



current

NAB AND AM STEREO

This issue of *Broadcast Technology* includes a wrap-up of some of the discussion that took place at NAB. (Jacquie's news and photos will follow in our big July/August *Buyers' Guide* issue.)

AM Stereo was a very topical question, as a result of the U.S. Federal Communications Commission decision to let the competing systems (now four) fight it out in the marketplace. There is much dissatisfaction and uncertainty in the industry, however many AM stations are planning to go stereo. The key will be public response, and that, in turn, will depend on the availability of receivers—their ability to receive the various systems being broadcast, their cost and their quality.

JUNEAU TO HEAD CBC

There's no doubt that Pierre Juneau is a capable man, and his years as chairman of the CRTC and communications guru in the prime minister's office should give him a useful background in his new role as president of the Canadian Broadcasting Corporation.

However, it remains disconcerting that Mr. Trudeau continues to re-cycle his coterie of colleagues to key positions in the Ottawa bureaucracy. Surely there are some new people and ideas out there somewhere...

They'll be needed if the CBC is to retain its significance in an era of tremendous competition for audience.

C-FAX REVISITED

We're again indebted to Bob Calder for a detailed account (see page 45) of the work that went into the new C-FAX facilities in Victoria, British Columbia. This is a follow-up to the cover story which appeared in our September/October, 1981, issue; both articles include some excellent color photos of the station's impressive studios and offices in a renovated

downtown building. Mel Cooper and his staff are to be congratulated on this outstanding facility.

We understand that, after 10 years with C-FAX, Bob Calder has launched out on a new career, including consulting work on broadcast engineering projects. Good luck, Bob—hope you'll still find time to tell us about some of those projects and ideas.

SATELLITE TECHNOLOGY

The electronic media are indeed "exploding" with new developments. Much of the activity results from the growing availability of satellite communications.

The CRTC has now granted six Pay-TV licences for Canada. (This decision is summarized on pages 74-76.)

Tremendous growth is also forecast for other areas of communication. Beginning on page 35, Terry Miller talks about *Teleconferencing*—the first in a series under the heading *Corporate Video and Teleconferencing*. These articles are designed to keep you informed on developments in related fields which could ultimately have considerable impact on broadcasting and on the use of the broadcast spectrum.

CHRISTINA TURNPENNY

The annual convention of the Central Canada Broadcasters Association, Engineering section, has developed, over the past number of years, an enjoyable day for the ladies. This feature was largely the work of one person, Chris Turnpenny, whose cheerful enthusiasm left no room for discouragement or defeat.

It was with this courageous spirit that Chris battled cancer during the past few years. Her zest for life is a legacy to all of us—that each day must be lived and appreciated. We join with her many friends in expressing our heartfelt sympathy to Ron and the family.

Doug Loney



Technitopics

by **Sandy Day**

The complexities for broadcasters increase as history and technology unfold at a rate which creates new pressures, new opportunities and new concerns at an uncomfortable rate. And never can a change be made which does not have secondary effects somewhere else. As Garrett Hardin put it, "You can never do merely one thing". The Fowler Commission report claimed that after programming, "all the rest is housekeeping". Broadcasters surely live in a complex house.

Division of the Spoils in AM

Under NARBA, Canada cannot operate stations within 650 miles of the US border, and must protect it at night with a maximum 25 uV/m signal level on the 25 US I-A clear channels. The USA is similarly restricted on the seven Canadian I-A channels. But with the demise of NARBA, the restrictions are removed.

The Rio Plan lists 161 US proposed new night-time operations on their clears in the continental USA, with a further ten in Alaska. But an FCC official stated in March that they had received more than 300 applications since May, 1980. Some are for power increases of NARBA Class II stations. The Canadian planned stations on the US clears, as listed in the Rio

Plan, total 130. Many of the planned stations, on both sides of the border, are mutually-exclusive.

Action of the FCC in late February closed the US "want-list" on the US clears as of early March, but also invited letters of intent to use the seven Canadian clears, these to be submitted by April 15th. Armed with their total "want-list", the FCC was then prepared to hold a bilateral in Ottawa in late April.

Out of the bilateral negotiations will come a number of good possibilities for Canada, but how many, and where, are largely matters of speculation. My guess would be 50 to 60. A number of these could only be used by existing stations because of local adjacencies, but some good opportunities will be available to new applicants.

AM Stereo

Though at time of writing, the FCC "marketplace" decision has not yet been released, US stations will be permitted to proceed with AM stereo. Broadcasters are generally displeased with the "marketplace" approach since it will seriously constrain the quick growth of stereo receivers in the hands of the public, and if the individual station makes the wrong choice (that of equipment which turns out to be other than the popular choice),

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reinvestment in the other stereo exciter for the transmitter will become necessary. But the major significant costs to the broadcaster will be in studio facilities and in ensuring antenna phasors having adequate bandwidth.

In Canada, the CAB, in its recommendations to CRTC in the March "Review of Radio" hearings, called for priority carriage on cable of local AM as well as FM stations and, since these would be distributed in the FM mode, suggested that direct stereo feed of the AM programs should be allowed. A stereo studio in these circumstances could be useful, even prior to on-air AM stereo transmission.

Meanwhile, DOC has instigated both technical and policy discussions leading towards quick approval of AM stereo operation in Canada.

Courtemanche to CRTC

Gilles Courtemanche, P. Eng., for the last six years Director of the Broadcasting Regulation Branch of DOC, shifted to CRTC as Director-General, Broadcasting Operations, on April 1st. We have worked very closely with him over these years, during which he has chaired the Technical Advisory Committee (TAC) and the Re-radiation Working Group as well as heading broadcasting regulatory functions and making a substantial contribution on Canadian delegations in Geneva, Buenos Aires, Rio and in the CITEL negotiations. A man of enormous capacity, he has always demonstrated fairness, honesty and tenacity in his dealings with the industry. He will be sorely missed in the DOC, not only by his own people, but by those in the industry who have had the fortune to work with him. Bonne chance, Gilles!

FM Allocations

The DOC and FCC have been negotiating a new bilateral working arrangement for FM, the features of which include use of the new propagation curves, new tables of protection distances, new classes of stations, and metric terminology. The technical details, already discussed in the TAC, are pretty-well set.

Station coverage maps, based on the old curves, will show reduced coverage with use of the more accurate new curves. New coverage maps will be required from all FM licensees at or by the time of license renewal. The new curves will go into immediate use in Canada, and as well internationally as soon as the arrangement is signed. Priority carriage on cable for some stations may be affected.

UHF-TV/Land Mobile Interference

In late 1981, DOC gazetted a notice on their proposed allo-

cations for cellular radio mobile systems in the former TV band 806-890 MHz. In reallocating these frequencies to land mobile use, DOC had assured broadcasters that the TV channels remaining would be fully protected from LM interference. DOC performed a number of tests and came out with a report on interference anticipated and protection necessary. This report had some surprising conclusions—such as base stations being acceptable at TV image frequencies within 6.16 km at the Grade "B" contour and 3.48 km at the Grade "A", and most significantly, that image interference from mobile stations would be negligible.

The comments of the CRTC, and the responses to the gazette notice by CBC and the CAB, left little doubt as to the opinion of broadcasters. All predicted substantial interference from both base and mobile stations if allowed within the service area of technically-related TV stations. The CAB response showed that mobile base stations should be outside the Grade "B" by 21.5 miles, and the Grade "A" by 29 miles, and that intolerable interference could be anticipated from mobile stations as well.

The TAC will be deliberating over the opposing opinions, in the hope of settling the issue within the next few months.

Associated with these concerns are proposed DOC regulations requiring future UHF-TV receivers to add substantially (in the order of 40 dB) to their present image rejection capabilities over the land mobile frequency range. Additional fixed filters could satisfy these requirements, but only at the expense of input noise factor and sensitivity in the top UHF-TV channels. Yet DOC has tightened the requirements on noise-factor, reducing it progressively from 18 to 14 and soon 12 dB. They even hope for an ultimate 10 dB value. Receiver engineers would have to take a very different approach to achieve the DOC requirements. This should be interesting!

And More...

The grab-bag contains many other issues: Canadian proposals for the RARC on Direct Broadcast Satellites, new radio license fees and substantial rate increases for DOC subscription services, treatment of low power unprotected TV and FM applications, rules for Cancom-type multiple transmitters, frantic activity in the Telidon/teletext/videotext area, the new Issue 2 of BP 23 for cable television, and multiple sound on television. And to cap it off, 1983 is "World Communication Year".

There is no rest for the wicked!

Sandy Day is Vice President of Engineering Services for the Canadian Association of Broadcasters. Readers' comments or questions may be addressed c/o CAB, Box 627, Station B, Ottawa K1P 5S2.

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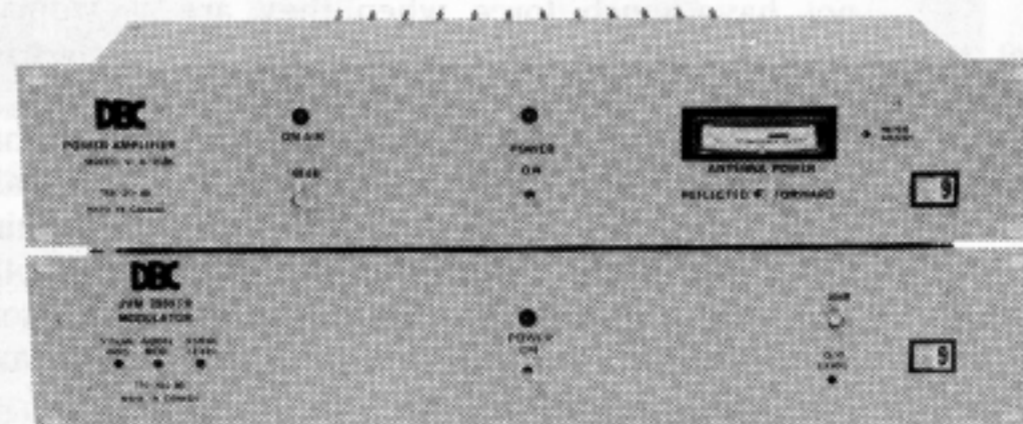
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AM STEREO

Few are happy with FCC "Marketplace" decision

With due respect to the philosopher who said, "Not to decide is to decide", when it comes to AM stereo, "Not to decide is not to decide".

By a 6 to 1 vote on March 4, 1982, the Federal Communications Commission left it to the "marketplace" to determine the system (or systems) which will be used to broadcast and receive AM stereo. Two years earlier, on April 9, 1980, the FCC had selected Magnavox, but withdrew this decision in the face of heavy criticism from the industry. The "marketplace" decision, opposed by NAB, NRBA and the Electronic Industries Association (EIA), won out largely because the FCC feared that selection of a specific system would result in legal battles which would delay the introduction of AM stereo at least another two years.

The one commissioner who dissented, Abbott Washburn, stated: "a selection of a single standard has been our practice for over 50 years...It is the proper function of government to lay down the guidelines for a single system that will

result in AM stereo in every home at the lowest cost consistent with technical excellence and quality reception." And two commissioners—Quello and Fogarty—who voted for the "marketplace" admitted it is "sheer folly" to expect the American public to select a single standard; they were "appalled" that it took the FCC "five years to decide not to decide".

FIVE SYSTEMS NOW FOUR

A panel discussion during the NAB convention provided the first public forum for discussion of the AM stereo decision.

A large audience had the opportunity to hear and question representatives of the five "proponents" (system manufacturers) and of the major manufacturers of radio receivers.

BELAR OUT

Belar Electronics has, in effect, withdrawn from the battle. Arno Meyer,

president of the firm and its spokesman throughout the AM stereo wars, described Belar's position as "neutral". The firm had "carried the ball" for the AM-FM system developed by RCA and still expects to be involved in the manufacture of monitoring equipment for AMS. Meyer noted that it is in the consumer market "where the decision must be made".

HARRIS

Spokesman David Hershberger optimistically proclaimed "We have won the battle!" Harris, as of April 6, has sold 77 systems to U.S. stations and 10 to other countries, and plans to ship in large volume starting in July. The company claims its linear system is preferred by more broadcasters than any other system. Hershberger said that consumers want a "smart" receiver and that Harris Semiconductor had launched a crash program to develop a chip for reception of linear AMS within 3 to 4 months.



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NAB REPORT: AM STEREO

KAHN

Kahn Communications has also signed an impressive list of stations—at least 62 in 46 U.S. markets, including major groups such as ABC, NBC, RKO & Westinghouse, plus the Moffat group in Canada and several Mexican stations. Exciters have already been provided to 16 stations. The Kahn-Hazeltine system is an independent sideband system which achieves separation by frequency separation, as opposed to phase separation, used by the other proponents. It is also the only system which can be received using two AM radios, enabling listeners to hear stereo immediately, without waiting for the production of stereo receivers. Prior to NAB, Leonard Kahn told *Broadcast Technology* that he "couldn't be more pleased" with the FCC's "marketplace" decision. AM stereo was technically feasible 22 years ago, he said, but the FCC had favored stereo on FM only, to advance that medium. AM stereo "would have been in the courts for years" if the FCC had made a one-system decision. At the NAB session, Kahn told the audience: "The Fowler Commission (FCC) made you the judge and jury." Receiver manufacturers, he added, will

be cautious and will want to be sure that broadcasters will go into AM stereo and stay in it. "Make sure you can live with the system you choose." He suggested these criteria for evaluating an AMS system:

- Is it capable of full modulation with present processors?
- Will it result in loss of coverage?
- Is it free of unusual sounds?
- Will it work with a directional antenna?

MAGNAVOX

Spokesman Robert McCarthy said that Magnavox—a division of North-American Philips which markets Magnavox, Sylvania and Philips product lines—is "off and running". He pointed out that television audio will eventually be in stereo, and that AM is "too forward-thinking to stay mono". An AM stereo system includes broadcaster, transmitter, receiver and listener, and should be as simple as possible to implement for both the broadcaster and the listener. The Continental 302A AM stereo exciter is compatible with the Magnavox system, and semiconductor chips are now available from two major manufacturers to decode the Magnavox stereo signal. McCarthy announced plans to sign a major station in each of the 50 largest U.S. markets to provide AM stereo on a national basis—a prerequisite for marketing receivers on a national scale. National Semiconductor and Pioneer Electronics have both voiced support for the Magnavox system.

MOTOROLA

Belar will be building exciters and monitors for the Motorola system, which spokesman Frank Hilbert attempted to outline. Unfortunately, his presentation was built on slides which were repeatedly projected upside down and/or backwards, and was largely lost on the late afternoon NAB audience. However, the company announced that it has developed a single-chip AM stereo decoder circuit and a single chip tuning stabilizer circuit for receivers.

RECEIVER KEY TO AMS

A number of manufacturers of receivers and/or integrated circuits also participated in the AM stereo panel.

Much of the discussion centred on car radios, which a spokesman for National Semiconductor described as the "crucial market". He argued that if AM stereo increases the cost of receivers more than \$30, it won't get the mass acceptance it needs to succeed. A receiver capable of decoding two or more systems, he added, is not practical. (Leonard Kahn believes such a receiver would cost an additional \$46.)

One interesting footnote to the FCC's non-decision on AM stereo was the advice of legal counsel that U.S. broadcasters would be in violation of anti-trust laws if they were to combine forces to recommend any particular system. The dilemma was summarized in these words: "One arm of government says: 'We can't decide.' Another arm of government says: 'You can't decide.'"

If no working IC is now available to receive a given system, National Semiconductor estimates it will take 14 months to get those receivers on the market. In addition, the confusion resulting from the use of various systems could "blunt" AMS, as it did Quad and the Videodisc. His conclusion: "We know of no production-ready receivers except Magnavox. Magnavox is the *de facto* standard."

Also represented on the panel were General Motors' Delco division, the largest maker of car radios, and Panasonic, the leading manufacturer of receivers for the consumer market. Delco's spokesman said the problem is to combine quality with cost-effectiveness. "The system that is perceived by the listener to have the best quality will be the winner."

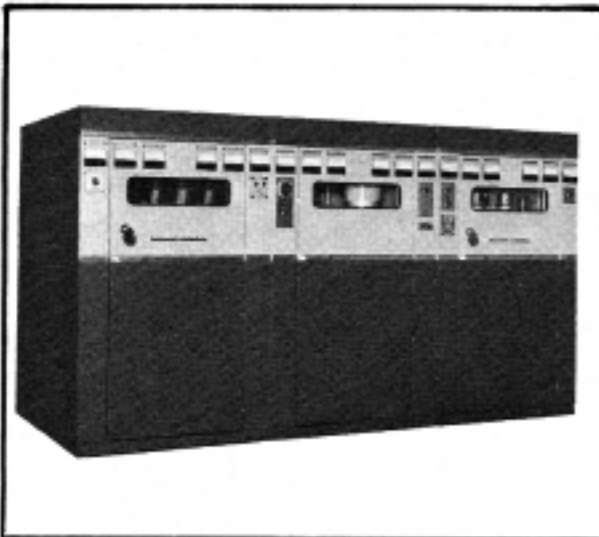
Panasonic believes that any purchaser who wants a radio with FM stereo will also want AM stereo, and that the principal prospects—those planning to spend \$125 and up—will be willing to pay 7 to 10 % more for AM stereo. Concern was again expressed that the broadcasting of various systems would cause confusion, and while there would be little difference in the performance of various systems, there could be large differences in the cost.

During a lengthy question and answer period, broadcasters repeatedly demanded that manufacturers produce quality AM receivers, an oft-heard theme at previous NAB confrontations. The manufacturers protested that any line has to sell at least 10,000 units, often 20,000 to 50,000, to be profitable. A spokesman for Magnavox commented that dealers say the customer "couldn't care less" about quality AM receivers. "Nobody has enough money to sell the public on wideband AM."

As the bickering dragged on, one exasperated broadcaster grumbled, "I'll tell you what's going to happen. Nothing."

That's what many in the industry fear will be the end result of the FCC's non-decision. Despite the enthusiasm of many broadcasters, AM stereo may become mired in confusion and indecision, as incompatible systems compete on an unpredictable battlefield: the "marketplace".

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CCBA ENGINEERING NEWSLETTER

by Bruce Dingwall

This month's newsletter contains few startling revelations. In a conversation with **Bill Onn**, CKEY, we concluded that nobody's building anything because of the tight money right now. However, a bit of sleuthing revealed that **Trevor Joice** of CHIN-FM is installing a Uni-Tel remote control system, linking the studios with the transmitters at the CN Tower.

Also, early in April, Middlesex Broadcasting opened the new Broadcasting House for CHOK in Sarnia, with **Bob Cooke** at the helm. Middlesex, incidentally, not so long ago completed the studios for the FM arm of London station CJBK, CJBX-FM.

On the lighter side, **Bob Burger** recently went shopping for a replacement dummy load for the CKDS-FM transmitter plant. Seems one night

recently, he and **Ted Townsend** were testing the transmitters, which are housed in the CHCH-TV transmitter building near Hamilton, using the water-cooled dummy load. Suddenly the water pressure dropped, and quicker than they cared to remember, their dummy load was burned out! (Speculation has it, somebody flushed the facility.) Anyway, they located an exact replacement for the DL, and are back in biz.

Speaking of CKDS (and CHML), thanks to **Ed Victor** for sending over a carton of old files related to CCBAE. This gives us a good start on the CCBAE history your Executive hope to compile in time for the 1982 CAB-CCBAE-CCBA convention in Toronto. But, we still need help, especially with the early years (before 1969) and the mid 70's. If you were a member of the executive, and have any

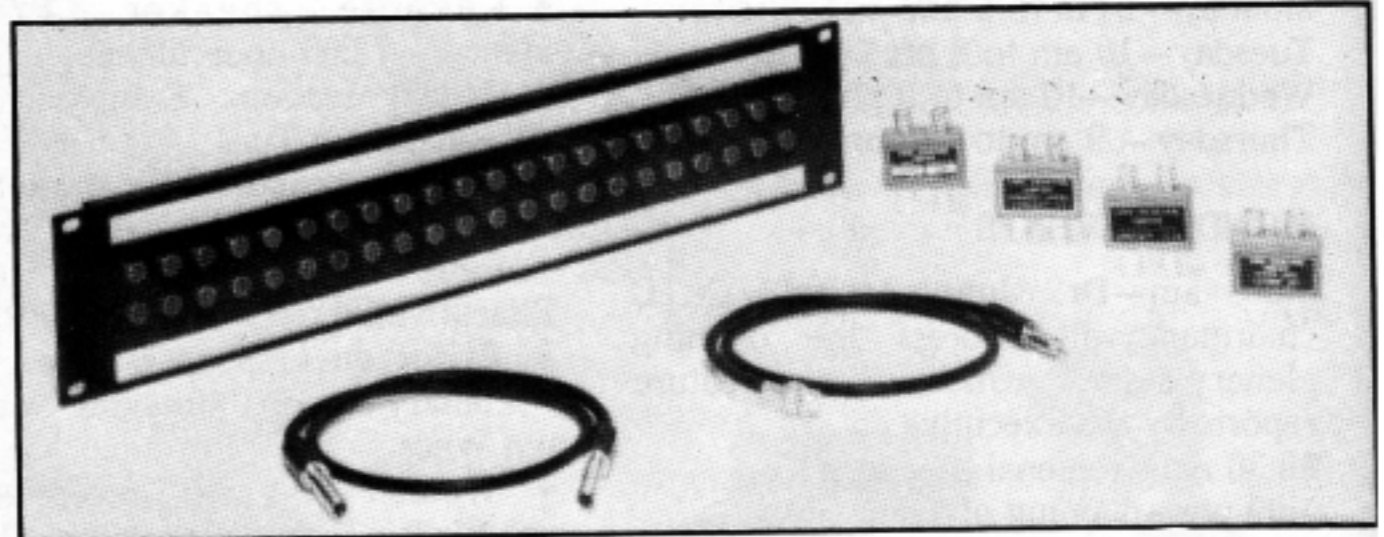
notes, materials or pictures that you think we can use, please call or write me at the address below.

With this Newsletter there appears the Nomination Form for the CCBA Engineering Award. We hope that all members will give thought to possible nominees, and will submit their names to **Jeff Guy**, along with details as to why this individual is deserving. (If you don't want to cut up the magazine—and who among us does?—then a submission on a photocopy is fine.)

What's that they say about old engineering types? They just go on and on and on....

- The above-mentioned Ed Victor will be retiring as chief engineer of CHML-CKDS, this Spring, but will continue on at CHML in another, much needed capacity.

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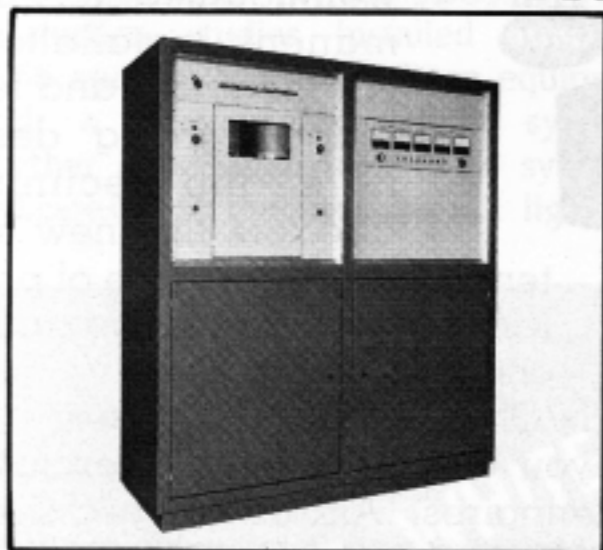
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- **Frank Lehman**, who retired from CFRB last Fall, is helping **Ron Hefler** at CFGM in Richmond Hill, a couple of days a week. Frank tells me he's tapering off to full retirement (and fishing, if I know Frank).
 - A new face at CHIN Radio is **Mike Druivan**. Mike holds a B.A.Sc., and was with the McMaster University FM station, CFMU, before joining CHIN.
 - Finally, a face has reappeared: **Chuck Beedle**, who we reported had left this biz for another last Fall, is back in the thick of it again, with **John McCloy** at CKOC.
 - The rumors that **Warren Parker** had become the Invisible Man are not true. After several tries, I was finally able to talk to him and learned that he is not invisible; it's just this big pile of work he had taken on at CKTB is keeping him *very* busy. Carry on, Warren.
- That's it for now. We are more than happy to pass along anything about your department at your station, but we have to *hear* about it. Drop a line or give a call!


Bruce Dingwall, CET, is chief technologist, CFRB, and publicity chairman for the Central Canada Broadcasters Association Engineering section. He may be reached at CFRB, 2 St. Clair Ave. West, Toronto M4V 1L4, (416)924-5711.

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in the news

LEASING BIRDS TO U.S. BIG \$ FOR TELESAT

Telesat Canada says it's good business, but others are voicing concern over recent deals by Telesat to lease 20 satellite channels to U.S. customers.

Canadian requirements for satellite delivery are developing more slowly than anticipated; meanwhile, the U.S. demand is heavy and will not be met by domestic satellites for at least another year or two. Telesat claims that by providing channels to U.S. users on a temporary basis, it will be able to reduce its rates in Canada by about 25% and still ensure that Canadian services receive priority.

The contracts, for channels on Anik C and Anik D, could bring in close to \$90 million. These include:

- GTE Satellite Corp., paying up to \$32 million to use 10 channels at 12/14 GHz, on two satellites—to be launched in November, 1982, and April, 1983. GTE plans to launch its own satellites in July, 1984; in the interim, the Telesat channels will carry two pay-TV services of the United Satellite (USTV) consortium, providing coverage of the northern U.S.A. as far south as Atlanta, GA, and Denver, CO.

- Oak Industries Inc., paying \$30 million for four Anik C channels to deliver scrambled pay-TV services, beginning in mid-1983. Two channels will cover the northeast, two the northwest, with a direct-to-home service, individually addressable for "pay-per-view" events.

In addition, at least two Canadian manufacturers hope to benefit to the tune of \$100 million through contracts to supply earth stations. SED Systems of Saskatoon and the Canadian division of General Instrument will collaborate to develop a TVRO costing \$1,000, aiming for U.S. sales of plus-100,000 units.

However, Telesat's plans have been criticized by Patrick McGeer, British Columbia's minister of communications. Terming the deals a "sellout", he says potential Canadian customers should be heard before the channels are leased to U.S. users. And C-Channel, the newly-licensed "lively arts" pay-TV service, claims it is being put at a disadvantage by Telesat's plans, which include "tilting" the birds southward to maximize U.S.

coverage.

Telesat intends to charge its U.S. customers 10% more than Canadian tariffs, offering two classes of service: "Class 1" service would be pre-empted only to restore an existing Canadian service; "Class 2" service could also be pre-empted on 12 months notice to accommodate a future Canadian service.

CFJC-TV MARKS 25 YEARS

CFJC-TV Kamloops, B.C., celebrated 25 years on April 8, 1982. When the station went on the air as CFCR-TV in 1957, Kamloops, with only 9,000 population, became the first North American city of under 100,000 to have a TV station.

As rebroadcasters were added to extend coverage, funds were raised by \$25 donations which local retailers would credit to the purchase of a TV set. Today, the CBC affiliate has a network of 30 transmitters.

ROCHESTER WORKSHOPS

Three workshops in film and video will be offered by the Rochester (N.Y.) Institute of Technology, School of Photographic Arts and Sciences, this summer.

Motion Picture Workshop I, from June 7 to July 9, will cover film-making as a means of interpretation and expression. Technical and theoretical knowledge will be emphasized through class projects.

From July 12 to August 13, the school will offer both Motion Picture Workshop II, and Television Production Workshop, which will include sessions on script writing, pre-production planning, camera and crew, directing, electronic editing, ENG procedures and producing television visuals. (Emphasis will be on non-commercial television).

For information contact: Rochester Institute of Technology, Coordinator of Summer Sessions, College of Continuing

Education, 50 West Main St., Rochester, N.Y. 14614, U.S.A.

CHANGES AT BROADCAST NEWS

- A.R.W. Lockhart of Saint John, N.B., is the new president of Broadcast News. Other broadcasters on the board are André Mercier of Sherbrooke, Que., Bill Ballentine of Toronto, Rory MacLennan of Winnipeg, and Ron East of Prince George, B.C.

- Dave Schnaider, formerly BN's manager of marketing and planning, resigned effective April 14. He is joining CBS Inc. in New York, where he will hold a senior position in the CBS videotex information technology project.

OBITUARIES

- **Jim Allard**, 67, of a heart attack on February 15 in Ottawa. He was with the Canadian Association of Broadcasters for over 30 years, serving as its executive vice-president from 1953 to 1973.

- **Jack Bews**, 66, on February 17 in Kelowna, B.C. He was news director of CKOV for more than 25 years, retiring in 1978.

- **Marty Cullen**, 59, sports director of CKOV Kelowna, of cancer.

- **Sandra Mackenzie**, 35 senior publicist for CTV, in Toronto, of complications following surgery.

- **Ross McIntyre**, 73, at Nanaimo, B.C. A pioneer in broadcast engineering on the west coast, he put the original CKWX and CKNW transmitters on the air, and was also associated with CKDA, CKAY, CJAV, CBC Vancouver and CHUB. He also held one of the first 50 "ham" radio operators' licences issued in Canada.

- **Robert Patchell**, 56, on March 7 in Toronto, after a lengthy illness. He was a producer with CBC-TV Toronto.

appointments

- ABC Radio—**Richard Martinez** promoted to new position of director, technical operations; consultant **Ronald G. Pearl** signed to assist in directing installation of digital audio satellite distribution system to be in full use by all six ABC Radio networks by 1984.

- American Transcommunications, Inc.—formerly of Harris Corp., **Richard J. Campbell** named v.p. at Atlanta, Ga.

- CBC—**Pierre DesRoches** appointed v.p. and g.m., French Services Division. Born in Montreal, he has been with Radio-Canada since 1951 and is also a director of Telesat Canada. DesRoches replaces **Raymond David**, who relinquished his duties April 1, prior to his official retirement July 1.

- CFPL London—promoted to v.p. and g.m. are **C.N. (Bud) Knight** for AM-FM and **R.V. (Bob) Elsdon** for T.V.

- CJAY-FM Calgary—recent promotions include **Vince DiMaggio** to station manager; **Wes Erickson** to p.d.

- CJSB Ottawa—among appointments at new station are **Linda Benoit** general sales manager; **Mike O'Brien** program director/operations manager; **Ken Harris**, chief engineer; and **Judy Bath**, administrative assistant.

- Cancom—**John Robinson** named sales mgr. for Pacific area (B.C., Yukon & N.W.T.), based in Richmond, B.C.

- Communications Equity Corp.—**Brent Bertrand** appointed v.p., finance.

- Global TV—**Raymond E. Heard** promoted to v.p., news and current affairs; **Jan Tennant** joins Global news on 3-year contract, leaving CBC after 15 years.

- RF Communications—**Gary Collier** appointed engineering manager.

- Radio IWC Ltd.—recent promotions include **Bob Johnson** to vp/gm CFGM; **Gary Slaight** to vp/gm CILQ-FM (Q-107); and **Marilyn Stitt** to general sales manager CILQ.

- Guy Royal & Associates—**Peter Emerson** has joined GRA as senior promotions consultant.

- Scientific-Atlanta—**Charles A. Presto** named g.s.m. of communications

products group.

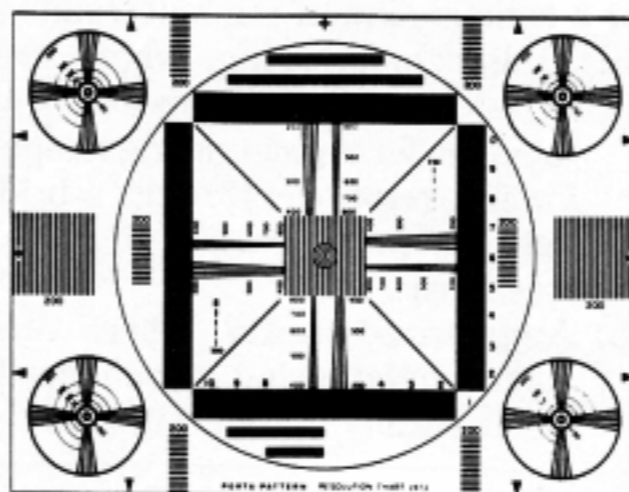
- Times Fiber Communications—recent appointments include **Richard Thayer** to director of engineering, cable TV division; **John Herz** to vp/gm of new communication systems division; **James Heath** to development engineer, fiber optic systems. Heath is a graduate of

Queen's University, Kingston, Ont., and UBC, Vancouver.

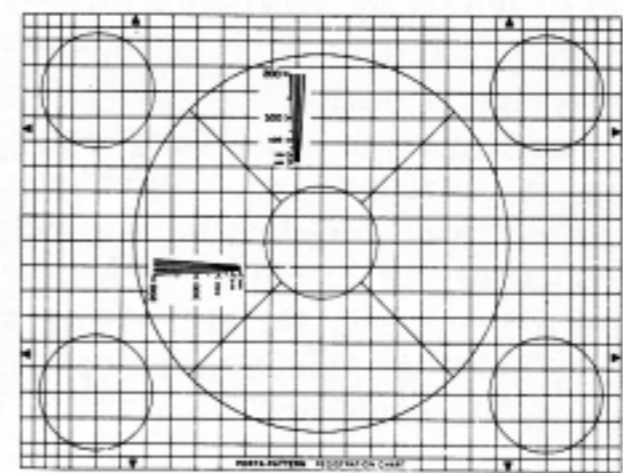
- Townsend Associates—**Howard G. McClure**, most recently of Fernseh, Inc., appointed v.p., marketing.

- Utah Scientific—**Eric S. King** named eastern U.S. sales mgr.

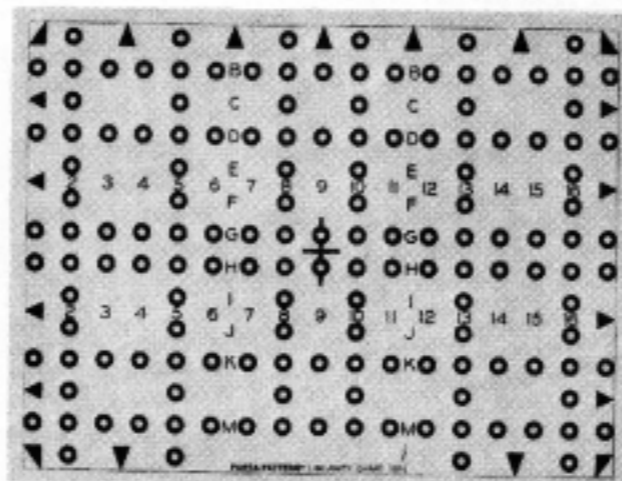
PORTA—PATTERN TEST CHART SYSTEMS



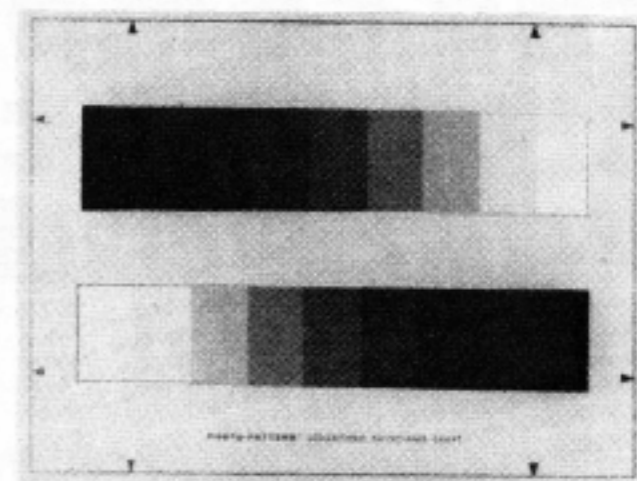
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Cover photo: Executive office with adjoining skylit conference area. Oak trim is used to enrich standard fluorescent fixtures. Plants and choice of furniture give life and warmth to an office whose theme is characterized by the original turn-of-the-century building.

BUILDING NEW STUDIOS FOR VICTORIA'S C-FAX

NEWS FACILITIES AND INSTALLATION

by Bob Calder



Photo 7: C-FAX news booth. The announcer in this room has a good view of the main control room and adjacent sports booths. Since all music is on cartridge, this room has all the facilities required for an emergency on-air studio. The auxiliary equipment turret on the right contains remote control room switcher, digital thermometer, mobile intercom facilities and remote access to the crossbar facilities. Judi Vertes Helfrich, traffic director, is in control room.

Broadcast people have asked various questions about the C-FAX studios since the article about the installation appeared in September-October issue of *Broadcast Technology*. Most of the inquiries have pertained to the news operation, interior finishing and some custom products used in the general installation of the studios.

BROADCAST TECHNOLOGY

With the aid of a few drawings and pictures, some of the answers are included in this article, combined with a further description of the newsroom. The focus of the story will remain on auxiliary equipment, as most readers will be familiar with the more fundamental studio equipment. Some of the concepts may not be unique, but the basis for description is to show how they were incorporated into our studios to form part of a complete broadcast system.

Newsroom

The newsroom consists of a floor area 5 metres by 12.5 metres and is equipped with 6 working positions, each with its own full complement of equipment. Small variations in the arrangement of equipment occur at some positions, regarding items such as intercom facilities interfacing the main news and sports positions; however, each of the six news modules has identical telephone

answering and recording facilities. In each news position all equipment is mounted on a three or four-sided turret located above and in front of the newscaster—with the exception of the reel-to-reel recorder, which is placed horizontally at desk level for ease in tape handling and editing.

The main news positions are equipped with a rack-mounted Technics cassette deck, digital timer, ITC cartridge facilities, intercom and a fully redundant source-selector panel. (See Pic 5). This not only allows for mixing discrete input sources, but allows for processing and recording of two independent sources. As an example, the operator may select the news network and record through one switcher directly to cartridge or cassette recorder. Meanwhile, his telephone facilities are free for bringing in a report and recording on a reel-to-reel for further editing purposes. Any local sources at the news position can be routed through an electronic crossbar to an adjacent position for additional multiple recording if necessary. If the equalizer is switched in circuit, it is automatically neutralized after another input on that panel is selected. (See Fig. E). Commentary of live network feeds can be done from the news position by switching in a quality, noise cancelling microphone. Also located in the cockpit-designed equipment modules are blank cartridge and paper storage

facilities. The news and sports positions can be serviced without disturbing the operator, by removing access panels mounted on the wall in the adjacent hallway.

The newsroom, like the on-air facilities, has large, triple-glazed

windows and a northerly exposure. This allows the room to have natural light without glaring sunshine, and psychologically provides a better working atmosphere—especially important during weekends and evenings, when other parts of the building may be



Photo 5: This newsroom position clearly shows the arrangement of equipment and its convenience to the operator. Bev Sinclair not only produces and reads major newscasts on C-FAX, but also does research and co-hosts a two-hour morning talk show.

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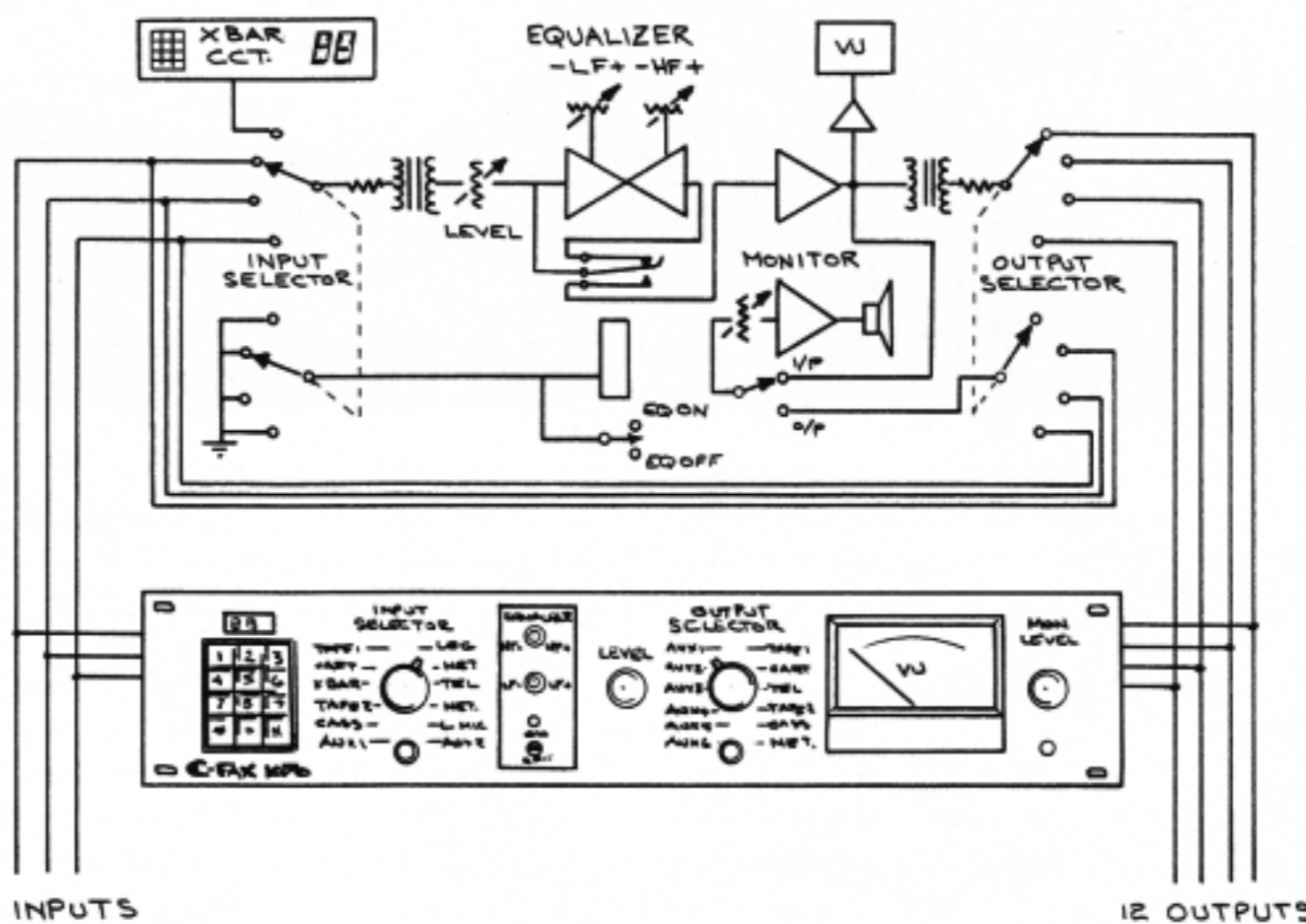


Figure E: Functional diagram of dual newsroom switcher. Note that the extra set of wipers on the output selector track the output of the corresponding piece of equipment selected, thereby allowing simple 'consumer' style monitor switching. When the equalizer is used in circuit, it will automatically be disabled when the next input is selected by the operator.

sparsely occupied. Acoustically-lined drapes are provided for all the front windows and can be closed at the discretion of the person(s) on duty at the time.

Acoustics

Since this area contains a large complement of equipment, millwork, and some original exposed brick walls, acoustic treatment was of some concern during the design stage. (Ambient noise levels in some news operations can be quite high). This was one of the few rooms of the building which was left uncarpeted, since the constant abuse of chair casters will ruin any carpet. Plexiglas chair mats cannot be used successfully, since they scuff easily, and they can be somewhat dangerous when exposed to any foot traffic. (The control rooms have a 3 millimeter steel plate with beveled edges over the carpet where the announcer normally sits.) After a year of heavy use the cushion flooring that was selected for the newsroom is still in good condition.

The one remaining surface that can be successfully treated is the ceiling. In our case, Acoustone Glacier shadowline tiles were used. This ceiling tile is fire rated and has excellent sound absorbing qualities, improving at lower frequencies when the tile can be suspended by a 'T-Bar' arrangement.

Aesthetics

Many architects or designers have left newsrooms, control rooms and studios to be finished in a manner which only satisfies the engineering requirements as to placement of equipment, speakers and acoustical panels. These results are technically quite satisfactory, but aesthetically they are far from conducive to a comfortable working environment.

Design, color, good lighting and room temperature are very important for people to conduct their tasks effectively. During planning and installation, aesthetics played as important a role in decision-making as functionality in all areas of the station. Considering the financial investment placed in equipment for areas such as the newsroom, it is worthwhile to formulate a theme for the decor that will help to inspire productivity and harmony. (See Pic. 7).

Although wall treatment of office areas varies somewhat, the decor theme for C-FAX is consistent with the original structure. Exposed old brick remains as the final wall finish in a great many areas. Most other interior walls are simply painted drywall, but here again a color scheme plays an important role. In some areas, where the original brick was marred, the wall area was re-covered with oak panelling or, in the case of studio walls, acoustic treatment was applied. An earth-tone wool fibre carpet

covers nearly all floor areas, with a darker version in the boardroom and executive offices. An acoustic tile, similar to that used in the newsroom, is glued to all drywall ceilings with the exception of the studios which have 2-inch Nubby 3 board (a product of Fibreglas Canada). All office and studio doors were manufactured by Weyerhaeuser, one of the few companies that publishes satisfactory sound ratings for their doors and provides a variety of door finishes, including plastic laminates.

When designing a building with an open stairwell, local fire codes will have to be considered. In our case, three fire-rated doors leading from the stairwell are held open by electric solenoids located in the door closures. If any of the smoke or heat detectors (42 throughout the building) are triggered, these doors are automatically closed, effectively isolating the three floors from possible spreading smoke or toxic gases. The air conditioning system is similarly interlocked through the fire alarm control system.

Ventilation

Air for ventilation is distributed throughout the C-FAX building at approximately 14°C. Because of the moderate climate in Victoria, this is normally provided by outdoor fresh air only.

When the outdoor temperature dips below 14°C, a damper mixes a small amount of recirculated air to maintain the duct temperature. As the outdoor temperature rises above 14°C various stages of compressors become active to maintain this same temperature. The compressors are only active a few hours a day in the summer months, the rest of the year cooling for the building is free. Each room or zone in the station is temperature controlled by its own wall-mounted thermostat. This thermostat controls a variable volume box which varies the amount of 14°C air allowed into the room to maintain a comfortable 20 or 21°C. If the heat loads you have given to your mechanical consultant are correct, the duct system will be sized so that the normal temperature is maintained by a constant variation of the supplied fresh air.

If the outdoor temperature drops to a point where the normal heat gain cannot maintain 20°C, even when the fresh air supply is reduced in the room, individual duct or baseboard heaters provide supplementary heating automatically. An additional compact refrigeration unit supplies added cooling to the computer area near the accounting and traffic departments. In this way the entire floor could be treated as a general office area and some back-up protection is provided for the computer hardware, which is in an enclosed room. (See Pic. 6). →

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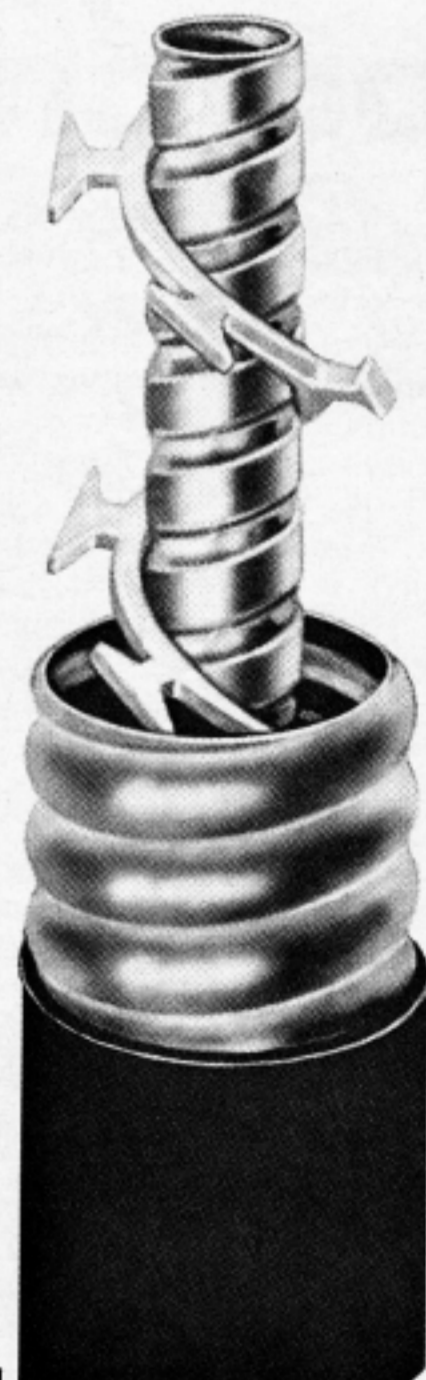
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Custom Projects

Without a doubt, the largest manufacturing project we undertook while the studios were being constructed was the building of our newsroom switching panels. (See Fig. E). The versatility and reliability of these units have proved out after a year of operation.

In nearly all large studio installations, circumstances arise where a line amplifier is needed for isolation or extra audio gain somewhere in the system. An example would be boosting 'reverb send levels' or increasing telephone levels. We overcame this situation by designing a balanced line amplifier utilizing a NE5534 within a Hammond Polycase, complete with an 11-pin socket. This amplifier is physically small, has an output capability of +28 dBm and can be mounted almost anywhere. Similarly, we utilized a solid-state relay complete with an adjustable 555 circuit within a similar case. (See Fig. D). By substituting this for an AC switch and utilizing any control circuit, a versatile 120-volt flashing studio or on-air light is easily interfaced to any microphone channel DC system.

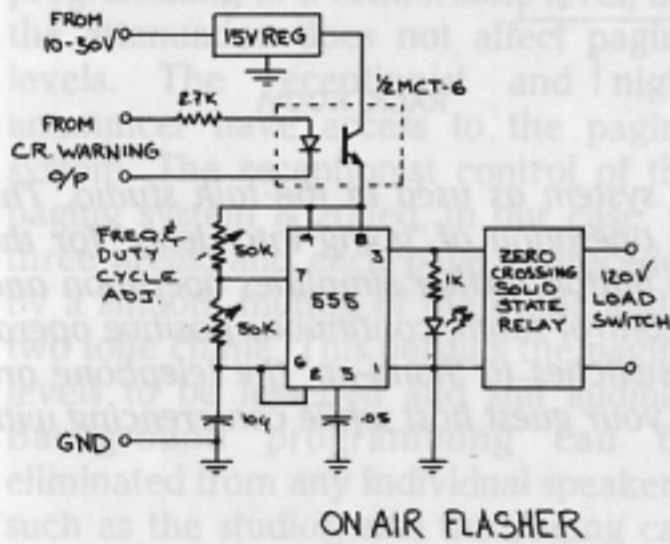


Figure D: Schematic of studio lamp flashing circuit used to control 120V lamps. Entire unit is housed in a Hammond Poly Case complete with octo socket.

Some news directors have asked about a circuit which we used to mute a monitor system which is bridging an incoming network line when printer data is appearing on that same line. If status is not readily available from the printer, simply connect an opto-coupler across the print-drive motor. The output can be wired to a mini-jack which is mounted on the side of the printer. Status to interface to a monitor-muting circuit is now available, and the plug-in circuit in the printer can be removed at any time to return the monitoring system to normal or to remove the printer for servicing. (See Fig. G).

BROADCAST TECHNOLOGY



Photo 6: Some of the IBM hardware which is part of the Columbine traffic system. This equipment, along with the CPU (not shown), is located in a secure area between the traffic and accounting areas and is complete with a dual cooling system. Val Turner, systems manager (left), explains accounting procedures to Lisa Voht, a student on the work experience program.

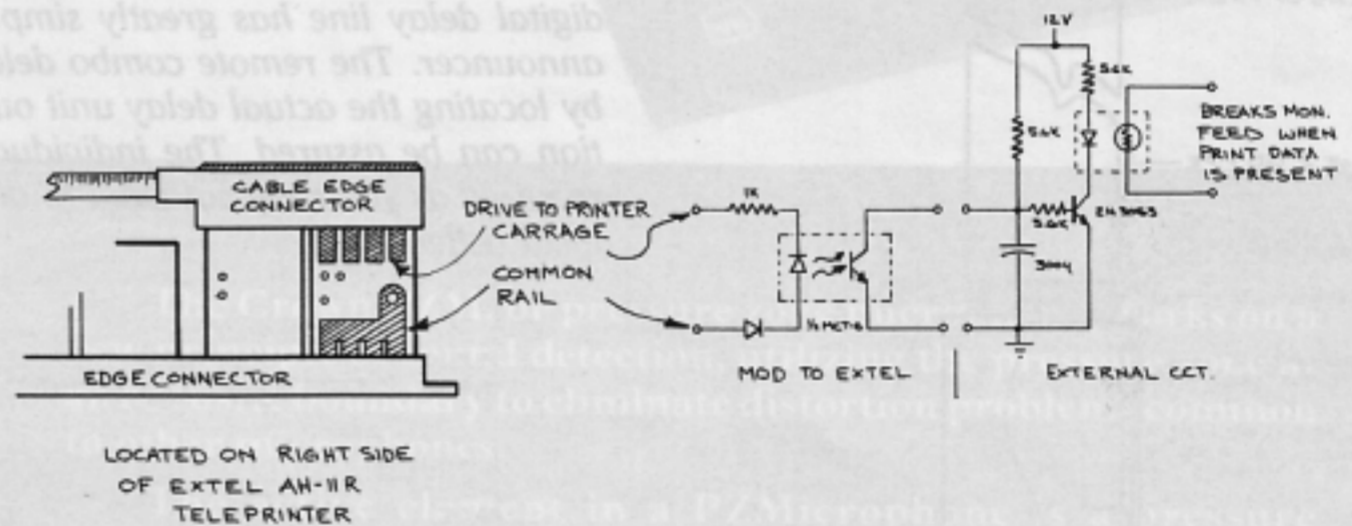


Figure G: A simple change to an Extel printer, which is tied to a line having both data and voice. The LED/LDR is wired in series with the high side of the monitor input to smoothly reduce audio levels while the printer is functioning.

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CFAQ

The telephone system we have installed in our on-air control room and talk studios is probably one of the simplest for doing open-line programming.

Two identical 'key' sets are located on the studio table with each set capable of accessing identical telephone lines. The outputs of the mating 'Companions' are routed through separated telephone channels in the main control room console. Conferencing is achievable by selecting separate lines on each set and allowing the outside callers to talk to each other by acoustic coupling only. When speaking, the moderator automatically overrides the incoming callers. The identical lines appear on two keysets in the main control room, where an operator may pre-screen callers or conduct his own one-man talk show with similar conferencing abilities. A 'dump' button duplicated in the studio and on-air control room not only places the program back into real time to immediately build up delay again, but also will hang up the selected line on any keyset. (See Fig. C).

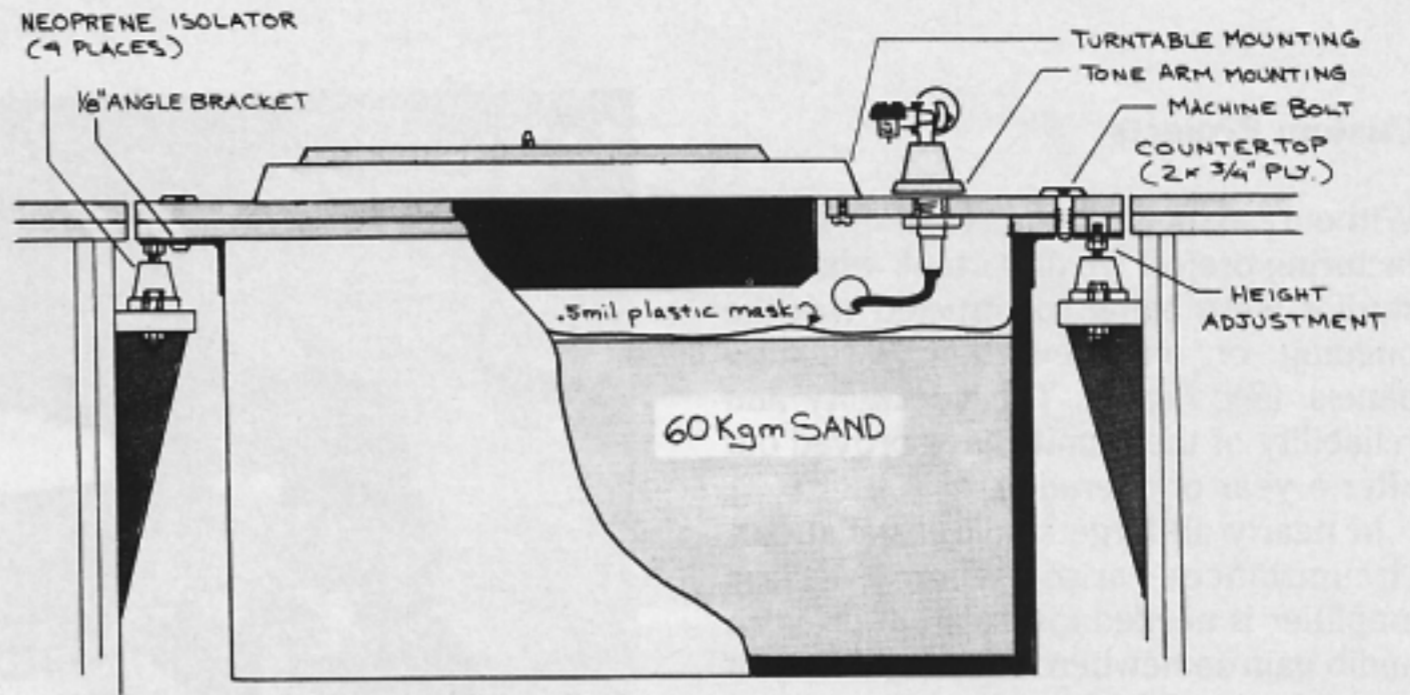


Figure B: Detail of economical mounting system for SP10 or SP15 turntables, when utilizing custom-built control room millwork. By removing four fasteners, the top ply is removable to gain access to underside of turntable and tonearm. After initial adjustment of the isolators the whole unit will remain centered and flush with the rest of the counter top.

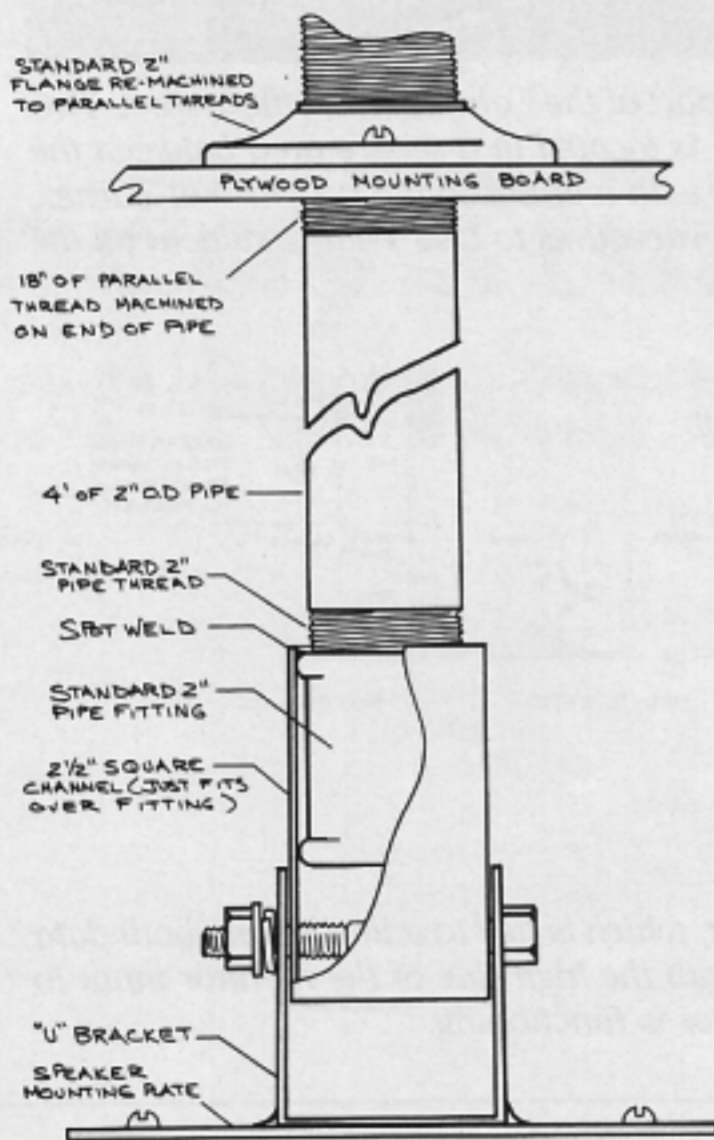


Figure A: Detail of mounting clamp used to hang Technics SB7 speakers from ceiling in control rooms. The plywood mounting board is placed on top of ceiling joists and rests on strips of neoprene before fastening. Long pipe thread should be used to allow for ample height adjustment. The speaker will tilt and rotate horizontally for final adjustment.

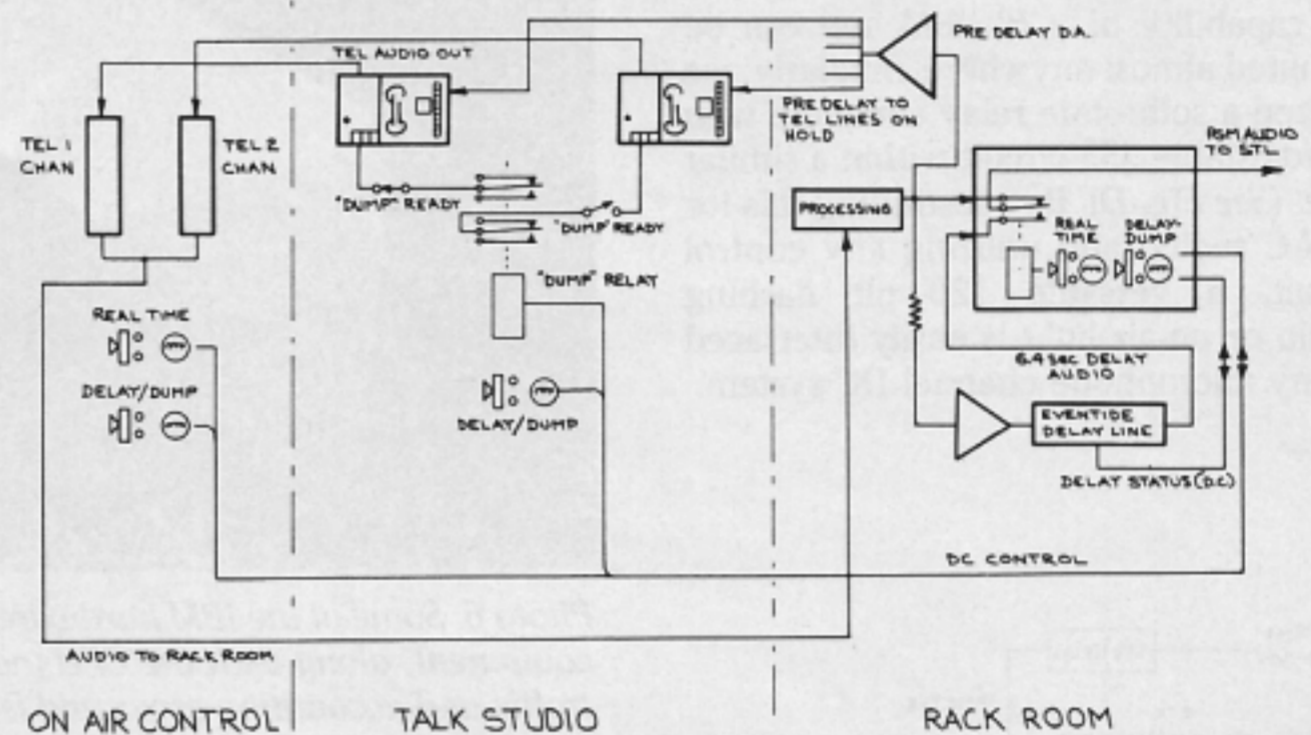


Figure C: Functional diagram of telephone system as used in the talk studio. The digital delay line has greatly simplified the operation of 'going into delay' for the announcer. The remote combo delay/dump button further simplifies operation and by locating the actual delay unit out of the control room, continuous positive operation can be assured. The individual ready switches to 'hand-up' the telephone are required as you may not want to disconnect your guest host while conferencing with local callers.

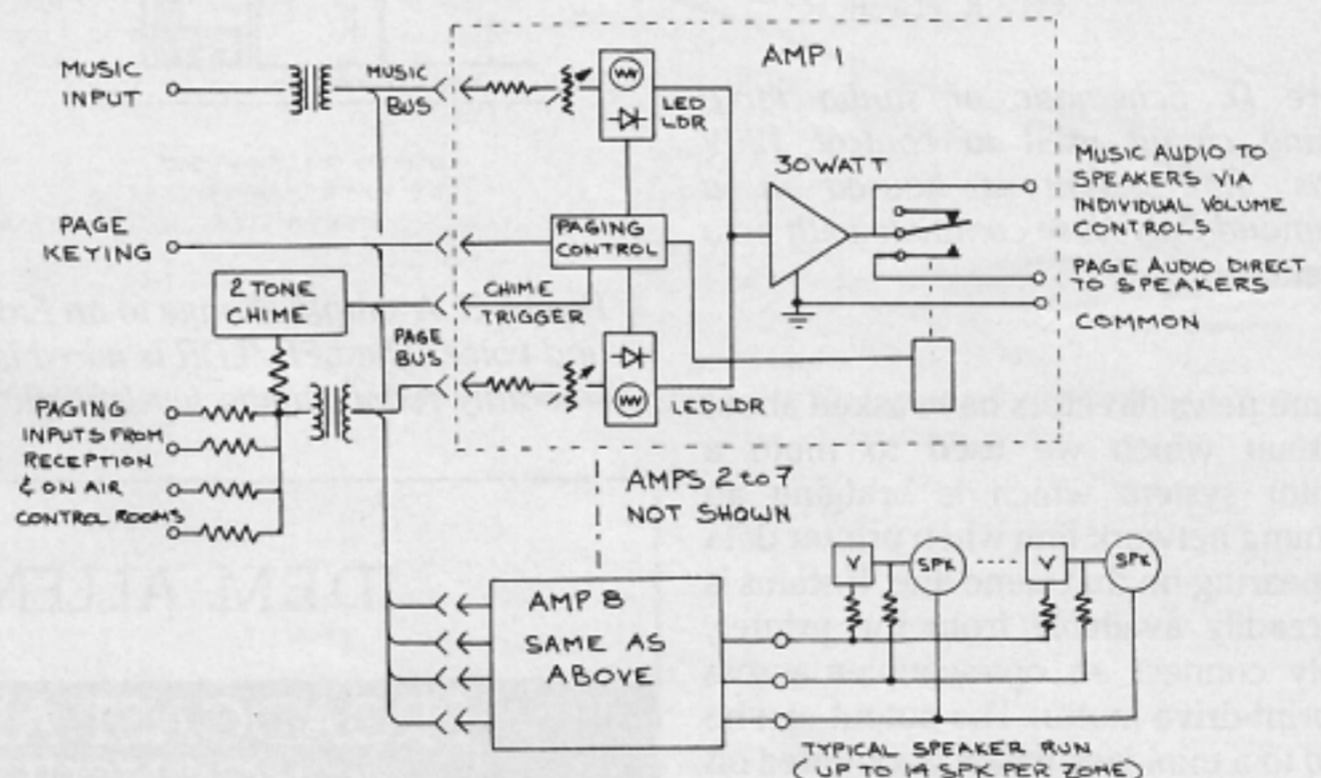


Figure F: Diagram showing functional system of combined public address and music system. The LED/LDRs in each amplifier input provide a smooth transfer between page and music. By various page-key strapping arrangements, it is possible to 'zone call' an area of the building without interrupting creative or management offices; also, AM and FM areas of the building may have separate programming inputs.

CFAX

As is the case in many stations, requirements occur where remote switching is necessary over wire or radio links. Although this equipment is available from regular suppliers we have designed our own DTMF receiver with all our required functions on a single card. (See Pic. 3). Mixed programming and tones may be transmitted on a single line and the tone receiver responds by giving a dry contact closure from any one of 16 standard DTMF tones. Visible level adjustment and 25 dB of extra gain are additional features on the card. Possible keying of the receiver by audio programming can be eliminated by strapping one digit as an 'activate' button and by increasing the guard-time of valid tones if required. This receiver is used in conjunction with our newsroom switchers and to control functions at a transmitter site.

Since radio stations consist of isolated room areas, I would recommend any station redesigning studios to place some emphasis on installing a good paging system, perhaps combined with music which can be the station's programming. Our requirements were satisfied by mounting 64 speakers to cover the floor area effectively, including the studios and washrooms. All offices have individual volume controls which adjust programming to a comfortable level, but the attenuation does not affect paging levels. The receptionist and night announcer have access to the paging system. The receptionist control of the paging system is zoned, in our case, to three areas, and each page is preceded by a smooth muting of the music and a two tone chime. This permits the paging levels to be lessened and still audible. Background programming can be eliminated from any individual speakers, such as the studios, and the paging can be muted when studio microphones are active. A well-designed system not only sounds professional, but is less frustrating for staff and receptionist alike. (See Fig. F/Pic. 2).



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BROADCAST TECHNOLOGY

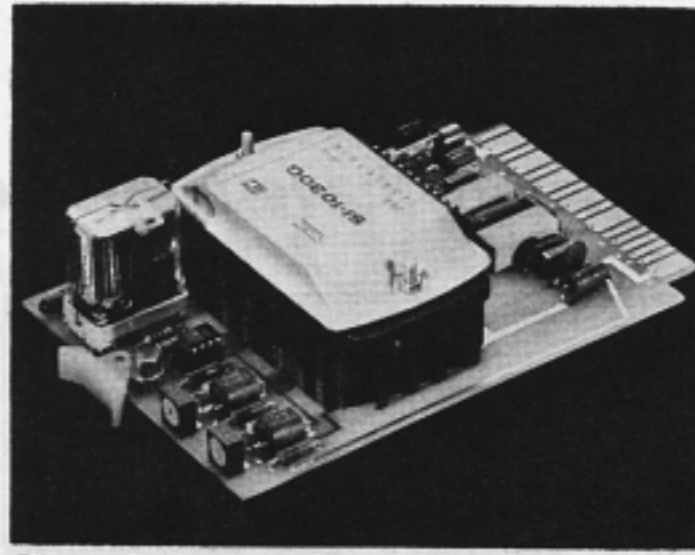


Photo 2: Amplifier module used in public address system. We have thought of packaging and selling this and other systems which have been constructed and tested 'in house'.

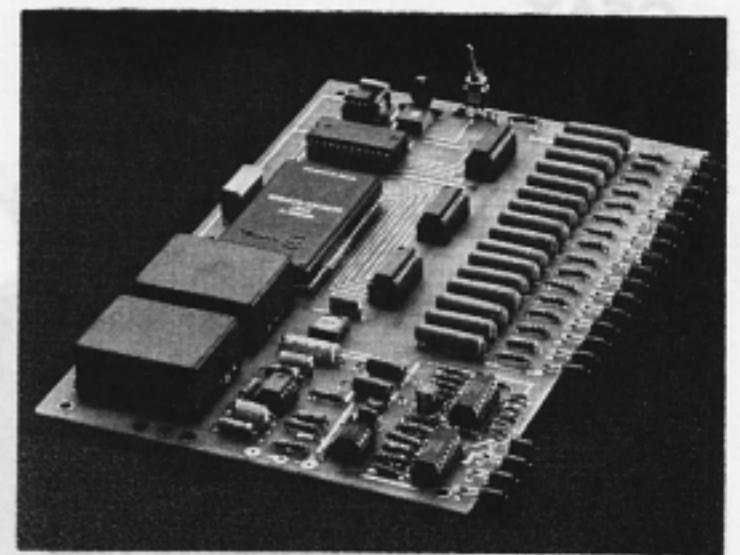


Photo 3: DTMF receiver. It may, for example, be tied to a telephone line, and in its simplest form consists of one of 16 momentary dry contact closures.



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Photo 4: Six-channel mixer used in sports studio. Inputs from left to right are 3 carts, telephone, microphone and remote. On far right, a remote selector and intercom system. This console has channel logic similar to BMX consoles, mainly to incorporate cartridge replay lockout.



Photo 8: Console designed for remote broadcast cut-ins is complete with built-in UHF talk-back facilities.

We have completed construction of a console to be used for remote cut-ins. (See Pic. 8). This console consists of a simple audio mixer, built-in monitor, cue and headset amplifier. A modified automotive type of receiver is used for in-store audio and cues for the remote announcer. It is complete with a digital timer (which can be voice activated at

the beginning of the cut-in) and UHF radio facilities for communication.

Rapid advances in technology have made general electronic servicing much easier for the radio station technician, but the repair job can only be completed if an ample supply of replacement modules exists to readily replace faulty units. To have at least one spare card on

hand for every piece of equipment at the studio and transmitter site can be very very expensive. Then comes the problem of how to service the faulty printed circuit card, if the piece of equipment is in service, not duplicated, or in a location where other functions are taking place and simply inserting an 'extender' card does not necessarily put all your test equipment at your fingertips. One of our solutions to help reduce afterhours servicing (system line-up and antenna work is enough) and to have maintenance occur in an environment of the workshop, was to build jigs for P.C. card maintenance. Our first such 'jig' was constructed in an enclosed case complete with a power supply and enables us to check all the audio and control functions of the modules in our Pacific Recorders consoles. The front panel of the case contains all jacks for audio in and out, push buttons and LED's for checking all the logic functions. As the mother board and sub-assembly approach to electronic equipment continues, this appears to be one way of making any checks or repairs on P.C. cards more convenient. As time permits, we intend to construct a jig for some P.C. cards associated with a 16-track Studer, and Audiotronics console.

Many other items were constructed which require some mention. There are numerous power supplies, input selector panels, an intercom system and various interfacing units and display panels. One problem solved after moving to the new studios was eliminating the abuse that speakers and VU meters were taking when tape was rewound on Ampex recorders with the edit button feature engaged. Despite the excellent cross-talk specifications of the console, this ear-piercing sound was still audible on adjacent channels. Our simple solution was to add an extra relay coil to the Ampex control circuitry which is energized when either fast forward or rewind is activated. The audio output of the recorder is routed through the relay contacts and energizing the relay reduced the output level by 10 to 40 dB (a hidden, adjustable pot). At normal monitor levels, the sound is just audible to the operator during high-speed tape shuttling.

Bob Calder is director of engineering for C-FAX 1070 Radio Ltd. The drawings are by Mark Friesen, an assistant engineer with C-FAX Radio.

business report

CANADA

• **Ampex Canada**—supplying BCC-10 camera, VPR-2B VTR and AVC micro-processor-controlled switcher to Broadcast Electronics course at Southern Alberta Institute of Technology (SAIT).

• **CJSB Ottawa**—has purchased Continental transmitters for delivery

early in May to tx site under construction 15 miles southwest of Ottawa. Six-tower array has been built by LeBlanc & Royle. Two-storey studio building, underway adjacent to CJOH-TV on Merivale Road, will include three control rooms equipped with McCurdy boards. Ken Harris, formerly of CJRN Niagara Falls, is chief engineer; overall engineering supervision is by Ernie Mott of Standard

Broadcasting's Montreal stations, CJAD/CJFM.

• **Cancom**—has appointed six firms to be "sales agents", authorized to sell Cancom satellite service and provide technical assistance. They are: Crowder Communications, Incospec Inc., Micro-Sat Communications, Paar Electronics, Sigmacom Systems and Tech Comm. Sales.

• **Central Dynamics Ltd.**—appointed distributor for video range of Philips (PTV) Test and Measurement Equipment, providing complete service for the line, which includes waveform monitors, vectorscopes and transmission test modulators and converters. Among recent CDL sales in Canada are a CD 480-10+ production switcher to CFTO-TV Toronto; a CD 480-9 to CFTM-TV Montreal, for use in their second post-production center; and a CD 480-4 to CFCM-TV Quebec, for use in their mobile unit.

• **DGH Television Systems Ltd.**—has reverted to independent status after brief merger with Micro-Sat Communications. DGH is now located at 236 Yorkland Blvd., Willowdale, Ont. M2J 1R5, (416) 499-4746. Both companies will continue to specialize in their respective fields, working together on larger projects involving both AML and FM microwave systems for CATV.

• **Electroline TV Equipment Inc.**—new brochure on addressable cable MATV system available from 8750-8th Ave., St-Michel, Montreal, PQ H1Z 2W4, or phone collect (514) 725-2471.

• **Harris Corp.**—recent transmitter sales include new stations in Alberta: CKRY and CKIK Calgary, CISN and CJAX Edmonton, all using the FM-25K model; and CJCY Medicine Hat with a 10 kw AM unit, the MW-10. CKX-FM Brandon, Manitoba, has also purchased the FM-25K, while CHNO Sudbury, Ontario, is installing the MW-50B for its new 50 kw AM facility.

• **Linear Technology Inc.**—Burlington, Ont., firm has received \$793,000 in funding from DOC for production of new, cheaper, semiconductor device which would replace components now used in UHF telecommunications equipment. Technology was developed by research scientists at University of Toronto.

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BROADCAST BEAT

by Phil Stone

Since the last time we walked the *Broadcast Beat* **John Dolan** left CFRB to go with CHFI as a newsman... **Bob Kennedy**, the former CHUM news director was, we're told doing some work in Oshawa. For **George Grant**?... **Bob Redmond** hopes to have his new Calgary FM station operating any time now. Meanwhile he has officially applied for an FM station in Edmonton. That could tie in with a *Report on Business* story wherein some market analysts figure the best buy in radio stocks are those that have stations in western Canada... After only eight months with Young & Rubicam as creative director, **Bob Gardner** resigned, staying on as a senior writer... **Bill Hallworth**, who was v.p. and creative director, Conroy Hallworth Advertising, left to open his own shop, Hallworth Productions... CJVB Vancouver promoted **John Gregory** to general sales manager... WX 1130 Vancouver appointed **Mike Murphy** promotion manager; previously he was a.e. at WX/CJAZ-FM... *Many a politician is neither for nor against apathy*... One of the few ad agencies to have a woman as president is Gordon Hill, where **Denyse Maheux** holds down that title. She recently named **Vivian Roi** to the position of media buyer... I like the logo for the Jerry Goodis Agency: GOOD!S.

Alan Middleton, once of JWT, is g.m. at Enterprise Advertising... **Gretchen Bennet** and **John Hoffman**, creative group supers at Grey, both made v.p.'s... **Ann Boden**, McKim media director, is reported to be advising her department to take a stand against TV stations which raise rates "unreasonably" and to drop them whenever possible... **Charlie Fenton**, like many of us in this broadcasting business, did many other things along the way before getting there. For Charlie, that included selling dessert fillings, then concrete blocks, followed by folding cardboard boxes... *Opening lead from a small-town paper; "A dog bit Miss Judy Whitworth just below the Presbyterian Church"*... How many stations carry advertising news? CKFM does; it's every Monday evening with **Bob Bales**... The Canadian Cable Television Association's 25th anniversary celebration takes place at Toronto's Sheraton Centre, May 31-June 3. **Eric Wimberley** at the Ottawa head office, (613) 232-2631, has full details... **John T. Coleman**, the ebullient v.p. of planning & development at CTV has a new assistant, **David A. Basskin**, a lawyer and former managing editor of *Canadian Communications Reports*.

Jack Milne, one of Canadian advertising's legendary figures, was made the first executive-in-residence of the Faculty of Administrative Studies at York University... Vickers & Benson named **Alan Itakura** media director... If you don't think p.r. is big business, the firm of Burson-Marsteller did a survey that showed 10 Canadian companies alone spend \$3 million or more a year on improving their image... **Rob Cowan**, Bunny's son, who used to be with CJCL as a musical host, is now a swing-shift announcer at CFTR... Many broadcasters were saddened to hear of the passing at 76 of **Paul Desruisseaux**, lawyer, senator, and former owner of *La Tribune*, CHLT AM-TV and CKTS Sherbrooke... Shortly after we interviewed

Mac McCurdy for BT, his townhouse on Alvin Avenue, closely behind Standard's St. Clair & Yonge offices, was swept by fire that started in the neighbouring home. No injuries, we're glad to say... TV talk shows in the U.S. are having a hard time: **Mike Douglas** cancelled after 20 years; **John Davidson** cut by a third to 60 minutes a day... **Don O'Neil**, formerly of CHEX, is now p.d. at CFRN Edmonton, working for our dear old friend **Dick Rice**. A warm note from Don tells us that other former Peterboronians working in Edmonton include **Jack Stuempel** at CJCA, **Carol Franks** at CBC-TV, **Bruce Kenyon** at K-97 and **Don Percy**, who does mornings on CFRN. "Keep the 'beat' going", says Don. Good to hear you are reading and enjoying BT... Among winners of the *Financial Post* Awards for Business in the Arts were CFPL-TV and CHOI-FM.

In 1981, *Chatelaine* sold more advertising, over \$26 million, than any other Canadian publication; *Today* was 2nd; *Maclean's* 3rd... When the Sports Federation of Canada gave out its Doug Gilbert Media Awards, **David Morelli**, sports director of CFNB Fredericton, was named Sportscaster of the Year... When **Rene Emile Castellani** was promotion director of CKNW he was known as "The Dizzy Dialer". Convicted of poisoning his wife, he spent about 11 years in jail, and after his release worked for CFVR Abbotsford, then CKEG Nanaimo. Always insisting he was innocent of the crime, Castellani died recently of cancer at 56... **Erwin Shangard**, once CJOR news director, was elected to his sixth one-year term as chairman of the Pacific National Exhibition... **Vin Dittmer** left CHAY-FM to go with **Dan Iannuzzi** as managing director of CFMT-TV Toronto... **Len Smith** goes 'way back in memory for many of us. His retirement at age 70 from Viacom tells us how fast the years have gone... **Robert Hunt** is the new communications officer for the Canadian Mental Health Association... Peoples Jewellers' active president, **Irving Gerstein** became a director of Baton Broadcasting—meetings should be on time... **Peter Grant** is station manager at CHMM-FM Winnipeg... **Doug Trowell** appointed v.p., Key Radio, in addition to pres/g.m., CKEY... Who's the toughest lady in broadcasting? Many would select **Margaret Lyons**, head of CBC AM Radio. Thing is, she's only 4'10½"—which didn't stop her from scrapping her way up the ranks... **Karen Weber** now account super at Carter Advtg... **Bill Booth** switched from Ted Bates to Scali, McCabe, Sloves, where he is v.p., operations... **Elizabeth Schiller** went to Bates as super of broadcast buying.

Read a revealing short piece on Radio Moscow in *World Press Review*. The writer said studios are old-fashioned, the recording studio "disappointing"—with one neon light fixture, two mikes and a few knobs that don't work. He said they play a lot of Western music to attract Third World youth to the station's propaganda in newscasts, filled with "half-truths and distortion"... *You know a marriage is going to pieces when they don't talk during the commercial breaks on TV*... **John Hinnen**, who was in one of our very first classes of Radio Broadcasting at Humber College, was named successor to **Bob Holiday** as news director of CFTR... **Patricia Samson**, well-known in

Montreal broadcasting circles before entering the travel industry, was appointed director of p.r. at Four Seasons Hotels...**Jim Bunsch** became treasurer at Selkirk Communications...Rogers Broadcast Productions cancelled their syndicated program *Sunday, Sunday*, aired on 52 stations in 48 markets, because of lack of commercial sponsorship...**Mike Hanson** advises that the new Calgary FM station he'll be running for Bob Redmond and associates (see *Jan/Feb BT*) will be known not as CHKY but as CKRY Country 105...**Gordon Warren**, for 30 years *The Maritime Gardener* on CBC, passed away at the age of 80...The Thompsons have it at CKWS Kingston: **Barry Thompson** is manager; **Jack Thompson** is p.d., coming over from CFMK where his successor as p.d. is **Dave Cunningham**...Quality Records made **Barry Stafford** v.p. of marketing...CBC Edmonton has veteran broadcaster **Mardi Matthews** as director of radio...**Dennis Fitz-Gerald** left CTV where he'd been v.p. of sales to become president of Toronto *Goodlife* magazine; earlier, **Herb Marshall**, who'd been v.p., broadcasting, at M-H, left to join Printcast Publishing Network, publishers of *Goodlife*...*If Canada is a free country, how come so many of us can't afford it?...*

Ron Bremner, veteran of sales in both Toronto and Hamilton, is now v.p., director of sales, at Radio NW Ltd. in Vancouver...**Tony Viner** became executive v.p. of Rogers Radio after serving five years with Radio IWC—most recently as president and g.m. of CFGM and Q-107...**Brian Thomas** is news director of CHUM AM-FM, responsible to **Dick Smyth**...We were happy to hear that **Murray Brown** promoted **Ross Hamilton** to v.p. and g.m. of CKNX AM-FM-TV in Wingham. Ross is a very special person...**Dennis Harvey**, former editor-in-chief of the *Toronto Star*, has rejoined the CBC, this time heading up CBC-TV's English-language sports division. He succeeds **Ron Devion**, now director of CBC-TV in British Columbia...An orchid to Fraser Valley Broadcasters for their bright, informative newsletter *Dial-Log*, which tells of active, progressive programming, public service and promotion. Truly up-scale...As a part-time instructor at Conestoga College's broadcasting course, I was one of the people teaching a young fellow with tremendous promise named **Dave Modrowski**. We were thrilled that Standard Broadcast News decided to hire him as a full-time editor. **Stu Morrison** has a fine one on his hands for the future...*Something to ponder over: The best way to live happily ever after is not to be after too much...*The recently-formed organization, Women in Cable, seems to be solidly entrenched: **Beverly Briggs** was chosen president, **Pat Douey** vice-president, **Angela Beaubien** secretary, and **Verna Aziz** treasurer; board members are **Dianna Dudley**, **Maureen Dawson** and **Elaine Lachappelle**. You can get information on WIC from **Nina Evans** at Rogers Cable TV, 855 York Mills Road, Don Mills, Ontario...**Richard Levinson** and **William Link**, who created such shows as *Columbo*, *Mannix* and *McCloud*, have an interesting book out called *Stay Tuned*—an inside look at the making of prime-time television.

The passing of **Jim Allard** at 67 was most sad to us. From early on in my career, Jim had been a staunch friend and counsel, as he had to the entire broadcasting industry. It was his efforts that were largely instrumental in bringing about a Royal Commission which eventually led to the formation of the Board of Broadcast Governors, later to be the CRTC...**Claire Duberet** went to Young & Rubicam from JWT as media manager...Mon ami and everybody's ami **Gene Plouffe** sent a nice letter re our BT piece on Bob Redmond, for whom Gene has a great admiration. Gene, of course, is running CKAN Newmarket and from all reports doing a job that is magnifique...**Murray the K**, the d.j. who helped launch rock 'n' roll,

passed away recently...“Did you know”, asked **Gary Dunford** in a recent *Toronto Sun* column, “that a radio newsman called a certain teletype service to ask if they could come and fix the station's news machine? A bell on the machine kept ringing, quoth the newsman. Quoth the wire service: The bells are supposed to be ringing, 3 for take a look, 7 for important, a dozen dings for bulletins. And here the dingdong thought the darn ding was broken”...The one-time great CFL quarterback **Ron Lancaster** is now with CBC Regina as a full-time sportscaster. He'll also work CBC coverage of CFL games with **Leo Cahill**...At 78, **Lawrence Welk** decided to stop taping new shows: re-runs will probably go on for some time...In Toronto, the CBC is scattered into 21 buildings in 18 locations, with an upkeep of \$12 million. And shades of yesteryear: CBLT local news is located over a Mac's Milk store.

Elmer Hildebrand dropped a line to let us know that CFAM Altona had its 25th anniversary. Elmer has done a fabulous job with CFAM and its sister operations within Radio Southern Manitoba, CHSM Steinbach and CJRB Boissevain. All three stations are 10kw, and CFAM now has 45 employees! When I started at CHUM in 1949, we had 19 people...

Murray Eldon, sports director of CKFM, is back as p.a. announcer at the *Toronto Blue Jays* home games...**Jan Tennant**, one of the nicest people on the broadcast beat and the CBC's first woman announcer, moved to Global TV to do prime time news with **Peter Trueman** and will also be featured on other major news and public affairs shows...**Bill Gable**, ex-pd at CFTR, is with WLW Cincinnati...Telemedia Ontario, through its CFOR Orillia, is expanding news coverage of the Muskoka area...*A wife is a person who knows everything except why she married you*...**Bonnie Warden** was appointed v.p., finance, at Goodis...Want a tie-in with Canada's Wonderland? Promotion manager is **Judie Dahl**...**John Badham's** contract as a full-time staffer with CBS Sports forbids him to work freelance for any other station, so he had to retire a *Toronto Argos* play-by-play announcer on CFRB...**Valerie Marlatt**, p.d. for Rogers Cable, East York, is now editor of CCTA's Programming Newsletter, succeeding **Dorothy Lapell**...When **John Gilbert** moved his open-line show to CKO, it became his 4th Toronto station, after CHUM, CKFH (now CJCL) and CKEY...There's now a B.C. chapter of Women in Cable; interested west-coasters should contact **Karen Kienlbauch** (604)327-1157 or **Marina Bailey** (604)985-2151.

Allan Waters lost his father, Reg, a very special and splendid human being...Belated thanks to **Bob Reinhart** for the warm note. We welcome the mail we receive from readers, whether to impart some information for *Broadcast Beat* or to merely say hello...**Dave Hodge** and CFRB parted company...**Bob Burr** of CHOO handling play-by-play for CJMR of the Toronto Maple Leaf Intercounty Baseball League games...**Arnold Gosewich**, whom many broadcasters will have known in his role as president of Capital Records and Columbia Records, is now president of MacMillan of Canada book publishers...**William Morgan**, head of CBC-TV's current affairs department and a major figure in launching *The Journal*, was appointed director of TV news and current affairs for CBC's English-language services...Meanwhile, **Donna Logan** was named new managing editor of CBC-Radio news. She's a former Halifax and Montreal newspaperwoman who joined the Corporation in 1979...At this writing, the Radio Bureau of Canada had not named a successor to president **Lou Tameanko**. He resigned effective the end of June when his contract expires...There is a Toronto outlet now, CKO-FM, for our weekly interview program, *Arts in Ontario*.

crtc

THE PAY-TV DECISION

In a decision dated March 18, 1982, the CRTC has brought about the long-awaited introduction of pay television to Canada, with the licensing of six services. More are to follow, with the Commission strongly suggesting that its objective will be to license a non-profit crown corporation to provide a national pay-TV service that all cable TV subscribers will be required to finance. The decision was severely criticized by two commissioners, who issued a dissenting minority opinion.

THE LICENSEES

Three classes of licence have been defined: general interest, specialty and multicultural.

The licensees are not permitted to carry commercials, nor are they permitted to carry any programs which they produce themselves, with the exception of "filler" material and multicultural programming.

All of the licenses are for a 5-year term, to March 1, 1987.

- **First Choice Canadian Communications Corp.**—a national, general interest service in both English and French, operating 24 hours a day, 7 days a week, originating from Toronto and Montreal. Three ANIK-D transponders, 2 for English and one for French, will deliver signals to local exhibitors who will pay \$7.50 per subscriber per month.
- **Lively Arts Market Builders Inc. (LAMB)**—a national "specialty" (performing arts) service operating 42 hours

a week from facilities in Toronto. Distribution via East and West spot beams of ANIK-C; wholesale rate: \$8.00.

- **Alberta Independent Pay Television** (Allarco Broadcasting Ltd.)—a regional general interest service for Alberta, operating 50 hours a week from Edmonton. Distribution via West beam of ANIK-C; wholesale rate: \$8.75 (year 1), increasing to \$10.35 (year 5).

- **Ontario Independent Pay Television** (46% owned by Allarco)—a regional general interest service for Ontario, operating 50 hours a week from Toronto. Distribution via East central beam, ANIK-C; wholesale rate: \$8.75 (year 1), increasing to \$10.35 (year 5).

- **Star Channel Services Ltd.**—a regional general interest service for the Atlantic provinces, operating 47 hours a



RADIO-TELEVISION NEWS DIRECTORS ASSOCIATION OF CANADA

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week from Halifax. Distribution via East spot beam, ANIK-C; wholesale rate: \$12.00 (year 1), increasing by 50 cents a year.

• **World View Television Ltd.**—a regional multicultural service operating 92 hours a week from Vancouver. Wholesale rate: \$10.00 (year 1), increasing to \$12.00 (years 3,4,5).

Unlike First Choice, which plans to transmit unscrambled signals, LAMB and the three regional general interest services plan to deliver scrambled signals to local exhibitors.

CANADIAN CONTENT

• Until December 31, 1985, general interest licensees—both national and

regional—are required to meet a 30% quota of Canadian programs; from January 1, 1986, the quota increases to 50%.

• The quotas for Lively Arts are 30% through 1985, and 40% thereafter; at least 20% of total revenues and 50% of programming expenditures are to be for Canadian programs.

• No Canadian content quota is imposed on the multicultural licensee. Programming is to be at least 60% in non-Canadian languages, and of the remainder, no more than 25% is to be feature films.

The Commission expresses the hope that some of the creative ideas of the 21 applicants handed denials will find their

way into pay-TV. It cites as an example the high quality sports programming proposed by Damian Lee.

MANDATORY PAY-TV

In its decision, the CRTC terms the licensing of a number of discretionary services as “a first step”—to be followed by “additional services”. Applications are to be called for a French service to cover eastern Canada, and a regional service for B.C. and the Yukon; in addition, the CRTC will consider pay-TV for other parts of the country, including the extension of the regional services now licensed.

Backtracking on its previous view that pay-TV should be “discretionary...at the option of the subscriber”, the Commission now states that the arguments for universal pay-TV are “persuasive” and that such a service could be “uniquely Canadian...available at low cost...especially if it were operated on a non-profit basis”.

“The federal government”, it concludes, “may wish to seek other means of ensuring the evolution of a distinctively Canadian pay television service.”

MINORITY OPINION

Two Commissioners, Gagnon and Grace, dissented from the pay-TV decision and issued an opinion severely critical of the majority view. “Specific, crucial elements” of the decision, they charged, “will add dangerously to the difficulties” of pay-TV.

Their criticism covers three aspects: 1) The CRTC substantially changed the French service proposed by First Choice Canadian, which had been for a bilingual rather than all-French channel. This action was “unfair to competing, unsuccessful applicants”. 2) Although in its previous comments the Commission had expressed a strong preference for pay-TV as a discretionary choice for subscribers, the decision now considers mandatory pay-TV as “desirable”. Gagnon and Grace describe a mandatory, universal pay-TV system as “a new CBC without commercials: an ill-timed, expensive luxury in two languages for which no public demand has been demonstrated” and which would have “a deleterious, if not devastating, effect” on the systems now licensed.

3) With the granting of six licences, and the CRTC's intention to consider more regional licences and possibly a universal pay-TV service, Canada is going from no pay-TV to “too much pay...It is system overload...How many of these birds will fly?” It is unrealistic, they conclude, that a country of Canada's population and resources can support significant production centres outside Toronto and Montreal.

A History of Innovation

1954 Private broadcasters establish Broadcast News as their national news agency with French and English printer services.

1960 BN Voice becomes world's first national audio service.

1970 BN establishes first national Cable television news services—still the only one in Canada.

1973 BN turns up first fully computerized news agency operation—in both languages.

1975 BN launches first French-language audio service and cable news service.

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NEC transmitters receive CBC approval

Earlier this year Larry Dobby and Robie Vatcher, of CBC Engineering Headquarters, visited Japan to undertake approval-testing of the NEC range of broadcast transmitters to CBC specifications. They were accompanied by David LaFrenais, president of MSC Electronics Ltd., the exclusive Canadian distributor for NEC RF broadcast products. Here is David LaFrenais' report on the visit to Japan.

Our hosts at NEC were most gracious during the two week visit but, because of the wide range of product to be tested, kept us extremely busy so that we matched if not exceeded, the legendary productivity of the Japanese.

The range of products tested included FM, VHF-TV and UHF-TV transmitters and microwave links, and encompassed power ranges from the VHF TV exciter output level to 80KW UHF.

The program of testing was very rigorous and included all the tests listed in the CBC approval document which is, in itself, very comprehensive.

The evaluation includes an exhaustive examination of the mechanical aspects of the equipment design. In this area too, the NEC product was found to be outstanding, consistently demonstrating good engineering practice combined with superb workmanship.

The result of the testing program was that all equipment tested passed the CBC specifications, with most parameters having substantial margins to spare, and were consequently approved for use by the Corporation.

Despite the fact that the production activity in the plant was at a very high level, we received outstanding cooperation from the factory engineers. Two features which made it possible to accomplish the substantial

testing program were the abundance of excellent test equipment and the competence of the factory engineers in utilizing the equipment. In addition, the availability of automatic test sets for some of the test programs helped considerably in the busy schedule.

The transmitter testing was carried out in the Fuchu City plant where all NEC broadcast products are designed and manufactured. During our stay we were also taken to visit the microwave plant in Yokohama and the tube plant in Tamagawa, a suburb of Tokyo.

In Tamagawa we were shown the various stages of manufacture of a variety of tube types, from medium-powered tetrodes, through to very high powered microwave

tubes for use in nuclear experimental machines.

At the Yokohama plant we saw NEC's latest microwave radio which is a power miser designed to work off solar-cell power supplies and which has MTBF figures of 300,000 hours.

Adhering to the principle that "all work and no play.... etc." we indulged, in our spare time, in such activities as exploring the fantastic shopping areas in Tokyo, an occasional intrepid ride on the Tokyo subway, a modicum of sight-seeing tours, and eating at some of the hundreds of fascinating restaurants which abound. While we were not there long enough to acquire a taste for Sushi, the well known fish delicacy, we were quite quick to adapt to the sake. But that's another story...



Robie Vatcher and Larry Dobby of CBC Engineering Headquarters enjoy a Japanese meal with David LaFrenais of MSC Electronics. A highlight was the Shabu-Shabu — beef-fed and massaged Kobe beef accompanied by hot Sake.



NEC engineer adjusts test equipment as Robie Vatcher and Larry Dobby conduct CBC approval tests on NEC's latest synthesized FM exciter.

New transmitter sales

MSC Electronics has recently completed the sale of the following transmitters:

CFNO, a new FM station in Marathon, Ontario, has purchased an NEC 12 KW FM transmitter.

CBC has purchased an NEC 25 KW VHF TV transmitter for installation at Strandraer, Saskatchewan. This sale followed CBC approval of NEC transmitters (see separate article).