VOL. LXII NO. 07

P.O. BOX 3454, TUSTIN, CA 92781

**July 2021** 

### The Prez Sez... By Nicholas AF6CF



We are Back!

Once more, this ARRL Field Day was fantastic, with lots of fun and many contacts. Thanks to all our FD participants we had yet another successful Field Day. Safe, with High scores and a PR success. This year marks the return to "business as usual". It's not too early to tell that this is a success, and to hope that we will continue to thrive in the years to come. We had lots of participants and visitors and many were impressed with the setup and operations, and again we have attained our operational objectives and Public Relations goals.

We also had a great learning session with Wayne KH6WZ showing us the principles of voice over a light beam and the cell phone signal capture. Several visitors were thrilled to learn

about the mysterious waves propagate over the air.

I would like to extend a Special Thank You to Tim N6GP and Ron W6WG, the event Co-Chairpersons, to all the Band Captains, GOTA and logistics persons. Ron and Tim both did a great job as well as all the Band Captains.

Also, big thanks the to members of the ABCD group for their support, attendance and help. The scores, the results, QSO's, Bonus Points, etc are being tallied so we should have them ready for the next edition, but I can tell you that this year's effort is among the best in our Club's history, not because of the points, but because this is a "comeback" from last year's restrictions.

This month we are planning to have more activities with a great speaker and Club member about VHF/UHF roving around the country.

I think we are lucky to have so many distinguished HAM radio operators among our members. I look forward to an eyeball contact with you all at the next Zoom General Meeting.

73, DE AF6CF

### JULY 18, 2021 7PM JOIN US ZOOM ONLINE OCARC Virtual Meeting Presentation:

"Green Red Rover"

by Wayne N6NB & Carrie W6TAI

Please Note: The ARC has NOT open their facility for use by non-profits at this time. ZOOM Meetings will continue. Current OCARC members will receive ZOOM INSTRUCTIONS by EMAIL

OCARC NETS and the Net@9 Wellness and Support Net Remain Active!

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### 2021 Board of Directors:

President:

Nicholas Haban, AF6CF (714) 693-9778 af6cf@w6ze.org

Vice President:

Tim Goeppinger, N6GP (714) 730-0395 n6qp@w6ze.org

Secretary:

Corey Miller, KE6YHX (714) 322-0395 ke6yhx@w6ze.org

Treasurer:

Ken Konechy, W6HHC (714) 348-1636 W6HHC@W6ZE.org

Membership:

Bob Eckweiler, AF6C (714) 639-5074 af6c@w6ze.org

Activities:

Ron Mudry, W6WG (714) 840-3613 w6wg@w6ze.org

Publicity:

Tom Cowart, W6ETC (714) 454-0571 w6etc@w6ze.org

Technical:

Steven Belasco, N1BKB n1bkb@w6ze.org

### **Directors @ Large**

Dan Violette, KI6X (714) 637- 4632 ki6x@w6ze.org

Tim Millard, N6TMT (714) 744-8909 n6tmt@w6ze.org

### **2021 Club Appointments:**

### W6ZE Club License Trustee:

Bob Eckweiler, AF6C (714) 639-5074 af6c@w6ze.org

### Club Historian(s):

Corey Miller, KE6YHX (714) 639-5475 ke6yhx@w6ze.org

Bob Evans, WB6IXN (Emeritus) (714) 543-9111 wb6ixn@w6ze.org

RF Editor for July 2021 **Tom Cowart, W6ETC** tom@w6etc.com

### Webmaster:

Ken Konechy, W6HHC (714) 348-1636 W6HHC@W6ZE.org

### **Assistant Webmaster:**

Bob Eckweiler, AF6C (714) 639-5074 af6c@w6ze.org

Tim Millard, N6TMT (714) 744-8909 n6tmt@w6ze.org

### **ARRL Awards Appointees:**

Arnie Shatz, N6HC (714) 573-2965 N6HC@aol.com

John Schroeder, N6QQ (West Orange Co.) (562) 404-1112 N6QQ@msn.com

### **Monthly Events:**

### Membership Meetings\* 200m

Time: 7:00 PM

When: 3<sup>rd</sup> Friday of each Month \*See ZOOM announcement pg.1

### **Board Meetings**

First Saturday\*\*each month 8 AM New physical location coming soon \*\* Board will handle Club business by ZOOM at this time

### Club Nets (Listen for W6ZE): 10M: 28.375 ± MHz SSB

Wed- 7:30 PM - 8:30 PM Net Control: Corey, KE6YHX

2M: 146.55 MHz Simplex FM Wed- 8:30 PM - 9:00 PM Net Control: Corey, KE6YHX

### **75M** 3.883 MHz LSB

Tue @ 8:00 PM (UPDATED!) Net Control: Corey, KE6YHX



**Wellness & Support Net** Tune into the following repeater: CATALINA AMATEUR REPEATER **ASSOCIATION (CARA)** 147.090 MHz (+0.600 MHz) No PL

> Monday - Friday 9:00AM and 9:00PM Prg. Director. Tom W6ETC NCO's include: Jeff: KK6TRC: Don W6ZZW, Chris KF6LEX John AJ6F; Milt N6MG; Doug AD4AL; John KB6OVO

### OCARC 2021 DUES

Membership period is: 1 January to 31 December

Individual New or Renewal: \$30. Family New or Renewal: \$45. Teen New or Renewal: \$15.

New Member Dues are prorated quarterly and includes a badge: Additional Badges: 9 Use one of our interactive online forms to calculate current prices, join the club and/or order badges:

### Online Forms / Dues & Badges

\$3. plus mailing costs if applicable are subject to change with

### ARRL FIELD DAY 2021

### PRELIMINARY SUMMARY by KEN W6HHC & BOB AF6C

JULY 2021

ORANGE COUNTY AMATEUR RADIO CLUB FIELD DAY SUMMARY - with COVID-19 OCARC Aggregated score listed

FOR THE ORANGE COUNTY AMATEUR RADIO CLUB - W6ZE

NOTE: Adjustments have not been made for duplicate contacts, and bonus points. Final scores appear in QST.

		_					_	_		_											
	:	(POINTS)	9,630			3,276				10,055		7,032	10,726	6,770	4,952	8,992	16,214	18,700	5,634	5,278	4,786
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ST.		GOTA	73			0				0		0	45	20	25	_	47	186	408	139	160
pear in Q	SAT-	ELLTE	8			0				9		9	4	4	_	0	23	4	0	0	0
bonus points. Final scores appear in QST	RTTY/	Dig	111			265				1021		271	137	9	188	11	121	144	13	0	0
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Ken / W6HHC	10M	SSB	30			0				-		7	9	0	0	7	134	29	12	9	0
Ken	10M	8	9			0				-		0	88	0	0	_	22	38	0	16	0
by:	12M	SSB										0	0	0	0	0	0	0	0	0	0
	15M	SSB	10			2				0		0	211	0	4	324	382	614	330	198	0
	15M	S	152			24				97		53	138	0	15	190	559	484	185	32	49
		SSB				207				291		322	848	787	760	1161	1113	1960	735	703	727
		CM	$\vdash$			220				258		536	265	262	206	199	1059	895	215	253	223
		SSB	$\vdash$			163				682	Н	999				207					
		CWS	$\vdash$			105				433 6		392		449 8				655 1			
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		YEAR	2021 - W6ZE	2021	COVID	Aggregates		2020	OCARC	aggregate		2019	2018	2017	2016	2015	2014	2013	2012	2011	2010

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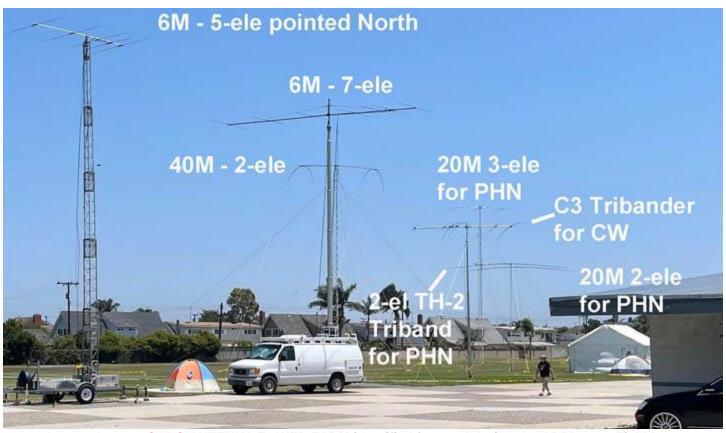
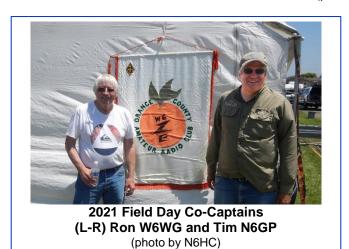
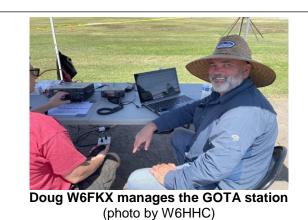


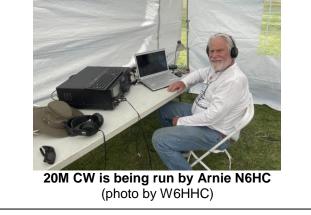
Image above: OCARC ANTENNA TOWER FARM identified for used during the ARRL 2021 Field Day. Located at: Ocean View School District HQ in Huntington Beach. (photo by W6HHC)













Dan KI6X is running the 40M PHN station (photo by KB6TKA)



40M CW is being run by Tim N6GP (photo by N6HC)



(Front) Kevin KF6ICD; (Rear) Tom KA9FRH running the 40M SSB station (photo by N6HC)



Vijay NA6VJ ran the Digital Station on 40M 20M and 15M bands this year (photo by N6HC)



(Front L-R): "El Presidente" Nicholas AF6CF, a friend - Angelo, Peter NI6E's wife Elsa. (Rear L-R): Nicholas' friend Bruno and Angelo's grandson – "Nick" (photo by NI6E)



OCARC NEW Field Day Generator!
Capable to run either Propane and/or Gas
(photo by W6HHC)



Night life at OCARC FD - (Front to Rear)
Wayne KH6WZ's colorful tent, CW tent, PHN tent
(photo by N6GP)



Steve N1BKB contributed 568 QSOs = 1506 pts to OCARC for FD from his home QTH (photo cortesy of N1BKB)



 $\mathbf{O}_{\mathbf{C}}^{\mathbf{C},\mathbf{A},\mathbf{R},\mathbf{C}}$ 

"W6ZE"

Field Day 1967



### L-R Back Row:

Jack N6UC, Rolland Miller K6KTX, Ralph Alexander W6WRT, Greg Cordes WB6FMJ, Paul Sheridan, Roy Maxwell W6DEY, Bud Baxter, Chuck Wohl WB6SIE, Jerry Ver Deft WA6ROF, ???, Jack Shaw WA6YWN, Dave Hollander W6COJ

Center leaning down: Bob Evans WB6IXN

### L-R Front Row:

Jack Shaw's son, David Hollander WB6NRK/N7RK, ???, ???, ???, Frank O'leary, Bob White, ???

Thanks for Dave Hollander N7RK for sending up this photo of the 1967 OCARC Field Day Contact Tim Goeppinger if you can help identify the missing names and call signs above.

Reported by Dan KI6X

### OCARC GENERAL MEETING MINUTES 2021-06-18

Due to the continuing aftereffects of the pandemic, the sixth General Meeting of the year was via Zoom on Friday, June 18, 2021.

The meeting was called to order by our president Nicholas Haban AF6CF at 7:03 PM PDT.

There were twenty-nine (29) members, guests and visitors present, including our speaker.

### Meeting Opened with the Pledge of Allegiance

The meeting begins with the Pledge of Allegiance in song.

### **Member Questions Fielded from Audience:**

Paul Whitely WA6GFT says his father passed away last year, and received a lot of equipment from him. He inquires as to whom to send the list for posting on the web site. Nicholas refers the question to Bob, who maintains the list. Bob gives Paul his email address and suggests Paul send pictures as well. Paul says thank you.

### **Meeting Presentation**

Nicholas AF6CF turns the meeting over to our vice president, Tim Goeppinger N6GP, who introduces Chip Margelli K7JA speaking on "Field Day 2021." Chip has worked Field Day in many interesting places, from where he grew up in the State of Washington, to Cuba, Wyoming and many others. He is one of the foremost speakers in the nation on the subject of Field Day.

### Chip Margelli gives a very interesting and inspiring presentation on the subject of Field Day.

Chip started Field Day with the OCARC twelve years ago, captaining the VHF station at Walter Knott Elementary.

Field Day is an important preparation for emergencies, such as earthquakes here in Southern California, says Chip. It is a part of our commitment to the objectives of Amateur Radio.

For a brief moment, Chip describes the equipment from past Field Days, at the Potomac Valley Radio Club W3AO, our nemesis on the banks of the Potomac River, in particular.

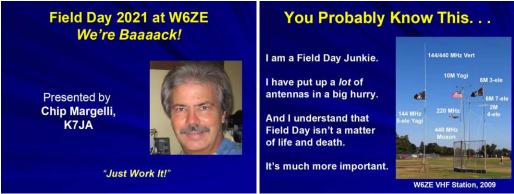
The presentation turns to Field Days that Chip has participated in. He then stresses the importance of being organized and getting things together, and the all-important Do's-and-Don'ts of Field Day.

Let's all be prepared for the Field Day weekend event and make having fun the primary goal.

Let's make it the best W6ZE Field Day ever!

Thanks, 73, •••-•-

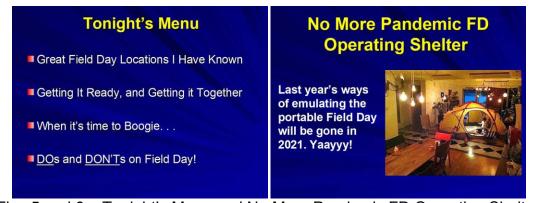
### **GENERAL MEMBERSHIP MEETING PRESENTATION HIGHLIGHTS**



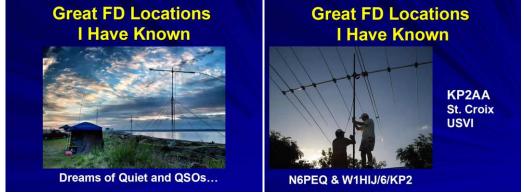
Figs 1 and 2- "We're Baaaack!" and the W6ZE VHF Station in 2009



Figs 3 and 4 – Why do we do Field Day? Because it's only a matter of time... ...before our skills will be called on for assistance!



Figs 5 and 6 - Tonight's Menu and No More Pandemic FD Operating Shelter



Figs 7 and 8 – Great FD locations I have known and KP2AA St. Croix, USVI

### GENERAL MEMBERSHIP MEETING PRESENTATION HIGHLIGHTS CONTINUED



Figs 9 and 10 – WY7FD Devils Tower, Wyoming and K7LED Marrowstone Island, WA

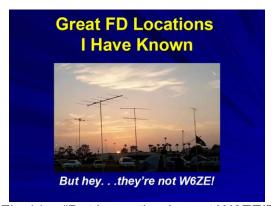


Fig 11 – "But hey...they're not W6ZE!"



Fig 12 and 13 - "Stage everything" and "It will all fit."



Fig 14 – "Be prepared, and have fun!"

A VHF Eco-Rover

Nicholas turns it back to Tim G. N6GP. Tim echoes the thanks to Chip. It is an honor for us to have him give us the pep talk. "We are jazzed to get ready to go!" says Tim.

### Visitor Introductions

Nicholas welcomes everyone, old members, new members, and returning members, especially Kris Cutting W6KJC, from Orange.

### **Business Meeting:**

The Business Meeting was called to order by our president, Nicholas AF6CF at 7:52 PM PDT. All ten (10) Board members were present for a quorum. Twelve (12) topics were brought to the Board, tonight, and one (1) motion carried, adjournment.

### **Director Reports**

**President:** Nicholas AF6CF announces the Club has a new generator, a Firman WH3200 that has been tested and ready to take to the site. We also have a 100W solar panel and battery ready-to-go.

**Vice President:** Tim G. N6GP has a brief announcement of next month's speaker, Wayne N6NB and XYL Carrie W6TAI, presenting their "Green Red Rover," featured on the May cover of *QST Magazine* (below and to the right).

### **General Meeting Program**

### July Presentation: "Green Red Rover" by Wayne N6NB and Carrie W6TAI

**Secretary:** Corey KE6YHX went to the post office box in Tustin, Friday, and there were four items of junk mail, and one bank statement from Wells Fargo.

**Historian:** Corey KE6YHX reports there was a query as to an SK Ken Diaz WB9YCJ, whom he is told passed away in 2019.

**Net Control:** Corey KE6YHX, Net Control, reports since the June Board Meeting, the three (3) Coronavirus Nets average three (3) attendees, and all nine (9) Nets together average three-and-one-third (3-1/3) attendees.

**Treasurer:** Ken W6HHC refers us to the June 2021 *RF* for the Treasurer's Report. We have an expense for a new generator, and Frank W6NKU made a generous donation to defray the cost of the same.

**Activities:** Ron W6WG announces Field Day coming next week, and the Opportunity Drawing coming later.

**Technical Chairman:** Steve N1BKB reports several members are ready to take down the tower from an SK donation tomorrow. It is a U.S. Tower MA-40.

**-Membership Report:** Bob AF6C reports we have 115 members. Bob sent out an email regarding the tower teardown tomorrow, and asks for a show of hands of who is coming.

### **Ask The Elmer**

Clay Brown N6CDB asks if his Kenwood Headset will work for Icom, Yaesu, or another brand. Chip K7JA replies 3.5mm and 1/4-inch stereo will work for headsets, and boom-mike headsets need adapter cables. The phone station captains should provide appropriate adapters.

Tom W6ETC asks about the connectors for the new generator, and if we will need a line-conditioner. Nicholas replies that it is an inverter generator, and should not require one, but it may be advisable to have one. Chip has two large toroids he is bringing for noise suppression, and Nicholas installed one toroid in each distribution box as well.

### Good of the Club

We are having an antenna and mast teardown tomorrow, says Nicholas for the Good of the Club.

### Opportunity Drawing

Nicholas AF6CF introduces the opportunity drawing, and the prize of an MFJ Noise Canceller, donated by Frank Doting W6NKU. The prizewinner is Dan Violette KI6X.

### Adjournment

A motion to adjourn was made in kind memory of SK Ken Diaz WB9YCJ. It was seconded and carried at 8:18 PM PDT.

--Respectfully submitted by Corey KE6YHX OCARC Secretary.

# A NEW WAY TO ROVE

2020 Chevy Bolt outfitted by Wayne N6NB with a microwave toolbox station covering 6m-10GHz bands

### OCARC BOARD MEETING MINUTES 2021-07-03

Due to the aftereffects of the pandemic, the seventh Board Meeting of the year was via Zoom on Saturday, July 3, 2021. The meeting was called to order by our president, Nicholas AF6CF at 8:18 AM PDT. Eight (8) directors were present for a quorum. Tom W6ETC and Steve N1BKB joined the meeting later. There were twenty-six (26) topics brought to the Board this morning, and one (1) motion carried, adjournment.

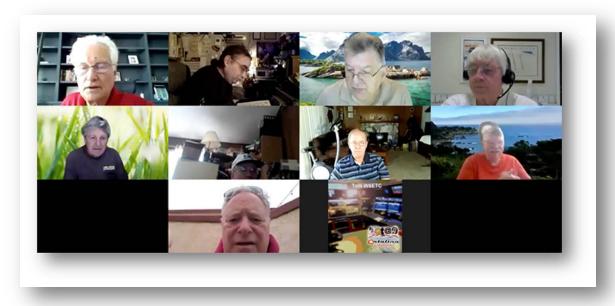


Fig 1 – All Board Directors were present.

### **Director Reports**

**Secretary:** Corey KE6YHX went to the Tustin post office box for the mail, Friday. There was no mail.

**Treasurer:** Ken W6HHC tells us the up-to-date Cash Flow Report is finished. YTD there were about \$2,700 of income, about \$1,600 of outflows, and a net increase by \$1,100. We have more than a reasonable amount of money in the bank, says Ken. The Field Day expense reports are still comingin. See page 30 of July Newsletter for cash flow details.

Bob AF6C, reminded the Club that our PayPal account is still partially in the name of a former member, and he needs to be removed. The Club will try to contact him, as he needs to be involved in the correction per PayPal policy.

PayPal has increased its fees, reports Bob and Nicholas AF6CF. Tim G. N6GP says PayPal is increasing from  $2.9\%+30\phi$  to  $3.49\%+49\phi$ , and Ken is in the process of reading exactly what that applies to.

**Activities:** Ron W6WG reports CQP is coming in October, with rule changes in July.

We are still waiting to determine the Opportunity Drawing prize for the next General Meeting. Bob AF6C and Steve N1BKB have some very nice suggestions.

**Membership:** Bob AF6C reports, at present we have 116 members.

**Technical Chairman:** Steve N1BKB reports we have more equipment from Bill Stock and Edna Weber. Bob AF6C and he will give a look at it in Steve's garage Thursday or Friday. They are two complete stations, an Icom IC-701, a Yaesu FT-301, and a Kenwood TL-922 amplifier, all with original boxes.

### **Old Business**

**Newsletter Editors:** 

July: Tom W6ETC (this issue) October: Tim M. N6TMT

August: Nicholas AF6CF

September: -- Volunteers Requested\*-
December: -- Volunteers Requested\*--

**SPECIAL REQUEST:** \*Would you be willing to be the RF Newsletter Editor for either November 2021 or December 2021 editions? If so please contact Ken at w6hhc@w6ze.org for more information!

### **General Meeting Programs: W6ZE**

July: Wayne N6NB and Carrie W6TAI on "Green Red Rover"

August: —lining up—

September: —to be determined—

The meetings will be via Zoom until further notice.

### **Hybrid Meetings:**

Tim G. N6GP reports at the national level, the American Red Cross is still making policy to decide holding club meetings on-site, and there is no news for the near future. It is suggested to notify the membership in the *RF Newsletter* of our status with the ARC.

### **Net Activity Report:**

Corey KE6YHX reports, since the June General Meeting, the eight (4 types) Club Nets average:

- (1) the 10M net attendees averaged 5.33
- (2) the 2M Wedneday net attendees averaged 7.33
- (3) the 2M COVID Monday & Friday nets attendees averaged 2.5
- (4) the 75M net attendees averaged 1.33

The Coronavirus Nets are shut down as of last Monday.

### **Club Web Site Status:**

There are several suggestions, including a picture of Gary Standard K6GSX's tower trailer at Field Day, for the front page of the web site.

### SK Donations from Tegel, Boykin WB6KJJ, and others:

Steve N1BKB and Bob AF6C will work on information and pictures of the SK equipment to post for sales. Steve arranges with Nicholas AF6CF to move the equipment from Steve's QTH to club storage.

### **New Club Generator:**

There were some procedural operating problems with the generator on Field Day, says Nicholas AF6CF. However he monitored and reports that the generator consistently provided 280W with no adverse activity and 400W during high demand - full-operation. The peak wattage was 1.2kW. The

**RF Newsletter Orange County Amateur Radio Club www.W6ZE.org** consensus is that the new generator seems to more than meet our FD needs and demands, and Nicholas AF6CF recommends plans to run the unit primarily on all-propane next year (2022).

### **Tegel KD6XO SK Antenna Teardown:**

Bob AF6C, Nicholas AF6CF and Dan KI6X had some difficulties at the site, but Nicholas says we did a good job. Ken W6HHC says such club efforts are covered by our insurance.

[REFER to the Tegel Article contained on Page 16 in this issue.]

### **New Business**

### **ARRL Field Day 2021 Report:**

**Tim G. N6GP** reports it was a very good Field Day, and he is pleased with the people, setup, and teardown. The number of operators is a little low, and some improvements can be made. These include meeting after Saturday afternoon during Field Day, to identify issues and make adjustments. Tim also says we are taking far more from storage than we need, but we are labeling all the antennas better for storage.

Ron W6WG reports overall, Field Day went well, with just one "hiccup," and next year it is "6A or bust!"

Nicholas AF6CF states everyone did a great job, and it is the hope of the OCARC Board of Directors to have as many or more visitors back again next year. We discuss making additional brochures available to visitors, similar to the ones that the Laguna Woods ARC provided at their ARRL Field Day event.

Ken W6HHC requests our best pictures to be sent to him for this month's Field Day article in the July *RF Newsletter*.

Dan Kl6X reports an issue with the third hole on tower base #2 not lining up. This may require a welder to take a look at modifying it.

### **New Activities for the Year:**

Nicholas AF6CF calls for suggestions for resuming activities such as **Antennas-in-the-Park**.

Ron W6WG states that when the Board Meetings were relocated to another location the result was little turnout.

Tim M. N6TMT suggests providing "free food," and Ken W6HHC, suggests offering "a free door prize." Tim M. N6TMT will check with Rodrigo's Restaurant to determine if they offer a facility that meets our needs.

Ken W6HHC proposes holding in–person breakfast and Board Meetings as we did in the past. Ron W6WG clarifies a gathering or picnic, rather than an operating activity as suggested. OCARC Members are encouraged to email your suggestions to the OCARC President, Nicholas at AF6CF@nsi-company.com

### October Club Auction – Regarding the Old Generator:

The board discusses the price and locations to sell the old club generator. The Club Auction can be held at some sites, but dates and cost are important considerations. Ken W6HHC suggests an outdoor auction as a way to approach this. Tom W6ETC recommends trying to raise the American Red Cross as a location for this again.

### **2021 OCARC Christmas Party:**

Ron W6WG reports we have one good restaurant prospect for both the future Board Meetings and the Christmas Party. Ron will check on this for both. The first or second Friday in December for the Christmas Party is decided on.

### Good of the Club

Ron W6WG proposes a photo gallery of members for the web site (head shots). The OCARC Board of Directors discusses this at-length. Photos of its members in the past January *RF Newsletter* might be an image source. Other options are being considered.

### Ken W6HHC reports:

- 1. His end-fed half-wave antenna is completed, tested, and adjusted. The 20m half-wave wire was resonating high, around 29MHz, so Ken added a separate half-wave wire for 10m. This allows the two bands to operate independent of each other. Ken also had a common-mode noise problem on the coax coming into his station. It was interfering with his desktop computer, and an attendee to the COAR Breakfast, Frank W6NKU, loaned Ken a minuteman common-mode noise detector. Ken was able to go along the coax and find the 10m, 20m noise peak. He installed two toroids at those locations and successfully suppressed the interference.
- 2. With the help of Tim G. N6GP, Ken successfully installed WSTJX FT8 software and equipment in his station and can now operate FT8.
- 3. There was strong interference from Ken's uninterruptible power supply, and he is in the process of suppressing it. At present, the uninterruptible power supply is disconnected and Ken is waiting on some toroids he ordered to attempt solving the problem.

Bob AF6C reports the QSL cards from Field Day are starting to come-in.

Tim G. N6GP reports "The Thirteen Colonies" are on now through July 4th.

### **Adjournment**

A motion to adjourn is made, seconded, and carried at 10:05 AM PDT.

--Respectfully submitted by Corey KE6YHX, OCARC Secretary



### **REPORT ON: KD6XO (SK) TOWER REMOVAL**

by Bob, AF6C

Longtime OCARC member Bob Tegel, KD6XO unfortunately became a 'SK' (Silent Key) on March 2nd (See RF LXII 04 for April 2021 page 5.)

His wife, Barbara, donated his equipment to the club including a 40' two section tubular tower located in the backyard. Atop the tower was an unknown make six-element tri-band beam and a two meter beam.

Steve - N1BKB and Bob - AF6C visited KD6XO's QTH removing his equipment and investigating what was needed to remove the tower. It became immediately clear this would not be a simple extraction. The two winches (one for extending the tower and the second for tilting over the tower), were corroded and questionably operational. A chain-link fence had been added impeding the tilt-over function, a covered porch had been added and numerous potted plumeria plants adorned the backyard. One of Bob's children had been applying a "liquid wrench" type lubricant to bolts and winch parts recently which helped considerably.

After a short delay due to lack of available personnel, ten hams met up on a Saturday afternoon on June 19th what was Bob's backyard QTH.

Steve - N1BKB, our technical chairman, oversaw the tower takedown.

### It was decided we could:

- 1. lower the tower between the gap created by the gate in the chain-link fence
- 2. antenna elements would be removed one at a time as the antenna was tilted
- 3. numerous potted plants would need to be moved out of harm's way
- 4. ropes were tied to the tower in key locations to keep the tower aligned within the gate opening
- 5. and additional ropes were attached in case the winch or cable should fail.
- 6. With Nicholas AF6CF operating the winches, the tower was fully retracted, and the tower was then unbolted so it could tilt over.
- 7. Nicholas worked the winch with skill, as the tower began to come down.
- 8. Dan, Ron, Tim, Cheyenne, and Bob manned the ropes, while Gene, June and Jesse awaited to begin disassembling the antenna elements.
- 9. When the tower was tilted to the point where the first antenna element was just above the sun porch, Jesse climbed on a ladder and, with Gene and June's help, removed the two meter beam and mast from atop the large tri-band beam intact.
- 10. Removal of the antenna element was difficult due to heavy corrosion, and it was decided to remove the elements with a hacksaw as the tower continued to be lowered. After each set of elements was removed the tower finally was resting on the ground, to the relief of everyone present.
- 11. Although the tower was removed from the base and a team carried it out to the street and onto Gene and June's modified boat trailer it was determined that the removal of the base with the tilt-over mechanism proved to be impossible without the proper tools at hand.

12. It was decided that a group, led by Jesse would come back with the proper tools and remove the base assembly. With Field Day and the Fourth of July weekends looming the base removal was postponed until later.

The tower was delivered to Jesse's QTH and sometime in the future there will probably be an antenna/tower raising party there. The OCARC and its Board of Directors would like to thank all the participants, especially Steve N1BKB who oversaw this exciting adventure. The OCARC club also recognizes Gene, call sign KJ7OML who provided the means of transportation for the 22' tower.

Also was the memorable 'Hacksaw' Jesse, call sign KB6MQY with brute strength and determination manually cut with a hacksaw a lot of aluminum required to its removal. Let's not forget "Captain Crank," aka our illustrious el Presidente Nicholas, call sign AF6CF who operated the old winches with absolute perfection!

Here's a list of the tower removal team participants with their call signs who put in their time, blood and sweat to make it happen.

Steve Belasco - N1BKB Gene Eckert - KJ6OML June Eckert - AG6UG Bob Eckweiler - AF6C Nicholas Haban - AF6CF Cheyenne Lopez - AJ6JZ Jesse Mendez- KB6MQY Tim Millard - N6TMT Ron Mudry - W6WG Dan Violette - KI6X



Figure 1 ......



Figure 2......

Figure 1: Steve examines the tower during the preliminary visit. (Photo by AF6C)

Figure 2: Tower showing crank-up winch and square tilt-over mast with cable and pulley atop. Tower tilt-over winch partially visible at bottom (Photo by N6TMT).







Figure 3 .....

Figure 4 ....

Figure 5 ....

Figure 3: Tower partially down, resting on ladder guided by Ron. Jesse removes part of boom with the help of Steve. More all the potted Plumeria that had to be moved and avoided (Photo by N6TMT).

Figure 4: Photo showing rotator and tower base with tower fully down. That's AF6C crawling under the tower. (Photo by N6TMT).

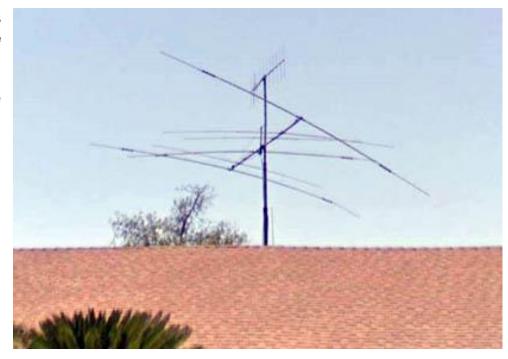
Figure 5: Cheyenne stands beside the tower base with tilt-over mast. This section remains to be removed later in July. (Photo by N6TMT).

Figure 6 (below, right):

A view of the tower prior to its removal. (Image from Google Earth - Street View)

Does anyone recognize the make of the HF beam?

73, Bob, <u>AF6C</u>



### Heathkit of the Month #107: by Bob Eckweiler, AF6C



### **AMATEUR RADIO - SWL**

Heathkit SB-630 Station Console.

### Introduction:

The Heathkit SB-630 Station Console was designed to help control ham shack clutter. It is, in one cabinet identical in size to the SB-600 speaker, four ham accessories that would normally be separate, taking up desk real estate. It is an SWR bridge, a phone patch, a ten-minute timer, and a 24 hour mechanical digital clock. See **Figures 1 & 6**.

Heathkit announced the SB-630 in their 1967 catalog, mailed in early fall of 1966, noting: "Expected Shipping Date: Late November" [of 1966]. The 1968 catalog describes the SB-630 as a "New Amateur Station Console, Four Control - Monitor Units In One". (Figure 2) It originally sold for \$74.95 mail order, and store retail. It was a popular accessory and many were sold. The SB-630 stopped production in 1974; at that time it was selling for \$89.95. It was replaced by the SB-634 which is styled to match the, then new, SB-104 transceiver.

Shortly after the SB-630 went into production Heathkit released a service bulletin, dated Dec. 2, 1966, to improve the timer operation. The update is discussed later in this article.

### 1. Notes are on page 26.

Here is a link to the index of Heathkit of the Month (HotM) articles:

http://www.w6ze.org/Heathkit/Heathkit Index.html



**Figure 1:** Heathkit SB-630 Station Console combines clock, phone patch, SWR bridge and 10 minute timer into one package. Photo courtesy of Gerhard Wagner - DF1DA

### The Heathkit SB-630:

What follows is a brief discussion of each of the four station console units.

### • The SB-630 SWR Bridge Unit -

The SWR section of the SB-630 is very similar to the stand-alone HM-15 SWR bridge discussed in HotM #037¹ (The AM-2). Refer to that article for its operation. Differences are only the non-critical values of the filtering capacitors and the addition of a switching circuit so the meter can be used to read both **SWR** and phone patch **VU**.

The SWR unit is powered with RF; the AC plug need not be connected for its operation.

### • The SB-630 Phone Patch Unit -

Like the SWR bridge, the phone patch unit is almost identical to another Heathkit product - the HD-15 Hybrid Phone Patch discussed in HotM #031². Refer there for operation of the phone patch. It is worth repeating here the concept of the patch being "hybrid": It isolates the receiver audio from the transmitter audio input, while allowing both access to the phone line. This prevents receiver audio from interfering with VOX operation when using the phone patch.

Deluxe SB-Series Amateur Station Console . . . Four Separate Units In One!

Includes 24-hour clock, SWR meter, hybrid phone patch and an all-electronic 10-minute timer with audio/visual signaling in one compact unit • Matched in styling and performance with the Heath Deluxe SB-Series amateur radio equipment • Measures 6° H x 10° W x 11½ ° D — same size as Heath SB-600 speaker and SB-610 signal monitor

Kit SB-630, 9 lbs., no money dn., \$8 mo. \$74.95 Expected Shipping Date: Late November

Figure 2: The Introduction of the SB-630 in the Main 1967 catalog that was released in the fall of 1966. "Expected Shipping date: Late November"

The phone patch unit requires a phone line connection. Like the SWR bridge, the AC plug need not be connected for operation.

### • The SB-630 Clock Unit -

The mechanical clock is a standard 24-hour clock using a Numechron movement. The clock is driven by a 120 VAC synchronous AC motor. Clock accuracy depends on the line frequency. While the 60 Hz line frequency used to be controlled tightly, restrictions have been eased in recent years affecting the short-term accuracy of the clock. Setting the clock is done manually. The Numechron movement is the same as used in the Pennwood Tymeter 24H clock, popular in 70's ham shacks (**Figure 4**).

For the clock to operate, the SB-630 must be connected to 120 VAC 60 Hz power.

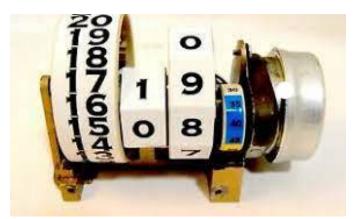


Figure 3: Numechron clock mechanism used in the Heathkit SB-630

### • The SB-630 Ten-Minute Timer Unit -

The FCC requires that ham stations identify every 10 minutes minimum, when in QSO. Setting this 10 minute timer reminds the op-



erator to identify and stay legal. the SB-630 has a **RESET** button that, when pressed, restarts the timer. When first turned on, the timer function automatically starts. At the end of ten minutes the **IDENTIFY** lamps light, and, if **AURAL** is selected, a buzzer sounds, reminding the operator to identify with his/her call sign. Should you ID early, a push of the RESET button re-syncs the timer.

For the ten minute timer to operate, the SB-630 must be connected to 120 VAC 60 Hz power, and the **TIMER** rotary switch must be in either the **VISUAL** or AURAL position.

### The SB-630 Front Panel:

**TABLE I** describes the layout of the front panel. The meter and SWR bridge controls are located vertically on the left side. On the



**Figure 4:** A vintage, circa 1970, Tymeter clock by Pennwood Numechron. The 24-hour version could be found in many ham shacks of the day. Photo by AF6C

### FRONT PANEL ITEMS

Left Column (Top to bottom):

Meter 0-100µA

VU - 20 dB to + 3 dB (Max at 0 dB) **SWR** 1 to 3 at half scale (Max at 3)

SWR SET - mark at full scale.

**SWR METER:** 

FWD - REV Switch, SPDT, rotary **SENSITIVITY** Potentiometer. 50 k $\Omega$ 

MIN (full CCW), MAX (full CW)

Center Column: (Top to bottom)

hrs 0 - 23, tens of mins 0 - 5; Clock:

mins 0 - 9 :secs 5 10 15 20 25

30 35 40 45 50 55 60

**IDENTITY** Dual #47 pilot bulbs in parallel

**HEATHKIT SB-630** Emblem:

Bottom Center L to R:

RESET Switch SPST NO pushbutton

TIMER Switch 2P3T rotary

OFF, VISUAL, AURAL

Neon, Ass'y with integral resistor Pilot lamp

[timer] ON

Right Column: (Top to bottom)

MODE Switch 3PST (no) + 3PDT rotary

**SWR METER - PHONE PATCH** 

PHONE PATCH GAIN:

Potentiometer Dual 1.5 KO - 200 KO TRANS

**RCVR** Potentiometer 10 Ω

(Bold items in table are printed nomenclature.)

**TABLE I** 

right side, also located vertically, are the meter selector switch and phone patch controls. A black escutcheon dominates the upper center with a cutout for the clock above a black window with the translucent word IDENTIFY that is lit from behind by the ten-minute timer. Below this window is the Heathkit logo. Below the escutcheon in a horizontal row (L to R) are the timer RESET button, the TIMER switch and the timer **ON** pilot light.

### **REAR PANEL ITEMS**

Above Chassis (Left to right - viewed from rear):

SWR Meter **OUTPUT** 

SO-239 UHF Connector

**SWR Meter INPUT** 

SO-239 UHF Connector

Rear Chassis (Left to right - viewed from rear):

Phone **LINE** x 2 2-Terminal Jones strip **NULL ADJUST**: Potentiometer 2 KΩ Null Monitor Sw. Switch, Slide DPDT

MON. - NULL

Microphone Inputs:

HI-Z Dual RCA Jack (top) 600 Ω Dual RCA Jack (bot)

Audio - speaker:

**RCVR** Dual RCA Jack (top) SPKR Dual RCA Jack (bot)

TIMER ADJUST:

FINE Potentiometer 10 KΩ

\_ +

COARSE Potentiometer 100 KQ

\_ **+** 

120 VAC power cord w/ Heyco strain relief

(Bold items in table are printed nomenclature.)

**TABLE II** 

### The SB-630 Rear Panel and Connections:

**TABLE II** describes the layout of the rear panel. Besides a terminal strip to connect the phone line, and two UHF connectors to pass the RF through the bridge sensor that measures SWR, there are four RCA jacks that switch between the speaker and phone patch, and the microphone and phone patch. Also on the back are three potentiometers. One sets the maximum null for the phone patch (as discussed in HotM #31); the other two set the 10 minute timer interval. One is a COARSE setting and the other is a FINE setting potentiometer.

### The SB-630 Circuitry:

Since the phone patch and SWR circuits have been covered in previous HotM articles, as mentioned earlier, This section will cover only the clock and the timer circuits.

### • SB-630 Clock:

The clock is an off-the shelf, 24 hour, Numechron mechanism. It is powered directly by the 120 V 60 Hz line power whenever the SB-630 is plugged in and a good fuse is present. The fuse is the pigtail type and is soldered in. The clock draws 3.7 watts (2.7 KWH/month). Setting the clock is done by manually rotating the numbered drums to the correct hour, tens of minutes and minute; the drums may be accessed from the open rear of the chassis. Be sure the seconds cylinder is not near zero as it will prevent the drums from being turned manually if near zero. Setting the seconds requires you to unplug the SB-630 and then plug it in when the time on the seconds cylinder corresponds with the realtime seconds. The clock accuracy is dependent on line frequency.

## 

### SB-630 Timer:

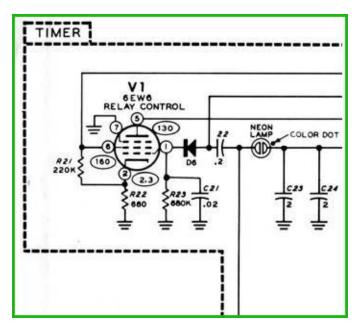
The timer circuit consists of a power supply, a vacuum tube based timer and a relay controlled by the tube that provides the reset function and controls the IDENTIFY lights and AURAL buzzer.

### • SB-630 12/2/66 Timer Circuit Update:

Shortly after delivery started on the SB-630 Heathkit released a circuit improvement to the timer. A four-page service bulletin dated 12/2/66 was included, along with updates to the original manual dated Sept 9, 1966. Also included was an additional 1N191 diode (Part # 56-26). The changes were incorporated in a later manual dated December 30, 1966. **Figure 5** shows the circuit changes. This update was likely sent to all SB-630 owners who had registered. The four page bulletin is available online<sup>3</sup>, along with a separate short repair bulletin<sup>4</sup> that recommends replacing the timer relay Part # 69-38 with Part # 69-42 if the buzzer operation is erratic.

### SB-630 12-2-66 Timer Circuit:

The SB-630 has a power supply that is used



**Figure 5:** On the left is the original circuit as shown in the Sept. 9, 1966 manual. On the right is the updated circuit in the Dec. 2 1966 Service Bulletin and later in the updated Dec 30, 1966 manual.

only by the timer. **Figure 8** (Page 26) is a schematic of the SB-630 timer circuit including the AC primary wiring. It consists of a low power transformer producing 6.3 VAC at 0.8 A for filament voltage, the IDENTIFY lamps and the AURAL buzzer; as well as 120 VAC at 20 mA for the B+. In the primary is a pigtail fuse marked 1¼ amp on the schematic but a  $^{3}/_{16}$  amp fuse is supplied per the parts list. After the fuse, but before the switch, is the clock. One section of the 3-position TIMER rotary switch applies AC power to the transformer and a neon pilot lamp (timer ON), when in the VISUAL or AURAL position.

The B+ secondary winding is wired as a voltage doubler producing 330 and 160 VDC. The 330 volt output is regulated by a cold-cathode 0A2 voltage regulator tube. Along with dropping resistor R38 ( $22k\Omega$  2W) the OA2 produces a stable 150 V at a few mA. The 160 volt output provides screen and plate voltage for the 6EW6 pentode.

When the timer is initially turned on, the filament is cold and the tube draws no current. A regulated voltage, set by the COARSE (R34) and FINE (R36) timer potentiometers, is placed on one side of the neon lamp. Meanwhile C25 charges rapidly through R32 and the normally closed contact of the relay.



**Figure 6:** A nicely restored Heathkit SB-630 Station Console sits between an SB-500 2 Meter Transverter and an SB-610 Monitor Scope in the Heathkit shack of WB4IUY. See the restoration at:

https://wb4iuy.blogspot.com/2017/05/a-heathkit-sb-630-lives-again.html

Photo Courtesy of Dave Hockaday - WB4IUY

From the moment power is applied C23 and C24 (which are in parallel) begin to charge slowly from the stable 150 volt source through R24, R25 and R26, a total of 144  $meg\Omega$ . After a long period (ten minutes if the COARSE and FINE adjustments are set) the voltage across the neon bulb reaches its firing voltage and lights, sending a positive pulse to the grid of the now warmed up pentode (V1) through diode D6. When V1 conducts, current is drawn through the relay coil and the relay closes, the top set of relay contacts fully discharge C23 and C24 through R27. The bottom set of contacts turn on the IDENTIFY light, and, if set in the AURAL position, causes the buzzer to sound. The central set of contacts discharges C25 through R25, R27, and D6 keeping the grid positive and the tube conducting for about a second. After C25 discharges the tube stops conducting, the relay opens and the 10 minute timing process starts all over again.

When the RESET button is pushed, current is drawn through the relay coil by R29, activating the relay and resetting the circuit. When the button is released the ten-minute timing starts from the beginning.

### The SB-630 Specifications:

**Table III** give the SB-630 specifications (mostly information from the manual.)

### The SB-630 Today:

The SB-630 station console has been in existence for almost 55 years, even the newest of the kits has passed its 46th birthday. The most common problem encountered with these units is noise from the clock after decades of service. Since the Numechron clock-motor is sealed, it is difficult or impossible to lubricate the mechanism. The leaf springs that help the digits to stop in the proper place also weaken over time and use,

### SB-630 Specifications:

CLOCK

4-drum, 24 hour, digital readout Dial: 1 rpm at "seconds" drum, gear driven Motor:

120 VAC, 60 Hz, 3.7 Watts Power:

TIMER

Interval: Adjustable to 10 minutes.

Stability: Less than 0.2% change per hour in

normal ambient temperature.

Cycle: Instant reset with pushbutton \*. Visual (2 #47 lamps), and aural Signal:

(buzzer), switch selected \*.

Circuit: R-C network. neon discharge,

vacuum tube relay control

0A2 voltage regulator (150v) Tubes:

6EW6 pentode relay control

Transformer operated, VR regulated, Supply:

Fuse: 3/16 amp, slow-blow 120 VAC 60 Hz, 15 Watts Power:

\* Front panel control.

**SWR BRIDGE** 

2 kilowatts P.E.P. Power Handling:

Impedance:  $50\Omega$  or  $75\Omega$  nom. (resistor selected.)

Band Coverage: 160 through 6 meters.

### PHONE PATCH

Circuit:

Line Impedance: 6000 nominal.

Null Depth: At least 30 dB isolation.

Rcvr. Impedance:  $3\Omega$  -  $16\Omega$ . Xmtr. Impedance: 600 Ω or Hi-Z

**GENERAL** 

100 µA movement. Reads VU for Meter:

phone patch and ratio for SWR.

Front Panel Controls: See Table I. Rear Panel Controls: See Table II. Size: 6" H x 10" W x 11 1/4" D.

Net Weight: 7 ½ lbs. Shipping Weight: 10 lbs.

Table III



**Figure 7:** A view of the underside of the SB-630 on the workbench of WB4IUY.

Photo Courtesy of Dave Hockaday - WB4IUY

and need tending to to keep the digits stopping at the correct point. Numechron mechanisms are often available on sites like eBay, however the 12 hour mechanisms way exceed the rarer 24 hour clock mechanism desired for the SB-630. After years of service the dial plastic yellows and the numbers fade. A glue-on replacement number set available on eBay<sup>5</sup>.

Other problems that occur with the SB-630 are consistent with those expected due to age. Capacitors go bad, vacuum tubes fail, resistors change value, etc. Heathkit seemed to have had a problem with their 2 µF tubular (non-electrolytic) capacitors. They have been known to open, dropping in capacitance to picofarads. However, newer axial mylar replacements are available that work well and will outlive the unit.

### No SB-630 in Europe:

Heathkit sold most of the SB Ham line in Europe, However, the SB-630 was an excep-

tion. Since many places in Europe use some combination of 240 VAC and 50 Hz power, the SB-630 would have to have been redesigned to operate under those conditions. While the Heathkit inventory did include a 240 volt version of the 54-92 power transformer (54-92-24) which is also used in the European version of the IG-102 RF Signal Generator, a separate version of the Numechron that runs at 50 Hz appears not to have been available, and the cost to develop one probably wouldn't be recovered by the expected European sales.

Gerhard - DF1DA, a fellow fan of Heathkit with whom I often swap emails with, has an SB-630 in his collection, mentioned another reason the SB-630 wasn't sold in Europe. Many European countries have strict rules concerning the connection of user owned devices to the phone line. Also the handling of third party traffic is limited or illegal in many European countries.

The SB-634 that replaced the SB-630 is very similar except it has an electronic digital clock using three two-digit Beckman plasma displays and a separate 10-minute timer using a smaller three-digit plasma display. This kit may be covered in a future article.

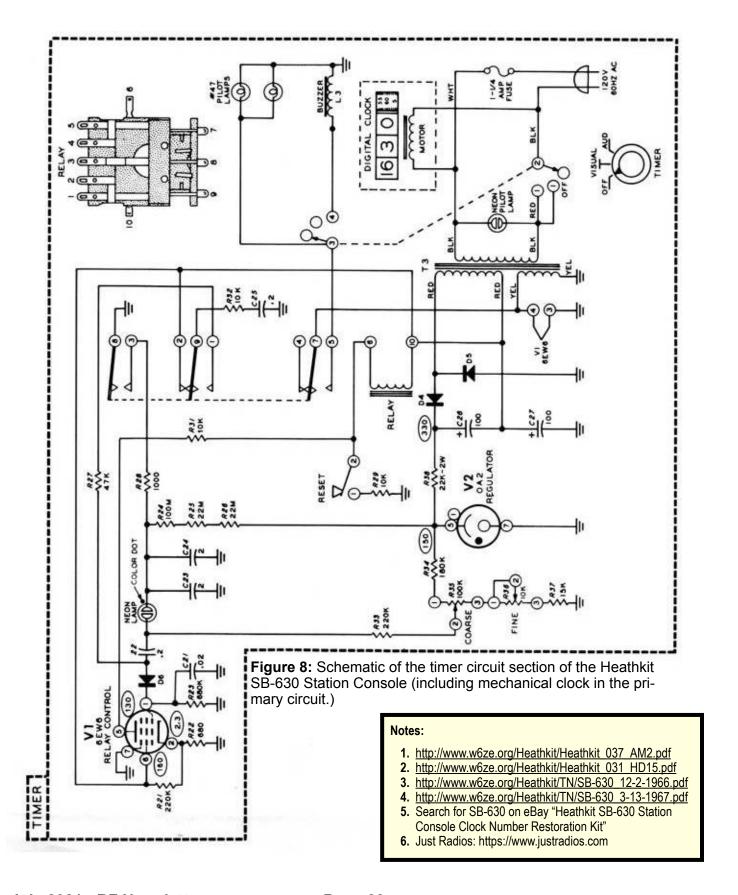
73, **from** AF60



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Remember, if you are getting rid of any old Heathkit Manuals or Catalogs, please pass them along to me for my research.

Thanks - AF6C





### **W6ZE NETS**

10M: 28.375 ± MHz SSB Wed - 7:30 PM - 8:30 PM Net Control: Corey, KE6YHX

**2M: 146.55 MHz Simplex FM**Wed - 8:30 PM - 9:00 PM
Net Control: Corey, KE6YHX

**75M:** 3.883 MHz LSB Tuesday – 8:00 PM – 9PM Net Control: Corey, KE6YHX







### **Upcoming Activities 2021:**

### Month of July 2021:

- <u>IARU HF World Championships</u>: 1200 UTC Sat-Sun July 10-11th.
- \*CQ WW VHF: 18:00-21:00 UTC Sat-Sun July 17-18th.
- \*\*North American QSO Party / RTTY: 18:00-21:00 UTC Sat-Sun July 17 & 18<sup>th</sup>.
- RSGB IOTA Contest: 12:00 UTC Saturday
   July 24 through 12:00 UTC Sunday July 25.
- ARS Flight of the Bumblebees: 17:00-21:00 UTC Sunday July 25.

### Month of August 2021:

- <u>10-10 International Summer Contest, SSB</u>: 00:01-23:59 UTC Sat-Sun August 7 & 8<sup>th</sup>.
- \*\*North American QSO Party / CW: 18:00-05:59 UTC Sat-Sun August 7 & 8th.
- \*\*\*North American QSO Party / SSB:
   18:00-05:59 UTC Sat-Sun August 21-22nd.
- W/VE Islands QSO Party: 12:00 UTC Sat-Sun August 28-29.
  - \* Indicates club entries are accepted \*\* Indicates team entries are accepted Note: When submitting logs for ARRL Contests indicate your club affiliation as "Orange County ARC"

### **State QSO Parties:**

- Maryland-DC QSO Party: 14:00-04:00 UTC Sat-Sun August 14th-15th.
- Hawaii QSO Party: 04:00-04:00 UTC Sat-Sun August 28<sup>th</sup>-29th.
- Ohio QSO Party: 16:00-04:00 UTC Sat-Sun August 28<sup>th</sup>-29<sup>th</sup>.
- Kansas QSO Party: 14:00-20:00 UTC Sat. and Sun August 28th-29th;

### **Ongoing Activities:**

• Super QP Challenge: Year Long Event 00:00-24:00 UTC Jan. 1 - Dec. 31.

### **Repeating Activities:**

- Phone Fray Every Tuesday evening 02:30Z-03:00ZUTC
- <u>SKCC</u> Weekend Sprintathon (Straight Key CW) 1st weekend of the month following the 6<sup>TH</sup> of the month. 12:00-23:59 Sat-Sun.
- SKCC Sprint (Straight Key CW) 00:00Z to 02:00Z 4<sup>th</sup> Tuesday night (USA) of the month.
- <u>CWops Every Wednesday</u> 13:00-14:00 & 19:00-20:00 UTC & every Thursday 03:00-04:00 UTC
- K1USN Slow Speed Test: (CW, 20 WPM Max.) Fridays 20:00-21:00 UTC Mondays 00:00- 0100 UTC

### **OCARC Club Nets:**

- 75 Meter Net: Every Tuesday night at 8:00 pm to 8:30 pm Local Time. SSB 3.883 MHz
- **10 Meter Net:** Every Wed. night at 7:30pm to 8:30 pm Local Time. SSB 28.375 MHz
- 2 Meter Net: Every Wed. night at 8:30 pm to
   9:30 pm Local Time. FM Simplex 146.55 MHz

### Other Nets:

Net-AT-9 Wellness and Support Net
 Monday thru Friday 9:00am and 9:00 pm
 Local Time 147.090 MHz (+600 MHz) No PL
 Echolink: \*CATALINA\* & AllStar # 51597
 Facebook page: CARA NET@9

Send an email to Ron W6WG, <u>w6wg@w6ze.org</u> to have your favorite activity or your recent RadioActivity listed in next month's column.

### MEMBERSHIP PHOTO GALLERY PHOTO REQUEST

### **OBJECTIVE:**

I'm would like to collect photos (headshots) of all OCARC members in order to create a 'Membership Photo Gallery' section in the clubs website.

Each photo will be identified with the members name and call sign as shown below.





**W6WG Ron 2021** 

**N6GP Tim 2021** 

Please send me a 'Head shot' that meets the file criteria below.

If you prefer not to be included please let me know.

- 1. Preferred file type to be .jpg (jpeg)
- 2. Preferred size of the image to be approximately 288 x288 pixels
- 3. The file name should include your call-sign, followed by a space, your first name and 2021 File name examples: W6WG Ron\_2021 or N6GP Tim\_2021 (see above)

If you have any questions or problems meeting the criteria indicated above go ahead and send me what you have and I will do the formatting.

73,

Ron Mudry, W6WG Email: w6wg@w6ze.org

### OCARC Cash Flow

1/1/2021 through 6/30/2021

Category	1/1/2021- 6/30/2021
INFLOWS	
Badge Income	1.64
Donation -new FD Generator	500.00
Dues, Family (PayPal)	129.50
Dues, Membership	412.50
Dues, Membership (PayPal)	1,615.46
Dues, Membership (Paypal) 2022	57.66
TOTAL INFLOWS	2,716.76
OUTFLOWS	
Generator - new Firman	915.87
OCARC Historian	97.91
PO Box Rental	118.00
Storage of Equipment - Ann Millard	250.00
Web Site Hosting - PayPal	76.00
ZOOM subscription	149.90
TOTAL OUTFLOWS	1,607.68
OVERALL TOTAL	1,109.08





### MiniTiouner-Express



www.W6ZE.org

### Digital Amateur Television DVB-S/S2 Receiver / Analyzer



### Available at DATV-Express.com

- Operates with Windows PC using free MiniTioune software from Jean-Pierre F6DZP
- Smaller than a stack of 2 decks of cards (picture above is full size)
- · Two independent simultaneous RF inputs with internal preamps
- High sensitivity -100dBm @1288MHz at 1/2 FEC
- · Fully assembled/tested in aluminum enclosure
- Covers 144-2420MHz (ideal for Space Station DATV reception)
- Symbol rates from 75 KSymb/s to >20 MSymbols/sec
- Uses external 8-24VDC supply or +5V from USB-3 port (with small modification)
- Real time signal modulation constellation & dBm signal strength display
- Price: US \$75 + shipping order with PayPal

### For details & ordering go to www.DATV-Express.com MINITIOUNE v0.8s - Receiver/Analyser DVB-S/S2 144 MHz to 2450 MHz - SRmini=65 kS/s - for MiniTiouner/MiniTiouner-Pro HOMEON - X NIM: Serit FTS-4334L SR (kS) Freq (kHz) Tuner MiniTioune LNA gain: 8.3 dB 03125 01268000 TV mode: DVB-S BaseBand Gain WSRUT 1 Offset-> - 000 0 d8 WSRUT 2 SR3125 1268p MHz 00162 Freq asked:1268000kHz Freq. set. 1268004 kHz HDlowSR 1 search SR4167 1288 MHz 10 MHz Freq -> 1268028 kHz France24 88000 SR250 437 MHz Offset 000kHz QRZ DX SR1000 437ae MHz PostLock SR22000 437ve MHz OVB mode O DVB-S O DVB-S2 O AUTO 16/9 Height MPA O AAC O AC3 Target dev. 24kHz Deviation: 24 kHz pli corr 0 0 ☐ auto GRAPH Scan Width Copy Freq found -/- 8000 kHz -/- 4000 kHz -/- 2000 kHz -/- 1000 kHz Web Station ID:1 Station WERUT 1 Symbolrate (kS) SR set 3125049S MABRME Deviation: 208S SR -> 3125 kS/s VMpeg2 + MPA ENSOND Preamp 20 dB 4219 Khz Ant. Dir. East Gain 12 dB photo Lg Msg Video QSL Lg Pic 0000 WebEr 00000 0 T iss : 75 Q: 74 Equa dBm -10 Vber -60 100% 0 FEC 3/4 MER Timing Lock TS 🔘 🔘 🔘 🔘 0 0 Quit Carrier Full RF Pw -40dBm S/N MER 23 dB Constellations (MiniTioune display above is the ATCO 1268MHz DVB-S repeater signal at WA8RMC QTH 15 miles away).