



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

*Version 6.4 – February 23, 2012*

In November 2011, the Federal Communications Commission issued a Report and Order that substantially expanded Amateur Radio privileges on the 60-meter band. The new privileges will take effect on March 5, 2012.

Amateurs are permitted to operate on five frequency channels, each having an effective bandwidth of 2.8 kHz. See Table 1 below.

**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 W or less, relative to a half-wave dipole. If you're using a commercial directional antenna, FCC Rules require you to keep a copy of the manufacturer's gain specifications in your station records. If you built the directional antenna yourself, you must calculate the gain and keep the results in your station records.

When using a directional antenna, you must take your antenna gain into account when setting your RF output power. For example, if your antenna offers 3 dB gain, your maximum legal output power on 60 meters should be no more than 50 W (50 W plus 3 dB gain equals 100 W Effective Radiated Power).

In addition to increasing the power amateurs can use on 60 meters, the Report and Order also expanded the number of 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 overmodulate 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). Operating at strict channel-center frequencies may come as a disappointment to many, but cooperating with the NTIA is key to expanded privileges in the future.

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***

Our expanded privileges on 60 meters were the result of collaboration between the FCC and the NTIA – the National Telecommunications and Information Administration, the agency that manages and coordinates telecommunications activities among US government departments, the primary users of the band. The NTIA expressed concern about possible interference and requested that amateurs limit digital operating to PSK31 and PACTOR III *only*.

It is certainly possible to interpret the FCC Report and Order somewhat broadly as it concerns digital operating on the band, but be careful not to read too much into the text. For example, while the Report and Order mentions RTTY, it also specifies that the signal must be less than 60 Hz wide. This is too narrow for amateur teletype signals. Only a much narrower mode such as PSK31 (about 50 Hz wide) meets this requirement.

With an eye to the potential for expanded 60 meter privileges in the future, the ARRL believes it is critical to cooperate fully with the NTIA. Therefore, the ARRL asks all amateurs to restrict 60-meter digital operations to PSK31 or PACTOR III.

With PSK31 you must operate on the following *channel center frequencies* ...

**Channel 1: 5332.0 kHz**

**Channel 2: 5348.0 kHz**

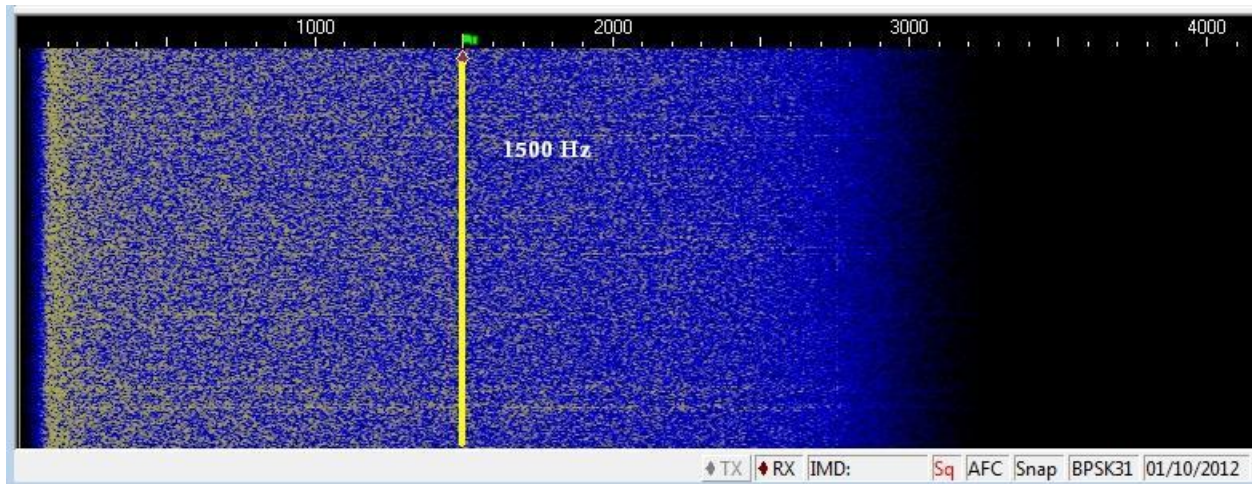
**Channel 3: 5358.5 kHz**

**Channel 4: 5373.0 kHz**

**Channel 5: 5405.0 kHz**

The easiest way to achieve this is to 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 (see below). 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.



PACTOR III operation on 60 meters is straightforward. With your transceiver in the USB mode, tune to one of the suppressed carrier channel frequencies shown in Table 1. Note that only live keyboard-to-keyboard operation of PACTOR III is allowed. Unattended automatic operation is *not* permitted.

### **Tips for Avoiding Interference**

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*.

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. 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.