



# AARC **COVER**

## Bulletin of Austin Amateur Radio Clubs

Austin Amateur Radio Club

Austin Amateur Television Club

Austin Repeater Organization

ISSN 1067-0262

November 2007

**OFFICERS TO BE ELECTED AT NOV MEETING!**

Issue 11-2007

### THE QCWA QSO

Bil Henson, WB5SYS

The Kantronics KPC3+ is a favorite TNC with digital packet hobbyists. It's a full-function packet radio controller with all of the features you'd expect in a "turn of the century" TNC. When Kantronics added the "+" to the model's name, they added APRS and telemetry, along with two digital outputs and two analog inputs.

The two digital outputs are toggled with keyboard (or remote access) commands which drive open-collector outputs to a low state. You can't do much with the signal as is, but a simple circuit can be added to drive the signal and toggle relays capable of handling much more current.

The two analog inputs sample incoming DC up to 5 volts, and report it as a number up to 255. Scaling resistors are used to drop higher sampled voltages to usable levels. I have found that 2.439K-ohms gives a handy 1-10 report, where 13.5 volts reads as 135. Later versions of the KPC3+ firmware allow further fine-tweaking of the scaling through software settings, so in hot weather you don't have to open the TNC to twist a trimpot. Of the two analog inputs, I have hard-wired one to watch supply voltage, and the other to a jack on the chassis. The KPC3+ may also transmit the AI's numbers as telemetry reports.

As designed, Kantronics allows use of just two of the four possibilities of inputs and outputs. Internal jumpers choose two inputs, two outputs, or one of each. The signal leads for this circuit go to the 9-pin radio port.

*(Continued on page 4)*

#### Periodic Events

Sun	7:30 p.m.	Travis ARES net	147.36 MHz + (131.8)
Sun	8:00 p.m.	Travis ARES Packet	145.73 MHz -
Sun	8:00 p.m.	Williamson ARES net	146.64 MHz - (162.2)
Sun	9:00 p.m.	ARO Swapnet	146.94 MHz -
Sun	(After Swapnet)	Newsline	146.94 MHz -
Tues.	7:30 p.m.	Hays ARES net **NEW FREQ!**	444.150 + (114.8)***
Tues.	8:00 p.m.	Bastrop ARES Net	443.750 + (114.8)
Wed	11:30 a.m.	Ham Social Luncheon, Jim's	146.94 MHz -
Thu	9:00 p.m.	2m SSB Net	144.250 (USB)
Thu	11:30 a.m.	Lunch, Waterloo Ice House	444.1 MHz+
Fri	8:00 p.m.	6m SSB Net	50.230(texasvhf.org/)
Sat	7:00 - 8:30a.m.	Breakfast @ Waterloo Ice House	444.1 MHz +
Sat	9:00 a.m.	Chapter 67 QCWA QSO Net.	3.920 MHz LSB
Daily	6:30 p.m.	Central Texas Traffic Net	147.14MHz+

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## Ham Radio Exams Results

ARRL VE Ham Radio Exam - 10-13-2007

The following are the results of the ARRL VE Test Session held on October 13th, 2007 in the Hancock Building of the LCRA General Office Complex:

### Technician Class Licenses Processed

David H. Keene, KE5RCU

Jessica L. Williams, KE5RCT

### Examiners Participating in this Test Session

Howard Glueck, K5ZUA

Larry Gunter, WB5BEK

Gene Hinkle, K5PA

Jerry Jackson, N5UJ

Joe Makeever, W5HS

Jimmy Mercer, N5WDH

### Next Two ARRL VE Test Sessions

November 3rd - LCRA Hancock Building, Board Conference Room

December 1st - LCRA Hancock Building, Board Conference Room

TNX ES 73 DE W5HS

Joe

**\*\*\*NOTE:\*\*\***The Austin Amateur Radio Club ARRL VEC amateur radio examinations will no longer be held in the LCRA Colorado Room. The location for the remainder of the monthly tests in 2007 will be held at the following location:

LCRA General Office Complex

Hancock Building, First Floor Main Entrance, Board Conference Room

3700 Lake Austin Boulevard

Austin, TX78703

Go along Lake Austin Boulevard to the low-lying limestone main entrance wall to the General Office Complex driveway on the east side of the road. It will show "3700" and "LCRA" on it. Go up the driveway to the Visitors' parking spaces (both on the south side and the north side of the driveway). Find a parking spot, then go up the main entrance walkway to the north. Signs along the walkway will direct you to the Hancock Building. Go up the stairs and into the front entrance of the Hancock Building. You will be directed to the test room location from someone near the front entrance.

TNX ES 73 DE W5HS

Joe Makeever

### 10-20-2007

No Results were available from the latest testing session. Be sure to look in next months Edition of the AACOVER.

Our next two amateur radio exam sessions will start at 2 PM on November 17, 2007 & December 15th in room 204 of Moody Hall on the campus of St. Edward's University.

For additional information regarding our amateur radio examination sessions,  
please contact Jim, AB5EK at (512) 327-6184 or by e-mail to  
Hamradioexams@hotmail.com or visit our web page at  
<http://texashams.org/w5yi-austin/>

Austin Amateur Radio Club, Inc., PO BOX 4739, AUSTIN TX 78765-4739, Web site: <http://www.austinhams.org>

President	Don Dudley	AC5YK	340-0778	ac5yk@yahoo.com
Vice President	Lee Cooper	W5LHC	424 5491	w5lhc@arrl.net
Treasurer	Jerry Jackson	N5UJ	832-5663	jerry@gaj.com
Secretary	Alan Russell	KE5DTR	851-1806	arusssel@lcra.org
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ARRL Travis Co. Emer. Coord.	Roger Wines	W5WIA	453-2193	w5wia@arrl.net
ARRL Public Information Officer	Lee Cooper	W5LHC	424 5491	w5lhc@arrl.net

Please contact a club officer, attend a meeting, or mail us to join the organization.

**The Austin Amateur Radio Club, Inc. (AARC)** has annual membership dues of \$20.00 per person or \$30.00 per family. AARC maintains the following repeaters:

FREQUENCY	AUTOPATCH	USE
146.780	Yes	General
146.880	Yes	General
146.940	No	Most popular, WX, Swapnet & Newslite
224.800	No	
444.100	No	

Persons using the repeaters are asked to join the club to help support these valuable resources. To use the autopatch, announce your call sign, press \* and dial the phone number then release the PTT. When finished, press # to hang up the phone. Dial 911 (no \* needed) for emergency services.

#### **AARCOVER Information**

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Viewpoints expressed in the AARCOVER do not necessarily reflect those of any club, or of its members, directors, or officers.

Material quoted from the ARRL Letter is supplied by the American Radio Relay League, Inc.

Members and other readers are encouraged to submit material for publication. Call Mitch London, if mailed submissions are

required. Electronic files are encouraged! Submissions may be edited for publication. **Deadline is the 20th of the month.**

Material may be used in a later issue. Unless otherwise noted, permission is granted to reprint AARCOVER articles, provided you credit the author and the AARCOVER.

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**For Changes in your ADDRESS, PHONE NUMBER or CALL SIGN:**

**See Jerry Jackson, N5UJ (512) 832-5663 jerry@gaj.com**

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## **AARC OFFICER ELECTIONS TO BE HELD AT NOVEMBER MEETING**

Elections are coming up for next year's officer. At the October meeting, nominations were made and the position of each office discussed. It is not too late to run for office, just show up at the November meeting and nominate yourself.

The nominations so far are as follows...

**President: Hugo Sanchez, N5JGX, and Don Dudley, AC5YK.**

**Vice-President: Lee Cooper, W5LHC.**

**Treasurer: Jerry Jackson, N5UJ, and Jay Hoffman, KA5OST.**

**Secretary: Alan Russell, KE5DTR.**

(Continued from page 1) QCWA QSO

(Designed on a Monday??) This limitation is easily fixed by removing the jumpers and tacking wires from the four pins and a ground to the D25 connector's unused pins 21 -25. I ran jumper wires on the backside of the pcb to keep things neat. The signals will be much handier there, and all four may now be used.

Since there is no room in the KPC3+ chassis for the drivers and relays, another box must be used for the drivers, relays, and jacks for the DO's power outputs and analog-in samples. This companion box can be mounted on the TNC and hold other handy circuits also. If your KPC3+ is serving as an APRS node, a switch may be mounted to allow the TNC to communicate with either the GPS or a terminal.

Technical note: When wiring the D25 connectors to the terminal, pay attention to the single line in the manual that says the KPC3+ shares circuit ground with chassis ground. Pin 7 should connect to the metal body of the plug, or your signal won't make it.

Technical rant: Schematic diagrams come in handy when wiring together separate station components. They are especially handy when the pinouts are labeled correctly. There seems to be no standard of what to call a signal out. It may be labeled "in", considering that it is the input to whatever you are wiring it to. Likewise a point where a signal enters the pcb, may be labeled "out", in reference to the output of another component. Be observant and "prove" that connections are correct before testing.

QCWA Chapter 67 meets at Denny's by Northcross Mall on the third Saturday of each month at 2:00 PM. Come early, bring a guest, and swap stories before the meeting starts.

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To: Tektronix Customers

On Monday, October 15, we announced Tektronix, Inc. signed a definitive agreement to be acquired by Danaher Corp. We are very excited about this agreement. This is another positive step forward for Tektronix and our customers.

With your help, Tektronix has grown to be a leader in the test and measurement industry. The strategic fit with Danaher Corporation is compelling - once we become part of Danaher upon completion of the transaction, we believe we will be in a position to accelerate our growth and to strengthen our ability to provide improved service and solutions to meet your needs. Our customers will benefit from Danaher's focused distribution channel and our combined commitment to expanding our global reach. More specifically, we believe the combined entity will provide by far the strongest portfolio in its class of test and measurement products in the industry.

Please be assured that this change will not be disruptive in any way. Danaher believes in a decentralized operating environment and will position Tektronix as a stand-alone operating company within Danaher's Electronic Test business. The sale transaction will not be complete until customary approvals are obtained, which we expect by the end of this year. Until then, we continue to operate as we always have. We appreciate the continued support from all of you as we make this transition as seamless as possible for our customers.

Your business continues to be extremely important to us. Please do not hesitate to contact either of us if you have any questions or concerns.

Information on Danaher Corporation is available at [www.danaher.com](http://www.danaher.com). Danaher is known for acquiring and building businesses. It is headquartered in Washington, DC. Today it has over \$10 billion in sales and a global foot print of nearly 50,000 associates. The Electronic Test platform is one of Danaher's largest and fastest growing businesses and we look forward to Tektronix becoming a part of it.

Tektronix is a leading supplier of test, measurement, and monitoring products, solutions and services for the communications, computer, and semiconductor industries - as well as military/aerospace, consumer electronics, education and a broad range of other industries worldwide. With 60 years of experience, Tektronix enables its customers to design, build, deploy, and manage next-generation global communications networks, computing and advanced technologies. Headquartered in Beaverton, Oregon, Tektronix has operations in 19 countries worldwide. For more information visit [www.tektronix.com](http://www.tektronix.com).

Jim Lico  
Danaher Executive Vice President

Rick Willis  
Tektronix Chairman, President and CEO

## CLUB MINUTES

AARC Meeting Minutes: October 2, 2007

**Meeting called to order:** 7:06pm by Vice-President Lee Cooper, W5LHC.

Lee showed a cartoon and informed the club that a story was done by the Houston Chronicle about Glen Reid, K5FX, hearing Sputnik passing overhead on Oct. 4, 1957.

**Visitors:** Gilbert Gonzalez, no call; Jan Campney; & Ginger Kirchhof, KD5JPW.

**New Members:** Bob Ascott, WB2FHR; Michael Cave, AE5DV; & KC7KBC.

“Housekeeping” announcements were made.

**Minutes:** last meetings minutes approved as written in the AARCOVER.

### OFFICER REPORTS:

**Editor:** always looking for articles, please submit them by the 20<sup>th</sup> of each month; you can now look at old issues on the website.

**Tech Committee:** Stuart Rohre, K5KVH reported: the old KVET tower was offered to the club, but the tower and its surrounding make it difficult for us to take it down ourselves. We would have to provide insurance in order to take it down. Jeff Schmidt, N5MNV, reported: the 440 Repeater was experiencing intermittent operation and getting interference. Lee Cooper inquired about the .94 tower and new repeater, answer was no action since last month.

**ARES:** Roger Wines, W5WIA reported: 2<sup>nd</sup> Tuesday meeting will be at the CTECC (EOC) across the hall from the ham shack; the ham classes are coming together well and so is the Simulated Emergency Test (SET) event set for Oct. 13 & 14, so try and be available.

Upcoming Presentations were discussed as shown in the slide show, some suggestions made.

**Old Business:** Help us spread the word for the Radio Roundup & Christmas Party. Raffle is going good, we have already covered the cost of the radio.

**New Business:** Elections are coming up for next year's officer. Descriptions of each officer's duties were given and then nominations taken. President: Hugo Sanchez, N5JGX, and Don Dudley, AC5YK. Vice-President: Lee Cooper, W5LHC. Treasurer: Jerry Jackson, N5UJ, and Jay Hoffman, KA5OST. Secretary: Alan Russell, KE5DTR. Voting will take place in November. Also, ARRL members will get ballots in the next few weeks, so please vote. A discussion was held proposing the club formally endorse David Woolweaver, K5RAV, for re-election as Vice-Director. It was agreed that the club should not be involved in endorsing any candidates.

**Ham of the Month:** Stuart Rohre, K5KVH, and Rick Herndon, K5FNI.

Slides and discussion of upcoming events: all listed in the AARC Swapnet newsletter or at [www.austinhams.org](http://www.austinhams.org).

**Announcements:** Larry Eblen is retiring from the NWS as of Dec.1. Tom Chapman, KC9FOZ, has had a heart attack, so a collection was taken for a card and gift. Mitch London, KD5HCV, had 12V 35Ah batteries for sell, \$5 each. The proceeds go to the club.

**Meeting Adjourned:** 8:09pm

**Presentation:** Gilbert Gonzalez presented "Incident Response to Terrorist Bombings (Module 2 & 3)."

# Austin 5<sup>th</sup> Annual! Radio Round Up December 7 & 8, 2007

Come join us for the 5th Austin Radio Roundup Dinner Banquet and Swapfest! The Radio Round Up will be held at the Sons of Hermann Mixed Lodge #120, on Decker Lake Road in Austin, Texas Friday December 7th and Saturday December 8th.

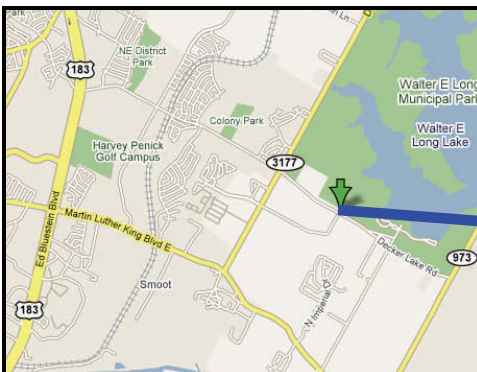
## Register Online at [www.austinhams.org](http://www.austinhams.org)

### Friday Dec. 7th Scheduled Events

Commercial Vendor Set Up 5 - 6pm  
 Social Hour From 6 - 7 pm  
 Dinner 7 - 9 pm  
 Catered Dinner and Music  
 Ham Themed Table Top Decorating Contest  
 QLF Contest - Sending Morse code with left foot  
 Casino Night fun!  
 Silent Auction  
 Dinner Tickets \$10 per person  
 Advance Registration available!

### Saturday, Dec. 8th Scheduled Events

Radio Round Up Swapfest  
 Entrance Fee \$2 per person  
 Doors Open at 8am and runs until 1 pm  
 Tables only \$15 (Elex first come first served)  
 Tailgating available - \$5 per space  
 VE Testing onsite!  
 Door Prizes! Commercial Vendors and More!



**Sons of Hermann  
 Mixed Lodge #120  
 9611 Decker Lake Road  
 Austin, Texas 78724**

**Only 250 Tickets  
to be Sold!**

# ICOM IC-7000 HF Mobile Radio Raffle



The Austin Amateur Radio Club is having a fundraiser event this year! We are raffling off a brand new ICOM 7000 Mobile HF Radio! This is the latest offering from ICOM. We will be selling ONLY 250 tickets in all! The drawing will be held at the AARC Radio Round Up Swapfest banquet in Austin, Texas on December 7th. Winner need not be present to win!

For More Details Visit...

[www.austinhams.org](http://www.austinhams.org)

**Update! Over 200 Tickets already Sold!!! Get Yours Soon!**

## **Memory Sticks, Flash Drives, Just What's in There?**

By Peter H. Forwarded By Stuart Rohre, K5KVH

What's IN these things anyway... just a memory chip and a battery? Do you change the battery every year or so, like a watch? They have just memory. They are powered by the USB port. Seems to be reliable.

These "thumb" drives contain:

- 1) a USB-to-3.3 volt (or whatever) voltage converter and regulator,
- 2) an ARM (or other) embedded microprocessor, which is relatively smart, and simulates the file system of a typical microprocessor (PC, Mac, Linux, etcetera), while writing the data to the FLASH chip(s), and
- 3) one or more FLASH chips.

The embedded micro program also "ages" the data in the FLASH, so that "hot spots" are reduced, or are eliminated, by moving highly accessed data to fresh areas within the FLASH.

This algorithm (patented by SanDisk, I believe) is necessary as FLASH chips have a relatively low lifetime, in terms of writes per cell.

There is more FLASH on a thumb drive than the stated capacity, so that this "aging" process has somewhere for the data to be moved, in the background, of course. And 4 or 8 Gb is not really enough space for most projects.

Would be nice if these came in capacities which more closely matched the capacity of 5.25" media, such as 700 MB (CD), 4.7 GB (DVD5) and 8.5 GB (DVD9). For otherwise, one has to use 1024 MB (1 GB), 8192 MB (8 GB) or 16184 MB (16 GB) thumb drives. Alas, there are lots of thumb drives being sold on eBay, and elsewhere, which are marked as 4 GB (or whatever capacity), but really only contain enough FLASH for a much smaller capacity product.

Essentially, these devices are defectives which will report themselves as having the stated capacity, yet when you attempt to actually write the full capacity, these will return with an error, best case, or will write into the "bit bucket", worst case.

Most often, these are counterfeit devices, and have the brand name imprinted on them, and are contained in counterfeit packaging, right down to the correct UPC symbol.

## **AARC Meeting Info.**

### **ARL Labs**

**10000 Burnet Rd. North of 183**

#### **Officers Meeting 6:00 PM**

Jack in the Box across the street from ARL Labs. Come by and eat dinner first if you like and listen in.

#### **Regular Business Meeting 7:00 PM**

**November 6th** - Bob Morgan will give a presentation on solar power.

### **2007 Upcoming Amateur Exams**

**ARRL VEC- November 3rd & December 1st** 9a.m. at LCRA Complex 3700 Lake Austin Blvd. \*\*\*See page 2 for location change. Contact Joe Makeever, W5HS (345-0800) or Joe Thiel, N5SMN (832-0450) for info. \$14 fee.

**W5YI VEC- November 17th & December 15th** 2p.m. in room 204, Moody Hall, St. Edwards University. Contact Jim Greenwood, AB5EK@arrl.net, (327-6184)

<http://texasparadise.com/w5yi-austin> for more info.

**\*\*\*\*\*DUES ARE NEARLY DUE!!!\*\*\*\*\***

Dues must be paid by April 15, to be included in the annual Roster. Contact Jerry Jackson (512) 832-5663 [jerry@gaj.com](mailto:jerry@gaj.com) or you can pay dues online at...

[www.austinhams.org/join](http://www.austinhams.org/join)

## **2007 Calendar of Events**

**10 Nov NCTECH Tri-County Amateur Radio Club of North Texas** Azle Lighthouse Conference Facility 404 West Main Street Azle, TX Talk-In: 147.16(+)  
110.9 David KB5YLG 817-507-9258 kb5ylg@arrl.net

[www.wc5c.org/](http://www.wc5c.org/)

**Dec 7 AARC Christmas Party & Radio RoundUp Hamfest Setup** Sons of Hermann Mixed Lodge #120 9611 Decker Lake Road Austin, TX 78724

[www.AustinHams.org](http://www.AustinHams.org)

**Dec 7-8 Austin Radio RoundUp Hamfest**

Sons of Hermann Mixed Lodge #120 9611 Decker Lake Road Austin, TX 78724

Winner of IC-7000 announced at the Hamfest!

[www.AustinHams.org](http://www.AustinHams.org)

Nov.	Dec.	Austin Meetings/Happenings
6	++	AARC Meeting ARL Auditorium** 7:00 p.m.
10	8	Austin QRP, Alvin's Sandwich Shop 11:00 a.m.
13	11	ARES Training -LCRA Hancock Bldg 6:30 p.m.
13	11	High Speed Multimedia SIG Red Cross 7:00 p.m.
20	18	ATV Club Mtg. Mangia Pizza 6:30 p.m.
17	15	QCWA Denny's on Burnet Rd. 2:00 p.m.
26	24	Travis Co. REACT Denny's on Burnet 7:00 p.m.
27	25	Travis County A.R.E.S., ARL Aud. 7:00 p.m.
28	26	Packet Set-up Lab @ Red Cross* 7:00 p.m.

++No meeting this month, Christmas Party/ Round Up See Page 6

\*\*AARC Business Meeting is at ARL Labs 10000 Burnet Rd.

Visitors are welcome whether they are licensed hams or not. Other meetings or activities are listed under the headings for Calendar.

*Return Service Requested*  
November 2007  
Austin, TX 78765-4739  
PO Box 4739  
Austin Amateur Radio Club  
AARCOVER