal is :
QRM	Is my transmission being interfered with?	I am being interfered with :
QRN	Are you troubled by static?	I am troubled by static with :
QRO	Shall I increase transmitter power?	Increase power
QRP	Shall I decrease transmitter power?	Decrease power
QRQ	Shall I send faster?	Send faster (.... words per minute)
QRS	Shall I send more slowly?	Send more slowly (.... words per minute)
QRT	Shall I stop sending?	Stop sending
QRU	Have you anything for me?	I have nothing for you.
QRV	Are you ready?	I am ready
QRQ	Shall I inform that you are calling onKHz?	Please inform that I am calling onKHz
QRX	When will you call me again?	I will call you again at ... hours (on ... kHz or MHz)
QRZ	Who is calling me?	You are being called by on KHz

Q Code	Meaning	
	Question	Statement
QSA	What is the strength of my signal (or those of)?	The strength of your signal (or those of ...) is :
QSB	Are my signals fading?	Your signal is fading
QSD	Are my signal mutilated/ Is my keying defective?	Your signal are mutilated/ Your keying is defective
QSG	Shall I send messages at a time? How many messages should I send at a time?	Send messages at a time.
QSK	Can you hear me between your signals and if so may I break in your transmissions?	I can hear you between my signals; break in on my transmission
QSL	Can you acknowledge receipt?	I am acknowledge receipt
QSM	Shall I repeat?	Repeat the last message you sent me (or message number ...).
QSN	Did you hear me (or) on KHz?	I heard you (or) onKHz.
QSO	Can you communicate with ... direct?	I can communicate with ... direct (or relay through ...)
QSP	Will you relay to ...?	I will reply to ...
QST	Attention all radio amateurs	
QSU	Shall I send or reply on this frequency (or on KHz)	Send or reply on this frequency (or on KHz)
QSV	Shall I send a series of V's for adjustment on this frequency?	Send a series of V's
QSX	Will you listen to (callsign/s) on ... KHz or MHz?	I am listening to (callsign/s) on ... KHz or MHz
QSY	Shall I change to another frequency? (or on ... kHz or MHz)	Change to transmission on another frequency (or on ...kHz or MHz)
QSZ	Shall I send each word or group more than once?	Send each word or group twice (or ...times)
QTA	Shall I cancel message number?	Cancel message number
QTB	Do you agree with my counting of words?	I disagree with your count of words. I will repeat the first letter of each word in the message.
QTH	What is your location?	My location is ...
QTR	What is the correct time?	The correct time is
QUM	May I resume normal working?	Normal working may be resumed

