A BASIC CW OPERATING MANUAL

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You are ready to make that first contact. Your palms may be sweating and your heart rate may be racing. That's ok. We've all been there. The first time I called CQ I was very nervous. I didn't think it was possible for fingers to have a stuttering problem but there I was, stuttering with my fingers. Gradually I relaxed and calmed down. The CQ's flowed from my fingertips with fluidity before sailing skyward. "Hey, this is really fun," I thought to myself. Suddenly, the inevitable happened; somebody actually answered! The anxiety returned. "Now, what do I do?" Here is some help with establishing that first contact.

Answering CQ

Let's suppose you're tuning across the bands and you hear a station calling CQ. The station seems to be sending at a speed you can copy: CQ CQ CQ DE WA3XYZ K

To answer WA3XYZ you just send the following: WA3XYZ DE (your callsign – lets use mine, KC0OBU, for our examples) AR

That's all there is to it. AR is the letters A and R sent with no spaces in between, a procedural signal that means "end of message" or "over." If the band is noisy or you are running low power, you may want to repeat your call sign twice like so: WA3XYZ DE KC0OBU KC0OBU AR

This is a '1x2'. The other station's call sent once, and yours sent twice. This allows the other station double-check to make sure they got your call right.

If WA3XYZ was able to copy you, that station will then come back with something like:

KC0OBU DE WA3XYZ TNX FER CALL UR RST 559 IN…

If WA3XYZ only copied part of your call sign, you may hear one of the following. The station may or may not add DE WA3XYZ depending on the situation:

QRZ?	(Who's calling me?)
? ?	(Who's there?)
KC?	(KC something….didn't get the rest of your call sign.)
OBU?	(Got the suffix, but I missed the prefix)

In this case, just send your call sign again.

Calling CQ

If the band seems to be in good shape, but nobody is calling CQ, you can do the following:

1. Find a frequency that seems to be clear, and listen for a few seconds. Listening is very important.

2. If you don't hear anything, send **QRL?** and listen for a bit more. Make sure you listen slightly up and down from your transmitting frequency as well. **QRL** is a Q signal that means this frequency is in use. When you send **QRL?** you are asking if the frequency is in use. If somebody comes back with **C**, **YES**, or **QRL**, then move to another frequency so you don't interfere. No further response is needed.

3. If you did not hear a response, send **QRL?** again and listen again. Some stations may take a bit to respond.

4. Still nothing? You can assume the frequency is clear. Immediately send your CQ while the frequency is still open.

The 3x2 CQ call seems to work well for most situations. Call CQ three times, and then send your call twice: CQ CQ CQ DE KC0OBU KC0OBU K

The final K at the end means you're inviting any station to answer you.

After calling CQ, listen, listen, listen. Listen slightly up and down in case the station trying to answer you is slightly off frequency. You can miss a return call if you are not listening carefully. If you hear nothing, send another 3x2 CQ call again, and listen. Repeat until either somebody answers or you want to try in another spot. Pretty easy, huh?

The 10x2x3 CQ call (CQ sent 10 times followed by your call sign twice, sent three times in a row) is seldom productive. Normally when stations hear this, they will keep moving up or down the band, and you will be scratching your head wondering why nobody is answering your CQ: CQ CQ CQ CQ CQ CQ CQ CQ CQ CQ DE KC0OBU KC0OBU CQ CQ CQ CQ CQ CQ CQ CQ CQ CQ DE KC0OBU KC0OBU CQ CQ CQ CQ CQ CQ CQ CQ CQ CQ DE KC0OBU KC0OBU K

The QSO

Basically there are three parts to a QSO: The introduction, the middle, and the conclusion. Almost sounds like a term paper. Let's take a look at each of these parts.

The Introduction

Once a CQ is answered, the stations first exchange three important pieces of information: RST (a signal report), QTH (location), and Name. So let's suppose I am calling CQ and WA3XYZ answers me. I would then send something like this:

WA3XYZ DE KC0OBU GM (GA, GE, GN) TNX CALL UR 559 (579,549, etc) 559 IN TRENARY, MI TRENARY, MI NAME DAN DAN HW? AR WA3XYZ DE KC0OBU KN

First I send the other station's call, then DE (which means from) and then my call sign. Then I say good morning (GM), afternoon (GA), evening (GE), or night (GN), whichever is appropriate. Next I say thanks for the call (TNX CALL) and give the RST signal report (UR 559. I then send my QTH or location followed by my name. You can send 'QTH' instead of 'IN'. But don't send 'MY QTH IS' because that would be redundant….sort of like saying 'MY MY LOCATION IS IS'.

'HW?' is short for 'How are you copying me?'. Then I send AR (Over or End of Transmission), WA3XYZ DE KC0OBU (so other stations listening will know who we are) and KN which says go ahead to a specific station, which in this example is WA3XYZ.

The other station will then reply back with its information by sending something like the following: KC0OBU DE WA3XYZ R GM DAN NICE TO MEET U UR RST 579 579 QTH PITTSBURGH, PA PITSBURGH, PA NAME PHIL PHIL HW? AR KC0OBU DE WA3XYZ KN

The R sent after the initial call signs means that the other station copied EVERYTHING that you sent. Don't send R and then ask the other station to repeat part of the information that was sent. It's bad form.

If you need the other station to repeat something send 'PSE RPT NAME', or 'RST', or 'QTH', etc. You can also send something like 'NAME?' or 'RST?' in your next transmission, and the other station should understand.

The Middle

Now, you chat back and forth about whatever you want: the weather, sports, your rigs, antennas, etc., using a format like the following: WA3XYZ DE KC0OBU R blah, blah, blah, AR WA3XYZ DE KC0OBU KN

Then the other station has a turn: KC0OBU DE WA3XYZ R blah, blah, blah, AR KC0OBU DE WA3XYZ KN

Technically, you don't have to send both call signs with each transmission. Some stations just send BK (back to you) and the end of a transmission and then legally identify the station every 10 minutes. Other stations will send both calls with each transmission so those listening will know who they are.

The Conclusion

To end the QSO just send something like: WA3XYZ DE KC0OBU R blah, blah, blah, OK PHIL TNX NICE QSO HPE CUL 73 GM SK WA3XYZ DE KC0OBU K

I thank Phil for a nice QSO, say hope to see you later (HPE CUL), send best wishes (73), and good morning (GM). The SK procedure signal means that's all I have. Similar to AR except it is only used in the final transmission from your station. Phil will then send his final transmission: KC0OBU DE WA3XYZ R FB DAN TNX QSO 73 SK KC0OBU DE WA3XYZ CL

The CL means that Phil is going to be closing his station and won't be answering any more calls. Phil could also end his call with a "dit dit". I would respond with a single dit.

Ending a QSO with the dit dit – dit, or the "shave and a haircut…two bits" is a friendly way of acknowledging that the QSO has ended and you enjoyed the chat. It started back before anyone can remember with one Ham sending 'shave and a haircut' – dahdididahdit - and the other station completing it with 'two bits' – dit dit. It has shortened over the decades to stations sending 'dit dit' and 'dit''.

Please don't fall into the habit of pluralizing. There is no need to send "73s". 73 by itself means "best wishes"; it is not proper to send 73s or 'best wisheses'

Another tip to remember is that most Procedural Signs (like QTH) already mean phrases, and are intended to reduce the amount of sending you need to do to make your point. You don't need to use extra words when using prosigns like QTH. QTH PA is sufficient, not MY QTH IS....

A Cheat Sheet

You might find it helpful to use a cheat sheet that you can refer to when your mind suddenly goes blank. So here it is. Just fill in the blanks and replace WA3XYZ with the other station's call sign.

Is this frequency in use?

QRL? (then LISTEN)

Calling CQ

CQ CQ CQ DE _____ K

Answering another station's CQ

WA3XYZ DE _____ AR

When another station answer's your CQ

WA3XYZ DE _____ GM (GA, GE, GN) TNX CALL UR 559 (or 579, 549, etc.) 559 IN
_____, __ _____, __ NAME _____ _____ HW? AR WA3XYZ DE
_____ KN

To end the QSO

WA3XYZ DE _____ R blah, blah, blah, OK TNX NICE QSO HPE CUL VY 73 GM SK
WA3XYZ DE _____K

If the other station initiates ending the QSO

WA3XYZ DE _____ R OK TNX NICE QSO HPE CUL VY 73 SK WA3XYZ DE
_____

A Final Word about Speed

Accuracy transcends speed. Most operators would rather copy slower accurate code with proper spacing than code sent fast with uneven spacing and lots of mistakes. Speed will come with practice.

Rule of thumb for spacing: The space between letters should be about as long as a dash – which is equal to 3 dits. The space between words should be about as long as two dashes (technically, 7 dits, but it's easier to estimate 'two dashes' since you DON'T want to start counting). Keep in mind that the person on the other end has to decipher your sending, so make it as clear for them as you can. Spacing is just as important as the letters themselves. Without spacing, it's all gibberish! Space between your letters, and pause ever so slightly between words.

It is asking for trouble to call CQ with a speed faster than you can comfortably copy, because that will probably be the speed somebody will use when answering you. Don't get frustrated if the other station doesn't slow down for you, even after you have sent PSE QRS (please send slower). The other station may be pressed for time, in the heat battle during a contest, or has been operating at a fast speed for so long that they have difficulty copying or sending slower. You also need to be courteous. Do not assume that everyone who does not slow down is being a jerk. If you cannot copy the other station, just say SRI TOO FAST, send them a 73 and move on. You are sure to find somebody that you can work.