

AARC

SEALANT

ZERO BEAT

VOLUME 6 NO. 9 SEPTEMBER 1992

Our chance to show off Amateur Radio

Mall Show is Sept. 12-13

At least four clubs will be participating in this year's Mall Show.

John Myers, head of the Mall Show committee, said the Salem, Canton, Alliance Y and our club will be at the show, slated for mid-September.

Featured speaker will be WJW's weekend weatherman Mark Koontz, who will talk about the value of SKYWARN spotters during threatening weather.

Mr. Koontz will be at Carnation Mall here in Alliance from noon to 2 p.m. on Saturday.

"We're inviting as many clubs to the Mall Show as we can think of," Myers said in hopes that it will lead to greater participation.

"We are anticipating less help this year from key people in the club so we are streamlining the show, hoping that

will offset any problems."

The scope is different this year Myers said. "In years past, we basically were out to show the public what amateur radio was all about, sign-up people for our classes -- and sell raffle tickets."

"This year, there's not going to be any raffle and we're going to focus more on getting the word out about the classes -- and here's an important point -- not just in Alliance."

Among the literature John is referring to is an information sheet on classes in Canton, Massillon, Salem and Alliance.

"I've heard it said many times from people at the Mall Show who are from the Akron-Canton area, 'Where are there classes near where we live?'"

"We hope this year's literature will go a lot farther than in year's past. We have made a special effort to give the public what they want and in the long run, it should accomplish what the Mall Show is intended for -- the education of the public about Amateur Radio."

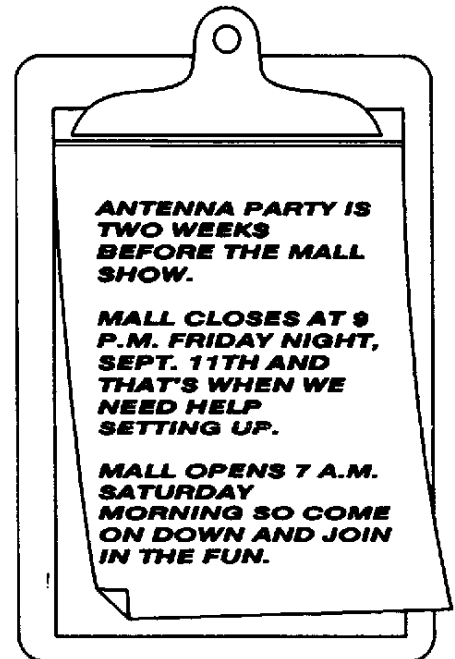
As of this writing, the following stations have been confirmed for the show:

*** Jim Ferguson N8DZA on Packet, Amtor and RTTY.

*** Bill Martikan KF8JD on HF and Packet.

*** Dan Mutigli N8LVO on HF CW and phone.

We will also have a display table. Jim Wilson KB8GHZ will introduce a static display of a radio station and Allen Dicks W18T has the fox hunting table, Myers said.



A contest has also been devised to select the station which best promotes Amateur Radio to the public. Any radio amateurs who stop by may judge the stations on clarity of expression, originality, etc.

The winner will be featured in a future *Zero Beat*.

N8LVO

ZERO BEAT: The art of all parties being on the same frequency.

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NEXT MEETING

Thurs., Sept. 3
7:30 p.m.

**THE ALLIANCE AMATEUR
RADIO CLUB ZERO BEAT**

Published the third week of every month by John Myers WXBG.

Changes in one's address may be sent to: John Myers, 510 W. Harrison, Alliance, Ohio 44601.

Deadline is the 14th day of the month.

The Alliance Amateur Radio Club is an American Radio Relay League affiliated club and is also a special service club.

The club meets the first Thursday of each month at the Alliance Community Hospital in the employee's cafeteria. Meetings start at 7:30 p.m.

-- SUBMISSIONS --

Stories may be submitted to the editor on 3.5 inch disk AND in writing. Entries should be written double-spaced on white paper and postmarked to:

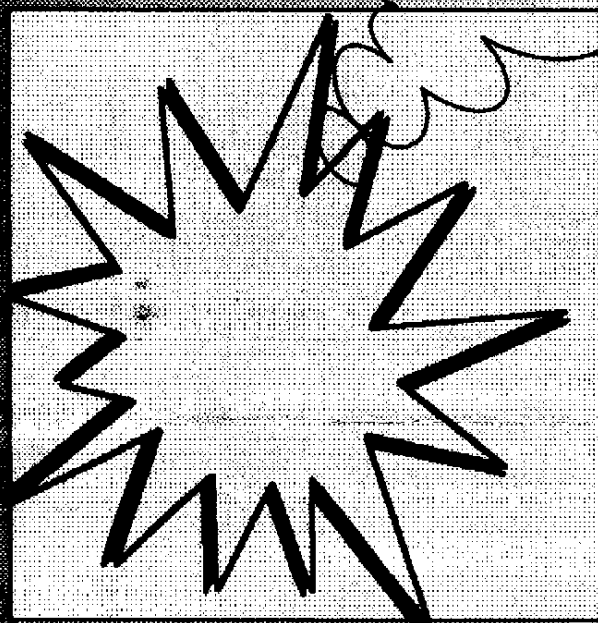
Daniel Mutigli N8LVO
925 East First St.
Minerva, Ohio 44657

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"I should've just bought the Tribander..."



While attempting to hang a dipole in a tree by throwing a rock with a string on it, Dan N8LVO learns the true secret of frustration.

TRUSTEES

Dave Buckwalter KC3CL
12435 Beula St.
Alliance, Ohio 44601
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ALLIANCE AMATEUR RADIO CLUB
 1992-93 ROSTER
 (32 TOTAL: 1 ASSOCIATE, 31 MEMBERS)
 20 ARRL = 64.5 PERCENT

MEMSHP-CALL	PHONE	ARRL	CLASS	NAME	ADDRESS	CITY	ZIP
Assoc.	821-9808	N		Diana Ashburn	1080 W. Beech St.	ALL	44601
f-PENDING	938-9135	N T		Grant Kelley	505 W. Ohio Ave.	SEB	44672
F-W8ACP	823-9603	Y A		Bob Hobbs	2305 Belleflower Ave.	ALL	44601
F-KB8BYN	823-7170	N N		John Ziccardi, Sr.	120 E. Carol St.	ALL	44601
S-NW8C	823-9423	Y E		Paul Beane	693 Wilcox St.	ALL	44601
F-K8DEN	823-2304	Y T		Ray Scoville	14096 Bandy Rd. R4	ALL	44601
S-N8DZA	823-3925	Y G		Jim Ferguson	115 E. Cambridge	ALL	44601
S-N8EAD	823-3067	Y A		Matt Thomas	8439 Schubert Ave.N.E.	ALL	44601
f-KB8ETH	762-6057	Y T		Jeff Bennett	105 Price Place	AKRON	44308
F-WX8G	821-5513	N E		John Myers	510 W. Harrison	ALL	44601
F-KB8GHZ	492-3754	Y A		Jim Wilson	6974 Rolling Ridge N.E.	N.CANT	44721
f-KB8GIA	492-3754	Y T		Gladys Wilson	6974 Rolling Ridge N.E.	N.CANT	44721
F-AA8GY	823-7816	Y E		Jerry Shore	1201 N. Walnut St.	ALL	44601
f-N8IAK	821-5513	N A		Pam Myers	510 W. Harrison	ALL	44601
S-KE8II	938-9135	Y E		Hal Kelley	505 W. Ohio Ave.	SEB	44672
F-KB8IQZ	821-3138	N T		Chuck Bench	12574 Greenbower St. NE	ALL	44601
F-KB8IVS	492-0703	Y T		Mary Ann Royer	6255 Sandalwood N.E.	CANTON	44721
F-N8JKZ	821-8469	N T		Gene Smythe	22590 Hartley Rd.	ALL	44601
S-KA8LKQ	821-0931	Y G		Dick Bontrager	1658 Burt Apt. B	ALL	44601
F-N8LVO	868-6610	Y E		Dan Mutigli	925 E. First St.	MIN	44657
F-N8MAA	875-2629	N T		Jim Miller	413 Woodward Ave	LOU	44641
F-N8NLZ	821-8423	Y T		Rev. David Hostetler	2230 Clark Ave.	ALL	44601
F-N8SFN	823-4404	Y T		John Bray	1624 Denwood St.	ALL	44601
F-N8SYF	821-0549	N T		George Ziga	2425 Crestview	ALL	44601
S-WI8T	875-4344	N E		Allen Dicks	8870 Alberta Beach St.	LOU	44641
S-K5TQN	904-677-2775		A	Larry Amann	10 Angels Falls Circle	Ormond B.FL	32174
F-W8UKQ	823-4855	Y T		Dave Glass	217 W. Simpson St.	ALL	44601
F-N8UYR	584-5490	N T		James Garrett	19070 N. Benton West Rd.	N.BENTON	44449
S-KE8VE	821-9808	Y A		Larry Ashburn	1080 W. Beech St.	ALL	44601
F-W8WEN	821-9779	Y E		Jack Bennett	3591 Mountview Ave	ALL	44601
F-WB8ZQX	799-8464	Y G		Sam Simon	2834 Rexford Rd.	YOUN	44511
F-W8ZZS	627-3600	Y E		Bill Bennett	2246 Scroll Rd.	CARROLLTON	44615

MEMBERSHIPS: (S)ustaining (F)ull (A)ssociate (f)amily
 Expires April 1, 1993
 (updated 8-8-92)

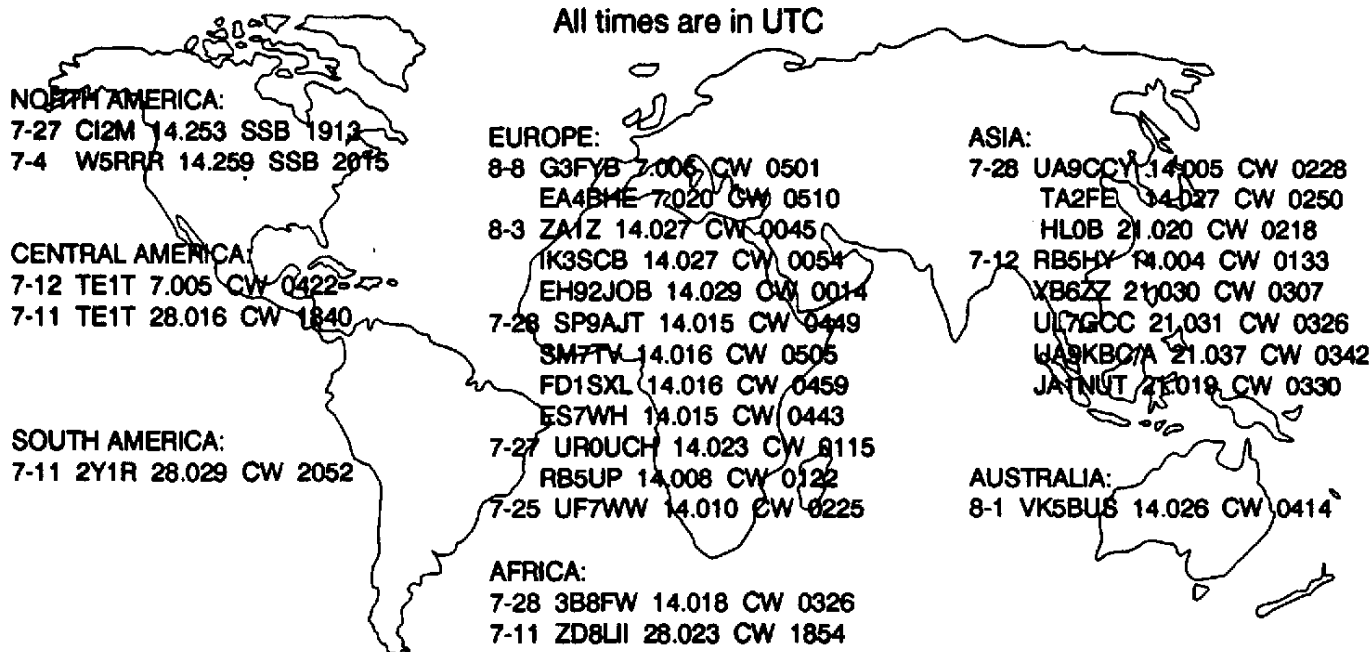
VITAL STATISTICS

YEAR	FULL & SUSTAINING	ASSOCIATES
1986-87	42	3
1987-88	42	4
1988-89	42	1
1989-90	UNKNOWN	UNKNOWN
1990-91	40	3
1991-92	40	7
1992-93	31	1

These records are pulled from the secretary's files. Persons belonging to the club who are not on record are not shown. If you have additional files that can clarify the records, please copy and send them to secretary.

WHERE'S DX?

By Jack Bennett W8WLN



WORKSHOP

By Jerry Shore W1SGY

The sloping horizontal loop has yielded good results for me in the past so I thought I might share some of what I've learned so far.

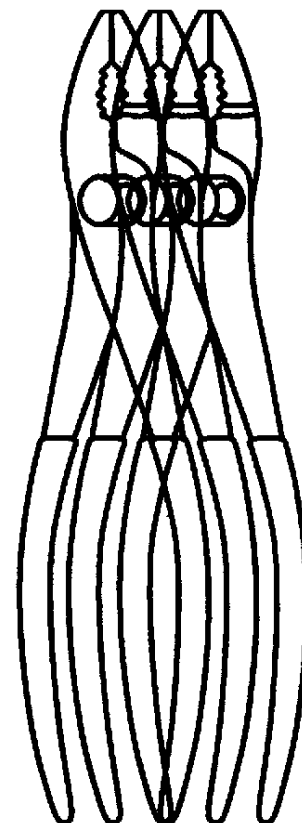
I started with the ARRL "Antenna Handbook," with vertical loop dimensions -- 142 feet of wire in a rectangle 27 feet high and 44 feet wide.

First I erected a loop with the loop top at about 30 feet and the bottom at about 12 feet, with the center of the bottom driven.

Measuring the impedance at the back end with about 50 feet of 75 ohm coax yielded a value of 140 ohms resistive in series with a high capacitive reactance outside instrument range.

Next, centering a circle on a Smith Chart that passes through the 140 ohm point on the real axis revealed that I could not match this particular antenna arrangement to 50 ohms using only a 75 ohm series stub as in the Antenna Handbook. However a point could be selected when shunted with an additional capacitor and would yield a 50 ohm load. Similarly another point could have been selected that could be matched with a shunt inductor. The coax was trimmed to the appropriate spot using the rx meter -- a Booton RX-250. Approximately 200 pf was added in shunt using a combination of series-parallel capacitors to hit the band center precisely. The network was fed with 50 ohm line. The capacitors and connections were housed in an empty Reiter brand raspberry sherbet container. I hope to compare the impedance measured with that of MININEC at a later date.

Results: I've received S9 reports barefoot from east coast stations as long as they are not too close. As expected, driving the matched version or the 140 ohm capacitive version yield the same sort of reports -- but even tube radios often misbehave when driving reactive loads from pi-networks. Anyway, I have a good match with about an hour's trimming, etc.



Latest FCC callsigns as of Aug. 1:

	AREA 8	AREA 3
EXTRA	AASIH	AA3BN
ADVANCED	KP8WK	KE3EI
TECH/GEN	N8VFG	N3NCS
NOVICE	KB8OFS	KB3AHH

7-year-old and NASA Ham both get a surprise

Brittany Bennett will sure make a good ham some day. She has no "mike fright" that usually calms most first-timers on radio.

On July 4th, Brittany got to talk with a ham operator named Bill signing W5RRR, at Johnson Space Center in Houston.

Jack Bennett W8WEN, the control operator on Brittany's end and also her grandpa, said she and Bill had a nice chat and that Bill was surprised to learn that Brittany was only 7 1/2 years old!

During the conversation, Brittany asked Bill if he had ever heard of Copley, Ohio -- her home town, and also home of Moonbase America.

Not only had he heard of it, Bill told Brittany that he had been involved in making up some of the experiments for the Moonbase!

BRIEFS

James Garrett of North Benton has received his call. It is N8UYR.

Grant Kelley has passed his Technician test and is awaiting his call.

PRESIDENT'S REMARKS

The mall show will be here is just a few weeks so I would like to see all of you pitching in this year. Remember, that no task is too hard hard when we all work together.

If you don't plan to set up a station or offer to plan a table for display, there are other ways you can help. For instance, we need help in setting up the tables and getting them decorated before the mall show. If you would like to help set up, be at the mall on Friday, Sept. 11th. If you haven't done this before, park in the rear parking lot and we will meet inside the mall at the tables near the movie theater around 8:30 or 9 p.m, and begin to set up when the mall is closed. Mostly we just need extra hands to help carry equipment and tables, cover the tables and get things ready for the next day.

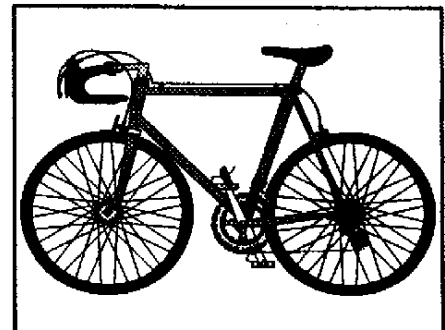
Once that is done, it won't take long the next morning at about 8 a.m. to unlock the storeroom, wheel out the equipment and get the equipment up and running.

The same goes for take down on Sunday at about 5 p.m. We need those extra sets of hands to pack the cars and then we will probably rendezvous over at Pizza Hut or somewhere close for dinner.

Cool weather for Triathlon

No sunshine, but not much rain contributed to a cool, safe running of the Eighth Annual Carnation Days Triathlon Aug. 16.

Radio operators Bill Hendershot N8QXT and Dale Storey KB8LWP provided the radio link at the lake which was overseen by Eric Gwynne N8HHV, who used his Kenwood dual-band mobile to porta-peet on 444.6 MHz back into the 145.37 repeater in Alliance. Back at HQ, Steve Hwig KB8NDM helped with the transition area, Dick Bontrager KA8LKQ assisted the Red Cross in checking the running course and Barb Gwynne KB8CDA also helped with



Red Cross and ambulance links.

Dan Mutigli N8LVO, who was net control for the event said the race went smoothly this year and there were only minor medical problems for some of the athletes.

LOCAL VOLUNTEER EXAMINER TESTING

DATE	LOCATION	TIME	CONTACT	TELEPHONE
AUG. 29	CANTON	9 A.M.	DICK STELLARINI	453-5896
SEPT. 12	RAVENNA	9 A.M.	JOANE SOLAK	274-8240
SEPT. 17	YOUNGSTOWN	6:30 P.M.	LOU MALICE	788-1618
SEPT. 20	ELYRIA		OLA SLOANE	647-5116
SEPT. 26	NORTON		MARY WAGNER	882-6387

How to choose the right TNC

By Al Gritzmacher, AF2J

So you're one of those (few) hams who aren't on packet yet, but are thinking about it. What will you buy? There are so many types you hear other hams talking about. And why do some units work better? Do they do more? What should you consider before you buy?

the software way

ADVANTAGES: Low cost way of getting started; small size, great for laptop and portable use; only packet equipment currently available in kit form.

DISADVANTAGES: You must run the appropriate software; little choice is available if you do not like the features; the computer must be running at all times for connects or digipeating; while the packet program is running, you can't use your computer for anything else; and you need the right computer or dumb terminal.

The cheapest way is through software: the only packet "hardware" is the modem and a little more circuitry to handle the PTT on the radio; and perhaps a watchdog timer to prevent accidental lock-up of the transmitter. For the Commodore 64, there is Digicom, available in either disk or ROM media. If you own a PC, consider either Baycomm or Poor Man's Packet (PMP).

Both Digicom and Baycomm were developed by a group in Bavaria (Germany) and have become quite polished and extensive in their abilities over the several years they have been out.

All of these packet systems require the computer to be on and running the program to work. Most of the wizardry of packet is done in the software so the hardware is minimal.

Modem kits are available for \$40 to \$60 from Ramsey Electronics and A&A Engineering. Pacomm also offers a compact Baycomm unit.

the TNC way

ADVANTAGES: Offers lots of features even when the computer is off or doing other tasks; can be used with a dumb terminal; can be used in KISS or Host mode; standardized commands; user friendly; can be used with a variety of terminal programs; network nodes may be used with a special EEPROM installation.

DISADVANTAGES: Cost can be as high as \$300; software updates require changes of the EEPROMs, which are expensive, and more space is required.

The TNC is probably the most universal and flexible way to get into packet. It is a stand-alone unit capable of performing packet duties while the computer is on or off.

The simplest: TAPR TNC-2, Kantronics KPC-2, MFJ 1270B, PacCOM Tiny-2 and older AEA models. More expensive models made by these companies offer more.

the card way

ADVANTAGES: Efficient use of the computer; use of multi-ports and multi-baud rates; best choice for sophisticated software; software easily upgraded; cost is about the same as TNC controllers.

DISADVANTAGES: Complex; may require computer memory, processor time; requires a PC; less software variety.

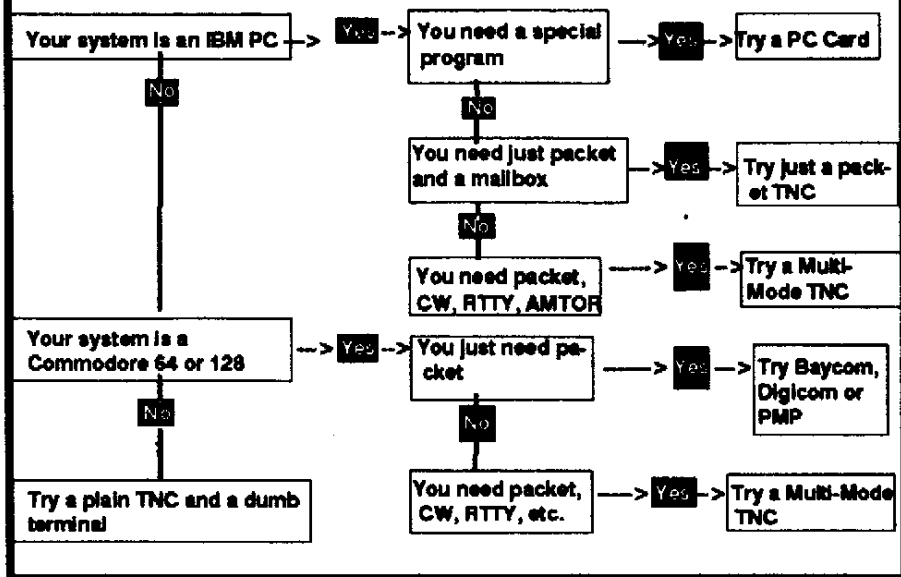
This type is a PC board that fits inside the personal computer. The only external connections are to the radio. This approach saves tying up a serial port as it talks directly to the computer on its data bus.

Different cards do more or less in the computer and share some duties with it.

The AEA PCB-88 is nearly a PK-88 and can run with the computer turned off. On the other hand, DRSI cards work only with the computer turned on and some packet functions are handled by the computer.

The LARA Spectrum

TNC Decision tree



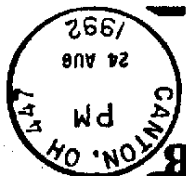
ALLIANCE ARC SEPTEMBER 1992

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3 AARC MEETING 7:30 P.M. ALLIANCE COMMUNITY HOSPITAL	4	5
6	7	8	9	10 SAARA MEETING 7:30 P.M. AT THE RED CROSS NET 9 P.M. NBDZA REPEATER	11 SET UP FOR MALL SHOW AFTER 9 P.M.	12 SET UP FOR MALL SHOW AFTER 7 A.M. VE EXAMS AT RAVENNA ERIE HANFEST
13 MALL SHOW TAKE DOWN AT 5 P.M. BUTLER HANFEST	14 DEADLINE FOR ZERO BEAT	15	16 CARC MEETING 7:30 P.M. AT THE SAFETY BUILDING	17 NET AT 9 P.M. NBDZA REPEATER VE EXAMS AT YOUNGSTOWN	18	19
20 VE EXAMS AT ELYRIA	21	22	23	24 NET AT 9 P.M. NBDZA REPEATER	25	26 VE EXAMS AT NORTON
27 CLEVELAND HANFEST TALK-IN 146.73	28	29	30			

W8UKG
DAVE GLASS
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TO:

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MOUNT UNION STATION
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Postscript

By Dan Mutigli N8LVO

At some point, I thought I might talk a little about how the newsletter is put together. This week, my AVAGIO DESKTOP PUBLISHING program crashed several times and ruined the first newsletter. For those of you who don't know it, the information that goes into the newsletter is easy compared to the tedious job of creating the shell -- all those headers and footers and lines and things.

To start off this story of misery, I will tell you that I wanted to get an early start on the September issue because of a very busy August schedule.

I started filling the newsletter pages with "filler" -- those long stories that eat pages of space and make the newsletter editor look like he does a lot of typing. Then as a creative gesture, I started on a graphic (appears on Page 6) which took about 4 hours to draw and center and tailor for the hole at the bottom of the page.

With that out of the way, I decided it looked so good that I was going to make it a point of putting some kind of graphic on every single page (little did I know that these graphics require HUGE amounts of program memory and as the memory is depleted, the program runs slower and slower).

Then I noticed that the program which used to run like lightning was taking quite a long time for very measly tasks.

But since I thought very well of this program, I figured I could live with this sluggish movement. The mistake I made is that when this program reaches its limit, it stops -- and you can no longer access the burgeoning file you have created. This occurred at a point where I had amassed 532,492 bytes of memory in 7 pages of an 8-page newsletter.

The bad part was that I had plenty of backup copies both on hard disk and floppies -- but none of them would load. Thinking all was not lost, I tried to erase one page to free up some memory for the program to load. No luck. In the end, I erased the 500K plus file and started over, this time making two 4-page files.

Of course the ordeal was not over yet. I typed four pages and the program locked up again. This was the "second edition" and I was still getting "out of memory" error messages. Knowing that there was not going to be any simple answer to this memory puzzle, I settled down to the course of creating 8 "new" pages. Not being a total masochist, I will tell you that the first time around, I did manage to make fairly high-definition printouts of the first 7 pages. Some of the material was cut and pasted in place. But about 5 pages had to be completely retyped including all that magnificent "filler." So it goes.