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West Mountain RADIO

Quarterly Newsletter

Quarter IV - 2018

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Making the RIGblaster Advantage operate 9600 bps (9k6) Packet Radio

By: Sholto Fisher

This article describes a Packet Radio cable and jumper diagram for your RIGblaster Advantage to operate 9k6 Packet Radio. Things you will need:

1) An old Ethernet patch cable (not a crossover cable).
2) A 6 pin mini din plug (male).
3) UZ7HO's High Speed Sound Modem.
4) A radio capable of 9k6 packet radio.

Most 9k6 capable VHF/UHF radios use a 6 pin mini din 'data jack'. This appears to be a standard between radio manufacturers. Both filtered (1200 bps) and unfiltered (9600) receive audio is available on this connector.

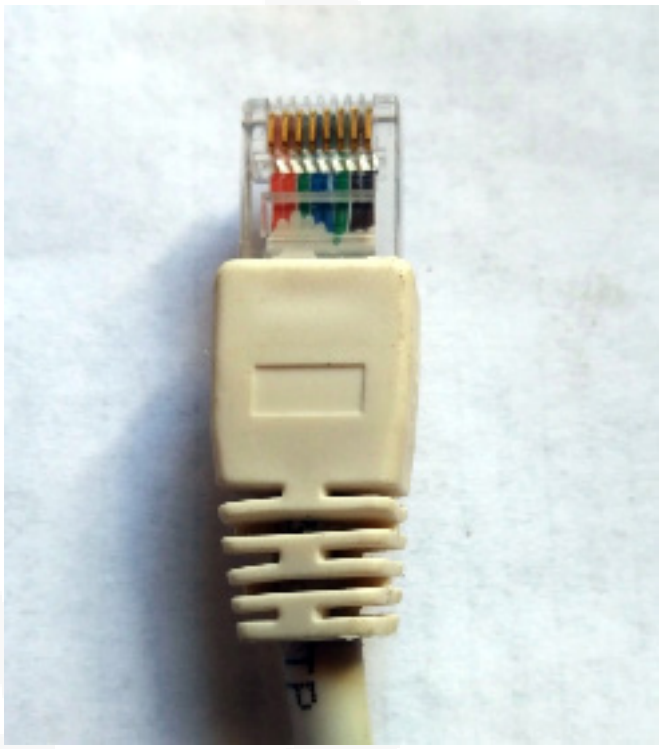
The diagram below is from the FT-817ND but as stated this is common on these types of radios.

Typical 'data jack' found on VHF/UHF transceivers.

This diagram is from the point of view of "looking into" the data jack on the radio. It would also correspond to the solder-side of the plug.

The first thing to consider is making a suitable cable.
A simple method is to take an Ethernet patch cable (which has the RJ-45 connector already installed) and cut it in two.

Examine the end of the RJ-45 plug you're going to use with the Advantage:

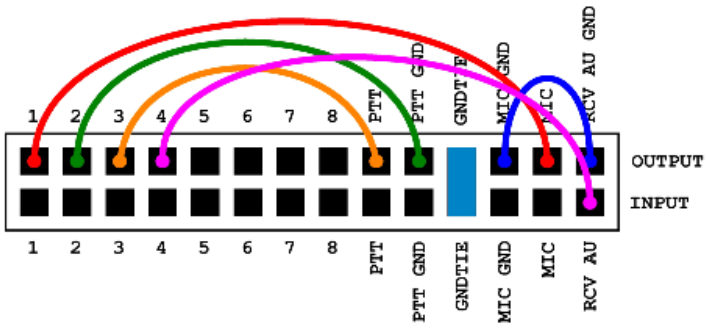


You could use any wiring scheme you like because you can always compensate for it in the Advantage by the use of the internal jumper pattern but I recommend you follow this one:

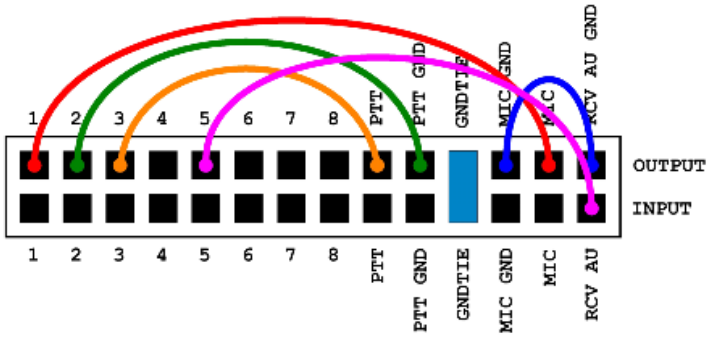
RJ-45 Pin number and wire color	6 Pin Mini DIN pin number (jack)	Signal
#1 (Orange/White)	N/A	N/A
#2 (Orange)	N/A	N/A
#3 (Green/White)	6	SQUELCH
#4 (Blue)	5	1K2 RX AUDIO
#5 (Blue/White)	4	9K6 RX AUDIO
#6 (Green)	3	PTT
#7 (Brown/White)	2	GROUND
#8 (Brown)	1	TX AUDIO

Now solder the 6 pin mini din plug on the end of the cut Ethernet cable and you have the packet cable made.

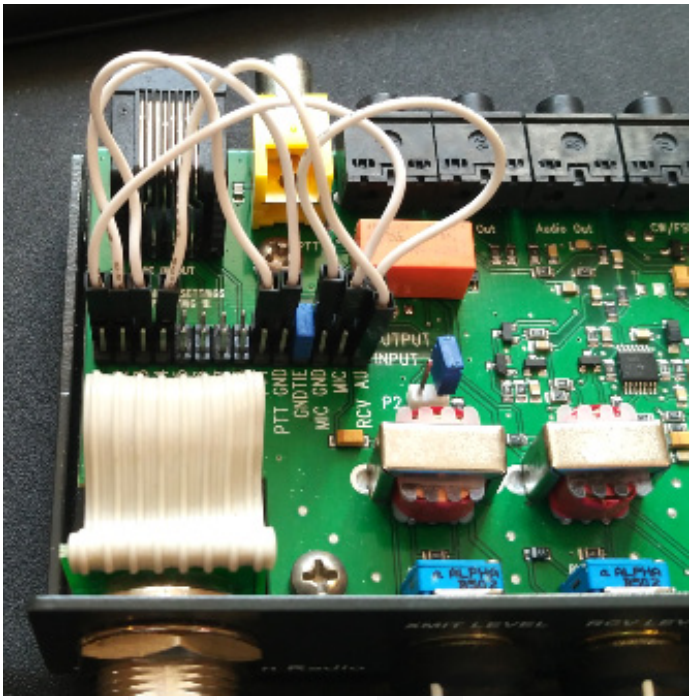
Although I include the SQUELCH signal it is not actually required by the Sound Modem software so it's up to you whether to bother soldering this pin at all.
The Advantage pin numbering is actually a mirror image of Ethernet pin numbering so Pin 8 goes to Pin 1, Pin 7 to Pin 2 ... etc. The Advantage jumper wiring pattern for 9k2 RX audio:



If you include the 1k2 audio signal in the cable then you can change the jumpering inside the Advantage to switch between either 1k2 RX AUDIO or 9k6 RX AUDIO. Note that 1k2 RX AUDIO would be useful for other digital modes such as the Fldigi modes designed for VHF/UHF and of course 1200 baud Packet Radio.
The jumper wiring pattern for 1k2 RX audio:



Because we are bringing RX audio into the Advantage on the rear RJ-45 jack we do not need to hookup a patch cable to the LINE IN jack (which is the normal method of obtaining RX audio) so make sure the LINE IN jack and SPKR OUT jack have nothing plugged into them or you may encounter difficulties.



The completed jumper wiring for 9k6 audio.

Next Steps

Configure UZ7HO HS Sound Modem for 9k6 operation. FM deviation is very critical for successful 9k6 Packet Radio so you are going to need to experiment a little with the TX audio volume control. A deviation of +/- 3KHz is the proper value and an easy way to set this up is to use a SDR dongle if you have one. Terminate the dongle and radio with suitable 50 ohm dummy loads and watch the output of your 9k6 radio. It should be easy enough to alter the TX volume until you see a 6 KHz wide signal.

HS Sound Modem also includes a 19k2 Packet Radio modem. The low pass filter in the Advantage should be capable of this speed too. The only question is whether your 9k6 radio is able to do it. Some can and some can't but if you're lucky you could have a very high speed packet link which would be suitable for transferring larger files such as pdf documents etc.

Resources
UZ7HO High Speed Sound Modem
http://uz7.ho.ua/packetradio.htm

The Cave Rescue

by Larry Risser

It all started with a phone call. While having a meeting with the sales manager of a Thermal imaging company while in Bangkok, about 1pm I received a phone call asking if I could assist in find some kids in a cave in the northern part of Thailand. Of course being a volunteer and First Responder Vientiane Rescue 1623 is known for having Thermal Imagers which are used in rescue and fire situations. I knew was a call that is not normal and immediately placed phone calls back to Vientiane Laos to gather up the equipment. That is the day everything changed.

I Volunteer for Vientiane Rescue 1623 in Vientiane Laos, A non-profit volunteer rescue organization helping to save lives and help during natural disasters and international rescues. A lot of you who have served in the Military know this country well, and now 47+ years later I find myself here working and volunteering to help save people. Laos is still a poor country 6.58 million from 2.3 in the 60's and now the infrastructure of Laos is slowly building to a more modern country. Healthcare is becoming more and more advanced slowly but coming. Medical assistance is done through Volunteer Rescues which rely on complete donations. I have been here for 25 years and I have seen how Laos has developed over the years. I was certified in The State of Pennsylvania as a Firefighter and I have taken that knowledge and brought it here to help others. Along with my communication background with Ham radios and Commercial radios, it has begun to change in the world of communications in Laos. I know some of you know XW is a rare call and I'm pretty sure a lot of you have made QSO with WX1A, and possible myself XW6OU.

In our free time we receive calls and respond to people whom have had an accident and thus requires pre-medical attention to bring them to the local hospital. In the USA we always think to call 911 but in Laos, its 1623. We have just under 400 Volunteer First Responders who spend their free time to standby and take calls and transport people including Americans to local and cross boarding countries for medical attention.

Nevertheless this particular day we had arranged for 3 thermal imagers which are all used in Vientiane Rescue 1623, had the imagers transported to Bangkok and thus the journey began to Tham Luang Cave which is located in Chang Rai Province. The Journey took about 13 hours to arrive at the location which is roughly 1120 Km from Bangkok. After arriving I was shocked to see how difficult it was going to be and this would not be a normal rescue. This in fact became one of the largest rescues in Thai history.

The Cave Rescue

by Larry Risser

First initial assessment was communications was very poor, since the cave entrance was surrounded by mountains, cellular signal was zero. Only initial signal was iridium satellite service. Until four days later when local providers moved in mobile cell sites.

Propagation was poor for using HF as the mountains and weather made many things difficult including putting up a antenna to being able to communicate back to Laos with our daily reports. However we were able to make contact in early morning to give an update. Once Cellular service was restored HF became our backup communications. One of our biggest issues we came across during this period was all 3 batteries would die after a few days from either having the door open and/or charging the battery for phones or flashlights.

Being a First Responder has its struggles and all of us know that radio communications is the first part of any rescue operation. How did the radios work for us? Our gear provided us with over the mountain communications that were not available with conventional radios.

We used our thermal imagers to scan entrances to the caves and as well as holes that had a potential entrance. The big worry was that this region has a lot of wild cats, and while a lot of mothers will protect the babies, we wanted to make sure we would take precautions not to disturb the natural habitat. Thermal

Imagers have about 100-200 meter range in open areas, and in most cases produces a white spectacles at long distances of body heat. A typical thermal imager will allow us to find pretty much any bodies in a complete darkness environment. Since the Thermal Imagers are expensive, they are not easily found in Laos, let alone Thailand.

I use a 1996 Land cruiser with Dual battery packs. This was a design from Japan to have a SUV that would have high CCA for severe winter weather. The additional battery pack was to provide additional power to the radio and charging equipment in the rear section of the vehicle. The first and foremost flaw was we had everything connected together and had no way other than a breaker to isolate the power from front and back. Only a few months later did I realize the ISOpwr was my solution.

Post adjustments and findings. Well after scratching my head for a few months I was going thru equipment in the ham Shack, and found we had an extra ISOpwr, and read the manual on how it operates. After some brief discussions with my father he pointed out about how the device would switch on and off with the power of the car while it is running. So after doing some metal work for the equipment cage, I added the ISOpwr and a RIGrunner 4004 to the system, and sure enough it solved my power issues. My land cruiser has 2 factory installed batteries which send 24 volts to the starter and then switches back to 12V for the rest of the vehicle. I am still trying to understand all the electrical part of this myself, but with the additional AUX battery connected to the ISOpwr all my worries of a dead battery

If you would like to submit an article for consideration in future newsletters please contact marketing@westmountainradio.com

The Cave Rescue
by Larry Risser

to the main vehicle are gone. With all the DC equipment in the Ambulances and rescue trucks, we find the RIGrunner and the ISOpwr does the job. We have tried plugging into battery chargers and found the drivers forget to unplug the units before leaving and has resulted in a few sparking power cords and chargers.

Vientiane Rescue 1623 is currently going through a communications upgrade, changing from analog to a Mototrbo DMR system VHF with GPS. The new system is called Rescue Net. With donations from Crown Plaza Hotel, French Embassy and the Church of the Ladder Day Saints. Rescue 1623 has a nationwide repeater license, as we expand our rescue operations area, we can expand the coverage of our radio network. With the new network we hope to reduce response time to an accident with GPS coverage and mapping at the dispatch center. We have reached out to West Mountain Radio for assistance in donating PWRISO and rig-runners in all the vehicles to prevent battery drainage to the vehicles.

We hope that this stage 2 project will be completed by Christmas.

Thinking outside the box, Vientiane Rescue 1623 is trying to find a used but very road worthy heavy rescue vehicle. Since Vientiane Rescue 1623 does a lot of rural rescue we are trying to find a vehicle that someone or company would be willing to donate to help us become more effective. Currently we use 4-5 small vehicles to move equipment that in the US would only require 1 vehicle. We do Vehicle Extrication, Swift Water Rescue and Dive teams as well as roping and cave rescues.

I thought by reaching out to everyone that maybe someone would have or know someone who would be willing to donate to our Rescue team in Laos. We need an Air Boat during the rainy season and the flooding season to cross rice patties and deliver water and food and bring out people requiring medical help. I have been working on a proposal to be the very first Volunteer Rescue Team in South East Asia to have Medivac service since we are in a mountainous area. We have reached out to Bell Helicopter to find a helicopter(s) to see which one would work best for our needs. We do have pilots who can be certified for this service if I can pull it all together. We want to work within Laos, Cambodia, Thailand, and possibly Burma to help during natural disasters. Right now nobody in any of these countries has a Volunteer rescue with Medivac options. We are open for donations and if you would like to come and visit to see what we do, I would be more than happy to show you Vientiane Rescue 1623.

We are:
Foundation for Assisting Poor People of LaosPhontham Village, Xaysetha District
Vientiane, Lao Peoples Democratic Republic

West Mountain RADIO 2018 Holiday Rebate Offers

Rebate Amount	Product	SKU	MSRP
$5.00	COMspkr Computer Speaker System	#58409-950	$39.95
$5.00	PWRbrite LED Light Strip	#58518-1066	$39.95
$5.00	RIGblaster Nomic	#58008-959	$59.95
$5.00	RIGtalk USB for Rig Control Interface	#58201-1004	$54.95
$5.00	PWRcrimp Crimp Tool	#58568-1049	$39.95
$10.00	PWRguard Plus	#58402-1045	$114.95
$10.00	RIGrunner 4010S+	#58303-1601	$179.95
$10.00	RIGrunner 4007U	#58313-1561	$169.95
$10.00	RIGrunner 4004 USB	#58315-1043	$79.95
$10.00	RIGrunner 4005	#58312-1039	$69.95
$10.00	RIGrunner 4005 Horizontal	#58312-1041	$69.95
$15.00	RIGrunner 4008	#58307-1035	$99.95
$15.00	RIGrunner 4008 Horizontal	#58307-1037	$89.95
$15.00	RIGrunner 4012	#58305-1033	$109.95
$15.00	Super PWRgate PG40S	#58403-1046	$139.95
$15.00	CBA IV Computerized Battery Analyzer	#58250-1014	$159.95
$15.00	CBA HR	#58258-1662	$159.95
$20.00	RIGrunner 4005i	#58312-1353	$279.95
$30.00	RIGblaster Plug & Play	#58009-960	$119.95
$30.00	CLRspkr ClearSpeech® DSP Noise Reduction Speaker	#58407-948	$219.95
$30.00	CLRdsp ClearSpeech® DSP Noise Reduction Processor	#58407-949	$219.95
$40.00	PWRcheck	#58430-1286	$184.95

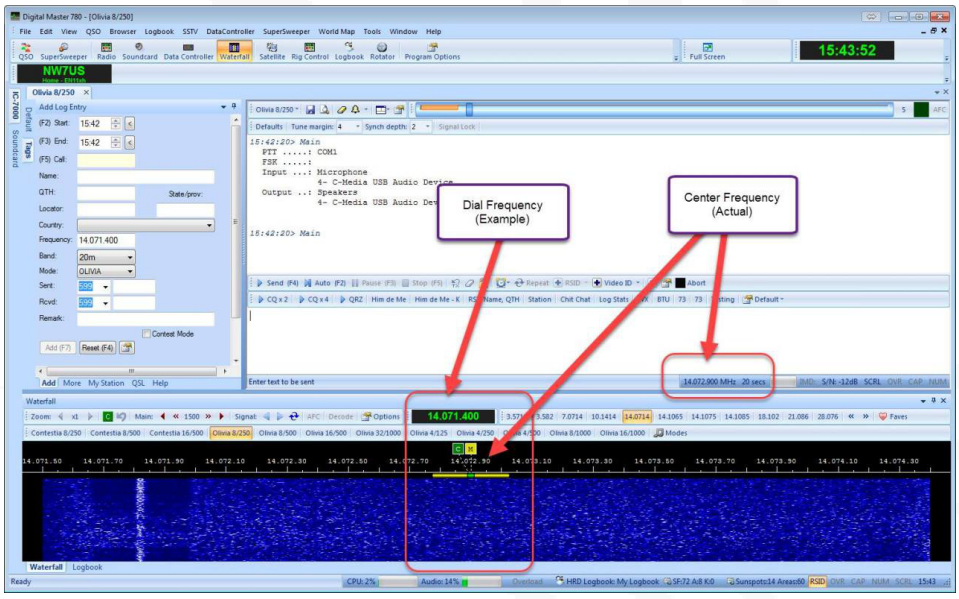
Rebate Offers valid for purchases made November 23 through December 31, 2018

Full Introduction to Olivia Digital HF Comms

by Tomas Hood NW7US

It is clear that we are at the end of current Sunspot Cycle 24, and are entering into the phase between cycles in which we may not see sunspots for great lengths of time (days, weeks, perhaps months). With this decrease in solar activity comes at least two changes: 1) the ionosphere dynamics change that includes lower maximum usable frequencies, shorter windows of "openings" over a given radio circuit's path, and, 2) the typical stability of a rarely-disturbed geomagnetic field. These and other factors significantly change the landscape of high-frequency (shortwave) radio-wave propagation.

In this challenging mix of real-world change, users of HF seek effective means of communications that rely on the ionosphere for long-distance (DX) radio-wave propagation. One digital mode is known as, Olivia.



For those of you who have dived into the crowded but fun pool of FT8 operation--or one of the other Joe Taylor modes (such as JT65, FT8, or JT9)--and now are excited about digital modes, here's something you might enjoy exploring, as well. Unlike the JT/FT digital modes--modes that do an incredible job under marginal propagation conditions--there are other modes that offer keyboard-to-keyboard conversational QSO opportunities that can overcome rough shortwave radio propagation conditions.

(The meaning of QSO on Wikipedia: An amateur radio contact, more commonly referred to as simply a "contact", is an exchange of information between two amateur radio stations.)

While making quick work of getting DX stations into your logbook by exchanging callsigns, a signal report, and a grid square, the JT/FT modes (JT stands for Joe Taylor, the fellow that pioneered these modes) are limited. They cannot handle any additional communications beyond a callsign, a signal report, a grid square, and a very limited set of acknowledgements and sign-off messages. When you desire to get to know people from other areas of the world, or if you need to establish networks around the world for passing information--perhaps an emergency net in support of the Red Cross--or if you are motivated by any other of a myriad reasons to establish a keyboard-to-keyboard conversation by way of the ionosphere, modes like Olivia are great candidates for your consideration. (Later in this article, typical and suggested frequencies and settings are listed for Olivia operation on HF)

For Your Consideration: Olivia
Olivia is an MFSK--Multi-Frequency Shift Keying--radioteletype protocol designed to work in difficult conditions on shortwave bands. The Olivia digital mode is commonly used by amateur radio operators to reliably transmit ASCII characters over noisy channels using the high frequency (i.e., 3 MHz to 30 MHz; high-frequency, or HF; shortwave) spectrum. The typical Olivia signal is decoded when the amplitude of the noise is over three times that of the digital signal!

In 2005, SP9VRC, Pawel Jalocha, released to the world Olivia, a mode that he developed starting in 2003 to overcome difficult radio signal propagation conditions on the shortwave bands. By difficult, we are talking significant phase distortions, low signal-to-noise ratios (SNR), and multipath propagation effects. The Olivia-modulated radio signals are decoded even when it is ten to fourteen dB below the noise floor. That means that Olivia is decoded when the amplitude of the noise is slightly over three times that of the digital signal!

When the propagation of digital signals is sub-optimal, such as when the signal experiences low signal-to-noise ratio, and/or the path between the transmitting station and receiver experiences multipath propagation, many digital modes suffer the loss of data. Olivia, on the other hand, overcomes these problems.

Olivia decodes well under other conditions that are a complex mix of atmospheric noise, signal fading (QSB), interference (QRM), noise (QRN), and polar flutter caused by a radio signal traversing a polar path. Olivia is even

capable when the signal is affected by auroral conditions (including the Sporadic-E Auroral Mode, where signals are refracted off of the highly-energized E-region in which the Aurora is active).

Currently, the only other digital modes that match or exceed Olivia in their sensitivity are MT63, and some of the modes designed by Joe Taylor as implemented in the WSJT programs, including FT8, JT65A, and JT65-HF--each of which are certainly limited in usage and definitely not able to provide true conversation capabilities. Olivia is useful for emergency communications, unlike JT65A or the newly popular FT8.

Olivia in Action
There is Olivia activity on shortwave. The mode has not died out, or become obsolete! This document is the result of many discussions between members of a subset of Olivia communicators. We are advocates and participants of the Olivia digital mode on HF:

Join us on Facebook at https://www.Facebook.com/groups/olivia.hf
Join us on Groups.io via http://OliviaDigitalMode.net

The following link is to a video that is a demonstration of a two-way transmission (a QSO) using the Olivia digital mode on shortwave. I am in QSO (conversation) with KA5TPJ. As you can see on the waterfall (the deeper blue area toward the bottom of the software's window), there are two other Olivia QSOs just below my QSOs frequency. Just above my QSO frequency is FT8 activity. Below the two other Olivia QSOs are PSK31 QSOs. The band is active!. One thing stands out: Olivia is not dead!

https://www.youtube.com/watch?v=yAIhkaJN15o

The standard Olivia formats (shown as the number of tones/bandwidth in Hz) are 8/250, 8/500, 16/500, 8/1000, 16/1000, and 32/1000. Some even use 16/2000 for series emergency communication. The most commonly-used formats are 16/500, 8/500, and 8/250. However, the 32/1000 and 16/1000 configurations are popular in some areas of the world (Europe) and on certain bands.

These different choices in bandwidth and tone settings can cause some confusion and problems--so many formats and so many other digital modes can make it difficult to figure out which mode you are seeing and hearing. After getting used to the sound and look of Olivia in the waterfall, though, it becomes easier to identify the format when you encounter it. To aid in your detection of what mode is being used, there is a feature of many digital-mode software implementation suites: the RSID. The next video, below, is a demonstration on how to set the Reed-Solomon Identification (RSID) feature in Ham Radio Deluxe's Digital Master 780 module (HRD DM780). (Check out Ham Radio Deluxe, here.)

I encourage ALL operators, using any digital mode such as Olivia, to TURN ON the RSID feature as shown in this example. In Fldigi, the RSID is the TXID and RXID; make sure to Check (turn on) each, the TXID and RXID.

Please, make sure you are using the RSID (Reed Solomon Identification - RSID or TXID, RXID) option in your software. RSID transmits a short burst at the start of your transmission which identifies the mode you are using. When it does that, those amateur radio operators also using RSID while listening will be alerted by their software that you are transmitting in the specific mode (Olivia, hopefully), the settings (like 8/250), and where on the waterfall your transmission is located. This might be a popup window and/or text on the receive text panel. When the operator clicks on that, the software moves the waterfall cursor right on top of the signal and changes the mode in the software. This will help you make more contacts!

https://www.youtube.com/watch?v=lBIacwD9nNM
+ NOTE: The MixW software doesn't have RSID features. Request it!

Voluntary Olivia Channelization
Since Olivia signals can be decoded even when received signals are extremely weak, (signal to noise ratio of -14db), signals strong enough to be decoded are sometimes below the noise floor and therefore impossible to search for manually. As a result, amateur radio operators have voluntarily decided upon channelization for this mode. This channelization allows even imperceptibly weak signals to be properly tuned for reception and decoding. By common convention amateur stations initiate contacts utilizing 8/250, 16/500, or 32/1000 configuration of the Olivia mode. After negotiating the initial exchange, sometimes one of the operators will suggest switching to other configurations to continue the conversation at more reliable settings, or faster when conditions allow. The following table lists the common center frequencies used in the amateur radio bands.

Olivia (CENTER) Frequencies (kHz) for Calling, Initiating QSOs
It is often best to get on standard calling frequencies with this mode because you can miss a lot of weak signals if you don't. However, with Olivia activity on the rise AND all the other modes vying for space, a good deal of the time you can operate wherever you can find a clear spot--as close as you can to a standard calling frequency.
Note: some websites publish frequencies in this band, that are right

Full Introduction to Olivia Digital HF Comms

by Tomas Hood NW7US

on top of weak-signal JT65, JT9, and FT8 segments. DO NOT QRM weak-signal QSOs!

We (active Olivia community members) suggest 8/250 as the starting settings when calling CQ on the USB frequencies designated as 'Calling Frequencies.' A Calling Frequency is a center frequency on which you initially call, 'CQ CQ CQ...' and then, with the agreement of the answering operator, move to a new nearby frequency, changing the number of tones and bandwidth at your discretion. Even though 8/250 is slow, the CQ call is short. But, it is narrow, to allow room for other QSOs nearby.

OUR CURRENT (2018) SUGGESTED OLIVIA CALLING AND LISTENING FREQUENCIES

These are suggested frequencies on which can be found WEAK (i.e., a signal that you cannot hear, a signal not seen on the waterfall) Olivia signals. While it is easy to spot a STRONG Olivia signal anywhere on the waterfall, by using these suggested calling frequencies at least once and a while, you will enable us to find your signal when the signal is too weak to hear and too faint to see on the waterfall. Olivia can do well with weak signals. Yes, our suggested 8 tone with 250 Hz bandwidth results in slow transmissions. But, it is one of the better settings when attempting to decode very weak signals. Once you make contact, you can move up or down a bit, away from the calling frequency, and then change to 16/500 to make the conversation go faster. But, on a calling frequency, it is advisable to configure operations in such a way as to increase the likelihood that you will find and decode that weak signal.

In the following list, CENTER is where you place the center of the software's cursor, and click to select that center frequency on the waterfall. If you use the DIAL frequency from this list, then click 1500 Hz offset up the waterfall (1500 Hz to the RIGHT of the LEFT side of the waterfall, if your waterfall is oriented horizontally with the lowest frequency on the left). This results in the software and transceiver being correctly tuned for the CENTER frequency.

The listing shows CENTER, then DIAL, then the number of tones and the bandwidth.

CENTER	DIAL	(Tones/Bandwidth)
1.8269	1.8254	(8/250)
3.5729	3.5714	(8/250)
7.0729	7.0714	(8/250)
10.1429	10.1414	(8/250)
14.0729	14.0714	(8/250)
14.1075	14.1060	(16/1000)
18.1029	18.1014	(8/250)
21.0729	21.0714	(8/250)
24.9229	24.9214	(8/250)
28.1229	28.1214	(8/250)

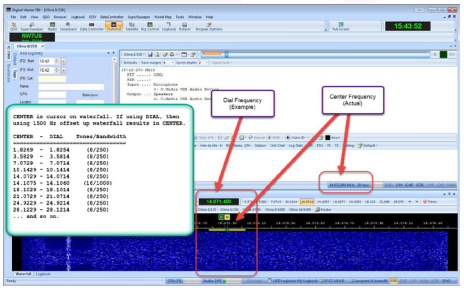
And so on.

Below, our current frequency reference listing:
http://NW7US.us/images/2018-03-03_SuggestedFreqs.jpg

```
CENTER is cursor on waterfall. If using DIAL, then
using 1500 Hz offset up waterfall results in CENTER.

CENTER  -  DIAL    Tones/Bandwidth
==================================
1.8269  -  1.8254      (8/250)
3.5829  -  3.5814      (8/250)
7.0729  -  7.0714      (8/250)
10.1429 - 10.1414      (8/250)
14.0729 - 14.0714      (8/250)
14.1075 - 14.1060     (16/1000)
18.1029 - 18.1014      (8/250)
21.0729 - 21.0714      (8/250)
24.9229 - 24.9214      (8/250)
28.1229 - 28.1214      (8/250)
... and so on.
```

Example (screen grab showing an example):



REMEMBER THAT IF YOU USE THE DIAL FREQUENCY (THE SECOND FREQUENCY PER ROW), SET YOUR WATERFALL CENTER AT 1500 Hz)

Don't forget: If your software is able to decode/encode the Reed-Solomon Identification signals (RSID), please turn on both received and transmit RSID. An example is shown in the following video, which demonstrates enabling RSID in a popular software suite: https://www.youtube.com/watch?v=lBIacwD9nNM

Please share this everywhere possible, as part of our effort to rekindle the love for our conversational mode, Olivia.

Q: What's a 'CENTER' Frequency? Is That Where I Set My Radio's Dial?

For those new to waterfalls: the CENTER frequency is the CENTER of the cursor shown by common software. The cursor is what you use to set the transceiver's frequency on the waterfall. If your software's waterfall shows the frequency, then you simply place the cursor so that its center is right on the center frequency listed, above. If your software is set to show OFFSET, then you might, for example, set your radio's dial frequency to 14.0714, and place the center of your waterfall cursor to 1500 (1500 Hz). That would translate to the 14.0729 CENTER frequency.

Another operating tip: Do not switch to other modes or settings without calling CQ for at least a five-minute window. It is horrid when people call CQ and change

Full Introduction to Olivia Digital HF Comms

by Tomas Hood NW7US

settings, modes, bandwidths, tones, every time they call CQ! If you want someone to answer your CQ, you need to stick with one setting for long enough for others to find your signal and get set up to answer.

REMEMBER: ALWAYS TURN ON RSID! (TXID and RXID in FLdigi)
Q: What are the common windows of Olivia operation on HF
(this is still a work-in-progress; your input is welcome)
+ 160m: 1835 kHz - 1837.9 kHz
+ 80m: 3571 kHz - 3573.9 kHz
+ 40m: 7071 kHz - 7073.9 kHz (500, 250, or 125 Hz configurations mostly)
+ 30m: 10141 kHz - 10144 kHz (500, 250, or 125 Hz configurations mostly)
+ 20m: 14071 kHz - 14073.9 kHz (500, 250, or 125 Hz configurations mostly)
+ 20m: 14104.5 kHz – 14107.9 kHz (1000 or 2000 Hz wide configurations mostly)
+ 17m: 18102.65 kHz
+ 15m,
12m,
10m,
6m: Usually 500 Hz above PSK activity (i.e., 21071.5 kHz, 24921.5 kHz, 28121.5 kHz)
+ 6m: 50.291 MHz (?? still in debate)

Note: Make sure that your signal does not cross into other sub-bands (watch the highest edge of the transmitted signal) where weak-signal modes are active. For instance, do not have any part of your signal at 14074 kHz or higher, as this is the sub-band for FT8, which is just below JT65A and JT9.

Also, do not quickly switch to other modes without calling CQ for at least a five-minute window. It is really horrid when people call CQ and change settings, modes, bandwidths, tones, every time they call CQ during the same session!

Join the OLIVIA COMMUNITY Online! There are several key resources that we in the Olivia community are developing, to make it easier for you to enter the great world of Olivia. One is an active support e-mail group to which you can subscribe at https://groups.io/g/Olivia -- a group containing topical areas of interest which can be filtered so that you are not flooded by email containing topics of which you are not interested. It has a files section, as well, in which we will add helpful how-to instructions and so on.

Another resource is our Facebook group, at: https://www.Facebook.com/groups/olivia.hf -- also with a files area containing help files. This group is a great resource for getting help from like-minded Olivia digital mode enthusiasts.

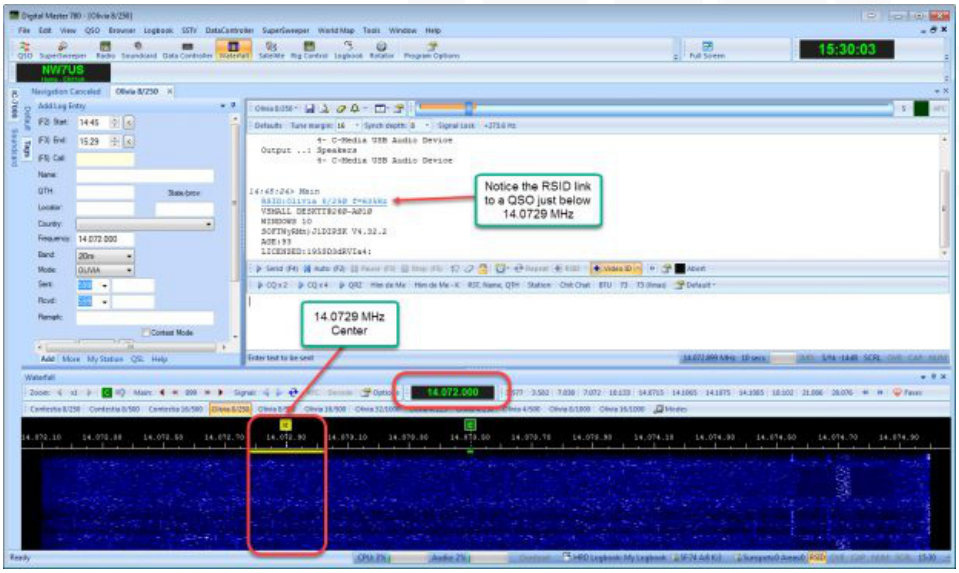
Here is a video of an Olivia 80-Meter Roundtable Net:
https://www.youtube.com/watch?v=G7TlGEuStx4

Check out some eavesdropping on an Olivia QSO:
https://www.youtube.com/watch?v=2lv9dshac78

And, two more:
https://www.youtube.com/watch?v=FUjiBVsXrzE

https://www.youtube.com/watch?v=Yz7a--ePSNs

One last note: Olivia is NOT a weak-signal mode. There are no points won by barely making a contact. In the USA FCC regulations, you are directed to use only the power necessary to make the QSO. Typically, with poor propagation, using Olivia with an output power of 100w is the minimum to establish a reliable circuit. You just cannot go beyond your rig's duty cycle (don't burn out the finals in your radio!). You also must be sure that you do not overdrive the audio chain into your radio. Be sure that you do not have RF coming back into your audio chain. Yes, 100 watts is acceptable. Don't let anyone convince you otherwise.



Welcome to Olivia!
See you on the waterfall.
73 de NW7US

Tomas Hood (Amateur radio NW7US),
Twitter: @NW7US
YouTube: https://YouTube.com/NW7US
Home Website: http://me.NW7US.us

Bulletin Board

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Fort Wayne Hamfest
November 17-18, 2018

Waukesha Swapfest
January 5, 2019

Attention! West Mountain Radio is focused on making products Made in the U.S.A. Unfortunately, due to the rise in raw materials and labor costs, we are forced to raise our prices. The good news is prices will not increase until January 1, 2019! Thank you for your continued support to provide quality products to hams worldwide.

Interested in microcontrollers?

Click here for more info:
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Want to Learn C programming for microcontrollers?
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Click the Link to see an overview
of HRO Superfest 2018!
(Our 10 seconds of fame falls on time index: 1:28 - 1:38)
https://www.youtube.com/watch?v=GhsBbdl2c1Y

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