



KARS KEY KLICKS



JOURNAL OF THE KANKAKEE AREA RADIO SOCIETY

Volume 85 Issue 5

Editors: K9NR, K9QT
Photos: K9NR
Contributors: N9LYE, N9IO

May 2010

ARISS VIDEO FEATURED AT MAY MEETING

The next KARS meeting will be Tuesday, May 4th, 7PM at St. Mary's Hospital. After a short business meeting, there will be a program featuring the ARISS (Space Station) contact at Bradley Bourbonnais Community High School. Three years in the making, the BBCHS/International Space Station contact was a great success. KARS was the sponsoring club.

This will be a fascinating program about a great local event. Be sure to attend!



Rollie N9RJM hard at work on the KARS EMCOMM Trailer

KARS EMCOMM TRAILER SHAPING UP!

Bill N9OE, Rollie N9RJM and Don KC9QPM have been very busy doing some heavy duty remodeling of the KARS EMCOMM trailer. There was considerable hidden water damage requiring replacement of the floor and walls near the rear of the RV. After this problem is remedied, construction will begin in earnest on the operating positions...tables, benches, electrical distribution, antenna and ground distribution.

It's a lot of work and the crew has already put in a lot of sweat-equity for the cause. Thanks guys!

The trailer has been moved to Rollie's QTH for further work. If you hear them on the air, don't forget to volunteer to help! There is plenty to do...carpentry, electrical and just plain helping out.

Check out the pictures on page three.

LOCAL HAM CENSUS

A quick check of the FCC data base shows the following distribution of hams in Kankakee County:

Kankakee	68
Bradley	32
Bourbonnais	44
Momence	15
Manteno	19
Bonfield	09

There are many others located rurally and outside the above communities. ie: there are many hams in the Limestone area that are not included above. Of course, the nicest hams live in Kankakee County and the finest are KARS members!

KARS KALENDAR

May 1.....	Indiana QSO Party
May 4.....	KARS General Meeting
May 14-16.....	DAYTON HAMVENTION!!!
May 18.....	KARS Board Meeting
May 29-30.....	CQWW WPX CW
June 1.....	KARS General Meeting
June 5-6.....	ANARTS RTTY Contest
June 6.....	Starved Rock Hamfest
June 12-14.....	ARRL VHF QSO Party
June 15.....	KARS Board Meeting
June 20.....	6 Meter Club Hamfest
June 26.....	ARRL Field Day

The Kankakee Area Radio Society operates repeaters on:

146.34/.94 107.2 PL Access

449.8/444.8 114.8 PL Access

Also, co-sponsors:

145.130 107.2 PL Access

Additionally, KARS sponsors:

144.39 Wide Area APRS digi-peater

145.53 KARS DX Cluster

NEXT MONTH

Be sure to watch for the June issue of KARS Key Klicks. Ken W9YNI has written a great article on Internet based SDR receivers based around the world.

NCS FOR MAY

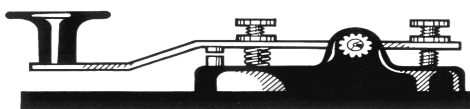
May 3	KC9FAV
May 10	N9LYE
May 17	KE9MG
May 24	N9FD
May 31	K9FO

The net meets every Monday at 2100 hours local time. All stations with or without traffic are invited to check in.

HAPPY BIRTHDAY

May 5	KC8JQX
May 6	KC9HHT
May 8	K9FO
May 9	W9QKF
May 13	KC9KBR
May 17	KC9MZL

If we miss your birthday or get it wrong, please let us know!



W9AZ

Don't forget the net!

See you at the Dayton Hamvention!

KARS HOMEPAGE—WWW.W9AZ.COM—KARS HOMEPAGE

PARALLEL PORT KEYING

By John N9LYE

In one of my previous articles, I wrote about how to turn on the Parallel port of a computer using Windows XP Pro. This seemed to be the end of the problem. But as I was helping a fellow Ham build the interface between the port and his rig, several things about this simple transistor and resistor circuit concerned me. The more I looked, the louder the warning bells in my head began to ring. So, I decided to share my concerns with some of my learned friends who are extremely knowledgeable in port hardware architecture. From the four corners of the Earth, we assembled online to share thoughts and ideas. This spirited discussion raged on till the early morning hours! Finally after several days, and numerous e-mails back and forth, we came up with several options. In Part 1, I will share some of our findings.

Let's have a look at the original circuit. Figure 1 illustrates what everyone has been using for years to key the CW jack on most modern rigs that use negative going keying. As you can see from the red arrows, the current flow is from the shell of the plug into Pin 18, out thru Pin 1, then on thru the transistor on its way to the tip of the plug. In Theory, this should work fine.

Then Reality pays us a visit. The ability of Pins 1 and 18 to sink current flow varies widely from laptops to desktops (Note 1). This ranges from as little as 5 milliamps to as much as 20 milliamps. Depending on the make and model of the rig being keyed, the ratings of the port might be exceeded far beyond its design limits. Modern solid-state rigs vary in range from 3.5 volts up to 13 volts across the CW jack and there are several older rigs that could present plate voltage (cathode keying) across the same jack. If George Ohm is right, the transition to a higher voltage means higher current if resistance stays the same. I would prefer not to test his theory in this situation. Besides, Gustav Kirchhoff already did decades ago.

Here are a few suggestions for you to consider. In Figure 2, a diode is placed between pin 18 and the emitter of the transistor. Most of the current now flows thru the diode to the transistor. This effectively reduces the amount of current passing thru the port while retaining the path to ground (Note 2). The port only has to switch the amount of current needed to forward bias the transistor (Note 3). However it was noted that certain types of computers would inadvertently key the line when rebooted or after sitting idle for long periods of time. This was not an issue with the original circuit. The next idea permitted other types of keying to be used. By adding a reed relay and an external 12 volt source, different types of keying like positive pulse, grid block and cathode keying can be used (Fig. 3). The reed relay was chosen because of its low current draw and is commonly available. To further reduce the amount of current thru the port, a 6-volt relay may be used. The 12-volt source may sometimes be available at the accessory jack of the radio.

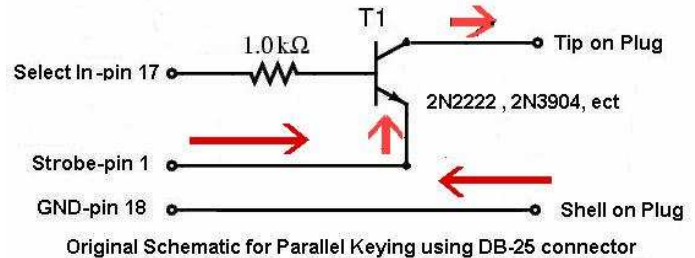


Figure 1

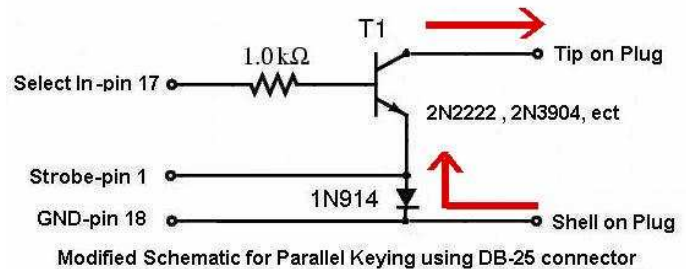


Figure 2

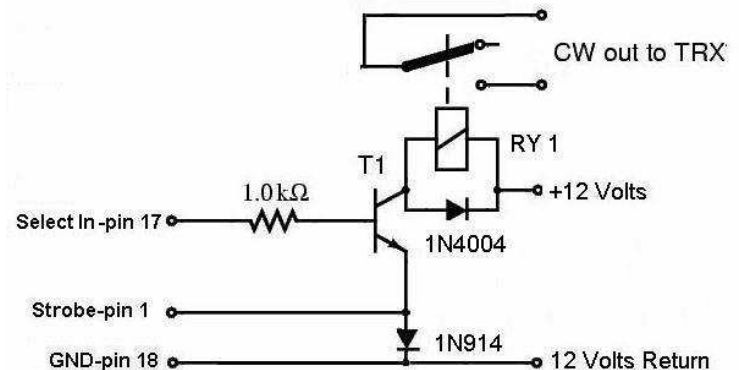


Figure 3

This will eliminate the need for another power supply when using a 12-volt relay. In the case of the 6-volt relay, an 8-volt source may be used due to the voltage drop thru the diode and transistor.

This is just the start of many ideas that came to me. In Part 2, I will cover the use of positive keying and optocouplers. There are still a few ideas being worked on while my friend Erik down in Champaign and I work on the port timing issues. Hopefully we will have these resolved before the end of the month. Stay tuned...

Ref:

Note 1: <http://www.beyondlogic.org/spp/parallel.htm>

Note 2: Pin 18 is actually a Strobe/Signal Ground.

http://www.interfacebus.com/Design_Connector_Parallel_PC_Port.html

Note 3: Approx. 5 ma current draw using a 1 K ohm resistor.

KARS HOMEPAGE— **WWW.W9AZ.COM** —KARS HOMEPAGE

More great photos of KARS members doing what they do best...have fun!

THE KARS EMCOMM TRAILER



Bathroom before removal

Kitchen and sleeping areas before removal

Kitchen before removal



Rear inside view with bathroom area removed and water damage issues being addressed

Close-up view of the bathroom floor area being replaced

Kitchen & sleeping areas removed and opened up for operating positions

KARS EMAIL REFLECTOR

An e-mail reflector "list" has been created to serve the purpose of better communications among the KARS membership and our friends. Around 35 of you have already subscribed, those 35 will be among the very first to receive e-mail announcing this newsletter.

Please subscribe today.

Send an e-mail to the web master at webmaster@w9az.com

I will send you the simple details asap. 73' from the web master, Clay N9IO

NEWSLETTER ARTICLES

If you haven't written a newsletter article lately then now is the time! Just a paragraph or two about something that interests you in ham radio or related computing. Larger articles are welcome also. Pictures are great (jpg) but not absolutely necessary.

The preferred format is MS Word as an email attachment. However, a text file works also. When you include your article as part of the body of an email rather than an attachment, we sometimes have difficulty with embedded control characters and other formatting quirks.

So please make it an attachment.

We generally use Arial font, size 10 but we can convert anything you send. Don't worry about sentence structure, grammar, etc, we'll be very appreciative of any of your efforts!

NEW MEMBER

Be sure to welcome KARS newest member...Doug Schnell KC9LTW