



**Practice Instructions and Homework
Assignments for the Beginner CW Academy
Course**

(Third Edition)

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2019 - Revision 2.1 by Bob Carter, WR7Q; Change course name from Level 1 to Beginner

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2020 - Sep - Rev. 2.3 by Bob Carter, WR7Q; Added Zoom also

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2023 – Feb – Rev. 3.1 by Bob Carter, WR7Q; moved 'Z' to section 10 from 9

2023 – Apr – Rev. 3.2 by Bob Carter, WR7Q; chgd 'sk' to <SK>;
removed '-' from sections 11 thru 13

Welcome to CW Academy's Beginner course. Before you take note of the homework assignments below, you should understand how we expect you to practice during the eight-week course, keeping in mind Beginner is mostly on-line, so you don't need a lot of equipment.

Your course is broken up into 16 sessions corresponding to a twice weekly on-line meeting with your advisors. You are expected to practice the assignment for session 1, for example, before the on-line session 1 so that the advisor can assess your progress and any problems. So, you practice the session 1 assignments for the days preceding session 1, and then practice the session 2 assignment for the days preceding session 2, and so on.

There are two key tools we use to ensure your success in this course. One is Zoom (Skype, Meet, etc.) which enables us to meet in a virtual training room two times per week, online. We can see and hear each other, and the code being sent.

But the most important tool is Morse Code Trainer (MCT). To set it up, read 'Using Morse Code Trainer.'

Morse Code Trainer is pre-loaded with your homework assignment segments. You will play them, over and over, until you feel comfortable that you recognize each letter and number sound pattern. Note, I did not say each letter and number dots and dashes or dits and dahs – I said sound pattern. That's the secret to learning Morse code in a way that will scale up in speed as you progress.

Initially setup MCT to 25cpm (Character speed) with at least 4wpm (Farnsworth speed)

The screenshot shows the Morse Code Trainer (MCT) interface. At the top, there is a navigation bar with links: CW Generator, CWops (EN), CWops (JP), QSO, Word List, and ICR. Below this is a form for user information with fields for call sign, town/city, name, age, power, and antenna. The main content area is divided into three sections: Session, Feedback, and Morse Sound Controls. The Session section shows '1/13' and 'Next' buttons. The Feedback section has 'Show text' and 'Flashcard' buttons, and a 'Thinking time' field set to 75%. The Morse Sound Controls section includes sliders for Frequency (550), Volume (100), and Advanced timing. Below these are input fields for Character speed (25) and Farnsworth speed (4), both circled in red. There is also a Segment gap section with #Dits (21) and Length fields. At the bottom, there is a 'Copying' section with 'Sending', 'Free-form', and 'Random' tabs. The 'Copying' tab is active, showing a sequence of 't' characters and a playback control bar with buttons for Play, Pause, Stop, Previous, Next, Repeat, Shuffle, and Download.

So, for example, your first homework assignment is to play the following segments, one at a time, until you feel you can recognize them:

Segment 1: t t t t t

Segment 2: e e e e e

Segment 3: a a a a a

Segment 4: n n n n n

Segment 5: tea

Segment 6: tee

Segment 7: eat

Segment 8: ate

Segment 9: at

Segment 10: tat

Segment 11: teen

Segment 12: neat

Segment 13: ten

Segment 14: net

Segment 15: tan

To enter a segment into Morse Code Trainer, simply select the session/segment from the menu, then hit 'play.' You can repeat a segment by hitting 'play' over and over again. When you're done, select the next segment in place of the previous segment, and continue.

This constitutes your 'copying' practice. The key is to learn to recognize a letter or number's pattern, and then recognize words that use those letters. You will start out by adjusting the 'Character speed' of Morse Code Trainer so that letters and words are sent at 25 wpm, then you adjust the Farnsworth speed to meet the daily class assignments.

Each homework assignment also has segments for 'sending' practice. For example, session 1 has the following sending segments:

Segment 1: tea

Segment 2: ten

Segment 3: net

Segment 4: tee

What you will do is select a segment, and then play it. Then you will try to imitate it, exactly, using your key or keyer. Repeat it as many times as it takes to feel like you've gotten the correct word pattern. For example, 'tea' will sound like 'dah' space 'dit' space 'didah.' If you don't have enough space, say, between the 't' and 'e', it will sound like 'dahdit' 'didah.' That is 'na' and not 'tea.' Timing is everything in sending.

So, before you meet for session 1, you should be able to recognize the patterns of the letter's 't', 'e', 'a' and 'n.' And you should be able to recognize the patterns of the words 'tea,' 'ten,' 'net,' and 'tee.' And you will be able to do that at 25 cpm.

During your first session, your advisor will be sending those words to you, individually, and seeing if you have learned them. Then, he/she will ask you, individually, to send words to assess how well you've learned good element (dit or dah) timing and spacing.

You probably realize, now, that most of your time and effort will be spent using Morse Code Trainer BEFORE each session, and the session is primarily used for assessment and constructive suggestions.

You will find that you should be spending at least 60 minutes every day, including session days, broken up into 15-minute periods. But take as long as you need to feel comfortable that you've 'gotten' the copying and sending segments down before each session.

You should be able to send and receive at least 6 wpm by completion of the Beginner class.

Okay, now that you know what's expected of you, here are the homework assignments organized by session and segment.

Homework Assignments

Session 1: (start at least 4wpm)

Copying segments:

Segment: t t t t t

Segment: e e e e e

Segment: a a a a a

Segment: n n n n n

Segment: tea

Segment: tee

Segment: eat

Segment: ate

Segment: at

Segment: tat

Segment: teen

Segment: neat

Segment: ten

Segment: net

Segment: tan

Segment: eat at ten

Segment: ate at ten

Segment: at tee

Sending segments:

Segment: tea

Segment: ten

Segment: net

Segment: tee

Segment: eat at ten

Segment: at tee

Session 2

Copying segments:

Segment: t t t t t

Segment: e e e e e

Segment: a a a a a

Segment: n n n n n

Segment: o o o o o

Segment: i i i i i

Segment: s s s s s

Segment: 1 1 1 1 1

Segment: 4 4 4 4 4

Segment: ten

Segment: ton

Segment: tin

Segment: tie

Segment: toe

Segment: no

Segment: not

Segment: note

Segment: it

Segment: at

Segment: one

Segment: neat

Segment: net

Segment: nit

Segment: toes

Segment: stone

Segment: tease

Segment: noise

Segment: one neat note

Segment: no noise

Segment: tie it

Segment: 1 ton stone

Segment: N1AS

Segment: N4ON

Segment: S41T

Segment: NO1S

Segment: AI1E

Segment: IT4O

Segment: EA1ON

Segment: ES4IT

Sending Segments:

Segment: stone
Segment: tin
Segment: tie
Segment: no
Segment: not
Segment: it
Segment: at
Segment: N1AS
Segment: N4ON
Segment: S41T
Segment: NO1S
Segment: AI1E
Segment: IT4O
Segment: EA1ON
Segment: ES4IT
Segment: 1 ton stone
Segment: 14 notes
Segment: ten toes

Session 3

Copying Segments:

Segment: o o o o o
Segment: i i i i
Segment: s s s s s
Segment: r r r r r
Segment: h h h h h
Segment: d d d d d
Segment: l l l l l (the letter 'l')
Segment: 2 2 2 2 2
Segment: 5 5 5 5 5
Segment: all
Segment: tell
Segment: tall
Segment: deal
Segment: the
Segment: their
Segment: doll
Segment: dell
Segment: hall
Segment: hill
Segment: hole
Segment: load
Segment: lead

Segment: late
Segment: later
Segment: seal
Segment: sell
Segment: sole
Segment: she
Segment: shed
Segment: her
Segment: hear
Segment: DL1AT
Segment: HH5H
Segment: HS1TD
Segment: ND2T
Segment: NA4T
Segment: 142
Segment: 451
Segment: 1425
Segment: a tall hill
Segment: she is here
Segment: he is late
Segment: 4 sheds
Segment: 12 hills

Sending Segments:

Segment: all
Segment: tell
Segment: the
Segment: lead
Segment: late
Segment: she
Segment: her
Segment: DL1AT
Segment: HH5H
Segment: HS1TD
Segment: ND2T
Segment: NA4T
Segment: 142
Segment: 451
Segment: 1425
Segment: she is here
Segment: he is late

Session 4

Copying Segments:

Segment: r r r r r

Segment: h h h h h

Segment: d d d d d

Segment: l l l l l (the letter 'l')

Segment: 1 1 1 1 1 (the number '1')

Segment: 4 4 4 4 4

Segment: u u u u u

Segment: c c c c c

Segment: chat

Segment: chair

Segment: chin

Segment: chart

Segment: ouch

Segment: couch

Segment: touch

Segment: such

Segment: teach

Segment: reach

Segment: sun

Segment: son

Segment: hold

Segment: told

Segment: sail

Segment: rail

Segment: tail

Segment: nail

Segment: oil

Segment: soil

Segment: toil

Segment: coil

Segment: rain

Segment: cause

Segment: sauce

Segment: toss

Segment: toll

Segment: tall

Segment: tell

Segment: cell

Segment: call

Segment: NC5A
Segment: NA2T
Segment: CU1LL
Segment: CO5NO
Segment: NU4R
Segment: CT1AC
Segment: CE1NI
Segment: 4241
Segment: 1452
Segment: in the cell
Segment: that hurts
Segment: at the hall
Segment: hole in 1

Sending Segments:

Segment: chat
Segment: chin
Segment: teach
Segment: sail
Segment: rain
Segment: tall
Segment: tell
Segment: NC5A
Segment: NA2T
Segment: CU1LL
Segment: CO5NO
Segment: NU4R
Segment: CT1AC
Segment: CE1NI
Segment: 4241
Segment: 1452
Segment: sail on sailor
Segment: tell all
Segment: hold on

Session 5

Copying Segments:

Segment: u u u u u

Segment: c c c c c

Segment: 2 2 2 2 2

Segment: 5 5 5 5 5

Segment: m m m m m

Segment: w w w w w

Segment: 3 3 3 3 3

Segment: 6 6 6 6 6

Segment: ? ? ? ? ?

Segment: wait

Segment: wall

Segment: well

Segment: will

Segment: mall

Segment: mill

Segment: chum

Segment: mow

Segment: much

Segment: such

Segment: water

Segment: wet

Segment: what

Segment: dew

Segment: date

Segment: atom

Segment: tow

Segment: tower

Segment: were

Segment: where

Segment: was

Segment: wish

Segment: wash

Segment: mat

Segment: matt

Segment: mel

Segment: him

Segment: her

Segment: his

Segment: hw?

Segment: W3AA
Segment: N3AM
Segment: DM5RA
Segment: W6AM
Segment: N2AT
Segment: RW5L
Segment: ON4UN
Segment: 335
Segment: 1432
Segment: 6122
Segment: well water
Segment: how is it?
Segment: is this it?
Segment: this is it

Sending Segments:

Segment: wait
Segment: well
Segment: mall
Segment: mill
Segment: wet
Segment: date
Segment: W3AA
Segment: N3AM
Segment: DM5RA
Segment: W6AM
Segment: N2AT
Segment: RW5L
Segment: ON4UN
Segment: 335
Segment: 1432
Segment: 6122
Segment: this is it
Segment: 1432 hill street
Segment: 1 and 4 is 5

Session 6

Copying Segments:

Segment: m m m m m

Segment: w w w w w

Segment: 3 3 3 3 3

Segment: 6 6 6 6 6

Segment: f f f f f

Segment: y y y y y

Segment: you

Segment: toy

Segment: foot

Segment: tooth

Segment: root

Segment: cute

Segment: noise

Segment: larry

Segment: roy

Segment: ton

Segment: teeth

Segment: feet

Segment: yet

Segment: they

Segment: say

Segment: ray

Segment: hay

Segment: your

Segment: fair

Segment: fare

Segment: far

Segment: fur

Segment: furry

Segment: hw?

Segment: F5IN

Segment: YO1AR

Segment: HH5H

Segment: NO3M

Segment: AA3U

Segment: S52R

Segment: 1512

Segment: 3316

Segment: is this fair?
Segment: yes it is
Segment: the fur flies
Segment: she is shy
Segment: I say no
Segment: she says yes

Sending Seqments

Segment: cute
Segment: said
Segment: raid
Segment: stir
Segment: him
Segment: feet
Segment: hw?

Segment: F5IN
Segment: YO1AR
Segment: HH5H
Segment: NO3M
Segment: AA3 U
Segment: S52R
Segment: 1512

Segment: 3316
Segment: she says yes
Segment: he says no
Segment: who is he?
Segment: he is will
Segment: no he is walt

Session 7

Copying Segments:

Segment: f f f f f

Segment: y y y y y

Segment: 3 3 3 3 3

Segment: 6 6 6 6 6

Segment: p p p p p

Segment: g g g g g

Segment: 7 7 7 7 7

Segment: 9 9 9 9 9

Segment: / / / / /

Segment: page

Segment: paper

Segment: pepper

Segment: glad

Segment: glare

Segment: large

Segment: ledge

Segment: george

Segment: geo

Segment: chas

Segment: chase

Segment: change

Segment: peg

Segment: pug

Segment: pig

Segment: pen

Segment: pencil

Segment: pipe

Segment: pit

Segment: gain

Segment: garage

Segment: guard

Segment: gas

Segment: gus

Segment: chug

Segment: yes

Segment: yet

Segment: yonder

Segment: coy

Segment: G4AN/3

Segment: N1AR/5

Segment: W9UCA/9

Segment: W3/PY2AA

Segment: F6/N6AM

Segment: 2N2222

Segment: 7423
Segment: 14253679
Segment: he is a pro
Segment: she is near
Segment: do not gape
Segment: he is at 19 glen street

Sending Segments:

Segment: page
Segment: glare
Segment: ledge
Segment: george
Segment: pen
Segment: pit
Segment: G4AN/3
Segment: N1AR/5
Segment: W9UCA/9
Segment: W3/PY2AA
Segment: F6/N6AM
Segment: 2N2222
Segment: 7423
Segment: 14253679
Segment: go to her
Segment: read the page
Segment: wat page?
Segment: page 15

Session 8 (at least 5wpm)

Copying Segments:

Segment: b b b b b

Segment: v v v v v

Segment: 7 7 7 7 7

Segment: 9 9 9 9 9

Segment: / / / / /

Segment: vote

Segment: vat

Segment: view

Segment: wave

Segment: pave

Segment: save

Segment: vow

Segment: valve

Segment: solve

Segment: volt

Segment: vault

Segment: bad

Segment: body

Segment: bore

Segment: born

Segment: barn

Segment: barney

Segment: brad

Segment: bread

Segment: bed

Segment: better

Segment: best

Segment: bill

Segment: build

Segment: built

Segment: bolt

Segment: bulb

Segment: blame

Segment: blend

Segment: bland
Segment: blow
Segment: BV2AA
Segment: BA1RO
Segment: WB2AE
Segment: N6RB/4
Segment: W2/VE1AR
Segment: VE2/W2LE
Segment: 6146
Segment: 5514
Segment: name is bob
Segment: name is bill
Segment: name is ted
Segment: name is Vinnie
Segment: ur rst is 559
Segment: ur rst is 459

Sending Segments:

Segment: vote
Segment: valve
Segment: bed
Segment: best
Segment: BV2AA
Segment: BA1RO
Segment: WB2AE
Segment: N6RB/4
Segment: W2/VE1AR
Segment: VE2/W2LE
Segment: 6146
Segment: 5514
Segment: name is bill
Segment: name is art
Segment: ur rst is 579
Segment: ur rst is 449

Session 9

Copying Segments:

Segment: b b b b b

Segment: v v v v v

Segment: k k k k k

Segment: j j j j j

Segment: 8 8 8 8 8

Segment: 0 0 0 0 0

Segment: <BT><BT><BT><BT><BT>

Segment: jack

Segment: jay

Segment: john

Segment: jim

Segment: jerry

Segment: back

Segment: rack

Segment: tack

Segment: tech

Segment: tach

Segment: reach

Segment: each

Segment: teach

Segment: help

Segment: high

Segment: hill

Segment: fact

Segment: face

Segment: far

Segment: fear

Segment: then

Segment: their

Segment: him

Segment: her

Segment: his

Segment: hers

Segment: them

Segment: they

Segment: their

Segment: switch

Segment: line

Segment: ant

Segment: dipole

Segment: vertical

Segment: ohms

Segment: home
Segment: away
Segment: test
Segment: Asia
Segment: Africa
Segment: K1JD
Segment: N1AR
Segment: W2TT
Segment: K2UMU
Segment: N2NW
Segment: VE3NE
Segment: VA3KP
Segment: K4BAI
Segment: N5KO
Segment: 807
Segment: 3500
Segment: 4250A
Segment: hw is he?
Segment: name is joe
Segment: name is john
Segment: name is jim
Segment: ur rst is 579
Segment: ur rst is 339
Segment: sri no cpy

Sending Segments:

Segment: jack
Segment: tach
Segment: reach
Segment: each
Segment: fear
Segment: his
Segment: ant
Segment: K1JD
Segment: N1AR
Segment: W2TT
Segment: K2UMU
Segment: N2NW
Segment: VE3NE
Segment: VA3KP
Segment: K4BAI
Segment: N5KO
Segment: 807
Segment: 3500

Segment: 4250A
Segment: name is fred
Segment: name is tom
Segment: name is john
Segment: name is bob
Segment: ur rst is 549

Session 10 (at least 6wpm)

Copying Segments:

Segment: k k k k k
Segment: j j j j j
Segment: 8 8 8 8 8
Segment: 0 0 0 0 0
Segment: x x x x x
Segment: q q q q q
Segment: z z z z z
Segment: <BK><BK><BK><BK><BK>
Segment: wl
Segment: ur
Segment: ok
Segment: hw?
Segment: qrx
Segment: rig
Segment: wx
Segment: ant
Segment: pwr
Segment: kw
Segment: name
Segment: Memphis
Segment: nyc
Segment: sf
Segment: dallas
Segment: Houston
Segment: nm
Segment: nj
Segment: ca
Segment: ut
Segment: al
Segment: ar
Segment: il
Segment: in
Segment: me
Segment: ma
Segment: ct

Segment: co
Segment: qrm
Segment: ne
Segment: sd
Segment: nd
Segment: pa
Segment: ky
Segment: fl
Segment: nc
Segment: sc
Segment: sdgo
Segment: lax
Segment: la
Segment: on
Segment: <SK><SK><SK><SK><SK>
Segment: mb
Segment: nt
Segment: ab
Segment: qc
Segment: nb
Segment: ns
Segment: nr
Segment: rst
Segment: uk
Segment: usa
Segment: Tokyo
Segment: paris
Segment: London
Segment: hamburg
Segment: Sydney
Segment: ZL2TT
Segment: VK4OM
Segment: JE1TRV
Segment: BA1CW
Segment: KH6LC
Segment: AL2A
Segment: AA3B
Segment: 8044
Segment: 7400
Segment: 73
Segment: u hv qsb
Segment: u hv qrm
Segment: name?
Segment: qth?

Segment: qth is ny
Segment: qth is paris
Segment: pse qsy to 7054

Sending Segments:

Segment: wl
Segment: ur
Segment: ok
Segment: qrx
Segment: rig
Segment: wx
Segment: ant
Segment: pwr
Segment: kw
Segment: qrz
Segment: qth
Segment: qrs
Segment: qro
Segment: qrp
Segment: ZL2TT
Segment: VK4OM
Segment: JE1TRV
Segment: BA1CW
Segment: KH6LC
Segment: AL2A
Segment: AA3B
Segment: 8044
Segment: 7400
Segment: 73
Segment: ur rst is 579
Segment: qth is nr Tulsa
Segment: name is barry
Segment: ur rst is 559
Segment: qth is Dayton oh
Segment: name is john

Session 11 (at least 6wpm)

Copying Segment:

Segment: [your callsign] de k6rbur rst 579 nr sf name rob hw? [your callsign] de k6rb k

Segment: [your callsign] de n3jt ur rst is 5nn <BT> qth mclean va ? mclean va <BT> op is jim de n3jt

Segment: [your callsign] de w1rm <BT> ur rst 569 569 in ct name is pete <BK>

Sending Segment:

Segment: k6rb de [your callsign] ur rst 57n in [your town/city and state abbreviation] name is [your name] btu k6rb de [your callsign] k

Segment: n3jt de [your callsign] ur rst 56n in [your town/city and state abbreviation] name is [your name] n3jt de [your callsign] k

Segment: w1rm de [your callsign] ur rst 45n wid QRN in [your town/city and state abbreviation] name is [your name] w1rm de [your callsign] k

Session 12

Copying Segments:

Segment: [your callsign] de k6rb wx cldy temp 58 <BT> rig runs 100 w to vert <BT> age is 66 so hw?[your callsign] de k6rb k

Segment: [your callsign] de n3jt <BT> wx rain temp 42 <BT> rig is k3 es ant is 4 el yagi age is 65 ok? de n3jt

Segment: [your callsign] de w1rm wx snow temp 24 rig is IC 7700 pwr is kw es ant is dipole age is 70 hw? <BK>

Sending Segments:

Segment: k6rb de [your callsign] wx sunny temp 82 rig runs [your power] w to [your antenna] age is [your age] hw? k6rb de [your callsign] k

Segment: n3jt de [your callsign] wx rain temp 54 rig runs [your power] w to [your antenna] age is [your age] hw? n3jt de [your callsign] k

Segment: w1rm de [your callsign] wx oc temp 70 rig runs [your power] w to [your antenna] age is [your age] hw? w1rm de [your callsign] k

Session 13 (at least 6 wpm)

Copying Segments:

Segment: [your callsign] de k6rb tnx fer qso es hpe cu agn 73 <SK> [your callsign] de k6rb ee

Segment: [your callsign] de n3jt nice qso tnx cul 73 <SK> [your callsign] de n3jt gn

Segment: [your callsign] de w1rm enjoyed qso <SK> [your callsign] de w1rm ee

Sending Segments:

Segment: k6rb de [your callsign] tu fer qso cu agn 73 <SK> k6rb de [your callsign]

Segment: n3jt de [your callsign] cul es nice qso 73 <SK> k6rb de [your callsign] ee

Segment: w1rm de [your callsign] enjoyed qso also 73 <SK> w1rm de [your callsign] cu ee

Session 14

Before online sessions, listen to HF radio on CW sub bands. Listen for slower stations calling CQ and copy their callsigns. Listen to slower stations in QSO and see if you can copy what they are saying. Practice sending first, second and wrap exchanges.

Practice sending your callsign, ur qth, and ur name over and over again!!!

Session 15 and 16

Congratulations, you are well on your way to a great future with Morse code!!