

MC ELROY CHART OF CODES AND SIGNALS

Enjoy the following figures. Well, maybe there's something to be learned...

McELROY CHART OF CODES AND SIGNALS

RESPECTFULLY DEDICATED TO THE
RADIOMEN OF OUR ARMED FORCES AND MARITIME SERVICES

INTERNATIONAL FLAG SIGNALS, INTERNATIONAL MORSE, COMMERCIAL "Z" SIGNALS, AERONAUTICAL "O" SIGNALS, AMERICAN MORSE, SERAPHIM CODE, GREEK, RUSSIAN, ARABIC, TURKISH, POSTAL TELEGRAPH - WESTERN UNION PHONETIC ALPHABET, JAPANESE MORSE, GOVERNMENT PRESCRIBED PHONING, "O" SIGNALS.

THE McELROY METHOD FOR TRANSCRIPTION OF RADIO TELEGRAPH SIGNALS

1 2 3 4 5 6 7 8 9 0 - =

Q W E R T Y U I O P

A S D F G H J K L ; :

Z X C V B N M , . ?

U.S. ARMY AND U.S. NAVY PHONETIC ALPHABET

UNITED WE

McELROY MANUFACTURING CORPORATION
82 BROOKLINE AVENUE, BOSTON, MASSACHUSETTS

On the following pages you will discover the details.

INTERNATIONAL MORSE

(CONTINENTAL CODE)

LETTERS	OPTIONAL LETTERS	PUNCTUATIONS AND OTHER SIGNS
A ..	ä	Period
B	á or ã	Comma
C	ch	Colon
D ...	é	Question mark
E .	ñ	Apostrophe
F	ö	Hyphen
G ...	ü	Fraction bar
H	1	Brackets
I ..	2	Double hyphen
J	3	Underline
K ...	4	Understood
L	5	Error
M ..	6	End of message
N ..	7	Invitation to transmit ...
O ...	8	Wait
P	9	End of work
Q	0	Starting signal
R ...	1 ..	Separation signal
S ...	2 ...	*Semicolon
T -	3	*Quotation mark
U ...	4	
V	5	
W	6	
X	7	
Y	8 ...	
Z	9 ..	
	0 -	

Numerals and punctuation marks are the same in the codes for all languages.

*Not official but in general use.

AMERICAN MORSE

A	..	1	----	Paranthesis (	.....	--
B	....	2	.....	)	.....	...
C	...	3	.....	Quotation	----	--
D	---	4	.....	End of quotation	----	----
E	.	5	---	Colon dash	---	----
F	---	6	.....	Capitalized letter	..	----
G	---	7	----	Small letter	-----	
H	....	8	.....	Colon followed by quotation	----	----
I	..	9	----	Semicolon	...	..
J	....	0	—	Paragraph	----	
K	---			Period	-----	
L	—			Comma	----	
M	--			Hyphen	---	----
N	--			Question mark	-----	
O	..			Exclamation mark	----	
P	.....			Colon	---	..
Q	....			Apostrophe	----	----
R	...			Dollar	---	----
S	...			Cents	..	.
T	—			Pound Sterling	—	----
U	---			Shilling	---	--
V	....			Percent	..	....
W	---					
X	....				
Y	... ..				
Z	....				
&					

Punctuation composed by Walter P. Phillips in 1876. He also made a compilation of few letter abbreviations of about 2000 commonly used words. This "Phillips Code" is used by newspaper telegraphers.

GREEK

GREEK LETTER	MORSE SYMBOL	
Α	..	Alpha
Β	Beta
Γ	---	Gamma
Δ	---	Delta
Ε	.	Epsilon
Ζ	Zeta
Η	Eta
Θ	Theta
Ι	..	Iota
Κ	---	Kappa
Λ	Lambda
Μ	..	Mu
Ν	..	Nu
Ξ	Xi
Ο	---	Omicron
Π	Pi
Ρ	---	Rho
Σ	---	Sigma
Τ	-	Tau
Υ	Ypsilon
Φ	Phi
Χ	Chi
Ψ	Psi
Ω	---	Omega
ΗΥ	Eta Ypsilon
ΥΙ	Ypsilon Iota
ΟΥ	...	Omicron Ypsilon
ΑΙ	Alpha Iota
ΑΥ	Alpha Ypsilon
ΕΥ	Epsilon Ypsilon
ΟΙ	Omicron Iota

RUSSIAN

RUSSIAN LETTER	MORSE SYMBOL	
А	..	А
Б	В
В	---	У
Г	---	Г
Д	---	Д
Е, Э	.	Е
Ж	Ж
З	З
И	..	И
Й	Й
К	---	К
Л	Л
М	..	М
Н	..	Н
О	---	О
П	Р
Р	---	Р
С	---	С
Т	-	Т
У	---	У
Ф	Ф
Х	Х
Ц	ТС
Ч	СН
Ш	Ш
Щ	ШСН
Ъ, ь	Mute
Ы	И
Ю	УУ
Я	УА

ARABIC

ARABIC LETTER	MORSE SYMBOL	
ا	--	Alif
ب	----	Ba
ت	-	Ta
ث	----	Tha
ج	----	Jeem
ح	----	Ha
خ	---	Kha
د	---	Dal
ذ	----	Dhal
ر	---	Ra
ز	----	Zay
س	---	Seen
ش	----	Sheen
ص	----	Sad
ض	----	Dad
ط	---	Ta
ظ	----	Za
ع	----	Ain
غ	---	Ghain
ف	----	Fa
ق	----	Qaf
ك	---	Kaf
ل	----	Lam
م	--	Meem
ن	--	Noon
ه	----	He
و	---	Waw
ي	-----	Lam-Alif
يا	--	Ya

TURKISH

A	--
B	----
C	----
Ç	-----
D	---
E	.
F	----
G	---
H	----
I	--
J	----
K	---
L	----
M	--
N	--
O	---
Ö	----
P	----
R	---
S	---
Ş	----
T	-
U	---
Ü	----
V	----
Y	----
Z	----

JAPANESE MORSE

(SOMETIMES REFERRED TO AS KATA KANA RADIO CODE)

A ア	KA カ	SA サ	TA タ	NA ナ	HA ハ	MA マ	YA ヤ	RA ラ	WA ワ
I イ	KI キ	SI シ	TI チ	NI ニ	HI ヒ	MI ミ	I イ	RI リ	(W)I ヰ
U ウ	KU ク	SU ス	TU ツ	NU ヌ	HU フ	MU ム	YU ユ	RU ル	U ウ
E エ	KE ケ	SE セ	TE テ	NE ネ	HE ヘ	ME メ	E エ	RE レ	(W)E ヱ
O オ	KO コ	SO ソ	TO ト	NO ノ	HO ホ	MO モ	YO ヨ	RO ロ	WO ヲ
N ン	NIGORI "	HAN-NIGORI °	HYPHEN |	PERIOD .	BRACKETS ()	QUOTES "	PARAGRAPH ¶	QUESTION MARK ?	

POSTAL TELEGRAPH — WESTERN UNION PHONETIC ALPHABET

Adam	Henry	Oliver	Walter
Baker	Mike	Paul	Wells
Chicago	John	Queen	William
Denver	King	Robert	Wynne
Edward	Louis	Sam	Young
Frank	Mary	Thomas	Zoe
George	Maxwell		

U. S. ARMY AND U. S. NAVY PHONETIC ALPHABET

Alpha	Bravo	Charlie	Delta
Echo	Foxtrot	Golf	Hotel
India	Juliett	Kilo	Lima
Mike	November	Oscar	Papa
Romeo	Tango	Uniform	Victor
X-ray	Yankee	Zulu	

"Q" SIGNALS

(THE SIGNALS TAKE THE FORM OF ADVICES WHEN THE QUESTION MARK IS OMITTED)
Originally developed for ship radiotelegraph communications, they are now used in all radiotelegraph services.

<p>QRA What is the name of your station?</p> <p>QRB How far approximately are you from my station?</p> <p>QRC What company (or State Administration) settles the accounts for your station?</p> <p>QRD Where are you based and where are you from?</p> <p>QRF Will you tell me my exact frequency (wave-length) in kc/s (or m)?</p> <p>QRH Does my frequency (wavelength) vary?</p> <p>QRI Is my note good?</p> <p>QRJ Do you receive me badly? Are my signals weak?</p> <p>QRK What is the readability of my signals (1 to 5)?</p> <p>QRL Are you busy?</p> <p>QRM Are you being interfered with?</p> <p>QRN Are you troubled by atmospheric?</p> <p>QRO Shall I increase power?</p> <p>QRP Shall I decrease power?</p> <p>QRQ Shall I send faster?</p> <p>QRS Shall I send more slowly?</p> <p>QRT Shall I stop sending?</p> <p>QRU Have you anything for me?</p> <p>QRV Are you ready?</p> <p>QRW Shall I tell you that you are calling him on kc/s (or m)?</p> <p>QRX Shall I wait? When will you call me again?</p> <p>QRY What is my turn?</p>	<p>QRZ Who is calling me?</p> <p>QSA What is the strength of my signals (1 to 5)?</p> <p>QSB Does the strength of my signals vary?</p> <p>QSD Is my keying correct; are my signals distinct?</p> <p>QSG Shall I send telegrams (or one telegram) of a line?</p> <p>QSI What is the charge per word for including your internal telegraph charge?</p> <p>QSK Shall I continue with the transmission of all my traffic, I can hear you through my signals?</p> <p>QSL Can you give me acknowledgment of receipt?</p> <p>QSM Shall I repeat the last telegram I sent you?</p> <p>QSO Can you communicate with direct (or through the medium of)?</p> <p>QSP Will you retransmit to free of charge?</p> <p>QSR Has the distress call received from been cleared?</p> <p>QSU Shall I send (or reply) on kc/s (or m) and/or on waves of type A1, A2, A3, or B?</p> <p>QSV Shall I send a series of VVV?</p> <p>QSW Will you send on kc/s (or m) and/or on waves of type A1, A2, A3 or B?</p> <p>QSX Will you listen for (call sign) on kc/s (or m)?</p> <p>QSY Shall I change to transmission on kc/s (or m) without changing the type of wave? OR Shall I change to transmission on another wave?</p> <p>QSZ Shall I send each word or group twice?</p> <p>QTA Shall I cancel telegram No. as if it had not been sent?</p> <p>QTB Do you agree with my number of words?</p> <p>QTC How many telegrams have you to send?</p> <p>QTE* What is my true bearing in relation to you? OR What is my true bearing in relation to (call sign)? OR What is the true bearing of (call sign) in relation to (call sign)?</p>	<p>QTF Will you give me the position of my station according to the bearings taken by the direction-finding stations which you control?</p> <p>QTG Will you send your call sign for fifty seconds followed by a dash of ten seconds on kc/s (or m) in order that I may take your bearing?</p> <p>QTH What is your position in latitude and longitude (or by any other way of showing it)?</p> <p>QTI What is your true course?</p> <p>QTJ What is your speed?</p> <p>QTM Send radioelectric signals and submarine sound signals to enable me to fix my bearing and my distance.</p> <p>QTO Have you left dock (or port)?</p> <p>QTP Are you going to enter dock (or port)?</p> <p>QTQ Can you communicate with my station by means of the International Code of Signals?</p> <p>QTR What is the exact time?</p> <p>QTS What are the hours during which your station is open?</p> <p>QUA Have you news of (call sign of the mobile station)?</p> <p>QUB Can you give me in this order, information concerning: visibility, height of clouds, ground wind for (place of observation)?</p> <p>QUC What is the last message received by you from (call sign of the mobile station)?</p> <p>QUD Have you received the urgency signal sent by (call sign of the mobile station)?</p> <p>QUF Have you received the distress signal sent by (call sign of the mobile station)?</p> <p>QUG Are you being forced to alight in the sea (or to land)?</p> <p>QUH Will you indicate the present barometric pressure at sea level?</p> <p>QUJ* Will you indicate the true course for me to follow, with no wind, to make for you?</p> <p>QUK Can you tell me the condition of the sea observed at (place or co-ordinates)?</p> <p>QUL Can you tell me the swell observed at (place or co-ordinates)?</p> <p>QUM Is the distress traffic ended?</p>
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*In certain aeronautical services "true course" and "true bearing" are called "geographic course" and "geographic bearing."

QRA What is the name of your station?

<p>QRZ Who is calling me?</p> <p>QSA What is the strength of my signals (1 to 5)?</p> <p>QSB Does the strength of my signals vary?</p> <p>QSD Is my keying correct; are my signals distinct?</p> <p>QSG Shall I send telegrams (or one telegram) of a line?</p> <p>QSI What is the charge per word for including your internal telegraph charge?</p> <p>QSK Shall I continue with the transmission of all my traffic, I can hear you through my signals?</p> <p>QSL Can you give me acknowledgment of receipt?</p> <p>QSM Shall I repeat the last telegram I sent you?</p> <p>QSO Can you communicate with direct (or through the medium of)?</p> <p>QSP Will you retransmit to free of charge?</p> <p>QSR Has the distress call received from been cleared?</p> <p>QSU Shall I send (or reply) on kc/s (or m) and/or on waves of type A1, A2, A3, or B?</p> <p>QSV Shall I send a series of VVV?</p> <p>QSW Will you send on kc/s (or m) and/or on waves of type A1, A2, A3 or B?</p> <p>QSX Will you listen for (call sign) on kc/s (or m)?</p> <p>QSY Shall I change to transmission on kc/s (or m) without changing the type of wave? OR Shall I change to transmission on another wave?</p> <p>QSZ Shall I send each word or group twice?</p> <p>QTA Shall I cancel telegram No. as if it had not been sent?</p> <p>QTB Do you agree with my number of words?</p> <p>QTC How many telegrams have you to send?</p> <p>QTE* What is my true bearing in relation to you? OR What is my true bearing in relation to (call sign)? OR What is the true bearing of (call sign) in relation to (call sign)?</p>	<p>QTF Will you give me the position of my station according to the bearings taken by the direction-finding stations which you control?</p> <p>QTG Will you send your call sign for fifty seconds followed by a dash of ten seconds on kc/s (or m) in order that I may take your bearing?</p> <p>QTH What is your position in latitude and longitude (or by any other way of showing it)?</p> <p>QTI What is your true course?</p> <p>QTJ What is your speed?</p> <p>QTM Send radioelectric signals and submarine sound signals to enable me to fix my bearing and my distance.</p> <p>QTO Have you left dock (or port)?</p> <p>QTP Are you going to enter dock (or port)?</p> <p>QTQ Can you communicate with my station by means of the International Code of Signals?</p> <p>QTR What is the exact time?</p> <p>QTS What are the hours during which your station is open?</p> <p>QUA Have you news of (call sign of the mobile station)?</p> <p>QUB Can you give me in this order, information concerning: visibility, height of clouds, ground wind for (place of observation)?</p> <p>QUC What is the last message received by you from (call sign of the mobile station)?</p> <p>QUD Have you received the urgency signal sent by (call sign of the mobile station)?</p> <p>QUF Have you received the distress signal sent by (call sign of the mobile station)?</p> <p>QUG Are you being forced to alight in the sea (or to land)?</p> <p>QUH Will you indicate the present barometric pressure at sea level?</p> <p>QUJ* Will you indicate the true course for me to follow, with no wind, to make for you?</p> <p>QUK Can you tell me the condition of the sea observed at (place or co-ordinates)?</p> <p>QUL Can you tell me the swell observed at (place or co-ordinates)?</p> <p>QUM Is the distress traffic ended?</p>
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QRT What is my turn?



COMMERCIAL "Z" SIGNALS

Signals take the form of advices when question mark is omitted. These signals are used on commercial radiotelegraph circuits throughout the world.

ZAL	Alter your wavelength.	ZTA	Transmit by auto.
ZHC	How are your receiving conditions?	ZBY	Break, go back yard. (Metre.)
ZAN	We can receive absolutely nothing.	ZBN	Break and go ahead with new slip.
ZSU	Your signals are unreadable.	ZPR	Rerun slip at present running.
ZWR	Your signals weak but readable.	ZRL	Rerun slip before one now running.
ZSR	Your signals strong readable.	ZPP	Punch plain only.
ZGF	.....signals good for w.p.m.	ZFB	Signals are fading badly.
ZGS	Your signals getting stronger.	ZFA	Failing auto.
ZGW	Your signals getting weaker.	ZRA	Reversed auto tape.
ZVS	Signals varying in intensity.	ZYS	What is your speed of transmission?
ZSH	Static heavy here.	ZSV	Your speed varying.
ZLS	We are suffering from a lightning storm.	ZBS	Your signals blurring.
ZWC	Wipers or clicks here.	ZDH	Your dots are too heavy (long), adjust lighter.
ZVP	Send V's please.	ZDL	Your dots are too light (short), adjust heavier.
ZWO	Send words once.	ZDM	Your dots missing.
ZWT	Send words twice.	ZDV	Your dots varying length, please remedy.
ZCT	Send code twice.	ZFS	Signals are fading slightly.
ZPO	Send plain once.	ZTH	Transmit by hand.
ZPT	Send plain twice.	ZHS	Send high speed auto w.p.m.
ZCD	Your collation is different.	ZSO	Transmit slips once.
ZCO	Your collation omitted.	ZST	Transmit slips twice.
ZSF	Send faster.	ZOR	Transmit revs continuously.
ZSS	Send slower.	ZLB	Give long breaks, please.
ZRO	Are you receiving ok?	ZUB	We have been unable to break you.
ZOK	We are receiving ok.	ZNB	We do not get your breaks, we send twice.
ZIR	Your transmitter has strong idle radiation.	ZLD	We are getting long dash from you.
ZRC	Can you receive code?	ZAP	Acknowledge, please.
ZNG	Receiving conditions no good for code.	ZMQ	Stand by for
ZNN	All clear of traffic.	ZMO	Stand by moment.
ZHY	We are holding your	ZKQ	Say when ready to resume.
ZCS	Cease sending.	ZOH	What traffic have you on hand?
ZMP	Mispunch or perforator failures.	ZVF	Signals varying in frequency. Please observe and furnish frame code reports on (call-letters and frequency) kilocycles.
ZCW	Are you in direct communication with	ZFF	We have checked (transmitter call-letters) Signals are radiating on air ok.
ZHA	How are your conditions for auto reception?	ZOA	Local receiving conditions poor; please increase to maximum.
ZUA	Our conditions unsuitable for endulator or automatic recording.	ZCP	

Certain other codes and signals are omitted

AERONAUTICAL "Q" SIGNALS

Used Especially in Airways Communications by Authority of the FCC.

- QAA** At what time do you expect to arrive at?
- QAB** Are you making for?
- QAC** Are you returning to?
- QAD** At what time did you leave (place of departure)?
- QAE** Have you news of (call sign of the aircraft station)?
- QAF** At what time did you pass?
- QAG** Arrange your flight in order to arrive at (time) at (place). OR I am arranging my flight in order to arrive at (time) at (place).
- QAH** What is your height?
- QAI** Has any aircraft been signalled in my vicinity?
- QAJ** Shall I try to search for an aircraft in my vicinity (or by any other indication)? OR Shall I try to search for aircraft in my vicinity (or by any other indication)?
- QAK** Is another aircraft flying in my vicinity, involving a risk of collision? OR Is aircraft flying in my vicinity involving a risk of collision?
- QAL** Are you going to land at?
- QAM** Can you give me the latest meteorological weather report for (place of observation)?
- QAN** Can you give me the latest meteorological report concerning surface wind for (place of observation)?
- QAO** Can you give me the latest meteorological report concerning upper wind for (place of observation)?
- QAP** Shall I listen for you (or for) on kilocycles (or metres)?
- QAQ** Am I in the vicinity of a prohibited area or of prohibited area (name of the prohibited area)?
- QAR** May I stop listening on the watch wave for minutes?
- QAS** You are flying over a prohibited area or over prohibited area (name of prohibited area).
- QAT** Shall I continue to send?
- QAX** Have you in your aircraft the following person for whom I have a waiting radiotelegram? (Here follows the designation of the person as it appears in the address of the radiotelegram; name and qualifications).
- QAZ** Are you flying in a thunderstorm?
- QBA** What is the visibility at (place)?
- QBB** What is the height of the cloud base at (place)?
- QBC** Can you transmit to me the meteorological observation at present made by you from the aircraft?
- QBE** I am about to wind in my aerial.
- QBF** Are you flying in cloud?
- QBG** Are you flying above cloud?
- QBH** Are you flying below cloud?
- QBI** The bad visibility regulations are in force.
- QBJ** At what height is the upper limit of cloud?
- QBM** Has sent any message for me?
- QBN** Are you flying between two layers of cloud?
- QBT** You are missing your dots.
- QBU** Are you sure of the accuracy of telegram?
- QBW** Did you receive the telegram sent at (time)?
- QCA** You are causing delay by your slowness in answering.
- QCB** You are causing delay by answering out of your turn.
- QCG** Shall I stand guard for you on the frequency of kilocycles (wave length of metres)?
- QCM** There seems to be a defect in your transmission.
- QCP** Your note is bad.
- QCS** My reception on long waves has broken down.
- QCT** My reception on short waves has broken down.
- QCY** I am working on trailing aerial OR Work on trailing aerial.
- QDB** Have you sent telegram to?
- QDC** Telegram has been sent by wire.
- QDD** Telegram No. has been refused by as not in order. Please inform sender.
- QDH** What is causing the present interference?
- QDK** Answer in the alphabetical order of the call signs.
- QDL** Do you intend to ask me for a series of bearings?
- QDM** What is the magnetic course to steer with no wind to make for you or for?
- QDO** Can you have transmitted by station, on its working wave (or on the wave), its call sign followed by a prolonged dash for minutes, in order to permit me to use my aircraft D/F installation?
- QDR** What is my magnetic bearing in relation to you or to?

(Complete code available on request)

d because of present day restrictions.

GOVERNMENT PRESCRIBED PRINTING

(FOR COPYING MESSAGES AT FIELD STATIONS WITH PENCIL AND PAPER)

A	J	S	↓
B	K	T	2
C	L	U	3
D	M	V	4
E	N	W	5
F	O	X	6
G	P	Y	7
H	Q	Z	8
I	R	∅	9

ARROWS INDICATE DIRECTION OF STROKE

THE McELROY METHOD FOR TRANSCRIPTION OF RADIO TELEGRAPH SIGNALS

1	2	3	4	5	6	7	8	9	0	-	=
Q	W	E	R	T	Y	U	I	O	P	()
A	S	D	F	G	H	J	K	L	:	;	
Z	X	C	V	B	N	M	.	.	?		

Typists can learn to transcribe inked slip at high speed in 4 to 6 weeks. Use G15FL set of practice tapes and associated equipment with this chart.

McELROY CHART OF CODES AND SIGNALS






RESPECTFULLY DEDICATED TO THE
RADIOMEN OF OUR ARMED FORCES AND MARITIME SERVICE

1944 Reprint of 1934 Edition, Volume 11, 1942
Revised Edition, October, 1944

INTERNATIONAL
RADIO SIGNALS

INTERNATIONAL MORSE
(COMMERCIAL CODE)

COMMERCIAL "Z" SIGNALS

AERONAUTICAL "Q" SIGNALS

AMERICAN MORSE

SIGNALS
CODE