QRO

Monthly Newsletter of the Palos Verdes Amateur Radio Club

September 2018

Inside this month's QRO:

"Show Us Your Shack"

Featuring PVARC members AB9A, K6JW, KE6JPM, N6HE, NG6R, and WA6AJC

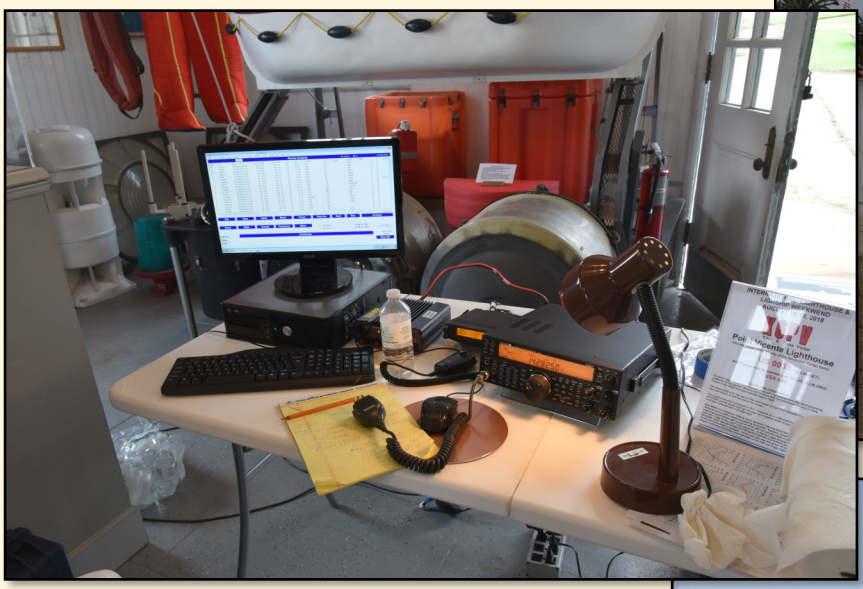
Thursday, Sept. 6, 2018
Fred Hesse Park
29301 Hawthorne Blvd.
Rancho Palos Verdes, CA

6:30 pm: "What's Next?"
7:30 pm: General Meeting

Visitors Welcome

Scenes from PVARC's 2018 International Lighthouse Weekend

The PVARC's International Lighthouse & Lightship Weekend during August 17-19 was like doing Field Day again: setting up our antenna tower trailer with hexbeam, hooking together our radios and computer.



And for something completely different, our Gary Lopes, WA6MEM, (right) operated his 10-GHz microwave rig to make several dozen contacts throughout Southern California and beyond Fresno from Pt. Vicente. The 10-GHz band has interesting properties allowing refraction off atmospheric dust and dirt across mountain ranges.

Our HF operations were mostly on 20 and 40 meters starting around 5:30 pm Friday, then from 6:30 am to 11:00 pm on Saturday; plus about five hours of operating on Sunday. Our logbook showed 242 contacts with 40 of the 50 U.S. states and six DX entities including Belize, Turks & Caicos Islands, and Spain.

Our Sunday family picnic had excellent attendance and plenty of food but with so much happening (including new requirements for guarding the front gate) no one got around to taking picnic photos.

PHOTOS: (GARY WITH MICROWAVE) RAY DAY, N6HE; ALL OTHERS, DIANA FEINBERG, AI6DF

Itching in paradise is expected on tropical island DXpeditions… but at Pt. Vicente Lighthouse too?

By Diana Feinberg, AI6DF
QRO Editor

While Warner Bros. cartoon character Bugs Bunny always asks "What's up, Doc?" ham radio operators on tropical DXpeditions are likely to have their doctor ask, "What's up, bugs?"

Bug bites have been legend on major DXpeditions to the Caribbean, Pacific Ocean islands, and other tropical locales. That's just one reason every major DXpedition has a physician team member…and DXer-retired physician Arnold Shatz, N6HC, of Tustin is frequently in that role.

But who would have thought we'd have a rash of insect bites at Pt. Vicente Lighthouse, our local paradise? Well, we did at this year's very humid Lighthouse Weekend…at least among some of our people who spent considerable time there. If you only attended the Sunday picnic you were unlikely to be affected.

Your **QRO** Editor got bitten extensively on Saturday operating from 5:30 –11:00 pm plus taking lighthouse photos at sunset and after-dark from near the cliffs. She counted and felt 65 insect bites from ankles to shoulders with inflammation/itching at each site. Now that's a real measure of her personal attractiveness!

Several of our guys who spent lots of time at the Lighthouse also reported extensive and persistent insect bites from ankles to shoulders. We're not sure which insect species is the culprit but the likely suspects were sand flies lurking in the un-watered grass areas near the cliffs and dust mites in the museum building. Unlike the big DXpeditions there isn't a dermatologist team-member in our International Lighthouse Weekend future…but we're still "itching" to return next year to our Pt. Vicente paradise. ■

Above: It seemed like paradise at Pt. Vicente around sunset and dusk, but a lot of insects felt likewise and left unwanted "souvenirs" from this year's International Lighthouse & Lightship Weekend. PHOTO: DIANA FEINBERG, AI6DF

PVARC's upcoming meeting topics…

Our September 6th meeting will have short "Show Us Your Shack" presentations by PVARC members Peter Landon, KE6JPM; Clay Davis, AB9A; Jerry Kendrick, NG6R; Ray Day, N6HE; and Jeff Wolf, K6JW, along with a short video by Matt Orlich, WA6AJC, about legacy radio equipment aboard the Battleship Iowa at Los Angeles Harbor. Our previous "Show Us Your Shack" evenings have always been popular.

Tim Coker, N6WIN, has been re-scheduled to speak on "The Reverse Beacon Network" at our October 4th meeting. Many HF contesters and DXers use the Reverse Beacon Network to check propagation conditions through RBN hams worldwide whose radios continuously monitor bands using "Skimmer" software to decode all callsigns heard calling CQ in CW (and now RTTY). These decoded callsigns then get immediately uploaded onto the RBN website. So…if a RBN station in the L.A. area reports hearing a station somewhere else there's a good chance you will too. RBN is currently studying whether to also post FT8 spots which would have the negative impact of greatly increasing demands on RBN's servers.

Would you like your "Show Us Your Shack" presentation filmed at your home to show at a future meeting? Diana, AI6DF, is glad to bring her video camera and simply let you present. No need to create a PowerPoint presentation or bring equipment to Hesse Park (unless you wish.) ■

Other PVARC upcoming dates in 2018

- **PVARC monthly meeting at Hesse Park, McTaggart Hall**
  1st Thursday each month, 7:30-9:30 pm, except in August and December
- **HF Enthusiasts Group meetings at Palos Verdes Library, Peninsula Center (Purcell Room)**
  2nd Saturday each month, 10 am to Noon
- **Walt Ordway, K1DFO, amateur radio license classes at Hesse Park**
  Up next: Saturdays, November 3 and 10; license exam November 17
- **Public service events:** Palos Verdes Half Marathon, November 17. (No RAT Beach Bike Tour this Fall.)
- **PVARC Holiday Dinner: Los Verdes Golf Course, Rancho Palos Verdes**
  Thursday, December 6. Guest speaker: Manhattan Beach schools K-5 science teacher Joanne Mitchell, KM6BWB, on high-altitude balloon projects with Kindergarten through 5th grade students. ■

PVARC's August HF Enthusiasts Group had lively show & tell

Report by Malin Dollinger, KO6MD

At the PVARC's August 11th HF Enthusiasts meeting among the impressive new devices shown was the Jerry Kendrick NG6R resonance shifter extensively described in the previous **QRO** issue. This shifter alleviates a problem noted at Field Day when the same antenna is needed for different parts of the 80-meter band for CW and SSB (voice), though initially resonant for only one of the two frequency areas.

George Nestojko WA6YBR showed us his small HF "tabletop" antenna, the 40M and 80M coils being purchased, and the tripod base home-brewed by George (see photo). Jeff Wolf K6JW told about his new Corsair gaming computer keyboard, which has built-in illumination to improve visibility at night (and for some of us, in the daytime!). Two attendees, Carlos Lemmi WD6Y and Malin Dollinger KO6MD (photo), immediately acquired one for themselves.

Vigorous discussions continued about various important questions and problems, for example the never-ending question of what kind of CW key is best, and whether iambic keying is really useful or not. Some members offered their QTH as a learning location for others wishing to try out different types of keys. It was pointed out that if iambic keying is chosen, B" mode is preferred to "A" mode. All agreed that "straight keys" (single contact vertical key action) were not preferred. However, there are "straight key" CW competitions, where old-timers use radiotelegraph skills in common use decades ago. ■

Above: Jerry, NG6R, showed his resonance shifter box enabling an 80-meter antenna cut for the phone sub-band to also serve the CW sub-band.

Upper Left: George, WA6YBR, showed his compact 80-40 meter tabletop antenna.

Bottom left: Jeff, K6JW, mentioned advantages of his Corsair illuminated gaming keyboard. Malin, KO6MD, and Carlos, WD6Y, subsequently bought theirs.

ALL PHOTOS:
MALIN DOLLINGER, KO6MD

Astron Linear DC Power Supplies (continued)
Part 2: Troubleshooting and repair example, RS-12A

By Jerry Kendrick, NG6R

This article is a continuation from Part 1 on page 11 of the July 2018 **QRO** newsletter (http://n6rpv.net/pvarc/2018QRO/QROJuly2018.pdf), in which basic operation of Astron linear DC power supplies (PS) was discussed. In Part 2, an actual troubleshooting and repair example is described; it illustrates the vagaries of repair work and demonstrates that anomaly resolution can be an elusive pursuit.

Recently, after briefly relating my experiences over many years of repairing linear DC power supplies, I was asked to take on an Astron RS-12A repair by Rolling Hills Estates amateur Jim WA6OZJ. After working on it in several sessions over a two-week period, it was returned to Jim and placed back into service. It exhibited the most interesting and unusual set of anomalies I've ever encountered in repairs made on various power supplies in the past, definitely worthy of being documented for the lessons learned.

Phase 1

Jim had reported no output voltage. (Remember this for a lesson learned at the end of this article.) However, upon powering it I noticed that the output voltage varied somewhat between 14V and 15V, i.e., it was not being well-regulated. The most likely culprit for this behavior is the voltage regulator integrated circuit (IC), the LM723 (or UA723). Since this chip eludes direct testing and because it's so inexpensive, it was decided to simply replace it before digging any further into other possible issues. However, there was a slight snag.

Unlike most Astron power supplies, this older unit had the 14-pin LM723 IC soldered directly onto the regulator board, instead of being plugged into a socket. (That saved cost for the manufacturer, but it's a nuisance for the repair technician to remove and replace this device.) Of the two options—solder in a replacement IC or install a 14-pin socket for replacement ease in the future—we selected the latter approach. Figure 1 (below) shows before and after photos. Solder around each of the 14 pins was "wicked" away using flux-infused copper braid, the old IC was removed, and the solder-through holes were cleaned out prior to soldering in the new socket for the replacement LM723 IC.

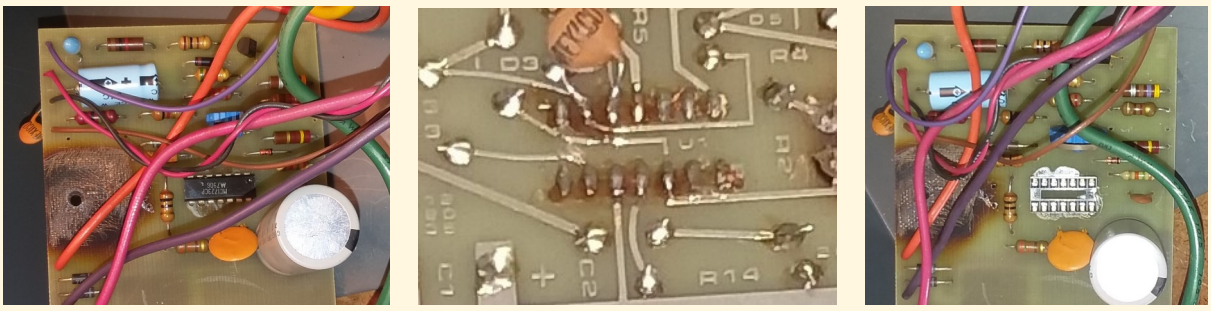


Figure 1. (left) Voltage regulator board with 14-pin LM723 integrated circuit shown prior to its removal; (middle) Solder side of IC prior to solder removal using flux-infused copper braid wicking technique; (right) Component side of board after installing IC socket for ease in replacing IC should it fail in the future. Note in left and right panels an area of PCB discoloration from overheating of (now removed) TIP29 driver transistor and heat sink. PHOTOS: JERRY KENDRICK, NG6R

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Astron Linear DC Power Supplies (continued)
Part 2: Troubleshooting and repair example, RS-12A

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While inspecting the voltage regulator board, it was noticed that there had been significant heating around and under the TIP29 driver transistor heat sink (shown on the left side of the board in the first and third panels of Figure 1). At the time that the IC was replaced, it seemed prudent to simply replace this previously overheated driver transistor as well. A batch of ten new Texas Instruments TIP29 devices had been received and one was soldered into place and secured to the board, along with the cleaned up heat sink, using an appropriate amount of silicone heat transfer compound.

Following replacement of both the voltage regulator IC (LM723) and the driver transistor (TIP29) as described above, the PS was again powered up. However, now the output DC voltage was slightly over 24 volts, not the 14V or so of regulated voltage that was expected (or hoped for).

Phase 2

As described in Part 1 of this article, there is an over-voltage protection circuit in Astron power supplies, which is intended to prevent this high level of output voltage. This type of circuit is important for the protection of units attached to the power supplies (such as transceivers and other ham radio equipment) and is a key feature of most Astron power supplies. Even without yet knowing the reason for the high output voltage of 24V+, we sought to determine why the safety circuit was not doing its job.

The over-voltage protection circuit is centered on Q1 (2N3906), shown in the lower right portion of the schematic in Figure 2, and uses a thyristor or silicon controlled rectifier (SCR) [Q103 in the schematic] directly across the output terminals of the PS. The concept is that the Q1 circuit samples the output voltage and if it determines that the voltage is too high, it will send a command voltage to turn on the SCR and effectively and non-destructively short the output terminals.

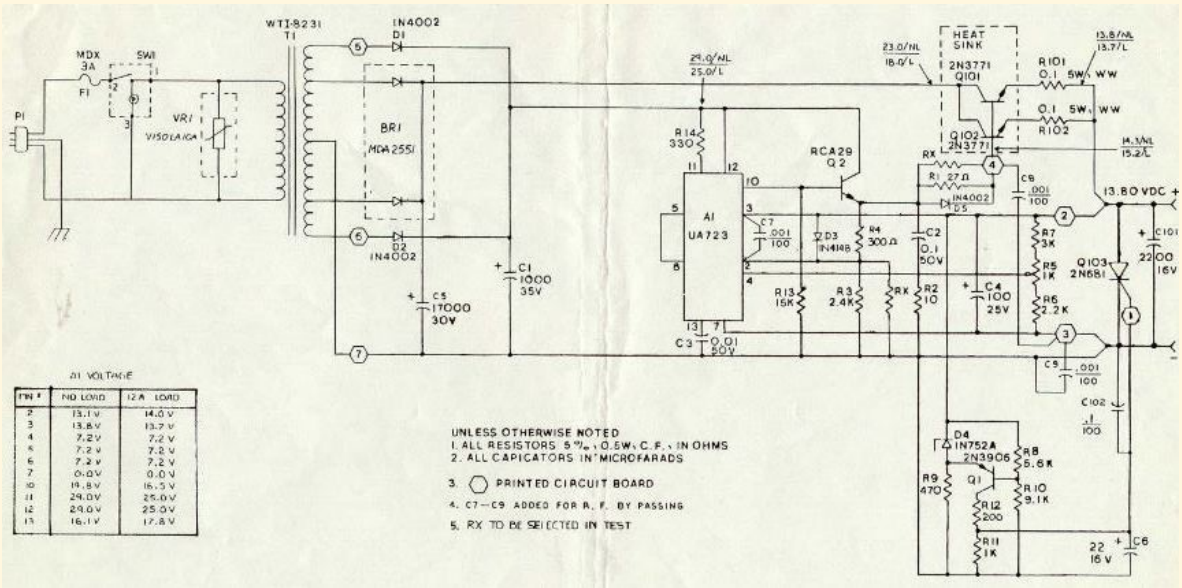

Figure 2. Schematic of Astron RS-12A power supply. Note location and configuration of the active devices discussed in this paper: LM723 IC (labeled UA723 here); Q1 2N3906 over-voltage protection device; Q2 RCA29 (TIP29) driver transistor; Q101 and Q102 2N3771 pass (power) transistors; and, Q103 SCR

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Astron Linear DC Power Supplies (continued)

Part 2: Troubleshooting and repair example, RS-12A

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When it became clear that this protective circuit was not functioning properly, and being accustomed to finding the most likely culprit to be an active device, I replaced Q1, the 2N3906 transistor. However, this did not result in any improvement. A quick check of the SCR determined it likely was working properly. A meticulous check of each passive component in the circuitry surrounding Q1 initially showed nothing wrong. Component resistance measurements were taken from the top side of the board across each resistor and seemed approximately correct.

Yet something in this circuit wasn't working properly. So, from the back side (or solder side) of the board, component values were again checked. But, this time one of the two resistors in the Q1 transistor base bias voltage divider appeared open. This was strange, as it had previously read OK when measured from the component side. A gentle prying tug on the resistor (without heating the solder connection) caused one end to come up out of the through hole and the end is shown in the middle right portion of Figure 3. From appearances, it had seemed well seated in the board as viewed from the component side. And the solder side showed a well-flowed and healthy appearance of the solder connection. However, in fact, one end of the resistor was not making good contact (out of sight inside the through hole) and was the source of non-operation of this protective circuit. After properly re-soldering the resistor and powering up the unit, a voltage of 0.9V was measured at the output of the power supply (and fortunately, the AC fuse did not blow). This was appropriate given the over-voltage readings made earlier and demonstrated that the over-voltage protective circuit was now working as it should. But, of course, the original over-voltage issue still existed and now had to be resolved.

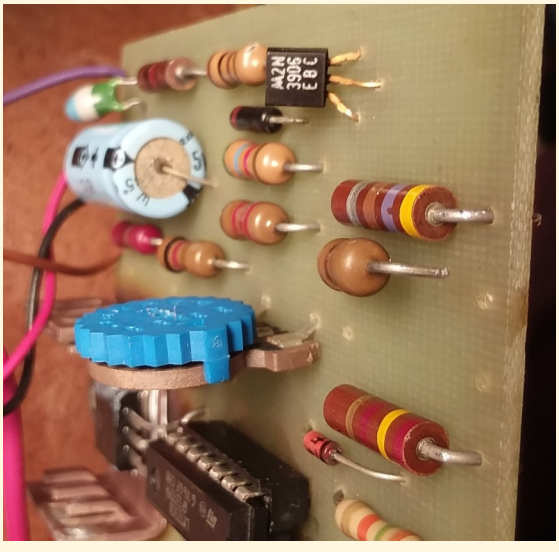

Figure 3. Close-up of Q1 2N3906 over-voltage protection circuit showing one of two base bias resistors (middle right in the photo) that readily separated from the PCB upon gentle prying; it had not been securely soldered to the PCB but the disconnect was hidden inside the through hole; the part was subsequently re-soldered as part of the repair. Note at bottom of this photo the newly installed IC socket with a new LM723 plugged into it. PHOTO: JERRY KENDRICK, NG6R

Phase 3

In order to now troubleshoot the over-voltage issue, the control voltage line from the Q1 protective circuit over to the SCR was temporarily disconnected. Disconnecting it would keep the SCR from firing and shorting the output. Later, it would be reconnected once the over-voltage issue was resolved.

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Astron Linear DC Power Supplies (continued)
Part 2: Troubleshooting and repair example, RS-12A

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One of the frequent sources of high voltage at PS output terminals is a short or leakage in one or more of the pass (power) transistors, the 2N3771. So, both of these power transistors were replaced (with the intention of reverting to the original devices if this was not the source of the problem). And, indeed, it was not the source of the problem. The TIP29 driver transistor, which is sometimes the source of this type of high-voltage anomaly, had already been replaced with a new device. Also, the LM723 was new. To be certain, though, another new IC was placed into the socket, but it gave the same result. A great deal of time was spent measuring and re-measuring component values and circuit voltages. The LM723 was removed from its socket; the PS unit was powered and carefully probed to see why the power transistors continued to be driven into saturation (resulting in high output voltage). It just didn't make sense!

So, with the LM723 removed from its socket and still getting about 24V on the bases of the pass transistors, the only possible source of this voltage had to be from the emitter of the Q2 TIP29 driver transistor. But a re-check of base voltage on that driver transistor revealed that it should be operating in cutoff mode, i.e., with no way of allowing the ~30V on the collector to pass through the transistor onto the emitter. And, yet, there it was! So, something was amiss with the newly installed TIP29.

The new and just installed Q2 TIP29 transistor was removed and tested. Figure 4 shows the pinouts. As we know, an inexpensive ohmmeter (not a high-end digital multi-meter that has low voltage on its probes when acting as an ohmmeter) can be used to quickly test transistors, as illustrated in Figure 4.

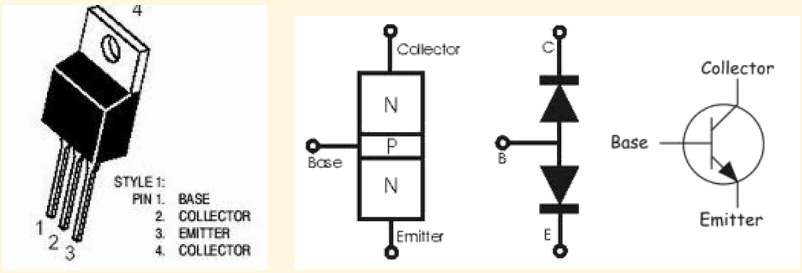

Figure 4. TIP29 driver transistor pinouts and conceptual representation as two diodes back to back; this concept can be exploited as a quick check to determine proper transistor operation; however, it's not 100% reliable as a test method, as discussed in the text below.

The transistor's B-C junction and B-E junction (each behaving like diodes) measured exactly what they should, and in both directions as the VOM leads were reversed. This was expected, since the device was new. However, checking resistance from the emitter to the collector (which should read many megohms in both directions of the VOM leads) revealed that there was a several-hundred-ohms resistance measurement. This was totally unexpected and showed that this brand new device was actually defective; it had internal leakage between the emitter and collector that was not detectable in the usual B-E and B-C resistance quick checks. Another new TIP29 device from the batch of ten was installed (after checking it as much as possible on the bench), again with proper heat transfer compound applied when installing on the heat sink.

The PS unit was powered up and this time everything worked as it should. The output is now well-regulated and the potentiometer was adjusted for 13.8V no-load output voltage. The SCR control voltage line was re-connected. And, the two original 2N3771 pass transistors were re-inserted into the PS replacing the two

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Astron Linear DC Power Supplies (continued)
Part 2: Troubleshooting and repair example, RS-12A

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new ones temporarily installed as a troubleshooting step earlier. The power supply was successfully load-tested using the test fixture described on page 7 of the March 2018 **QRO** newsletter (http://n6rpv.net/pvarc/2018QRO/QROMar2018.pdf), the unit was buttoned up and, after several hours of successful run-in, was returned to its owner.

Lessons learned

1. Don't be lulled by the seeming simplicity of the voltage regulator PCB. The tried-and-true fixes from past experience don't guarantee a quick and easy fix, due to the interrelationship and interdependence of feedback elements within the control circuitry and the complexity within the IC itself.
2. Don't rely solely on measurements made in situ on the PCB and in particular do not rely solely on measurements made across components on the component side of the board, as there might be an internal and hidden disconnect to the solder pads on the back side of the PCB.
3. Don't necessarily rely on the integrity of a replacement component just because it's new. Test the new component to the greatest possible extent prior to installing it on the PCB, particularly if the installation of the component is rather involved and the component is not easily or quickly changed out during subsequent troubleshooting.
4. Be very attentive to any initial anomaly report from the PS owner—it might be an important clue as to what is occurring in the unit. The owner's report in this case of "no output voltage" (which could have been actually 0.9V, consistent with a once-operative over-voltage protection circuit) might have been a strong hint that something was amiss in the OVP circuit.
5. Never discount the mystery and benefit of serendipity. Had I not unintentionally installed a defective TIP29 driver transistor—resulting directly in unacceptably high output voltage—we likely would not have discovered that the over-voltage protection circuit was actually inoperative and also needed to be repaired. Left uncorrected, that could someday have been catastrophic for sensitive/expensive equipment powered by this unit. ■

Left: The power supply discussed in this article...a fully-assembled new Astron 12A is a compact metal box with plain front panel (no meters.)

PHOTO: DX ENGINEERING.COM

Reminder:

PVARC's next monthly HF Enthusiasts Group meeting is Saturday, Sept. 8, 10 am to Noon at Palos Verdes Library main branch in the Purcell Room.

PVARC Club News

Discounted PVARC badges now available to first 25 takers

The PVARC Board would like as many members as possible to have club badges because they enable members to better recognize one another. To facilitate this objective for a limited time we are offering up to 25 members a club badge for just $6.00 versus the normal $13.50 cost. This subsidized offer is available only during September and October to the first 25 members requesting a badge. If interested please contact Gary Lopes, WA6MEM, at gary@wa6mem.com or see him at our September 6th monthly meeting. ■

Embroidered PVARC patches available at meetings

PVARC club patches will be available at our monthly meetings for $4 each. You may sew these onto any cap, jacket, shirt, or fabric bag. ■

Amateur Extra license course in Long Beach during October

It's rare to find classes for the Amateur Extra license. But if you can spare four Saturdays this October and engage in several months of advance self-study there's such a course at the American Red Cross building in Long Beach.

Mark Chung, MD, KK6SMD, will teach this Extra course on Saturdays October 6, 13, 20, and 27 from 8:00 am to 5:00 pm each day. The $75 fee includes handouts covering all 712 Amateur Extra questions, breakfasts, coffee, snacks, and cost for using the Red Cross facility. Mark KK6SMD is our ARRL Los Angeles Section Asst. Section Manager—Education. To register send your name, address, and check to:

Mark Chung, MD
Box 575
13337 South Street
Cerritos, CA 90703

Questions?
mchung@prodigy.net ■

Palos Verdes Amateur Radio Club

An American Radio Relay League Affiliated Club

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Monthly Meetings:
1st Thursday (except August and December) at 7:30 pm at Fred Hesse Park, 29301 Hawthorne Blvd., Rancho Palos Verdes, CA. Visitors always welcome.

Repeaters (Open, though often listed as "Closed"):
Club: K6PV, 447.120 MHz (-), PL 100.0, CTCSS
"PV-West": K6IUM, 449.980 MHz (-), PL 173.8, CTCSS

To order a Club badge:
Gary Lopes, WA6MEM, gary@wa6mem.com
To order a Club jacket or patch:
Dave Scholler, KG6BPH, 310-373-8166

Front page photo — Pt. Vicente Lighthouse and the K6PV antenna tower trailer at dusk during International Lighthouse & Lightship Weekend, August 18, 2018. PHOTO: DIANA FEINBERG, Ai6DF

PVARC Club News

Something extra…

"What's Next?"– no-stress, no-pressure help for our newer hams

Did you recently obtain your amateur radio license and wonder what to do next? Or you've had your license for several years and want to know more about avenues in amateur radio? Come to the PVARC's "What's Next?" gatherings at Hesse Park anytime from 6:30-7:20 pm just prior to our regular monthly meetings and ask for help with any question. We're here to assist in a no-stress manner—and no ham radio-related question is considered "dumb" to ask.

Led by Ray Day, N6HE; Bob Millard, KE6JI; and Ron Wagner, AC6RW, we can help hams better understand how to operate their radios (and/or help purchase the best one for their budget.) We can also provide help on other ham radio subjects, whether for VHF/UHF bands or HF bands; public service or DXing/contesting, or ???

Among the most frequently asked questions by new hams are "Which radio to buy?" and "How do I program my radio?" If you have others we're glad to help with those too. Look for Ray, Bob and Ron off to one side of our room at Hesse Park while setup is underway for the main meeting. ■

Helpful guidelines when submitting QRO articles

Our **QRO** newsletter welcomes articles about technical subjects and PVARC member activities.

To facilitate layout and editing please send your article as two separate files: 1) all the text as a straight Microsoft Word file and 2) any photos, illustrations, or diagrams in a second file or as separate JPEG files. If possible please keep the text portion to not exceed 800 words. ■

QRO's Dept. of Errors and Omissions

We strive for 100% accuracy in each issue but if you notice any errors or omissions in **QRO** please advise your **QRO** Editor, Diana AI6DF, at: ai6df@arrl.net. ■

WELCOME NEW MEMBERS OF THE PALOS VERDES AMATEUR RADIO CLUB IN 2017-2018

Jeff Wolfe, KM6GYB

George Nestojko, WA6YBR

Irene Turner, KM6LGU

Dave Turner, KM6LGX

Don Wilt, WG6E

Don Putnick, NA6Z

George Rizkalla, KM6OXX

Alfred Visco, KM6OPB

Noel Park, KM6OPA

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Daniel Shrader, KM6QXC

Baldomero Fernandez, KM6QVV

Brian Keen, KM6QWC

Emanuele Rodrigues-Berardini, KM6QVZ

Neal Pollack, N6YFM

Daniella Ward, KM6TRC

Talbot Knighton, KM6TDF

Dylan Brown, KM6TDI

Robert Cullinan, KM5DI

Ellen Tessitore, N6XJM

Michael Vulpillat, KJ6RVU

PVARC Club News

PVARC website re-design underway

Later this year look for a completely new PVARC website at www.k6pv.org.

The PVARC Board of Directors has been working since early this year with our webmaster Kel Vanderlip, W6KCV, to use new web tools for enhancing our website utility. We are especially focusing the PVARC's website to have easier navigation and more design congruency with our **QRO** monthly newsletter.

Other website options going forward are to provide for additional media formats such as video and audio, indexing of **QRO** articles, and easy posting of photos and technical content. We are very thankful for the work our previous webmaster John Freeman, WW6WW, provided for more than a decade before turning over the website to Kel in early 2017. In the meantime, we also greatly appreciate fellow member Dale Hanks, N6NNW, providing free hosting for the PVARC's website after we moved from the www.palosverdes.com hosting service in late 2016. ■

PVARC 2019 dues renewal to have PayPal option

In response to member inquiries and practices at some other amateur radio clubs the PVARC Board of Directors has decided to initiate a PayPal option for club dues and donations starting with the 2019 calendar year.

We have some technicalities to work out, including how to factor in PayPal fees that average slightly over 4% of the transaction value. Some groups add a small incremental fee to cover PayPal transaction costs and we are exploring whether to have such an increment. Adopting PayPal will also make our Treasurer's job easier by resulting in far fewer checks needing deposit and an easier audit trail. For members an added benefit is that PayPal has a credit card payment option regardless of whether PayPal is linked to a bank account. Stand by for further details. ■

PVARC and other operators handle communication at Conquer the Bridge run/walk on Labor Day

Labor Day, Sept. 3, marked the 10th annual Conquer the Bridge 5.3 mile race with 4,000 registered runners and walkers—and the PVARC was there to provide communication. The race started at 7:05 am on Harbor Blvd. near the Maritime Museum in San Pedro and traversed the Vincent Thomas Bridge before turning around at Navy Way on Terminal Island and returning via the Bridge.

The fastest runner, a male, finished in 28 minutes while the final walker finished at 9:32 am. The race went very well and there were no injuries. Communications through the 445.72 MHz repeater was reasonable, except for a few hams near the Start-Finish line where there are a lot of buildings. Bob AC6RM provided a cross band repeater that linked to the 445.72 MHz repeater very nicely.

We had operators at various locations along the course. Operating this year were: Herb KO6RC, Bob W6HIP, Bob AC6RM, Matthew N6MDC, Glenn KJ6ATN, Dave WA6PHS, Ralph AI6GP, Dave K9DBA, Ginger KG6TAU, Scotty K6ZNL, Steve KI6TEQ, Cynthia AG6NW and Walt K1DFO.

—-Thanks to Walt Ordway, K1DFO, for this report and heading our coverage.

September 2018 Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 **Conquer the Bridge** run/walk, PVARC radio	4 **PVARC Weekly Net, 7:30-8:00 pm,** K6PV repeater, 2-M crossband	5	6 **PVARC monthly meeting**, Hesse Park, 7:30 pm; What's Next?, 6:30 pm	7	8 **PVARC HF Enthusiasts Group meeting,** 10 am-Noon, PV Main Library
9 City of RPV 45th City Anniversary Celebration, Hesse Park	10	11 **PVARC Weekly Net, 7:30-8:00 pm,** K6PV repeater, 2-M crossband	12	13	14	15 RHE City Celebration, 9 am to 5 pm, Empty Saddle Club
16	17	18 **PVARC Weekly Net, 7:30-8:00 pm,** K6PV repeater, 2-M crossband	19	20	21	22
23	24	25 **PVARC Weekly Net, 7:30-8:00 pm,** K6PV repeater, 2-M crossband	26	27 Palos Verdes Peninsula CERT bi-monthly meeting, Hesse Park, 7:00 pm	28	29 W6TRW Swap Meet, 7-11:30 am, Northrop Grumman, Redondo
30						

Tell your friends and family about our upcoming ham license classes at Hesse Park

Two Free Amateur Radio Courses

FCC "Technician" course (entry level)
FCC "General" course (2nd level)
Each course is 2 sessions
The sessions will be on 3 November and 10 November 2018
Technician 9:30 AM to 1:30 PM both Saturdays (bring your lunch)
General 1:30 PM to 5:00 PM both Saturdays
The FCC tests will be 10:00 AM to noon on 17 November 2018

At the start of the 3 November Technician course, the Palos Verdes Amateur Radio Club will give a 30-minute presentation on how to get further involved with amateur radio.

The class location is at Fred Hesse Community Park, 29301 Hawthorne Blvd., Rancho Palos Verdes.

Confirm your attendance to Walt, K1DFO at waltordway@juno.com

There is no fee for either course.
Taking the FCC test is $15.

Optional Material (sold at cost)
Gordon West books with all the FCC test questions, $26 for the Technician and $26 for the General
Paper copy of Walt's Power Point charts, $22 for the Technician and $22 for the General -

For courses sponsored by the Palos Verdes Amateur Radio Club, students thru grade 12 who pass their examination at a PVARC VE test session will, upon application to the Club, be eligible for reimbursement up to a maximum of $50 to cover the cost of materials and the examination fee.

Everyone who obtains their first ham radio license through a PVARC VE test session, regardless of age, will receive a free membership in the Palos Verdes Amateur Radio Club for the remainder of the current calendar year.

Palos Verdes Amateur Radio Club
P.O. Box 2316
Palos Verdes Peninsula, CA 90274
www.n6rpv.net/pvarc or k6pv.org

NEW MEMBER & MEMBERSHIP RENEWAL FORM

NEW: _____ or RENEWAL: _____ MEMBERSHIP DATE: _____

Last Name: _____ First Name: _____Spouse: _____

Street Address: _____

City: _____ Zip: _____

Phone: Home _____ Work _____Cell_____

Email address: _____
(Unless otherwise noted emails will be sent to the applying member only)

License Call: _____ License Class: _____ARRL Member?____Birth Mo./Day: _____

Other amateur radio groups you belong to:_____

Additional Household and/or Family Members (if Applicable):

Name_____ Call _____ Class_____ ARRL____ Birth Mo./Day: _____

Name_____ Call _____ Class_____ ARRL____ Birth Mo./Day: _____

Name_____ Call _____ Class_____ ARRL____ Birth Mo./Day: _____

Individual membership ($15.00) $_____

Household and/or Family membership ($20.00) $_____

Additional donation to support PVARC activities $_____

Cash: _____ or Check #: _____ Date_____ TOTAL $_____

Please make checks payable to: Palos Verdes Amateur Radio Club; Dues based on January 1st to December 31st year.

All New and Renewal Member applications must be signed below.

I am applying for a new or renewal membership in the Palos Verdes Amateur Radio Club and understand that by accepting membership I agree to abide by the Club's constitution and by-laws (available on-line at: http://www.n6rpv.net/pvarc/constitution.htm or upon request.)

Signature:_____ Date: _____

Family Member Signature: _____ Date: _____

Family Member Signature: _____ Date: _____