

## Calendar of Events

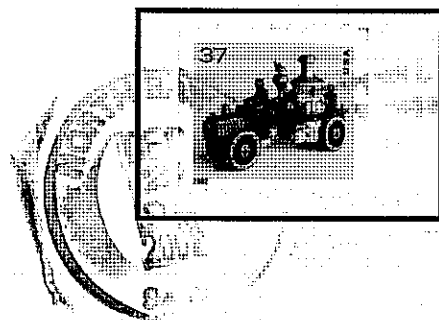
Jan 3	Fri	7:30 PM	Marin ARC Meeting, Alto Clubhouse, 27 Shell Road, Mill Valley
Jan 4	Sat	10:00 AM	Red Oak Victory ARC Meeting, Point Richmond
Jan 8	Wed	<b>SPECIAL NIGHT</b>	
		5:30 PM	Dinner at Marie Callenders, 2460 Mendocino Ave, Santa Rosa
		7:30 PM	SCRA Meeting, Agilent Technologies, 1400 Fountain Grove Prkwy, Santa Rosa
Jan 15	Wed	6:30 PM	SCRA Board of Directors Meeting (Location to be determined)
Jan 15	Wed	7:00 PM	REDXA Meeting, Carrow's, Petaluma
	Wed	7:30 PM	Valley of the Moon ARC Meeting, McDougall Hall, Sonoma Developmental Center, Glen Ellen.
Jan 18	Sat	9:00 AM	VE Test Session - SCRA Agilent, 1400 Fountaingrove Prkwy, Santa Rosa Contact: John KD2L (707) 575-9176
Jan 21	Tues	7:30 PM	Hamilton Wireless Assoc., Bldg 549, Hamilton Field, Novato

## Sonoma County Radio Amateurs, Inc.

P. O. Box 116  
Santa Rosa, CA 95402-0116

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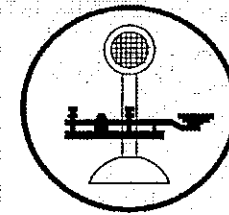
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Bob Olsten  
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Santa Rosa CA 95402

WD6DPE



Club Station  
W6LFJ

## Short Skip

newsletter of the

Sonoma County Radio Amateurs, Inc.

P. O. Box 116, Santa Rosa, CA 95402-0116  
(707) 579-9608

<http://www.sonomacountyradioamateurs.com>

Repeaters

146.985- • 146.73- • 224.48- • 441.375+



Repeater Station  
W6SON

Volume 28 Number 1

January 2003

# Happy New Year

## QTC

by

Bill Hillendahl KH6GJV  
SCRA President



### Straight Key Night

### SPECIAL MEETING NIGHT

Wednesday, January 8th

With SCRA's regular meeting night falling on January 1<sup>st</sup>, this month, and Agilent being closed for the holiday, SCRA's January meeting will be held on January 8<sup>th</sup> at the usual place and time. See you at the meeting!

One of my favorite ways to start off the new year is to make a contact during Straight Key Night (SKN) which runs from 0000 to 2400 UTC January 1<sup>st</sup>. (That's 1600 PST December 31<sup>st</sup> to 1600 PST January 1<sup>st</sup>, local).

SKN is promoted by the ARRL as an opportunity to enjoy a good old fashioned QSO with a straight key, like the "old days." Sorry, no bugs or electronic keyers allowed. The emphasis is on rag-chewing rather than racking up the contacts. You can even apply for a Rag Chewers certificate if you submit a log with a QSO of at least 30 minutes in duration. (Check the ARRL website and search for "2003 Straight key Night" for more information.)

I will dust off my straight key that I used as a Novice some 35 years ago. I still have my Brown Brothers Machine Company key with bright red dual-button on a chrome lever mounted to a black wrinkle finished heavy base. I have fond memories of getting home from school or after evening homework and plopping down in front of my rig and pounding out a contact or two at 75 watts on 40 or 15 meters. I only had two crystals.

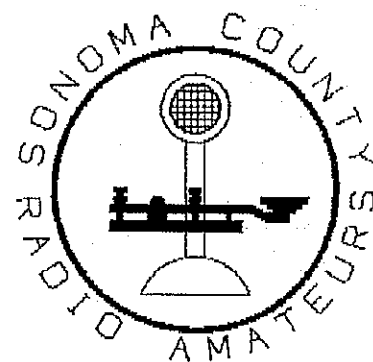
I'll make a contact or two and listen for operators that I can nominate for Best Fist before I head off to the New Year's parties. Haven't played with a hand key in a while? Dig it out of the box and wire it up. Don't have a hand key or access to an HF rig? Give someone who does a call and ask if they can help you make a contact. Most of all, have fun with it!  
73 and Happy New Year!

### 2002 Member of the Year



John Mullan KD2L accepts the 2002 MOY award from 2001 recipient Al Ferrera K6MXI

John Mullan KD2L was selected as SCRA's Member of the Year for 2002. The presentation was made at the annual holiday party. John has been a real resource for the club serving as it's Public Service Chairman, Volunteer Examiner Coordinator and Chef Extraordinaire at Field Day for several years. Many thanks, John, for your years of service.



**2003 Club Officials**

President	Bill Hillendahl	KH6GJV	707 544-4944
Vice President	Brian Torr	N6IY	707 575-5871
Secretary			
Treasurer	Jeff Basham	W2JAB	707 542-3860
Director	Josh Fiden	AD6XI	707 874-3940
Director	Jim Lee	KE6VGV	415 892-0317
Past President	Greg Gordon	AC6VJ	707 523-7077
Activities Chairman			
Public Service Chairman	John Mullan	KD2L	707 575-9176
Repeater Chairman	Greg Gordon	AC6VJ	707 523-7077

**Short Skip & Web Staff**

Editor	Bill Hillendahl	KH6GJV	707 544-4944
Hank's Swap Shop	Jeff Basham	W2JAB	707 542-3860
Web Master	Jeff Basham	W2JAB	707 542-3860

**Contacts**

Antenna Ordinance/Legal	Lee Dibble	KE6EAQ	707 544-1675
Public Relations	Bill McCall	W6WDM	707 538-2844
Raffles			
Refreshments	Ted DeCroff	KB6PTA	707 542-4008
Volunteer Exam Liaison	John Mullan	KD2L	707 575-9176

SCRA Hotline	707 579-9608
SCRA E-Mail	scra@sonomacountyradioamateurs.com
SCRA Web Site	http://www.sonomacountyradioamateurs.com

**Tuesday Night Net**

Check in to the SCRA net each **Tuesday** evening on the **146.985-(PL 88.5)** repeater at **7:00 PM**. Announcements are made of upcoming SCRA and other amateur radio activities in the area and what is listed in Hank's Swap Shop. You will also hear the weekly *Amateur Radio Newslines* broadcast.

**Short Skip Advertising Rates**

Business Cards	\$ 12
1 <sup>st</sup> Quarter Column	\$ 13
Each Addn'l Quarter Column	\$ 4
Full page (one side)	\$ 35
Pre-printed inserts (each)	\$ 35
<b>Guaranteed circulation of 150 per month!</b>	
For more information, contact the Editor.	

**HUNGRY BEFORE THE MEETING?**

**JOIN US FOR DINNER!** We meet at Marie Callenders restaurant, 2460 Mendocino Avenue (corner of Mendocino & Chanate), Santa Rosa. People start showing up at 5:30 PM. No RSVP is required! See you there!

**NEXT MEETING**  
**January 8th**  
**7:30 PM**

**Program:**

**Amateur Radio on**  
**Intl. Space Station**  
 by Tim Bosma W6ISS

(See article)

**CLUB MEETINGS**

The club normally meets the first Wednesday of each month at:

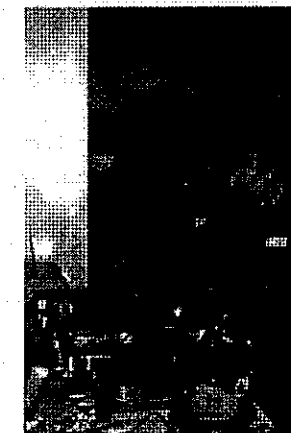
**Agilent Technologies**  
**1400 Fountaingrove Parkway**  
**Santa Rosa, CA**

The meeting starts at 7:30 PM

**ALL ARE WELCOME!**

Please join us at our next meeting. Membership in SCRA is open to anyone interested in Amateur Radio. A membership application is included in this newsletter.

Interested? For more information, contact any SCRA officer, director or member.



Ted DeCroff KB6PTA tickles the keys.

**CHARLES J. TARR**

*Attorney at Law*  
**W6VAG**  
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Address \_\_\_\_\_ Hm Phone \_\_\_\_\_ Wk Phone \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_ E-Mail \_\_\_\_\_

ARRL Member? [ ] Yes [ ] No

**Dues & Fees:** (SCRA dues year is from 3/1 to 2/28) **Payment Calculations:** Make checks payable to SCRA

Individual/Associate Member	\$ 20 (\$5.00/qtr)
Family Membership	\$ 30 (\$7.50/qtr)
Under 18 Membership	\$ 10 (\$2.50/qtr)
Badge	\$ 7

Dues - Full Year (3/1 to 2/28)	\$ _____
Dues - Prorated ____ Qtrs. X \$ ____/qtr	\$ _____
Badge	\$ _____
Other - _____	\$ _____
Donation	\$ _____
<b>Total</b>	<b>\$ _____</b>

**Badge Information**  
 Call Sign \_\_\_\_\_  
 First Name \_\_\_\_\_  
 City \_\_\_\_\_

**Mail to:** SCRA, P. O. Box 116, Santa Rosa, CA 95402

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(Near Disneyland)  
933 N. Euclid St., 92801  
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(800) 854-6046  
Janet, KL7MF, Mgr.  
anaheim@hamradio.com

**BURBANK, CA**  
2416 W. Victory Bl., 91506  
(818) 842-1786  
(800) 854-6046  
Eric, KAGHT, Mgr.  
Victory Blvd. at Buena Vista  
1 mi. west I-5  
burbank@hamradio.com

**OAKLAND, CA**  
2210 Livingston St., 94606  
(510) 534-5757  
(800) 854-6046  
Mach, K6KAP, Mgr.  
I-880 at 23rd Ave. ramp  
oakland@hamradio.com

**SAN DIEGO, CA**  
5375 Kearny Villa Rd., 92123  
(619) 560-4900  
(800) 854-6046  
Tom, KM6K, Mgr.  
Hwy. 163 & Claremont Mesa  
san diego@hamradio.com

**SUNNYVALE, CA**  
510 Lawrence Exp. #102  
94085  
(408) 736-9496  
(800) 854-6046  
Mark, W17YN, Mgr.  
So. from Hwy. 101  
sunnyvale@hamradio.com

**NEW CASTLE, DE**  
(Near Philadelphia)  
1509 N. Dupont Hwy., 19720  
(302) 322-7082  
(800) 644-4478  
Jim, KA3LL, Mgr.  
RT.13 1/4 mi., So. I-295  
newcastle@hamradio.com

**PORTLAND, OR**  
11705 S.W. Pacific Hwy.  
97223  
(503) 598-0555  
(800) 854-6046  
Leon, N7IX, Mgr.  
Tigard-99W exit  
from Hwy. 5 & 217  
portland@hamradio.com

**DENVER, CO**  
8400 E. Hill Ave. #9, 80231  
(303) 745-7373  
(800) 444-9476  
Joe, KD0GA, Mgr.  
John, N5EHP, Mgr.  
denver@hamradio.com

**PHOENIX, AZ**  
1939 W. Dunlap Ave., 85021  
(602) 242-3515  
(800) 444-9476  
Gary, N7GJ, Mgr.  
1 mi. east of I-17  
phoenix@hamradio.com

**ATLANTA, GA**  
6071 Buford Hwy., 30340  
(770) 263-0700  
(800) 444-7927  
Mark, KJ4VO, Mgr.  
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Steve, N4SR, Mgr.  
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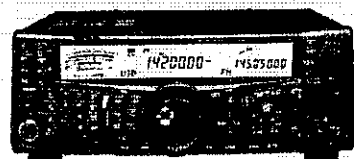
**SALEM, NH**  
(Near Boston)  
224 N. Broadway, 03079  
(603) 898-3750  
(800) 444-0047  
Chuck, N1UC, Mgr.  
sales@hamradio.com  
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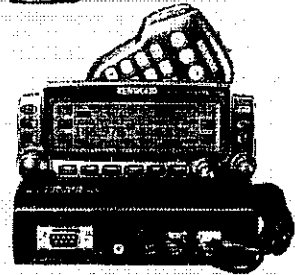
**KENWOOD**



**TS-2000** HF/VHF/UHF TCVR  
• 100W HF 6M, 2M • 50W 70CM  
• 10W 1.2 GHz w/optional UT-20 module  
• IF Stage DSP • Built-in TNC, DX packet cluster  
• Backlit Front Key Panel  
**Low Intro Price!**

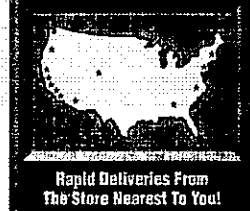


**TH-D7A(G)** 2M/440  
• 2M/440 Dual Band  
• Built-in 1200/9600 Baud TNC  
• APRS Compatible  
• DX Packet Cluster Monitor  
• 200 Memos., CTCSS  
• VC-HI Messaging Control  
**Low Pricing!**



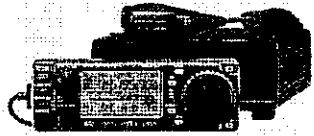
**TM-D700A** 2M/440 Dualband  
• 50W VHF 35w UHF • Opt. Voice Synthesizer  
• Receives 118-1300 MHz (cell blocked)  
• Remote Head Inst. only (kit included)  
• 200 Memories • Built in 1200/9600 baud TNC  
• Advanced APRS Features  
• Dx Packet Cluster  
• Tone Scan • GPS/VG-HI/PC Ports

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sunnyvale@hamradio.com



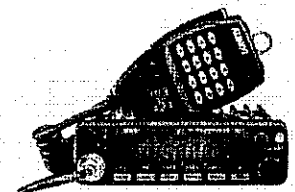
**IC-706MKIIG** HF/VHF Transceiver  
• All mode HF/6M/2M/70CM  
• 100W HF/6M, 50W/2M, 20W/440 MHz  
• AF-DSP • Plug and Play Filters • No Soldering  
• Easy-to-Navigate menus  
**Low Pricing!**



**IC-756 PRO II** All mode Transceiver  
• 160-6M @ 100W • Enhanced Rx performance  
• 32 bit IF DSP • SSB/CW Synchronous tuning  
• Enhanced 5 inch color TFT w/spectrum scope  
• Selectable IF filter shapes for SSB & CW  
• Multiple DSP controlled AGC loops  
• Advanced CW functions  
• 101 alphanumeric memories  
**The Ultimate Radio!**



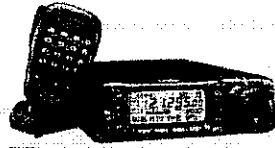
**DJ-196T** 2M/HT  
• 5 Watt out  
• 40 memories  
• Alphanumeric display  
• CTCSS + DCS built in  
• "S" meter  
• Auto Dialer  
**Low Pricing!**



**DR-135TP** 2M mobile  
• 50 Watt out • Alpha numeric display  
• 100 memos • Built-in TNC 1200 & 9600 Baud  
• Front Panel GPS in • Rear DB-9 port  
• CTCSS/DCS Encode/Decode built in  
**Low Pricing!**



**VX-7R**  
50/2M/230/440 HT  
• Wideband RX  
• 900 Memories  
• 5W TX (300mw 220MHz)  
• Li-Ion Battery  
• Fully Submersible to 3 ft.  
• Built-in CTCSS/DCS  
• Internet WIRESS compatible  
**Great Price!**



**FT-100D** HF/6M/2M/70CM Trans.  
• Compact Transceiver w/detachable front panel  
• Rx 100kHz to 970MHz (cell blocked)  
• Tx 100W 160-6M, 50W 2M, 20W 70CM  
• Built-in DSP, Vox, CW keyer  
• 300 Memories  
**Low Pricing!**



**FT-100MP MKV** HF Trans.  
• Enhanced Digital Signal Processing  
• Dual RX  
• Collins SSB filter built-in  
• 200W, External power supply  
**Low Pricing!**

**January 8<sup>th</sup> Program  
Amateur Radio on the  
International Space Station**

Tim Bosma W6ISS will head up our program for the January meeting. Tim has been involved in the Space Amateur Radio Experiment (SAREX) and the space station program (ARISS) for many years. Tim is one of the founders of the SAREX/ARISS stations at the Santa Rosa Junior College which acts as a link between the astronauts in space and school children throughout the world. Currently, Tim is the coordinator for school contacts for the SAREX/ARISS program. Come join us for an update on Amateur Radio's walk in space.

**Weekly Ragchew Night**

Calling all SCRA members... dust off your microphone and loosen up your jaw! We're having a weekly ragchew following the Tuesday night net on the club repeater (146.985-). Everyone is welcome and please join in, even if you just want to say "hello".

Do you have any ideas for future club events? Need help with your shack or a new antenna? Found a great restaurant? Let's talk about it. All topics are fair game, so make it lively!

73,  
Josh AD6XI

**SCRA v NARCC**

NARCC has yet to file the required answer to SCRA's complaint. A two week extension was granted which expired just after Thanksgiving.

Are you a budding author? Write an article for *Short Skip* on a Ham radio-related subject, technical or non-technical. E-mail the article to kh6gfv@arrl.net. We'd love to see YOU in print!



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**SCRA Holiday Party A Blast!**

This year's holiday party was the biggest in many years. Just under 60 people showed at Agilent's cafeteria with dishes to share. There was more than enough wonderful dishes to eat for the crowd including the turkey and ham that was supplied by the Agilent caterer. Ted DeCroff KB6PTA graciously supplied music for the evening. Ted was prepared with sing along sheet music if the group had gotten to it. A slide show of activities during 2002 was presented.

The outgoing officers, directors and club volunteers were thanked for their service to the club. The 2003 officers and directors were introduced. John Mullan KD2L was presented with the Member of the Year, also dubbed as the HOTY (Ham of the Year) by 2001 recipient Al Ferrera K6MXI.

Everyone said that they had a great time and preferred a pot luck to a formal restaurant. Some photos are in this newsletter. Many thanks to Brian Torr N6IY for arranging the party. Many thanks to everyone who attended and shared their food dish. We will do it again next year!

**A Note from John KD2L**

Thank you for honoring me with the 2002 Ham of the Year Award. It is a tremendous feeling to be recognized by your peers in this way. As I stated at the banquet, it is not really my award, it truly belongs to each and every one of you who has made me successful in the projects I have undertaken for the amateur radio community. Without you, the volunteers, we would not be successful in supporting the community through the public service events. Without you, the volunteer examiners and the test takers, we would not be successful with the VE program. So, let me say thank you for the honor, and thank you for your participation and support.

John Mullan, KD2L

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**ARES Comm Log**

by Rich Freitas KF6SZA  
Greater Santa Rosa  
Emergency Coordinator

**Go Kits**

As I'm sitting here nice and warm in the comfort of my home, I'm looking out the window at the torrential rain that has been the norm for the past two days; we've already received two-thirds of the total rainfall we got last year. The flood warnings have been sent out and the Russian River is predicted to rise above flood stage and I'm thinking about why most people get caught in predictable events and still wonder how the emergency occurred. Hopefully the rain will subside soon but what about the next time?

Are you ready for an emergency? Every emergency - whether it's a tornado, hurricane, flood, forest fire, ice storm, missing person, 911-phone center outage, or 9/11 itself --is different. However, the planning process and the basic checklist remains the same. Are your handheld (and larger) batteries charged, are your radios and antennas packed and ready to go, do you have a small "go kit" or bag with whatever personal stuff (and your radios) which you might need for a day or two, is your generator serviced and filled, do you have any forms you may need (e.g., Radiograms), do you know what HF/VHF/UHF nets will be used, when was the last time you checked into your local ARES net, have you made contact with your local EC lately, do you know who your EC is? And the list goes on. Nothing can take the place of good planning. And once the emergency starts, it is run on experience, training, and good judgement... but it all starts with planning.

So... are you ready for an emergency?

Many of us take a HT along on our daily activities. Obvious accessories are an extra nicad/nimh battery pack, external power cord, some sort of gain antenna and comfort and safety items in case of some unexpected event. It only takes your battery to "go south" when you need to access the repeater to report a traffic accident, or to get lost or break down on the road in an unfamiliar place to appreciate the value of being "prepared."

The best kit for you may not fit a "canned" list, but should be based upon your operating mode, experience and local conditions. It is better to have the bare necessities always handy than to leave a bulky pack someplace where you can't get to it. A larger kit bag is more practical if you are almost always in or near your home or car.

The trunk is the best place to store emergency gear because it is dry, relatively secure and is accessible either at home or away. I actually have two kits and I plan on having

a third. An "everyday" kit accompanies my HT and is small enough to fit in a briefcase. A larger "backup" bag stashed in my shack is ready to go at a moment's notice (I only live 8 minutes from where I work) and provides 24 hours of auxiliary power, a spare HT, coax and accessories for extended operating. The planned "disaster" bag will have emergency cash, food and water, rain gear, a larger gel cell battery, clothing and shelter to sustain a 3-day activation or evacuation.

The ARRL ARES Field Resources Manual provides excellent guidance on "go-kits." If you travel through rural areas like Sonoma County, you should also include fire making supplies, a pocket knife and a compass in the kit. In the suburbs, you'll want a local street atlas, change for a pay phone and emergency cash or a credit card. A compact, sturdy flashlight, extra batteries, first aid kit, extra HT battery pack and spare eyeglasses (thank goodness I had Lasik surgery!) are useful everywhere. If you regularly take prescription medications, you should plan to rotate a current supply in the kit.

A typical "go-kit" should sustain a day of continuous operation and be easily supplemented for overnight or weekend trips. The bare essentials are a 2-meter or dual-band HT, some sort of "gain" antenna, auxiliary power source, writing materials, comfort and safety items. You can do a lot with a minimum kit if you plan its contents carefully. There is risk of not having something you may need if you go "too" light, but obvious "bells and whistles" should stay at home. Next month I'll provide a list of items you may wish to gather for your own go-kit.

The ARES net meets on Mondays at 7:30 PM on the 146.985 MHz, - offset, 88.5 PL. Everyone is welcome to participate.



The crowd gathers at the 2002 holiday party.

**HSC Web Specials!**

The items below can be found in the "Specials" area of our on-line shopping pages at [www.halted.com](http://www.halted.com)...check them out and use our secure site to place your order for the holidays!

- |  |   |
|--|---|
| Fujitsu FPG-310 Color Pen Plotter<br>GPIB (IEEE-488) interface<br>Based, w/ manual, cord, 90-day warranty<br>HSC# 19131 <b>\$47.50</b> | Computer Power Supply, ATX, 145W<br>HSC# 18950 <b>\$9.95</b>                  |
| Rechargeable 12VDC Battery<br>40 AH, lead/acid, Yuasa NPX-150R<br>HSC# 18917 <b>\$29.50</b>  | Network card, ISA bus, 10-Base T<br>HSC#18943 <b>\$4.95</b>                   |
| Server Cabinet, ATX rack mount, with<br>Power Supply, White color<br>HSC# 80541 <b>New Price! \$179.95</b>                             | Computer Speakers, powered<br>HSC# 18662 <b>\$9.95</b>                        |
| Battery charger, NiMH<br>HSC# 19151 <b>\$17.50</b>   | Game-pad, Microsoft "Sidewinder"<br>HSC# 80488 <b>\$12.50</b>                 |
| SCSI Controller, Initio, PCI Bus<br>HSC# 18218 <b>New Price! \$9.95</b>  | Compact AC Inverter for the car, 100W<br>HSC# 19021 <b>New Price! \$14.95</b> |
| SCSI Controller, Adaptec 1505, ISA Bus<br>HSC# 17995 <b>New Price! \$7.50</b>  | Motherboard, 486DX4 AT<br>HSC# 18529 <b>New Price! \$9.95</b>                 |
| Mouse, 2-button<br>HSC# 18731 <b>\$3.95</b>  | Motherboard, Baby AT, 486VLB<br>HSC# 19003 <b>\$9.95</b>                      |
| Mouse, w/ numeric keypad<br>HSC# 80539 <b>\$4.95</b>   | Multimeter, analog, VOM<br>HSC# 18250 <b>\$9.95</b>                           |
| Scrolling mouse, translucent body<br>HSC# 18829 <b>\$9.50</b>  | Multimeter, DMM, with transistor check<br>HSC# 80370 <b>\$14.95</b>           |
| Computer Power Supply, ATX<br>200W, "Mini-Tower"-style<br>HSC# 18665 <b>New Price! \$14.95</b>   | Multimeter, DMM, lit-up display, nical<br>HSC# 80504 <b>\$39.95</b>           |
|  | Computer Joystick, "FX2000"<br>HSC# 18772 <b>New Price! \$3.00</b>            |
|  | Tower Chassis, 7-Bay "RAID"<br>HSC# 80544 <b>\$42.50</b>                      |

**Disk Drive Deals!**

- Seagate ST16150N 4.3 GB "Barracuda" SCSI
  - 7200 RPM, 8.09ms avg seek time
  - 21 Hrs, 11 Dks, 3,711 Cyl.
  - Standard 50-pin SCSI
  - 3.5" size, half-height (1.5" tall)
  - Reliable, 90-day warranty
  - HSC# 18412 **\$32.50**
- Seagate ST1917WC, Ultra-SCSI Wide Area2
  - Formatted capacity: 6.1GB
  - Spike speed: 7200 RPM
  - 3.5" size, half-height (1.5" tall)
  - 90-124 mbps/sec internal transfer rate
  - Average Access (read/write): 9.7-10.7 ms
  - HSC# 18753 **\$39.95**
- Special: buy this drive & get a 50-pin (HSCA23700) or 68-pin (HSCA3720) Adapter for \$10.00! (Normally a \$20+ \$0 value)

**PCMCIA Goodies!**

- EPSON Ethernet PCMCIA interface card...
- Both 10Base2 and 10BaseT cables included!
- Compatible with notebooks/PCs with Type II slots
- Hot card insertion and removal - no power down
- No jumpers or switches - two LED status lights
- New, boxed, obsolete & manual, 90-day warranty
- HSC# 19125 **\$9.95**
- Intel PRO/100 PCMCIA Network Adaptor Card
- MDLA1600 LAN card supports 10BaseT/100BaseTX
- For PC Card Type II sockets, 32KB packet buffer
- Full duplex support (10Mbps networks only)
- Ethernet Specs: IEEE 802.3 & 802.3u spec
- With RJ45 cable, OEM packed, 90-day warranty
- HSC# 19190 **\$39.50**
- Epson/Adaptec APN488B PCMCIA SCSI Card
- Up to 2 Mbytes/sec PC Card bus rate
- New OEM pack with DB25 cable, 90-day warranty
- HSC# 19160 **\$49.50**

**VHS Video To Go!**

- Visionetics! Model No. VHS-105 player deck
- Dual power option! - 110VAC or 12VDC!
- Perfect for enterprising kids in the yard!
- Many other uses: home, business, camping...
- Standard NTSC VHS format, full front-panel controls, soft-touch buttons with LEDs
- Remote control sensor on front panel - remote NOT included...any work with generic remotes? Removed from working service, 90-day HSC warranty
- HSC# 19048 **\$19.95!**

**External CD-RW!**

- Hewlett-Packard Model 7200 Series CD-RW
- Use just like a floppy! Shares printer port
- Drag & drop up to 650MB on a single CD!
- 2X write on CD-R/W, up to 6X read on CD-R
- 1X RW: 1500KB/sec, 2X RW: 300KB/sec
- 6X Read: 800KB/sec - drives dual at HP website
- EIDE-ATAPI interface w/MAC, front tray load
- 74 min. on 120min disk, 21 min. with 80min disk
- Power supply not included (precut provided)
- Refreshed, 90-day HSC warranty
- HSC# 19036 **\$49.50**

**VHS for even less!**

- Magnavox Model No. VHS 100AT01 video player
- Standard "F" type connectors for video connection
- Four panel switch selects Ch. 3 or Ch. 4 output
- HCA pads for line level videorecorder connect
- Filtered from working service, units have slight markings from removed infrared transmit element covering front panel infrared detector. Remote NOT included.
- For 110VAC, 60Hz operation
- Removed from working service, 90-day HSC warranty
- HSC# 19152 **\$17.50!**

**Lab Bench Supply!**

- Model No. AEEC-350, 0-50VDC 60 Amp
- 110VAC, 60Hz - 150VA - small footprint
- Dual digital meters for voltage and current
- Short-circuit protected, grounded five cord
- New, IEC power cord, manual, 90-day warranty
- HSC# 80606 **\$139.00**

**Variable Transformers!**

- One of the most useful instruments on your bench!
- Always wanted one, but they were too expensive!
- Two sizes to choose from, now they're affordable!
- Both new in box, made in China
- Model AEEC-500VR
- 0 - 120 VAC output, 500 VA
- Measures 6.5" x 9" x 7" tall
- Features meter, illuminated switch, line cord, fuse
- HSC# 80474 **\$45.00**

- Our most popular model!
- Model AEEC-200VR
- 0 - 120 VAC output, 200VA
- Measures 6" x 10" x 9.5"
- Features meter, illuminated switch, line cord, fuse
- HSC# 80461 **\$95.00**

**EASY NETWORK!**

Multi-PC Web Access...  
Save Money!  
Up to 4 PC's on one phone line!

- Perfect for homes/small businesses
- Share printers, send faxes, backup files
- Proxy server for multi-PC internet access!
- Only one phone line needed for ISP connection
- Includes 4-port hub/56K modem & 1 network card
- If you need more than two PC's networked, you will need more network cards (HSC# 18403 - \$4.95)
- 50 ft network cable, driver/installation manual CD
- OEM package, new, 90-day warranty
- HSC# 80599 **\$29.95**
- ...or, you can just buy the modem/hub/cable!
- Comes with installation software CD
- You can connect your own 10-BaseT network PC's (up to three) to its hub and save!
- OEM package, new, 90-day warranty
- HSC# 18942 **\$17.50**

**Solder Pots!**

Finally...we found a source for solder pots! New 90-day HSC warranty, very handy for the workbench!

- AEEC-10P - handy compact desktop unit
- 110VAC, 110 Watts - perfect for small jobs
- Adjustable temp. levels - 300 to 430 deg. C
- Both dimensions: 36mm. dia. x 30mm. deep
- HSC# 80610 **\$32.00**

**HSC Electronic Supply**

Toll Free (Orders Only) 1-800-4 HALTED (1-800-442-5833)  
World Wide Web: <http://www.halted.com>  
3500 Ryder St.  
Santa Clara, CA 95051 **408-732-1573**

4837 Amber Ln.  
Sacramento, CA 95841 **916-338-2545**

5681 Redwood Dr.  
Rohnert Park, CA 94928 **707-585-7344**

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