



The Illuminator



The monthly newsletter of the Carbon Amateur Radio Club

March 2002

March Meeting

The next regular meeting of the Carbon Amateur Radio Club will be held on Thursday, March 21, at 7:30 p.m. at the Emergency Operations Center in Nesquehoning. See you there!



2002 CARC Membership Dues

Yes, 2002 Carbon Amateur Radio Club membership dues are being collected. Just \$15 buys you membership in this august group for all of calendar year 2002! Please get your membership dues in as soon as possible. A membership application may be found on page 5 of this newsletter.

Traditionally, if dues are not received by April 1, you are dropped from the membership roster and you stop receiving this newsletter. Don't let this happen to you!



ARRL DX Bulletin

DX Bulletin 9 ARLD009
From ARRL Headquarters
Newington CT February 28, 2002
To all radio amateurs

This week's bulletin was made possible with information provided by Tedd, KB8NW, the OPDX Bulletin, QRZ DX, LU3DR, The Daily DX, KD2DL, WA7BNM and Contest Corral from QST. Thanks to all.

VIETNAM, 3W. Conny, DL1DA is QRV as 3W9KCS until March 15. Activity is on 40 to 10 meters using

CW. Since he is here on holiday, activity may be limited. QSL to home call.

JUAN FERNANDEZ ISLANDS, CE0. Eliazar, CE0ZIS has been QRV on 10 meters using SSB around 1900z.

CUBA, CO. Don, VE3ESE and operators from the University of Oriente ARC will participate in the ARRL DX Phone contest as T48RAC. QSL via VE3ESE.

FRENCH GUIANA, FY. Laurent, F6FVY and others will be QRV as FY5KE as a Multi/Single entry in the ARRL DX Phone contest. QSL via operators' instructions.

GUANTANAMO BAY, KG4. Vance, N5VL will be active as KG4VL from March 1 to 6. This includes an entry in the ARRL DX Phone contest. Look for some 160 meters operations using CW and SSB. QSL to home call.

US VIRGIN ISLANDS, KP2. Tony, N2TK is active as N2TK/NP2 from St. Croix, IOTA NA-106, until March 7. QSL to home call. He will be QRV in the ARRL DX Phone contest as WP2Z. QSL via KU9C.

SOUTH ORKNEY ISLAND. Claudio, LU1ZA has been QRV using RTTY on 15 meters around 0700z and then on 20 meters around 0930z. QSL via LU4DXU.

ARGENTINA, LU. The Radio Club Tandil will be QRV as LR7E using QRP during the ARRL DX Phone contest. Activity will be on 40 to 10 meters. QSL via LU2EE.

PERU, OA. Olli, OH0XX will be QRV from the OA4O club station during the ARRL DX Phone contest. QSL via operator's instructions.

ST. MAARTEN, PJ7. Bert, PA3GIO will be QRV as PJ7/PA3GIO/m from March 5 to 6. Activity will be on

20, 17, 15, 12 and 10 meters using SSB. QSL to home call. Meanwhile, Brian, KD2DL will be QRV as PJ7/KD2DL from March 2 to 9. Activity will be around 18080 kHz using QRP equipment. QSL to home call.

ANTARCTICA. Mike, RW1AI is QRV as RW1AI/ANT and has begun activities from Vostok Base, IOTA AN-016. QSL to home call. Mike also plans on being QRV with Alan, UA1PAC during the ARRL DX Phone contest using the club call R1ANC. QSL via DL5EBE.

BELIZE, V3. Walt, W0CP and Jim, W1LLU are QRV as V31JR until March 8. They will be active in the ARRL DX Phone contest as V31DJ. QSL both calls via W1LLU.

SOUTH GEORGIA ISLAND. Mike, GM0HCQ hopes to be QRV as VP8SGK from March 4 to 6. QSL via operator's instructions.

CHAGOS ISLANDS, VQ9. Mel, W3MR is QRV as VQ9MR from Diego Garcia, IOTA AF-006, until March 7. This includes an entry in the ARRL DX Phone contest. QSL to home call.

VANUATU, YJ. Michel, F6COW and Dominique, F6EPY will be QRV from the island Efate and Espirito Santo, IOTA OC-035, as YJ0AOW and YJ0APY, respectively, from March 4 to 15. Activity will be on 80 to 6 meters, including the newer bands, using CW and SSB. QSL to home calls.

QSL MANAGER CORRECTIONS. As reported in DX Bulletin ARLD008, the CORRECT QSL Manager for P40A is WD9DZV. The CORRECT QSL Manager for 7Z1AC is WA4JTK, direct only.



ARRL Propagation Forecast Bulletin

Propagation Forecast Bulletin 8 ARLP008
From Tad Cook, K7VVV
Seattle, WA February 22, 2002
To all radio amateurs

Average daily sunspot numbers and solar flux were both down this week. Fortunately, geomagnetic indices were low as well. The average daily planetary A index dropped from 10 to 6. This contrasts with last week's warning of possible

geomagnetic activity for the weekend, although the bulletin did hedge a bit, stating effects could miss earth and conditions turn out mild, which they did. The result was very good conditions for the contest weekend.

Last week's bulletin suggested a rising solar flux toward the 240-245 level around February 24-28, but the latest projection shows flux values around 200 for the next few days, gradually declining toward 180 around March 6. There isn't much visible sunspot activity, and holographic images show nothing substantial on the sun's far side.

Geomagnetic conditions could become unstable by Saturday with a planetary A index around 20. This is because of a coronal mass ejection that left the sun on February 20, erupting from sunspot 9825. This area is right at the northwestern edge of the visible solar disk, so any effect on earth is uncertain.

Check out this interesting set of links from the Solar Physics Department at the Royal Observatory of Belgium. The URL is <http://sidc.oma.be/html/ClickMaps.html>, and the department's home page is <http://sol.oma.be/homepage.php3>.

Sunspot numbers for February 14 through 20 were 209, 156, 134, 121, 103, 130 and 157 with a mean of 144.3. 10.7 cm flux was 196.1, 195, 193.5, 196.6, 192.8, 189.4 and 193.4, with a mean of 193.8, and estimated planetary A indices were 4, 4, 5, 8, 9, 4 and 8 with a mean of 6.



GYT Special Icom Interface

By Bob Schreibmaier K3PH

There's nothing like computerized logging in a contest. No question about it – CT has revolutionized contesting. However, my brain tends not to work in contests. Consequently, at least once every contest, I manage to change the bandswitch on the IC-765 but not on the computer, or vice versa. Now, I could interconnect the computer and the rig using ICOM's CT-17 CI-V level converter. However, the latest Ham Radio Outlet catalog lists it for \$130 and I'm cheaper than Jack Benny. So, I set out to build the simplest (i.e., cheapest) RS-232 to CI-V level converter I could.

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I've seen circuits designed to perform this conversion built around the MAX232 integrated circuit. This is a very cleverly designed IC that uses charge storage to generate both positive- and negative-going output voltages while using only a single-ended power supply. At first glance, it seems like exactly what you need for an RS-232 to CI-V level (TTL-compatible) converter! It's overkill.

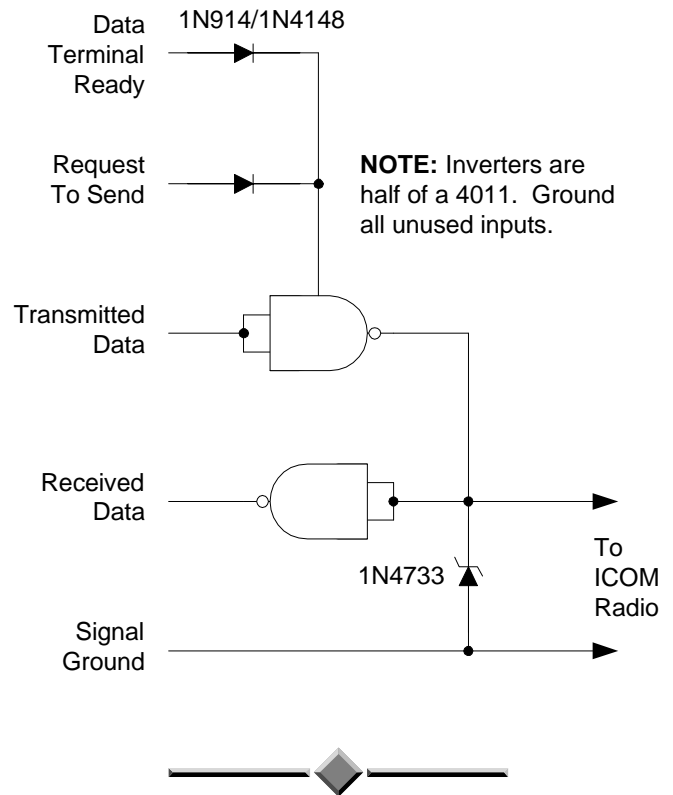
Here's why:

- The 1488 quad RS-232 driver IC and 1489 quad RS-232 receiver IC or their equivalent functionality are practically ubiquitous in personal computers today.
- The 1489 switches states at about 1.5 or 2.25 volts, depending on whether it's a 1489 or 1489A, and operates from a single-ended supply. It's already TTL compatible.
- Most driver ICs have an output resistance that limits the current the driver can produce. This current limiting means that TTL-compatible levels can be safely achieved by simply swamping the output with a 5.1-volt Zener diode.

The attached figure shows the circuit that I use. It is built around half of a CMOS 4011 quad NAND gate, a 5.1-volt 1N4733 Zener diode, and a couple of 1N914/1N4148 silicon diodes. CT (and other programs) thoughtfully turn both the Data Terminal Ready (DTR) and Request to Send (RTS) signals high on the serial interface, so power is stolen from those leads. The two inverters and the Zener diode are wired to form a TTL-compatible data bus and the silicon diodes provide polarity protection for stealing power for the 4011 from the PC. Unused inputs on the 4011 are grounded. That's all there is to it!

My original circuit was built on half a predrilled dual IC board (Radio Shack 276-159). Just to be safe, I used a 14-pin IC socket (RS 276-1999). I housed the entire circuit in a 2.75 by 2.13 by 1.63 inch aluminum P-box enclosure with LOTS of room to spare. When I got better at packing things in, I built one inside a 25-pin D connector hood. Here are the pinouts for the RS-232 leads used:

RS-232 Circuit	25-pin Connector	9-pin Connector
Transmitted Data	2	3
Received Data	3	2
Data Terminal Ready	20	4
Request to Send	4	7
Signal Ground	7	5



Check out <http://incolor.inetnebr.com/n0ujr> for other cartoons and to purchase N0UJR's book, "N0UJR and His Friends."

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This page intentionally left open for **YOUR** article!



Carbon Amateur Radio Club 2002 Membership Application Form

Please complete this form and send to the Carbon Amateur Radio Club, P. O. Box 622, Lehighton, PA 18235-0622, or drop it off at the monthly CARC Meeting, at the Carbon County EMA Center, Route 93. The meeting is on the third Thursday of each month at 7:30 PM.

Callsign _____ Name _____

Address _____

City _____ State _____ Zip Code _____

Phone Number _____ Check if unlisted

Email address _____ URL _____

Check if ARRL Member

Membership (check one): Full (\$15.00) _____ Associate (\$10.00) _____
Additional family member (\$5.00, up to a maximum of \$25.00 per family) _____

I would like to receive the Newsletter via (check one): Postal Mail Web

Check here if you would like to be subscribed to the CARC Email Reflector _____
(Requires email address above. Do not check if you are currently subscribed to the reflector)

What are your interests in ham radio? _____

What activities would you like to see at CARC this year? _____

I'm interested in (check all that apply): Newsletter Writing Tee Shirts Coats

Foxhunting Special Events Station RACES QRP DX Contests

Carbon Amateur Radio Club – 2001-2002 Officers

President: Anthony "Goody" Good, K3NG, goody@fast.net
Vice President: Rob Roomberg, KB3BYT, roomberg@ptd.net
Secretary: Larry Lilly, N3CR, ka3afy@ptd.net
Treasurer: John Schreibmaier, W3MF, w3mf@ptd.net
W3HA Callsign Trustee: Bill Dale, WY3K
W3HA Repeater Trustee: John Bednar, K3CT
Public Information Officer: Bill Kelley, KA3UKL

Directors

Bob Schreibmaier, K3PH, John Bednar, K3CT, Bert Rex, W3OWP

Illuminator Staff

Editor: Bob, K3PH k3ph@dxis.monroe.pa.us
DX: Bob, K3PH
Foxhunting: open

Propagation and Commentary: Larry, N3CR ka3afy@ptd.net
Newsletter Printing, Folding, and Mailing: Bob, K3PH

Services

W3HA Repeater: 147.255 Mhz + PL 131.8

CARC Website: <http://www.cpals.com/~elitehom/carc/>
Webmaster: Rob, KB3BYT roomberg@ptd.net

CARC Email Reflector: see www.qth.net CarbonARC list for details

CARC Membership Information

Regular Membership is \$15.00, which includes autopatch privileges.

All amateur radio operators are invited to join the CARC ARES / RACES net held 2:00 local time every Wednesday on the W3HA repeater at 147.255 MHz + offset, PL 131.8. Any amateur radio operator or anyone with an interest in ham radio is welcome to attend our monthly meetings which occur the third Thursday of each month at 7:30 PM at the Carbon County EMA Center on Route 93 in Nesquehoning.

Carbon Amateur Radio Club
C/O Bob Schreibmaier K3PH
P. O. Box 166
Kresgeville, PA 18333-0166