



**Practice Instructions and Homework Assignments  
for the Intermediate CW Academy Course  
By: Rob, K6RB**

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## Revision Record

2016 – Original Version by Rob Brownstein, K6RB

2016 – Revision 1.1 by Rob Brownstein, K6RB (Misc Corrections and Updates)

2017 – Revisions 1.2 and 1.3 by Jerry Weisskohl, AC4BT (Misc Corrections and File References)

2018 – Revision 1.4 by Glenn Norman, W4YES and Alan Dewey, K0AD (Add References for New QSO and Short Story Files plus other minor revisions)

2018 – Revision 1.5 by Bob Carter, WR7Q; Glenn Norman, W4YES and T.H. Bauer, WA3AER (Minor revisions to add course objectives; provide balanced speed and progress and incorporate more sending practice)

2019 – Revision 1.6 by Bob Carter, WR7Q; Glenn Norman, W4YES and T.H. Bauer, WA3AER (Increase week two speed to 13 wpm)

2019 – Revision 1.7 by Bob Carter, WR7Q; (Change course name from Level 2 to Intermediate)

2020 – Revision 1.8 by Rob Brownstein, K6RB; (minor changes to assignment instructions)

2020 – Revision 1.9 by Bob Carter, WR7Q; (minor corrections to assignment instructions)

2021 – Revision 1.10 by Bob Carter, WR7Q; (minor corrections; added optional RufzXP Trainer Mode)

## Introduction

Welcome to CW Academy's Intermediate course. Before you take note of the homework assignments, below, you should understand how we expect you to practice during the eight-week course.

Your course is divided 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. You should 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.

Most vital to the learning process is your personal practice between sessions. You are encouraged to practice at least 60 minutes per day, six days each week. The sessions are for coaching purposes, therefore, your disciplined approach to practice is a must.

In essence, then, Intermediate focuses on two popular areas of CW in ham radio – contesting and ragchewing while learning to copy in your head, without having to write things down. In contesting, callsign copy and entry are very necessary. Morse Runner, RufzXP, and copying practice files enhance this effort. In ragchewing at speeds over 20 wpm, writing what you copy will quickly limit you. Learning to head copy and retain information without writing is a critical skill,

Equally important to copy skills is sending skills. You will be provided with exercises to emphasize good sending techniques and proficiency.

When you meet twice weekly with your advisor, he or she will be assessing how you are doing, using interactive exercises and other means. The idea is to provide you with feedback that will help you overcome any barriers or concerns you may encounter.

As with all our CW Academy courses, your success is ultimately tied to your commitment and willingness to daily practice. You will only get “out” what you are willing to put “in”. It is worth it.

We hope you enjoy the course and achieve noteworthy improvements in all aspects of your CW skills.

The following are six key tools we use to ensure your success in this course:

- 1) ZOOM - enables us to meet in an online virtual training room for our classes. With this we can see and hear each other as well as the code being sent. Some advisors may choose to use an alternate on-line conference program such as SKYPE; Meet; etc., if it is determined to be more effective for the students involved. Subsequent references to ZOOM in this document are meant to include the possibility that an alternate to ZOOM may be used. Your advisor will discuss this with you before your sessions start.
- 2) Daily Morse Code “Scales” - located on the CW Academy website (*CWA Student Resources - Additional Info & Practice Material*), will enhance your CW sending and comprehension.
- 3) Morse Runner - a contest simulator and a great way to practice receiving callsigns and serial numbers. (This is similar to what many hams use at the annual “Field Day”). It really helps you be able to do instant recognition of letters and numbers. With this application, you enter the information via your keyboard, which also helps you to become proficient at using contest logging programs, should you be interested in learning or improving your contesting skills. From the CWA website, download and read the “Using Morse Runner” document before the sessions begin.
- 4) RufzXP - a contest simulator and a great way to practice callsigns that come to you at different speeds. It “rewards” or “penalizes” based on the timing and accuracy of your response. A session is comprised of 50 callsigns, with two chances to get it correct. From the CWA website, download and read the “Using RufzXP” document before the sessions begin. Your instructor will fill you in on the “nuances” of using this program.

Optionally, RufzXP Trainer Mode can help you get better at Instant Character Recognition (ICR) and learning to copy behind. See webpage: <https://cwops.org/rufzxp-trainer-mode/>

- 5) Practice audio, files that you can listen to at different speeds. The current files consist of: Short Stories; QSO or CWT Practice Files. You can hear these directly from the CW Academy website - CWA Student Resources - Intermediate Practice Files
  - a) Short Story Practice Files – these files have a unique name (such as SS 201) and are available at speeds of 10, 13, 15, 18, 20, 25 and 30 WPM.
  - b) QSO Practice Files - these files have a unique name (such as QSO 201) and are available at speeds of 10, 13, 15, 18, 20, 25 and 30 WPM.
  - c) CWT Practice Files – these files each have a unique name (such as CWT 201-20) and are 20 to 30 WPM. This is to give you experience in listening and getting ready to participate in CWT.
- 6) The weekly CWT – is an “on-air” event, managed by CWops. These occur each Wednesday at 1300Z, 1900Z and (Thurs) 0300Z. Each one is an hour long and provides a great opportunity to practice and learn techniques that can prepare you to work DX and/or become an effective contester.

## Assignments

(Objective of Sessions 1 thru 3 send and receive at 10 to 13 wpm)

### Session 1:

#### Day one:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales” (*Located on the CW Academy website CWA Student Resources - Additional Info & Practice Material*)

Short Story head copy practice file **SS 201 – 10**. Please listen to it once and just pick out without writing the words that pop out for you. Then listen to it a second time to see if you can capture the essence of it.

QSO head copy practice file **QSO 201 – 10**. It is a whole QSO simulation – a CQer, someone who responds, swapping of RST, QTH and name info; swapping of weather and rig info; and a “wrap” exchange (e.g. tnx fer qso, 73, etc.). Don’t write everything you hear but you can jot down notes.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

#### Day two:

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **10** wpm and do a full cycle until it ends. Type in callsigns as you copy them, and note your result at the end of the session.

Using Morse Runner, uncheck all the “boxes”; set speed at **10** wpm, select “single call” mode (*pull down “run” tab and select “single calls”*). Set “run for” time at **15** minutes. Note your results at the end of the session.

#### Day three:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 202 – 10**. It is a whole QSO simulation – a CQer, someone who responds, swapping of RST, QTH and name info; swapping of weather and rig info; and a “wrap” exchange (e.g. tnx fer qso, 73, etc.). Don’t write everything you hear but you can jot down notes.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Short Story head copy practice file **SS 202 – 10**. Please listen to it once and just pick out without writing the words that pop out for you. Then listen to it a second time to see if you can capture the essence of it.

## Session 2:

### Day one:

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Using Morse Runner, uncheck all the “boxes”; set speed at **10** wpm, select “single call” mode (*pull down “run” tab and select “single calls”*). Set “run for” time at **15** minutes. Note your results at the end of the session.

Using RufzXP, set starting speed at **10** wpm and do a full cycle until it ends. Type in callsigns as you copy them, and note your result at the end of the session.

### Day two:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 203 – 10**. Please listen to it once and just pick out the words that pop out for you. Then listen to it a second time to see if you can capture the essence of it. Don’t write anything – just listen and absorb.

QSO head copy practice file **QSO 203 – 10**. It is a whole QSO simulation – a CQer, someone who responds, swapping of RST, QTH and name info; swapping of weather and rig info; and a “wrap” exchange (e.g. tnx fer qso, 73, etc.). Don’t write everything you hear but you can jot down notes.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

### Day three:

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **10** wpm and do a full cycle until it ends. Type in callsigns as you copy them, and note your result at the end of the session.

Using Morse Runner, uncheck all the “boxes”; set speed at **10** wpm, select “single call” mode (*pull down “run” tab and select “single calls”*). Set “run for” time at **15** minutes. Note your results at the end of the session.

## Session 3

### Day one:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 204 – 13**. It is a whole QSO simulation – a CQer, someone who responds, swapping of RST, QTH and name info; swapping of weather and rig info; and a “wrap” exchange (e.g. tnx fer qso, 73, etc.). Don’t write everything you hear but you can jot down notes.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Short Story head copy practice file **SS 204 – 13**. Please listen to it once and just pick out the words that pop out for you. Then listen to it a second time to see if you can capture the essence of it. Don’t write anything – just listen and absorb.

### Day two:

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Using Morse Runner, uncheck all the “boxes”; set speed at **13** wpm, select “single call” mode (*pull down “run” tab and select “single calls”*). Set “run for” time at **15** minutes. Note your results at the end of the session.

Using RufzXP, set starting speed at **13** wpm and do a full cycle until it ends. Type in callsigns as you copy them, and note your result at the end of the session.

### Day three:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 205 – 13**. Please listen to it once and just pick out the words that pop out for you. Then listen to it a second time to see if you can capture the essence of it. Don’t write anything – just listen and absorb.

QSO head copy practice file **QSO 205 – 13**. It is a whole QSO simulation – a CQer, someone who responds, swapping of RST, QTH and name info; swapping of weather and rig info; and a “wrap” exchange (e.g. tnx fer qso, 73, etc.). Don’t write everything you hear but you can jot down notes.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

**(Objective of Sessions 4 thru 6 send and receive at 13 to 15 wpm)**

**Session 4**

**Day one:**

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **13** wpm and do a full cycle until it ends. Type in call signs as you copy them, and note your result at the end of the session.

Using Morse Runner: using single-call mode, do **15** minutes with starting speed of **15** wpm.

**Day two:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 206 – 13**.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Short Story head copy practice file **SS 206 – 13**.

**Day three:**

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Using Morse Runner: using single-call mode, do **15** minutes with starting speed of **15** wpm.

Using RufzXP, set starting speed at **13** wpm and do a full cycle until it ends.



## **Session 5:**

### **Day one:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 207 – 13.**

QSO head copy practice file **QSO 207 – 13.**

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Take as many times at it as you need to head copy and jot down notes of the information above.

### **Day two:**

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **13** wpm and do a full cycle until it ends.

Morse Runner: using single-call mode, do **15** minutes with starting speed of **15** wpm.

### **Day three:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 208 – 13.**

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Take as many times at it as you need to head copy and jot down notes of the information above.

Short Story head copy practice file **SS 208 – 13.**

## **Session 6:**

### **Day one:**

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Morse Runner: using single-call mode, do **15** minutes with starting speed of **15** wpm.

Using RufzXP, set starting speed at **13** wpm and do a full cycle until it ends.

### **Day two:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Head copy practice file **SS 209 – 13**.

QSO head copy practice file **QSO 209 – 13**.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Take as many times at it as you need to head copy and jot down notes of the information above.

### **Day three:**

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **13** wpm and do a full cycle until it ends.

Morse Runner: using single-call mode, do **15** minutes with starting speed of **15** wpm.

(Objective of Sessions 7 thru 10 send and receive at 15 to 20 wpm)

**Session 7:**

**Day one:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 210 – 15**.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Take as many times at it as you need to head copy and jot down notes of the information above.

Short Story head copy practice file **SS 210 – 15**.

**Day two:**

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Morse Runner: using single-call mode, do **15** minutes with starting speed of **20** wpm.

Using RufzXP, set starting speed at **15** wpm and do a full cycle until it ends.

**Day three:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 211 – 15**.

QSO head copy practice file **QSO 211 – 15**.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Take as many times at it as you need to head copy and jot down notes of the information above.

## **Session 8:**

### **Day one:**

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **15** wpm and do a full cycle until it ends.

Morse Runner: using single-call mode, do **15** minutes with starting speed of **20** wpm.

### **Day two:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 212 – 15**.

Who is calling CQ? Who answers the CQ? RST, QTH and Name info for CQer? RST, QTH and Name info for caller? WX/rig info for CQer? WX/rig info for caller? What is the essence of the conversation?

Take as many times at it as you need to head copy and jot down notes of the information above.

Short Story head copy practice file **SS 212 – 15**.

### **Day three:**

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Morse Runner: using single-call mode, do **15** minutes with starting speed of **20** wpm.

Using RufzXP, set starting speed at **15** wpm and do a full cycle until it ends.

## Session 9

### Day one:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 213 – 15**.

QSO head copy practice file **QSO 213 – 15**.

### Day two:

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **15** wpm and do a full cycle until it ends.

Morse Runner: using single-call mode, do **15** minutes with starting speed of **20** wpm.

### Day three:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 214 – 15**.

Short Story head copy practice file **SS 214 – 15**.

## **Session 10:**

### **Day one:**

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Morse Runner: using single-call mode, do **15** minutes with starting speed of **20** wpm.

Using RufzXP, set starting speed at **15** wpm and do a full cycle until it ends.

### **Day two:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 215 – 15**.

QSO head copy practice file **QSO 215 – 15**.

### **Day three:**

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **15** wpm and do a full cycle until it ends.

Morse Runner: using single-call mode, do **15** minutes with starting speed of **20** wpm.

**(Objective of Sessions 11 thru 13 receive at 18 to 20 wpm)**

**Session 11:**

**Day one:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 216 - 18.**

Short Story head copy practice file **SS 216 - 18.**

**Day two:**

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Morse Runner: using single-call mode, do **15** minutes with starting speed of **20** wpm.

Using RufzXP, set starting speed at **18** wpm and do a full cycle until it ends.

**Day three:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 217 – 18.**

QSO head copy practice file **QSO 217 – 18.**

## Session 12:

### Day one:

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **18** wpm and do a full cycle until it ends.

Morse Runner: using single-call mode, do **15** minutes with starting speed of **20** wpm.

### Day two:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 218 - 18**.

Short Story head copy practice file **SS 218 - 18**.

### Day three:

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Morse Runner: **WPX competition mode** – full **15** minutes – starting speed of **20**, activity level **1**.

Using RufzXP, set starting speed at **20** wpm and do a full cycle until it ends.



## Session 13:

### Day one:

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 219 - 18.**

QSO head copy practice file **QSO 219 - 18.**

### Day two:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

CWT practice **CWT 201-20.**

This is a simulation of a typical CWT “running” station. He is sending “CQ CWT” to start then answering calling stations one after another. There will be three different stations he works and he will repeat his exchange (name and number or state) each time. So, you have three opportunities to capture his call, his name, his number each time you play the file. Take as many times as you need to get all three pieces of info and write them down.

Using RufzXP, set starting speed at **20** wpm and do a full cycle until it ends.

### Day three:

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 220 - 20.**

Short Story head copy practice file **SS 220 - 20.**

**(Objective of Sessions 14 thru 15 receive at 20 to 25 wpm)**

**Session 14:**

**Day one:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

CWT practice **CWT 202-20**.

This is a simulation of a typical CWT “running” station. He is sending “CQ CWT” to start then answering calling stations one after another. There will be three different stations he works and he will repeat his exchange (name and number or state) each time. So, you have three opportunities to capture his call, his name, his number each time you play the file. Take as many times as you need to get all three pieces of info and write them down.

Using RufzXP, set starting speed at **20** wpm and do a full cycle until it ends.

**Day two:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

**CWT, any session or all sessions Wed (1300Z, 1900Z or 0300Z [Thu])**

Monitor and try to capture the info from 5 “running” stations.

**Day three:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

Short Story head copy practice **SS 221 – 20**.

QSO head copy practice file **QSO 221 – 20**.

## Session 15:

### Day one:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

CWT practice **CWT 209-25**.

This is a simulation of a typical CWT “running” station. He is sending “CQ CWT” to start then answering calling stations one after another. There will be three different stations he works and he will repeat his exchange (name and number or state) each time. So, you have three opportunities to capture his call, his name, his number each time you play the file. Take as many times as you need to get all three pieces of info and write them down.

Using RufzXP, set starting speed at **20** wpm and do a full cycle until it ends.

### Day two:

Complete the “*Warm Up*” and the “*Exercise*” section of the Daily Morse Code “Scales”

Using RufzXP, set starting speed at **20** wpm and do a full cycle until it ends.

Morse Runner: **WPX competition mode** – full **15** minutes – starting speed of **25**, activity 2.

### Day three:

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

QSO head copy practice file **QSO 222 – 25**.

Short Story head copy practice file **SS 222 – 25**.

(Objective of Sessions 16 is to give you a “flavor” of receiving at 25 to 30 wpm)

**Session 16:**

**Day one:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

CWT practice **CWT 213-30**.

This is a simulation of a typical CWT “running” station. He is sending “CQ CWT” to start then answering calling stations one after another. There will be three different stations he works and he will repeat his exchange (name and number or state) each time. So, you have three opportunities to capture his call, his name, his number each time you play the file. Take as many times as you need to get all three pieces of info and write them down.

Using RufzXP, set starting speed at **25** wpm and do a full cycle until it ends.

**Day two:**

Complete the “*Warm Up*” section of the Daily Morse Code “Scales”

**CWT, any session or all sessions Wed (1300Z, 1900Z or 0300Z [Thu])**

Get the info from a running station and try to work him after he finishes his last QSO.  
Try to work 5 QSOs or at least copy their info.

**Day three:**

Complete the “*Warm Up*” and the “*Drill*” section of the Daily Morse Code “Scales”

Short Story head copy practice file **SS 223 – 25**.

QSO head copy practice file **QSO 223 – 25**.