

Vhf-Uhf DIGEST

The Official Publication of the Worldwide TV-FM DX Association

APRIL 1990



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From The STAFF

IT'S A WHOLE NEW SEASON!...For FM and TV DX enthusiasts, April is an important month. It marks the start of a whole new DX year almost everywhere. Spring DX, especially the tropospheric variety, can be quite exciting. That's only partly because it follows the slowest period of the year for V-UHF enthusiasts--things really do often get started quickly at this time of the year. Now's the time to check your antenna system and perform any repairs that may be needed.

CONVENTION 1990...Pages 20 and 21 of this issue feature the tentative agenda of this summer's WTFDA convention, to be held in Manassas, VA. Mike Wimer will be your host this August, and he's picked a great location that sounds ideal for the event. A real bonus for tourists: WTFDA Convention '90 is just outside the Washington DC area. Include the club convention in your summer travel plans this year!

FOR YOU LOWBANDERS...If you're interested in longwave DXing, there's a great new reference available. Ken Stryker of the Longwave Club of America, together with Joe Woodlock, have come out with the 1990 AERO/MARINE BEACON GUIDE--the most comprehensive longwave reference we've seen. A fantastic guide to the low end of the DXing spectrum, it's available postpaid for \$15 from: Ken Stryker, 2856-G West Touhy Avenue. Chicago IL 60645.

BITS ..TV CCI editor John Combs wants your DX mysteries. Now that the column is back on a regular basis, he'd like to hear from those with unidentified loggings. Send em in!...Here's another mystery: over the past several months we've heard from many WTFDAers who have said they've noted F2 video DX, with varied results. Yet, we've seen very few reports in DX columns from the same people. Why not report any and all F2 DX events to your DX columns, even if they fail to produce an ID?...One avid DXer who does report his results to DX columns is Illinois' Jeff Kadet, who has now received verifications of his reception of Sweden and Norway last November. Jeff also saw Australian video on February 26!

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Thanks to Matt Sittel for this month's cover.

SPECIAL REPORT

INTERESTING OBSERVATIONS FROM
A DUTCH TV DX ENTHUSIAST...
INCLUDING SOME CORRECTIONS ON
EUROPEAN VIDEO CARRIER OFFSETS

Hello there VUD readers:

Surprised to get a letter from Europe? The reason why I write is the fact that I've had several issues of VUD in my possession for several weeks and it is very interesting to see and read how VHF/UHF-DXing is done in the US & Canada. The definite reason for my writing are the articles in the December '89 VUD issue...Let me first introduce myself: Joop Prosee, 44, married for 22 years, 2 sons (8 & 11), TV DXer since 1975. Special interest concerning the DX-hobby: designing/building/testing of DX-antennae and comparative testing of all other kinds of TV-DX materials such as: masthead amplifiers/commercial antennae/antennae stacking devices/TV-sets/rotors, etc.

Of course I don't forget the normal DXing and looking for conditions and distant VHF + UHF-signals. I DX all the signals between 25 & 1000 MHz except for the 87-108 MHz spectrum. I started out as an FMDXer in 1974, but very soon I could not get a kick out of it anymore! Last 5 years I've been getting to be more and more an Iono-DXer. Sporadic-E/MS/Aurora & F2-DX give me the most thrills nowadays...

Concerning VUD of December '89 page 38, the same discussion is held within the BDXC (Benelux DX Club) and it looks like, just as Adam Hostetler says, that many members of DX-clubs turn out to be FM-listeners & TV-viewers instead of FM/TV DXers. A real DXer qualifies DXing as a hobby that totally depends upon conditions! After all WTFDA and other DX-clubs are DX-CLUBS.

Let me be so free as to answer some questions that were put in past VUDs. First the question on page 26 of August '89's VUD, where John F. Combs asks the name of the testpattern shown on the lower photograph. Well this type of testcard is known in Europe as "Low Frequency Response" (LFR)-card, I know only the English name of it. Sometimes European transmitters do use this kind of pattern mostly while testing or repairing. A few years ago the Portuguese TV transmitters were regularly airing these LFR-cards.

Second, the European offsetlist of the June '89 VUD page 18. I've some corrections & supplementary information. Ch E2: POR Muro 48.242 (-6 kHz from figure given in VUD). Admit Spain TVE1, Navacerrada, 250/25 kW 48.250. TVE2, Santiago de Compostela 40/4 kW 48.250. Especially the Navacerrada (Madrid) transmitter is a strong candidate for transatlantic F2 DX (F2-TA)! Santiago carries the second network of TVE! TVE1 has teletext info in the synchar, TVE2 synchar is empty.

Ch E3: BEL. Liege E3 55.250 & no teletext in synchar. POR. Lousa, 55.250. YUG. Kum, 55.250. The Spanish TVE transmitters do use offsets. Regularly I receive an E3 TVE transmitter with +23 kHz offset. I've strong reasons to believe that this is the Zaragossa-La Muela transmitter with 35/3 kW. Unfortunately the offset of this transmitter, is not known to me.

Ch R1 USSR: Moscow 240 kW, 49.747 & Leningrad 240 kW, 49.750.

There are serious misunderstandings among TVDXers about the French L2/L3/L4 channels. Opposite what is mostly published, the audiofrequency is the lowest of the given channel frequencies. So, the vision frequencies of L2/L3/L4 are: 55.75/60.50/63.75 and the audiofrequencies are: 49.25/54.00/57.25! This is only the matter with the system L Band-1 channels. So, the chances of receiving L2-videosignals via F2 in USA/Canada are less than was assumed first. Audio is in AM-mode!

For the fixing of the offsets I use the Icom R7000E communications receiver, a very valuable DX-tool for identification of TV transmitters by means of the offset-method. Seeing how high the MUF is at any given moment, is also a very nice characteristic of the R7000.

I hope you'll appreciate this contact from Holland/Europe and I wish all members of the W.T.F.D.A over there a DXful 1990.

--73's de Joop, Spanbroek, THE NETHERLANDS

outstanding results with more selective fm ceramic filters

by BILL NIENAJADLY

A few weeks back Bill Nollman informed me of even more selective FM ceramic filters. These are a 150 kHz bandwidth and they are HOT! Finding them wasn't easy at first, but as luck would have it we did find some sources; soon I had these babies and I was ready to re-modify. The day before I was given a poor-selectivity-but-real-sensitive Pioneer SX-828 receiver, so this was the one I would give the "double test" -- first with the 180's, then with the 150's.

With only 3 filters to replace, the 180's were put in....the results were comparable to the modified digital SONY with the 180's. This was pretty much what I expected, though the Pioneer was a bit more selective due to being an analog.....now.....comes the REAL change. I remodified the Pioneer with the 150's and low and behold....I now have a receiver almost or maybe on par with the Mac-78! I can tune (all the time) now all Philly, Hartford and even real toughies like WBSS 97.3, WRCH 100.5, WWYZ-WXTU 92.5; before, these stations would come in only on tropscatter or tropo with the 180's.

The effect of now razor-sharp selectivity is something I'm still getting used to. When I tune to WRCH 100.5 it's like adjacent 100.3 WHTZ local and 100.7 WHUD strong semi local are not on the air! As I'm tuning around I actually notice BLANK SPOTS between the adjacents! What is even more incredible is the fact that I could look out my attic window and see the World Trade Center & Empire State Building 12 miles away with the home of NYC xmtrs of the FM's and I'm hearing WMMR 93.3 Philly under dead conditions and 82 miles on the adjacent, NO 93.1 WPAT & 93.5 WRTN! I could tune to 97.3 and hear WBSS or scatter from WHP and yet no, I repeat NO WQHT 97.1!

Having been in shock of the incredible selectivity of the SX-828, I quickly rushed to re-modify the SONY ST-J60.....Ready for this? The darn thing is also super selectivity, a hair less than the Pioneer. On the signal meter (really it has lights) the NYC locals register to 5 lights (the max)...when you tune to the adjacent the light meter only registers one light or two. Wow!..... When I had the 180's in the SONY the adjacent had 3 or 4 lights.

Interesting to also note that the mod Pioneer sounds exactly the same as when a Mac-78 is in supernarrow. Well are you impressed? Actually I had a lot more to report but I gave much info and had comparison tests given to Bruce Elving for his column and I believe he too, is doing a special write up on this very interesting subject. Other info given to Tim McVey also for a special write up. I highly encourage all to write in and report your results!

Technical Topics

Quite a stir has been going around lately about a simple, inexpensive modification to any FM tuner that can improve its Adjacent Channel Selectivity (ACS). There have been some very exciting times for a number of DX'ers in NJ and CT who have performed the surgery described in Mike Bugaj's article in the Feb. 90 VUD. For example, Bill Nollman modified his Carver TX-11 tuner and reclaimed virtually all of his previously unlistenable, un-DX-able channels.

BEFORE: 100.1 useless due to local 99.9 WEZN (27.5 kW, 45 miles away) in Bridgeport, CT
AFTER: 100.1 clear reception of WJRZ (1.6 kW, 150 miles away in same direction) in Manahawkin, NJ
DELTA: WJRZ at least 10 dB weaker due to longer path, and 12.4 dB weaker due to lower power; at least 22.4 dB ACS required

BEFORE: 106.7 useless due to local 106.9 WCCC (23 kW, less than 10 miles away) in Hartford, CT
AFTER: 106.7 clear of interference with WLTW (7.8 kW, 98 miles distant) from NYC
DELTA: WLTW at least 26 dB weaker due to longer path, and 4.7 dB weaker due to lower power; at least 31 dB ACS needed in this case.

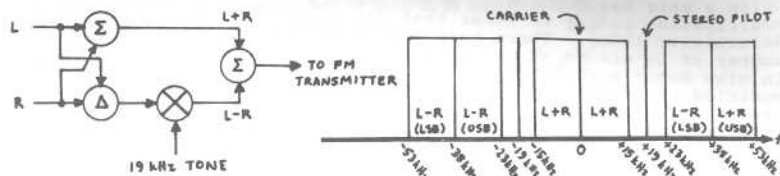
Compare these figures with published ACS specs for a Mac MR-78 tuner. The upshot of all this is that by replacement of a simple \$2 component, many otherwise mediocre tuners or receivers used for FM DX'ing can be brought up to levels of ACS performance associated with the DX super hitters like the '9090 and TX-11. And for those who already own an excellent tuner, the same procedure, together with the great RF stages they have already, may elevate FM DX potential higher than ever before. In this article we will cover in detail why this procedure works so well, why it's just now making the news, and answer a number of questions that have been sent to me.

Every radio, receiver, tuner, television, or piece of communications equipment actually functions as a small, tunable window. It is a major engineering task to make that window let in only the signal we wish to receive while at the same time blocking the infinitely large number of others that are available. One approach is to design a tuner with a series of band-limiting stages, where each successive stage is a narrower and narrower "window." The IF stage filters are the narrowest, and are selected to match the type of signal we expect to receive.

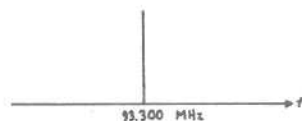
In the case of FM, it turns out that signals have very wide bandwidths. Recall that to generate a frequency-modulated wave, one starts with a pure tone (say it's vibrating 93,300,000 times per sec. at station WMMR) and then causes that tone's frequency to change according to the information to be transmitted. For example, a 1000 Hz note played into the microphone will cause the transmitter to broadcast at 93,301,000 Hz. It is widely accepted that in music, most of the sound exists at frequencies of 15 kHz or less. (Alright, the harmonics above 15 kHz are needed for some people to enjoy a complete experience...) Therefore, given that we transmit sidebands on both sides of the carrier, one might conclude that an FM channel need only be 30 kHz wide. But they are 200 kHz wide in the U.S. There are two main reasons for this.

First, we wish to transmit in stereo; this alone doubles the bandwidth since there are left and right components to be sent out over the air. [In the 50's a number of schemes were proposed to transmit stereo audio on a single FM channel, not increase bandwidth, and maintain compatibility with the millions of monaural FM receivers already in existence. The winner is still used today. In the multiplexed stereo transmission standard, the left and right components are summed and transmitted normally. At the same time, a circuit takes the difference between left and right, shifts that up in frequency by 38 kHz, and combines the result with the L+R signal at the transmitter. With this method, any old mono receiver can still pick up the L+R part clearly, and with no loss of frequency

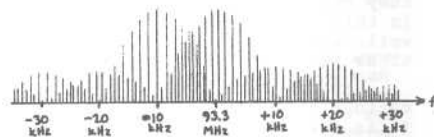
content: But a stereo receiver can use the "pilot tone" transmitted 19 kHz above the center of the channel to lock on to the L-R sideband and re-create separate left and right channel audio. Please refer to the figure below. We shall come back to this later.]



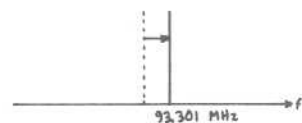
The second reason is because, with FM, actual signal bandwidth is theoretically infinite. Back to the WMMR example, we saw that a single note at 1 kHz caused the transmitter to produce 93.3 MHz plus a 1 kHz "deviation." If, instead, a Rolling Stones record was played, energy would be radiated from the transmitter at frequencies out to several hundreds of kHz at least, even if the record was band limited to 15 kHz. The reason for this involves some very complex mathematics, but it is important to note that the amount of energy contained in the (infinite) sidebands of the FM carrier varies with the volume level and frequency content of the music. This suggests that we may, to some extent, control exactly how wide a range of frequencies the FM sidebands will extend out to. This is precisely what the FCC requires FM stations to do...because it turns out that much more than 15 kHz of bandwidth is required to accurately transmit all the information in a piece of music, and because it is impractical to place each station infinity MHz apart on the dial!



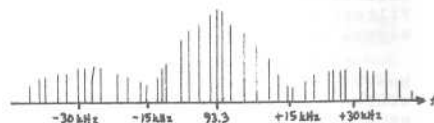
FM SPECTRUM:
unmodulated carrier



FM SPECTRUM: modulating 10kbps data
(for example, 9600 baud data) FSK

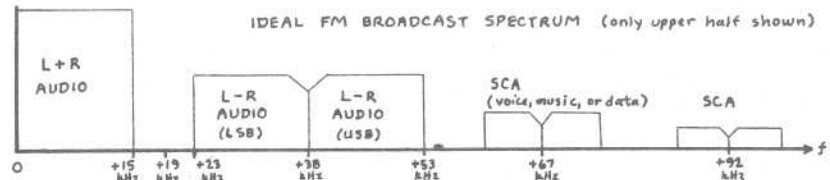


FM SPECTRUM:
modulating a 1 kHz tone



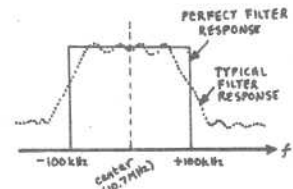
FM SPECTRUM: modulating music,
bandlimited to 15 kHz

Specifically, each FM station must carefully set and monitor its modulation index (a measure of the way a program's frequency content and amplitude affects deviation), compression thresholds (often compression is used to ensure that loud and/or fast-attack passages in voice or music does not cause the transmitter to generate sidebands that splatter over into an adjacent channel), etc. Because it is impractical to totally compress music (it would not sound natural) and to predict the exact statistical nature of its spectral components, extra space ("guard bands") is inserted between broadcast channels. By adding the guard bands and reducing the transmitted amplitude of the stereo subcarrier by an appropriate amount, it is possible to enjoy clear FM stereo programs without excessive bandlimiting or compression, and with an acceptable spacing between channels. In the US, there are 100 FM channels, each spaced 200 kHz apart, and each capable of carrying stereo audio to 15 kHz. (In areas where the FCC feels there is little chance of interference to an adjacent channel, often a station will be granted a Subsidiary Communications Authorization, or SCA, to transmit music or data on a subcarrier, usually at 67, 75, or 92 kHz from the carrier, and bandlimited to 7 kHz.)



Now the reader may ask, what does all this have to do with selectivity? It has to do with the bandwidth of the filter one will need in the receiver! In order to obtain every little bit of information from the received signal and reproduce the best quality audio, the tuner should have at least the 200 kHz bandwidth available in a standard FM channel. In fact, many use 230 or even 280 kHz wide IF filters. However, in a crowded part of the country, most would prefer to use a bandwidth less than 200 kHz so that no interference is picked up from an adjacent or strong alternate channel. Thus, the choice of IF filtering is a tradeoff between selectivity and audio quality. The manufacturers of today's tuners are very aware of this tradeoff, and almost always opt for wider bandwidths so that the best audio specs can be achieved (and used in advertising). Further, it is fair to assume that most consumers have little desire to try to receive a station on an adjacent channel anyway. Of course, DX'ers have very different requirements, and since we do not exist in large enough numbers to make up a significant market segment, we must take this tradeoff into our own hands.

Since it is the IF filter(s) that ultimately determines the alternate channel selectivity (ACS) of a tuner, it is important to understand what filters might actually be needed. Ideally, FM tuners would use a filter having this kind of response (see figure). Nature will not allow the manufacture of such a filter, but we can come very close. Indeed, with carefully designed and built crystal or mechanical resonators, a filter very close to ideal can be built at great expense. (This is how a Macintosh tuner can offer superb audio, incredible ACS, and a \$2000 price tag.) Alternatively, a circuit of resistors, inductors, and capacitors can be built and painstakingly aligned. To approach the response curve above would require a complex design based on the mathematical equations of Chebyshev, but at the cost of (1) dozens of components, and (2) poor audio quality due to the "group delay" of the filter. (Group delay means that some frequencies pass through the filter more slowly than others. This effect introduces a noticeable form of audio distortion because the phase relationships within the music have been altered.) The group delay of the filter can be reduced to an acceptable level only by reducing the number of sections (or "Q"), which increases the slope of the curve and ruins ACS. Typically, a compromise design is used based on the equations of a fellow named Butterworth. With a five section circuit, reasonable selectivity is obtained while introducing negligible group delay. Such a circuit would require about 12 separate components. The Japanese had a better idea, however, which brings us to ceramic filters.

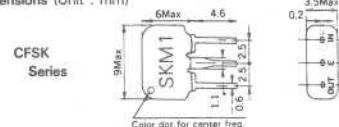


Because a de facto standard exists on the IF frequency used in FM tuners and radios for the consumer market (and for a lot of other applications, as well), it was possible to develop a standard, plug-in part which could be mass-produced and sold to various manufacturers. So with some research and engineering effort, and the promise of sales of millions of units, the ceramic IF filter was designed. It operates at a center frequency of 10.7 MHz, matches into 330-ohm input and output impedances, comes in bandwidths of 150, 180, 230, and 280 kHz, and offers excellent group delay and "Q" (a figure of merit which describes the slope of the filter response curve; the perfect filter shown above has infinite Q).



CFSK Series (CFSK 107M □)
(Ultra-compact, low temp. coefficient)

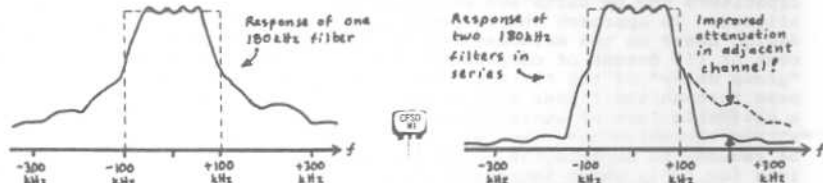
Dimensions (Unit: mm)



There are several compelling advantages that ceramic IF filters have over their alternatives. They are small; an equivalent circuit made up of discrete components (a couple of dozen of them!) would take up much, much more space on a circuit board and require costly labor to install. They do not drift significantly over time. They are standardized. And, most importantly perhaps, they are inexpensive (less than 25¢ apiece in the huge quantities that a manufacturer would purchase) Therefore, almost every receiver designed to receive FM broadcasts and built since the early 70's uses them. Two companies, both Japanese, seem to have the vast majority of the market: TOKO and MURATA-ERIE. The big, famous names like Sony, JVC, and Matsushita (the parent of Panasonic, National, and Technics) buy these little dudes by the millions, but they are available to experimenters from a few distributors in the US for less than \$2 apiece.

Typically it seems that most tuners, portable radios, walkmans, and hi-fi gear comes with anywhere from one to four ceramic filters, each having 230 kHz bandwidth. This is the best choice from the maker's standpoint because this bandwidth passes all the information presumably available in a standard FM channel, and allows for drift in the IF which may occur in the equipment over time. For really top-quality audio the expensive tuners may even use 280 kHz filters! Those tuners having wide/narrow bandwidth switches generally just switch in a 180 kHz filter or two so that better ACS can be achieved in the "narrow" position.

Now DX'ers have a different perspective on this whole matter. Of course, we would rather give up some audio quality in order to gain more ACS. Perhaps some of us would even accept a nearly unintelligible sound at the speaker if we could have 100 dB ACS in return! Now, with the availability of ceramic IF filters in small quantities to experimenters, we can finally take the tradeoff decision into our own hands. Indeed, replacing stock 230 kHz filters with 180 kHz units does not significantly alter the sound (those with good hearing will notice that the highest frequencies are lost...a subtle effect) but it can add 14 dB of ACS. By going to 150 kHz filters, one adds over 18 dB of ACS, with some dulling of sound. If several 150 kHz filters are cascaded (that is, replacing all of the stock filters) much more ACS is achieved. The two figures below illustrate how, when two filters are cascaded in series, the stopband attenuation improves. (This is subtle...notice that, while the IF response does not really get much sharper than with just one filter, each additional filter adds about 10 dB to the ultimate attenuation in the next channel over.) There's no reason why a cascade of four (a number I selected because many \$300 and up tuners use four) 150 kHz filters can't yield an ACS of 40-50 dB or more.



For the experimenter that wants to try replacing the stock filters in a receiver, there should be little difficulty involved. Substitution of one filter for another should have no significant effect on sensitivity (the narrower filters have a bit more insertion loss, but that will have little effect on sensitivity since there are several gain stages ahead of the filter. A cascade of 4 or more filters will add up to 12 dB or more extra loss which may tend to reduce sensitivity a noticeable bit.) Also, because of reduced bandwidth, any SCA decoders you may be using will suffer. If you have an analog tuner it will be necessary to detune slightly in order to recover the subcarrier. If you have a digitally-tuned tuner, you will probably be out of luck. The filters are easy to locate: they are more or less square and have three leads. It doesn't matter which way they are soldered in.

You may buy TOKO filters from DIGI-KEY, POB 677, Thief River Falls, MN 56701-9988. (Phone orders are taken at 1-800-344-4539.) 180, 230, and 280 kHz models are available; the 180 kHz one is part number TK2307 for \$1.67 each or \$13.88 for ten. MURATA filters in 150 kHz style are available from HOSFELT ELECTRONICS, 2700 Sunset Blvd., Steubenville, OH 43952. (Phone orders are taken at 1-800-524-6464.) Ask for part number 27-109, at \$1.00 each. The author has a large number of 150 kHz Murata filters available for \$2.00 each postpaid, if you'd like to buy just a few from me.

QUESTIONS FROM READERS

1. How come the manufacturers are not using the "narrow band" filters?

As suggested earlier, filters narrower than 230 kHz will degrade audio quality (first noticeable as a loss of treble). Given a choice of pleasing DX'ers or pleasing audiophiles, the latter group wins every time. Onkyo, Carver, and other top notch tuners by DX standards are expensive because they have superb RF sections and because their designs have been painstakingly executed to deliver the best sound in a crowded signal environment. Good ACS was a design goal from the start in such tuners. DX'ers who already own these will benefit the most.

2. Are there even MORE selective filters out there? Say a 130? 110?

This author isn't aware of them, and can't imagine who would buy them besides a handful of DX'ers in the WTFDA. There are some options, though. A custom circuit could be designed, for instance, that would only pass the L+R component of the signal (a 30 kHz wide band), and which could be wired in in place of a ceramic filter. It would not be stereo, of course, but might turn out to offer tremendous selectivity, assuming the RF stages of the tuner are decent and the mixer doesn't produce a lot of spurs and intermods. (I am working on such a circuit, if anyone is interested.)

3. If 2 filters work well, will 4 work better?

To the extent that stopband attenuation is increased, yes. A cascade of several filters, in any case, can't do any better if an adjacent channel splatters into the tuned channel. It is not really worthwhile to string together more filters than the tuner possessed to begin with, unless you incorporate some sort of amp stage to compensate for the loss.

4. Why do some stations present such a bad ACS problem? There are a couple of stations in my area that splatter into the channels on both sides and no amount of narrow filtering seems to help.

Music that is heavy in bass content, and has fast dynamics (rate of change of amplitude) will cause a transmitter to throw sidebands hundreds of kHz away from its center frequency. This effect is controlled using spectral limiters and compressors (the name Orban "Optimod" comes to mind...) to keep transmissions within their legal bandwidth. Though your narrower 150 kHz filters help, the best approach is to weaken the offending signal somehow (move the antenna, install a trap, or off-tune the other way). Unfortunately, there isn't much you can do about a station that may not have its equipment set right (how do you prove it? And besides, if they compressed all FM stations to avoid any remote chance of adjacent splatter, they would sound dull during those times you're driving around and want to use the FM band for normal entertainment!). See illustration below.

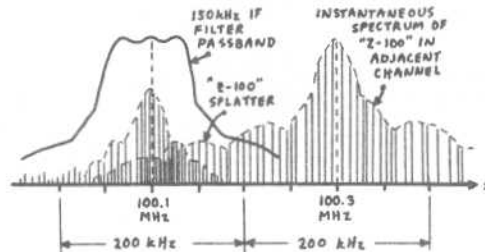
5. Why is the selectivity on my upper adjacent channels better than that for the lower adjacent channels?

This is caused by either or both of two reasons: (1) the tuner is a bit out of alignment, meaning that its IF passband has moved away from the RF passband, (2) the center frequency of the ceramic filter may be different from the IF of the tuner. (It wouldn't be unusual if the IF center of the tuner drifted by 50 kHz over time, or if the tolerance of the filter came to 30 kHz.)

THANKY to Bill Nienajadly for supplying information used in this article. Also kudos to Bill Nollman for locating a source for 150 kHz filters. My distributors are much less reasonable!

T. K. McVEY
9906 El Dee Drive
Ellicott City, MD 21043

MORE TO COME next month!



Selectivity Modification Promises More FM DX

—By Bruce F. Elving

Is it a panacea, or a gimmick? Is it something that's the greatest aid to FM DXing since the invention of the yagi? Or is it just hype? Even if it works like "they" say, are there harmful side effects to regular FM reception?

You've seen the articles in January's and February's VUDs, and March will probably have brought still further news on this exciting-to-FM DX development—namely replacement ceramic filters for better adjacent-channel reception. If you're an FM DXer, most likely the articles have at least made you curious about selectivity modifications.

Dr. Ulrich Onken, a WFTDA member from Loerrach-Brombach WEST GERMANY, and who has spent a lot of time around South Bend IN, wrote me in May, 1989 about how to improve selectivity. He even sent two ceramic filters, which had been literally filed away in a cabinet. That is, until Bill Nienajadly started writing and calling me, full of enthusiasm on the subject. I've also heard from Bill Nollman in CT, who says that Mike Bugaj has since gone through his Sony ST 5130 and apparently remodified it, putting some of the original filters back in. This indicates some caution is needed before we, in a gung-ho fashion, filterize all our electronic equipment.

Ulrich mentioned the more selective filters as working with the Sony ICF-2010, and he sent a photocopy of the parts layout of this legendary AM-FM-shortwave radio with its keypad and station memories. The copy is too poor to reproduce here, but filters can be identified by the picture (below), usually having a body which is brown/orange or blue in color and having a colored dot in one of its upper corners. Ulrich's new home is an apartment just across the border from Basle SWITZERLAND, which "is certainly not an ideal place for FM DXing, since it is located in a valley on the southern edge of the Black Forest; however, there are a few 'slots' to the east and the west, the latter ones providing for reception of a number of low-powered stations in neighboring France. . . I got them by mail order from a discount store somewhere in Bavaria. I have also a data sheet from the manufacturer (Murata, Inc.). These data are roughly in agreement with my own measurements; these indicate a center frequency of 10.71 to 10.73 mhz (specified: 10.70 mhz) and a bandwidth of about .20 mhz at an attenuation of 3 dB. The original filters had a bandwidth of about .3 mhz.

"The original filters and the replacement parts look fairly similar: brown-orange components, 5 by 5 mm in size, three legs and a red dot on the labeled side. The color of this dot indicates the center frequency (red=10.70 mhz, other colors are .03 or .06 mhz off). Since 10.70 mhz is the common IF frequency, you should only use filters with a red dot. The label itself reads something like 'E10.7A', an abbreviation for SFE 10.7 MA.

When replacing the filters on the ICF-2010, you will have to lift the main circuit board in order to get hold of the component side of the board. The filters are located somewhere near the center of the board. Be careful not to break any of the wires connected to the board, especially the foil type ones.

"This kind of modification is suitable for any tuners or receivers with ceramic filters in their IF sections. Some older FM receivers still have coils and capacitors in their IF section; I would not replace these with

ceramic filters since the impedances might be different and the resulting mismatch would degrade sensitivity. As far as I know, the ceramic filters have a standard impedance of 200 ohms, thus there is no mismatch when you replace one type of ceramic filter with another one."

Is the "filter modification a resounding success" as Bill Nienajadly wrote so enthusiastically? Two main types of narrower filters have been used by us. The DigiKey filter, which Bill mentioned in his January article, offers 180 kHz bandwidth at 3 dB, while the Murata-type filters, available from various places, such as Hosfelt Electronics in OH and Newark Electronics (In NJ, I guess), is somewhat more selective—150 kHz at 3 dB bandwidth; 380 kHz at 20 dB bandwidth. I have a few of each type, including the two filters Ulrich sent. Using two identical Magnum/Dynalab FT-101 tuners, switchable to a yagi antenna, and with audio cables switchable at the amplifier, I could instantly compare the results with only one of the tuners modified. Before modification, both tuners performed equally.

The FT-101 is an analog tuner, with its ability to tune away from strong local signals, which helps, filters or not.

With the help of wife, Carol, with much better hearing than I have, we discovered that, using the FT-101 with two of its three filters changed (the filter by itself with a blue dot was not changed because it outperformed the Digi-Key variety, and I have no idea what frequency is signified by a blue dot; possibly the component with the blue dot is a discriminator [which can look like a filter], and should not be changed), selectivity was improved. Adjacent-to-locals 95.9 WLKX Forest Lake MN and 103.5 KYSM-FM Mankato MN were in much better, although both tuners would get both stations. Carol did find the country music on KYSM-FM listenable on the modified tuner, while on the other, KUMD *103.3 Duluth spread over too uncomfortably. Other adjacents showed up better on the modified tuner. These included KXLP 93.1 New Ulm-Mankato MN, KEEZ 99.1 Mankato and WLDY-FM 92.7 Ladysmith WI. The test may not be that impressive to other DXers when you realize we are aiming away from the Duluth locals to get the adjacents, but it did show improvement in selectivity. I've since modified the other FT-101 tuner. Since the filter advertising mentions a 7 dB insertion loss, I also checked sensitivity on the two sets, and found no difference between the modified and the unmodified tuners, nor was main channel fidelity or stereo separation affected—at least that we could hear.

I then called Marv Southcott at the Magnum/Dynalab Company in Buffalo NY and told him what I am doing to his tuners. I said with this modification I am getting better selectivity than on the more expensive \$850 "Etude" series tuner. He agreed that selectivity can be improved, but cautioned that distortion can result if you are not careful about selecting components. He advised me to insert molex pins, or do like Bill Nollman suggested, and that is to tear off all but three pins of an IC holder. Solder those to the underside of the circuit board and then you can easily test different filters. I asked if filters vary among themselves when they are of the same type, having the same markings, and he said, "no; you only have to be concerned about types of filters, not variations within a type." He did not know the significance of the blue dot, and has promised to send more information by mail on the filters they use. I am sure I could modify an "Etude" tuner if I had one to work on. His price for factory remodification of tuners is \$200.00.

I have two car radios modified, one being an extra that is in the workshop and powered on a bench AC power supply, a Sherwood AM-FM-cassette, which also has an FM-SCA or subcarrier mod in or on it. The two filters were quite easy to take out (best procedure is with a braid type solder wick to remove underlying solder, then gentle pressure from above to lift the filter out; you don't want to break the filter, since you may want to put the original filter back if you don't like the results with the replacement filter). I used the less selective Digi-Key filters and found that adjacent channels WIMI 99.7 Ironwood MI could be heard quite nicely next to closer and stronger WCDK 99.9 Virginia MN, and WOJB *88.9 Hayward WI could be extracted from the spread of WNCB *89.1 Duluth MN. On the '87 Delco radio in the Oldsmobile, I completed a modification which included a tunable SCAdapter for 67-92 kHz reception plus two Digi-Key filters. Again, those filters were quite easy to change after I first lifted the upper circuit board of the radio. Selectivity improved dramatically, enabling me to hear WOJB in areas of downtown Duluth where the WNCB signal is overpowering; however, within 2 km of WNCB, adjacent channel interference is quite annoying. Before, however, I had to be out of town, or at least away from line of site of the WNCB tower to hear the other station. WOJB at 110 km was producing a signal of 110 microvolts per meter or 41 dB, while at 2 km WNCB was delivering a signal of 500 millivolts per meter, or 93 dB. Subtracting, this shows an adjacent channel selectivity of 52 dB. Compare that to the selectivity for the radio when it was unmodified of about 19 dB.

Bill Nienajadly sent a comparison of several receivers with the filters in use, both 150 and 180 kHz types. Because of limitations in my computer program, I cannot reproduce his table. In summary, he changed three filters in an analog Pioneer SX 82B receiver. Adjacent channel selectivity increased from about 0 dB to an estimated 30-35 dB with the 180 kHz filters and 50 dB with the 150 kHz filters. He noticed less bass with 180 kHz; at 150 kHz there was noticeable distortion to the FM sound, but "not major."

A Pioneer SX 650011 analog tuner gave an increase from 0 to 25-30 dB adjacent channel selectivity after changing three filters with 180 kHz types; with 150 kHz types it went up to 45 dB. He noticed less bass, midrange and treble with 180 kHz, and at 150 kHz, "noticeable distortion; sounds scratchy."

A JVC JR-S201 analog receiver had three filters changed. Selectivity rose from an estimated 5-10 dB to 30-35 dB adjacent with 180 kHz types, while it went up to 52 dB with 150s. Bill found higher treble with the 180s in use and no noticeable distortion with the 150s.

CERAMIC FILTERS FOR FM RADIOS

- 1 - Input
- 2 - Ground
- 3 - Output



SFE10.7MJ (Red)

Center of freq. - 10.7 MHz

3dB Bandwidth - 150 ±40 KHZ min.

20dB Bandwidth - 380 KHZ max.

Ripple - 1dB max.

Information on stations broadcasting in
Stereo or not especially welcome!

A Sony ST-J60 digital tuner with four filters went up from 0 dB estimated adjacent channel selectivity to 35 dB with 180s and 40-45 dB with 150s. The 180s seemed to give higher treble, while the 150s gave some distortion, "not major." He's gotten Frankfort NY (WKLL 94.9—is it stereo and does it ID with Utica-Rome?) and WXBB, "B-97.3," Harrisburg PA next to a local on 94.7. "It was tough before." Finally, a G-E Superadio, model 7-2885, analog FM-AM portable radio had its one filter changed. Before modification, there was an estimated 5 dB adjacent channel selectivity. This rose to 10 to 15 dB with a 180-kHz filter installed, and 15 to 25 dB with a 150-kHz filter. With the 180 filter there was less bass, and with the 150 "sound dull; some distortion. Not major." [John Ebeling said he changed the filter in his Superadio and did not discover much of a change.]

Bill also modified Bob Smolarek's Carver, "and it now has the 150s in it. I would say it has 55-60+ adjacent channel rejection. . . . There is a difference with sound quality on the 150 kHz filters. The sound quality is the same almost as a McIntosh MR-78 in super narrow, best described as scratchy, but is super narrow."

I have noticed no difference in sensitivity, but Bill cautions that a loss of 10 dB of signal per filter 150-kHz type, or loss of 7 dB of signal per filter, 180-kHz type, may be more than theoretical. An amplifier [booster] may be needed with the 150s. But I'd say if you are merely replacing one filter with another filter, there should be no noticeable difference in sensitivity. "A tuner with the 150 kHz filters approaches the selectivity of a MR-78! The trade off of sound quality vs. selectivity is well worth it! Receivers of good quality can benefit from modifications as tuners do—*is really worth doing!*"

"Tim McVey DID mention about the filters two or three conventions ago. Nobody followed up on it! So he did mention about it first! . . . What should DXers do with their 'old' 180 kHz filters? Put them in car radios and critical sounding tuners or receivers! They should use 150s in their primary DX set up."

In answer to Bill's question, I hope to always have a stock of 150 and 180 kHz filters for use in various receivers, testing as Marv Southcott suggests, and using the best filter in the proper application. If any DXers are about to discard filters, please send them to me. I am collecting even the discarded, 230 kHz or so, filters and may ship them to a company that buys surplus electronics. I'll have to wait until I collect about 100 of the old filters for them to have any value, probably about 10 cents each when bought by surplus traders. Old filters never die!

Many of you know I am somewhat interested in FM/SCA (SCS or SCMO), and have done some modifying of radios for noncommercial, hobby use of the 67 or 92 kHz subcarriers. If you are into SCA listening, here's a new caution for you. Don't expect pristine reception of the 92 kHz frequency, either with the 150 or 180 kHz filters. My FT-101 is still as sensitive on 92 kHz SCS as it was, but I must detune it to the next even frequency. Instead of hearing the local station at 105.1 I must tune it to 105.2 to get their 92 kHz foreground music clearly; 67 kHz is unaffected. In the car radio, the selectivity is so great that the 92 is heard only in a rather distorted way, enabling one to know the program is there, but not all that pleasant to listen to.

It might be possible to add filters to a radio not having them, but the caution issued by Ulrich should be kept in mind. Filters seem to connect in series between the radio's various IF transformers, with the center leg of the filter going to ground. I am sure some enterprising DXer will figure how to improve the selectivities of his or her boomboxes or cheaper radios that lack filters to be able to hear some groundwave or skip that might otherwise not be listenable, such as when on a picnic or DXpedition in the mountains. As a sideline I may offer filter modifications, along with FM/SCA modifications to DXers. But since there are some in the club who think I make too much money off fellow DXers, I will refrain from any commercials here. Hopefully, this article will stimulate you to think about installing filters to help in your DXing. Having done so, you'll be in a better position to catch whatever skip, tropo, meteor scatter, airplane reflections, or auroral DX there is to get—even if some of that DX is lurking under the adjacent channel spread of your local stations.

P.S.: To Ulrich, Yes, do deduct the cost of the two filters you sent me when you order the next "FM Atlas," which hopefully will be out some time this year. b.e.

"Majic potion! Heh!" — Bill Nienaiadly

Readers' Reports

Eric Fader and Max Engel were nice enough to send an article from NY's "Newsday" on WFMU *91.1 East Orange, which thanks to an engineering error of 28 years ago is operating with twice the power it should have for its height. This is causing concern at WSHU *91.1 Fairfield CT (now with a translator in Stamford to cut interference; see FMedia! for details on the translator), at WKTW *91.1 in "South Jersey" and WFUV *90.7 in the Bronx. They'd like to get WFMU cut back, while WFMU is applying to the FCC to make their operation legal as it is. Bill Nienaiadly sent an item from the "Daily News Magazine" on NY area DJs who are black. These include, not surprising, one of WBSL's announcers, Hal Jackson. Thanks to selectivity modification, Bill's heard WDVR *89.7 Stockton NJ; apparently mono, but too weak to tell if stereo.

A prospective member, J. Kent Wood from OK, who calls himself a "life-long FM enthusiast," checks in: "The first time I realized FM had more than a line-of-sight future was in the early '50s, when I befriended a broiler chicken farmer on the south side of Siloam Springs AR. Fred Hays had purchased a folded dipole with reflector and antenna rotor for his FM tuner (mono, of course). He was not in good health and I was more than glad to mount his antenna in an adjacent pine tree about 9 meters high. His home was on a hill above the Illinois River. We tuned in to a station out of Brownsville TX. This was approximately 550 km from Siloam. Of course, this was during the early days of FM, when many of the electronic men believed that FM was a line-of-sight technology. Well, now I have put my children thru college and life has settled down. I have mounted a multi-element Radio Shack yagi 9 meters above the ground and in the process of mounting an Alliance rotor. . . . My only disappointment with FM today is the slow but sure disappearance of the better music formats. Educational stations broadcast better music, but the easy listening stations seem to have lost out to the drum beat of the '90s; our youth are being short changed in this regard. I worked up the preliminary engineering for the first FM station to go back on the air after the Second World War, KOCW Tulsa, but did not take an active part in it from a financial standpoint. The early days were tough for the pioneers of this new medium. The advertising agencies were not overly receptive to FM, or probably anything that threatened their long and successful marriage with AM radio. I note that AM radio seems to be on the down side, with stereo not reviving AM to any extent."

"Monitoring Times" has cut me out of the trade subscription I had, so I will not have the chance to read Karl Zuk's column any more. "I just heard that you also called Brasstown (NC) regarding the trade-out. Perhaps we'd better forget the whole thing," writes Larry Miller. So I have taken him off the mailing list for FMedia!

Matt Sittel sent lots of news from NC where he is, including the new WSAY-FM 98.5 stereo Rocky Mount NC; WSAY AM is in Salem VA. Mike Cherry is happy I've added o, rock oldies, and op or or for classic hits. "I understand that in order to reduce your workload for you and Carol, you are trying to discourage subscriptions to 'FMedia!' I am willing to help out and let my subscription lapse but ONLY and ONLY if you restore and even EXPAND your FCC News column to include

'Readers' Forum' and other features that I'll sorely miss without 'FMedia!' PLEASE continue to print non-DX news (gasp!) in your column. I get pretty tired of Les Remmer and some of the other whiners and snivellers that bitch and complain about the style, content and every other nit-picky little detail about the VUD. As I said, we all, DXers, broadcasters, casual listeners, etc. need all the information we can get. So, please restore the FCC News column to its former length and format. I will continue to report to you on a regular basis and will continue to purchase each edition of 'FM Atlas', even if Les Remmer and others think it's 'immoral' of you to make money off of fellow DXers/broadcasters. Believe me, Bruce, you have more supporters and than detractors!"

Mike noted in *Popular Communications* "Broadcast Topix" column a grant to Bellingham WA *91.3. That is an error; the station will be on *91.7, protected from CBYF *91.7 Chilliwack BC by a directional antenna (plus low power). He wonders if his DX equipment will be able to separate the two on their co-channel. About "lame radio": "Don't give in to your detractors. Let's face it, the quality of radio programming in general on the commercial stations is so 'safe' it has become boring even to those of us that have radio in our blood. If a few broadcasters take exception to this such as in the last VUD, then perhaps it's time to take a good, hard look at their station's 'sound'; get out there, do a little research and actually talk to some of your listeners! Unfortunately, there are too many venture capitalists and corporate owners that are not broadcasters and do not have radio in their blood. The bottom line is profit—from safe, bland and lame generic radio meant to pacify your average and below-average listeners. . . . Keep telling it like it really is, Bruce. I can't think of a better term than 'lame' to describe today's robotic, generic, safe formats! Keep up the good work and don't give a centimeter! Hopefully, we'll all get some aurora soon!"

Regarding club commercialization, Bill Fabber summarized it well last month (pp. 5-6, "Scapbox"). My commercial endeavors benefit both my subscribers and the nonsubscribers who use this column. Surprisingly, those most vocal in favor of having this a long column are those already getting FMedia! and presumably least needy of the information, most of which appeared a month earlier in my newsletter. I plan to keep the column shorter from now on, however, despite a period of longer columns. Rather than trying to have a column as long as any other in the VUD, I will be striving for making this column even more readable than before, using larger type fonts whenever possible. For a guy without a word processor, I think Bill Nienaiadly's column (p. 30, March), was very readable. Carol and I like our work to be profitable, and that is why I increased subscribing prices to FMedia! I'd rather DXers pay the \$25/year price than have the newsletter go under. That would leave us as before, with only this column to do, which doesn't generate income for the family. I do appreciate the contributions of station information from VUD readers, and hope you can all continue to report on new stations from your areas, whether they have stereo or not, and music formats. This month I am cutting back on news of FM translators. DXers like Roger Winsor tell me that translator news only clutters the listings of main stations.

Danny Buntin says "please keep up with the comments section of your column. It's frequently interesting

reading, and I'm not so narrow-minded that comments not squarely related to DXing are going to make me unhappy. The comments are good for showing the human side of DXing." He's modified his tuner for more selectivity, but feels the need for such modifications might be greater in large urban areas than where he is in OK. "I wouldn't mind getting your new catalog," he writes.

Nick Lombardi said I should explain to the club the discussion of rock "oldies" which was in FMedia! Unfortunately, that file was deleted from the computer, so I'll only say I am starting to list stations with a rock oldies format, coded o (but not "lame" rock oldies), and "classic hits" as op or or. He sent a piece, "Mad at Metric," from a reader to "Time" magazine. Like it or not, slowly we are seeing more metric. DataWorld has just converted its FM station database to metric. This leaves only "Broadcasting" and the "M Street Journal" as holdouts, and I am working on "M Street" to change. All DXing distances reported to this column or other measurements are converted to metric. I am an absolutist who believes, while a certain amount of audience adaptation is necessary, one should not pander. When one system is clearly superior to another, it behooves those who have the power to change things to do so. With that bit of pomposity out of the way, it's on to more mail:

Jim Pizzi sent an article about a Class A going to higher power and height, which I can't find. It must have been processed and appearing in "Facilities" or "On Air." Charles Gauthier sent an article from Canada's "Broadcast Technology," which I receive directly on a trade for FMedia! The article laments the loss of the CKO news stations.

Alain Pepin has a criticism of the way I show call letters here. "Was 91.9 Plattsburgh NY actually assigned 'WCFE' without the suffix? Or did you take it upon yourself to remove the suffix because your research showed no AM station bearing the same call letters? WCFE ch. 57 Plattsburgh at this point does not use the '-TV' suffix. Can we trust you to give factual call change information? I would like to see the '-FM' suffix listed whenever it is assigned and perhaps the information of the type 'KHLT-FM becomes KHLT-FM' because AM gets a new call sign could be listed separately from what I would like to see as an 'official call changes' column. Only once did I actually record a 'quasi-legal' ID that forgot about an assigned suffix. WERT-FM Van Wert OH didn't mention it the time I caught it, and yes there was a WERT AM on at the same time! . . . It's too cold for skiing so I'm going scuba in Lake Champlain; will mail this letter there." [I've been skiing about five times this season; thrice downhill at nearby Mont du Lac in WI (on MN state Highway 23, the only state highway known to go through another state) and twice cross-country on the "estate." Now to call letters. Alain is absolutely right. I do take liberties in listing calls and failed to note the existence of a WCFE (TV) when listing the FM calls as WCFE and not WCFE-FM. However, when I do not list suffixes I will usually use the form WCFE-FM, which indicates that the FCC considers the calls to be WCFE-FM, but I don't. What I am trying to avoid is abuse of call letters by stations using the "-FM" when there is no like call-lettered AM station or TV station established before the FM was granted.]

John Jefferson heard a pirate around Antioch CA on 90.4 and 90.5. "He apparently has only one album, consisting entirely of solo guitar music in a folksy vein [and] may be airing a tape of his own playing. There's no talk at all, so no clue who's in charge. It's mono with a signal that varies noticeably in strength." Could it be on a rotating yagi, and how sure are you it is a "he" who is broadcasting?

"To say that FCC/FM News is now only to aid in FM DXing is not true," writes Andy Reid. "Just as your column heading says, I consider FCC/FM News to be

just that, a news column—news that affects the FM industry as well as news the FM industry creates. Yours is probably one of the best columns in North America that keeps its readers informed on the whole of FM developments. With this in mind, I would ask that you reconsider adding some of the sub-columns dropped in January, like FM Rulemakings and especially AM Happenings [this item most directly demonstrates FM's continuing success over older technologies]. Without these (and other items dropped or reduced in size), your column has lost some of its usefulness for me. Readers can get DXing info from loggings—that's what they are for. I also do not think it is right for FCC/FM to endorse (if it is doing so) such derogatory comments as 'lame'. A column while offering opinion, should not judge—as you have seemed to, of what I'm sure many radio stations find as a working format. If it were truly lame I doubt if broadcasters would use it. . . . I trust you will take these comments as constructive criticism. . . . Those stations I wrote about in Nov. at Rophoton ON 96.7, Fraserdale ON 91.9 and Beardmore ON appear to be erroneous. They apparently do not exist after all. As you requested, I tried to get more information by first calling the DOC who could not help me. They referred me to the good old CRTC, who were very helpful, but could not find information on such stations." Andy then came through with some official news from the CRTC, including call letters for Fort Frances ON 90.5. If I am endorsing the term "lame" and other derogatory references, it's because of a need to shake up the industry. If a broadcaster recognizes his or her station in such comments, then it's time said broadcaster be awakened from its apathy and work to provide more service, before the ratings betray a decline in listenership. Contributors to this column and FMedia! are among the continent's most knowledgeable in radio, both as DXers and broadcasters, and it behooves them to make their influence in the industry felt far out of proportion to their numbers. Some programming by its very nature is superior to other programming. This applies also to presentation—how the elements of a program are put together. "Lameness" can apply as much to a repetitive list of songs on the same station as it can to a faceless copying of other stations in the same market.

Bill Nienajadly doesn't want me to use the term "lame radio" if it will mean a loss of subscribers/revenue. "But, heh, everybody is using the term widely now, and I guess the term 'lame radio' is solid and will probably be for some time [but] again comments are the lifeblood of FCC News/FMedia! You decide. You're da boss! Are you having any luck with the filter modifications? Real curious! . . . What is 'rock garbage'? Heh! Good DXing!"

W. R. McIntosh sent an article on 92.3 KKBZ changing formats from rock, after being classical KFAC. "A lot of people may feel they are getting revenge!"

A Soviet would like to hear from young Americans. Eighteen-year old Alex Drofa, Pechersky Spusk 18-66, Kiev-11, CCCP, would like letters and trades of records, games, etc. His family is hoping I'd sponsor their visiting the USA.

John Ebeling came back from a trip to Barbados, and included a full page ad for "Voice of Barbados 790." He says "AM is far from dead in the Caribbean what with the distances involved." FM stations there: BBS 90.7, "no ID except BBS-FM," and Yess-Ten 4 104.1, "only ID is as shown." BBS-FM seems to be b and c, while Yess-Ten 4 must be hits, etc. including blues and "mellow." No indication of stereo in the listings. CBQ AM Thunder Bay ON had an ad mentioning technical difficulties on 800 kHz, and "difficult to replace parts." Tune in "our new transmitter presently operating at 88.3 on the FM band." CJLB AM has applied for an FM country station in Thunder Bay, competing for the unnamed channel with a group of local businesspersons.

Gus Mancuso checked FM listening ratings in 17

major markets, finding Atlanta and Washington DC were way up there with 80% FM listenership. These were followed by Houston at 79%, Cleveland 78%, Dallas 75%, Philadelphia and Columbus OH at 74%, Chicago and Denver at 73%, Detroit 72%, Boston 66%, Seattle 65%, New York and Pittsburgh 64%, Los Angeles 63%, San Francisco 62%, St. Louis 61%. "Biggest factor seems to be lack of AM competition; Atlanta and DC have few AMs on left side of dial. It might be noted that San Francisco (along with DC) was one of the cities with high FM ratings in the early days." Gus used spring 1989 ratings, probably Arbitron. "Obituary: Connie B. Gay, early Washington area radio pioneer, founded WGAY. Have modified my receiver with ceramic filters as per recently discussed method. Can't tell much difference around here (DC). But will try from Bartow FL, where I DXed thrice before. Can a station have bi-polar directional signal with stronger directionality at night, using only four towers or would it need six? [I don't know; you must be talking about AM—b.e.]

Play me lame format is when stations to play music that people won't dislike, rather than looking for songs that listeners will like. In DC, 5-kw AM WMAL seems to be doing this and consistently beats WAVA and WLTT, which are typical light-easy FMs. Many of their songs have a hum-drum 'poop-ee-doop' sound."

A DXer in Newfoundland, Tom Wickham, used a colorful QSL card showing NF and LB. He's 39, 157 cm tall, and working for Cable Atlantic as a cameraperson, audio and floor director at "our community channel's" cable 9. I hope you can monitor it." What, DX cable TV from Newfoundland? CBN-FM 106.9 St. John's is c, 0930 UTC to 0400, while 0400 to 0930 UTC it is "new wave and punk." Apparently not on the air: CBAF-20 *105.9. I wonder how many other French CBC stations in the eastern provinces are unbuild?

Canada's Radius International sent information on their 1/2-watt and 10-watt FM transmitters. Standard frequencies for their equipment are 89.9 and 105.1; others cost \$100 extra. The half-watt is \$1500 Canadian and the 10-watt transmitter is \$1850. "Please note that equipment shipped to the United States is declared to be 'fixed frequency signal generator' and is not subject to FCC restrictions." I am sure this doesn't mean you can set up and broadcast legally in the U.S.A., using the equipment for purposes not approved by the FCC. Radius International is at 81-260 Adelaide Street East, Toronto ON M5A 1N0; (416) 769-4288. Their equipment is used by community stations in the

far north of Canada, many of which are upgrading from half-watt to 10 watts.

Now to material appearing in last month's FMedia! This longer "Readers' Reports" will probably eat into the space left for other stuff. Look also for the feature "See Also," culled from March's VUD.

New FM Station Grants (translators excluded)

CA Merced 107.7 3000 h.v.; 100 m
ID Caldwell KTSY *89.5 8300 h.v.; 807 m, Gem State Adventist Academy, g, reinstatement of permit
IL, Northern IL U.
IL Rockford *90.5 50000 h.v.; 112/ [Bstg. KY Downs 96.1 100000 h.v.; 302 m, Sound/KY Flemingsburg WBPX 106.3 1800 h.v.; 122 m, \$, p, on air, despite FCC cancelling its CP
NE Omaha KPDB *88.1 1100 h.v.; to be \$, g, grant reinstated to Family Stations, Inc.
OH Columbus 107.5 1900 h.v.; 126 m, H. Perkins OH Ripley 89.5 3000 h.v.; 100 m, J. P. Gray PA Berwick 103.5 2100 h.v.; 120 m, R. J. Moisey PA Lewisburg 96.3 3000 h.v.; 100 m
SC Loris 105.9 3000 h.v.; 100 m, R. L. Rabone TN Rockwood 105.7 600 h.v.; 222 m, Roane TX Jefferson 104.5 1700 h.v.; 129 m, D.L.B. Bestg. VT Killington 105.3 11000 h.v.; 270 m
VA Emporia 98.1 2000 h.v.; 123 m, Stone Bestg. VA Lawrenceville WHFD *91.7 100 watts h.v.; 30 m, St. Paul's College
VA Rural Retreat 103.1 3000 h.v.; 100 m
WI Pashco 101.3 3000 h.v.; 29 m, c
WI Mascoutet WTRW-FM 107.5 3000 h.v.; 67 m
BC Hazelton CJFW-101.9 50 watts horizontal, relay of Terrace station, k
BC Mackenzie CIOI-105.7 50 h, relay of Pwnee George station, k
BC McLeod Lake CIOI-92.5 24 watts/ [h, k/ country]
ON Orillia CBCO *105.9 6700 h.v.; 152 m, CBC ON Penatanguishene-Midland CBCM *107.5 15300 h.v.; 168 m. See also "Deletions," ON Hillsdale, and Mar. VUD, p. 13, Chernox.
PQ Trois-Rivieres grant to Talemédia Communications, but must find a different frequency and power 94.7 with 100000 h.v
NT Fort Simpson CKNM-101.9 10 h, relay of Yellowknife station via satellite
NT Hay River CKNM-101.9 4 watts h, relay, plus 10 hours a week of local programming

Call Letters Assigned

AL Huntsville *90.9 WJAB
AK Fairbanks 102.5 KJAK-FM (KQRZ), k
AK Phoenix 101.5 KAMJ-FM (KAMJ-FM; AM gets new call) [CP granted '87
AZ Winslow 95.1 no calls (not KTD), / 105.1 KTDX [Unis. oldies
AR Bentonville 98.3 KOLZ (KBCV), o, /
AR Marianne 106.9 KVNZ
CA Dinuba 98.9 KJOI (KJOY), still b
CA Hanford 107.5 KZRZ (KCLD), p, "Z-Rock," back on air [in Barstow
CA Lenwood 104.9 KIQO-FM (KIQO; AM) /
CA Los Angeles 98.7 KXEZ (KJOI), mr, "EZ 98.7." "Rich Capparella, a former KFAC-FM announcer who made a much-publicized move to KJOI just after the format change last October, was fired. . . He has been replaced by Steve Day in the 5-9 a.m. shift."
101.1 KRTH-FM (KRTH-FM; AM gets new call), o, "K Earth 101"
CA Palm Desert *81.7 KYRH [stereo]
CA Pittsburg 92.1 KKIS-2 [stereo]
CA Pleville 92.1 KWWN (KHTN), to resume/
CA San Ramon 92.1 KKIS-1 [But/
CA Santa Paula 96.7 KXBS (KXPT), o, "The/
CA Walnut Creek 92.1 KKIS-FM (KKIS-FM; AM in Pittsburg gets new call)

CO Vail 104.7 KSKE-FM (KSKE)
CT Enfield 97.9 WJAI
FL Melbourne 102.3 WGGO-FM (WMMY)
FL Micanopy 97.7 WGLL (WGGG-FM)
FL Port St. Joe 94.5 WJST (WWZR)
FL Tallahassee *88.9 WFSO
GA Clarkesville 102.9 WMJE (WCHM)
GA Crawford 102.1 WGMG
GA Gordon 107.1 WYGO-FM (WYGO) [oldies
GA Jesup 98.3 WGGC (WZKS), o, "Coast," Unis./
GA Thomasville 107.1 WSTT-FM (WLOL-FM)
ID Sun Valley *88.9 K205BW [in Molina]
IL East Moline 101.3 WLLR-FM (WLLR; AM in Austin 96.3 WJAA
IN Seymour 93.7 WZZB (WJCD-FM)
KS Burlington 95.3 KSNP
KS Kansas City 94.1 KFCK-FM (KFCK-FM; AM gets new call)
KS Larned 106.9 KYSV [AM-FM simulcast
KS Pittsburg 96.9 KQOW-FM (KRKN), k, /
KY Edmonton 99.1 WKNK
KY Elizabethton *90.9 WPHJ
LA Hammond 103.3 WKJN-FM (WKJN-FM; AM in Baton Rouge gets new call)
LA Houma 107.5 KCLL (not changing to KIXA)
LA Lake Charles *91.7 KOJD
LA New Orleans 95.7 WMKZ (WQXY), sr, "Mix"
LA Tallulah 104.9 KBYO-FM (KBYO)
MD Baltimore 101.9 WLIF-FM (WLIF)
MS Ellisville 102.5 WJXX (WBSJ)
MS Gulfport 102.3 WGCN-FM (WTKI), o [oldies, "Coast 102"
MS Wiggins 97.9 WPHF
MO Springfield 98.7 KKHT (KWTO-FM)
NE Alliance *91.1 KTFE-FM
NE McCook 96.1 KICX-FM (KICX-FM; AM gets new call)
NE South Sioux City 107.1 KYNF (KIKD)
NJ Ocean Acres 98.5 WQJL
NJ Villas 98.7 WLGE (WVLL)
NM Los Alamos 106.7 KPZA (KBOM)
NM Santa Fe 105.9 KOLT-FM (KMMG; KOLT AM is in Scottsbluff NE), k, "The Colt"
NY Geneva *89.7 WEGS (WEGS-FM)
NY Plattsburgh *91.9 WCFE-FM (WCFE); not on air yet, but is mentioned in "WCFE Highpoints" magazine, published by Ch. 57 Plattsburgh ["Z-95" and "Gorilla"
NC Charlotte 95.1 WZZZ (WRQQ-FM), r, /
NC Nags Head 92.3 WNNW (WPIR)
NC Scotland Neck 102.7 WWRT
OH Marysville 105.7 WNRJ
OH Nelsonville 107.7 WAIS-FM (WSNV); AM is in Buchtel OH
OH Shadyside 95.7 WEEL (WBZY)
OH Toledo 92.5 WVKK (WMHE), r, "Kiss"
OR North Bend 107.3 KPQA [AC]
PA Harrisburg 97.3 WKBX (WHP-FM), r, "hot"
PA Mercer 98.7 WKTX-FM (WKTX) ["Magic"
SC Darlington 105.5 WDAAR-FM (WMMG), [loss/
SC Elmore 100.3 WNNY-FM (WNNY), S, s
SC Ridgeland 104.9 WSHG (WZBZ)
SC Pamplico 102.1 WPHO
TN Crossville 102.5 WEGE
TN East Ridge 107.9 WJRX
TN Sargolville 104.3 WLKW (WOTH)
TX Belton 106.3 KYZZ (KTQN), r, "Z-106"
TX Corpus Christi *90.3 KEDT-FM (KKEE)
TX Hereford 103.5 KMAZ
TX Midland 103.3 KCRS-FM (KMMJ)
TX Portland 105.5 KISQ (KJKC)
TX San Angelo 101.9 KKLL
TX San Antonio 98.5 KISS-FM (KISS; AM is in Terrell Hills)
104.5 KZEP-FM (KZEP), no nonID, saying/
TX South Padre Island 95.3 KZSP (KESD)
TX Stephenville 98.3 KUCB (KVOC)
TX Texarkana 92.7 K242B
TX Waco 99.9 WACO-FM (KTSK), k, "FM 100"
UT Ogden 101.1 KBER (KDAB), r, "classic rock, AC, CW"
UT Spanish Fork 106.5 KQOL (KBER), r, /
VT Rupert 104.1 WNNV (WRQL)

VA Christiansburg 100.7 WFNR-FM (WQGX; AM is in blackburg)
VA Dublin *91.5 WPHH
VA Exmore 106.1 WPHG
VA Orange 96.7 WJMA-FM (WVJZ)
WA Ephrata 95.9 KULE-FM (KGDN)
WV Beckley 99.5 WJLS-FM (WBSKW), \$7
WV Parkersburg 98.1 WHCM (WMPG), k
WV Princeton *91.1 WZ16TAK
WI Blomer 95.1 WPHO [oldies
WI Spencer 92.1 WOSX (WJMA), a, SMN Pure/
WI Washburn 105.9 WEGZ (WBVA)
WY Diamondville 105.3 KGLG (KFGI)
ON Fort Frances *90.5 CBQQ (not CBOT-1)
ON Maynooth *89.3 CBOD, to replace AM with those calls within a year
ON Ottawa *89.1 CFUO, calls presently used by a carrier-current station [assumed
PO Rouyn-Noranda 99.1 CJMM (not CJMN), \$/
SK Saskatoon 102.1 CHSN

Facilities Changes (Selected)

AL Birmingham WENN 107.7 377 m
AZ Cottonwood *91.1 calls are KZ18BU, relaying KCWM *91.3 Barstow CA
CA Colusa KKL 103.1 (from 96.5), "They have the same facility, but say the open channel has done wonders for their coverage, as KOIT SF used to zap them as near as 23 km from Colusa." [96.1 530 h, v; 238 h
CA Morgan Hill KRAC [m [300 h, v
CA Santa Ana KWIZ-FM 96.7 63/
CA Taft KMYX-FM 103.9 6000 h, v; 300 m, "Soft Mix 104" [6 m
CO Ouray KURA 105.7 (from 104.9) 3000 h, v; 2/
CT Stonington WVVE 102.3 100 m (3000 h, v)
FL Marathon WMMU 94.3 3100 h, v (49 m), C2, not moving to 94.7
FL Miami WEDR 99.1 100000 h, 82000 v, 307 m
IL Chicago WOUJ *88.9 17 wets horizontal only, 27 m, off air, but may come on soon—watch for it! [adds vertical
IL Quincy WQUC *90.3 1800 h, v; 155 m, v/
KS Col by KCLH 97.9 184 m (100000 h, v)
KS Lawrence KANU *91.5 100000 h, v (201 m)
KY Berea 106.7 850 h, v; 172 m, grant changed to Beria Besty, Co. [101.7 Presque Isle
ME Madawaska W26AG 107.1 primary is WOZ1/
MD Frederick WJTM *88.1 4000 h, v; 189 m, directional (d-e), on air, mono, g, finally on air
MA Fitchburg WXLD 104.5 37000 h, v; 172 m; CP for 206 m cancelled [h, v; 142 m
MN Albert Lea KPFI 94.9 (from 95.3) 50000/
MN Park Rapids KD KK 97.5 134 m (100000 h, v)
MN Sartell KKSR 96.7 (from 96.1) 15500 h, v; 277 m, C2. This will cause disruptions to KSJU *96.5 Collegeville MN and K244AZ *96.7 Sauk Rapids-St. Cloud MN.
MO Steelville KNSX 93.3 (from 96.7) 7700 h, v; 347 m, C2 [extended time to build
NV Reno (near) 82.9 45000 h, v; 809 m, given/
NY Cortland W209AF *89.7, NY WQYV-FM 91.3 Syracuse instead of WSKG-FM 89.3
NY Smithtown WFRS *88.9 1500 h + v; 132 m
NC Edenworth WBXB 100.1 50000 h, v; 92 m
NC Erwin WUAUW *88.3 63 m (3000 h, v)
NC Hickory WXCX 95.7 311 m, d-a (100000 h, v)
OK Salisaw KKID-FM 95.9 32000 h, v; 190 m, C2 [h, v; 150 m, C2, adds vertical
SC Brookings KEGK 93.7 (from 94.3) 31000/
TN Bristol WHCB *91.5 10000 h, v; 709 m
TX Fort Worth KSCS 96.3 491 m (89000 h, v)
TX Madisonville KAGG 96.1 40000 h, v; 164 m
TX San Antonio KSAQ 96.1 182 m (100000 h, v)
VA Colonial Beach WGRQ 95.9 100 m (3000 h, v) [410 m, C2
WA Ellensburg KXLE-FM 95.3 1900 h, v/
WA Tacoma KRPM-FM 106.1 58000 h, v; 714 m
WI Janesville WJVL 99.9 168 m (11000 h, v)
ON Brockville CHXL 103.7 139 m (50000 h, v), licence renewed to 1994, but its request to

eliminate 90 minutes of weekly jazz denied
ON Chaptau CBCU *89.9 350 h, v; 70 m
CBON-28 *91.9 350 h, v; 70 m
ON Cornwall CCKS 95.1 171 m (42000 h, v)
ON Cornwall CKON 97.3 50 wets h, v
ON Geraldton CBLG *89.1 134 m (11900 h, v)
ON Hamilton CKLH 102.9 40000 h, v; 122 m
ON Hearst CBON-26 *90.3 10500 h, v; 119 m
ON Kingston CFRC-FM *101.9 3000 h, v; 81 m (still on 91.9)

ON Orangeville CIDC 103.5 149 m (50000 h, v)
ON Ottawa CBO-FM *103.3 323 m (84000 h, v)
ON Parry Sound CKLP 103.3 2800 h, v; 105 m
ON Pembroke CBOD *96.7 61000 h, v (158 m), to reduce overlap with new CBC FM station in Ottawa, mentioned last month
ON Toronto CKLN *88.1 250 h, v; 259 m
CJBT *89.5 15000 h, v; 270 m
CJUC-FM *90.3 431 m (3500 h, v); off air
CJWE 97.3 421 m (4000 h, v)
ON Wawa CBOB-27 *90.7 115 m (890 h)
ON Windsor CIMX 88.7 100000 h, v; 176 m
ON Woodstock CKDK 102.3 120 m (3500 h, v)
PO Longueuil CHAA 103.1 33 m (50 wets h)
PO Montreal CIBL 104.5 10 wets h, v; 107 m.

The move to 101.5 now complicated by Communications Power Corp., which has bought St-Jean-sur-Richelieu station CHRS AM, and is interested in the 101.5 frequency for itself. "The new frequency allocated to St-Jean is 104.1, and they are afraid that it might produce other problems to the air band. So they told their objections to the CRT, and the whole saga is still in the hands of the Commission!"

CH Ciudad Juarez XHEM 103.5 20000 h, v (134 m), but possibly 10000 wets with the horizontal and vertical powers being added in its on-air promotion

Stereo, or to be Stereo.

CA Central Valley KNNN 98.3, r
CA Cupertino KKUP *91.5, having installed a microwave link to their Loma Prieta transmitter, now j, but "very eclectic," with a 30-hour classical marathon at Christmas
CA Idyllwild KATY 101.3, r
CA Santa Rosa KBFF *89.1, +U, 67 kHz SCS
CA Twenty-nine Palms KODS 107.7, r
FL Lakeland WYFO *91.9
FL Ocala WHIJJ *88.1, g [(not strict)
MI Muskegon WMHG 107.9, s, "Magic 108,"/
NC Gaston WLGO 97.9
NC Roanoke Rapids WPGT *90.1
NC Spindale WNCW *88.7 cj, some talk
PA Greencastle WKSL 94.3
PA Renovo WMMU 93.1 k, //WHD 99.9 Avis
SC New Ellenton WAJY 102.7 r, "Joy 102.7" (not strict), ID with Aiken
TX Abilene KHXS 106.3
TX Granbury KYOT 106.7 m, still testing
TX Robstown-Corpus Christi KMIQ 105.1
VA Petersburg WVST *91.3
PQ Montreal C1NQ 102.3, 91 m (50 wets h, v), but applying for an increase. "We broadcast in seven languages as a nonprofit station. We can carry commercials, but advertisers in the two main languages, French and English, are reluctant to advertise on a station like this."

CINQ FM

Monophonic
FL Sarasota WKZM 105.5
GA Folkston WDKF 92.5, g
IA Des Moines KDMI 97.3, not even resuming; stereo weekends when it has more music; delete \$ listing
NC Rocky Mount WRSV 92.1
PA Mifflintown WQJU 107.1, remove \$ listing
WI Kewanee WAUN 92.7 "is the only regularly-

heard station w/that stereo here"

See Also March VUD For:

CA Big Bear Lake KTOT 101.7 Mountain Radio, nonID, Michaels, p. 17 [eels, p. 17
CA Riverside KWDJ 92.7 DJ-92 nonID, Mich-/
CA San Diego 94.9 1 list calls as KYYY, "Y-95," not KWLTV, "K-Lite," Michaels, p. 17
KYY 96.5 Y-96 nonID, Michaels, p. 17
KXG 101.5 Y-96 nonID, "The 101," Michaels, p. 17 [calls, Michaels, p. 17
CA Ventura KBBY 95.1 no "95" nonID, Mich-/
FL Cape Coral WAKS (was WRCC) now on 103.7, from 103.9, \$, r, Falconer, p. 14
FL Fort Lauderdale WJQY 106.7 m, Falconer, p. 14
FL Sebring WCAC 105.5 Stereo, Falconer, p. 14
NE Public Radio now on Spacetun 2, transponder 2, Jensen, p. 24. This might mean other stations are about to sign on and join KUCV *90.9 [ID, Falconer, p. 13
OH Chillicothe WFCB 94.3 B-94-FM non/
PA Harrisburg 99.3 real calls are WIMX, although it says "WIMX," except at legal ID time, Nienajadly, p. 14 [p. 17
BJ Tijuana XHKY 94.5 Y-94 nonID, Michaels, Buntin, p. 16-FM modification shows the theoretical limits of FM selectivity work. I wonder if this means a tuner having excellent selectivity, when modified, will always be better than a modified tuner that did not have as good selectivity to begin with. I modified a Sony STR-V3 receiver (which I bought from John Ebeling) with rather disappointing results. Selectivity improved, but it was still not as good as my 1969 vintage Fisher 500-TX receiver. The problem probably was due to an overactive AFC circuit which could not be turned off.

Format Changes (Selected)

Format is the same as in the "FM Atlas"
AZ Kingman KZZZ 94.5 k, "K Triple Z"
AR Sheridan-Little Rock KDLV 102.3, a, "Q-102" [on p. 102, FM Atlas-12, \$?
CA Barstow KXXZ 95.9 (not "105.9," as/
CA Hemet KHYE 105.7 k, \$, ex-105.5 mz
CA Los Angeles KKB 92.3 k, "It's the first time in several years that this city has a full-signal urban station. The last one was KKGQ (105.1), including those years as KBCA." KKB had "dismal ratings," dropping from 22nd place as classical KFAC to 36th as KKB. "I think their research was ill-founded and their arrogance excessive," charged Ellen Harris of the Committee for Classical Music, formed to protest the station's changeover.
CA Sacramento KAER 92.5 r, "The New Care"
CA San Diego KCBQ-FM 105.3, o, "Eagle 105"
CO Denver KOSI 101.1 m, from b
FL Bonita Springs WRXX 96.1 rp
FL Callaway WBKL 103.5, SMN Pure, \$7
FL Goulds WAQI-FM 98.3 mj, "The Breeze"
FL Homestead WDCY 91.7 Spanish, latin, "Ritmo noventa y cinco puntos siete," a flip-flop of the two, but so far no call letters exchanging. WDCY's format "was not a great commercial success," while 98.3 "is a poor facility." [g, "Joy-96"
IN Franklin-Indianapolis WPZZ 95.9/ \$?
IN New Haven WJFX 107.9 s, "Foxy 107.9"/
KS Columbus KCO 98.3 r, \$; had been silent
MI Ann Arbor WAMX 107.1 rj, "lately more pop, less new age"
MI Detroit WMDX 92.3 ar, "going after some of the large audience of 97.9 WJLB."
WJZZ 105.9 js, "jazz flavored pop soul and ballads," now "Jazz 106"
MI Kalamazoo WQLR 106.5 m, "O Lite 106.5"
MI Standish WSTD 96.9 o, Unis. oldies, \$7
MN Hibbing WFMG-FM 106.3 o
MS Greenwood WGNL 104.3 s, Stereo?
MS Newton WMYQ 106.3 delete format and

stereo; off air, awaiting a new owner/operator
NY Frankfort WKLL 94.9 op; is it Stereo?
NY Port Henry WMNN 92.1 o, "92-MNM"
NC Dunn WRCC 103.5 (having moved from 103.1) r, \$, ID with Fayetteville
NC Greenville WNCV-FM 107.9 is still b. "It never has been recently to my knowledge."
OH Cleveland WMMR 100.7 rp
OH Newark WCLT-FM 100.3 k, still "T-100"
OH Toledo WLOL 101.5 m, "Lite and Easy 101.5 WLOL," similar to WLTJ 93.1 Detroit ("Lite FM," from "W-Lite")
OK Stillwater KSPI-FM 93.7 rp
PA Bellwood WALY 103.9 r, AC and CHR mix
PA Patton WBXR 94.7 no format: "Silent pending sale"
PA Philadelphia WYSP 94.1 op, "94-1"
SC Goose Creek WWHT-FM 94.3 s, "94 Jams"
TN McKinnon WTWL 101.5 k
TX Dallas KZPS 92.5 op
KLVU 98.7 o [ning "Easy 108"
TX Edinburg KVLV 107.9 o, "Y-108," can-/
TX Hamilton KCLW-FM 92.1 r, oldies/CHR
TX Huntington KAQU 101.9 op, "KQ-102"
TX Lamesa-Midland KIDL 100.3 o, Here's where "the city's two FM's serve different markets. KIDL aims at Mid-and-Odessa, and KLSC (104.7) aims at Lubbock"
TX Lampasas-Austin KLTO 99.1 o
UT Centerville KBCK 105.7 k, SMN Traditional Country; facilities to 281 m (13500 h, v)
VT Woodstock WMMR 93.9 m, "Magic 94"
WA Grand Coulee KEYG-FM 98.5 m
WA Seattle KZOK-FM 102.5 op, no nonID, saying "Classic Rock ZOK"
WA Tacoma KBSS-FM 97.3 o, from the "50s-90s," "K-Best" (not strict)
WV Ravenswood WRZZ 106.1 op, \$
WI Neenah-Menasha WROE 94.3 m, "Soft 94.3," with "compressed songs"
ON London CFPJ-FM 95.9 r, still "FM-96"
ON Thunder Bay CJSJ 94.0 renewed to Aug. 31, 1992 and still saying "Hot 94," according to John Ebeling (in addition to "94 FM")

PQ Trois-Rivieres CIGB 102.3 rs, \$, "Radio Mutual" network, also including CJMM 99.1 Rouyn-Noranda [weak to tell if
BJ Tijuana XHITC 88.7 lc, c at night; signal too/ "I haven't been as much in touch since I stopped getting FM dial but I have not forgotten you..."
On Air (Selected)
CA Palm Springs KPSC *88.5, receiving the KUSC signal via satellite, Stereo
IL Pekin WGLD 95.5 (having moved from 95.3) 7000 h, v; 189 m
NY Jeffersonville WJFF *90.5 was to have come on air Feb. 12, operating initially from 6 a.m. to 7 p.m., daily, but hoping to extend to 24 hours daily. Is it stereo and with any format?
NY Utica WPNR *90.7 heard weekly; signal usable only in mono. "They must operate a limited schedule, perhaps not with their full 430 watts; *91.9 WRVW with only 210 watts (although at 25 m instead of WPNR's 46) puts out a much better signal."
OH Mansfield WOSV *91.7
UT Salt Lake City KUF 91.7

Off Air or Not Yet On

CA Bakersfield KTIE 107.1, was to have come on in Mar., k, rumored; stereo?
FL Gainesville WJLF *91.7
GA Statesboro WOTR *90.3, WUUF 102.9
IA Des Moines KUCB *89.3, al 43 on briefly with a weak, distorted signal around Christmas. Could be "permanently dark."
MA Amherst WHCI 100.9, "of course"
NY Cortland WSPC *90.5, off weekends at least
NY Danville WA 2C 93.9
NY Irondequoit WOSS 106.7

NY New Palz WFNP *86.7, to share time and transmitter with WMHX *88.7 Poughkeepsie, WMHX will program the most hours, including relaying WMHT-FM *89.1 Schenectady 24 hours when school is not in session, and will pay 80 percent of the construction costs. WFNP student programming will be heard during the school year from 7 p.m. to 10 p.m., and again from midnight to 5 a.m. SUNY-New Palz agreed to the unusual time-share arrangement rather than carry on a protracted legal battle. "There is a tremendous potential for some nice interactive programming," with students to learn how to fit their broadcasts with WMHX's mainly classical music. I disagree with almost all other DXers in saying it's legal to count and verify each of those stations, even though sharing one transmitter, since they are separately licensed by the FCC.
NY Ravens WRAV 94.5
NY Scholario WMY 97.3
NY Yorkshire WYEF *91.9
NS Halifax CBFA-19 *92.3, but listed as licensed to ON Sudbury CBBS *90.1, CBOS *90.9, due to "lack of sufficient funds—next planned on air date Dec., 1991, but don't count on it!"

Deletions

CA Modesto K209AL *89.7
CA San Martin K201BE *88.1, probably "a fall back in case K202AR Madrone didn't work. I haven't heard it anywhere..."
FL Marco WGUF 92.7, FCC overturned settlement agreement
IL Rockford W292BZ 106.3. "Their CP was cancelled and cannot be reactivated because of the freeze." A DXer is trying to activate the never-buff W257AW/99.3 there, hoping to get a different primary.
IA Knoxville KTA 92.1, calls not used, even on Sundays when the FM has separate programming from KNIA AM, using the KRLS FM calls. KRLS had been considered a sharetimer, but now has the exclusive use of the 92.1 channel (ID with Pelia).
NE Imperial KKEI 103.1
NY Cortland W252AL 98.3, not necessary now
VA Charlottesville W208AA *88.7, to be replaced by WVTU *89.3
ON Brockville CBQF-7 *102.1, CBQF *100.3, CBBA *104.9—all because of new grants at Ottawa (see last month). CBQF's deletion is mentioned for sure; the others are assumed to also delete, since none has operated in several years of holding CPs.
ON Hillsdale (Orillia) CBCC *91.5, Station "will be cancelled. After tests late last year, CBC engineers were not satisfied with the station's coverage into the Muskokas (north of Orillia). I'm not surprised—the station had only 1080 wets compared with the stations it was to replace. CBC essentially will be going back to the drawing board on this one. It is unclear whether the same frequency will be used or what to do about the facilities built at Hillsdale; 105.9 Orillia and 107.5 Penetanguishene will be on the air for some time to come."

FMistakes, FM Atlas-12 (Selected)

AZ Page KXAZ 93.5, not "95.3," p. 101
FL Cross City WDFL-FM 106.3 add \$, p. 106
FL West Palm Beach WEAT-FM 118.5 104.3, not 104.5, p. 106
SC Aiken WKXC-FM 99.5 out of sequence, p. 169 [km, not 46, p. 123, still mono
TX Herford KPAN-FM 106.3 coverage is 21/
TX Wheeler KPDR *90.5 add \$, p. 148
Selected SCS Item
ID Boise KBSU *90.3 has a CPB research grant for Alternate Public Radio distribution at 76 kHz. This will be a high-quality, 10-kHz

monophonic channel, helping fulfill a CPB mandate for alternative public radio without having to create more transmitters. The 76 kHz frequency is a multiple of the 19 kHz stereo pilot.

NonIDs, Not Just Slogans

AL Altmore-Mobile-Panacea (FL) WGXC 104.1 Rock 104 (ex "Gulf Coast's Rock & Roll")
GA Buford WLKQ 102.3 Oldies Lake 102
MI Ann Arbor WUOM *91.7, MI Flint WFUM *91.1, MI Grand Rapids WVGW *104.1—all Listener-Supported Michigan Public Radio
MI Mount Clemens WKSG 102.7 no nonID, saying, "Oldies 102.7, WKSG"
MI Saginaw WIOG 102.5 no nonID, saying "The New 102, WIOG," has a "monster signal; monster ratings." [with Mankato
MN New Ulm KXLP 93.1 no nonID, 104/
NM Bismarck KCEM-FM 104.5 KC-104
PA Scranton WGBI-FM 101.3 no nonID, throwing out "Stereo 101" [102.7 Bright 102.7, \$7
RI Narragansett Pier WJPB [B-93.7 FM
SC Greenville WFBC-FM 93.7 [95 FM"
TX Austin KKMU 95.5 Magic 95.5 (from "Magic/
TX Port Arthur KYKR 93.3 Kicker, still k
VT Rutland WKLZ 94.5 Kiss 94.5, \$7
WA Bellevue-Seattle KLSY-FM 92.5 no nonID, calling self "92.5 KLSY"
WA Seattle KUOW *94.9 Nearly 95 FM
ON Samia CBEG *90.3 CBC Radio (mono)
"I appreciate the accurate listings available in your guide... although I still feel that anybody who's interested enough in radio to buy your guide is also interested in accurate listings of AM stations, as well."
"I heard your interview with Fred Vobbs recently on HG48 (later WVEW) about SCA listening. Very interesting! I look forward to receiving it on tape!" via the NRC's DX Audio Service.
"THE SCA unit arrived from Dayton Radio via UPS... and works good... Then yesterday I received a second AF-155 from Dayton via UPS. I want to keep this second unit with me and a check is enclosed. It is good to hear that Dayton seems to be up and running again..."

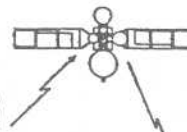
FCC Axes Proposals Which Would Have Meant More Diversity for the FM DXer

Saying they're out of date, the FCC gave the heave-ho to eight Mass Media dockets; some were as old as from the Jimmy Carter era in -1978. Proposals having the greatest bearing on FM radio were Docket 78-165, Amendment of the Commission's Multiple Ownership Rules to Include Educational FM and TV Stations, and Docket 78-164, Amendment of the Commission's Rules Governing the Eligibility for Noncommercial FM and TV Broadcast Station Licensees. Also eliminated was Docket 85-192, which would re-examine the "single majority stockholder" and "minority incentive" provision of Sec. 73.3555 of the Commission's rules. Comment: It's too bad the FCC has to drop proposed actions simply because it failed to act in timely fashion. We're seeing abuse of FCC processes in the licensing of noncommercial facilities, both religious and "public." Multiple transmitters in the same city by the same organization is pure abuse, in my book. And proliferation of stations by one owner, such as Family Stations, Inc. or Trinity Broadcasting, is also abuse. To the FCC's credit, an earlier proposal, from 1976, was favorably acted on, and that was to undercut 10-watt educational stations, relegating them to nonallocated channels. 73, b.e.

Television news

BILL FAHBER, EDITOR
336 ATLANTIC ST
BRIDGETON NJ 08302-2525

APRIL, 1990



GEORGE W. JENSEN
4604 Annapolis Avenue
Baltimore, MD 21206-4220

SATELLITE NEWS

Another relatively slow month in the satellite world. But, here are a few tidbits.

Morelos 2 - Someone testing on XPDR 2 with color bars.

English soccer match noted on PanAmSat Ku in PAL color briefly with signal that completely faded out - signal apparently mis-beamed.

Voices and Images from the past - CARIBBEAN SUPERSTATION - noted briefly on Westar 5 XPDR 22. Been years since they were on the air and it seems that this was only a brief appearance.

HBO has dropped all of its feeds on K1.

2 Japanese satellites were destroyed when the latest Arianespace rocket exploded shortly after lift-off. - Rare for Arianespace.

There is increasing talk of NBC scrambling all of its feeds on K2. It will not be VCII - ABC is also considering encoding its signals

FRL relayed a dog-sled type of race to France in PAL (unusual since France is SECAM) via Anik D-1.

The new Viacom Comedy Channel - Ha - will probably be on Galaxy 3. There is no definite word yet on this.

Healthlink Television to serve MD's waiting rooms with programming is being planned. Where and when is not known as yet.

There is a new radio superstation on Galavision - Galaxy 1 XPDR 20 originating from Mexico??

Intelsat VI F2 at 38 W continues to test and is slated to move to 24.5 West in late March to begin permanent service.

I noticed some comments about SYNDEX in the last issue. Basically most comments hit the nail on the head, In satellite viewing where the viewer has to subscribe to receive a superstation, why should anything be blacked out. After all one is PAYING to see the service at ones convenience. The local affiliates here are generally terrible with ch 2 frequently preempting many syndicated programs for Orioles baseball or something else. If I am PAYING, I should be able to receive what I want, when I want with no other interference from a governmental source. If what these folks are doing continues, I would not be able to watch Washington TV or any skip or tropo for that matter without breaking the law. The next thing they will be doing is encrypting all the regular channels to prevent you from non-local programming. Is someone trying to keep things from the public. Does this not restrict the right one has to a free flow of information. I can subscribe to an out-of-town newspaper why not an out-of-town television station, or do we blacken out the comic strips that appear in that paper just because they appear in the local paper. Is this next?? Just a comment that's all.

See you in 30

George

APPLICATIONS TO MODIFY CONSTRUCTION PERMITS

ST	CH	ERP	AATm	CALLS	CITY
GA	53	5000	363	WHSG	Monroe
NE	17	1213	240	KTVG	Grand Island (amended)
UT	16	3890	703	KZAR-TV	Provo (amended; CP reinstated?)
WY	7	1.78	291	KRBQ	Sheridan

CONSTRUCTION PERMIT MODIFICATIONS GRANTED

ST	CH	ERP	AATm	CALLS	CITY
FL	57	1820	145	WTLT	Live Oak
NE	17	1213	240	KTVG	Grand Island
PA	60	60	214	WBPH-TV	Bethlehem
PR	46	1500	643	WIDP	Guayama

APPLICATIONS TO CHANGE EXISTING FACILITIES

ST	CH	ERP	AATm	CALLS	CITY
CA	50	5010	330	KOCE-TV	Huntington Beach (cp)
CO	6	100	372	KRMA-TV	Denver (cp)
CO	8	233	728	KTSC	Pueblo (cp)
KS	38	4744	330	KMCI	Lawrence (mp)
MA	57	1465	322	WGBY-TV	Springfield (cp)
PA	51	5000	384	WTVG	Reading (mp amended)
PR	40	388	845	WMTJ	Fajardo (cp)
PR	3	81.3	691	WIPM-TV	Mayaguez (cp)
VT	20	720	594	WVTB	St. Johnsbury (cp)
WA	13	316	363	KCPQ-TV	Tacoma (cp)

CHANGES GRANTED STATIONS ON THE AIR

DC	Washington; WRC-TV, ch. 4; granted license to cover CP for changes; ERP remains unchanged at 100 kw max; raise antenna 3 meters to 191m AAT/143m AG/261m ASL; same TL.
SD	Sioux Falls; KTTW, ch. 17; granted MP (I have no record of any CP grant) to reduce ERP from 20.56 kw max to 19.67 kw max; raise antenna 88 meters to 151m AAT/135m AG/592m ASL; same TL; DA BT.

CALL LETTER APPLICATIONS: NEW STATIONS

ST	CH	CALLS	CITY/APPLICANT
WY	20	KFNB	Casper; KWYM

CALL LETTER GRANTS: NEW STATIONS

ST	CH	CALLS	CITY/APPLICANT
CA	33	KADE	San Luis Obispo; Community Media Corp.
IA	48	KTVC	Cedar Rapids; KRBU
MT	6	KPQD	Billings; BHC Associates
NE	15	KPQC	Omaha; Mid-America Broadcasting Inc.
PR	46	WIDP	Guayama; Ebenezer Broadc'ng Group Inc.
SC	21	WFIL	Florence; WGRS (corrects last month)
TX	51	KQBA	Katy; Johnson Broadcasting Inc.

CALL LETTER GRANTS: EXISTING STATIONS

ST	CH	CALLS	CITY/APPLICANT
NY	33	WFXV	Utica; WTUV
OH	45	WNEO	Alliance; WNEO-TV

ABBREVIATIONS USED IN THIS COLUMN:

AATm	Height (meters) above average terrain
AG	Antenna height above ground
ASL	Antenna height above sea level
AZ	Azimuth (North=0°)
BT	Beam Tilt
CIR	Circular polarization
CP	Construction permit
CRTC	Canadian Radio-television and Telecommunications Commission
DA	Directional antenna
ELL	Elliptical polarization
ERP	Effective Radiated Power
FCC	Federal Communications Commission (USA)
HOR	measured along a horizontal plane
MAX	In the direction or elevation of maximum signal strength
MP	Construction permit modification
TL	Transmitter or tower location
+	carrier frequency offset 10 kHz above standard
-	carrier frequency offset 10 kHz below standard
z	carrier frequency not offset

APPLICATIONS FOR NEW TELEVISION STATIONS

ST	CH	ERP	AATm	CITY/APPLICANT
MN	30	514	212	Thief River Falls; Northern Minnesota Public TV Inc.
SD	23	29	64	Sioux Falls; State Board of Directors for Educational TV

CONSTRUCTION PERMITS GRANTED

ST	CH	ERP	AATm	CITY/APPLICANT
FL	66	5000	477	Bradenton; Bradenton Broadcast Television Co. (Review Board Decn)
TX	31	1000	348	Victoria; Turner Broadcasting & Communications
WY	7	316	291	Sheridan; K2 Radio

APPLICATIONS DISMISSED

FL	Bradenton; ch. 66; Florida Manatee TV Broadcast Associates; Gulf Coast Telecasters; Joyner Communications; Manatee Television Inc.; McDaniel Broadcasting Partners; Renee Marie Kramer; Skylight Broadcasting Inc. (Review Board Decision)
TX	Arlington; ch. 68; The LouRay Corporation.
TX	Fredericksburg; ch. 2; Frontier Southwest Broadcasting Inc.

CONSTRUCTION PERMITS CANCELLED

ST	CH	CALLS	CITY
AZ	3	KGCC	Douglas
IA	30	KDAV	Davenport
KY	57	WMMH	Madisonville
SC	48	WHST	Greenwood

WTFDA CONVENTION '90

WTFDA Convention 1990 is coming soon! Time to start planning on attending. It will be held at the Old Town Inn in Manassas, VA (about 30 miles from Washington D.C.) There are plenty of things to see & do in the Metropolitan area. (something for everyone). Family members welcome!

TENTATIVE AGENDA

FRIDAY, AUGUST 3rd:

The convention will open at 5:00 p.m. with a pizza party shortly there-after. Plenty of munchies & cold soda will be available throughout the weekend.

The evening will be a time to meet new & old friends, DX, open flea market, trade & promotional items, etc...

Convention will close at 11:00 p.m.

Note: If there is interest in station tours and enough members arrive early on Friday, the opening time will be earlier.

SATURDAY, August 4th:

Convention will open at 10:00 a.m. with brunch provided shortly there-after.

The afternoon will consist of a tour of PBS microwave link near Springfield, VA and then on to their studios in Alexandria, VA. For those of you not interested in the tour - there will be continued DXing, trading or swimming at the INN.

A catered buffet dinner will be served around 6:00

The evening will feature Tech Talks & more. For those willing to give a 15-30 minute tech talk or slide presentation please let me know!

Convention closes at 11:00 p.m.

SUNDAY AUGUST 5th:

Convention opens at 10:00 a.m.

Either brunch or lunch will be provided.

There may be an optional tour of a nearby T.V. station.

Continued DXing, trading, flea market, etc... will continue throughout the afternoon.

Convention closes at 4:00 p.m.

The fee for the convention this year will be \$45.00 per person and includes:

All your meals listed above plus plenty of cold soda & snacks available throughout the convention. The cost of renting the room for meeting, station tours, equipment set-up, any rentals of misc. items. etc...

I have reserved a block of rooms at the Inn. The cost is \$37.00 for 1 person 1 room. \$40.00 for 2-4 people per room. (now is the time to get together with your friends to save on room costs). We would like to see as many people as possible stay at the Inn for convenience (since the meeting room is right there) but there are several other hotels located nearby. (a list will be provided, if requested SASE) I will also make your reservations at the Inn for you if you request it when you send in your registration fee. If you prefer to make them on your own the number is (703) 368-9191. Mention you're with WTFDA. There is a swimming pool available so bring your suits!

Directions for Old Town Inn in upcoming issues.

Deadline for registration is June 15th. You must pre-register to attend!! Registration fee is non-refundable. For confirmation of pre-registration your cancelled check is your receipt unless SASE enclosed & for confirmation of lodging enclose 15 cent stamp.

REGISTRATION FORM

NAME _____ INTERESTED IN TOURS _____

ADDRESS _____ NEED FLEA MARKET SPACE _____

_____ DAY OF ARRIVAL _____

PHONE NO: _____

NUMBER ATTENDING _____

WOULD YOU LIKE ROOM RESERVATIONS MADE FOR YOU AT THE

INN? _____ IF YES, HOW MANY IN PARTY? _____

WILLING TO GIVE A TECH TALK? _____ IF YES, TOPIC _____

ANY IDEAS ON SOMETHING YOU WOULD LIKE TO DO OR PERHAPS SOMETHING YOU'RE TIRED OF DOING? ANY COMMENTS WELCOMED. (USE SEPERATE SHEET IF NEEDED) _____

SEND TO: MICHAEL WIMER, 14508 DARBYDALE AVE., WOODBRIDGE, VA 22193.

TV C.C.I. [UNIDENTIFIED DX]

John F. Combs, 1308 Willow Branch #24, Jacksonville FL 32205

THE ART OF THE I.D. (Part I): REFERENCE WORKS FOR THE TV-DXer

There are a number of reference works that any TV-DXer should have close at hand in the DX shack. These are publications that will aid you in identifying your DX, and I recommend that you obtain as many of these as possible.

(1)THE WTPDA TELEVISION DATA BASE. Although the first edition is somewhat outdated, it is still the best basic listing available. If you have a copy of the first edition, good. If not, Bill Fahber has indicated that the second edition is in preparation.

(2)TELEVISION FACTBOOK and BROADCASTING YEARBOOK. These publications are the Bibles of the broadcast industry itself. They are the best source for such data as addresses, phone numbers, and station personnel. Unfortunately, the cost of these yearly volumes is quite high. The good news is that almost any public or university library of modest size should have recent copies of one or both. You can probably xerox just the pages that are of interest for much less than the cost of purchasing the whole volume. Recent back copies of these publications can sometimes be found at library book sales and used book stores.

(3)BRUCE ELVING'S FM ATLAS and VANE JONES' NORTH AMERICAN STATION GUIDE. You might wonder what use these publications could be to a TV-DXer. Actually, they can be quite valuable in tracking down ads and other references to radio stations that crop up on TV.

(4)FCC DATA FILES ON MICROFICHE. For the truly committed TV-DXer, these files represent a worthwhile investment, especially since they include data on applicants and permittees as well as active stations. They are available from the National Technical Information Service (NTIS). Current prices and ordering information can be obtained by dialing (703) 487-4929. Unless you possess a microfiche reader, you'll have to visit the library to view these or make copies. If you're lucky, you'll find a used reader somewhere at a good price. (Mine cost \$49!)

(5)MAPS AND ATLASES. I recommend having access to at least two different atlases, as well as a good travel-type atlas such as those published by Hammond or Rand McNally. The former help to pinpoint towns, counties and other features mentioned in local ads and newscasts; the latter are additionally useful for tracking down references to highways and interchanges. Classical atlases can sometimes be found at used book stores. One excellent budget-priced atlas is the *Rand McNally Universal World Atlas* available for only \$19.95 from Barnes and Noble at (201) 767-7079. Harder to find, but invaluable, is a truckers' atlas published by Creative Sales Corporation. My copy (purchased at a garage sale) lacks a cover or title page, so I cannot advise the actual title. You might find this, or something similar, at your local truck stop. The one I have includes many detailed city maps that are useful for researching references to parks, buildings, attractions, etc.

(6)ZIP CODE DIRECTORY. More valuable than the actual codes are the detailed street listings for all U.S. cities with multiple zip codes. If you've noted several references to local street names on your unID station, and that particular combination of streets checks out in one of your suspect cities, you're well along the road to an ID!

(7)TELEPHONE DIRECTORIES. No, you certainly don't want to actually have dozens of out-of-town directories cluttering up your shack, for reasons of cost as well as space. But larger libraries and telephone company offices should have a good selection. (More on using the phone to track down unIDs in a future installment...)

(8)TV GUIDES. Finally, the old mainstays of the TV-DX reference shelf. The more TVGs you can obtain while on vacation or travels, from distant friends, or from trading with other DXers, the better! Try to establish a reciprocal relationship with TV-DXers in your heaviest skip areas. (And don't forget to send a copy to your friendly TV-CCI editor!!!!)

UNIDENTIFIED TV-DX LOGGINGS

Jeff Kadet, P.O. Box 20, Macomb IL 61455 (1989 unIDs)

Tue Oct 3 Tr ch 33 0905 CDT --- Country mx videos, ads w/Nashville address (which means nothing if a satellite net), + offset, heading towards Pensacola, but a call to WHBR reveals they're religious. Probably an LPTV. (FCC database shows a W33AN in Union City TN, owned by "Futures TV, Inc." It's the only LPTV on 33 in that direction, almost exactly the same heading as Pensacola--jfc)

(Jeff adds that he has noted video carriers from East Asia on the following channel R1 offsets: 49.7452, 49.7497, 49.7565 (strongest), 49.7597, and 49.7614 MHz. He adds, "if you can help ID these, you're really good!" Any European or Asian members that can help Jeff?--jfc)

TV-CCI

AORIL 1990

Christopher Hanley, 1321 Beecher Avenue, Galesburg IL 61401

(1989 unIDs)

Tue Jul 4 Es ch 2 1540 CDT --- "Florida's Channel Two!" WESH? (Yes--jfc)

ch 2 1706 CDT --- Ad for ABC Insurance Co. PTA: FL or TX.

Fri Aug 18 Tr ch 45 0837 CDT --- Home Shopping Network. Possibly WHSL-46? PTA: IN/IL/MO

Es ch 2 1030 CDT --- Man wearing a pig snout. "PIG NEWS" on screen. PTA:

southeast U.S., eastern time zone. (Sounds like something from a kid's show... maybe a PBS station--jfc)

Wed Aug 23 Es ch 2 1945 CDT --- Baseball: Detroit at Toronto. Tony Kubek in the booth, so it is Blue Jays network. PTA: Ontario or Manitoba.

(I'd say probably CKCO2--jfc)

Matt Sittel, POB 21441, NCSU, Raleigh NC 27607

(1989 unIDs)

(summer address: 220 Brookfield Dr., Kingsport TN 37663-9777)

unIDs from Kingsport TN:

Tue May 30 Es ch 2 2059 EDT --- said "on the Schumacher Highway." PTA: Canada.

Tue Jun 6 Es ch 4 1604 EDT --- "Kojak" Suspect WTVJ.

Thu Jun 15 Es ch 3 2004 EDT --- "Dennis the Menace" cartoon show ended. PTA: Mexico. XHY?

Fri Jun 16 Es ch 4 0030 EDT --- "Love Connection" PTA: TX, FL.

Sun Jul 23 Es ch 2 1752 EDT --- "El Gordo de la Semana" SS speaker/political address.

Cuba? (The phrase as written literally means "Fat Guy of the Week" (!) so perhaps a misunderstood word. Can't

imagine anyone but Castro giving a political address on

Cuban TV, pero Fidel no es gordo--es flaco--jfc)

Sat Jul 29 Es ch 2 0017 EDT --- NBC "Tonight Show," off 15 minutes from network. Not

Tue Dec 26 Es ch 4 1003 EST --- "Joan Rivers" PTA: NE, CO.

John F. Combs, 1308 Willow Branch #24, Jacksonville FL 32205

(1989 and 1988 unIDs)

Sun Nov 26 Es ch 2 1552 EST --- Mexican: repeater of XHIMT-7 Mexico City (Imevision). No

local IDs or programming. This station has been seen many

times, often in by itself for an hour or two. XEFA and

XHCH both rather far for single-hop and XHRPM has been

noted with local shows in the afternoon. Is there

another ch. 2 Imevision relay, one which functions as a

passive repeater? I have seen references to a KHAN in

Cancun, Quintana Roo... is this on? PTA: Mexico.

ch 2 1702 EST --- PBS-like interview show featuring some ambassador who has

Sun Dec 10 Es ch 2 1350 EST --- U.S. music videos, southwest heading. Appeared to be

20-30 kHz offset to WESH-2 (which is minus). Could have

sworn I saw a VH-1 ID at one point! Could some Latin stn

be running videos pirated off satellite?!? PTA: Mexico,

Central America.

(The following are old 1988 unIDs for which I have lost the date and time. They never got to appear in the column, and they are high-priority...)

(Unknown date and time) Es ch 3 --- Ad for a carpet cleaning establishment mentioned outlets in Security and Timoquin. There is a Security in CO, near Colorado Springs, but no ch. 3 nearby.

(Summer 1988)

All atlases check negative for a Timoquin. These are probably not names of incorporated towns or cities,

but rather neighborhoods within a larger city. PTA:

Midwest and Rockies.

(Unknown date and time) Tr ch 16 --- Station running programming of the Three Angels

(November 1988)

network. No ID on the hour, but at about :03 a small

super in upper right read "Stereo 16" with possibly

small calls or location. AL and MS in at the time.

Doubt WAPT-16 would have Three Angels, so very possibly

an LPTV. PTA: AL/MS/GA.

(Unknown date and time) Tr ch 22 --- TBN LPTV, antenna heading N.W. There is a W22AH in

(November 1988)

Columbus GA that is supposedly TBN, and the 1989 TV

FACTBOOK shows a s/on date of 10-1-88. Can anyone

confirm whether they were actually on in November

1988? Any other ch. 22 TBNs on that heading?

Next time, we'll discuss using the telephone to track down your unIDs. In the meantime, send in your mysteries and we'll put our DX detectives to work! It's been real.....JOHN

TO WHOM IT MAY CONCERN:

I have your wife and kids. And your dog. Also your Teknika tuner. They are safe and sound...for now. They have been kidnapped and are being held hostage. If you want to ever see them alive again, follow these instructions: mail \$7 in U.S. funds and your exact geographical coordinates (latitude/longitude) to the address at the head of this column. If you do this, I will return your loved ones safely, and also send along a DX DISTANCE printout for your QTH. This is no joke. I am armed and semi-dangerous. P.S.--no cops!

PHOTO NEWS

APRIL 1990

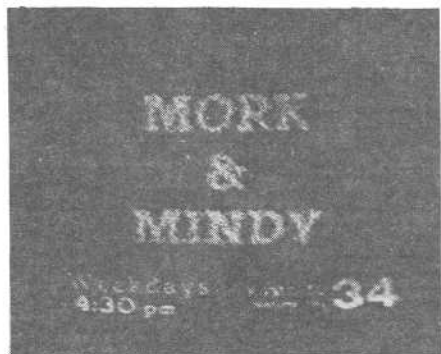
Mailing Address:

PHOTO-NEWS - P. O. Box 155 - Clarence, NY
14031-0155 U.S.A.

Photos submitted to PHOTO-NEWS become the property of this column and will not be returned.

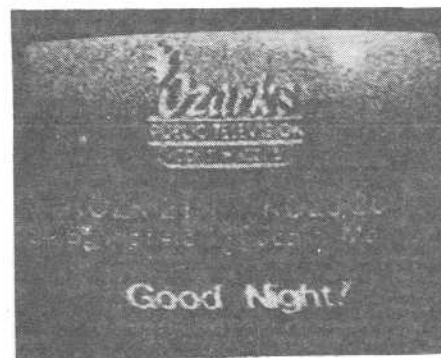
EDITED BY
David J. Nieman

Continuing on with Jerry Beaudin's - Curtis, MI DX from late September 1989. Equip. Magnavox with Sylvania chassis & Quasar tuners, 7 ft. CM UHF dish at 45 ft. AGL with Winegard PA 4975 preamp, RG-6 coax.



KGMC 34

Oklahoma City, Oklahoma
954 mile tropo
seen September 19, 1989



KOZK 21

Springfield, Missouri
722 mile tropo
seen September 21, 1989



WCTV 6

Thomasville, Georgia
899 mile E-skip
seen July 3, 1989
at 2045 ESTime



WCPX 6

Orlando, Florida
1001 mile E-skip
seen July 4, 1989
at 1716 ESTime

Thanx Jerry; hope to see more from you soon.

DAVE

EASTERN TV-DX

Bill Nienajedly
98 Highland Ave
Clifton NJ 07011

APRIL 1990

Deadline the 5th

I have only TWO report's on hand to type up. I did not get any forwarded report's from Ron Stock yet. Even though these two report's came after my deadline I felt two are better than none so I did this column and hopefully it will get to HQ on time. We welcome new reporter Debra Lee Oliver to ETVDX. On with DX!

Greg Coniglio 5100 Glenwood Drive Williamsville NY 14221

Equip; Emerson 12" color TV, 4 bay UHF @ 30 ft, CAC 11, Channel Master 20 db amp.

March 8 1990 Tr

0800 Ft Wayne U's-21
33,39,55 - 360
2030 Watertown, 16,50
2030 WUCX-35-MI-240

2050 WGN 52 OH 210
2100 WUPW 36 OH 255
2100 London 40 s/f

Seen 66 Erie on 59
Amazed I got Watertown 16
adj to superpowered WNED 17

WIVB 5TV

Debra Lee Oliver 7935 Dartmoor Drive Pensacola FL 32514

January 21 1990 Tr

1000 WNEH 38 SC 400
1000 WMG 41 GA 270

Jan 29 Tr

2200 WTVM 9 GA 200
WLTX 19 SC 450
2030 WTBS 17 GA 290
WDHN 18 AL 130
WAGT 26 GA 380
WDGH 28 FL 110
WKAB 32 AL 140
WATL 36 GA 290
WLTX 38 GA 200
WBMG 42 AL 220
WTVY 4 AL 130
UNID 20 ?? ??

Jan 30 Tr

0500 WGXA 24 GA 270

0700 WCTV 6 GA 200
WJHG 7 FL 110
WAKA 8 AL 135
WMBB 13 FL 110
1030 WFSG 56 FL 110

Jan 31 Tr

2030 WLOX 13 NS 100
2045 WFSG 56 FL 110
2100 WMAH 19 MS 100
WXXV 25 MS 110
WGNO 26 LA 180
UNID 40 NBC
UNID 27 PBS
2200 WDIQ 2 AL 80
WFSU 11 FL 180
2215 WAFB 9 LA 240
2220 WDAM 7 FL 140
WVUE 8 LA 180
2230 WOCL 49 LA 180

February 28 Tr

1600 WBHS 50 FL 350
W46AN-46 110
(Panama CityFL)

Es

2100 XEPB 2 MX 870

March 1 Tt

0700 WTOK 11 MS 160

Jan 31 Venetian blind
effect so probaly E-
Skip ?.

Equip; 13" General Electric Color TV, Model 8-1304, 3ft rabbit ear's & bowtie UHF

Comment's; I have a Bachelor's degree in broadcasting and spent several year's working in television production in several Florida TV station's. I am now out of the business now. I started DX-ing AM & Shortwave radio in 1968 when I was 14 year's old I started seriously DX-ing TV last summer when I joined the club. I also listen to my police scammer. Well good luck in your new position. (Thanx -ed) Hope you can use this report. (Most definatly-ed) If I get enough new DX I'll send it in.

73's Debra Oliver

(Thanx for reporting and again welcome to ETVDX-ed)

Just a couple of note's to fill out the column. Whatever remaining report's I get from HQ will be printed up in Eastern TV DX. In a month or two I will delete old report's that are 3 or 4 month's old. So don't worry about the report's held up due to the transition period it will be in ETVDX and hopefully in next month's installment everything should be taken care of by then. Remember even if you only get one or two DX station's, report it anyway! Don't wait till you get more DX, let your fellow member's know about your DX promptly.

Goodxing! Bill

WESTERN TV-DX

Fred McCormack
Box 9077
Prairiewood Station
Fargo, ND 58106-9077

April 1990

Deadline: 05-03-90
Cut-off: 02-01-89

New _____ New Mode_ _ Tent. - t Unidentified - unid S/On - + S/off_ =
ID Color Bars - @ Unid Color Bars - % Misc. Test Patterns - &
Parallel Programming - //

Mike Cherry, Box 631, Ganges BC V0S-1E0 (604) 537-5201 PST

Equipment: See February 1990 Western TV-DX

January 1990

3 tr 0728	CBUT9 60 BC	28 ms 0346	unid channel 2	14 tr 2309	CBUT26 25 BC
0732	CBUT1 9 BC	tr 0349	KTVZ 21 OR	2314	K3680 36 WA
0735	CHEK5 13 BC	0618	unid ch 3 170°	(Deming	KOMO- 4)
12 F2 1218	49.735 / 56.255		<i>KOABt 3 OR</i>	17 Es 1001	KREG 3 CO
(See Note # 1)		30 tr 0718	KLEW 3 ID	1014	KTVK 3 AZ
1243	TVNZ2 NZ	0724	KXLY 4- WA	1019	fade/out
	45.25 / 50.75		(Under KOMO 4z)	22 tr 1127	KUTF 32 OR
1304	TVQ Australia				(Snow free)
	46.25 / 51.75	<u>February 1990</u>		Es 1140	CCI 2, 3 briefly
24 ms 2110	unid ch 3 (7sec)	9 F2 1144	49.730 video	23 tr 1028	KEPR 19 WA
tr 2238	KTDZ 24 OR	1222	55.750 audio		(Under CBUT35)
	KUTF 32 OR		(See Note # 2)	24 tr 1652	OR chs 16,24,32
	(Abv 2 snowfree)	1237	50.76 audio		(Snow free)
28 tr 0341	KREM 2 WA	14 F2 1104	51.76 weak	1659	KIDK 3 ID

Note # 1 - This was very strong and audio revealed location as the People's Republic of China. A friend who speaks Cantonese translated this as an agricultural program. I got the Hitachi to "roll" with the video enough to get some of the program on tape. Video stayed in with little ghosting until F2 MUF dropped at 1325.

Note # 2 - 49.73 video held steady for about an hour and the audio on 55.75 didn't sound audible until some time after the video appeared. The audio seemed to be some Soviet language and I'll try and have this verified. Beam aimed at Kamchatka Peninsula - 320°.

TROPO SCATTER: Only loggings listed are rare stuff. Super tropo (regional) occurred: January 3, 6, 10, 14, 20, 24, 30, February 20, 21, 22, 23, 24. Super tropo (local) occurred: January 3, 11, 12, 20, 24, 25, February 6, 7, 14. Major temperature inversions with fog have occurred February 20-25

The E skip opening on February 17th was a pleasant surprise, but all too short lived. I don't think it was auroral induced. I spent my time on FM instead of TV during the Quadrantid meteors this January.

February 20th, I got a chance to try an ICOM R-7000 with TV adapter. In spite of the fact that the specifications are considerably better than my Kenwood RZ-1, both receivers performed similarly well; although disappointingly, there was no DX at all except for a feeble attempt by KVEW-42 to push through the scatter. Perhaps in the future, I'll have a chance to do a really good comparison/workout between the two. With the Kenwood about one half the price of the ICOM, the specifications will no doubt be different, however a comparison might help other DX'ers on a fixed budget decide. The tuning increments on the ICOM are definitely superior with the Kenwood only able to drop to 5 kHz steps as opposed to 10 Hz steps on the ICOM.

I hope by the time this gets read that we'll have had some solar disturbances to induce auroral skip. 73's, Mike

(Amazing F2 loggings, Mike! I wish I knew more about F2. With the information I have, your observations on the 12th of January would seem unlikely. Some time back, Jeff Kadet commented that Solar Flux should be up around 260 for really good F2. On January 12th, the Solar Flux was around 175 and was near its February minimum (it did reach 260 toward the end of the month). I don't have the solar flux data yet for your other F2 dates. Who knows? Hopefully, others got in on this opening. fm)

Western TV-DX

April 1990

Michael Parks, Route 1, Box 103, Amery WI 54001

CST

Equipment:

Channel Master 1110 Quantum with Channel Master 0064C preamplifier and RG-11U at 28', Antennacraft P-7 with Winegard PA-4975 preamplifier and RG-11U at 33', Alliance HD-73 rotor, Winegard DA-8150 post-amplifier, Channel Master 7206 Hi "Q" trap, and Zenith Z1920W 19" color TV.

There's been little snow this winter and even less DX - NONE to be exact. The only items to report are two new local LPTV's in Minneapolis, W62DB (12/15 @ 0012) and K07UI (1/25 @ 2238), both 56 miles distant. The stations are parallel and were relaying KTMA-23 while testing, but are now running announcements of the great programming courtesy of ValueVision International that is to premiere sometime this spring. Won't this shopping by TV craze ever end?

Hopefully my next report won't fit on a postcard! 73, Mike

William Eckberg, 1032 Sterling Road, Dixon IL 61021

CST

Equipment:

1966 Zenith b&w tube receiver ch 14N22, modified Zenith 175-1962 detent tuner. Channel Master 1110 VHF antenna. Channel Master 7 foot UHF parabolic antenna with Winegard PA4975 preamplifier on a 40' tower.

January 1990

February 1990

2 Es 1230	KTVQ	2 MT 968				
1240	KXLF	4 MT 1151	5 tr 0035	KFAA 51 AR 444	5 tr 0505	WHNT 19 AL 503
3 Es 0500	KOB	4 NM 1026	0036	KPOM 24 AR 513	0506	WDBB 17 AL 593
	KATC	3 LA 809	0050	KHOG 29 AR 463	0510	WZDX 54 AL 503
ms 0527	KPRC	2 TX 893	0051	KHBS 40 AR 513	0520	WBMG 42 AL 582
20 tr 2330	<u>W46AR</u>	46 WI 118	0253	<u>KMCI</u> 38 KS 357	0530	WAFF 48 AL 503
	(Milwaukee	LPTV)	0308	KSNF 16 MO 413	0532	<u>WNAL</u> 44 AL 551
31 tr 2030	<u>WHSI</u>	46(MO) 218	0500	<u>WVTM</u> 13 AL 582	27 Es 1100	WBRZ 2 LA 784

Noted some early AM skip again. I also saw E skip in February. This was the only month I had never seen E skip in.

I observed tropo to 600 miles in the AM of February 5th. I had never seen a first class tropo opening in February either. At 0400, tropo suddenly went from the Arkansas area to Alabama.

The logging of channel 44, Gadsden, Alabama was a surprise. They used the ID of their primary in Tuscaloosa, WDBB-17. Strangely, I can not find another logging of this station in past VUD's. Did they recently go on the air?

(WNAL-44 came on the air April 25, 1986. I don't recall if it has been reported in Western TV-DX. At least since June 1988, it hasn't been. Nice going! fm)

BRAND NAMES USED BY DX-ERS

SOLUTION TO PUZZLE FROM FEBRUARY V.U.D., P. 27

WINEGARD
ANTENNACRAFT
CHANNEL MASTER
BLONDER TONGUE
ZENITH
ARCHER
JVC
PIONEER
HYGAIN
BELDEN

ANSWERS: WINEGARD,
ANTENNACRAFT, ONEYO, ROHN,
CHANNEL MASTER,
BLONDER TONGUE, TECHNIKA,
ZENITH, RCA, CARVER,
ARCHER, DENON, RADIOSHACK,
JVC, PIONEER, HYGAIN,
BELDEN.

Puzzle by.....Bill Niensjadly
-Clifton N.J.

SOUTHERN FM DX

APRIL 1990

Danny Buntin
1312 N. Skyline
Stillwater, OK 74075

DEADLINE: 10th

CALIFORNIA DXER WILL PASS UP A 21' DISH.

John Jefferson, 4104 Spyglass Ct., Antioch, CA 94509-6051

To date I've received 2 responses to my query about dishes, & I want to thank everyone for their ideas. Todd Brandenburg has heard that an FM dish needs to be 21' across, so I think I've lost interest. I have about 1/5 acre here - most of it at a 35-degree angle - but not enough room for a monster like that! Oh, well. The S/Probe-9 actually gives excellent results. Just wish I could make better use of the aux tuner, as the garage antenna really doesn't do much. One big problem is proximity to this PC/AT & its various emissions.

As usual, underlined means new; @ means new to Antioch.

TIME CALLS	FREQ	ST	CITY	DIST	REMARKS
1/25/90 TR					
0848 KPQR	100.5	CA	E. Porterville	200	Port morn show
1/28/90 TR					
2102 KLOS@	95.5	CA	Los Angeles	330	ID; KNEV off
2/11/90 SL					
1159 KKLK	103.1	CA	Colusa	78	ID; new freq
2/16/90 TR					
1455 KYMS	106.3	CA	Santa Ana	350	Eagle 106.3; Ph# & area code
1525 KRAB	106.3	CA	Greenscres	230	Crab R 106

For the 12th-best dx month, February is doing all right this year. Three loquins to date, to go with 1 in January. Not exactly a record start - I had 9 in January '77 alone - but I'll take it.

KLOS 95.5 finally made it into the Antioch log thanks to a KNEV Reno outage. Rare opportunity to monitor 3 LA frequencies, as KRWR 94.7 Carson City has yet to debut. Much as I prefer KTUV 94.7's programming to KLOS's noise, I must admit KLOS ran circles around KTUV, with KJOI 98.7 also much more in evidence. None was anywhere close to usable, by the way.

Never thought I'd hear KYMS here. Only 3 of the LA giants here in Antioch in 1 1/2 years, & suddenly I have an LA-area class A. It's my 1st ever by trop, though I heard KGIL 94.3 San Fernando via MS in Pleasanton. Was fishing for KRAB with KDAT Merced off. It had just been hailing, & reception figured to be rock bottom. Mostly, it was: it took a couple hours to get anything out of KRAB. But KYMS just drifted in long enough for a couple commercials, their unid, the dj's name, & a call-in feature for office-bound listeners: the 25th caller to 714-744-5967 got some sort of prize. Of course I couldn't get through on that line! I called information for the studio phone & had a nice chat with one of the personnel there. Eagle 106.3 is new: they introduced it this month. Looking at a map later, I think KYMS must have a nice bead on the passes I-5 traverses from LA to Bakersfield. Now I'm worked up over the possibility that other Orange County stations or even San Diego might be able to hit that same magic path some day.

****FROM THE SPM EDITOR: For a special feature coming in June, SPM will take a 10th anniversary look at that monumental year for FM DXing--1980. All those who had a good time DXing 1980 are welcomed to reflect on that special, unforgettable year by sending in your comments along with a few of your favorite loggings. Don't put it off, though. Get them in to reach me by May 10th. Meantime, happy DXing with 1990! DB**

SOUTHERN FM DX is for reporters from: AL, AR, AZ, CA, CO, DC, DE, FL, GA, HI, KS, KY, LA, MD, MO, MS, NC, NM, NV, OK, SC, TN, TX, UT, VA & WV. Report today! Why not?

NORTHERN FM-DX

For DXers in: Canada, ME, VT, NH, MA, CT, RI, NY, PA, NJ, OH, MI, IN, IL, WI, MN, IA, NE, SD, ND, MT, WY, ID, WA, OR
APRIL 1990

GREG CONIGLIO
5100 GLENWOOD DRIVE
WILLIAMSVILLE, NEW YORK 14221

DEADLINE: The First

JEFF FALCONER - BOX 63 - CLINTON, ONTARIO NOM TLO

Equipment: Magnum Dynalab FT-101A (Etude) with SCA, Magnum Dynalab 205 (signal sleuth) pre-amp, Stereo Probe 9 at 27' with Alliance HD-73 rotor and RG-11u feedline

DECEMBER 1989

30 Au WWW A index to 38. K index of 6

0100 WJCH 91.9 IL Joliet, gS, Family Radio 359
0103 CKMF 94.3 PQ Montreal, disco, French DJ 409
0119 WOZZ 93.5 WI New London, r oldies, ID 359
0143 WSTW 93.7 DE Wilmington, station faded up with ad for ??? Station at 13th and union in downtown Wilmington, call 571-1995, into ad for Bridal and Tuxedo Outlet. Help anyone? (Try writing. They verified my reception report-gc) 409

30 MS

0157 WDAY 93.7 ND Fargo, "....WDAY for the Fargo Police Department...." State #34 heard 797

30 Au

2334 CBF9 91.9 PQ Mont-Laurier, r. FF // CBF 690 359
2337 CKMF 94.3 PQ Montreal, r, very good slgs 409
2341 WRVM 102.7 WI Suring, g, very weak 349

31 Au

0000 WAXX 104.5 WI Eau Claire, soft rm, wx, ID 492
0033 WZZU 93.9 NC Burlington, r, U-93.9 540
0117 CBM 93.5 PQ Montreal, r // CBLL 100.5 409

JANUARY 1990

2 MS

1326 CBAF 88.5 NB† Moncton, probably the one with French talk here from time to time

2 TrS

1449 CBON21 104.9 ON Gogama, m MONO // CBON 98.1 Sudbury 281

3 TrS

0154 WCJC 99.3 IN Van Buren, kS, C-99.3 288

3 MS - Quadrantids

0238 unid 93.5 Spanish talk-here several times
1325 WPRE 94.3 WI Prairie du Chien, "...FM WPRE..." 481
1348 WIZB 94.3 AL Abbeville, "...WIZB..." 870
1414 WVPV 94.9 VA Roanoke, "...relaxing with popular music on Easy 95. Its 2-14" 477

1417 unid 95.7 CBC program, maybe CBWX
1555 WHGC 94.3 VT Bennington, "...on WHGC, coming up at 4 o'clock of course AP Netwok News" 418

STATE NUMBER 35 HEARD



My December 30 reception of WSTW was indeed them as they have since verified (Thank you for the logo, Jeff-gc). On January 4th caught some Es but MUF only got to Ch. 4. MS during the Quadrantids shower netted several new ones including a new state: Vermont. 35 states heard here now. On January 18 I noticed CKO has finally taken its 'tone off 99.1. Last but not least, I had a strong opening to Michiana, but nothing new here. Till next time, 73s and Good DXing

STATION NEWS: Word has it WKLL 94.9 Utica-Rome has signed on the air. Don't know what power but they can be heard as far as New Jersey. Format is the ever popular "classic rock" format (Thanks Bill Nienajadly for that news). Bill also tells of another new station to sign on the air: WDVR 89.7 from Stockton, New Jersey. See his report this month for more details.

HARRY J. HAYES - 9 HENRY STREET - WILKES-BARRE, PENNSYLVANIA 18702

Equipment: Superadio-Jerrold 9 element on 2 chairs in attic.

Not any DX activity in February, or January for that matter, to speak of. I have spent numerous sessions just scanning the FM band for new nearby stations. Here is my short rundown. February 2 2044: WKGB 92.5 Susquehanna, PA. This has AOR type rock and it has taken me many tries to finally hear them. They are sandwiched between super strong WEAY 92.1 and WMGS 92.9. 2101 WKMZ 97.5 Martinsburg, WV briefly on airplane scatter with ID. 2/3 1419 WSHQ 103.5 Cobleskill, NY "Show-FM" pops in and out fairly well when warm days bring extended groundwave, and there have been plenty of those kind of days this winter. I do believe this station simulcasts 98.3 in Rotterdam. 1445 WMXW 103.3 Vestal, NY, this noted for first time w/weakish signal. "Mix-103". 2/4 2117 WETA 90.1 Washington, DC in w/NPR program. "World of Opera", this popped in on airplane scatter. 2/17 1316-WKLL 94.9 Frankfort, NY, this noted for the first time with my antenna pointed toward New York City. "Utica-Rome's Classic Rock and Roll", pops in and out with Harrisburg and an UNID that calls itself "Cool 94.9 Oldies". (Harry, I believe this "Cool 94.9" is in fact, Harrisburg-gc). I have a strange problem with my Superradio on certain days only. The FM band for some reason will pick up these strange shortwave noises, like beeps and buzzes and sometimes even foreign language stations, not like birds but the reception will be all across the dial. I'm assuming it's the high sunspots opening up the upper 20 Mhz region of the radio spectrum (1/4 the freq of FM) or poor image rejection of the Superradio, or both. Has anyone else come across this this year? The last E-skip was on 12/9/89 when TV opened up to Ch5 to Newfoundland. Nothing got into FM. I missed all the December openings everyone else got into. Next report in Spring...

BILL NIENAJADLY - 98 HIGHLAND AVENUE - CLIFTON, NEW JERSEY 07011

<u>JANUARY 27, 1990 Tr-scatter</u>	<u>20 Tr-S</u>	
1520 WITZ 92.9 PA Pittsburgh, new TrS record!	0625 CHT 97.7 ON St.Catherines	310
<u>FEBRUARY 1990</u>	<u>24 Tr-S</u>	
<u>12 Tr-S</u>	0843 WKLL 94.9 NY Utica, "Classic Rock	
1805 WESM 91.3 MD Princess Anne, ID	Utica Rome, 94-9"	180
<u>14 Gw/TR/TR-S</u>	<u>25 Trope</u>	
0100 WAMK 90.9 NY Kingston, ID // WAMC, GW	0830-0930 WYF1 99.7 VA In, also WOLC	75
0105 WETA 90.9 DC Washington TENTATIVE	102.5, WESM 91.3, WQSR 105.7 MD solid	
c mx to SW in and out, likely them, Gus help!	for 25 minutes	
<u>17 Tr-S</u>	2240 WOLR 96.9 NY Utica	180
1420 WFNU 101.7 NY Hudson Falls	<u>26 Tr-S</u>	
<u>19 Trope to SSW out to 120 miles</u>	2008 WQVR 89.7 NJ Stockton, new station	185
	on the air, confirmed by Bob Smolarek	50

Nice getting Pittsburgh, a new Tr-scatter record for me at 311 miles. Now Ohio isn't far from Pittsburgh. So hopefully I'll get something soon from the Buckeye State. need them. FILTER MODIFICATION UPDATE: Bill let me know that he has come across ceramic filters even more selective than the 180, these are 150 khz. He installed them in some radios and found a great improvement, almost to the quality of an MR-78. A special report will follow soon, also look for Bob Smolarek's report elsewhere this month.

BOB SMOLAREK - 156 OLDWICK ROAD - WHITEHOUSE STATION, NEW JERSEY 08889

Equipment: CARVER TX-11 (Modified), McIntosh MR78, CM Stereo Probe 9 at 15'

JANUARY 9, 1990 TROPO

1935 WARY 88.5 NY Valhalla, Bill Nienajadly tip

FEBRUARY 17 TROPO

1548 WENU 101.7 NY Hudson Falls, r

FEBRUARY 19, TROPO

1930 WKLL 94.9 NY Frankfort, r, new station, easy catch!!

FEBRUARY 25 GROUNDWAVE

2000 WQVR 89.7 NJ Stockton, new station, MONO

FILTER MODIFICATION UPDATE: I modified my CARVER TX11 with those ceramic filters Bill Nienajadly wrote about and the selectivity has improved greatly. WWWW 99.3 used to be impossible to get due to WAWZ 99.1, now they are totally in the clear. The Carver's selectivity is just a shade below the MR-78. I urge everyone to modify!! Let's hope for an early skip season!



HAPPY EASTER!!

RICHARD K. SHAFTAN - 39 OLD MIDDLETOWN ROAD - ROCKAWAY TOWNSHIP, NJ 07866

Equipment: Same as last report, with modifications as outlined below.

DECEMBER 15, 1989 E-SKIP

1534 WUWE 88.1 FL Pensacola, c, ID
 1551 unID 90.7 thru local WFUU, CST time
 1635 unID 89.3 Latin mx, English announcer
 1635 WAMB 89.3 FL Boynton Beach, Religious with Dan Moody

1640 WMCU 89.7 FL Miami, Christmas mx religious program, mentioned Miami

DECEMBER 25, 1989 GROUNDWAVE

1127 W220RA 91.9 NJ Parlin, ID as WCNJ w/ local WNT1 off the air

JANUARY 14, 1990 GROUNDWAVE

2325 W244BS NJ Oakhurst, parallel WHTZ through semi local WJAZ.

JANUARY 18 GROUNDWAVE

0900 WCVH 90.5 NJ Flemington, ID

JANUARY 22 TROPO

0018 WMLN 106.5 PA Bloomsburg, rare here
 0100 WITF 89.5 PA Harrisburg, WSOU off
 0100 unID 89.5 unID talk thru WITF and WPKN. Maybe Utica?

JANUARY 24 TROPO

2118 WFRS 88.9 NY Smithtown, // WFHE
 2254 WHCN 105.9 CT Hartford, thru lcl WNHK

JANUARY 25 TROPO

0038 WRAK 103.7 RI Westerly, thru WNHJ
 0045 WDAQ 98.3 CT Danbury, 98-0, rare
 0045 WPLR 99.1 CT New Haven, thru WAMZ
 0106 WSHU 91.1 CT Fairfield, thru lcl WFNU
 0220 WKPE 104.7 MA Orleans, "lame" through WSPK.

FEBRUARY 10 GW/TRS (180 khz filters)

1908 unID 92.1 sounded like K-92 or the new WKFX. Weak. Also WRAQ clear Q-92

FEBRUARY 11 Tr-Scatter

1428 WUVA 91.3 PA Bethlehem, Latin Mx, ID
 1549 WACK 107.3 NY Utica, Rock 107
 1600 WROX 107.3 DC Washington, Everyone said this would be regular on scatter after the modification

1715 WIBF 103.9 PA Jenkintown, Ethnic pgm
 2009 WMCY 103.7 MD Havre de Grace, country
 WNHJ off the air for transmitter work

2140 unID 103.7 Spanish program, then to English ID at 2200 w/mention of shortwave program to North America on

9454 kilohertz??

2158 unID 103.7 Capital Sports network
 2359 WARK 90.9 NY Kingston, thru WWHY

FEBRUARY 12 TR-SCATTER

1024 WQMA 105.7 PA York, Hot 105.7, thru local WDHA at about 3 miles

1025 WDRS 105.3 PA Philadelphia, interference free w/locals WNSR/WDHA on both sides.

FEBRUARY 16 TR-SCATTER

0042 WARD 107.3 NY Highland, Country 107.3
 1417 unID 107.9 thru WEBC, Muzak, 107.9 (Syracuse is an excellent possibility-gc)

FEBRUARY 17 Tr-SCATTER

1556 unID 101.7 Muzak
 1606 WQMA 107.7 NY Albany, COUNTRY 107.7

FEBRUARY 18 TR-SCATTER

1959 unID 99.5 thur WBAI, religious program

on Christian Science (Richard, could it have been Buffalo??-gc)

2018 WTVY 100.9 CT New London, Tide 101
 2213 WCCC 106.9 CT Hartford, Lou Reed through WKDH

2220 WPRX 91.3 NY Southampton, with gaelic Music to jazz and ID

FEBRUARY 19 TR-SCATTER

0026 WLAH 96.9 PA Lancaster, FM 97
 0058 WBSB 97.3 NJ Millville, Boss 97
 0142 WULT 92.1 NJ Ulenland, ID
 0207 WFFH 95.3 NY Southampton, ID
 WBAZ 101.7 also in

WGLT

GREG CONIGLIO - 5100 GLENWOOD DRIVE - WILLIAMSVILLE, NEW YORK 14221

Not much DX at all to report for me. Only one notable catch: One morning WVOR 100.5 Rochester, New York was off the air for about 10 minutes (I think it was Feb 13); I got WOMP easily, but there was another top 40 sounding station coming in at the same antenna bearing. A possibility is WKEE Huntington, but I'll never know for sure. I have disconnected my Pioneer TX-9100 to make the 150 khz filter modification that has been talked about so much. Hopefully I can find someplace to do that for me soon. I am not handy with soldering and would prefer to have a professional install them for me (See Southern FM-March). Answering Bruce Elving's question about my new local on 89.1, well Bruce, I have 2 new locals on 89.1!! WBSU Brockport and WCID Friendship. They have ruined that previous open frequency for all but strong tropes and skip. Would like to thank the following people who have contributed logos to me: Bill Thompson, Dave Nieman, Matt Sittel, Bill Nienajadly, Jeff Falconer, Larry Fuss, Tom Bryant, Joe Fela, and Bill Kretschmer. If I have left anyone out-sorry-let me know. Hopefully DX will pick up soon!

LATE BREAKING STATION NEWS: A frequency swap in Miami between 95.7 and 98.3. So now the new age is on 98.3 "Whisper" and Spanish on 95.7. More details (calls) not known. Also, I hear that WKXW 101.5 in Trenton has gone to an oldies format. Thanks Bill Nienajadly for that tip.



HAPPY EASTER!

A HOMEBREW ANTENNA FOR VIDEO SIGNALS BELOW 54 MHz

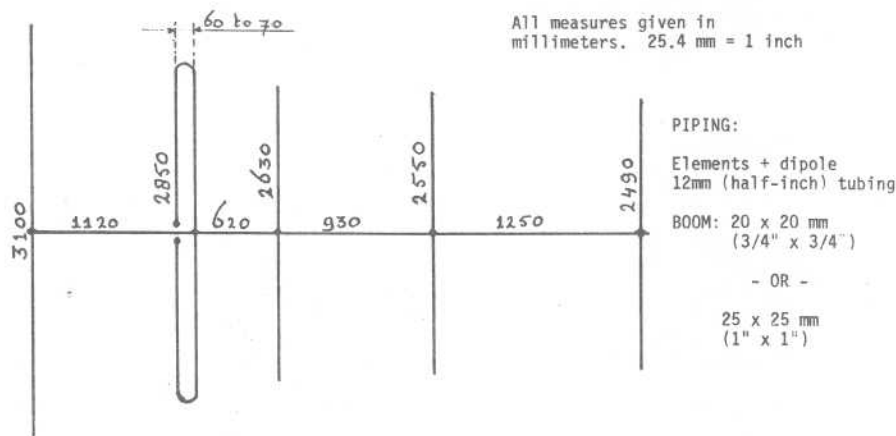
BY JOOP J. PROSEE

In "International-Notes" Ron Stock asks for powerful antennadesigns for F2 reception of E2/R1 channels (48.25/49.75 MHz) and I presume also for the New Zealand channel 1 and Australian channel 0. Well I think that I can offer such a special design for the North American TVDXers.

The antenna I want to introduce to you directly originated from the F2 conditions of the last 14 months. In spite of very high solar activity, the MUF is only very very seldom higher than ch E2/R1. Channel E3/A2 reception has been up to now extremely rare. Considering this fact, I decided in early 1989 to mount a big ch E2 antenna in one of my masts. The mounted antenna was a rather big commercial E2 design (Yagi) with three reflectors, a folded 300-ohm dipole, and three directors.

Unfortunately, this antenna performed not as could be expected from such a design. The results on ch E2 were not better than the results with my normal 4 element home built, wideband antenna for 47-68 MHz (ch E2-E4). That's why I restyled this E2 antenna last October into a design that is now the fulfilment of my wishes.

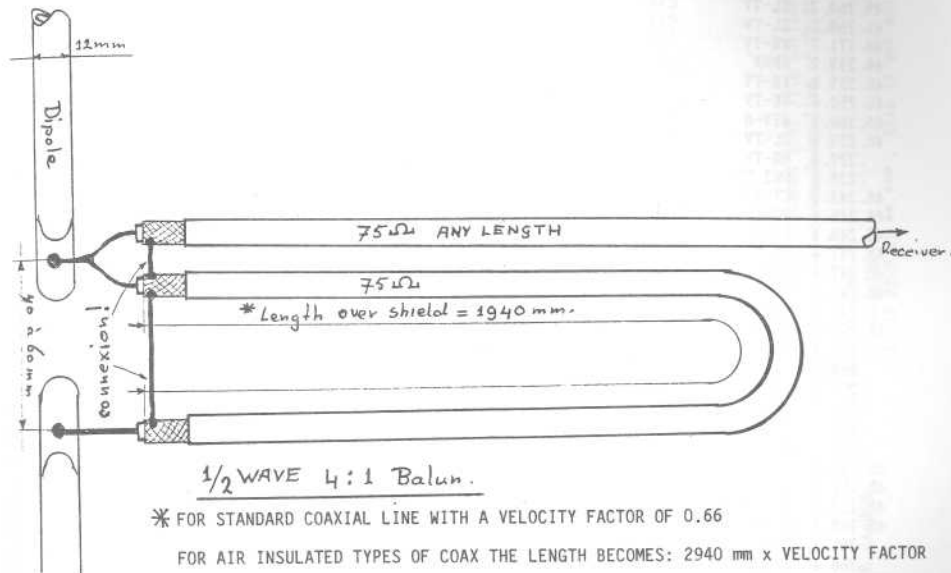
Another fact that appeared with these solar-cycle conditions is: only reception of vision (video) frequencies. Of all the many F2 TV signals that I received the last 14 months, I had only twice reception of traces of sound. So I made up my mind and decided to design the antenna only for the vision part of ch E2/R1. The design spectrum lies between 47 & 52 MHz. This choice also takes care of very good reception of the 50 MHz HAM-band that's much smaller here than in the USA, only 50-50.4 MHz! As stated before this design gives bad reception of the E2/R1 soundchannels (53.75 & 56.25 MHz), on the other hand good reception of the soundchannels of New Zealand ch 1 and Australia ch 0 (50.75 & 51.75 MHz) must be possible!



I have used this restyled ch E2 antenna since early November and the reception of E2/R1 visionsignals has become absolutely noticeably better. More gain, less disturbances giving a cleaner picture and a better directivity compared with the 4-element wideband B-1 antenna that I normally use for 47-68 MHz Horizontal signals. At this moment a copy of this restyled ch E2 antenna has been built by me and is in use with another Dutch wellknown TVDXer since 15th of November '89. He wanted such an antenna after he saw the results of it in my QTH. He has already made marvellous F2-catches with it, for instance China ch 1 (= ch R1) and very distant USSR transmitters on R1.

A HOMEBREW ANTENNA FOR VIDEO SIGNALS BELOW 54 MHz

On the previous page is a sketch of the E2-design; please mind that if 75/50 ohm coaxial line is used, a 4:1 balun is necessary. I don't know if such "trafos" (baluns) are normally obtainable in the USA. If not, such a balun can easily be made out of a piece of any normal kind of coax! (see sketch below) Please mind that the length of the balun is measured over the shield of the coax, the total length is somewhat bigger. Of course 300 ohm twinlead can be attached directly to the folded dipole, in Europe this sort of line is not used anymore, has not been used for many years!



I hope that you find this design interesting...compared with a vertical polarised groundplane as used among US/Canadian DXers. Especially the directivity of the design and the F/B ratio of 17 dB is superior to a ground plane with no directivity or F/B ratio at all! Our experiences with F2-propagation show, that horizontally polarised antennae give the best results with F2! The forward gain of this E2-design lies around 8.5 dB. It is recommendable to mount the E2-antenna with a support to strengthen the boom of this rather big beam.

I'm an engineer on a big powerplant here in the province which is delivering electricity for +3.5 million people and all the industries. My QTH lies 40 km (25 miles) north of our capital Amsterdam. The Log Periodic-antenna principle is my favourite and I use these types of antennae for BAND 1-2, BAND 3 & UHF. Antennae for BAND 1-2 & BAND 3 are my own designs and home made. My BAND 1-2 Log Periodic is designed for the 45-108 MHz frequencyspectrum with 10 log-per dipoles and has a boomlength of 4.145 metres (13'7"). My BAND 3 (174-230 MHz) antenna consists of 8 log-per dipoles, 1 Yagi reflector and 9 Yagi directors with a boomlength of 3.705 metres (12'2"). For UHF, I use 4 stacked commercial TeWeA (Philips) logperiodic-yagis with 15 log-per dipoles and 24 + 1 Yagi directors in 2 rows of 12 and a boomlength of 2.100 metres (7').

Another DX-interest is the study of ionospheric propagation. This is because I was unpleasantly surprised when I discovered that the knowledge of Ionospheric propagation among (TV) DXers is unbelievably low. Since last year when studying this matter I discovered that many opinions about this subject have to be considered again. In an upcoming article the newest opinions about ionospheric ways of propagation will be ventilated.

73's de: Joop

VIDEO CARRIER FREQUENCY LIST

FOR CHANNELS E2, R1, AUSTRALIA, AND NEW ZEALAND
SUBMITTED BY JEFF KADET, MACOMB, IL

Mhz	CALL	MODE	POW(KW)	CL	REMARKS
45.239.7	ZL-TV	C3F	100		(ZL1)
45.242.0	ZL-TV	C3F			
45.249.3	ZL-TV	C3F	100		(ZL2)
45.250.0	ZL-TV	C3F			ZL-TV
45.260.2	ZL-TV	C3F	2		(ZL2/ZL4)
45.260.8	ZL-TV	C3F			ZL-TV
46.171.7	VK-TV	C3F	100E		(VK4)
46.239.2	ABMN	C3F	100E		(VK2)
46.239.8	VK-TV	C3F			
46.250.0	VK-TV	C3F			(VK4)
46.260.0	ATV-0	C3F	100E		VK-TV
48.239.6	DL-TV	C3F	100E	JN39	Goettelborner Hoehe
.239.6	HB-TV	C3F	60E	J079	Oereboro
.239.6	9M2-TV	C3F			
48.242.2	CT-TV	C3F	40E	IN51	Muro
48.246.0	9C-TV	C3F	15		
48.246.1	LA-TV	C3F	30E	JP21	Gulen
48.247.4	DL-TV	C3F	100E	J040	Biedenkopf
48.247.6	3X-TV	C3F			
48.249.7	LA-TV	C3F	30E	KP59	Varanger
.249.7	9M6-TV	C3F	112E		
48.250.0	OE-TV	C3F	60E	JN78	Sankt Poelten
.250.0	EA-TV	C3F	250E	IN80	Navacerrada
.250.0	do	C3F	40E	IN52	Santiago
.250.0	SM-TV	C3F	60E	JP93	Vaennes
.250.0	HB-TV	C3F	50E	JN36	Bantiger
.250	9L-TV	C3F	0.4		
.250	A6-TV	C3F	150E		
48.252.6	LA-TV	C3F	60E	J038	Greipstad
48.256.1	LA-TV	C3F	100E	JP53	Melhus
48.259.6	ZE-TV	C3F	17.6E		
48.260.4	DL-TV	C3F	100E	JN57	Gruenten
.260.4	LA-TV	C3F	60E	JP77	Steigen
.260.4	9M-TV?	C3F			
49.224.0	F-TV	A3E		JN25	Arbresle
49.739.4	UA-TV	C3F			AS-ZONE
49.739.6	HA-TV	C3F	150E	JN97	Budapest
.739.6	UA-TV	C3F	150E	KN29	Lvov
.739.6	OK-TV	C3F	150E	JN79	Prague
.739.6	UA-TV	C3F	50E	KN74	Simferopol
.739.6	do	C3F	35E	K089	Tcherepovets
.739.6	do	C3F	35E	K062	Voronezh
49.740.9	UA-TV	C3F	10E	KP78	Lovozero
49.744.8	HA-TV	C3F	50E	JN86	Nagykanizsa
49.746.7	UA-TV	C3F			AS-ZONE
49.747.6	UA-TV	C3F	240E	K085	Moscom
49.748.2	UA-TV	C3F			AS-ZONE
49.749.3	UA-TV	C3F			AS-ZONE
49.749.6	UA-TV	C3F			AS-ZONE
49.750.0	UA-TV	C3F	50E	KN95	Krasnodar
.750.0	do	C3F	35E	KN67	Krivoi Rog
.750.0	do	C3F	10E	KP75	Kuzema
.750.0	do	C3F	240E	K059	Leningrad
.750.0	do	C3F	150E	K033	Minsk
.750.0	do	C3F	35E	KN93	Sochi
.750.0	UA-TV	C3F			AS-ZONE
49.750.6	BY-TV	C3F			
49.751.1	UA-TV	C3F			AS-ZONE
49.751.3	SP-TV	C3F	100E	J093	Bydgoszoz
49.752.4	UA-TV	C3F			AS-ZONE
49.753.7	BY-TV	C3F			
49.755.4	BY-TV	C3F			
49.757.8	UA-TV	C3F	90E	K056	Novosokolniki
.757.8	do	C3F	10E	KP63	Sukhozero
49.758.2	UA-TV	C3F			AS-ZONE

Key To Country Prefixes

- A6=United Arab Emirates
- BY=China
- CE=Chile
- CO=Cuba
- CL=Portugal
- DL=West Germany
- DU=Philippines
- EA=Spain
- EI=Ireland
- F=France
- HA=Hungary
- HB=Switzerland
- HC=Ecuador
- HI=Dominican Republic
- HK=Colombia
- HP=Panama
- I=Italy
- LA=Norway
- LS=Argentina
- OA=Peru
- OE=Austria
- OK=Czechoslovakia
- PY=Brazil
- SM=Sweden
- SP=Poland
- PI=Costa Rica
- UA=U.S.S.R.
- VK=Australia
- W=U.S.A.
- XE=Mexico
- IN=Nicaragua
- YS=El Salvador
- YV=Venezuela
- ZE=Zimbabwe
- ZL=New Zealand
- ZS=South Africa
- 3X=Guinea
- 9G=Ghana
- 9L=Sierra Leone
- 9M2=West Malaysia
- 9M6=East Malaysia
- 9Y4=Trinidad and Tobago Is.

Note: Italian pirates operate from 47.9 up through channel E-2

49.760	UA-TV	C3F			
.760	BY-TV	C3F			
49.760.3	UA-TV	C3F			AS-ZONE
49.760.4	UA-TV	C3F	50E	K006	Kuldiga
.760.4	do	C3F	50E	K041	Ovrutch
.760.4	do	C3F	35E	KN79	Rostov on Don
.760.4	do	C3F	35E	K091	Unetcha
49.760.6	UA-TV	C3F			AS-ZONE
49.770	ZS-FM	F3E			
50.740	ZL-TV	F3E	10		Te Aroha
50.750	ZL-TV	F3E	10		Kaukau
.750	ZL-TV	F3E	10		Hedgehope
50.760	ZL-TV	F3E	0.2		Whakapunake
.760	ZL-TV	F3E	0.2		Mt. Murchison
51.670	TVQ-0	F3E	10E		(VK4)
51.740	ABMN	F3E	10E		(VK2)
51.760	ATV-0	F3E			
51.910	TVQ-0	F3E			STEREO (VK4)
53.729.2	DL-TV	F3E		JN39	Goettelborner Hoehe
53.739.6	1-TV	C3F	34E	JN63	Monte Nerone
.739.6	SM-TV	F3E		J070	Oerebro
53.740	9M2-TV	F3E			
53.742.2	CT-TV	F3E		IN51	Muro
53.744.8	DL-TV	F3E		J040	Biedenkopf
53.746.1	LA-TV	F3E		JP21	Gulen
53.749.7	LA-TV	F3E		KP59	Varanger
53.750	9M6-TV	F3E			
53.750.0	HB-TV	F3E		JN36	Bantiger
.750.0	EA-TV	F3E		IN80	Navacerrada
.750.0	do	F3E		IN52	Santiago
.750.0	OE-TV	F3E		JN78	Sankt Poelten
.750.0	SM-TV	F3E		JP93	Vaennes
53.752.6	LA-TV	F3E		J038	Greipstad
53.756.1	do	F3E		JP53	Melhus
53.757	EI-TV	C3F			
53.760	9M-TV	F3E			
53.760.4	1-TV	C3F	35E	JM67	Monte Cammarata
.760.4	1-TV	C3F	34E	JN81	Monte Caccia
.760.4	1-TV	C3F	1.6E	JN65	Trieste Muggia
.760.4	DL-TV	F3E		JN57	Gruenten
.760.4	LA-TV	F3E		JP77	Steigen
55.239.7	DU-TV	C3F			
55.249.2	?	C3F			
55.250.0	DU-TV	C3F			
.250.0	KHON-TV	C3F	100E		KH6-TV
.250	XFAR-TV	C3F	5.37E		KL7-TV
.250	KENI-TV	C3F	28.8E		do
.250	CBUT-TV	C3F	50E		VE-TV Vancouver
.250	CKCW-TV	C3F	100E		do Moncton
.250	CKCK-TV	C3F	100E		do Regina
.250	CKCY-TV	C3F	100E		do Sault Ste. Marie
.250	TI-TV	C3F	0.11		
.250	CO-TV	C3F			
.250	HI-TV	C3F	5		Mogote
.250	YS-TV	C3F	100		
.250	YN-TV	C3F	50		
.250	HP-TV	C3F	1.25		
.250	WKAQ-TV	C3F	53.7		KP4-TV
.250	VP2K-TV	C3F	0.2		
.250	9Y4-TV	C3F	30		
.250	LS86	C3F	100E		LU-TV (PAL)
.250	CE-TV	C3F	70E		EI Roble (NTSC)
.250	HK-TV	C3F	900E		San Lorenzo (NTSC)
.250	HC-TV	C3F	12		(NTSC)
.250	YAY4A-TV	C3F	2		OA-TV Arequipa (NTSC)
.250	YV-TV	C3F	105.6E		Maracaibo (NTSC)
.250	PY-TV	C3F	162.5		Many Stations (PAL)
.250	W-TV	C3F			Many Stations
.250	XE-TV	C3F	100E		Many Stations
55.250.6	DU-TV	C3F			
55.257.9	DU-TV	C3F			

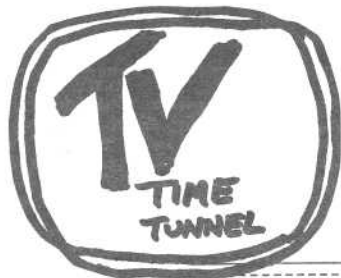
Would you please send any additions, corrections, or deletions to:

M. GOTOH J11DLZ/AHGJJ
115 Komagi Nagareyama-City
CHIBA 270-01 JAPAN.

REFERENCES
WORLD RADIO TV HANDBOOK 1983 37th EDITION
European Broadcasting Union List of TV Stations No. 31

NOTE 1) E-EIBP
2) AS-ASIA
3) If FREQ is ex. *** this is not actual frequency's.

TXN OM KG6DX JAIRJU J11DMH JAITCS JAZDDN J43EGE JR3HED JA3BHL JA4MBM
JA5CNO JA5HTP V6SEL G3COJ G4JCC VK6RO



A STRUGGLE TO SURVIVE...
THE UNIQUE STORY OF
WMCV-TV, WTLT-TV and WZTV



Written by: Tom Bryant
849 Todd Preis Drive
Nashville, TN 37221

'TIME TUNNEL' NEEDS YOU!:

Almost every DXer has a good story or two about his or her experiences. I'd like to hear yours, and pass it (them) along to VUD readers. It doesn't have to be ancient history...even things that happened just a couple of years ago can be of historic value. Your topic might be a rare DX catch...an exotic means of verifying an unID...or maybe something unusual about ownership or facility changes. Please send your story to me at the address preceding the column. If you're not much of a writer, don't worry; I'll smooth off the rough edges. In fact if you'd rather submit your 'Time Tunnel' contribution on an audio cassette (you tell the story in your words and I'll get it into written form) that's fine, too! If you have printed copy or pictures to go along with your feature, so much the better. Anything submitted will be photocopied and returned to the contributor. Don't put it off. Get your story on the way to 'Time Tunnel' now!

WTLT - THE STATION THAT (ALMOST) NEVER EXISTED:

Nashville, Tennessee's first independent service, WMCV-TV (17), began operation in the fall of 1968. The shoestring operation was plagued with technical problems from the beginning. During the inaugural program the sync generator was in such bad shape that viewers saw nothing but wavy lines, floating bars, and vague images of the guests on the show. It lost money hand over fist, and went dark 2½ years later. WMCV's technical facilities and license wound up in bankruptcy proceedings and the channel was dark for over four years. Ownership was finally transferred from the bankruptcy trustee to Hudson Broadcasting (a minority group) in 1974. By fall of that year the new operators had the station (now WTLT-TV) back on the air with a test signal. The color bars with ID popped up sporadically for a few weeks and then disappeared completely. Before running a single program the channel had gone dark again. The problems were the same as before; terrible equipment and no money. Tower height above ground was only 376 feet, and visual ERP less than 250 kw. Late in 1975 the Hudson Group managed to unload the seemingly jinxed independent to Reel Broadcasting. When channel 17 returned to the air in March of 1976 there was a difference. It was now WZTV. The new owners had money. The programming quality skyrocketed. Technical improvements were implemented including a new tower on higher ground, increased ERP to 2500 kw and extended hours of operation. The fickle finger of fate had finally begun to point in other directions. The channel 17 of today is light years past it's second resurrection. Two owners later (Multimedia bought it from Reel, and the Norman Lear 'Act III' group has it now) WZTV is in the black, getting respectable ratings, and has just snatched the Fox Network affiliation away from WXMT (30). Incidentally, WXMT (formerly WCAY) is still on the air but runs home shopping satellite feeds about 20 hours a day. Sorry there wasn't much to report about WTLT...but after all, it's a station that (almost) didn't exist!

COMING UP:

In the next few months you'll be reading (not necessarily in this order) about the odd evolution of Fargo's channel 11...a camera/grocery display smashup...and some background on Yorkton Television Limited with special emphasis on it's Wermley/Carlyle Lake transmitters. Stay tuned!

STATION BREAK

WTFDA
P.O. Box 514
Buffalo, NY 14205-0514

WTFDA member ads only. Items may be edited to conserve space.

FOR SALE - Cassettes...90 min. cassettes each contain at least 300 official AM and FM station IDs recorded on location, categorized by area, following the itinerary of the trip, and sorted by frequency. NEBRASKA 1987 starts in Pennsylvania and ends up in Northern Michigan, with a survey of Esko, MN where the '87 WTFDA convention took place. KENTUCKY/GEORGIA 1988 covers everything from WHAS and WSB to remote places in Hillbilly Appalachia. FLORIDA 1989 takes you to ANARC and then diving in the Florida Keys, deep enough to hear Cuban call signs over the air! Features some of the July 4th sporadic E-skip. \$4.00 each gets you a new TDK tape and a detailed index with dates and times. Alain Pepin - 234 rue Montcalm - St-Jean-sur-Richelieu, QUEBEC J3B 3N8 CANADA

FOR SALE - Ku-band satellite dish, about .7 meter diameter, like new, never installed, in original box. \$35 plus \$15 shipping from Bruce Elving - Box 336 - Esko MN 55733-0336.

FOR SALE - Below cost - Antennacraft - P-7's & P-5's and other antennas, amps, surge strips. Channel Master - antennas, rotors, amps, mast hardware, tripods, traps, etc., Stereoprobes, Winegard amps, antennas, electronics, also cables / rotor wire / connectors / towers / supplies / satellite TV equipment. Call Rich Wertman at (716) 433-0805 [Best after 6 p.m. EST to 11 p.m.] -or write- to 6150 Crosby Rd. - Lockport NY 14094

FMedia Newsletter--Monthly, covering all of FM, including news of translators, subcarriers, rulemakings, new stations and format changes, stereo information, and the controversial feature "AM Happenings Most Likely Caused by FM." Like "FCC-FM News." only bigger and more media-oriented. A \$25 subscription now will give you all issues through mid-1991, including any backissues in stock. Order from Bruce Elving, Box 336, Esko MN 55733-0336.

WANTED - I would like to get in touch with people who would be interested in exchanging videotapes (VHS) with me. I'm also a TV-DXer and satellite enthusiast. Please note the difference in the TV systems, both colour and frame sync. Presents big problems. People who would be interested do need a PAL (VHS) VCR or multistandard VCR to play my tapes! I do have a NTSC (VHS) video machine which plays all speeds! I can of course only make PAL recordings of the different European stations.
B. Habekotte - Julianastraat 44 - 8262 DP - Kampen - NETHERLANDS

FM Atlas and Station Directory, latest (1989), 12th edition, a must for FM DXers. Since 1971. No new book expected before mid-1990 at the very earliest. \$9.95 plus \$1.05 postage. Order from Bruce Elving - Box 336 - Esko MN 55733-0336

WTFDAers: YOUR ad can appear in the VUD free of charge! Got a piece of DX gear you'd like to sell? Looking for something? Advertise in STATION BREAK. This feature appears on a space available basis. WTFDA and the VHF-UHF DIGEST assume no responsibility for any claims made by advertisers--our trust is implicit, as fellow DXers.



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221 PINEWOOD ROAD
BALTIMORE, MD 21222-2345



THE Spirit OF MISSISSIPPI



Latin Network, Inc. Miami, Florida

EYEWITNESS NEWS



WSOC-TV We send our best to you.



NASHVILLE'S 17



WBTV 3 NEWS On Your Side



SOMETHING'S HAPPENING HERE WERN NASHVILLE

News Center 7 The News Leader in West Tennessee



atlantic PULSE MOVIES & NEWS



WTVD 1 NEWS

Womens, a las 8:00 PM AQUA, on SU CANAL 23



WKTV 2 NEWS THE TEAM TO WATCH

LIVE AT 5 EVENING NEWS with STEVE MURPHY with DAVE WRIGHT 5-6 WEEKDAYS ON WJXT



wtvh 5 SYRACUSE

BLUE RIDGE PUBLIC TV

WBRA/15



WMSY/52

WSBN/47



We send our best to you.

WTUV 33



APRIL FOOLS TV DX

Bill Nienajdly
98 Highland Ave
Clifton NJ 07011

April Fool's Edition April Fool's Edition April Fool's Edition April Fool's Edition

Super Intense but rather boring Tropo Duct from California to Pittsburg DC spawned 3 Hop D layer skip which enabled DX-ER's log WNJM-50 from amazing distance's as far as 20 mile's!!! Auroral reflection's caused the moon to chip off and we had meteor shower's which resulted in Traveling moon bounce. UFO scatter was noted over Gotham City and the reported logging of BBC TV on video tape made DX-ING History on Feb 31. We had more to report but this special edition is April Fool's and will appear once a year here.

Hy Gain 5 Pioneer Drive Archer NJ



Equip; 1962 TV set only two channel's work, Coat hanger beam antenna at minus 50 ft 25 year old insulation free twin lead

2/30/90 I couldn't belive it on ch 3 I saw faint trace's of WGBS-2 and WNBC-4 !!!! Wow trop's must of been up! On 2/31 I saw Los Angeles UHF's, Miami UHF's, St Louis UHF's! But it was soon gone after I had to return the video tape. 37's

Hugh Betcha C 4 Mile's Hill Top Ohio



Equip; A TV set, Antenna Radio Shack Super Deluxe High End \$ 19.95 model and Armstrong rotor (non automatic model). Elevation 19,950 ft.

2/29/90 Same boring trop's again!!! Idaho, Wyoming U's and WNJM -50 the first week, the next week VHF hi-band from Alaska and Leningrad U's. The 3rd week The Marshall Island's U's, the fourth week thing's finally back to normal with WOFL-35 snowy as ever. Im getting bored with lousy DX I've been getting. 70's

P. TOOMUCH 10 Yellow River Road Skunktown NY



Equip; Borrowed TV set, Rabid ear's, Bud, Foster's, Heineken in Fridge

1/2/90 I don't reneber too much, still. (.Hicupp, Burb, etc.) I saw BBC on TV it was real clear too. Funny thing though the TV turned on channel 13 and I thought I saw Sesame Street and Mr. Rodger's too, they mentioned something about PBS, must be that F2 Skip everyone's talking about. I guess PBS stand's for Perfect British Station. 74's

I Bragoften

1000 Snob Lane

Elite Upscale CD

Equip; \$20,000 45" TV Wide Screen TV monitor, \$5,000 high resolution VCR, \$600 CATV grade antenna (only the best for me). \$5,000 200 foot tower, \$10,000 gold clad coax. \$1,500 top of the line rotor. \$1,000 Amp. 10 foot UHF dishes stacked 4 of them worth \$750. Three other tower's with antenna's cut for each channel. 83 antenna's worth oh I say about 10,000 buck's for that alone. Plus a lot more which I'll list next month.....Do I have any DX to report? Nah...I just list stuff that I can afford.

Joe DKER 100 Winegard Place

Zenith PA



2/30/90 Tr

0230 WLVT-39-PA-05
0300 WFMZ-69-PA-05
0700 WLVT-39-PA-05

0730 WFMZ-69-PA-05
2/31/90 Tr
0100 WLVT-39-PA-05

0200 WFMZ-69-PA-05
0201 WLVT-39-PA-05
0201 Fade out's

I never seen a opening like that before. The best ever! (Why Me? HI!!!) -BN