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18

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Austin Amateur Radio Club Meeting for August 4 will be held ONLINE!

Continuing adherence to social distancing mandates, the AARC meeting will be held online, Tuesday August 4, 2020 at 7:00p.m. using the Zoom app. If you do not have Zoom, you may download the free application from the Zoom website for your desktop, laptop, or tablet. It can also be loaded on your smart phone from the iPhone or Android Stores.

https://zoom.us/Download

Zoom will allow the group to see the PowerPoint presentation online, as well as allowing the whole group to hear the speaker. While presentations are in progress **please mute your microphone** so the whole group will not hear background noise from your location. If you would like to ask a question, you can select "*Raise Your Hand*" from the application menu and the speaker will recognize you to take your app off mute. Then return to mute after you have finished.

The *Raise Your Hand* feature will also be used for any votes necessary during the meeting. After voting, please *Lower Your Hand*. You will also have the option to only see who is speaking or a view of all participants, with the speaker outlined in green.

We are looking forward to seeing and hearing from you during our regular meeting date and time. We also would like to express our appreciation to Clear Blue Sky Digital for allowing the club to use Zoom Pro at no charge to the club.

Kerby Spruiell, AARC President

The Austin Amateur Radio Club

Monthly Meeting - August 4, 2020 Main Presentation Topic: **TBD Solar Weather**, by W5IFQ, Lew Thompson

Time: 7 p.m. to 9 p.m., Central Time, Tuesday, August 2

An email will be sent with meeting details as the date approaches. Make sure your email address is up-to-date on the **austinhams.org** site.

Please do <u>not</u> post meeting info on social media or transmit via the radio. Unfortunately, QRM is likely and expected if the meeting is published publicly.

If you don't receive the meeting info, please contact an officer for the meeting link and password.

Contact info is on the last page.

Note 1: You can join the audio portion by phone or using your computer's audio. If you need to speak, you will need a headset with microphone to prevent feedback. If you do not need to speak, you can simply use your computer speakers to listen.

Note 2: If you have not used the Zoom teleconferencing app before, you may want to visit the pages below for some hints and tips on participating in the meeting:

https://www.wired.com/story/tips-for-using-zoom/ https://thewirecutter.com/blog/use-zoom-like-a-pro/



by Michael Skurka, K5MSK

Windows 10 (hereinafter referred to only as Win10) has changed the way sound settings are configured. Win10 has many more settings than previous versions of Windows. One of which is setting input and output devices for a specific application. That was a source of frustration for me. Hopefully, this article will help others. Included are basic settings for WSJT-X and settings for Yaesu FT-991/FT-991A.

This article focuses primarily on the Yaesu FT-991/FT991A. Though the FT-991(A) settings may be specific for that particular transceiver, but the concepts may be applied to other transceivers. The following assumes that you have already installed the Yaesu drivers for the FT-991 (or for your transceiver or sound device - like a SignaLink). If you haven't, get the drivers for your device and install them. For Yaesu, visit the Yaesu site. Look for FT-991/SCU-17 USB Driver (Virtual COM Port Driver). Click here for a direct link to the Yaesu download.

Audio Device Identification

First, you need to determine what the name of your audio device is. Sometimes it's easy, but in the case of these amateur radio audio interface devices, they seem to be using a popular audio chip from Texas Instruments and they don't customize the USB Device Name, aka "Friendly Name" (see sidebar). How do you find the name of your device? The most reliable way is to open the Device Manager. Begin by making sure your FT-991(a) USB cable is not connected. Click the Win10 Start button and type "Device Manager". Choose it from the resulting window.

All Apps Documents Web More 🔻	R
Best match	
Control panel	
Search the web	Device Manager Control panel
	다 Open

(Note: As you go through this document, the appearance settings for your Windows may cause screens to look slightly different - usually just the color. The menus and content should be nearly identical.)

In Device Manager, expand **Sound**, **video** and **game controllers** by clicking the >. Your list will definitely be different than shown in the following figure.

📇 Device Manager 🦳 —		×
File Action View Help		
🗢 🏟 📰 🚺 🖬 💭		
> 📱 Software devices		^
🗸 🐗 Sound, video and game controllers		
DroidCam Source 3		
👖 DroidCam Virtual Audio		
📢 NoMachine Microphone Adapter		
📢 NVIDIA High Definition Audio		
👖 NVIDIA Virtual Audio Device (Wave Extensibl	e) (WD	M)
📢 Realtek(R) Audio		



Audio CODEC Chips

I did some research on the audio CODEC chips used in these devices. My FT-991A uses the Texas Instruments PCM2903B Audio Code chip, and my SignaLink use the PCM2906C chip. Pinouts and functions are identical within this family of chips. I find it interesting that the PCM2903B used in the FT-991A is a discontinued chip. It's still available, but has a replacement that should be used in new designs. Many amateur radio sound card "interfaces" use these or other common CODEC chips. In fact, the SignaLink appears to use much of the typical application circuit from the Texas Instruments datasheet for the chip! However, it does have additional circuitry which provides the PTT function, as well as other functions.



(continued on page 5)





AMATEUR RADIO EXAM - TEST RESULTS

No exam results for ARRL VEC for the month of July.

Please visit http://www.austinsummerfest.org/VEC/ARRL_1st_Sat_Exams.html for details and list of scheduled exams. NOTE: The AUGUST exam is canceled as the test site is not available due to Church coronavirus contagion concerns.

TNX ES 73 DE W5HS Joe



The South Austin W5YI VE exam for July was canceled due to the closure of St. Edward's University in response to COVID-19. The August exam will likely be canceled as well.

The amateur radio exam sessions normally start at 2 PM on scheduled test dates in Fleck Hall, room 118 on the campus of St. Edward's University. All sessions are walk-in and the exam fee is \$14 (cash or check).

For additional information regarding our amateur radio examination sessions, please contact Craig, AC5KW at (512) 474-6443 or by e-mail to craigmb5 /at/ gmail.com

Please visit AustinHams.org for current information about ham radio exam sessions returning.

www.AustinHams.org

(continued)

Now plug in your FT-991(a) USB cable. This list will be updated to show the new audio device. Here is my new list of devices:



USB Audio CODEC is my FT-991A. I also use a SignaLink connected to another transceiver. Let's see what happens when I plug it in without disconnecting the FT-991A.





Note that I now have two (yes, two!) that look almost the same. From the previous figure, I know that the **USB Audio CODEC** is the **FT-991A**. The next new device (**USB AUDIO CODEC**, all uppercase) is my **SignaLink**. I'm making note of that as I continue. I will only be working with the **USB Audio CODEC** on the FT-991A for the remainder of this article.

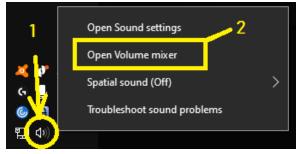
Next, open the application that uses sound input and output. Win10 needs to "see" the application running to be able to change its settings. In this case, open WSJT-X.

Renaming Audio Devices

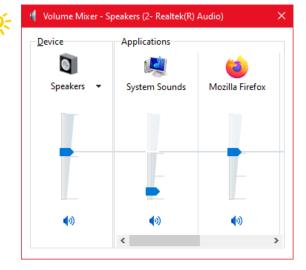
Next, let's rename the sound device so it's easier to recognize and work with. This isn't *absolutely* required, but you'll see how much easier it is with descriptive names.

Open the Volume mixer by right clicking the speaker icon in the taskbar, then click **Open Volume mixer**.



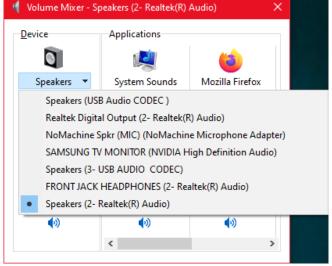


Yours may look a little different than mine, and will depend on the applications you have open.



Click the drop-down in the first column that shows the sound device - Speakers, in this example. Again, your list will be different than mine.





Click the device for the FT-991(a). **USB Audio CODEC** in my example.







(continued)

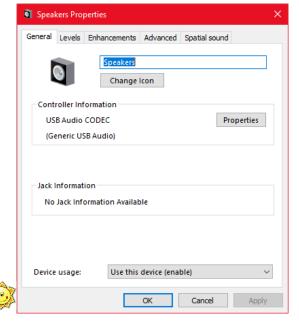
No application is currently using my FT-991's sound device, and there are no applications shown here. Click the speaker icon to view device properties.

*

Here is where you can change the display name ("friendly" name) of the output device. This is the device that sends sound to the FT-991(a). I named mine "TO 991A" (Figure 10). If you wanted to get fancy, you could change the icon, too, but I'll leave that as an exercise for the bold.

> [Editor's Note: What's with all the suns? I guess you'll just have to read the whole newsletter to find out.]





	ikers Pro	perties				
eneral	Levels	Enhan	cements	Advanced	Spatial so	ound
۱	0	Т	O 991A Change	lcon		
Cont	troller Inf	ormati	on			
US	SB Audio	CODEC	5			Properties
(G	eneric U	5B Audi	io)			
	Informat Jack Inf		on Availal	ble		
No				ble device (ena	ble)	~



www.AustinHams.org

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While you're in this window, verify that no sound "enhancements" are enabled. Click on the **Enhancements** tab.



🛐 TO 991A Pro	perties			×
General Levels	Enhancements	Advanced	Spatial sound]
	ancements to app Changes may not			
☑ Disable all	enhancements			
Bass Boo Virtual Su Room Co Loudness	irround			
Enhancement	Properties			
Descrip	tion:			
Prov	ider:			
Sta	atus:		S	ettings
Restore Defa	oults			Preview
		ОК	Cancel	Apply
*				

Click Disable all enhancements, then click the Advanced tab.



TO 991A Properties	×
General Levels Enhancements Advanced Spatial sound	
Select the sample rate and bit depth to be used when running in shared mode.	
16 bit, 48000 Hz (DVD Quality) V Test	
Exclusive Mode	
Allow applications to take exclusive control of this device Give exclusive mode applications priority	
Restore Defaults	
OK Cancel Appl	y

(continued)



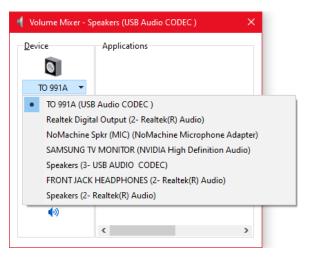
The default format should be **16 bit, 48000 Hz**, which is the best quality setting. Defaults are good and you should not need to change anything here. Click **Spacial sound**.



General	Levels	Enhancements	Advanced	Spatial sound	
Spati	al sound	l format			
Sele	ct the Sp	atial sound fo	rmat you war	nt to apply.	
Off					~
UII					
Res	tore def	aulto			
Res	tore def	aults			

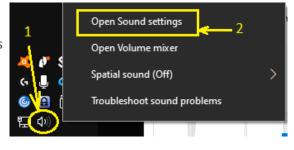


The default should be Off as shown in Figure 13. Click **OK** to save the new name and it will then be seen in the mixer window (Figure 14).





Next, we'll change the name of the input device, which currently is shown as a Microphone in Win10. Right click the speaker icon in the taskbar and choose Open Sound settings.



(continued)

This opens the Win10 sound con-
trol panel. We are interested in the
Input section.

Settings	X	
ம் Home	Sound	
Find a setting ,0	Output	
System	Choose your output device	
🖵 Display	Speakers (2- Realtek(R) Audio) Certain apps may be set up to use different sound devices than the one	
印) Sound	selected here. Customize app volumes and devices in advanced sound options.	
□ Notifications & actions	Device properties Master volume	
D Focus assist	d) 55	
() Power & sleep	▲ Troubleshoot	
📼 Storage	Manage sound devices	
- Tablet mode	Input	
甘 Multitasking	Choose your input device	
Projecting to this PC	Microphone (USB Audio CODEC)	
X Shared experiences	Certain apps may be set up to use different sound devices than the one selected here. Customize app volumes and devices in advanced sound options.	
🛱 Clipboard	Device properties	
	Test your microphone	_

Win10 automatically switched the default input device to the FT-991 as soon as I plugged it in. This is what I consider an extreme annoyance to me. Anytime a new audio device is plugged in, Win10 will change defaults to that device. This can cause problems when working amateur radio digital modes. Make sure the **USB Audio CODEC** device is selected. If not, choose it from the Input selection box.





(continued)



The Device properties will be displayed for the device.

÷	Settings	
ŵ	Device properties	
Ų	Microphone	Rename
	Disable	

Change the name in the text box to your preferred name. I used "**FROM 991A**" to identify this as the input device coming FROM my FT-991A. Click the **Rename** button to save the name. Set the Volume to about 70. I've seen some sites recommend setting it to 100, but this setting has worked well for me. You can always modify it later if you need to. Click the "back button".



The input device should now show as renamed.



← Settings	
☆ Device properties	2 ↓
	Rename
Disable	
Volume Test 70	
Related Settings Additional device properties	

Input	
Choose your input device	
FROM 991A (USB Audio CODEC)	\sim
Certain apps may be set up to use diff selected here. Customize app volume: options.	

Device properties

Note: This device is still the default input audio device. This is not desired because you want only the WSJT-X software to use this device. Change this now by selecting the Microphone from the drop-down list.

Your Win10 default input device should be similar to that shown.

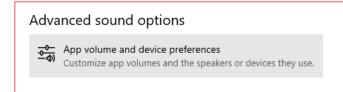
Input	
DroidCam MIC (DroidCam Virtual Audio)	
FROM 991A (USB Audio CODEC)	
Line (3- USB AUDIO CODEC)	ound devices than the one
Microphone (2- Realtek(R) Audio)	vices in advanced sound
Device properties	

nd devices than the one ses in advanced sound

But don't close the Sound control panel yet! Leave it open and start the **WSJT-X** application. WSJT-X must be running to continue with the following settings. After opening WSJT-X, go back to the **Sound control panel**.

Setting Windows 10 Audio Devices for WSJT-X

Scroll down to Advanced sound options and click App volume and device preferences.



This next section defines audio input/output preferences for individual applications that are running. You should see WSJT-X in the App list.



(continued)

Note that WSJT-X is initially set to use Default input and output audio devices.



32	Speakers (2	2- Realtek 🗸	
WSJT	-X		
strut		Input	
Default	~	Default	~
Default	~	Default	~
Default	~	Default	~
Default	~	Default	
	Default Default	Default V	Default V Default

This is why I had the most problems! Since the default audio device wasn't the FT-991A, WSJT-X was sending all its audio to some other device. Yikes! Let's fix that. Click on the drop-down for Output and set it to the device "TO 991A" (or the name you chose for the FT-991(a) "Microphone"). Likewise, click on the drop-down for Input and set it to the device "FROM 991A" (or the name you chose for the FT-991(a) "Speakers"). It should look similar to the following:

70 Reset to the Microsoft recommended defaults.	WSJT-X v2.2.2 by K1JT, G4WJS, and K9AN	TO 991A (USB Audi \smallsetminus	FROM 991A (USB A \smallsetminus
Reset to the Microsoft recommended defaults.) 70		
Reset to the Microsoft recommended defaults.			
	Reset to the Microsoft recommended defaults.		

That's it for the Win10 sound settings.

Now to continue with WSJT-X configuration.





(continued)

WSJT-X Configuration

The following assumes that you have already installed the Yaesu drivers for the FT-991(A) or your sound device. You must have if you completed the steps above! Make sure you know the COM ports assigned.

Find the COM ports in Device Manager:

V Ports (COM & LPT)

Silicon Labs Dual CP210x USB to UART Bridge: Enhanced COM Port (COM5)
 Silicon Labs Dual CP210x USB to UART Bridge: Standard COM Port (COM6)
 Print gueues

Note which is the *Enhanced* COM port as this is the one needed for WSJT-X.

Go back to the WSJT-X window and select **Settings...** from the File menu.

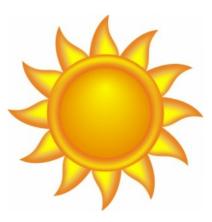


🧶 WSJT-X v2.2.2 by K1JT, G4WJS, and K9AN

File	Configurations	View	Mode	Decode	Save	Tools	Help
	Open			Ctrl+	o	Į	
	Open next in d	rectory					
	Decode remaini	ng files in	directory	Shift		<u></u>	
						M51	U
	Delete all *.wa	/ & *.c2 fi	iles in Sav	/eDir		L83 19	Ci U
	Erase ALL.TXT					M38	U
	Erase wsjtx_log	g.adi				M13	υ
	Erase WSPR ha	shtable				83	U
	Reset Cabrillo l					L83	Ci
						N20	υ
	Export Cabrillo	log				19	υ
	Open log direct	ory				M38	U
. г		-				L83	Ct
1	Settings					М13	υ
_ L						83	υ
	Exit					M38	U

In the **General** tab, minimum settings are My Call and My Grid. Need to find your grid square? There are many sites to find it. https://www.qrz.com/gridmapper / For a U.S. map of grid squares:

https://www.icomamerica.com/en/downloads/Download Document.aspx?Document=415



	;						?	
eneral	Radio	Audio	Tx Macros	Reporting	Frequencies	Colors	Advanced	
Station D	Details							
My Call:	K5MSK	м	1y Grid: EM 10		AutoGrid IAF	RU Region:	All ~	1
Message	e generatio	n for type 2	2 compound ca	llsign holders:	Full call in Tx3		~	,
Display								_
	t new perio	od decodes	at top			F	Font	
Blan	k line betw	een decodir	ng periods			Decede	d Text Font	i
🗹 Displ	lay distance	e in miles				Decode	I Text Font	•
🗹 Tx m	nessages to	Rx freque	ncy window					
Shov	w DXCC, gr	id, and wor	ked-before sta	atus 🗌 Show	principal prefix ir	nstead of co	ountry name	
Behavior								_
_	itor off at s	startun				_		
I I Moni				I I Enable VHF	UHF/Microwave	features		
_	itor returns		d frequency	_	/UHF/Microwave		mitting	
Moni				_	equency changes		mitting	
Moni	ble-click on	s to last use	enable	Allow Tx fro	equency changes		mitting	
☐ Moni ☐ Dout ☐ Disal	ble-click on	s to last use call sets Tx r sending 7	enable	Allow Tx fro	equency changes		mitting	
│ Moni │ Dout │ Disal │ Callir	ble-click on ble Tx afte	s to last use call sets Tx er sending 7 es Call 1st	enable	Allow Tx fro	equency changes de er EME delay		-	
Moni Moni Dout Disal Callir Alter	ble-click on ble Tx afte ng CQ forci	s to last use call sets Tx er sending 7 es Call 1st 6 bindings	enable	Allow Tx fro	equency changes nde rer EME delay Tx w	while trans	3 minutes 🌻	_
Moni Moni Dout Disal Callir Alter	ble-click on ble Tx afte ng CQ force rnate F1-F6	s to last use call sets Tx er sending 7 es Call 1st 6 bindings	enable	Allow Tx fro	equency changes nde rer EME delay Tx w	while trans	3 minutes 🚖	_

(continued)

In the **Radio** tab, set the CAT Control to the **Serial Port** to the Enhanced port noted earlier. **Baud Rate** should match the setting on the FT-991(A) - Menu 031 CAT RATE. Set PTT Method to CAT. Set Mode to **USB** so that the radio will be automatically set to USB by CAT. You can leave it set to None if you prefer to manually set the radio. Set **Split Operation** to Rig. The radio will be set by CAT for split operation (receive on one frequency, transmit on another) as required for FT-8. Note: If you're not using an FT-991(A), some online forums suggest that you may need to set Split Operation to **Fake It**.



The important **Audio** tab (Figure 30) is where you set the soundcard settings that have been configured. Since the devices were renamed, it's easy to choose the right one for each. Input comes *from* the FT-991(a) and Output goes *to* the FT-991(a). See how easy that was with the devices named?!

Click **OK** to save your changes. The rest of the settings can be reviewed and modified to your preference of operation.



More Info

WSJT-X Manual

Online Manual: https://physics.princeton.edu/pulsar/K1JT/wsjtx-doc/wsjtx-main-2.2.1.html

PDF Manual: https://www.physics.princeton.edu/pulsar/K1JT/wsjtx-doc/wsjtx-main-2.1.2_en%20%28USLetter%29.pdf

🧶 Settings	? ×
General Radio Audio Tx Macros Rep	porting Frequencies Colors Advanced
Rig: Yaesu FT-991	✓ Poll Interval: 1s
CAT Control	PTT Method
Serial Port: COM5 ~	
Serial Port Parameters	
Baud Rate: 9600 V	Port: COM5 \checkmark
Data Bits O Default O Seven	Transmit Audio Source Rear/Data Front/Mic
Stop Bits	Mode None USB Data/Pkt
Handshake O Default O None O XON/XOFF I Hardware	Split Operation
Force Control Lines DTR: V RTS: V	Test CAT Test PTT
	OK Cancel

Settings							?	×
General	Radio	Audio	Tx Macros	Reporting	Frequencies	Colors	Advanced	1
Soundca	Soundcard							
Input:	FROM 99	1A (USB A	udio CODEC)				∨ Mono ∨	
Output:	TO 991A	(USB Audio	CODEC)				∨ Mono ∨	
Save Dire	ectory							
Location	Location: C:/Users/skurka/AppData/Local/WSJT-X/save Select							
AzEl Dire	ctory							
Location	: C:/Users	s/skurka/Ap	pData/Local/W	SJT-X		[Select	
Rememb	er power s	ettings by	band					
Tran	smit			Tune Tune	e			
					[OK	Cance	!

(continued)

FT-991(a) Menu Settings

These are the settings I use for FT8, based on info I found online. The Yaesu manuals were not very helpful.

FT-991 Menu Item	FT-991A Menu Item	Setting	Notes
030 CAT RATE	031 CAT RATE	9600bps	Or use the default of 4800; just be sure you are consistent and set WSJT-X to use the same rate!
031 CAT TOT	032 CAT TOT	100msec	
063 DATA MODE	062 DATA MODE	OTHERS	
067 DATA LCUT FREQ	066 DATA LCUT FREQ	OFF	
069 DATA HCUT FREQ	068 DATA HCUT FREQ	OFF	
071 DATA IN SELECT	070 DATA IN SELECT	REAR	
073 REAR PTT SELECT	071 DATA PTT SELECT	RTS	
102 SSB LCUT FREQ	102 SSB LCUT FREQ	OFF	
104 SSB HCUT FREQ	104 SSB HCUT FREQ	OFF	
106 SSB MIC SELECT	106 SSB MIC SELECT	REAR	This is the setting that <i>got</i> me. I was looking for "DATA" settings. WARNING: When you change this, your microphone is no longer used for SSB voice! You must switch this back to MIC for SSB voice communication!
108 REAR PTT SELECT	108 SSB PTT SELECT	RTS	
109 REAR PORT SELECT	109 SSB PORT SELECT	USB	

These setting also work well for receiving WSPR. I don't have a good antenna for transmitting WSPR, so I didn't even try.

Do you have any other rig settings that work for you? Would you care to share them? Send them to the editor and we'll publish them in a future issue. editor [/at/] austinhams.org



New Editor Needed

Austin Amateur Radio Club needs a new editor. I've enjoyed putting this newsletter together and handling the website for a few years now. However, current conditions and real-life work situation are demanding more and more of my time and I cannot continue serving as editor. I will continue through December 1st and the December 2020 issue will be my last. I would like to pass the reins and get someone up to speed before then, if possible. I will be happy to train, online of course, anyone interested. I will donate the publishing software to the club so the new editor can continue seamlessly without having to start from scratch or purchase software.

If you are interested and can spare some time, Austin Amateur Radio Club needs you! Contact me at **editor** [/at/] austinhams.org for more info.



Over the WWWaves...



(Note: Some titles added by Editor. All links verified prior to publication.)

FCC Fines HobbyKing Nearly \$3 Million for Marketing Unauthorized Drone Transmitters - 07/27/2020

The FCC has issued a Forfeiture Order (FO) calling for HobbyKing to pay a fine of \$2,861,128 for marketing drone transmitters that do not comply with FCC rules. An FCC Enforcement Bureau investigation stemmed in part from a 2017 AR-RL complaint that HobbyKing was selling drone transmitters that operated on amateur and non-amateur frequencies, in some instances marketing them as amateur radio equipment. The fine affirms the monetary penalty sought in a June 2018 FCC Notice of Apparent Liability (NAL). The FCC said its investigation found that dozens of devices marketed by the company transmitted in unauthorized radio frequency bands and, in some cases, operated at excessive power levels. "Such unlawful transmissions could interfere with key government and public safety services, like aviation systems," the FCC said. "We have fully considered HobbyKing's response to the NAL, which does not contest any facts and includes only a variety of legal arguments, none of which we find persuasive," the FCC said in the FO. "We therefore adopt the \$2,861,128 forfeiture penalty proposed in the NAL."

Read the full article at: http://www.arrl.org/news/fcc-fines-hobbyking-nearly-3-million-for-marketing-unauthorized-drone-transmitters

High School Marine Buoy Transmitter Now Active on 20-Meter WSPR – 07/23/2020

Phil Karn, KA9Q; Randy Standke, KQ6RS, and members of the Mount Carmel High School Amateur Radio Club (MCHSARC) in San Diego have constructed and deployed an amateur radio marine buoy in the Pacific. The buoy, which transmits WSPR on 14.0956 MHz USB, has already been heard around the continental US, Brazil, Hawaii, Japan, Costa Rica, Australia, and South Africa.

"It is up and transmitting WSPR on 20 meters using the call sign KQ6RS, and is being received all over the US and into Canada and Brazil." Karn is blogging about the project with updates.

The electronics are the 20-meter WSPR version of the WB8ELK "pico tracker" that has been flown on long-duration balloons. "We removed the solar panels and substituted 21 ordinary alkaline D cells, wired to supply 4.5 V," Karn explained. "We estimate battery lifetime will be 6 months." [...] Karn said that the project made use of everyday hardware. Read the full article at: http://www.arrl.org/news/high-school-marine-buoy-transmitter-now-active-on-20-meter-wspr

More than 12,000 Register Early for QSO Today Virtual Ham Expo – 07/22/2020

More than 12,000 have registered to attend the first QSO Today Virtual Ham Expo, August 8 – 9, QSO Today host Eric Guth, 4Z1UG, said this week.

"Since the Expo is a completely new experience for the ham radio community, it's great that so many people are excited and already registered," he said. "And with almost 3 weeks before the event, the number of registrants continues to increase." Attendance is free, and there are early-bird prize incentives for registering by July 24.

More than a typical web meeting, the Expo is built on a live virtual platform commonly used by Fortune 500 companies and major universities. The platform simulates a convention experience with an exhibit hall and booths staffed by live attendants, a speaker auditorium, and even a lobby. Attendance just requires an internet connection and a computer, tablet, or smartphone. [...] The QSO Today Virtual Ham Expo is an ARRL-sanctioned hamfest.

Read more at: http://www.arrl.org/news/more-than-12-000-register-early-for-qso-today-virtual-ham-expo

AMSAT Board Member Elections

If you're a member of AMSAT, look for an envelope in your mail. It's time for Board member elections. Candidate profiles are included with the ballot. Check them out, do your research, choose your favorite candidates and mail in your ballot!



Do you have any favorite links or news items? Send them to the editor [[at]] austinhams.org









Word Search

Can you find all the words listed below in this puzzle? The words are taken from articles, news, events, or *anywhere* in this newsletter. Can you find them in this newsletter?



L Y S Y D W Y G W C O G X L E E T K S V O N A M S C X Z A D N L P W T I E O D O P C G I I O I S A N W T P N H Q R C T T R Y S R V C O D E C T B D A O D M U C P M F L L C D R G P R A B K N A I E N F S D A I S A W H K R A C I D A R O P S B I A O I E T V Q I M I D W A Y G V N R I Y W A N Q T B L R I J E R O R U U R J O T J U Y W T X N F Q A W O S O Y S V G D V S U Z Q L V L S I Z U M U S Q D S N O M G L N R E T N I W T H A W O O M D E S A T D Y M D

AMSAT ARROW BIRTHDAY BURNING CODEC DRONE EDITOR ELECTIONS MARINE MIDWAY

NAVAJO

SPATIAL

WINTER

WSPR

SPORADIC

🍥 How Hot Is It? 🍯

Has anyone noticed? It's a bit warm outside. Me? I was ready for "winter" a few weeks ago already! Until then, I'll have to just enjoy the sun we have outside, and hope you will, too. While we don't have oodles and oodles of sunspots yet, the new solar cycle has reared its head and said "I'm coming!" And we have a lot of suns to spot in this issue of the AARCOVER. How many did you count? I know... More than 1 and less than 100. Right?

Action on the Airwaves

Looking for a way to "get out" during COVID-19 lockdown? This is just a *sample* of the special events stations. Check out more <u>activities on the air</u>!

NOTE: Due to COVID-19 and shelter-in-place orders around the country, some events may be canceled, postponed, or modified without notice. Check the respective links for current info.

08/03/2020 | National Order of the Arrow Conference

Aug 3-Aug 8, 1300Z-2300Z, K2BSA/various, Various cities. Boy Scouts of America Order of the Arrow. 21.360 14.290 14.065 7.190. QSL. QSL , per operator's, instructions. The National Order of the Arrow Conference, scheduled for Michigan State University, has been cancelled, so amateurs who are OA members will be operating K2BSA in many call areas during the week of August 3. QSL via operator's instructions. https://k2bsa.net/

08/04/2020 | US Coast Guard 230th Birthday

Aug 4-Aug 5, 1400Z-0400Z, K1CG, Port Angeles, WA. CG CW Operators Association. 21.052 14.052 7.052 3.552. QSL. CG CW Operators Association, Fred Goodwin, 424 N. Bagley Creek Rd, Port Angeles, WA 98362. https://www.qrz.com/db/k1cg

08/08/2020 | USS Midway Museum Ship Special Event: USS Nautilus first sub under the North Pole on 8/3/58

Aug 8, 1600Z-2300Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 14.320 7.250 14.070 (PSK31) D-STAR on various reflectors. QSL. USS Midway Museum Ship (COMEDTRA), 910 N Harbor Drive, San Diego, CA 92101.

08/11/2020 | Navajo Code Talkers S/E

Aug 11-Aug 15, 0000Z-0000Z, N7C, Window Rock, AZ. Herbert Goodluck, N7HG. 18.133 14.265 7.265. Certificate & QSL. Navajo Code Talkers, PO Box 06, Chinle, AZ 86503. https://www.qrz.com/db/n7c

08/12/2020 | 2020 IL State Fair

Aug 12-Aug 24, 0000Z-0000Z, W9I, Springfield, IL. Sangamon Valley Radio Club. 14.250 7.150. QSL. J. Mitch Hopper, K9ZXO, 536 E. Mill St., Rochester, IL 62563. http://www.svrc.org/

08/22/2020 | National Park Service Founders Day

Aug 22-Aug 30, 1200Z-2300Z, N1P, Canfield, OH. NPS Ranger News. 14.255 7.290. Certificate. Certificate, available online only, see website. Online certificate only, see website https://www.qrz.com/db/N1P

08/27/2020 | Burning Man

Aug 27-Sep 7, 1200Z-1200Z, W7B, Gerlach, NV. Mansonian. 28.375 21.325 14.250. QSL. George Badger, 4602 Fairway Dr, Soquel, CA 95073. SASE for QSL please. w7b@w3ab.org



AARC Monthly Meeting Info

Tuesday, August 4, 2020 / 7:00pm to 9:00pm

Location: ONLINE - Email invite See Page 2 for more info

> Meeting Topic TBA

Solar Wx Summary, by Lew, W5IFQ

Upcoming Amateur Exams: 2020

ARRL VE - Please visit http://www.austinsummerfest.org/VEC/ARRL_1st_Sat_Exams.html for details and list of scheduled exams. August exam is CANCELED / Sep. is pending For more info, contact: Joe Makeever, W5HS (512-345-0800)

W5YI VEC - August Exam-CANCELED / Sep.is pending

2 p.m. In Room 118, Fleck Hall, St. Edwards University. \$14 fee. For more info, contact: Craig, AC5KW [at] ARRL.net

2020 - Calendar of Events

Aug 2 – Milam ARC ARRL/VEC In-Person Exam Session

(Sunday) 1705 Pecos Ave, Rockdale TX 76567-2517 The Due to COVID-19, only 6 will be allowed in the building at a time. All who show up will be processed.

Contact: Stuart Wolfe, KF5NIX, 512-660-9954 amadeus8558 [at] gmail.com

Aug 3,6,10,13 – KB6NU's Online Technician Class Amateur Radio License Class

\$20 for adults; kids are free

https://preview.mailerlite.com/o3m7q7/1468907536651393023/w1o3/ Dan KB6NU, CW Geek, Ham Radio Instructor Author of the "No Nonsense" amateur radio license study guides. Ham radio blog at http://www.kb6nu.com/

It will consist of four, two-hour sessions starting at 9 pm EDT (6pm PDT) running until 11 pm EDT (8pm PDT). The four classes will take place on the following dates:

Monday, August 3 / Thursday, August 6 / Monday, August 10 / Thursday, August 13

Aug 7-8 – Austin Summerfest

Canceled due to COVID-19 threat. http://www.austinsummerfest.org/



Aug 8-9 – QSO Today's first ever Virtual Ham Expo

Learn from 70+ speakers at QSO Today's first ever Virtual Ham Expo. First ever *QSO Today Virtual Ham Expo* on

Saturday and Sunday, August 8 - 9, 2020. Attendance is free and registration is now open at

https://www.qsotodayhamexpo.com/

Built on a live, virtual reality platform used by Fortune 500 companies and major universities, this ARRL-sanctioned hamfest will let you: Learn from a packed line-up of 70+ world renowned ham radio speakers such as Ward Silver (NOAX) on Grounding and Bonding, Glen Johnson (WOGJ) on DXpeditions, and John Portune (W6NBC) on building slot antennas for HOA. See demos of the latest ham radio equipment from the world's top equipment companies. You can easily ask questions and engage with Exhibitors through video, audio, or chat. (Note: CQ is an Exhibitor!) Share ideas and network with your fellow ham radio operators throughout the Expo. This platform simulates a full convention experience with an exhibit hall and exhibit booths lcom is the Expo's Platinum Sponsor, along with Gold Sponsors GigaParts, RT Systems, FlexRadio, RFinder, DX Engineering, Elecraft, RigExpert, and NCG Company (Comet Antenna).

Aug 22-23 – Huntsville Hamfest & ARRL Southeastern Division Convention

Canceled due to COVID-19 threat.



Future Dates: Aug 21-22 2021, Aug 20-21 2022, Aug 19-20 2023. https://hamfest.org/

Contact- https://hamfest.org/contact-us

Oct 2-3 – Belton Ham Expo (Fall) Canceled due to COVID-19 threat. http://www.tarc.org/hamexpo

Oct 3 – Deep South ARC Hamfest

Deep South Amateur Radio Club / J. C. Davis Auditorium 400 Thompson Blvd. Chickasaw, Alabama 36611 Sandy 251-232-1938 or usnamom@bellsouth.net http://k4dsr.com/

Oct 17 South Texas Hamfest & Electronics Expo

"TEXAS FASTEST GROWING HAMFEST" San Patricio County Fairgrounds - Event Center Located at 219 W. 5th Street, Sinton, Texas. Doors open to the Public 8:00AM - 3:00PM Talk-In Frequency- 147.08(+) 107.2 PL

https://squareup.com/store/south-texas-hamfest southtexashamfest@gmail.com or call 361-947-5665 http://southtexashamfest.org/ for details

- * Oct 23-24 73rd Annual Texoma Hamarama
- * Jan 23-30th 2021 7th MPMT 7-days Ham Cruise
- * Feb ?? 2021 30th Annual Lou Withrow Austin /South Central Texas SkyWarn

More info & events listed in the <u>SwapNet Newsletter</u>! Visit <u>http://austinhams.org/swapnet</u>

Upc	oming Meet	ings	
Aug 4 25 18	1 1st Tuesday 22 4th Tuesday 21 3rd Tuesday	AARC Meeting @ ONLINE 7:0 Travis County ARES @ ON-AIR 7:0	tes for updates. tes, please let us know!
		Please include complete details of what needs	to be updated.
*		OVID-19 (coronavirus), in-person me g held online/on-air. Check with their	
Peri	odic Events	- In the Area and On-the-A	Nir
Sun	7:00 p.m.	Travis Co. ARES net	147.360 MHz - (131.8)
Sun 1	900-Wed 2359	Travis Co. ARES WinLink Wednesday	145.730 MHz
Sun	8:00 p.m.	Williamson Co. ARES net	146.640 MHz - (162.2)
Sun	9:00 p.m.	AARC SwapNet	146.940 MHz - (107.2)
Mon	7:30 p.m.	STX ARES Net	3.873 MHz
Tue	7:30 p.m.	Hays ARES net	147.100 MHz +
Tue	8:00 p.m.	Bastrop ARES Net	443.750 MHz + (114.8)
Wed	10:00 a.m.	Ham Social Brunch, Jim's	146.940 MHz - (107.2)
Thu	9:00 p.m.	2m SSB Net	144.250 MHz (USB)
Thu	11:00 a.m.	Lunch, Pokey Joe's 183&Great Hills	444.100 MHz+
Thu	11:45 a.m.	Lunch, Whataburger, ONLINE Contact Gene at wa5ac [[at]] arrl.net for instruct	146.940 - (107.2) ions to receive invitation to meetings
Fri	8:00 p.m.	6m SSB Net	50.230 (texasvhf.org/)
Sat	7:00-8:30 a.m.	Breakfast @ Waterloo Ice House	444.100 MHz +
Sat	9:00 a.m.	Chapter 67 QCWA QSO Net.	3.920 MHz LSB
Sat	7:00 p.m.	AARC Elmer Net	146.940 MHz - (107.2)
Daily	6:30 p.m.	Central Texas Traffic Net	147.140 MHz+



I continually run out of material and am interested in articles for publishing in this newsletter. Personal experiences are fantastic! Have you worked or played with a new technology? Or maybe you're one of the more experienced operators in our community. What changes have you seen in amateur radio throughout the years?

You don't have to be a Pulitzer Prize winner to submit an article. I'll take anything, but would love to get articles that are at least two pages in length (single-spaced). Photos are great, too! Please remember, any submissions need to be free of copyrights. Creative Commons are okay, but I will need references to be able publish them with attribution.

Thanks & 73 DE K5MSK, Editor

IMAGE CREDITS

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Minutes of the Regular Membership Meeting of July 7, 2020 The Austin Amateur Radio Club (AARC)

Online Meeting on Zoom hosted by Mark Jenkins & Clear Blue Sky Digital



KI5ADZ

KI5JJM

W4SPN

Ronald Gratehouse

Andrew Hedden

Ryan Rodriguez



Kerby Spruiell, President, started meeting at 7:01 p.m. with a slide presentation. This is the club's 101st year of existence. AARC officers were introduced. This is our fourth Zoom meeting. 63 in attendance on Zoom tonight.

Treasurer: approximately \$10,000 in bank accounts. We added ten new members last month.

New Members

- KA5NKDGeorge WatkinsK7OIAPaul GoodsonKI5JHLAlex Robinson
- W3SCJ Spencer Wood

Visitors: None

Ham of the Month for July: John Roberts



ARES - Michael Marks EC, website https://tcares.org/

80 man hours last month. Thanks to Patrick Rogers for coordinating Red Cross Drill.

Trailer is upgraded with most of new logos. Red Schuller taking over Winlink for John Roberts. Technical Committee – Roy Walker

Pickle Research Center power is down. The 146.88 & 444.1 repeaters are disabled due to heat. They will be back up when LCRA has the Air conditioner fixed. AARC has nine repeaters.

Field Day – Unusual amount of sporadic E. List your score to Austin ARC.

COVID-19: Shelter in place. Check into Weekly Nets.

Solar Weather Program by Lew Thompson, W5IFQ. Presentation is on the AustinHams.org web site.

Program: Antenna Masts by Lew Thompson, W5IFQ. Presentation is on the AustinHams.org web site.

Joan Cox, Secretary









Austin Amateur Radio Club, Inc. / PO BOX 4739 / AUSTIN TX 78765-4739 / Web site: http://www.austinhams.org The Austin Amateur Radio Club, Inc. (AARC) has annual membership dues of \$20.00 per person or \$30.00 per family.

(

CLUB REPEATERS	200	Ä	
AARC maintains the	e following repea	aters:	
Frequency (MHz)	PL Tone (Hz)	Use / Notes	
146.780 (-)	-	2m D-STAR repeater [W5KA C]	
146.880 (-)	107.2	Analog/Digital Fusion (Yaesu)	
146.940 (-)	107.2	Most popular, TCARES WxNet, SwapNet	
224.800	-	-	
440.650 (+5)	-	70cm D-STAR repeater [W5KA B]	
444.100	-	-	
444.200	107.2	-	
1293.100 (-20)	-	23cm D-STAR repeater [W5KA A]	
1248.200	-	23cm D-STAR DD (data, simplex/Reversib	e) [W5KA A]
Developed a state the state			

Persons using the repeaters are encouraged to join the club to help support these valuable resources. Note: **No** AARC repeater has **auto-patch** capability any longer.

The Austin Amateur Radio Club offers annual scholarships to licensees living in Travis, Williamson, Bastrop, Hays, Blanco, Caldwell, and Burnet counties. Please see <u>http://austinhams.org/scholarships</u> for more information.

OFFICERS

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* Replace [at] with @ in email addresses.			



Viewpoints expressed in the AARCOVER do not necessarily reflect those of the club, or of its members, directors, or officers. Material quoted from the ARRL Letter is supplied by the American Radio Relay League, Inc.

Members and other readers are encouraged to submit original material for publication. Contact the Editor, if mailed submissions are required. Email and/or electronic files are encouraged! Submissions may be edited for publication (for content and/or space). Deadline is usually the 25th of each month, but late articles may be considered for future publication. Material may be used in a later issue. Unless otherwise noted, permission is granted to reprint AARCOVER articles, provided you credit the original author and the AARCOVER. If material from the AARCOVER is included in another publication, a courtesy copy to the Editor is appreciated.



AARC Members:

For Changes in your ADDRESS, PHONE NUMBER or CALL SIGN Contact: Mark Jenkins, W5MPJ / treasurer [at] austinhams.org Mark handles all changes for membership information.

