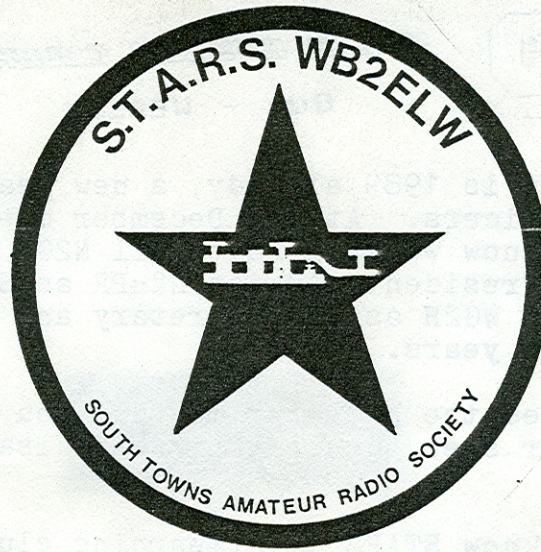


TELSTAR

KB2EQV
STEVE YEKICH
716-825-8049



Business meeting = 5 January = 1930 = Youth Center
Board meeting = ? January = 1900 = Youth Center

HAPPY



NEW YEAR

From The Editor:

Well I hope everyone was satisfied with the newsletter.
I'm going to do the telstar up to March on a trial basis, and probably continue for the rest of the year. The deadline for the articles is the 20th of each month.

See you at the meeting,

Steve KB2EQV



STARS Gossip Column

Guz - WB2EZU

Well here it is 1989 already, a new year is upon us and also a new set of Officers. At the December meeting we had election of officers and now we will have Bill N2GAO as President, John KA2RFT as Vice President, Adrian N2HPR as Secretary, Mal WA2VER as Treasurer, Frank WG2H as Fin. Secretary and Nick N2IBC as board of Director for two years.

If you missed the December meeting you missed a good time. You know I never seen such big pizza's disappear so fast in such a short time.

As you all know STARS is a learning club and tries to keep up with the latest state of the art in Amateur radio. As far as I know it never has been done in Western New York in a manner that we were able to do it on December 10th. With the assistance of Bill N2GAO and John KA2RFT on the two meter repeater and Guz WB2EZU on the 80 meter net, they joined the repeater to the low band transmitter and were able to check in members on the link. It was very successful and hope it can be done at least once a month if possible. There were five check-ins on two meters and ten check-ins on 80 meters and it was possible to have the two meter check-ins on 80 meters talk to such places as Belmont NY, Syracuse and even Lawton NY. It was very enjoyable and hats off to the members who were able to accomplish a fete like this. What will someone dream up next???

Remember dues are dues and after February you will not get a club paper if you are not paid up. So dear members keep this in mind. They are \$15.00 per year.

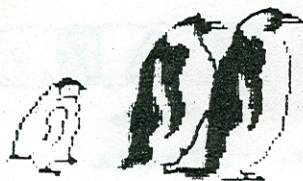
On January 14 and 15 Hamburg Recreation Department shall conduct a Snow Fest at the Nike Base. Some years ago they had one also and we opened up the Nike Base Club Station and they used it as a stop off point for the dog sled races. The children enjoyed the sled rides very much.

We are very fortunate to get a member to act as Editor of the club paper so please members lets keep Steve KB2EQV happy and write a lot of nice articles for him to put in the paper. I know there are a lot of electronic wizards on the club and this will give you a opportunity to share your findings with the rest of the club members.

One thing at the January meeting all the committee chairperson will be appointed, so if you are interested to chair a committee why let the president know so he can appoint you to it.

How many of you that use the clubs repeater notice a difference in its operation. If you do please let the two meter chairman know so they can study it and make changes as a new antenna has been installed and needs a little tuning up as yet.

Hope everyone had a good time over the holidays
See you all January 5th at the meeting
Guz WB2EZU



VE REPORT

by Dick Haungs W2UJR

The next Stars Ve test session will be on April 12, 1989 at the Hamburg Junior High School on Wednesday evening from 7-10 PM in rooms 117/119. Please send your 610 applications, a copy of your license and a check for \$4.75 made out to ARRL/VEC (yes the price went up) and a copy of your CSCE (upgrade or credit certificate)

TO: Guz Guzenski WB2EZU
5084 Chapman Pkwy
Hamburg NY, 14075

The Lancaster Amateur Radio Club will hold Ve test sessions on Wednesday evenings at 7:30 To 10 PM on January 18, February 15, and March 15. For these sessions send your 610's etc.

TO: Matt Gorski MS2M
6117 Broadway
Lancaster NY, 14086

The deadline for receiving applications will be one week before each test session. Technician through Extra exams will be given. All candidates must be pre-registered. There will be NO WALKINS.

If the Stars club would like to hold more than the April and October sessions, please let me know. Our Ve team stockpiles all test elements, so there is no waiting period to receive test materials from ARRL and we hold test sessions as often as necessary.

Dick Haungs W2UJR
VE Liason



NEW CALLS

Edward T Patton ex KB2FKF now N2ING

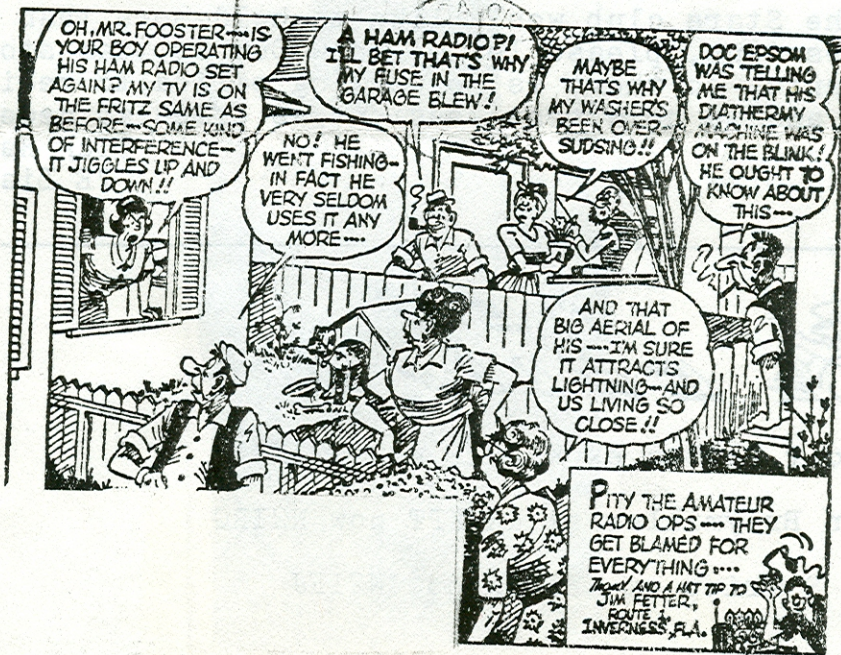
Vernon Braymiller ex KA2KPT now N2IRG

Chris S Tripp ex KB2ERN now N2IFJ

HAM GEAR

Amateur related gear
Wanted - Sale - Trade

- D1: Kenwood 21BT 2-Meter Handheld with PB-21H 500MAH Battery pack and PB-21 180MAH Battery, with battery charger and touch tone pad. \$150.
- D2: Olson 6 meter transceiver with AMECO VFO for 6, 2, and 220. \$50. (Will trade for 10meter ssb mobie radio)
- D3: (2) Teletype machines with TU. \$10. each - Chris N2IFJ 627-5895 after 3PM
- E1: Heathkit DX-60 Transmitter 80meters through 10meters \$50.
- E2: Heathkit 40 meter ssb Transceiver \$50. - Ed N2ING - 627-2417
- G1: Icom 28A 2meter Mobie 25watts high 5watts low with touch tone pad and Mike \$285.
- G2: Trade KDK 2030 2meter Mobie 25watts high 5watts low with TTP and Mike for a 440 mobie rig.
- G3: Wanted any 440 Mobie radio's - Vern N2IRG - 337-0289



INTRODUCTION TO FACSIMILE

The shortwave spectrum is filled with an almost uncountable number of stations. We are most familiar with "voice" stations - stations transmitting in the voice modes (AM & SSB). However, voice stations are actually in the minority on shortwave! Most signals on the spectrum are sent in other modes. One common non-voice mode is Morse code (CW). Many stations transmit in "regular" radioteletype (Baudot RTTY). Other stations use specialized teletype modes like ARQ, Sitor, FDM, etc. Still other stations transmit in a mode called facsimile (FAX). Facsimile is the transmission of pictures, charts, maps, press photos, marine information and other documents over radio & satellite.

THE FAX SIGNAL

FAX pictures are transmitted and received line by line. The transmitting station scans the photo to be transmitted mechanically, converting picture elements (pixels) to electrical voltages proportional to the lightness or darkness of the transmitted pixel. When the signal is received, the FAX demodulator converts the signal back to an electrical voltage (again, proportional to the lightness or darkness of the transmitted pixel). This electrical voltage is then applied to a stylus (or print head) which makes the appropriate light or dark mark on the paper. Each line is built up pixel by pixel and the entire received picture is built up line by line. Most are sent at 60, 90, 120 or 240 lines per minute.

A facsimile signal has a very unique (and somewhat "nasty") sound, making them easy to find on shortwave. Perhaps the strongest FAX signal in North America emanates from U.S. Naval Station NAM in Norfolk, VA. Their FAX signal can be heard nearly 24 hours a day on 8080, 3357 or 10865 KHz. Tune this on your shortwave radio to hear what FAX sounds like. The signal sounds like a scratchy phonograph record stuck at the end.

FAX USERS

Press Stations

Those readers who copy radioteletype transmission from world press agencies know how the text of news stories are transmitted. But what about the pictures? The wire (or press) photos are also often sent over radio. Shortwave FAX is an expeditious and economical way of sending press pictures to newspapers and television stations worldwide. Like press teletype, the signal is there for any properly equipped listener to receive. An SWL with FAX capability can receive wire photos from around the world in "real-time"! For example:

9241.5	Telam Press	B.Aires, Arg.
9324.5	Kyodo Press	Tokyo, Japan
12175.0	KCNA	Pyong., N.Korea
12828.5	TASS News	Moscow, USSR
15785.0	U.P.I.	New York, USA
18433.0	Reuters	B.Aires, Argentina
15878.0	China News	Taipei, Taiwan

Weather Stations

Shortwave is filled with FAX weather stations. Copying meteorological transmissions can be fascinating even if you are not a "weather buff." Weather maps, charts and satellite photos can be

received 24 hours a day on shortwave. Conventional weather maps are transmitted almost continuously to airports, coastal stations, ships at sea, and broadcast stations. A variety of maps showing cloud cover, temperature, pressure and wind direction are sent. Specialized maps showing sea conditions and ice floes can also be seen. Examples:

9203.0	GFE	Bracknell, England
6956.0	5YE	Nairobi, Kenya
9280.0	RUZU	Molodezhnaya, Ant.
7535.0	AXI	Darwin, Australia
10107.0	ATV	New Delhi, India
9060.0	RTA	Novosibirsk, USSR
16025.0	BAF	Beijing, China

Military Stations

The United States military transmits a tremendous amount of information in FAX including oceanographic charts, satellite pictures, weather maps, broadcast schedules and test charts.

7530.0	NMF*	Boston, USA
7670.0	AOK*	Rota, Spain
10966.0	NPO	Subic Bay, Philip.
8080.0	NAM	Norfolk, USA
12806.0	NKW	Diego Garcia
8682.0	NMC	San Francisco, USA
14826.0	NPM	Pearl Harbor, Hawaii

You can also receive the facsimile transmissions from foreign militaries.

4247.0	GZZ	Northwood, England
13366.0	CTU	Monsanto, Portugal
6946.0	CKN	Vancouver, Canada
13527.0	CCV	Bellote, Chile

EQUIPMENT

Receiving and decoding facsimile (FAX) does not require a special radio or antenna. Any quality communications receiver demonstrating good stability and reasonable sensitivity will work. Suitable radios would include the Kenwood R-1000, R-2000, Yaesu FRG-7700, FRG-8800 and Icom R-71A. Ideal radios for FAX would include the Kenwood R-5000 and the Japan Radio Company NRD-525. The NRD-525 even features a separate FAX mode! Portable receivers typically do not work well for quality FAX reception.

Surplus Equipment

For many years surplus FAX equipment was the only way to receive this mode. The use of such surplus equipment presents major challenges to the listener. Despite the fact that it is surplus equipment, it is still expensive. "Checked out" surplus printers typically run \$300 to \$700. Surplus units traditionally weigh between 50 and 150 pounds, making shipping expensive. The next challenge is maintaining the equipment. Not only does one need to be competent in electronics, but a definite mechanical aptitude is required; as surplus units contain clutches, gears and many mechanical adjustments. Obtaining parts can be nearly impossible. Assuming you obtain a working surplus unit, your problems don't end there. Most surplus FAX units are designed to receive only one FAX speed (usually 120 lpm). Most surplus FAX printers require specialized, and very expensive, electrostatic or chemical papers. The printing stylus actually burns through the top layer of the paper in order to print the image. The resulting smell falls somewhere between obnoxious and downright hazard-

ous. A few surplus printers (Westrex R-J4) do not use the smelly electrostatic method, but rather a carbon transfer technique. This precludes the odor but does not lessen the expense.

Computer Interfaces

With the increased popularity of microcomputers, there have been many attempts to write software to display FAX pictures on the computer screen (and/or printer). However, because of the limited memory and intrinsic limitations of composite video monitors, the results have usually been less than satisfactory. This fact, coupled with the problems associated with using computers near radios (RFI), have made this approach unacceptable for all but the most casual and undemanding enthusiast. One exception to this is the AEA PK232 which does deliver an acceptable image to the printer.

Commercial Equipment

There is a wide selection of commercial facsimile equipment being produced for government, maritime, meteorological and military concerns. The price range of this equipment generally runs from \$4,000 to \$15,000 and is therefore beyond the means of the average listener.

Info-Tech M-800 FAX Converter

Digital Electronic Systems, manufacturer of the famous "Info-Tech" line of RTTY equipment, has produced a new product for FAX called the M-800 FAX Converter. The compact M-800 simply connects to the audio output of any quality communications receiver. The audio is converted into graphics data and printed out on several parallel dot-matrix computer printers. Thanks to a powerful microprocessor this device, weighing only five pounds, has more sophistication and flexibility than surplus FAX units weighing 10 or 20 times more! The M-800 prints all four FAX speeds (60, 90, 120 and 240 rpm) and three IOC's (288, 440 and 576) with exceptional clarity on inexpensive plain 8 inch paper. The M-800 features a mode for both black & white (for maps and charts) and for 16-level gray shade wire photos and satellite pictures. Selection can also be made for printing from right to left or left to right as well as positive or negative for pictures. This is an important capability as press photos are often sent as negatives.

FAX FROM SATELLITES

Facsimile signals can be monitored from a number of satellites. American 4 GHz domestic satellites (Westar V, Satcom F2R, etc.) are an excellent source of crystal clear FAX signals (some reception restrictions may apply). FAX pictures can also be received directly from the GOES and METEOSAT satellites which downlink on 1690 MHz and NOAA and METEOR birds which downlink at 137 MHz. Satellite FAX can be sent in AM or FM FAX mode on either a SSB or FM carrier. Those interested in satellite work will want a FAX decoder that has both AM and FM detection such as the Info-Tech M-800 or the Universal M-7000.

RESOURCE MATERIALS

Monitoring FAX can be most productive if you know "when and where" to look. Universal offers several books to help you enjoy your FAX listening.

OFFICERS AND BOARD OF DIRECTOR

PRESIDENT = BILL SISKA = N2GAO
VICE PRES. = JOHN LEITTEN = KA2RFT
SECRETARY = ADIRAN GEOGESKI = N2HPR
TREASURER = MAL VALLONE = WA2VER
FIN. SECY. = FRANK MODZELEWSKI = WG2H
DIRECTOR = NICK STANKO = N2IBC
DIRECTOR = VOIT DRANKAN = KA2WIO

BUSINESS MEETING =1st THURSDAY

1930 Hours(7:30) =YOUTH CENTER

BOARD MEETING =4th TUESDAY

1900 HOURS =YOUTH CENTER

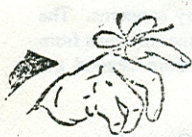
S.T.A.R.S. NETS

75 METER NET= EACH SATURDAY AT

1000 HOURS = +/- 3925 KHZ

2 METER INFO NET= EACH WEDNESDAY AT

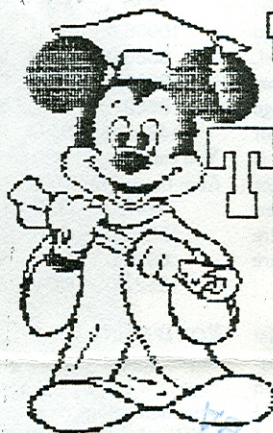
1900 HOURS = 147.69/.09



DUES REMINDER

Single \$15
Family \$23
Student \$8

Frank Modzelewski WG2H
1818 Clinton St.
Buffalo, NY 14206

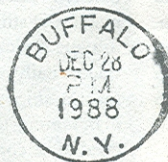


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