

RF



ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. LV NO. 1

P.O. BOX 3454, TUSTIN, CA 92781-3454

January 2014

The Prez Sez.....

by Nicholas AF6CF



Hello,
 Happy New Year! At the start of the New Year, we have to reflect on the past and look at the future ahead. The year 2013 was a big one for our Club., not only it was our 80th anniversary, but we broke our record for Field Day, coming second overall. I was very happy to see the great turnout we had at the Holiday party, too. It was a great night of food, prizes and fun! For this year, we have a big agenda with our activities. Field Day will take again center stage, but we will try to make every single meeting and activity better than the previous one.

This month's speaker is Art W6XD, and he will talk about a very important topic for the amateur radio community regarding it's future, so be sure not to miss our next meeting.

The Club is growing, and we hope that all the new and current Club members will contribute to make this year at least as good if not better than the last one, which will be remembered for a long time. There are many things that you can do to help, some with more effort than others, but all of them will be great for our Club. Just come to the meetings with your suggestions and ideas and above all, let's have "Fun with Radio".

Thank you very much.

73 DE AF6CF



Next Meeting

The next [General Meeting](#) of the OCARC will be held on Friday, January 17th, 2013.

Our guest speaker is Art Goddard, W6XD. Art is well known for his involvement and promotion of Amateur Radio. Licensed for 57 years, he is Past Director, ARRL Southwestern Division.

His topic is:

**Amateur Radio
 in the 21st Century...
 Mainstream or Backwater?**

The next general meeting will be on:

**Friday, January 17th, 2014
 @ 7:00 PM**

As usual, we will be meeting in the east Red Cross Building, Room 208. See you there!

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W6ZE Club License Trustee:

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Contact the Newsletter:

Feedback & Corrections:
RF_feedback@w6ze.org

Submit Articles:
EDITORS@W6ZE.org

Monthly Events:

General Meeting:

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

Club Breakfast:

Second Saturday of every
month at 8:00 AM
Jagerhaus Restaurant
2525 E. Ball Road
(Ball exit off 57-Freeway)
Anaheim, CA

Club Nets (Listen for W6ZE):

28.375 ± MHz SSB
Wed- 7:30 PM - 8:30 PM
Bob AF6C, Net Control

146.55 MHz Simplex FM
Wed- 8:30 PM - 9:30 PM
Bob, WB6IXN, Net Control

7.086 ± MHz CW **OCWN**
Sun- 9:00 AM – 10 AM
John WA6RND, Net Control

VISIT OUR WEB SITE

<http://www.w6ze.org>

for up-to-the-minute club information, the latest membership rosters, special activities, back issues of RF, links to ham-related sites, vendors and manufacturers, pictures of club events and much much more.

Club Dues:

Regular Members	...\$20
Family Members*	...\$10
Teenage Members	..\$10
Club Badge**\$3

Dues run from Jan thru Dec and are prorated for new members.

*Additional members in the family of a regular member pay the family rate up to \$30 per family.

**There is a \$1.50 charge if you'd like to have your badge mailed to you.

2013 FIELD DAY RESULTS

Introducing the 2014 OCARC Board

Top 10 Claimed

Call Sign	Score	Class
W3AO	33,724	29 A
W6ZE	21,258	12 A
K5UZ	20,696	2 A
W4IY	19,924	9 A
K6EI	18,885	9 AB
W4EZ	17,675	9 AB
K4LRG	17,392	5 A
NA5NN	16,750	5 A
W6YX	16,074	9 F
K4FC	15,954	7 A

President: AF6CF Nicholas Haban
 Vice President: N6GP Tim Goeppinger
 Secretary: KJ6NGF Tim Millard
 Treasurer: W6HHC Ken Konechy
 Activities: W6GMU Paul Gussow
 Membership: KC6TOD Kris Jacob
 Publicity: KB6CJZ Robbie Robinson
 Technical: AF6C Bob Eckweiler
 Director at Large: W6FKX Doug Britton
 Director at Large: W6ATB Greg Bohning

Last year Field Day results were fantastic, and we hope to repeat them for this year.

We were second overall in the nation, but first in the West Coast by many points.

The Orange County Amateur Radio Club wishes to thank all team leaders, operators, participants, helpers and supporting public for this extraordinary effort.

Results like these cannot be obtained without the participation of the whole Club, its family and friends.

We look forward to a 2014 repeat of these results. DE AF6CF



OCARC Coffee Mugs are only \$10.

Paul, W6GMU is collecting money and has the signup sheet for ordering additional mugs.

Corey's Succulent Emergency Supply French Toast

(Makes 2 pieces)

Ingredients:

2 slices of freshly cut bread from a breadmaker,
5 tbsp whole egg powder,
5 tbsp water,
1 eight-ounce container of shelf-stable whole milk,
2 tbsp sugar,
1 tsp vanilla powder,
1/4 tsp salt,
butter for frying.

Directions:

Combine the egg powder with the water and mix until the lumps are nearly gone. Add the milk, sugar, vanilla, and salt, and stir. Chill overnight. When you are ready for French toast, take the mixture out of the chill-chest and stir. Set a baking dish or small pan next to the stove and pour the mix in. Cut one or two pieces of bread 1/2-inch to 3/4-inch thick, depending on the size of the baking dish, and the amount of mixture; it must come up at least half-way on the bread. Let the bread soak for four minutes on each side, and melt some butter in a nonstick pan on medium heat. When the butter just begins to brown, lay the soaked bread in the pan, last-soaked-side-up and cover. Cook covered for two minutes on each side. Place on the serving dish and allow carry-over heat to set the interior to custard. Slather with butter and syrup, or try it without; it tastes great either way!

For a hint of strawberry, substitute the milk and sugar with:
1 eight-ounce container of shelf-stable 2% strawberry milk,
2 tbsp shelf-stable heavy cream,
1 tbsp fructose.

--73, Corey Miller KE6YHX

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OCARC 2014 DUES

It's Dues Time:

It is 2014, and that means it is time to renew your Club dues. You have thorough March 2014 to pay your dues without falling in arrears. Don't miss out on the events planned by our new Board. Have you paid already? Visit our Membership webpage to check. If something seems incorrect, please email the Treasurer and/or the Membership Chairperson and they will make sure everything is right!

Heathkit of the Month #52:
by Bob Eckweiler, AF6C



Heathkit SK-211
AC Monitor

Introduction:

When club president, Nicholas - AF6CF, mentioned he had two Heathkit SK-211 AC Line Monitors that he bought sometime back - one he had built and one was still in the box - my ears perked up. He offered me a “loan” of the unbuilt kit to use as the basis of this month’s column, and I accepted. He presented me the box at the August club meeting and I promised to keep my soldering iron locked up while I had it!

The SK-211 is one of the later kits that Heathkit produced. It was originally introduced sometime in mid-to-late 1986 and continued in production at least through 1991 when Heathkit was near closing down. I have no catalogs for 1986 through 1988, but after a search I found it in the Fall 1989 catalog. At that time it was selling for \$29.95; that is the same price as in the winter 1991 catalog - the last catalog in my collection. (Heathkit closed its kit business on March 30, 1992).

The SK-211 was difficult to locate in the catalog. Heathkit had a couple of pages of “SK” “starter kits” but the SK-211 wasn’t among them. It was finally found in the computer accessory section.

The SK-211 AC (Line) Monitor:

This simple (Skill Level 1) kit is a plastic box that plugs directly into an AC wall socket. It is shown in Figure 1; it has ten red LED lamps and a **RESET** button on the

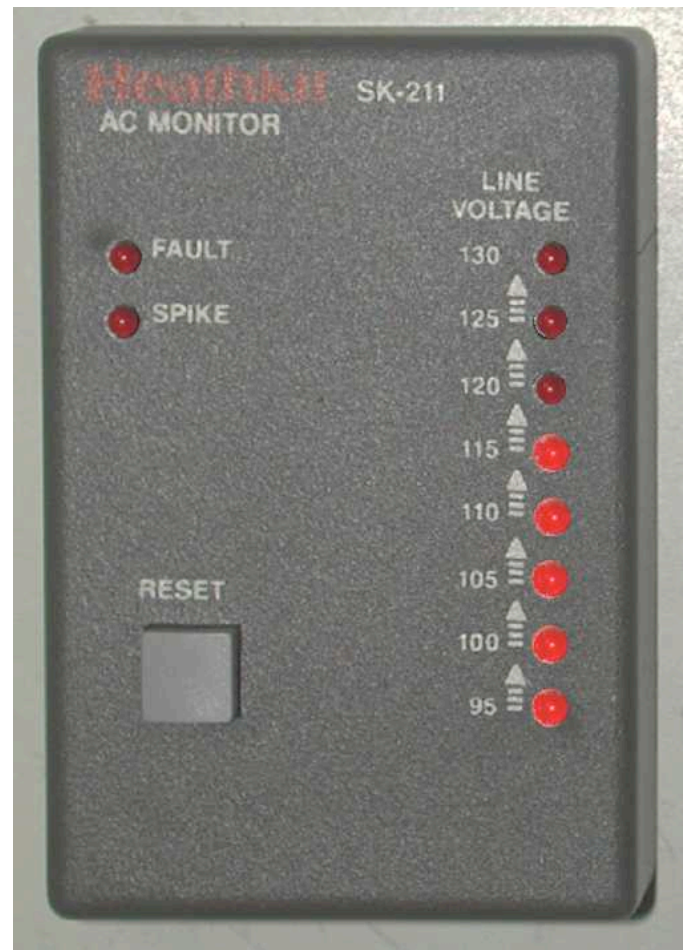


Figure 1: Heathkit SK-211 AC Monitor

side opposite the AC plug. Eight of the LEDs are in a vertical row on the right with the nomenclature **LINE VOLTAGE**. The eight LEDs are individually marked from **130** (at top) down to **95** in steps of 5. All the LEDs whose threshold value is at or below the current line voltage will be lit. For figure 1 the voltage is 115 volts or more, but less than 120 volts. Accuracy is nominally ± 5 volts without calibration and less than ± 3 volts with calibration. Calibration requires an accurate ohmmeter.

To the left of the eight LEDs are the remaining two LEDs in a separate vertical row. The top LED is marked **FAULT** and the lower one is marked **SPIKE**. A **RESET** button is located below these two LEDs. The **FAULT** light latches on should the voltage

drop below 90 volts for one or more AC cycles. The SPIKE light latches on if a repetitive voltage spike above 250 volts is sensed on the AC line or if an intermittent spike of around 300 volts is sensed. The specifications for the SK-211 AC Monitor are given in table I.

The SK-211 Circuit:

The circuit is shown in figure 4. All components mounts on a single circuit board, and can be divided into four sections: the power supply, the spike circuit, the eight LED voltage indicator and the fault circuit.

Power Supply:

The SK-211 runs directly off the AC power and has no transformer. Thus it is designed, for safety reasons, not to be easily powered up when not totally encased in its insulated box. Since most of the circuitry needs a voltage between 15 and 18 volts the power supply must drop the 120 VAC down to where it can be rectified, filtered and regulated to the needed voltage. C1, a 2.2 μ F capacitor is connected to the hot side of the AC line and provides about 1.2K Ω of AC impedance to the 60 cycle AC power. This reactance has no power loss other than imperfections in the capacitor and limits the AC current to around 100 mA RMS. Two 13.5 volt zener diodes in series (D1 & D2) complete the circuit to the neutral side of the AC line, which is the common point for all the circuitry. On the positive half of each cycle about 27 volts is developed across the zener diodes. This is rectified by D3 and charges up C2. On the negative half of the cycle the zener diodes are forward biased and drop very little voltage allowing C1 to discharge, but not C2 which is isolated by D3. Thus C2 is kept charged to around 27 volts (peak) on each positive cycle.

Voltage Display: One to eight LEDs light in a string to indicate the AC line voltage from 95 to 130-volts AC, in 5-volt steps.

Accuracy: \pm 5-volts AC at each threshold (\pm 3-volts AC, if calibrated with an ohmmeter).

Fault Indication: A separate LED lights whenever the voltage fall below 90-volts AC for at least 1 cycle (0.016 second). The LED remains lit until the RESET button is pressed.

Spike Indication: A separate LED lights if a voltage transient occurs. Typical sensitivity is 250-volts for repetitive spikes and 300-volts for intermittent spikes. The LED remains lit until the RESET button is pressed.

AC Voltage Input: 80 to 135 VAC 60 Hz, 2.5 watts.

Dimensions: 3-5/8" H x 2-3/8" W x 1-1/4"D (9.2 x 6.0 x 3.2 cm).

Weight: 3-1/2 oz. (100 g)

Table I - Heathkit SK-211 Specifications from the 1986 manual (595-3616)

The voltage across C2 is fed to U1 an LM-317 voltage regulator IC whose output is set by R3 and R4 to 16.5 VDC. This is the V+ voltage that feeds the other circuits.

This type of AC circuit has its drawbacks. While the reactance of C1 is 1.2K Ω at 60 Hz, voltages with higher component frequencies (such as transients and AC from a square wave inverter) will see less reactance. Two resistors, R1 and R2, are in series with the capacitor to help protect against transients and non-sinusoidal AC power. Heathkit even warns about this in their manual; though they say it will affect

the accuracy of the instrument, it may also tax the power supply.

The Spike Circuit:

The AC line voltage is divided by three in a voltage divider consisting of 3 33K Ω resistors (R9, R11 & R12). The AC is then coupled to Q1 as follows: Diodes D6 and D8 separate any positive going transients from any negative going transients. Each transient is then fed through a 110-volt zener diode so only pulses greater than around 300 volts reach Q1. Positive transients, large enough, reach the base of Q1 drive it positive with respect to the emitter which is held at ground potential by R19. Negative transients, large enough, reach the emitter of Q1 drive it negative with respect to the base which is held at ground potential by R16. When Q1 conducts momentarily it pulses low. The large value of the collector resistor R17 allows Q1 to respond with high sensitivity to the transients.

U3 is a quad CMOS NAND gate. The output of each gate is low only if both of its two inputs are high. U3A and U3B are coupled as a latch. Pins 1 and 6 are the latch inputs. Normally they are both high due to R17 and R29. Should pin 6 go low (the RESET pushbutton pressed) the output of U3B will go high forcing the output of U3A to go low, driving pin 5 of U3B low which keeps the output of U3B high even when the RESET button is released. Should Q1 pulse low, the reverse will happen and the output of U3A will go high and latch high until the reset is again pushed. When the output of U3A is high it turns on Q2 lighting the SPIKE LED.

Voltage Indicator LED Circuit:

The heart of this circuit is U2 an LM-3914 Dot/Bar Display driver integrated circuit.

A reference voltage is applied to the IC between the REF_{HI} and REF_{LO} terminals. A precision voltage divider divides this voltage into 10 equal segments and applies each to one side of a comparator. The other side of the comparators are all tied together and to the input pin. The IC has two modes, bar and dot modes. In the bar mode the output of all the comparators whose input voltage is above their reference will go low. In the dot mode, only the highest one will go low. The SK-211 uses the dot mode. The LM-3914 data sheet is available here:

<http://www.ti.com/lit/ds/symlink/lm3914.pdf>

The reference voltages for the comparator are set by D4 and D5, two precision 5-volt zener diodes in series and a precision voltage divider. The lower reference voltage is connected to the bottom zener setting V_{LO} to 5.0 volts. This should correspond to the lowest voltage, or 85 volts. (A ratio of 17 volts/volt). If each of the ten LEDs correspond to 5-volt increments, then the high reference should correspond to 135-volts, and at the given ratio the high reference should be 7.94 volts. This is the voltage provided by the voltage divider consisting of R14, R15, R_{CAL} and the internal resistance between REF_{HI} and REF_{LO} (if you are doing the calculations, use 7.15K for R_{CAL} and 10 K for the internal resistance).

The AC voltage is coupled to the input pin of U2 through a voltage divider consisting of R5 through R8. This divider reduces the AC voltage to the correct value so 135 volts corresponds to 7.94-volts and 85-volts corresponds to 5-volts. But wait! These are RMS voltages and the comparator works on peak voltages so a correction of 1.4 must be made to this divider. In-

stead of a ratio of 17 volts/volt it must be a ratio of 17 times 1.4 or a ratio of 23.8. This is the ratio provided by the voltage divider consisting of R5, R6, R7, and R8.

The outputs of U2 corresponding to 95 through 135 volts are connected to a series chain of eight LED diodes. (The 130V and 135V outputs are connected together). Whichever output of U2 is low its corresponding LED and all the lower voltage LEDs will light.

Fault Detector Circuit:

U3C and U3D make up a latch similar to the one used in the spike circuit. The FAULT LED comes on should the voltage drop below 90 volts for a cycle or more. Should the power go off entirely, the FAULT LED should also come on when power is restored. This is handled by C9, R28 and D13. When power is applied, pin 8 of U3C will remain low until C9 charges through R28, forcing the output of U3C high and turning on the FAULT LED. The latch remains set via diode D12 until RESET is pressed. D13 causes C9 to discharge quickly if power fails momentarily

Pin 1 of U2, the 90 volt output, instead of being connected to an LED, goes to the fault circuit. As long as the AC line voltage exceeds 90 volts, this pin will go low for a part of each each cycle. C9 is constantly being charged by R26, a multi-megohm resistor. However each time pin 1 of U2 goes low it discharges the C9 through diode D11. Should the voltage drop below 90 volts C9 will continue to charge and cause the latch to set, lighting the FAULT LED.

SK-211 Checkout and Calibration:

Each of the two AC voltage dividers have a jumper that is normally installed and can

be removed for checking out a particular circuit. When J1 is removed, voltage is removed from the input of U2 simulating a “low-voltage” fault. With this jumper removed the FAULT LED should light and none of the voltage LEDs should be on.

Jumper J2 disables the voltage divider to the spike circuit, applying the full AC line voltage to its input. This simulates a spike condition and should cause the SPIKE LED to light. While not mentioned in the manual, replacing the jumper with an appropriately rated diode, first in one direction and then in the other, will confirm that both positive and negative peak detection is working properly.

Measured Resistance Between S3 and S4*	Calibration Resistor Value
6,000 to 7,700Ω	4,990Ω 1%
7,701 to 9,200Ω	5,900Ω 1%
9,201 to 11.3KΩ	7,150Ω 1% **
11.3K to 15.0KΩ	9,090Ω 1%
* Remove jumper between S3 & S5 to measure. ** Nominal calibration resistor value.	
Table II - Calibration Chart	

The internal resistors of U2 that make up the reference divider chain are precisely matched in resistance during the manufacturing process; however their actual resistance tolerance is not. Thus the overall resistance of the chain may vary between 6KΩ and 15KΩ. Heathkit offers a way to calibrate the unit to correct for this variation. You need a good ohmmeter to measure the internal voltage divider chain resistance. This is done by temporarily removing jumper between terminals S3 and S5 and then measuring the resistance between terminals S3 and S4. Using the re-

sistance measured you select the proper calibration resistor as shown in a table in the Heathkit manual. The table is repeated in Table II.

If you don't have an ohmmeter you can just select the nominal calibration resistor which will provide reasonable accuracy.

Using the SK-211 AC Monitor:

Use of this device is quite straightforward. First you plug it into a convenient AC outlet. The plug is polarized and only goes in one way, and may block the other socket on a duplex AC outlet. Once plugged in, the FAULT LED will be lit as well as some of the AC Monitor Voltage LEDs. Pressing the RESET button should extinguish the FAULT LED. Reading the highest lighted LED tells you the AC line voltage. Should a fault or spike occur the corresponding LED will light to inform of such



Monitor shows what your AC line is doing

1 ^{SKILL} _{LEVEL} Keep track inexpensively of an important part of your system, the AC power line. With the Heathkit AC Line Monitor, you can monitor voltage sensitive equipment such as computers, communications gear and medical apparatus. Eight LED indicators show voltage from 95 to 130 VAC in five volt steps. Plus, a separate fault LED lights if the voltage falls below 90 VAC, and a separate spike LED lights if a voltage transient occurs. Dimensions are 3⁵/₈"H x 2³/₈"W x 1¹/₄"D.
Kit SK-211 (1 lb.) \$29.95

Figure 2: Heathkit SK-211 Catalog Ad.

an occurrence; the light will remain lighted until the RESET button is pressed.

73, from AF6C



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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



Figure 3: Heathkit SK-211 Unpacked.

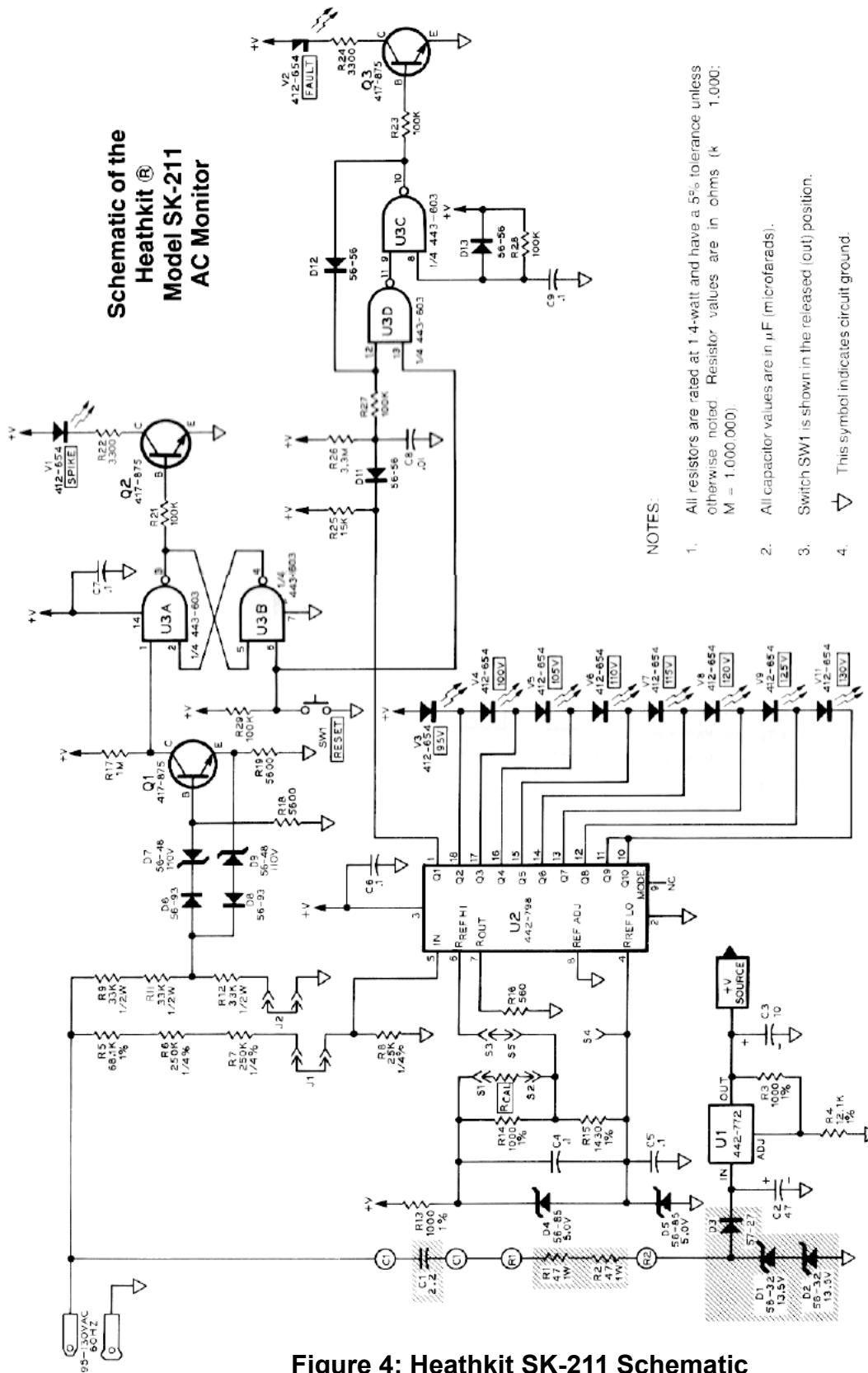


Figure 4: Heathkit SK-211 Schematic



NOW OFFERING
AMATEUR RADIO VE TESTING SESSIONS

Contact V.E. George T. Jacob Jr. N6VNI

Phone Numbers: Home Phone 562 691 7898 Cell Phone 562 544 7373

Email: jac2247@gmail.com Or N6VNI@arrl.net

Sponsoring Club: N6ME Western Amateur Radio Association, "WARA"

Test site location:

La Habra Community Center.

101 W. La Habra Blvd.

La Habra, Ca. 90631

Pre-Registration is requested and preferred. Walk-ins are welcome.

2014 TESTING SESSIONS

Thursday, Jan 16th 2014 6p.m.

Thursday, Jul 17th 2014 6p.m.

Thursday, Feb 20th 2014 6p.m.

Thursday, Aug 21st 2014 6p.m.

Thursday, Mar 20th 2014 6p.m.

Thursday, Sep 18th 2014 6p.m.

Thursday, Apr 17th 2014 6p.m.

Thursday, Oct 16th 2014 6p.m.

Thursday, May 15th 2014 6p.m.

Thursday, Nov 20th 2014 6p.m.

Thursday, Jun 19th 2014 6p.m.

On VE Exam Day Bring the Following Items

1. A legal photo ID (driver's license, passport) or two other forms of non-photo ID; e.g., birth certificate, social security card, library card, utility bill or other business correspondence with name of the examinee as it appears on the Form 605 and current mailing address.
2. Your Social Security Number (SSN) or FCC-issued Federal Registration Number (FRN).
3. If applicable, the original and a photocopy of your current Amateur Radio license and any Certificates of Successful Completion of Examination (CSCE) you may have from previous exam session. (Photocopies will not be returned.)
4. Two number two pencils with erasers, and a pen.
5. A calculator with memory erased and formulas cleared (no iPhones, iPads, etc.).
6. Test Fee: \$15.00 (cash or check).

If you fail an element and wish to retake it, we are required to charge an additional test fee. If you pass an element, we typically offer and encourage you to take the next element. We do not charge an additional test fee for this and it gives you the opportunity to see what the next exam element is like!

		OCARC Financial Report for 2013	
		12/31/2013	
INCOME		Cash - Beginning Balance: 2013-01-01	
ARRL Membership Income	\$154.00	Checking Account	\$3,560.09
Auction In	\$1,414.50	Savings Account	\$2,302.35
Badge Income	\$61.00	Deposit for Jaegerhaus	\$200.00
BADGE MAILING	\$2.00	Outstanding checks	\$0.00
Christmas Dinner Ticket Sales	\$1,290.00	Total Beginning Balance:	\$6,062.44
Coffee Mug Sales	\$220.00		
Donation - FD Generator Rental	\$260.00		
Donation - W6NGO Trust For Generator	\$231.30		
Donations - FD Food	\$1,064.00	Assets - Ending Balance: 2013-12-31	
Dues, Family	\$240.00	Checking Statement	\$4,512.19
Dues, Future	\$320.00	Savings Statement	\$2,303.89
Dues, Membership	\$1,313.50	Deposit for Jaegerhaus	\$200.00
Interest	\$1.54	Cash Box	\$50.50
Opportunity Drawing - Holiday	\$900.00	Outstanding checks	-\$2,053.88
Opportunity Drawing -FT817	\$550.00	Total Ending Net Balance:	\$5,012.70
Opportunity Drawing -Monthly	\$804.00		
Radio Sales Receipt	\$527.35		
Refund Of Womens Basket Advance	\$8.32		
TOTAL INCOME	\$9,361.51	Total Beginning Balance:	\$6,062.44
		Total Ending Net Balance:	\$5,012.70
		Net Change for the Year	-\$1,049.74
OUTFLOWS			
Anniversary Party	\$192.42		
Anniversary Party Food	\$51.88		
ARRL Membership Expense	\$135.00		
Auction Payout	\$542.25		
Awards and Plaques	\$62.64	Audit Acceptance:	
Badges Expense	\$94.93		
Christmas Dinner 2013	\$1,373.85		
Coffee Mug Expense	\$297.00	<i>Tim Millard</i>	
Field Day - Flowers	\$64.80	Tim Millard KJ6NGF	
Field Day - Generator Rental	\$491.30		
Field Day Equipment	\$32.08		
Field Day Food	\$1,915.47	<i>Bob Eckweiler</i>	
Field Day Other	\$61.32	Bob Eckweiler AF6C	
Insurance Expense 2014	\$300.00		
Opportunity Drawing - Monthly	\$1,439.50		
Opportunity Drwg - Anniversary Radio	\$712.75	<i>Ken Konechy</i>	
Opportunity Drwg - Christmas Radio	\$1,513.45	Ken Konechy W6HHC , 2013 Treasurer	
Opportunity Drwg - Christmas Women's	\$400.00		
PO Box Rental	\$54.00		
Postage	\$4.50		
Radio For-Sale Payout	\$492.35		
Supplies	\$26.98	Date signed:	2013/January/09
Web Site Hosting	\$152.88		
Accounting adjustment	-\$0.10		
TOTAL OUTFLOWS	\$10,411.25		
NET CHANGE	-\$1,049.74		

A HISTORY of OCARC PRESIDENTS

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

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
1990 KJ6ZH Chris Breller

YEAR

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

YEAR

1961 K6IQ Roy Morriss
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

DATV-Express Project launches WEB Site

by Ken W6HHC

The Digital-ATV project to develop open-source hardware exciter board and software has launched their own web site to discuss details and eventually sell board using PayPal.

www.DATV-Express.com

Register on the site to be able to see all the various areas on the web site. Currently, "developer boards" are being sold only to "interested and willing" software programmers that can help work on the software.