

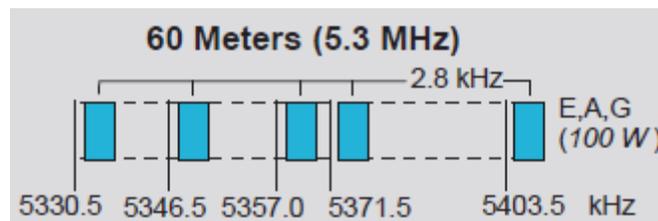
## 60-Meter Operations – New Privileges and Recommended Practices

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Amateurs are permitted to operate on five frequency channels, each having an effective bandwidth of 2.8 kHz. See Table 1 below (These are also the dial frequencies when operating with a VFO using Upper Side Band).

**Table 1**

**Channel 1: 5330.5 kHz**  
**Channel 2: 5346.5 kHz**  
**Channel 3: 5357.0 kHz**  
**Channel 4: 5371.5 kHz**  
**Channel 5: 5403.5 kHz**



These frequencies are available for use by stations having a control operator holding a General, Advanced or Amateur Extra class license. It is important to note that the frequencies shown above are *suppressed carrier frequencies* – the frequencies that appear in your transceiver’s tuning display when your transceiver is in the **USB mode**.

Amateurs may transmit with an effective radiated power of **100 Watts or less**, relative to a half-wave dipole. If you are using an individual antenna or an antenna system with gain greater than that of a half-wave dipole, *there are additional required parameters for operation* (not expressed here).

### ***Legal Operating Modes***

#### **Upper Sideband (USB)**

**CW**

**Digital**

Each mode comes with its own requirements for legal operation on 60 meters.

#### ***Upper Sideband Operation***

Upper Sideband operation on 60 meters is simple. Just tune your transceiver to one of the channel frequencies shown in Table 1 and operate, being careful that you do not over-modulate and create “splatter” that would fall outside the 2.8 kHz channel bandwidths. If your transceiver allows you to adjust your maximum SSB transmit bandwidth, setting it to 2.4 kHz should keep you well within the legal limit.

#### ***CW Operation***

CW operation must take place at the *center* of your chosen channel. This means that your transmitting frequency must be 1.5 kHz *above* the suppressed carrier frequency as specified in the Report and Order (see Table 1).

The channel **CENTER** frequencies are ...

**Channel 1: 5332.0 kHz**  
**Channel 2: 5348.0 kHz**  
**Channel 3: 5358.5 kHz**  
**Channel 4: 5373.0 kHz**  
**Channel 5: 5405.0 kHz**

Consult your transceiver manual. Some transceivers transmit CW at the exact frequencies shown on their displays, but others offset the actual transmission frequency by a certain amount (for example, 600 Hz). If your manual is not clear on this point, contact the manufacturer. If you have access to a frequency counter, this is an excellent tool for ensuring that your CW signal is on the channel center frequency.

### ***Digital Operation***

The FCC Report and Order permits the use of digital modes that comply with emission designator 60H0J2B, which includes PSK31 as well as any RTTY signal with a bandwidth of less than 60 Hz.

The Report and Order also allows the use of modes that comply with emission designator 2K80J2D, which includes any digital mode with a bandwidth of 2.8 kHz or less whose technical characteristics have been documented publicly, per Part 97.309(4) of the FCC Rules. Such modes would include PACTOR I, II or III, 300-baud packet, MFSK16, MT63, Contestia, Olivia, DominoEX and others.

On 60 meters hams are restricted to only one signal per channel and automatic operation is not permitted. In addition, the FCC continues to require that **all digital transmissions be centered on the channel-center frequencies**, which the Report and Order defines as being 1.5 kHz above the suppressed carrier frequency of a transceiver operated in the Upper Sideband (USB) mode. This is typically the frequency shown on the frequency display.

To repeat, the channel **CENTER** frequencies are ...

**Channel 1: 5332.0 kHz**

**Channel 2: 5348.0 kHz**

**Channel 3: 5358.5 kHz**

**Channel 4: 5373.0 kHz**

**Channel 5: 5405.0 kHz**

Operating on the channel center frequencies is not difficult since most amateurs now use digital software that includes some form of “waterfall display” that can be calibrated by audio frequencies.

For example, to operate PSK31 place your transceiver in the USB mode and tune to one of the suppressed carrier channel frequencies shown in Table 1. With your PSK31 software display configured to indicate audio frequencies, click your mouse cursor at the 1500 Hz mark. With your radio in the USB mode, this marker indicates the center of the channel and it is the frequency on which you should be transmitting (FLDigi operates in this manner).

For wider modes, the signal envelope must be centered at the 1500 Hz mark in the waterfall display.

### **Tips for Avoiding Interference (Important)**

Because amateurs are only secondary users on 60 meters, we are required to yield to other services. In other words, if you suddenly hear a non-amateur transmission on the channel, you must cease operation on that channel immediately.

Always listen before transmitting. If you hear another signal on the channel, whether it is a signal from an Amateur Radio or government/private station, *don't transmit*. Another approach is to listen first and then after a reasonable period of time with no apparent activity ask if the frequency is in use (and ID) and then listen for a response.

If your transceiver came with the five (5) 60 meter channels in memory, be sure that they match what is above since some of the older transceivers may have one of the channel frequencies wrong as it changed.

It's recommended that you tune to the channel frequencies shown in the table below based upon your chosen mode of operation with your VFO and then commit them to your memory on your transceiver. That way you're not risking drift off of the center channel if you inadvertently bump your VFO knob. One should also do the same after performing a "MARS modification" on their radio.

Channel	USB Suppressed Carrier (kHz) (VFO Dial Frequencies for USB)	Center (kHz) (1.5 kHz above USB Dial Frequency)
1	5330.5	5332.0
2	5346.5	5348.0
3	5357.0	5358.5
4	5371.5	5373.0
5	5403.5	5405.0

As amateurs exercise their new 60 meter privileges, a more detailed and specific channel occupancy plan may become clear. In the meantime, follow these tips to share the channels as efficiently as possible.

- Keep your transmissions as short as possible with frequent breaks to listen for other signals.
- Although split-channel operation (transmitting on one channel and listening on another), is permitted under the rules, this is considered poor operating practice on 60 meters because it effectively ties up two channels at once and increases potential interference. If you must operate split channel, monitor your transmit channel for other signals.
- To locate a clear channel, USB operators should begin at Channel 5 and move down (if necessary) to Channels 4, 3, 2 and 1 until a clear channel is found. CW and digital operators should reverse this pattern, beginning at Channel 1 and moving upward until a clear channel is found.
- If you hear a digital signal and you're not sure if it is an Amateur Radio signal, don't transmit; move to another channel instead. If it is an amateur digital signal that is not centered in the channel, resist the temptation to contact him on his transmitting frequency to tell him he is out of compliance. By transmitting on his frequency you'll be out of compliance as well!

Most primary users on 60 meters operate USB or wide-shift digital signals, so they are relatively easy to recognize. To help you identify the sounds of popular amateur digital modes, see the Get on the Air with HF Digital web page at [www.arrl.org/hf-digital](http://www.arrl.org/hf-digital).

- Take care when using narrow receive filters, such as when operating CW. To be in compliance you need to be able to hear other stations that may begin operating on the channel.
- Over the years, Channel 5 has become a de facto international DX channel. With that in mind, avoid domestic QSOs on this channel when possible.

*\*\*\*Credit to ARRL for this document\*\*\*. This is a modified version of a document from the ARRL. The original is Version 6.5 – March 27, 2012 and can be found at [http://arrl.org/files/file/Regulatory/Recommended\\_Practices\\_Version\\_6\\_5.pdf](http://arrl.org/files/file/Regulatory/Recommended_Practices_Version_6_5.pdf).*