RF

ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. LX NO. 01 P.O. BOX 3454, TUSTIN, CA 92781-3454 January 2019

The Prez Sez.....

by Dan KI6X

I appreciate the nominating committee asking me to run for President and the votes by the members to get elected. I will talk more about myself in the next issue of the RF.

First an observation I had during last year: One of the big industry "buzzwords" recently is "diversity". As VP this past year I noticed that our club is already rather diverse and that is a good thing. We are not talking necessarily about ethnic diversity or gender diversity as most people use the term these days, but amateur radio diverse. I think that keeps OCARC interesting for all members and visitors.

As VP I also tried to plan a wide range of presentations to appeal to as many members as possible and hopefully at least be interesting to everyone. In the club we have regular attending members that have many years of amateur radio experience, maybe with years of contesting, DXing, DX-peditioning, VHF/UHF, direction finding, working in the amateur radio industry, etc. We have "mid-career" amateurs that have a few years of experience on them and have gained knowledge in areas they enjoy maybe more recent forms of enjoyment (meteor scatter, satellites, digital modes, moon bounce, etc.) and will still find more areas of ham radio that they are interested and want to learn more about. Our club also has many "new-career" amateurs or those that have been licensed at most a couple years. They may have gotten interested through a friend, by Boy Scouts, by CERT, local emergency preparedness, or in other ways. They are finding out what interests them most and are eager to learn more. Hopefully all levels of amateurs are getting something out of our club either by helping others learn or learning more themselves no matter their experience. I look forward to the new year and hope you are too. As VP it was not too difficult to find subjects for speaker ideas since the speakers brought a general interest to the full club. Attendance was good and I thought speakers were well liked and very appreciated throughout the year.

Let's keep up the learning and will continue to hear from members and non-members on various subjects that we all have some interest. Looking forward to 2019.

Dan Violette KI6X, Pres

Next General Meeting

The January 18th 2019 OCARC General Meeting program will be presented by Arnie Shatz, N6HC...

"Baker Island DXpedition"

The next General Meeting will be on:

Friday, January 18, 2019

ENTER from the WEST SIDE entrance of the Red Cross Building, Room 208
Take elevator to the 2nd Floor.
See you there!

In This Issue.....…… Page

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Feedback & Corrections:
rf_feedback@w6ze.org

Submit articles:
editors@w6ze.org

Monthly Events:

General Meeting:
Third Friday of the month
at 7:00 PM held at:
American Red Cross
600 Parkcenter Drive
Santa Ana, CA
(Near Tustin Ave. & 4th St.)

Club Breakfast (Board Mtg):
Normally First Saturday of month at 8am
Marie Callender's Restaurant
1821 North Grand Ave
Santa Ana, CA
(Between 17th & Santa Clara)

Club Nets (Listen for W6ZE):
28.375 ± MHz SSB
Wed- 7:30 PM - 8:30 PM
Bob AF6C, Net Control
Alt: Corey, KE6YHX, Net Control

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

7.086 ± MHz CW **OCWN**
Sun- 9:00 AM – 10 AM

Club Dues for 2018:
Regular Members renewals*- - - $30
Family renewal/Join**- - - - - - - - $45
New Member Join Nov-Dec*** $30
Replacement Badge**** - - - - - - $ 3

* Member renewals Jan-Dec.
** Two members or more, w/badge.
*** New members Nov thru 2019 w/badge.
**** There is a $1.50 charge if you'd like to have your badge mailed to you.

"2019 Winter Field Day"

January 26th and 27th

(Contest period Saturday 1900 UTC to Sunday 1900 UTC)

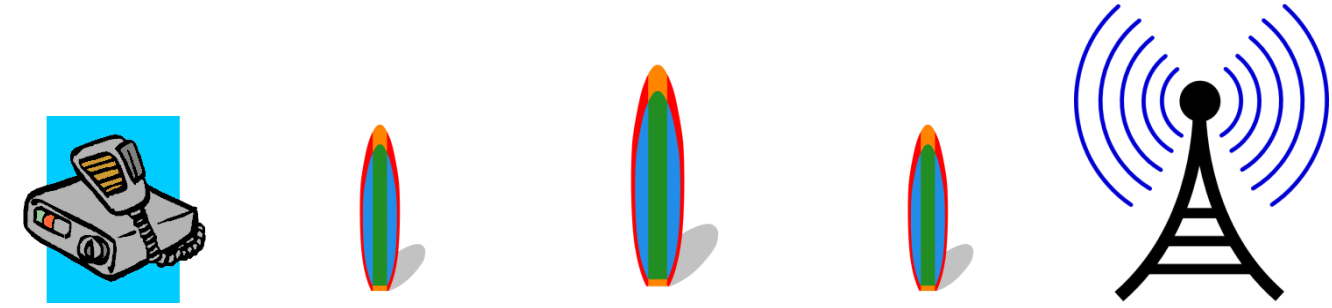
Come join the team for the OCARC 2019 WINTER FIELD DAY The event will be held at the Ocean View School District site located at 17200 Pinehurst Lane in Huntington Beach.

Six operating positions with bands and modes for everyone.

Bands: 160m, 80m, 40m, 20m, 15m, 10m, 6m, 2m plus UHF and VHF bands

Modes: SSB, CW, FT8 and other Digital modes, Satellite

If you are coming or interested and need more information contact Ron W6WG@W6ZE.ORG *www.winterfieldday.com*



Wanted

DC Power Cable for Yaseu FT-100D
This is a cable that is different than most DC cables. The two female spade contacts are parallel instead of in a Tee format

Contact Bob AF6C (714) 639-5074

For Sale Items – The RF accepts for sale notices from members and they can also be put on the W6ZE website (see: http://www.w6ze.org/FOR-SALE/For-Sale-Portfolio.html). You may submit items to the current RF editor for the newsletter by emailing them to editor@w6ze.org . If you want them on the website see the information on the webpage linked above. Some restrictions may be applied by the editor because of space or abuse of the privilege.

ANTENNA ROMANCE ... From The Internet

Two antennas met on a roof, fell in love and got married.
The ceremony wasn't much, but the reception was excellent.
Since they were a perfect match, soon they generated harmonics.
Wrapped the harmonics in dipoles.
But later the harmonics turned out to be parasitic elements.

The true story -- she was a tri-bander and he felt trapped, so they went on separate beam headings

Officer Position of the Month

I am starting a brief section in the RF I am calling “Officer Position of the Month”. Starting next month and for 9 months, every Officer position will be briefly described. This is to encourage members to volunteer to assist the Officer or maybe consider running for a position at election time. We have members that are very knowledgeable or really enjoy certain areas (technical, administrative, financial, etc.) and would be a great asset or resource to an Officer. As you read the articles, they will include an email address to the current holder of that position so you may volunteer to assist or have other needs. The current By-Laws (last revised 2012) are on the W6ZE website at: http://www.w6ze.org/Newsletter/OCARC-bylaws-revF.pdf and have the Officer duties listed. We know the By-laws are a little out of date with everything moving to email and other streamlining and they are being looked at to be revised this year. Reviews and voting on the changes will be brought to the members later this year. Dan Violette, KI6X, President

UPCOMING EVENTS

January 18th, 2019

Arnie Shatz, N6HC
"Baker Island DXPedition"

Photos and discussion of the recent Baker Island, KH1/KH7Z, DXPedition. Arnie was the medical representative along with all the other duties of preparation, set-up, operating, and tear-down. , Arnie always brings back interesting presentations from his trips.

February 15th, 2019

Doug Millar, K6JEY
"EME Communications on10 GHz"
EME = Earth-Moon-Earth

March 15th, 2019

William Phinizy, K6WHP
Dave Martin, KD6QIY
"Civil Air Patrol (CAP)"

For the most current Upcoming event information go to the OCARC EVENTS website:

http://www.w6ze.org/Events.htm

QuartzFest - January 20 - 26, 2019 - See flyer on www.orange-arrl.org or quartzfest.org

January 26, 2019

Orange Section ARES Basic Boot Camp

American Red Cross of Orange County

600 Park Center Dr. Santa Ana CA

92705 - Room #208

See PDF Flyer on my website: www.orange-arrl.org

February 2, 2019

SATERN's Annual Seminar - to be held in San Bernardino Citadel Corp.

The Salvation Army, San Bernardino Citadel Corps

2626 Pacific St., Highland, CA

See PDF Flyer on my website: www.orange-arrl.org or www.satern.net

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ARRL Orange Section

Section Manager: Carl H Gardenias, WU6D

wu6d@arrl.org

Heathkit of the Month #90:
by Bob Eckweiler, AF6C

AMATEUR RADIO - SWL - CB

Heathkit GW-31
HAND - HELD TRANSCEIVER.

Introduction:
On September 11th 1958 the FCC created the Class D Citizen Band (CB) service which divided the 11-meter amateur band (26.96 - 27.23 mc.) into 23 CB channels. While not yet the craze that CB became in the late sixties, it did start to grow. Initially, under FCC Part 19 rules, a license was required to operate a CB radio. However, under Part 15 of the FCC rules, unlicensed operation was allowed on CB channels 2 - 23 with heavy restrictions on power and antenna size.

Heathkit entered the CB market with the CB-1 in late 1959. The CB-1 "Lunchbox" design soon led to the HW-19, HW-29(A) and HW-30 transceivers for 10, 6 and 2 meters respectively. The CB-1 sold for $42.95 in kit form and $60.95 factory wired. It required a CB license to use. Heathkit followed it with a line of CB radios into the mid-70's.

In late 1960 Heathkit produced the GW-30, a hand-held CB transceiver that met the requirements of Part 15 and could be used without a license. The GW-30 sold for $32.95 ($64.95) in kit form and $50.95 ($99.95) factory wired. The prices shown in parentheses are for the radios when bought in pairs.

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

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

Figure 1: A pair of GW-31 Hand-held CD Transceivers.

In the Fall - Winter 1961 catalog Heathkit began offering two new hand-held CB transceivers, the GW-21 and the GW-31; like the GW-30, both could be operated without a license. The GW-21 sold in kit form for $44.95 ($84.95) and factory wired for $71.95 ($136.50). The GW-21 featured nine transistors and a superheterodyne receiver with RF amplifier. The lower cost GW-31 was a redesign of the GW-30, offering a more compact unit at a lower cost. The GW-31 sold for $24.95 ($46.00) as a kit and $37.75 ($71.95) factory wired. The GW-31 remained in production until 1966 when it had an extensive makeover and was rebranded the GW-31A. The GW-31A sold for $19.95 ($35.00).

The GW-30 Hand Held Transceiver:
Heathkit's first handheld "Walkie Talkie" was the GW-30 (Figure 2). It is housed in a simulated black leather case and has a shoulder strap for "convenient carrying". The radio weighs just under two pounds with the battery installed, and measures: 6-1/2" H x 3-1/4" W x 2-3/8" D. The four transistor circuit has a regenerative receiver, a 90 mW input, crystal controlled transmitter and two stages of audio with built-in speaker (which

Figure 2: GW-30 Heathkit's first CB Walkie Talkie

also acts as the microphone). Audio output is 30 mW. The GW-30 has just two external controls; a large black volume control, with an OFF - ON switch at its fully counter-clockwise position and a "Push-to-talk" (PTT) button. "Set and forget" receiver regeneration control and receiver oscillator adjustable coil are not accessible for adjustment when installed in the case. The pull-out whip antenna extends to 40" and collapses to 7-1/2".

The GW-30 requires an older style 9-V NEDA #1602 battery (Eveready #246) which provides a 75 hour life under "normal intermittent use". The NEDA 1602 battery is now only available from specialty battery manufacturers. Amazon is selling an alkaline version of the NEDA 1602 for just under $24 each. Heathkit was offering them for $2.95 for two in mid-1961. Luckily, the common NEDA 1604 9-V battery will work, but not provide the life that the NEDA 1602 would. Still, you can buy a lot of common 9-V batteries for $24.

The GW-31 Hand Held Transceiver:

The GW-30 didn't stay around very long. It was superseded by the GW-31 which is very similar electrically, but more compact, and lighter; all for $8 less. At 5-7/8" H x 3-1/8" W x 1-1/2" D it is only 27-1/2 cubic inches in volume compared to 50-3/16 cu. in. for the GW-30. At 1-1/4 lb. is almost 3/4 lb. lighter.

GW-31 Controls:

The GW-31 OFF - ON / volume control is a thumbwheel type located near the top of the front panel above the speaker/mic. The PTT button is located on the left side of the unit. Two holes in the rear panel allow access to the receiver oscillator coil and the regeneration potentiometer so they can be adjusted without opening the case, when needed. The whip antenna extends to 36" and collapses to just 1" outside the case, making it less susceptible to damage than the GW-30 antenna when collapsed.

GW-31 Circuit:

The GW-31 uses the same four transistors as the GW-30. They are germanium PNP types. Refer to **Figure 3** for the GW-31 schematic and **Table I** for the transistor types.

The Transmitter:

The transmitter uses a single TI R424 HF transistor (V4) as a crystal-controlled class-C oscillator. The crystal is a subminiature third overtone plug-in type that was buyer specified and Heathkit supplied for one of the, 23 CB original channels (Channel 1 was only usable for licensed CB operation). L4 and C20 form the tuned output circuit. L4 has two taps, one provides feedback to the crystal through C18; capacitor C17 sets the feedback level. The second, low impedance, tap feeds the antenna. L1 is a loading coil for the shortened antenna. Class-C bias is provided by R12 through R14; C19 provides AC bypass for the emitter bias resistor.

The Audio Stages:
In transmit, the speaker acts as a microphone; audio is amplified in two cascaded audio stages, each using a 2N185 transistor. The class-A first amplifier (V2) has a, ball-park calculated, voltage gain of around 40. In reality it is somewhat less.

The second audio stage (V3) operates as a class-A power amplifier that drives an audio transformer (T2). In transmit, the primary of the transformer provides modulated voltage to the transmitter collector (V4), and the transformer secondary provides a low impedance modulation voltage on the ground return to the emitter of V4.

In receive the cascaded (V2 and V3) audio stages amplify the audio from the super-regenerative detector and drive the speaker.

The Super-Regenerative Detector:
A 2N1108 transistor (V1) operates as a super regenerative detector that can be tuned to receive any of the 23 original CB channels from 26.965 to 27.255 mc. In receive, the signal from the antenna is coupled by C7 to a tuned circuit made up by L2 and C5. C7 is small to reduce the oscillating detector signal that radiates from the antenna during receive. The detector oscillates due to feedback provided by C3. This oscillation is at the frequency of the tuned circuit.

The detector is actually continually going in and out of oscillation due to voltage accumulating on C1. This is occurring at the "quench" frequency, and is adjustable by R1, the REGENERATION control. R1, along with R2 and C1, sets the quench frequency. Quenching is occurring at a rate much higher than the audio frequency range. The gain of V1 is at its highest just before the oscillation starts. This detected signal is coupled through T1 to the volume control. C4 and C8 bypass the higher quench frequency, leaving the detected audio intact. In the first audio stage C10 and C12 further reduce the quench signal, which is heard as a hiss in the receiver speaker. There is no audio squelch.

T / R Switching:
A momentary 4PDT pushbutton switch activates the transmitter when pressed; when released a spring returns the switch to receive. Each switch pole is designated with a letter from A to D in the schematic.

A - Receive: The antenna, with loading coil, is connected through C7 to the low impedance tap on L2, the detector tank circuit.

A - Transmit: The antenna, with loading coil, is connected through C16 to the output tap on T4, the transmitter tank circuit.

B - Receive: The crystal is shorted to assure no oscillations occur in the transmitter circuit.

B - Transmit: C6 and R13 are effectively connected across L2 detuning the detector to prevent spurious radiation during transmit.

C - Receive: The output of the audio amplifier is connected to the speaker.

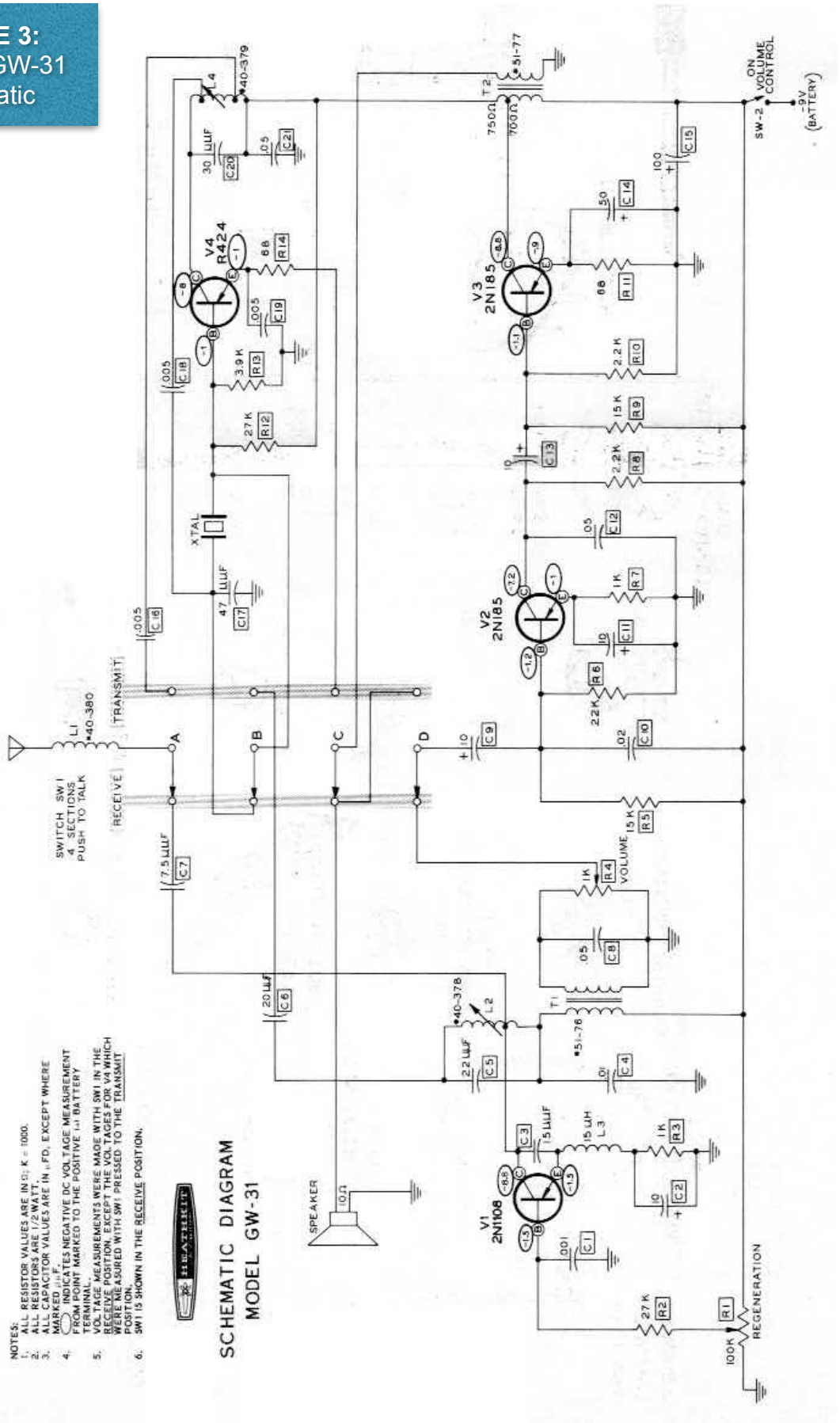
C - Transmit: The transmitter (V4) emitter is connected to ground through the secondary of the audio output transformer, turning on the transmitter.

D - Receive: The super regenerative detector audio, after the volume control, is connected to the audio amplifier input.

D - Transmit: The speaker, acting as a microphone, is connected to the input of the audio amplifier.

GW-31 Assembly:
Just about all the electronic components of the GW-31 mount on a single circuit board including the PTT switch and volume and regeneration controls. Sockets are provided for the transistors and the crystal. Even the

FIGURE 3:
Heathkit GW-31
Schematic



speaker, which is wired externally, bolts to the circuit board. The collapsable antenna bolts to a small bracket also mounted to the circuit board. The bracket provides the needed electrical connection. A plastic grommet isolates the collapsable antenna where it exits the metal case.

The battery doesn't mount on the circuit board. It uses a standard 9-volt battery connector which also fits the common NEDA 1604 battery. (If you use the more common 9-volt battery, you will need to place some filler in the battery compartment to keep the battery in place).

Inside the battery compartment section are three FCC mandated labels. A battery type label, a transmitter identification label and a certification label. These labels are provided by Heathkit and are required under sections 15.208 and 15.209 of the FCC Part 15 rules.

Heathkit also included a *Citizen's Band License Package* with each kit. This packet contained instructions and forms to obtain a CB license at the time. Unlicensed operation could only be used between two part 19 devices. Communication on Channel 1 or between this Part 19 radio and a licensed Part 15 radio was not allowed.

GW-31 Adjustment:

Alignment is required after assembly. The first adjustments set the regeneration control, followed by preliminary tuning of the receiver. Then the transmitter is tuned, and finally the transmitter input power is measured to be sure it is below 100 mW to meet FCC Part 19 rules.

Setting the regeneration control involves turning it slowly from fully CCW to where the hiss is loudest. Then the transmitter is keyed momentarily. If the hiss doesn't return upon receiving, the control is turned slightly CCW and the procedure repeated until the hiss returns reliably.

Setting the receiver close to on frequency is cleverly done. Just remove the transmit crystal and hold it close to the receiver tank coil. Then adjust the coil for minimum hiss. The crystal is a sharply tuned circuit and the crystal absorbs energy from the coil near resonance.

A dummy load is used to adjust the transmitter tank coil for maximum output. Using the previous procedure, once peaked, un-key and key the transmitter and turn the coil slightly CW until the transmitter starts reliably.

Final assembly is done next; it involves putting the radio into its snap-together metal cabinet. If you need to re-open the case a coin can be inserted in a slot and twisted to snap the case back apart.

Once assembly is complete, Heath recommends you have someone operate the transmitter you will be communicating with from a distance and do a final adjustment on the receiver tuning coil.

The Heathkit GW-31A:

In 1966 Heathkit replaced the GW-31 with the GW-31A. The transistors were changed to silicon NPN types. The circuit remained similar, though with the higher gain transistors, only one stage of audio was needed for

GW-30/GW-31:			GW-31A		
V1	Detector Ge PNP	2N1108	**Q1**	Detector Si NPN	2N2712
V2	1st Audio Ge PNP	2N185	**Q4**	Mic Amp Si NPN	2N2712
V3	Audio out & /Modulator Ge PNP	2N185	**Q2**	Audio out & Modulator Si NPN	2N3390
V4	Xmtr Ge PNP	R424	**Q3**	Xmtr Si NPN	2N3646

Table 1: GW-30, -31 and -31A Transistor Lineup

receive. The transistor lineup is shown in **Table I**. Note the change in designator letter from V to Q and the changed numbering. The GW-31A was sold until sometime in 1968.

10-Meter Ham Operation:

In the February 1961 QST *Hints and Kinks* K8BLL discusses putting the GW-30 on 10 meters with additional power. A similar idea will work for the GW-31 & 31A handhelds. For licensed ham operation Part 15 restrictions no longer apply.

Author's Comments:

Back in the early sixties I built a pair of GW-31 transceivers. They disappeared during the move from NY to CA. My impression of their operation was not favorable. They worked, but the constant hiss was annoying, their range was poor, and they needed adjustment frequently. Still my friends and I had a lot of fun with them. I think these radios soured me on super-regenerative receivers more than any other device I've ever used.

Of special interest is the dummy load. My kits each came with a coil that you soldered to a #49 lamp bulb (**Figure 4**). The coil was placed near the transmitter tank and used to adjust for maximum power. Other units used

Figure 4: Dummy load used on my GW-31 units.

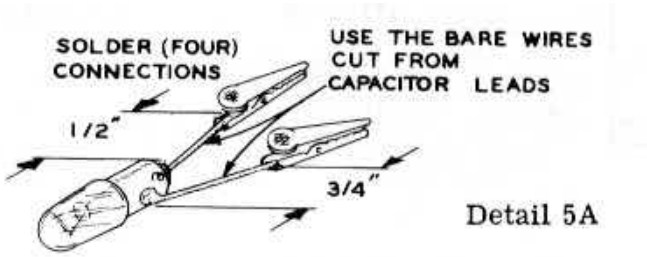


Figure 5: Dummy load using #1804 with alligator clips used on other GW-31 units.

alligator clips for direct connection to the circuit board (**Figure 5**). Which was used first is unknown. Both lamps are rated at 60 ma, but the #1804 is 4-volt and the #49 is 2-volt.

Next month:

In late January I'm expecting a heavy work load so I may not have time to put together a Heathkit article for the February issue. I should be back on track for March. Meanwhile I'm open for suggestions for the April article.

As some might know, I try to find an abstruse Heathkit to write about to celebrate April 1st. I'm open to suggestions. A Heathkit Candle Stick, Heathkit 'freebee' flashlight, Heathkit 26 lb. "Laptop", Heathkit Log-Splitter, Heathkit Motor Bike, and Heathkit Trash Compactor have starred in past April issues. there must be more out there!

I'd like to thank Chuck Penson, WA7ZZE for sending along the GW-31 manual that played an important part in me writing this article. His trilogy of books on Heathkit belong in every Heathkit fan's library.

73, from AF6C

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

Thanks - AF6C

Reprint of the December 2018 Puzzler challenge:

As the Christmas dinner was breaking up, two club members decided to play a few rounds of "high-card, math-style". Borrowing the ten card deck used for the prize drawing from Ron - W6WG, they proceeded to play two hands.

Probably everyone is aware of "high-card". where two or more participants draw a card from a deck of cards, and the one with the high card wins. This is often done to see who goes first in another contest.

"High card math-style" is different. There are two players and each draws a single card (in this case from a deck with ten cards, ace through 10, with the ace counting as a one). The rest of the cards are not used. Each player privately looks at his/her card. The winner is not the one with the high card but the first one who KNOWS which player is holding the high card. Each player takes a turn by saying either "I have the high card", "[My opponent] has the high card", or "I don't know".

The players that Christmas dinner were Fried - WA6WZO and Bob - AF6C, and it was decided (perhaps by "high-card") that in the first game Fried would go first. The first game proceeded thusly:

1. ***Fried says: "I don't know".***
2. ***Bob says: "I don't know".***
3. ***Fried says: "I don't know".***
4. ***Bob says: "I don't know".***
5. ***Fried says: I have the high card"!***

The question is: There are two possible cards Fried was holding. What are they?

In the second game Bob starts first, and the game proceeded thusly:

1. ***Bob says: "I don't know".***
2. ***Fried says: "I don't know".***
3. ***Bob says: Fried is holding the high card.***

The next question is: There are two possible cards Bob was holding. What are they?

Send your answers to puzzler@w6ze.org

OCARC
BOARD MEETING MINUTES
2019-01-05

The OCARC Board meeting was held at Marie Callen-der's Restaurant at 1821 N. Grand Ave in Santa Ana on January 05, 2019. There were a total of thirteen members attending. There was a board quorum with all Directors present.

Director Reports:

- **Treasurer**- Ken W6HHC (Treasurer in 2018) handed out a draft 2018 YTD cash flow report. Ken explained that the main effort was to ready the 2018 financial files and report for the new 2019 Treasurer, Greg W6ATB

OLD BIZ:

- **Newsletter Editors**
  Jan - Tim N6TMT
  Feb - Vijay KM6IZO
  Mar - Greg W6ATB
  Apr - Tom W6ETC
  May - Bob AF6C
- **Program Speakers for Club Meetings**
  Jan – Arnie N6HC on "Baker Island DXpedition"
  Feb – Doug K6JEY on "10GHz EME"
  Mar – Bill K6WHP & Dave KD6QIY on "Civil Air Patrol"
- **Updating EMCOMM section on website**
  Bob AF6C reported no new progress had been made on updating the EMCOMM page. Bob will work with Jeff KK6YUP on the effort..
- **Audit Committee status**
  Ken W6HHC reported that all preparations had now been completed for the Audit Committee to review the clubs 2018 Finances. A date was scheduled for Wednesday Jan 09 for the first audit meeting.
- **Summer Field Day plans**
  The board agreed to ramp up planning for 2019 FD. Will contact the school district in Buena Park to confirm insurance requirements. Tim N6GP reported that Atlee N2CNC should finish the new stronger tower-base-plate by mid-February.
- **Winter Field Day plans**
  WFD is coming up fast on Sat/Sun January 26/27. The board agreed to rent a large tent for $100 to house all (most?) stations. Tom W6ETC will also provide his trailer for station expansion (if necessary).

NEW BIZ:

- The Board agreed that the existing OCARC corporation BYLAWS has several areas that are outdated. For example: to mail out paper copies of RF Newsletter. Tim N6GP and Nicholas AF6CF will work as a committee to begin this effort.

- The Prez, KI6X, plans to publish one new Officer duty briefing in RF newsletter each month.

- The Prez, KI6X, will work on assigning a new FD committee for 2019.

- There was discussion that while the club wants to assist with estate sales of ham equipment, the club does NOT have any infrastructure to store equipment until sold.

GOOD OF CLUB:

- Nicholas AF6CF told about plans to avoid CC&R restrictions by building a remote station out in the desert. Nicholas and Ron W6WG hope to locate the internet-access HF station near Boron, CA.
- Nicholas AF6CF also sadly reported that the wife of past president Paul W6GMU passed away unexpectedly on Dec 31.

Respectfully submitted
by *Ken Konechy W6HHC*
OCARC Secretary

RadioActivity
January 2019

JANUARY

- ****North American QSO Party / CW:** 1800Z Saturday January 12 to 0559Z Sun. January 13
- ***ARRL January VHF Contest:** 1900 UTC Saturday Jan 19 to 0359 UTC Mon. January 21
- ****North American QSO Party / SSB:** 1800Z Saturday January 19 to 0559Z Sun. January 20
- ***CQ WW 160 Meter / CW:** 2200Z Saturday 25 Friday to 2200Z Sunday January 27
- ***Winter Field Day:**
  1900Z Sat. Jan. 26 to 1900Z Sun. January 27
  PLEASE JOIN THE CLUB EFFORT

*** 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"

FEBRUARY

- ****North American Sprint / CW:** 0000 UTC through 0400 Sunday Feb. 3
- ***CQ WW WPX / RTTY** 0000 UTC Saturday Feb. 9 through 2359 UTC Sunday Feb. 10
- ***International DX Contest:** CW: 0000 UTC Sat. Feb 16 through 2400 UTC Sunday Feb 17
- ***CQ WW 160 Meter SSB:** 2200 UTC Friday Feb. 22 through 2200 UTC Sunday January 24

*** 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

- **Vermont QSO Party:** 0400 UTC Saturday February 2 through 2400 UTC Sunday Feb. 3
- **Minnesota QSO Party:** 1400 through 200 UTC Saturday February 2
- **North Carolina QSO Party:** 1500 UTC Saturday February 24 through 0059 UTC Sunday Feb. 25
- **South Carolina QSO Party:** 1500 UTC Saturday February 24 through 0059 UTC Sunday Feb. 25

Repeating Activities:

- **Phone Fry** Every Tuesday night at 0230Z to 0300Z
- **SKCC** Weekend Sprintathon (Straight Key CW) on the first weekend of the month after the 6TH of the month. 1200Z Sat. to 2359Z Sunday.
- **SKCC** Sprint (Straight Key CW) 0000Z to 0200Z on the 4th Tuesday night (USA) of the month.
- **CWops** Every Wednesday 1300Z to 1400Z, 1900Z to 2000Z and Thursday 0300Z to 0400Z

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

OCARC Financial Audit Report 2018

12/31/2018

INFLOWS

Auction In	$	2,073.75
Badge Income	$	2.00
Christmas Dinner Ticket Sales	$	1,041.97
Coffee Mug Sales	$	307.29
Donation	$	10.00
Dues - Family	$	50.00
Dues - Family (PayPal)	$	172.89
Dues - Membership	$	985.00
Dues - Membership (PayPal)	$	986.89
Field Day Food Income	$	422.00
Opportunity Drawing - Holiday	$	410.00
Opportunity Drawing -Monthly	$	375.00
Opportunity Drawing IN - Christmas	$	178.00
Opportunity Drawing IN - Christmas 2017	$	100.00
Refreshments Income	$	104.83
Troop 440 donation from KM6EMP	$	65.00
TOTAL INFLOWS	**$**	**7,284.62**

OUTFLOWS

Anniversary Party Food	$	122.47
Auction Payout	$	1,812.38
Awards and Plaques	$	145.16
CA Statement Of Info filing	$	20.00
Christmas Dinner - Ladies Gifts	$	51.46
Christmas Dinner 2018 Meal Expenses	$	966.00
Club History Archive	$	82.16
Coffee Mug Expense	$	543.89
CU service Fee	$	20.00
Donation to Troop 440 - from Joel KM6EMP	$	65.00
Field Day - Flowers	$	53.88
Field Day - Gas	$	44.85
Field Day Equipment Repairs	$	49.48
Field Day Food Reinbursement	$	657.00
Insurance Expense - 2019	$	300.00
Meals - Board Mtg	$	12.48
OCARC Historian	$	122.45
Opportunity Drawing - Monthly	$	218.80
Opportunity Drwg - Christmas Radio	$	1,250.91
PO Box Rental	$	70.00
Postage	$	11.00
Publicity - OCARC Biz Cards	$	18.29
Refreshments Expense	$	96.01
Storage Locker	$	1,015.00
Supplies	$	24.33
Web Site Hosting	$	203.88
Web Site SSL Fee	$	69.99
Accounting adjustment	$	135.43
TOTAL OUTFLOWS	**$**	**8,182.30**

NET CHANGE **$ (897.68)**

Assets - Beginning Balance: 2017-12-31

OCCU Checking Statement	$	5,319.37
OCCU Savings Statement	$	0.09
Cash Box	$	-
Wells Fargo Checking	$	561.69
PayPal account (deposit Bank 1/03/2017)	$	43.39
Outstanding checks	$	(30.00)
Total Beginning Net Balance:	**$**	**5,894.54**

Assets - Ending Balance: 2018-12-31

WF Checking Statement	$	5,427.66
Cash Box	$	-
Old OCCU Checking	$	-
Old OCCU Savings	$	-
PayPal account	$	-
Outstanding checks	$	(1,396.80)
Adjust Incorrect check (Mimi)	$	966.00
Total Ending Net Balance:	**$**	**4,996.86**

Total Beginning Balance:	**$**	**5,894.54**
Total Ending Net Balance:	**$**	**4,996.86**
Net Change for the Year	**$**	**(897.68)**

Audit Acceptance:

Greg Bohning W6ATB

Greg Bohning **W6ATB**, Incoming Treasurer (for 2019)

Timothy Millard N6TMT

Timothy Millard **N6TMT**

Jim Schultz AF6N

Jim Schultz **AF6N**

Ken Konechy W6HHC

Ken Konechy **W6HHC**, Outgoing Treasurer (from 2018)

Date signed: **2019/January/09**

A HISTORY of OCARC PRESIDENTS

by Ken Konechy W6HHC
with great assistance from our Club Historian Emeritus, Bob Evans - WB6IXN

2019 KI6X Dan Violette
2018 N6GP Tim Goeppinger
2017 N6GP Tim Goeppinger
2016 AF6CF Nicholas Haban
2015 N6TMT Tim Millard
2014 AF6CF Nicholas Haban
2013 AF6CF Nicholas Haban
2012 W6GMU Paul Gussow
2011 W6GMU Paul Gussow
2010 K6PEQ Kristin Dankert
2009 AF6CF Nicholas Haban
2008 N8WP Willie Peloquin
2007 K6PEQ Kristin Dankert
2006 N8WP Willie Peloquin
2005 W6HHC Ken Konechy
2004 N1AB Steve Brody
2003 KQ6JD Lowell Burnett
2002 KE6WIU Cory Terando (now AE6GW)
2001 KD6BWH Bob Buss (later KØBWH)
2000 K6LDC Larry Hoffman
1999 WA6VPP Bud Barkhurst
1998 KD6BWH Bob Buss (later KØBWH)
1997 WA6VKZ Frank Smith
1996 AF6C Bob Eckweiler
1995 N6XTJ Jim Roberts
1994 KJ6ZH Chris Breller
1993 KC6TAM Jane Breller
1992 WA6VKZ Frank Smith
1991 W6HHC Ken Konechy

YEAR
1990 KJ6ZH Chris Breller
1989 WA6VKZ Frank Smith
1988 W6HHC Ken Konechy
1987 N6JSV Jim Talcott
1986 WA6VKZ Frank Smith
1985 AF6C Bob Eckweiler
1984 KA6IMP Chris Breller (now KJ6ZH)
1983 W6IBR Al Watts
1982 KA6HNY Robin Hoff
1981 WA6VKZ Frank Smith
1980 WA6FOW Ernie Prichard
1979 WB6IHZ Terry Mathers
1978 WA6LFF Jim Kingsbury
1977 WA6WZO Fried Heyn
1976 WB6PEX Martin Raymond
1975 WA6LHB Art Sheldon (now K7ZE)
1974 W6HHC Ken Konechy
1973 WB6QNU Bob Eckweiler (now AF6C)
1972 WA6FIT Ron Cade (now W6ZQ)
1971 WB6CQR Billy Hall (now N6EDY)
1970 WB6UDC Jack Hollander (now N6UC)
1969 WA6ROF Jerry VerDuft (now ADØA)
1968 W6COJ Dave Hollander
1967 WB6GPK Jim Hill
1966 WA6YWN Jack Shaw
1965 K6KTX Rolland Miller
1964 W6WRJ Ralph Alexander (later W6RE)
1963 W6DEY Roy Maxson
1962 K6LJA Ted Glick
1961 K6IQ Roy Morriss

YEAR
1960 K6TXS Charles(Ed)Edwards
1959 W6BVI Ken Kesel
1958 W6BVI Ken Kesel
1957 - CLUB DISBANDED -
1956 W6HIL Bob Swenson
1955 W6BVI Ken Kesel
1954 W6UPP Marinus Conway
1953 Probably only informal meetings, no officers?
1952 W6QZQ Horace Bates
1951 W6LDJ Sam (Mac) McNeal
1950 Probably only informal meetings, no officers?
1949 W6CGF Chuck Lunder
1948 W6BWO Dale Bose
1947 W6ALO Tommy Gentges
1946 W6DEY Roy Maxson
1945 W6DEY Roy Maxson
1944 - **ALL OFF TO WAR!!**
1943 - **ALL OFF TO WAR!!**
1942 W6IBN Roy Cumpston
1941 W6BAM Shelley Trotter
1940 W6KLU Harold Christensen
1939 Probably only informal meetings, no officers?
1938 W6NSA Les Gates
1938 W6ADT Noral Evans
1937 W6LYN Noral Evans (later reissued as W6ADT)
1936 W6LYN Noral Evans (later reissued as W6ADT)
1935 - CLUB DISBANDED!!
1934 W6IGO Earl Moore
1933 W6IGO Earl Moore

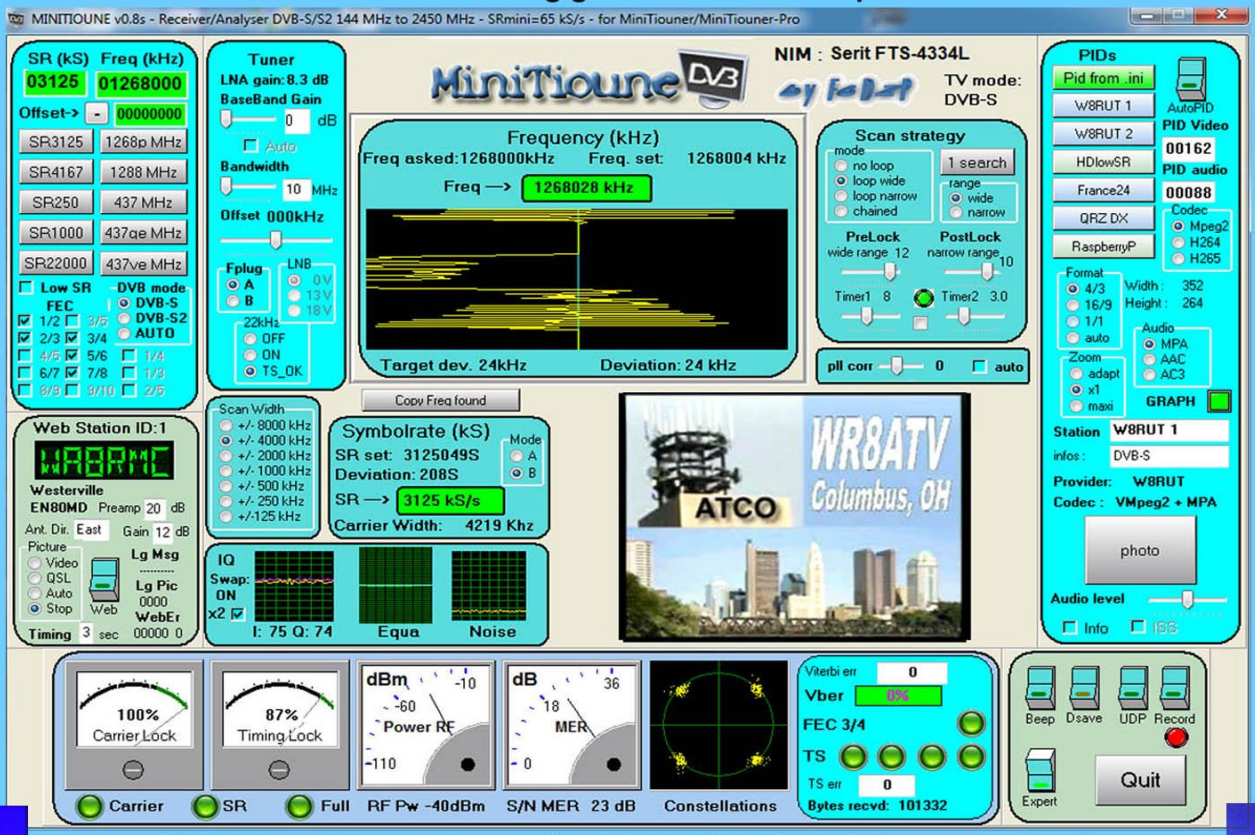
MiniTiouner-Express

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 display above is the ATCO 1268MHz DVB-S repeater signal at WA8RMC QTH 15 miles away).