

SCOPE

THE PALOMAR AMATEUR RADIO CLUB NEWSLETTER



Save the Date

Club Meeting **1 May 2013**

The 7:30pm program is about the Red Cross.

Board Meeting **8 May 2013**

Palomar Amateur Radio Club board meeting at 7:30pm at K2RP QTH.

Field Day Work Parties **May 2013**

Contact Greg KI6RXX or Charlie NN3V to volunteer.

Fold & Staple that did February Scope
Al Donlevy W6GNI Kathy Donlevy
Jo Ashley KB6NMK Sonny Stires WA5ACE
Roni Elsberry W6EPM Art KB6YHZ

Advertisements are free for members

Have items that need to find a new home? Advertise here! Send your ads to scope@palomararc.org

For Sale

Four rolls of Mil-C-18/ UG218. The rolls are about 140 feet long with N connectors. Insertion loss is .9 dBa per 100 feet at 150 mHz. \$250.00 per roll or \$800.00 for all of them.

Glenn
N6JAI
619 654 1402

For Sale

Swan Mark II linear amplifier. Clean, working well \$650.

Heathkit HP23B Power Supply with 11-pin cable. Looks and works very well. \$70.
Ron K2RP@arrl.net (760) 436-8109

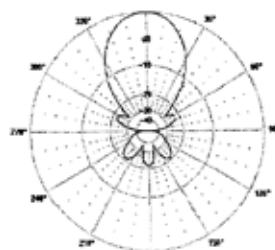
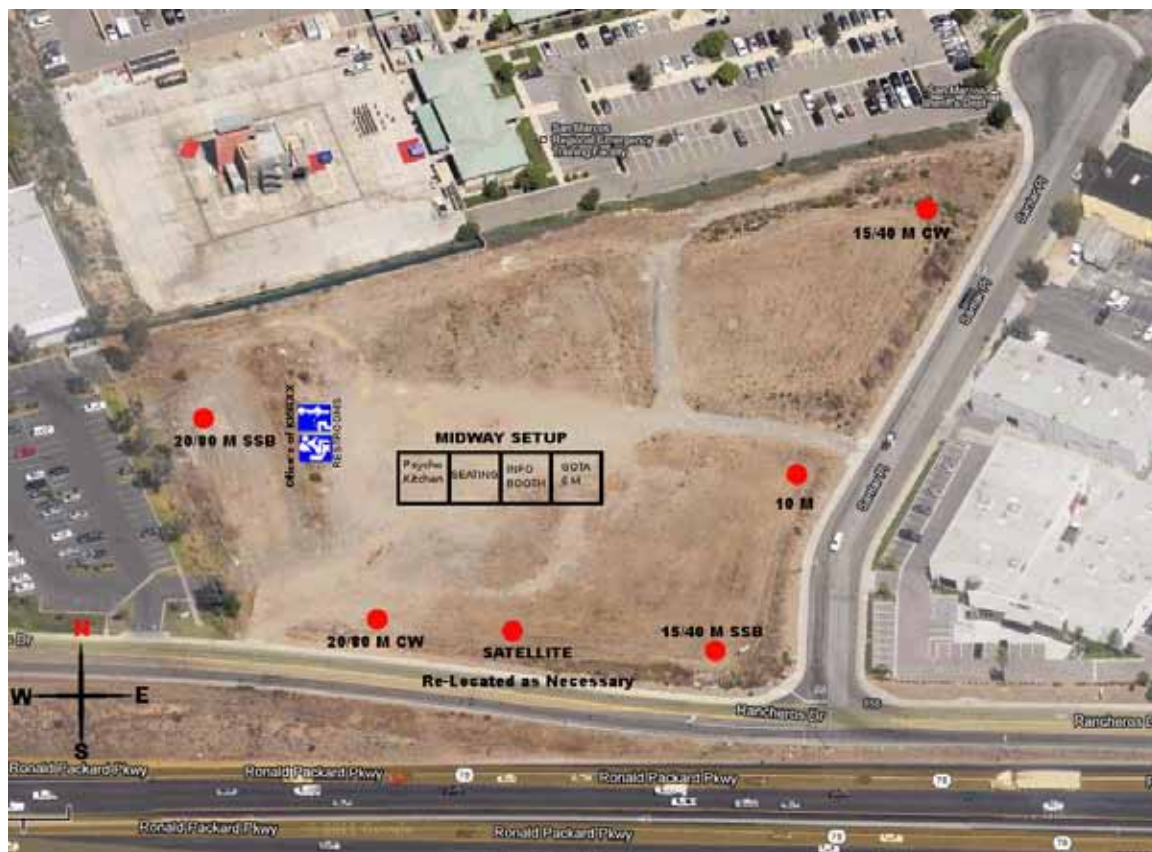
For Sale

The Alinco DJ-580 illuminated keypad button does not work.....No Backlighting of keypad, Transmit coverage is: 130-173.995 and 400-519.0995 with Mars/Cap Mods completed, Radio has no worn pads and all LCD display functions work as new, case looks like new, this radio comes with (1) EBP-20X 7.2 volt 1650Mah battery used only a few time before put away, (1) EBP-20N 7.2v 700Mah pack (not sure how long it will last) (2) EDH-11 dry cell pack (1) Yaesu dual band antenna and (2) Alinco EDC-24 Slow chargers and (1) DJ-580. I have checked this radio on simplex and our local repeater and it sounds fine, you would be hard pressed to find a radio in better condition than this one. excellent condition, As with all electronics this radio is sold AS IS, It will not be DOA, asking \$100 OBO, James 760-722-2797.

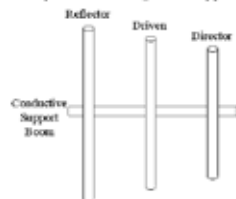
For Sale

Kenwood Communications Receiver, Model R-599 with factory installed 2m converter. \$100.00
Pete, K6JQE 858-755-4838. Solana Beach

Field Day 21-23 June 2013



Simple 3-element Yagi With Support Boom



FIELD DAY



W6NWX

WHISKEY SIX NOTHING WORKS GOOD

FD SCHEDULE

June 21
-11AM Setup at site

June 22
-7AM Breakfast
-8AM Crank up towers
-9AM Final Setup Test
-11AM CQ Field Day...
-1PM Radio Merit Badge
-2PM Lunch
-6PM Dinner
-8PM NTS Message NET

June 23
-7AM Final Breakfast
-10:59:59 Final Contact
-11:30 Tear-down

PALOMAR AMATEUR RADIO CLUB

FIELD DAY 2013

21 - 23 JUNE

594 Rancheros Drive, San Marcos
(Adjacent to San Marcos Sheriff's Station)

OPERATING 7 STATIONS

- 10M
- 20/80M CW
- 20/80M SSB
- 15/40 M CW
- 15/40 M SSB ALL YL STATION
- GOTA STATION
- MULTIPLE BANDS INCL 6 METERS
- SATELLITE

DO NOT HAVE TO

- BE A PARC CLUB MEMBER
- BE LICENSED
- KNOW CODE



FD PICNIC

Saturday 2pm
Psycho Kitchen

Category:
5A

MORE DETAILS
ON CLUB WEBSITE
WWW.PALOMARARC.ORG

ALL ARE WELCOME INCLUDING GENERAL PUBLIC!
COME OPERATE, LEARN MORE ABOUT HAM RADIO!
VISIT SAN DIEGO COUNTY'S GREATEST AMATEUR RADIO CLUB!
COME JOIN THE FUN!

A Mobile Portable Station

by Pete KH6GK

We've been traveling around in our RV for the past several years and I have enjoyed making contacts after we've arrived and set up camp. Since this is a travel trailer, I can't operate on the move, but that's OK, I have enough to do watching traffic and controlling the rig. In the October 1980 issue of QST, W8UCG in his article, "A Deluxe RV 5-Band Antenna," describes his mobile portable setup focusing mainly on his antenna which is mounted to his Airstream rear frame. I have taken a somewhat different approach based on the reasoning that since I don't operate on the move, I can set up the antenna after I arrive. Moreover, I can also chose the type of antenna based on the RV site parameters and geography. My first step was to devise a convenient way to connect the antenna to the rig, an ICOM IC-706MkII with AT-180 tuner. I decided to use the existing TV cable outlet as the external antenna interface location.

The modified cable TV box now contains in addition to the TV cable connection, a HF and VHF coaxial connection and two PowerPole connectors providing 13.6V to operate antenna accessories. Inside the coach, the coax cables run from the back side of the cable box at the bottom of the wardrobe under the floor of the coach through an existing cable conduit and to the rig which is bolted to the bottom of the dinette underseat storage compartment. A West Mountain Radio RIGrunner is mounted to the back of

the undersea compartment and provides 13.6V DC to the radio/tuner and PowerPole connectors in the cable box. A 10 GA PowerWerx cable connects the RIGrunner to a 20A fused power panel connection of the coach and all components are grounded to the coach frame. Using the remote head feature of the IC-706MKII and an MFJ-361 Presentation Stand, I am able to easily move the control head and microphone from its undersea storage location to the operating position on the dinette table.

Antennas that I have used so far include a BuddiPole, a High Sierra HS1800PRO, a homebrew 20M vertical, and a homebrew 20M sloping dipole. The vertical and sloping dipole are mounted on a 22 foot fiberglass flagpole and are quite inconspicuous to the casual observer. The BuddiPole allows for a number of different configurations and elicits questions from passersby.

Best contact to date is from Borrego Springs on the BuddiPole: Sable Island on 10M.

If you are contemplating a similar installation on your RV and have questions, please contact me at pmiverson@att.net. 73's, Pete

See photos page 8-9.

HAM RADIO OUTLET

Jose XE2SJB
Jerry N5MCJ
Joe N6SIX

H
R
O

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AEA,
OUTBACKER
Larsen Antennas
TEN-TEC
Hy-gain, Tri-EX,
Cushcraft And Others
too
Numerous to
Mention!

Drop in to see our display of working equipment. Find out about Pkt location determining equipment (APRS). Check our complete line of magazines, ARRL books, license manuals, and Bulletin Board with all sorts of Goodies listed.

Directions: On 163, take **Clairemont Mesa Blvd.** off ramp to East. Stay in right-hand lane. Turn right at stoplight. As you are turning right you can see our beams in this shopping center. Travel 100 yds. On Kearny Villa Rd. and U-turn back to shopping area and HRO sign. Be sure to see our equipment in action on **real** antennas!

Regulations? We don't need no regulations!

Au contraire my friend. Indeed we do!

I was thinking about this the other day, listening to a couple of ham friends chatting.

We operate under the protection of US Title 47, Part 97, FCC rules. Those rules infer what we can do on our bands, and specifically tell us what we can't do. And of course, they serve as our "protector". By specifying our band privileges it sets aside the spectrum in which we enjoy our hobby.

We are fortunate that, as time passes, and as technology changes, all we need do is communicate with our elected representatives to ensure they tell the FCC not to change our spectrum allocation, and make sure we are given our rights as ham. Not many countries have our privileged system of governance where the people rule themselves, and by merely making their interests known, have such sway in the affairs of governance....

By now you should be wondering what planet I am writing from, or what recreational smoke is wafting around my hamshack! Has he paid attention to politics lately? You are asking yourselves. It is the rule of the BIG BUCK\$\$ that sways any action in Washington.

As a ham, have you noticed how the commercial interests salivate over our spectrum? That juicy 220 MHz band that no one uses? That hardly ever used 70cm sliver of spectrum? Have you observed how easily hams get permits for erecting antennas on their private property (land rights, you know?)? Oh, and of course, you know that our enlightened representatives fully understand that our using a microphone to talk while driving is totally different from talking on a cell phone while driving. Yes!

Well, if you believe any of the thoughts in the previous paragraph, I am certain you are the one affected by wafting recreational smoke!

The assault on all our cherished traditions is relentless, from commercial establishments through special interests. The commercial world would love to take those spectrum slivers, and with all the modern digital communication protocols turn them into 24/7 commercial money-making use. The continued onslaught to our antenna permitting process is ceaseless. And, face it, few individual hams have the BIG BUCK\$\$\$ to sway Washington.

The only political protection we have, and the only way hams can influence any political representative is with organization and BIG BUCK\$\$.

"So who you gonna call"? Certainly not the DX pile-up busters. !!

So what?

Those two ham friends chatting the other day were pontificating on how useless it was for them to be ARRL members. Their line of thought was that for a small membership fee, they "...get nothing in return..."

I won't elaborate on the receipt of QST as a membership benefit. Both in print, and in electronic media at no extra charge!

But I will elaborate on what the ARRL does for our privileges "behind the scenes". You know, eating rubber chicken while lobbying those Washington guys who only respond to organized BIG BUCK\$\$\$

The ARRL Board of Directors has announced the following 2013 ARRL agenda :

- Seek legislation instructing the FCC to extend the requirement for "reasonable accommodation of Amateur Radio station antennas – a requirement that now applies to state and local regulations – to all forms of land use regulation.
- To oppose legislation that would lead to the reallocation of amateur spectrum or to sharing arrangements that reduce the utility of existing allocations.

continued on page 6

continued from page 5

- To seek recognition of the unique resources, capabilities and expertise of the Amateur Radio service in any legislation that addresses communications issues that are related to disasters, emergencies or homeland security.
- To oppose “distracted driving” legislation that does not clearly exempt two-way mobile radio transmitters or receivers used by FCC licensed radio amateurs.
- To support legislation authorizing FCC Commissioners to appoint an electrical engineer or computer scientist as an additional member of their staffs to ensure that Commissioners have adequate

access to technical expertise when making decisions.

In addition to the Washington presence implied above, for a fee of \$36.00 per year, ARRL members get a host of discounts on Amateur Radio equipment insurance, discounts from preferred stores (Best Buy is one of them), etc.

So I suggest to my two chatting ham friends, and to anyone not already an ARRL member, that ARRL membership is a pretty good deal.

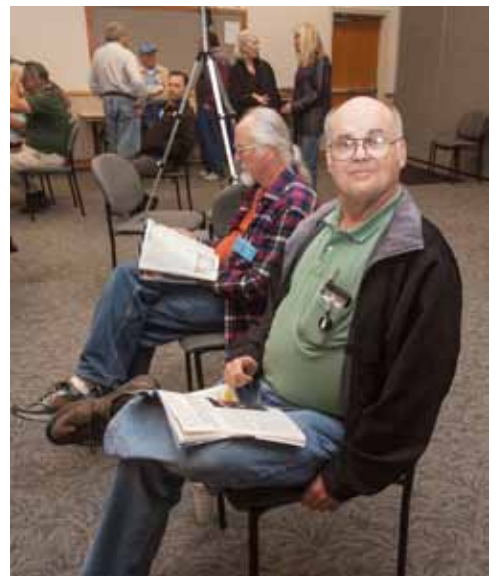
As I like to say, all professional :=)) ham radio operators should be ARRL members!

73 de NN3V



Congratulations to Charlie NN3V for First Place!

March Meeting Photos



Photos by Paul KB5MU.



CONGRATULATIONS!

A Mobile Portable Station by Pete KH6GK

See article on Page 4

Do you have a mobile installation? Do you want to have a mobile installation, and need some motivation?

We're looking for a few good mobile installations - whether they're completed, on the drawing board, or half-way done and tripping you and your passengers every time you get in and out of the vehicle - to be featured in the Scope. We'd love to show your installation.

Tips, narratives, explanations, techniques, problems encountered and solved (or encountered and evaded) are what we're looking for. Send them in!

scope@palomararc.org





February Meeting Photos



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Info for May SCOPE

While we certainly appreciate Reinstated members, we believe many “Reinstatements” are due to members not aware that their membership was due.

Since many members now get the News Letter (SCOPE) on the web, they don’t receive the paper copy that we mark blue when membership is almost over, and red when the time for renewal has passed.

The Board has recommended that we publish member’s calls that are getting close to renewal time. Previously, we listed the memberships that had expired, and some didn’t like that at all!

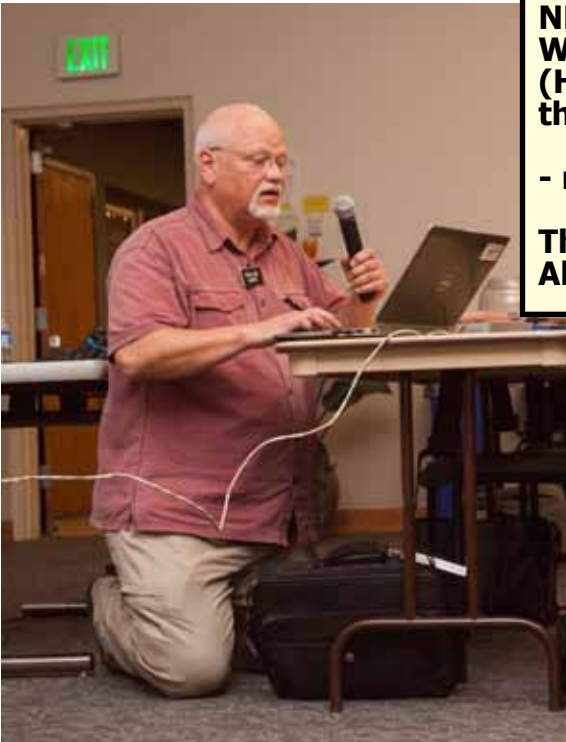
The following members are due for renewal in a month or so. Hopefully, if your call is in this list, you will find time to send a check, or tell PayPal to renew your membership.

W6OWG, KT6UK, KG6UTS, KJ6OSG, KJ6DPE, KJ6GOQ, KJ6HCT, WN6K, K6PKS, NF4JA, KQ6AM, WA6MHZ, W6YXY, KI6DIZ, N7MM, WB6YCQ, and W6GNI.

(Hay – W6GNI is Me!!) (I see some other old timers in the list too!)

- more next month!

**Thank you,
Al W6GNI**



February Meeting Photos by Paul KB5MU.





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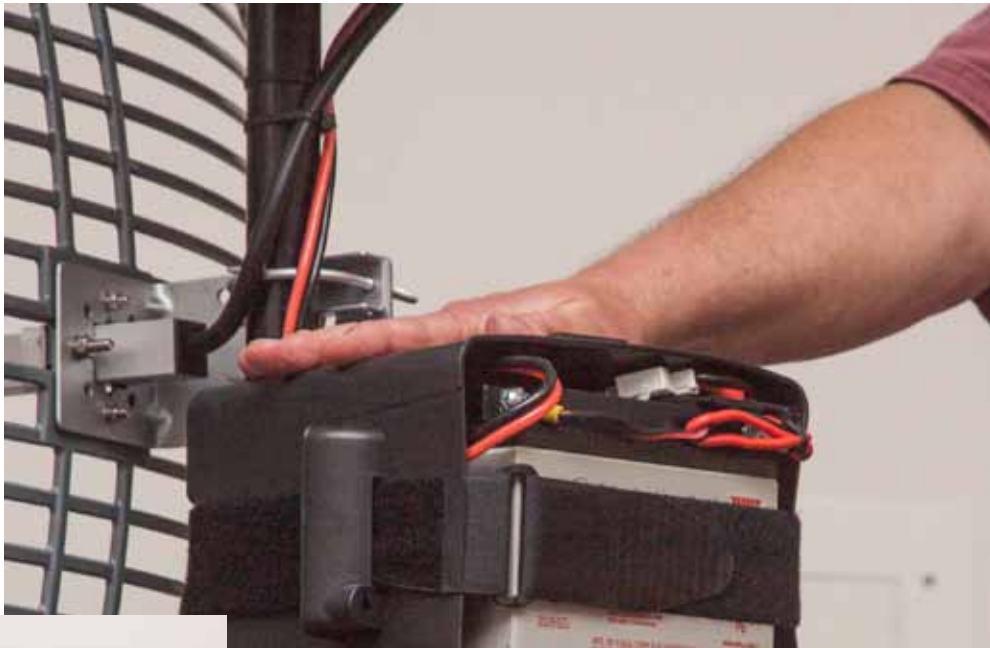
3-500ZG • 811a • 572B • 4-400a • 6146B • 8072 • 8560AS
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FINAL SPECIFICATION⁽¹⁰⁾

DESCRIPTION

The Signetics 25000 Series 9C46XN Random Access Write-Only-Memory employs both enhancement and depletion mode P-Channel, N-Channel and Neu⁽¹⁾ channel MOS devices. Although a static device, a single TTL level clock phase is required to drive the on-board multi-port clock generator. Data refresh is accomplished during CB and LH periods⁽¹¹⁾. Quadri-state outputs (when applicable) allow expansion in many directions, depending on organization.

The static memory cells are operated dynamically to yield extremely low power dissipation. All inputs and outputs are directly TL compatible when proper interfacing circuitry is employed.

Device construction is more or less S.O.S.⁽²⁾

FEATURES

- FULLY ENCODED MULTI-PORT ADDRESSING
- WRITE CYCLE TIME 80ns (MAX. TYPICAL)
- WRITE ACCESS TIME⁽³⁾
- POWER DISSIPATION 10μW/BIT TYPICAL
- CELL REFRESH TIME 1ms (MIN. TYPICAL)
- TTL/DTL COMPATIBLE INPUTS⁽⁴⁾
- AVAILABLE OUTPUTS "n"
- CLOCK LINE CAPACITANCE 2pF MAX.⁽⁵⁾
- $V^{CC} = +10V$
- $V^{DD} = 0V \pm 2\%$
- $V^{FF} = 6.3V^{ac(6)}$

APPLICATIONS

DON'T CARE BUFFER STORES
LEAST SIGNIFICANT CONTROL MEMORIES
POST MORTEM MEMORIES (WEAPON SYSTEMS)
ARTIFICIAL MEMORY SYSTEMS
NON-INTELLIGENT MICRO CONTROLLERS
FIRST-IN NEVER-OUT (FINO) ASYNCHRONOUS
BUFFERS.
OVERFLOW REGISTER (BIT BUCKET)

PROCESS TECHNOLOGY

The use of Signetics unique SEX⁽⁷⁾ process yields V_{th} (var.) and allows the design⁽⁸⁾ and production⁽⁹⁾ of higher performance MOS circuits than can be obtained by competitor's techniques.

BIPOLAR COMPATIBILITY

All data are clock input pins applicable output will interface directly or nearly directly with bipolar circuits of suitable characteristics in any event use 1 amp fuses in all power supply and data lines.

INPUT PROTECTION

All terminals are provided with slip-on latex protectors for the prevention of Voltage Destruction. (PILL packaged devices do not require protection.)

SILICON PACKAGING

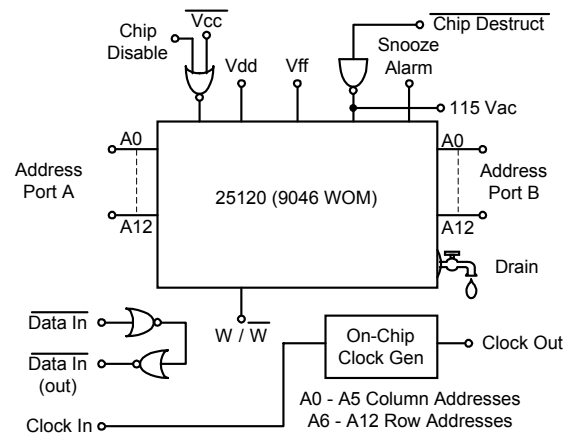
Low cost silicon DIP packaging is implemented and reliability is assured by the use of a non-hermetic sealing technique which prevents the entrapment of harmful ions, but which allows the free exchange of friendly ions.

SPECIAL FEATURES

Because of the employment of the Signetics' proprietary Sanderson-Rabbet Channel the 25120 will provide 50% higher speed than you will obtain.

COOLING

The 25120 is easily cooled by the employment of a six foot fan 1/3" from the package. If the device fails you have exceeded the ratings. In such cases, more air is recommended.



PART IDENTIFICATION

TYPE	"n"	TEMP. RANGE	PACKAGE
25120	0	0 to -70°C	Whatever's Right

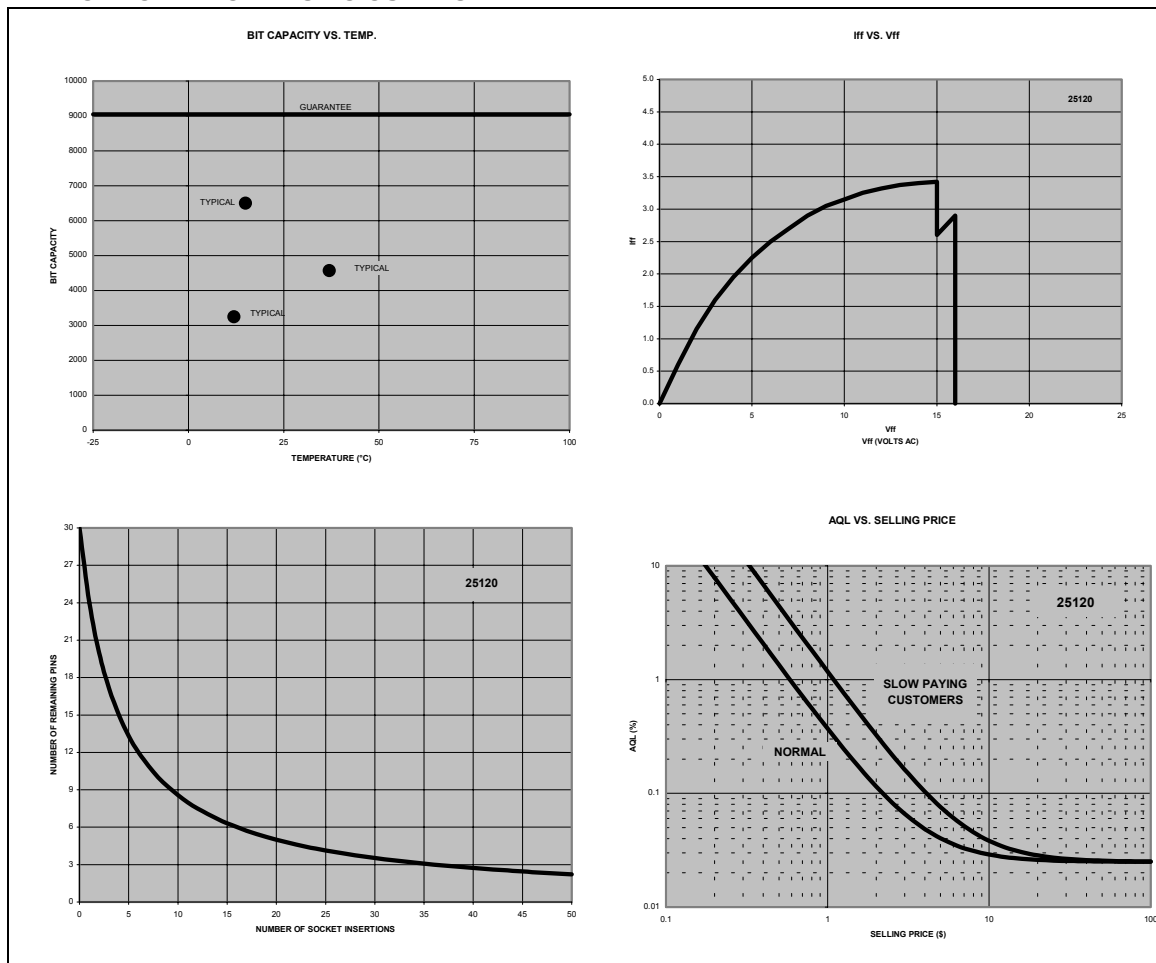
1. "Neu" channel 16V CMOS enhances or depletes regardless of gate polarity, either simultaneously or randomly. Sometimes not at all.
2. "S.O.S" copyrighted U.S. Army Commissary, 1940.
3. Not applicable.
4. You can somehow drive these inputs from TTL, the method is obvious.
5. Measure at 1MHz, 25mV, 1.8pF in series.
6. For filaments, what else!
7. You have a dirty mind. S.E.X. is a Signetics Extra Secret process. "One Shovel Full to One Shovel Full", patented by Yagura, Kashkooli, Converse and AL, Circa 1921.
8. J. Kana calls it design (we humor him).
9. See "Modern Production Techniques" by T. Arrieta (not yet written).
10. Final until we got a look at some actual parts.
11. Coffee breaks and lunch hours.
12. Due credit to EIMAC for inspiration.

Spotlight on Memory Devices

A lot of attention has been paid lately to the SDR (software-defined radio) movement in amateur radio. Devices such as the Signetics Memory featured here are starting to become more and more important on the SDR homebrew scene.

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You can join or renew your membership on the club's web site <http://www.palomararc.org>

Editor: Michelle Thompson W5NYV

Submissions: scope@palomararc.org

Questions? Ideas? Comments? W6NWG@amsat.org

Featured Program:

At 7:30pm on 1 May 2013, Palomar Amateur Radio Club presents a program about the Red Cross.

We look forward to seeing you at the Carlsbad Safety Center, 2560 Orion Way, Carlsbad, CA.