FEEDBACK

THE OFFICIAL NEWSLETTER OF THE

GEORGIAN BAY AMATEUR RADIO CLUB INC.

MAY 1995

Sponsoring

VE3OSR FM REPEATER	146.940-	Mhz	BARROW BAY
VE3OST FM REPEATER	145.290-	Mhz	OWEN SOUND
VE3GBT FM REPEATER	146.895-	Mhz	MARKDALE
VE3IJD PACKET BBS	145.630	Mhz	KEADY

REGULAR EVENTS

GBARC MEETINGS:
FOURTH TUESDAY OF EACH MONTH

NETS:
SUNDAY 9:30 A.M 3.783 MHZ
THURSDAY 8:00 P.M. 2 MTR

BREAKFAST MEETINGS:
SECOND AND LAST SATURDAY OF EACH MONTH , 9:30 A.M. ROCKFORD

GBARC INFORMATION:
INFORMATION REGARDING MEMBERSHIP SHOULD BE DIRECTED TO TOM VE3NEM 519-371-9499

Minutes of the meeting of April 25, 1995:

Jim VE3OVV, emergency coordinator of Bruce County, spoke to us about ARES. Steve VE3XKM volunteered to be an assistant emergency coordinator. Jim runs an ARES net on the second Monday of each month at 7:00pm on packet, at 8:00pm on VE3TIV (146.61-) and at 9:00pm on 3737khz..

The business part of the meeting was opened by president Ken with 29 members and visitors present. Gene VE3IJD moved we accept the minutes of the last meeting as printed, Jack VE3DTS seconded.

Gene was presented with his Ham of the Year trophy.

Bob VE3XOX asked for volunteers to help out at the fleamarket, a number of members signed up. A letter was received from Ian VE4IST inviting GBAC members to visit him if they are in Winnipeg.

Gene explained the Packet Users Group motion he made last month. The motion was changed the administrator will be a GBARC member appointed by the GBARC executive and not necessarily the vice president. It will also be added that no one will be locked out of the BBS if they get behind in paying the users fee. A vote was held and the motion passed.

Larry VE3MTG and Richard VE3WUD will be contacting all of the members to get nominations for next years GBARC executive.

The treasurer has mentioned that the 50/50 draws don't quite cover the cost of the room, various solutions were sugested but it was decided that the club would pay the shortfall out of general funds.

Field day will be at Gene VE3IJD place near Keady, Brad VE3RHJ moved we spend up to $500.00 on a tent, porta-poty and food, John VE3TXB seconded, there was no one opposed. The 50/50 draw was won by Ian VE3HXX
Minutes by.....NICK...VE3MWU

Guides On The Air (G.O.T.A.)

On Saturday Feb. 18th, the Girl Guides went on the Ham bands to make contact with other Girl Guide troops. They organized their weekend to coincide with Guides' Thinking Day.

Our local guides, the 9th Owen Sound Guides, met at the home of Bob VE3LKD in two groups of six with their leader Jane Streun. Gene VE3IJD, his XYL Randy, as well as Bob's XYL Linda, were there to give a hand. The guides were given an introduction to the Ham phonetic alphabet so they could understand all the "Victor Echo" talk. They enjoyed the practice of spelling their own names phonetically. Next they got a quick overview of Q codes, call sign prefixes and Zulu time.

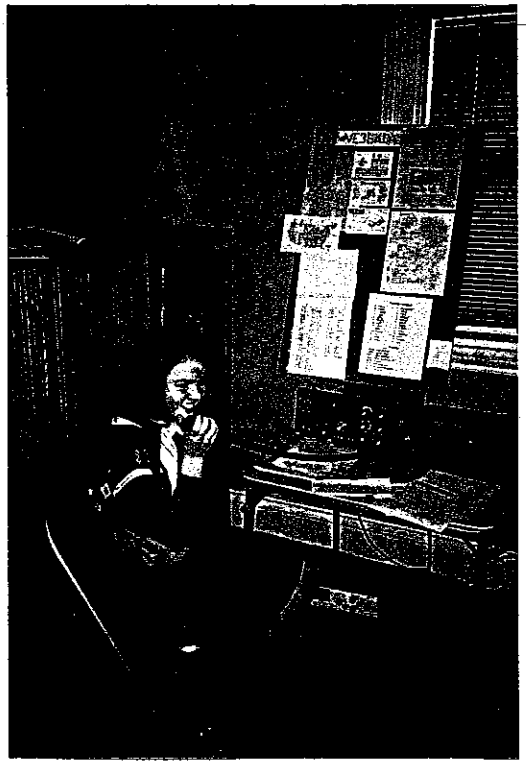
When they finally got on the air, the first QSO was a short one with VE1JIM on 40m which QSB'ed out pretty quickly. The next QSO was with Peter VE3PPD in Brockville, who was with a local Girl Guide troop at a Radio Shack store in a mall. After introductions, the mike was handed over to the girls who then traded information about themselves and their Guiding activities. Twenty-five minutes later VE3PPD had run out of Guides so we exchanged 73's and went back to scanning the bands.

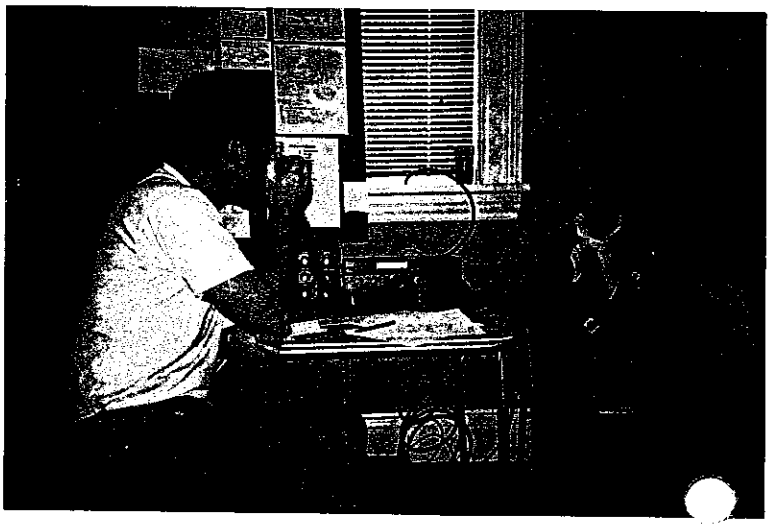
It wasn't long before we heard a "CQ CQ CQ, Guides On The Air" from VE4GGC (GGC is the callsign for Girl Guides of Canada). VE4GGC was operating out of the Winnipeg Senior Citizens' Centre. Our QSO with VE4GGC was similar to the earlier one but by now our Guides were less mike-shy. Our old friend Ian, who is now in Winnipeg, was not participating in this event. I guess he's too young to be hanging our at a Senior Citizens' Centre.

The last CQ we tried to answer was for a VE7 station, but conditions weren't good enough to even exchange call signs successfully. In total, the day was a succcess. The Guides got an appreciation for some of the Ham radio procedures, customs and lingo. They got a taste of good propagation and a feel for the frustration of unsuccessful QSO's. It was satisfying to see activity from coast to coast in Canada but a little disappointing not to work any DX.

A few weeks after that weekend, Bob was surprised when he received his first Girl Guide badge, an honorary G.O.T.A. badge, from the 9th troop. Let's hope for even better band conditions next year if the Guides ask us to participate again.

73.....de Bob VE3LKD

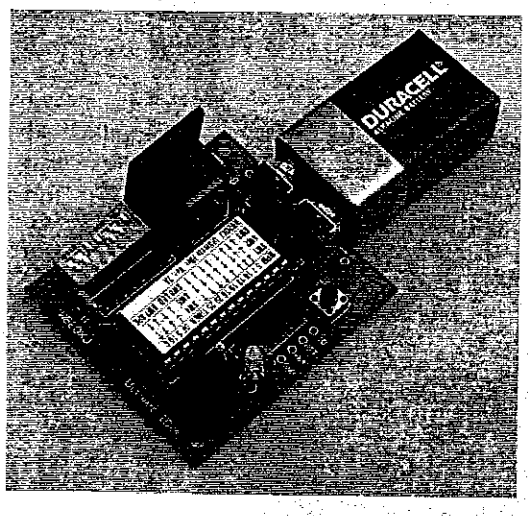




A User-Programmable IDer

This flexible, feature-packed IDer was designed with *you* in mind!

By Robert Silva, WB2OXJ
341 Wicomico Rd
Stevensville, MD 21666



Although there have been many CW identifiers (IDers) featured in the ham magazines over the last few years, those I've seen require the ID message to be programmed into PROM by the author/designer and make it difficult (or impossible) for the user to reprogram. This IDer is different. Its message is stored in a serial EEPROM, which means *you* can program the IDer. No fancy equipment is required. To change the message, all you need is something you probably already have in the shack: a PC-AT-compatible keyboard. (If you don't have one, check with your neighbor's kid.) I dubbed this project the WB2OXJ Ultimate IDer.

Description

At the heart of the IDer is a Microchip MTA81010, known as the PICSEE. The PICSEE (a trademarked name) is identified by the manufacturer as a "28-pin MCU with Serial EEPROM Multi-Chip Module." I chose the PICSEE because it contains—in one IC—an 8-bit high-performance PROM-based microcontroller and a 1024-bit serial EEPROM. The IDer's program occupies nearly the entire 512-byte PROM. A user-entered message (of up to 127 characters) is stored in the 1024-bit serial EEPROM. Reprogramming the serial EEPROM will eventually wear it out, but it can be programmed a minimum of 100,000 times. (Please—let me know when you wear out the EEPROM under average use...)

A compact 2 1/4×2 1/8-inch PC board[1] contains all of the IDer's parts except for a power supply. As the title photo shows, that can consist of a common 9-V battery attached directly to the board by means of the board-mounted snap-on connectors.

Description and Operation

Refer to Figure 1. Power is applied to the IDer through the on-board 9-V battery terminals or the adjacent PC-board solder terminals. The supply voltage can range from 7.5 to 20 V. D1 provides reverse-polarity protection and an on-board 78L05 voltage regulator (U2) delivers the necessary 5 V to feed the IDer and AT compatible keyboard. If the switches for the LED (S1-6) and piezo speaker (S1-7) are off, the IDer's current consumption is a mere 3.5 mA. The dual-colored LED (DS1) and piezo speaker (LS1) are normally on, but if battery operation is required, they can be turned off to prolong battery life.

S1-4 and S1-5 control the timer functions. The timer is off if S1-4 and S1-5 are both off. The IDer plays its message only if the **PLAY/PROGRAM** button is pressed, or the ID terminal is grounded. When the timer is off, the IDer spends some of its time in sleep mode, reducing its current requirement from 3.5 mA to 2.5 mA. If S1-4 and S1-5 are both on, the IDer continuously plays the message. When S1-4/S1-5 are off/on or on/off, the 5 or 10-minute timer is selected. These timers cause the IDer to play its message every 5 or 10

[1]Parts are available from the author (410-643-1581) and from Maryland Radio Center, 8576 Laureldale Dr, Laurel, MD 20724, tel 800-447-7489, 301-725-1212. A complete kit (PC board and PC-board-mounted parts), $30; PC board (double-sided, masked and silk-screened), $8; MTA81010 IC programmed and tested, $12; piezo transducer, $1.50. Shipping and handling for orders from the US, Canada and Mexico, add $4; overseas orders add $8.

Table 2
S1 Control Settings

WPM	*5*	*7.5*	*10*	*13*	*15*	*18*	*20*	*25*
S1-1	off	off	off	off	on	on	on	on
S1-2	off	off	on	on	off	off	on	on
S1-3	off	on	off	on	off	on	off	on

TIMER	*OFF*	*5 Min*	*10 Min*	*Continuous*
S1-4	off	off	on	on
S1-5	off	on	off	on

S1-6—DS1 on/off
S1-7—Speaker on/off

PC-Board Connections

ID—A momentary ground on this terminal causes the IDer to play its message; same as pressing the **PLAY/PROGRAM** pushbutton.

PTT—An open-collector output which goes to ground 250 ms before the CW output occurs. This output is used to place radio in transmit mode and is monitored by the red LED.

KEY—An open-collector output that goes to ground during CW keying. This output is monitored by the speaker and the yellow LED.

Table 1
PICSEE I/O Control Line Use

Port	*Direction*	*Use*
RA0	output	Piezo speaker
RA1	output	Key
RA2	output	PTT
RA3	input	Pushbutton / ID
RB0	output	Serial EEPROM clock
RB1	input/output	Serial EEPROM data
RB2	input	wpm select
RB3	input	wpm select
RB4	input	Keyboard clock
RB5	input	Keyboard data
RB6	input	Timer select
RB7	input	Timer select
RTCC	counter input	wpm select

minutes. If the **PLAY/PROGRAM** button is pressed, an ID input occurs, or the timer times out, the message plays, then resets the timer.

The timer's period is measured from the end of the last message played to the start of the next message. S1-1, S1-2, and S1-3 select the speed at which the CW message is sent. The eight available speeds are 5, 7.5, 10, 13, 15, 18, 20 and 25 wpm. Sound is produced by a piezo speaker that is controlled by S1-7. The speaker is driven by a square wave with a frequency of approximately 600 Hz. The square-wave harmonics give the sound a higher pitch than normal because the speaker's response at 600 Hz is poor. Like most piezo speakers, the one I use is non-

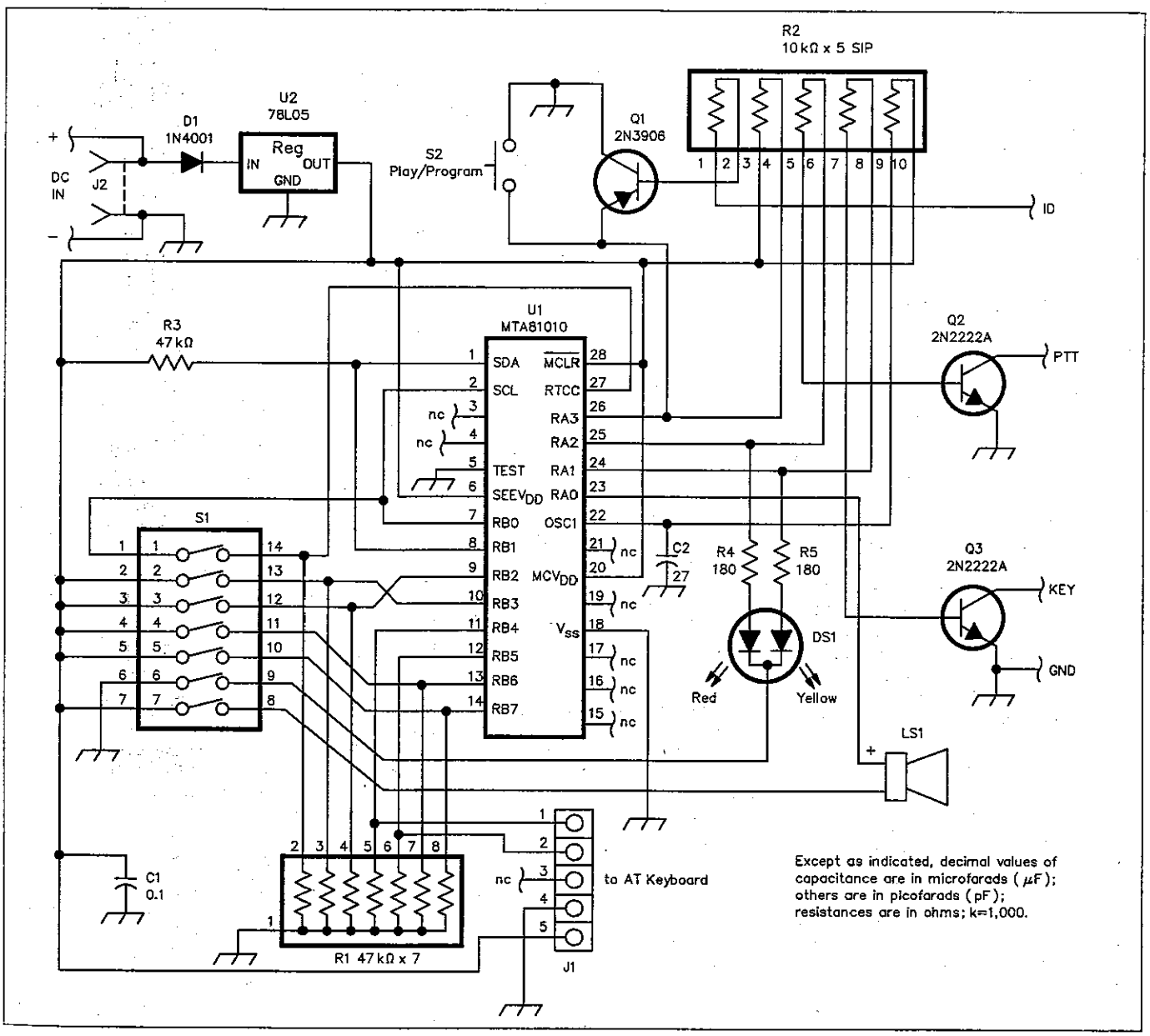


Figure 1—Schematic of the WB2OXJ Ultimate IDer. All resistors are 1/8-W, 5%-tolerance carbon-composition or film units. Equivalent parts can be substituted. Part numbers in parentheses are Digi-Key (701 Brooks Ave S, PO Box 677, Thief River Falls, MN 56701-0677, tel 800-344-4539, 218-681-6674, fax 218-681-3880).

C1—0.1 μF, 25 V (P4887-ND)
C2—27 pF, 25 V (P4842-ND)
DS1—Two-colored LED, red/yellow (P509-ND)
J1—5-pin standard-size DIN PC-board-mount female socket (CP-2350-ND)
J2—PC-board-mount 9-V battery clips (male, BSPCM-ND; female, BSPCF-ND)
LS1—Piezo speaker (available from the author; see Note 1)
Q1—2N3906 (2N3906-ND)
Q2, Q3—2N2222A or PN2222A (PN2222A-ND)
R1—47 kΩ 7-resistor common-terminal SIP (Q7473-ND)
R2—10 kΩ 5-resistor isolated-terminator SIP (Q6103-ND)
S1—7-position SPST DIP switch (CT2067-ND)
S2—Miniature SPST pushbutton (P8011S-ND)
U1—Microchip PICSEE MTA81010 serial EEPROM, see Note 1 (MTA81010-RC-P-ND)
U2—78L05, positive 5-V, 100-mA regulator (AN78L05-ND)

IDer Specifications
Supply voltage: 7.5 to 20 V dc
Current requirements with LED, speaker and timer off: 2.5 mA
Current requirements with LED, speaker off and timer on: 3.5 mA
(When on, each LED draws 17 mA; the speaker draws 15 mA)
PTT and KEY outputs off: <40 V; on: <500 mA
CW speed: 5 to 25 wpm
Audio tone: square wave, approximately 600 Hz
Size: 2 1/4 x 2 1/8 inches

polarized, but has polarity markings to indicate phasing. For some reason, the piezo-speaker volume is louder when the positive (+) terminal is connected to the microcontroller port and the negative (–) lead to +5 V. The bicolored LED (DS1) is controlled by S1-6 and monitors the **PTT** and **KEY** outputs.

I chose to use red for the **PTT** and yellow for the **KEY** indicators because yellow is more dominant than red. (Actually, the LED I used is sold as green and orange, but looks red and yellow.) The **PTT** and **KEY** outputs each use a 2N2222A (Q2 and Q3). In its off state, the 2N2222A can handle up to 40 V on its collector and can sink 500 mA when saturated. In an RF environment, it's a good idea to bypass all the input and outputs leads connected to the IDer with 0.01-µF capacitors and house the IDer in a metal enclosure.

Using the PICSEE

The microcontroller's clock runs at approximately 1.57 MHz. This frequency is determined by the RC network on pin 22 of U1 that consists of a 27-pF capacitor (C2) to ground and a 10-kΩ resistor to +5 V. U1 has 12 input/output (I/O) ports; how they're used is shown in Table 1. These I/O control lines are software selectable to act as inputs or outputs. The lines are arranged so that Port A has 4 I/Os: RAØ through RA3. Port B has 8 I/O lines: RBØ through RB7.

The IDer needs 13 input/output lines, but the PICSEE has only 12. Here's how the real time clock counter (RTCC) input is used to detect if the S1 speed-select switch is open or closed. The RTCC input is used as a counter. First, the RTCC count is cleared, then the serial EEPROM's clock is toggled. Only if S1 is closed will the RTCC input see the clock signal and increment its count. Then the RTCC register is tested for a zero state. If the RTCC register is 0, S1-1 is open; a 1 means S1-1 is closed.

Programming a Message

Programming the IDer is easy. Simply plug an AT-compatible keyboard into the 5-pin DIN keyboard jack. (If your keyboard uses a 6-pin mini-DIN connector, you'll need a readily available adapter.) Press pushbutton S2 (**PLAY/PROGRAM**) and hold it closed for more than two seconds. If speaker switch S1-7 is on, you'll hear a beep. You're now in program mode. If you hear a low-pitched beep when you release S2, that means no keyboard was detected and you're returned to play mode.

Once in program mode, key in your message. (In program mode, the **PTT** and **KEY** outputs are disabled.) With each typed character, the IDer's sidetone plays the corresponding CW character at 20 wpm. If you enter an incorrect character, use the backspace key to erase it and retype. When you've completed your message, press the **Enter** or **Escape** key.

A few CW prosigns are available and are entered by using the function keys: **F1** = $\overline{SK}$, **F2**= $\overline{AR}$, **F3** = $\overline{AS}$, **F4** = $\overline{BK}$ and **F5** = $\overline{BT}$. Since the **Shift** keys are disabled, use the tilde (~) key to enter a question mark (?), and the opening square bracket ([ ) key to enter a colon (:).

Battery Life Considerations

With the keyboard LEDs off, some AT-compatible keyboards draw only about 2 mA, but most draw about 40 mA. Battery operation was not intended for programming the IDer unless a low-power keyboard is used. Although you can use a battery while programming with the 40-mA keyboards, shortened battery life is the result. When programming the IDer using battery power, make the session quick and unplug the keyboard when you're finished.

Summary

To play the IDer's message once, press the **PLAY/PROGRAM** pushbutton or momentarily ground the **ID** terminal. To continuously play a message, switch on S1-4 and S1-5. To play a message every 5 or 10 minutes, selectively turn on S1-4 or S1-5 (see Table 2). S1-1, S1-2 and S1-3 select the playback speed (see Table 1). S1-6 turns on the LED that monitors both the **PTT** and the **KEY** output. S1-7 turns on the speaker.

I developed this IDer because of a need for an easily programmable unit. Using a PC keyboard was about the easiest method I could think of! In addition to its use with repeaters, this unit is ideal for transmitter hunts and amateur balloon tracking. The special call or suffix can be changed easily for that special event. There's even room for a short message, since the serial EEPROM holds 127 characters (127 characters plus 1 end-of-text character fills the 128-byte-size SEEPROM.

I'm sure you'll find this versatile unit handy. If you have any questions about it, I'll be glad to QSO on the twisted pair at 410-643-1581.

Bob Silva has been a ham for 25 years. He is currently self-employed as an electronic circuit designer. Bob obtained his BET from the University of Central Florida in 1981. QST

OWEN SOUND FLEA MARKET

JUNE 10, 1995 OWEN SOUND, ONT. VENDORS ...DOORS OPEN AT 8 AM PUBLIC ...DOORS AT 9 AM GIVES YOU A CHANCE TO SLEEP A BIT LONGER! CONTACT ME "BOB" AT 519-376-8060 FOR BOOKING OF TABLES... DONT LEAVE TILL THE END....WE HAVE TABLES BOOKED ALREADY... IF YOU ARE INTERESTED IN HEADING THIS WAY ... ZAP ME A PACKET TO GIVE US A IDEA HOW MUCH FREE COFFEE WE ARE GOING TO HAVE ON HAND...HI IF INTERESTED IN TABLE SEND ME A NOTE AND WE WILL WRITE YOU DOWN IN THE BOOK FOR THE TABLE.... TABLES ARE 7.50 AND THAT INCLUDES ONE ADMISSION TO THE MARKET AND FREE COFFEE..... DOOR ADMISSION IS 2.00 DOLLARS PER ADULT... KIDS UNDER 13 ARE FREE ADMISSION.... HOPE TO HEAR FROM YOU.... 73

QSL QSL QSL QSL QSL QSL QSL QSL QSL

It's hard to believe, I know, but another year has rolled around and I am once again inviting you to attend the famous, annual OLD TYME RADIO OPERATORS REUNION at Orillia.
It's our 28th!
This year's shindig will be held as usual, on the third Thursday in the month of June, in other words on June 15th, 1995.
Also as usual , we will meet in Couchiching Beach Park near the popular Champlain monument at 2.00 p.m.

There is a comfortable roofed-over picnic shelter in the park should we experience a summer shower during the enjoyable two-hour eyeball QSO's that take place every year.
Then about 4:00 p.m. it's off to the famous Sundial for a sumptuous repast in the legendary Saturn Room. The bar will open at 4:15-5:15 after which you will be too busy eating delicious food to notice that it closed.
We will have lots of draw prizes so bring all your good luck charms.
Now for some good news. Because of a surplus of funds from last year we are able to reduce the cost to $17.50 a head, down a buck from previous years. As usual, parking is free.

Make cheques payable to Ken Robertson, and NOT, please, to the Orillia Amateur Radio Club. Send them to me at R.R. 1, Victoria Harbour,Ont., L0K 2A0.
See you at the party.

Ken -- VE3 ERS.

IF YOU WOULD LIKE MORE INFORMATION ON THIS PLEASE CONTACT JACK AVIS, VE3DTS

Wiarton, Ontario, Thursday, June 27, 1974

Radio field day at Johnston Harbour

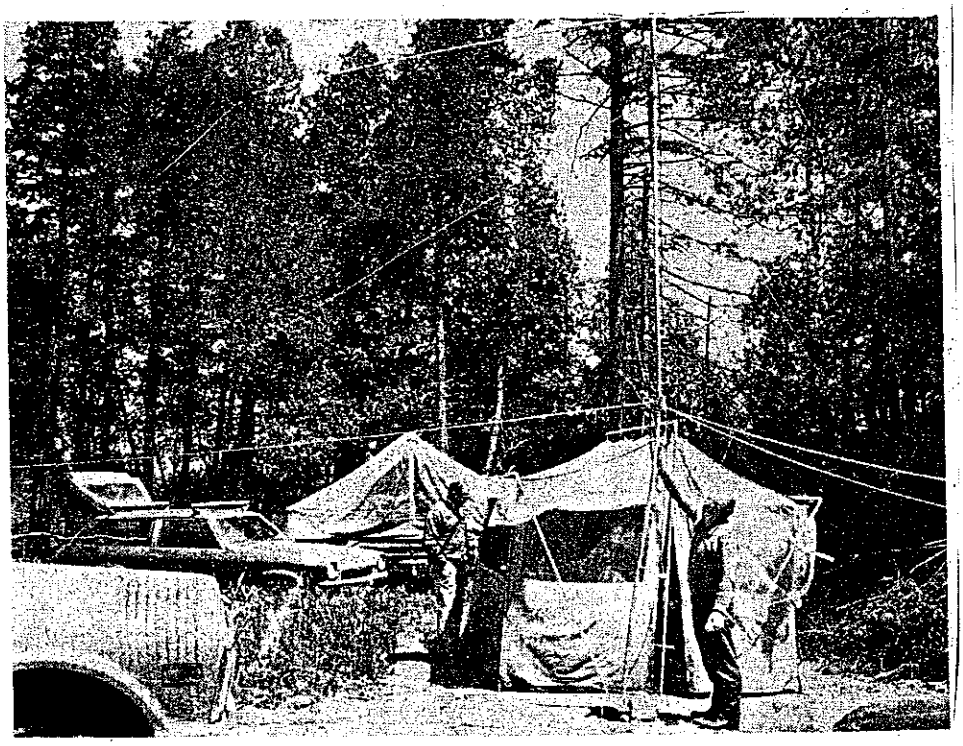
Johnston's Harbour was the location selected by the Georgian Bay Amateur Radio Club for participation in the 1974 annual Field Day sponsored by the American Radio Relay League as a test of emergency communication facilities by the amateur radio operators all over North America.

About 20 club members converged on the Harbour Saturday and Sunday, June 22nd and 23rd. In order to simulate real emergencies such as fire, flood, or tornado certain rules are set down, the principal being, all equipment must be operated from portable power supplies such as batteries, gasoline - engine generators or similar means; operation limited to 27 hours starting at 2 p.m. on the 22nd and ending at 5 p.m. on the 23rd. The erection of antennas and setting up the stations being part of the total 27 hours; and a power limitation of 200 watts.

In order to gauge the efficiency of the various installations points are given for the number of contacts made with similar stations all over North America, for simulated emergency messages forwarded via radio to EMO offices, and some other features.

The Grey-Bruce Club was led by Mr. William Hardie of Tiverton whose personal gov-

Submitted by
Jack Avis
VE3DTS



Emergency radio installation at Johnston's Harbour June 22 and 23. One complete station was installed in the tent in the foreground and a second identical set-up was located 75 feet from the above. The operator adjusting the antenna direction is Verne Bohlender of Chesley, club vice-president.

Another view of the temporary station. The beam antenna above the tent was rotatable to increase signal strengths in desired directions.

ernment assigned call of VE3-EFX was used for the stations at the Harbour. Approximately 750 contacts were made with stations from coast to coast in Canada and the States. Four operators were on duty at a time over the contest period, in approximately 2 hour shifts. Tents and trailers were set up for sleeping accommodation. One feature of the club activity was participation by a lady operator, Mrs. Tess Hardie, who attended the Georgian College radio course during the winter and passed the government examinations on May 14 and has now been assigned her own call, VE3HIR.

The youngest licensed operators present were Rick (12) and Mike (16) Slack of Owen Sound, who also attended the course and were successful in passing the exams while the results from the thousands of stations taking part will not be available until early fall. The club executive and members are pleased with this test of their equipment and operating ability.

Incidentally, the personnel and equipment are available at no charge for any emergency requiring radio communication, the simplist way to obtain is to alert the Emergency Measures Organization Officer for the County, who is familiar with the club and the services available.

GBARC ELECTIONS

Well thanks to VE3MTG and VE3WUD we have the names of few people for the club exec. If things don't change between now and the meeting there will be no need to vote. Here is what your new exec will most likely look like.

President: VE3RHJ

Vice-pres: VA3KMS

Secretary: VE3WUD

Treasurer: VE3NEM

Program Director: VA3DSI

Technical Director: VE3HIO

Bulleting Editor: VE3TSA

Field Day

Field Day will be held this year on June 24th , at the QTH of Gene MacDonald VE3IJD near Keady. It's not too early to get ready.

GBARC QUESTIONAIRES

There are many who have not forwarded their questionaires back to me. Please take a minute before the next meeting and return this needed information to me...thanks Tom

REMOVING DISKETTE LABELS

Ever tried to remove a label from a 3‹" diskette?

Take a hair dryer (on medium heat, if there's a choice) aim it at the label for 5 to 10 seconds, the label will peal off without tearing, and will leave little or no residue on the diskette.

Cheers....VA3KF