

# LCWO ICR Guidelines

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The ‘number one’ problem most people have with decoding Morse Code, they do not have Instant Character Recognition (*ICR*). Miss a single letter, you lose the word or a whole group of words

The following exercises will help you on your way to getting a lot better at ICR, if...you consistently practice and complete all the processes

## LCWO Getting Started

Webpage: [LCWO.net](http://LCWO.net)

You must register, then sign in each time

## Change CW Setting

- Character Speed – at least 25 to 30 wpm to minimize ‘counting’ dits and dahs
- Effective Speed (Farnsworth) – as requested in the curriculum or by the advisor. Hereafter referred to a ‘speed’
- Extra Word Spacing – time before you need to hit the ‘space bar’ or ‘enter key’ (temporarily increasing may help with ‘copy behind’)
- Tone (Hz) – frequency of the code you hear  
500 (or your preference)
- CW player – ‘jscwlib’ is the recommended setting
- Start delay – (2 sec) number of seconds before the file starts playing
- Group length – number of elements being sent
- Letters, figures, Koch Characters and Extras – only need to be selected for Code Groups if you choose Custom characters

**Submit** – for changes to take effect

## **Beginner Level**

For this to be effective, you must be familiar with all 26 letters and ten numbers. This 'typically' is after you have completed Session 10 in the Beginner curriculum

*Go to Code Groups*

Duration (*min*) – 1

'Uncheck' – Use REAL speed (not PARIS)

After completion, select 'Check Results'

'Continue Training' – five or more times

**Letters (in Code Groups)**

Start with an Effective Speed of 6 wpm, 1 character Group length

Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 7 wpm, then...8 wpm. Then again, start speed at 6 wpm and increase to 2 characters

**Words (in Word training)**

Start with an Effective Speed of 6 wpm, 2 characters

Practice until you start averaging less than 3 errors, then move speed up to 7 wpm, then...8 wpm. Do the same thing until you get to at least 10 wpm. Then again, start speed over at the 'class speed' and increase to 3 characters

**Figures [numbers] (in Code Groups)**

Start with an Effective Speed of 6 wpm, 1 character

Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 7 wpm, then...8 wpm. Then again, start speed at 6 wpm and increase to 2 characters

## **Custom characters [*Koch Characters*] (in Code Groups)**

**Start with an Effective Speed of 6 wpm, 1 character.**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 7 wpm, then...8 wpm. Do the same thing until you get to a least 10 wpm. Then again, start speed at 6 wpm and and increase to 2 characters**

## **Beyond the Curriculum**

### **Getting Better Yet**

**Keep increasing the speed, number of characters and decreasing word spacing**

### **Mixed (in Code Groups)**

**Start with an Effective Speed of 6 wpm, 2 characters**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 7 wpm. Do the same thing until you get to 8 wpm. Next, start over at 6 wpm and increase to 3 characters, following the same process**

### **Copy Behind**

**Instead of hitting the 'space bar' or 'enter key' immediately after you hear the character, wait until you have heard them all...then enter. This will train your brain to get better at 'hearing words'**

### **Callsign Training**

**Start with an Effective Speed of 6 wpm and increase till you get to 10 wpm or more, i.e. 6, 7, 8, etc.**

## **Fundamental Level**

### ***Go to Code Groups***

**Duration (*min*) – 1**

**‘Uncheck’ – Use REAL speed (not PARIS)**

**After completion, select ‘Check Results’**

**‘Continue Training’ – five or more times**

### **Letters (in Code Groups)**

**Start with an Effective Speed of 6 wpm, 2 characters Group length. Always keep the speed at least the same as the class curriculum**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 7 wpm, then...8 wpm. Do the same thing until you get to at least 10 wpm. Then again, start speed over at the ‘class speed’ and increase to 3 characters**

### **Words (in Word training)**

**Start with an Effective Speed of 6 wpm, 2 characters. Always keep the speed at least the same as the class curriculum**

**Practice until you start averaging less than 3 errors, then move speed up to 7 wpm, then...8 wpm. Do the same thing until you get to at least 10 wpm. Then again, start speed over at the ‘class speed’ and increase to 3 characters**

### **Figures [*numbers*] (in Code Groups)**

**Start with an Effective Speed of 6 wpm, 1 character. Always keep the speed at least the same as the class curriculum**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 7 wpm, then...8 wpm. Do the same thing until you get to 10 wpm. Then again, start speed over at the ‘class speed’ and increase to 2 characters**

## **Custom characters [*Koch Characters*] (in Code Groups)**

**Start with an Effective Speed of 6 wpm, 1 character. Always keep the speed at least the same as the class curriculum**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 7 wpm, then...8 wpm. Do the same thing until you get to a least 10 wpm. Then again, start speed over at the 'class speed' and increase to 2 characters**

## **Beyond the Curriculum**

### **Getting Better Yet**

**Keep increasing the speed, number of characters and decreasing word spacing**

### **Mixed**

**Start with an Effective Speed of 10 wpm, 3 characters**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 12 wpm. Do the same thing until you get to 15 wpm. Next, start over at 10 wpm and increase to 4 characters, following the same process. Now do the same process again with 5 characters**

### **Copy Behind**

**Instead of hitting the 'space bar' or 'enter key' immediately after you hear the character, wait until you have heard them all...then enter. This will train your brain to get better at 'hearing words'**

### **Callsign Training**

**Start with an Effective Speed of 6 wpm and increase till you get to 10 wpm  
i.e. 6, 7, 8, etc.**

## Intermediate Level

*Go to Code Groups*

Duration (*min*) – 1

Uncheck – Use REAL speed (not PARIS)

After completion, select ‘Check Results’

‘Continue Training’ – five or more times

### Letters (in Code Groups)

Start with an Effective Speed of 10 wpm, 3 character Group length. Always keep the speed at least the same as the class curriculum

Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 13 wpm, then...15 wpm. Do the same thing until you get to 20 wpm. Then again, start speed over at the ‘class speed’ and increase to 4 characters, following the same process. Now do the same process again with 5 characters

### Words (in Word training)

Start with an Effective Speed of 10 wpm, 3 characters. Always keep the speed at least the same as the class curriculum

Practice until you start averaging less than 3 errors, then move speed up to 13 wpm, then...15 wpm. Do the same thing until you get to at least 20 wpm. Then again, start speed over at the ‘class speed’ and increase to 4 characters, following the same process. Now do it again with 5 characters

### Figures [*numbers*] (in Code Groups)

Start with an Effective Speed of 10 wpm, 3 characters. Always keep the speed at least the same as the class curriculum

Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 13 wpm, then...15 wpm. Do the same thing until you get to 20 wpm. Then again, start speed over at the ‘class speed’ and increase to 4 characters

## **Custom characters [*Koch Characters*] (in Code Groups)**

**Start with an Effective Speed of 10 wpm, 2 characters. Always keep the speed at least the same as the class curriculum**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 13 wpm, then...15 wpm. Do the same thing until you get to 20 wpm. Then again, start speed over at the 'class speed' and increase to 3 characters**

## **Beyond the Curriculum**

### **Getting Better Yet**

**Keep increasing the speed, number of characters and decreasing word spacing**

### **Mixed**

**Start with an Effective Speed of 15 wpm, 3 characters**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 18 wpm. Do the same thing until you get to 20 wpm. Next, start over at 15 wpm and increase to 4 characters, following the same process. Now do the same process again with 5 characters**

### **Copy Behind**

**Instead of hitting the 'space bar' or 'enter key' immediately after you hear the character, wait until you have heard them all...then enter. This will train your brain to get better to 'hearing words'**

### **Callsign Training**

**Start with an Effective Speed of 15 wpm and increase till you get to 25 wpm.  
i.e. 15, 18, 20, etc.**

## Advanced Level

### *Go to Code Groups*

Duration (*min*) – 1

Uncheck – Use REAL speed (not PARIS)

After completion, select 'Check Results'

'Continue Training' – five or more times

### Letters (in Code Groups)

Start with an Effective Speed of 20 wpm, 3 characters Group length. Always keep the speed at least the same as the class curriculum

Practice until you start averaging around 10% errors or less...next move speed up to 23 wpm, then...25 wpm, then...28 wpm. Do the same thing until you get to 30 wpm. Then again, start speed over at the 'class speed' and increase to 4 characters, following the same process. Now do the same process again with 5 characters

### Words (in Word training)

Start with an Effective Speed of 10 wpm, 3 characters. Always keep the speed at least the same as the class curriculum

Practice until you start averaging less than 3 errors, then move speed up to 23 wpm, then...25 wpm, then...28 wpm. Do the same thing until you get to at least 30 wpm. Then again, start speed over at the 'class speed' and increase to 4 characters, following the same process. Now do it again with 5 characters

### Figures [*numbers*] (in Code Groups)

Start with an Effective Speed of 20 wpm, 3 characters. Always keep the speed at least the same as the class curriculum

Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 23 wpm, then...25 wpm, then...28 wpm. Do the same thing until you get to 30 wpm. Then again, start speed over at the 'class speed' and increase to 4 characters



## **Custom characters [*Koch Characters*] (in Code Groups)**

**Start with an Effective Speed of 20 wpm, 2 characters. Always keep the speed at least the same as the class curriculum**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 23 wpm, then...25 wpm, then...28 wpm. Do the same thing until you get to 30 wpm. Then again, start speed over at the 'class speed' and increase to 3 characters**

## **Beyond the Curriculum**

### **Getting Better Yet**

**Keep increasing the speed, number of characters and decreasing word spacing**

### **Mixed**

**Start with an Effective Speed of 20 wpm, 3 characters**

**Practice until you start averaging around 10% or less errors (accuracy 90% or better), next move speed up to 23 wpm, then...25 wpm. Do the same thing until you get to 35 wpm. Then again, start speed over at 20 wpm and increase to 4 characters, following the same process. Now do the same process again with 5 characters**

### **Copy Behind**

**Instead of hitting the 'space bar' or 'enter key' immediately after you hear the character, wait until you have heard them all...then enter. This will train your brain to get better to 'hearing words'**

### **Callsign Training**

**Start with an Effective Speed of 20 wpm and increase till you get to 35 wpm. i.e. 20, 23, 25, 28, etc.**