Technitopics

by Sandy Day

THE CASE FOR IMPROVED AM QUALITY

At the bottom of the barrel!

Since the sound of AM on many receivers appears to be coming from the bottom of the barrel, it is not surprising that AM is finding itself closer to the bottom as FM continues to increase its share of audience and of market revenues. In the U.S.A., the AM share of total listening has dropped from 75 to 48 per cent over the period 1972 to 1980. In Canada, the recent slide has exceeded three per cent per year. The trend points to *zero* AM audience somewhere in the 1990s.

What factors are behind this trend, and what can broadcasters do about it? Sure, the problem is with the receiver, but the receiver manufacturer doesn't dare give us reasonable AM audio response under current conditions. His set must be able to work under the difficult conditions created by our AM band environment. It will take a dual push, by both broadcasters and radio manufacturers, to stabilize the slide and to attract even more listeners from their records, cassettes or tapes.

What caused it all?

The light, inexpensive solid state receiver started the trend in the 1960s, and as FM signals became more plentiful, the dual-band receiver came along at little increase in cost over that of the AM. FM broadcasters, in part responding to BBG/CRTC pressures, increasingly offered real alternatives in program formats. Then, with the advent of stereo records, stereo listening became the preferred mode and homes were equipped with better and better fidelity receivers and amplifiers. And FM hit the car radio market, and there the real difference in listening was most apparent. The FM sound was clean and crisp, the AM by comparison was soft and muggy. And the audiophiles went for stereo cassettes and stereo FM in their cars and vans.

Sound processing

AM broadcasters, attempting to reduce the difference in sound balance and quality, resorted to pre-emphasis of the higher frequencies, typically adding up to 10 dB of treble boost to compensate for AM receiver roll-off. But in our crowded AM band, this resulted in even worse interference at night, with adjacent channel sidebands becoming more annoying than ever. If the radio manufacturer responds to this trend as he has in the past, AM receivers will be made even narrower in response, with roll-off increased to reduce the interference problems created. And 9 kHz channelling can only worsen the trend and drive additional listeners to FM. Hopefully though, with the advent of AM stereo, manufacturers are taking a hard look at AM quality, and with the cooperation of broadcasters, the significant difference in listening quality can be removed.

AM receivers

The selectivity of current receivers, in order to discriminate against unwanted adjacent channels as well as to minimize costs, is little over 7 kHz wide at the 6 dB roll-off points. So the receiver will be down 6 dB at 3.5 kHz even with a flat audio response. The audio section on many receivers further attenuates the highs, and as reported by Chris Payne of NAB,[1] the typical car receiver is down 3 dB at 1.7 kHz and 7.7 dB at 3 kHz. And the tonal balance results in a soft, muggy sound.

The rule-of-thumb for acceptable tonal balance, according to Payne, is the "500,000 rule" whereby the 3 dB response frequencies at low and high limits, when multiplied, should equal 500,000. In other words, a response of 100 to 5,000, of 50 to 10,000, or of 25 to 20,000 would have good tonal balance. The car radio, as with other radios having small speakers, does not produce clean sound under 100 Hz, but its electrical response at 3 dB points runs from about 50 to 1,800 Hz. The product of this is 90,000, a far cry from the desirable 500,000. With speaker low frequency cut-off near 100 Hz, the product is still only about 180,000 and the sound lacks reasonable tonal balance.

Sound equalization

Tests performed on such receivers indicate that very acceptable tonal balance can be achieved with broadcaster-provided equalization which is flat to 1,000 Hz and +15 dB at 20 kHz, even though a sharp-cut-off 5 kHz filter is also added. This pre-emphasis curve peaks at 5 kHz to +9 dB and drops to −4 dB at 10 kHz.

Standardized equalization?

Chris Payne points out that a standardized AM equalization providing flat to one kHz and +10 dB from 10 kHz to 15 kHz may well be the compromise solution which brings AM sound back to acceptable balance as heard on small portable, table and car radios. And to overcome the adjacent channel interference problem at night, a sharp-cut-off 5 kHz filter can be added with little perceived change in sound quality. While NAB does not recommend this procedure at this time, it is being closely examined in the National Radio Systems Committee (NRSC) which is under NAB and EIA sponsorship.

There is hope that, with the advent of AM stereo and with the cooperative steps to obtain a good sound on AM receivers, AM radio will be able to hold its own in the years to come.

Now if we can just hold the line on our 10 kHz channels ...wish us luck in Rio!

(1) "AM Pre-emphasis and Transmission Bandwidth", Christopher P. Payne, National Association of Broadcasters, presented at the NAB Convention, Las Vegas, 1981.

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THE PHIL STONE REPORT

An Interview with Doug Thompson of Daniel/Douglas Inc.

To us, broadcasting has always been Ingenuity, Imagination and Innovation, liberally salted and peppered with Drive and Determination.

Exemplary of that is a young man whom we have had the pleasure of knowing since the days when, at the tender age of 18, he was an operator at CHUM. To quickly establish the nature and character of this issue's profile, it should be noted that Doug Thompson, whose shift ran from six to midnight, would then stay until six or so in the morning working on production ideas and developments.

Doug, winner with his associates over the years of over 100 awards including several Clios and IBA awards, has just joined forces with his long-time friend, Dan Plouffe, to form Daniel/Douglas Inc., developers of radio programming, commercials, logos and other broadly accepted creative material. To pointedly show how young Canadians are conquering the international market, consider that Doug is now all of 35. Plouffe is just 29.

Thompson was born in Kingston, Ontario, the son of an army man. "We moved around a lot", and when he was ten years old the family moved to Oakville. "It was then that I sort of got interested in radio. Everything I did was geared towards that kind of career. Even then, I knew that was what I wanted to do. For a short period I wanted to be on-air when I grew up, but I seemed to gravitate to behind-the-scenes, towards doing commercials. I was creating them when I was 13, when my parents gave me my first tape recorder. I put home-made commercials together in my bedroom using my record collection and copies of newpaper ads."

Thompson never played those spots for anyone in the business, but when he found that his high school had a Radio Club, he joined it. This was in Edmonton now—as once again the Thompsons had moved their residence. "I put together promo announcements and other material for the various functions that were going on around the school. The teachers would pick out little things they liked, but that was as close as I got to any professional opinion. I used to hang out around the school radio station all the time. I remember that during the years we lived in Oakville, I couldn't wait for the Canadian National Exhibition to open in Toronto so that I could go there and see the CHUM booth. I'd stay there for the entire day—right through from Al Boliska in the morning to Dave Johnson at night. I'd just stand there, slipping away to get a Honeydew and a hot dog for lunch.

"When I was finishing high school in Edmonton, I used to hang around the CJCA studios a lot and a couple of the fellows there took an interest in me and my aspirations. When a job came up for an operator I got the call and that was the start of it." That was 1964, and Doug was 17 years of age. His parents had now moved to Ottawa, and Thompson went to visit them; en route, he stopped off at CHUM and left his resumé and application. Two months later he got the call that answered his dream: "I didn't need a plane to fly to Toronto from Edmonton."

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Doug operated the last hour of the Bob McAdorey Show, then the Dave Johnson Show, and closed with Larry Solway's open-line *Speak Your Mind* program—a great variety and challenge for one so young.

From midnight to six in the morning he would go into the production studio and create items, including "funny little things" for Bob Laine who handled the all-night show. When Fred Snider, the production chief left and his assistant Claude Deschamps moved up to replace him, Doug became Claude's assistant.

While Doug has become involved in comedy commercials, he has emphasized serious work as well. He did, however, get outstanding training in the comedy field—since at that time at CHUM Larry Solway and Gary Ferrier were starring as a very funny team called Larry and Gary. Ferrier went on to write for such shows as Johnny Cash, Sha-na-na and Tim Conway.

Doug was not a comedy writer per se. What he did was hire people with outstanding comedic talents when he went into his own production house. It was called *That Commercial Place* and his partners were Bill McDonald, who had worked at CHUM, and, looking after the business side, Hugh Batchelor. And while they did turn out some outstanding comedy spots, they also were very much respected for their straight material.

Doug has fond memories of his latter time at CHUM. "In late 1968, Allan Waters decided to go progressive rock on FM. He'd had CHUM-FM as a classical station and it wasn't making much money, so he went after a different kind of audience. That was probably my most rewarding period in a radio station. For commercials, you could do anything. You didn't need guys with stentorian voices any more; we had guys with fairly light voices and you could do things—I got away with so many things—experimentation: you could experiment in the production studio, put it on the air, and hear if it worked or not, right off. I put music in backwards, had spinning things and did quick cuts. That was the period when these kinds of production techniques were beginning in California— people like Chuck Blore were just getting started. So that period was most rewarding because it was a great time to experiment."

Thompson left CHUM in January, 1970, and went to California to work with Ted Randall—now general manager of CHFI Toronto—in his consulting business. "I was just in the office as sort of a writer on his tip sheet and an office worker." What was great about it all for Doug was that Chuck Blore's offices were in the same building and he spent a lot of his free time down in Blore's premises. He learned a lot watching the brilliant Blore during the nine months he spent on the West Coast.

Thompson doesn't think that today one has to travel to California to learn creativity. "It used to be that way, but whatever the reason is, creativity, I think, has crossed the border."

Today, indeed, Doug goes to Los Angeles periodically to perform his creative talents for clients there. This includes, for example, "doing promotions for 20th-Century Fox for their movies."

Back when he was partners with Bill McDonald, who is now a vice-president with Chuck Blore (the move comes full circle), their firm, *That Commercial Place* did a public service spot for UNICEF. Entered in the Clio awards, it won an Effie which brought them international attention. Indeed, of the more than 100 awards Doug and McDonald won, Thompson figures only four or five are Canadian.

In his philosophy of production, Doug stresses that there are no borders, no restrictions for the Canadian who has the talent, the desire and the motivation. He tells of spending eight or nine continuous hours in the studio editing down an interview for 20th-Century Fox. I recall when he lectured to the students at Humber College that he told them, "You not only have to have a flair for production, you have to have a love for it."

What Doug and his partner Dan Plouffe, with their wide, colorful and successful production backgrounds, are looking at now is the freshness of Canadian enterprise. "Today," Doug told us, "there really isn't a production company in Canada that mainly produces radio programs. I mean an independent company, not an in-house one—and yet, there are many in the States. We hope that what we produce will be Canadian —and, by the way, all of our shows are being sold and syndicated in the States as well as other parts of the world. We can, then, use Canada as our base and sell to the States, instead of the other way around, as it was for a long, long time. The future's exciting—like being back in '69 and '70 again!"

For the Daniel/Douglas Inc. team, it's a new time to experiment and grow.

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Doug Allen's New Landlords

At a time when employer-employee confrontation seems to be the rule, a refreshing situation exists in a firm of broadcast consulting engineers in Winnipeg. The company, D.E.M. Allen & Associates Ltd., rents office space from its employees.

D.E.M. Allen & Associates Ltd., founded in 1964 by Doug Allen, is the largest consulting engineering firm in Canada involved solely in broadcasting. It has already proved to be progressive in that it is profit-sharing with its employees, and has now come up with this rather unique twist in employee benefits.

Although the employees appreciated the profit-sharing plan, the fact remained that the company was not large enough to afford a substantial pension plan. Since the firm kept growing and required more office space, the need for space and a desire for a pension plan jelled into the concept that one could provide the other.

Seven employees formed a company, property was acquired in the spring of 1978 from the City of Winnipeg, and planning for the building began in earnest. Plans were thwarted for some time by escalating mortgage interest rates, and the project was put on hold. When interest rates dropped for a time, shares were issued, a mortgage obtained, and in July, 1980, construction began.

In order to save the cost of painting, work-bees were organized, and one Saturday saw the entire staff, including Doug Allen, painting the outside trim of the building. Later work-bees completed inside painting and varnishing. The only female and non-painter in the group was dispatched to the outdoors in the frigid weather to clean windows.

November 21, 1980, was moving day, and by early December, the staff of D.E.M. Allen & Associates Ltd., was settled in a modern, functional building at 130 Cree Crescent, Winnipeg. The sense of permanence engendered by owning its own office building has increased the productivity of the staff, and has made the company even more efficient.

Some background

D.E.M. (Doug) Allen began his career in the broadcasting field with the CBC in Winnipeg as an operator while attending the University of Manitoba; this followed eight years' service in the Navy. Doug earned a degree in electrical engineering at the University of Manitoba and McGill University, and worked for RCA as a consulting engineer and later as manager of the Broadcast Group.

During his travels across Canada for RCA, Doug saw the need for a private broadcast consulting firm, and in 1964 founded D.E.M. Allen & Associates Ltd. He is president and general manager of the firm.

In the beginning, the staff consisted of Doug Allen and one part-time Girl Friday, Mona Pachal. Mona had previously worked in broadcasting, having been secretary and jack-of-all-trades at CFAR Flin Flon, and later wrote commercial copy at CKY Winnipeg. Mona is now secretary-treasurer of the company, and supervises an office staff consisting of Barb Vienneau who has been with the firm for four years, Inez Parrott and Cindy Green.

As the workload increased and Doug Allen's expertise became more and more in demand, Ed Prefontaine joined the firm part-time while pursuing a degree in electrical engineering. Ed's career in communications began when he served as an aircrew Officer (radio) on the 415 Maritime Patrol Squadron from 1963 to 1967, prior to attending university. Upon graduation from the University of Manitoba, Ed joined the firm as a full-time employee, and is now vice-president and manager of AM broadcasting.

Gord Henke, who had worked for the Manitoba Telephone System for a number of years in the Microwave and Communications Engineering department, brought this experience to D.E.M. Allen & Associates Ltd. in 1974. Gord is now a director of the company.

As the firm grew, it continued the

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policy of employing students while they attended university and college. Summer employment was given initially, and in nearly all cases the students worked part-time throughout the year for the company. Bob Kowalchuk was one of these students, and upon graduation joined D.E.M. Allen & Associates Ltd. full-time. Bob has now been with the company for eight years.

David Chan and Jim Suzuki were also hired by Doug Allen while they were students, and worked throughout the summer holidays while completing their education. Upon graduation, they became permanent members of the staff. David has been with the firm for six years, Jim for five.

The practice of hiring these young people while they attended university and college has been appreciated by the students. They did not simply have a "summer job", but were able to put their theoretical knowledge into practice, and develop an interest in, and knowledge of, the broadcasting industry. This policy proved advantageous to the firm as well, since it was able to channel the students' interests into areas that would be of value to the company when they completed their studies and joined the firm full-time.

This summer is no exception, and James MacKenzie, a 3rd year engineering student at the University of Manitoba has been hired for the summer months.

From the number of employees that have remained with the firm for so many years, it can be seen that there exists a good rapport among staff members, and the spirit of cooperation engendered by common ownership of a new building has reinforced this rapport.

The employees feel that they have an excellent investment, and because they were involved not only in the planning and financing, but also in the actual labour associated with the construction, they have an interest in caring for the building. As well as being a good financial investment, the project has generated much good will between the employees and company management.

At D.E.M. Allen & Associates, it's co-operation from the ground up, with pension plan built into this employee-owned building at 130 Cree Crescent in Winnipeg.

appointments

E&O APPOINTMENT

D. J. (Dave) Abbott

Michael Paull, president of Electro & Optical Systems Ltd. annouces that David Abbott has joined the marketing team of E&O, and will be responsible for sales of all products distributed in Canada.

ANIXTER-PRUZAN

Richard Thibodeau

Anixter-Pruzan is pleased to announce the appointment of Richard Thibodeau as Manager of Engineering.

A registered Professional Engineer in both Quebec and Ontario, Richard has extensive experience in the design and implementation of television and radio broadcast facilities, microwave systems and satellite T.V.R.O. projects.

He will be working on both existing and new technological developments in the CATV and broadcast industry and will be responsible for customer support, product analysis and application design.

• AirBC—**Mel Cooper**, president of C-FAX Radio in Victoria, named chairman.

• Cablebus Systems Corp.—consultant **Robert D. Foster** appointed v.p., operations, for Oregon manufacturer of cable TV equipment.

• CAP Communications Ltd.—**Walter Hulme** promoted to general sales manager of Radio division (CKKW/CFCA-FM Kitchener, Ont.)

• CFAC Radio, Calgary, Alta.—**Walter Machny**, g.m., named v.p. and director.

• C-FAX Radio, Victoria, B.C.—recent appointments include **Bill Gibson**, previously with RBC and stations in Nova Scotia and Calgary, to director of marketing; **Joe Easingwood**, formerly p.d. at CJVI Victoria, to news commentator/talk show host; and **Ed McKenzie**, also from CJVI, to assistant news director.

• CFPL-TV London, Ont.—**L.J. (Jack) Shaunessy** promoted to manager, marketing services.

• CFTR Toronto—**Dave Barrett**, who was g.m. at CFCF/CFQR-FM Montreal prior to moving to the U.S. recently, returns to Canada to be executive v.p. and g.m. at CFTR. New morning man is **John Landecker**, formerly with WLS Chicago.

• CKIQ Radio, Kelowna, B.C.—**Ted Pound**, program and promotion director, adds role of national sales manager, developing station promotions for national accounts.

• Department of Communications—**Michael Helm** to senior policy analyst, broadcast and social policy; **Jean Guerette**, to chief of program development and policy analysis; both from CRTC. **Roland Bouchard** to cable TV consultant, Montreal region; **Allister Pederson** to chief of program development and policy analysis, Ontario region.

• DOC/Telidon program—**Maurice Lovelock** to manager equipment, inventory and maintenance; **Ralph Hutchison** to liason officer for the Telidon field trial at WETA-TV Washington, D.C.

• Edcor—**James E. Morrison** appointed v.p., marketing.

• EECO Inc.—Santa Ana, CA. firm has named **Dr. Yates J. Canipe** to engineering manager for electronic products division; **Dr. Stuart Krasney** to director, marketing development, video-based information systems.

• General Wire & Cable Ltd.—**Stanley J. Bond** promoted to g.m. of Cobourg, Ontario, operations.

• Global Communications—**John Burgis**, previously with Telemedia, to v.p., finance and administration.

• HM Electronics, Inc.—**Robert W. Carr**, formerly of Shure Bros., appointed marketing manager; **John F. Kenyon** promoted to assistant s.m.

• JVC Corp.—marketing/planning manager for new U.S. Videodisc division is **Martin J. Homlish**. JVC's high-density videodisc system is to be introduced later this year.

• Local Digital Distribution Co.—Maryland firm, associated with M/A-COM, has named **Donald Silverman** v.p. of engineering.

• Logica Inc.—**Richard J. (Dick) Lutz**, formerly of WQED-TV Pittsburgh, appointed U.S. Database manager for Prestel International videotex system.

• OK Radio Group—re-organization of Alberta group earlier this year has **Stu Morton**, formerly a partner with **Roger Charest**, as president; department heads based at CFOK Westlock include sales manager **Larry Snelgrove**, formerly of CHNL Kamloops, and director of engineering **Al Holmberg**; **Don McAllister**, from CJAZ-FM Vancouver is CFOK p.d. At CIOK St. Paul, **Ron Clark**, formerly of CKER Edmonton, is station manager, while **Larry Howell**, formerly of CKWX Vancouver, is station engineer.

• RCA Cablevision Systems—**Ronald W. Polomsky** promoted to manager of product planning operation, California; **Thomas J. Yawit** to northeast U.S. sales rep.

• Télé-Métropole Inc.—Montreal firm (CFTM-TV) has named **J. Richard Genin** to v.p., sales. He's also chairman of TvB.

• Telesat Canada—**Jacques Langlois**, formerly of DOC, appointed supervisor of regulatory policy.

BUILDING NEW STUDIOS FOR VICTORIA's C-FAX

by Bob Calder

On-air control room. Announcer has view of entrance, news and sports studios. A low-profile design contributes to the spaciousness of the control room. Speakers are mounted from a neoprene isolated "T" hung on ceiling joists. Equipment turret on operator's right contains remote transmitter monitoring, remote status panel, recording input selector panel, remote control room switcher, temperature indicator, intercom, PA and front door control, and a cassette deck.

Production control room is complete with 4-track, 2-track and full track recording. The equipment turrets contain patchfields, graphic equalizers, reverb, flanger and input selector units. Reel-to-reel remotes are at operator's left. Turntables are flush-mounted on neoprene isolators and a cavity under the turntable is filled with 60 kgs. of sand.

C-FAX Radio recently moved its studio facilities from a cramped seventh floor penthouse location in Victoria, British Columbia, to expanded facilities five blocks away; a move which was completed within a year from when the studio site was purchased.

A description of our planning schedule and some installation procedures is contained in this article. Like most engineers in our industry, I follow with great interest trade magazine articles dealing with this subject—however, I feel most of the stories could be dealt with in more detail, especially since they are written for technical people. I will therefore attempt to provide some detail.

The two storey building C-FAX purchased is located in downtown Victoria and previously housed a number of light commercial businesses on the main floor, including a publishing company, and a number of residential apartments on the second floor. Built at the turn of the century, the building had undergone a number of renovations, resulting in wallboard placed over panelling over paper over plaster and so on. We did locate a set of original plans and these provided the basis for much of the decision-making process as to the suitability of the building for a radio station.

In October, 1979, having drawn some preliminary floor plans, we engaged the services of a designer, building contractor and structural engineer. The contractor had some previous knowledge of the building and had given us a floor plan, indicating very few necessary interior supporting walls or beams: the structure consisted primarily of brick exterior and bearing walls with wood floor joists, some 3" × 18" in size!

The two floors, each 8,000 square feet, gave us a 9'6" ceiling height on the second floor and a 15'6" ceiling height on the main floor. Since one tenant on the main floor was to occupy 5,400 sq. feet, the remaining square footage was slightly shy of our immediate and future requirements. Our decision was to lower the remaining 2,700 sq. feet on the main floor by excavating, and adding a 2,000 square foot mezzanine area. This also enhanced the flow of traffic between departments, as the lower floor was to house the sales area, the new mezzanine floor was to house the accounting, traffic, and creative area, and the top floor would be on-air, production, engineering and a multi-track recording facility. The

Original turn-of-the-century decor was retained for exterior of building, in keeping with renewal of Victoria'a downtown area. Windows above main entrance are those of on-air control room and sports studio.

Newsroom is equipped with six work stations, two of which are shown here. The cockpit design of each position places more equipment within easy reach of news announcer. James Losh is working at position 2.

split level design, and location of the stair well with its skylights, enhanced the visual appeal—more so than if the 12,800 square feet were located on a single floor. A basement area is located under the rented portion of the remaining main floor area and is a useful storage area. The electrical service entrance is also underground, with part of the basement allocated to service entrance equipment and standby generator facilities.

I might mention that the existing studio lease was to expire in December, 1980, and it was now November, 1979, and we were still in the planning stage. The building contractor, Bill Patterson of Wakefield Construction, and myself drew up a tentative construction schedule in which I decided we could begin wiring rack area equipment on site in May, 1980. As it was, May slipped by and we did not begin any control room or rack area wiring until July. We still moved the studios in November of 1980, with 99% of the studios completed. Our schedule of manpower hours would be extremely tight, however, and a delay of only a day in equipment arrival would require a re-adjusting of installation schedules.

In November and December of 1979, my time was divided between the draughting table and various meetings with consultants. Besides myself and the building contractor, four other firms were involved in completing a set of working drawings for the radio station. These were:

- D.W. Thomson Consultants Ltd., Mechanical Consultants
- Brooker Engineering, Structural Engineering Consultants
- Wells Electrical Design Ltd.
- William Turkington, Building Designs

In January of 1980, the air conditioning, plumbing and electrical systems were tendered. Eight to ten contractors responded to each system. The successful bidder in each case worked with us in sorting out changes on the jobsite that seemed to occur daily. Other aspects of the project went out for competitive quotations as well. These quotes covered insulation, drywall, ceilings, roof, painting, flooring and mill work.

The two floors of the building were stripped fairly quickly, before our building prints were complete. By visually inspecting bare walls, floor and ceiling joists, it was now relatively easy to make small changes in the blueprints to suit any building inconsistencies. (We had to maintain heating, power and water service to an existing tenant on the main floor— a situation which should be avoided if at all possible during such an extensive renovation, as it was, at times, inconvenient for both parties and more expensive than estimated.)

In the early months of construction my time was about evenly divided between the new studio building and the old studio building. Two assistants, Mark Friesen and Dave Shearer, were busy maintaining the existing facilities and building equipment for the new studios. Due to the size and complexity of our system, we were forced to build much of the equipment for our studios and rack area. Most of these items were unavailable from regular suppliers. (An exception was the building of a six-channel mixer for the sports studio—a decision based on having control of all cartridge decks functioning similarly to the control rooms which have BMX consoles. More on that later.)

Our newsroom switching panels were designed and constructed in the old workshop. Ten of these panels were built, each with an amplifier, equalizer, and a DTMF control station with digital readout. These key pads access an additional 30 (expandable to 60) sources which are switched in the rack room utilizing Ericson crossbar switches.

Of all the visible equipment, the one item we spent painstaking hours perfecting the design of, was the millwork. Considering the requirements, such as aesthetics, durability and functionability, it was one of utmost importance since the appearance and operation of the control rooms and newsroom were directly related. Solid oak trim and Wilson Art plastic laminate were used on all work surfaces. Scaled cardboard models of the more complicated millwork were constructed to explain our requirements to the millwork contractor.

In order to reduce air conditioning duct sizes, a medium pressure variable volume system was installed, with each control room, studio or work area having its own temperature control. Electric heaters are located in individual ducts. In critical areas noise and vibration are non-existent.

Other than wire required for AC, three main types of cable were used throughout the building: 25 pair unshielded, equivalent to Beldon 9585; 15 pair individually shielded, equivalent to Beldon 8776; and RG 59. Fourteen-

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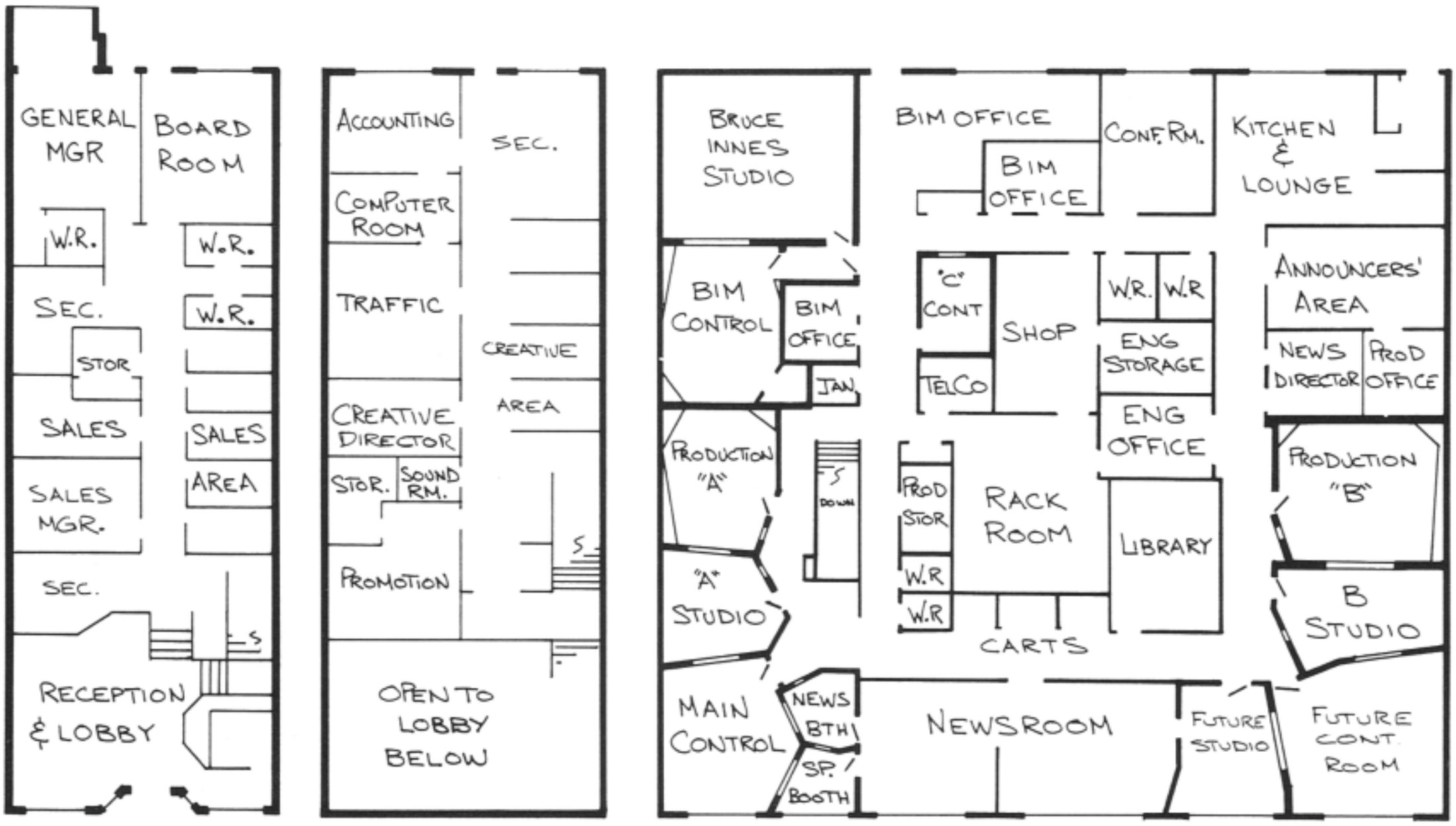


Floor plan of C-FAX facilities. Note strategic location of rack area.

gauge wire was used to speaker connections. A #4 ground buss connected studios to the rack area, and a 4" ground strap tied the ground plane of our emergency studio transmitter antenna, through the rack area and down to basement earth ground. Sixty-four ceiling speakers were installed for paging and off air monitoring.

The most important time-saver from an installation point of view was the addition of all inter-studio wiring and grounding to the electrical contract, although we supplied the material and terminated each cable ourselves. Good electricians can install many types of cable; they are used to handling it and they can install cable runs neatly and much more quickly than most radio station technicians. The electricians from State Electric had a keen interest in our project and they assisted us beyond expectations.

Another time-saver during the last two months of installation was the employ of a full time janitor-handyman who worked with us while all the control rooms and the rack room were being installed.

A third time saver was to have a carpenter work with us on the millwork installation. Not only did he set up the millwork, but also mounted tape recorders, turntables, and speakers. An electrician wired the AC in all our con-

soles and rack area. The paging and background music system, studio warning lights, and master clock system were also part of the electrical contract. This allowed most technical people to devote their time to equipment installation and check out.

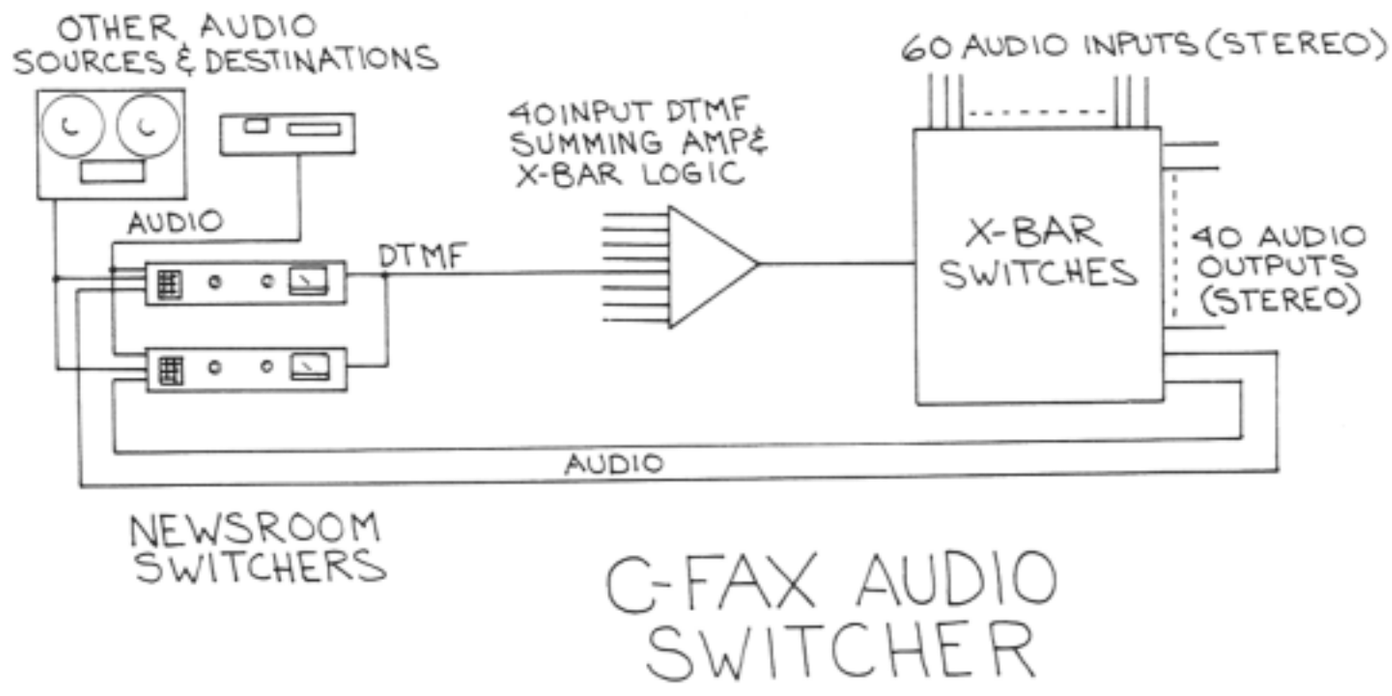
By November 15th, 1980, we had installed a total of six control rooms, two talk studios and a large 16-track recording studio. Recording facilities are also located in the record library, and playback facilities are located in the production library and writers' area.

At the end of September, a 16-track recording studio was completed and in operation at the new studio building before any on-air control facilities were completed. This facility is operated by Bruce Innes Music Ltd. and is complete with an Auditronics console, 16-track Studer, two MCI mixdown and editing recorders, BX 20 reverb system and two racks of effects equipment. Across the hall, an editing facility is complete with a Pacific Recorders BMX 14 console and three multi-track recorders, as well as cassette and cartridge facilities.

Besides a summer student, Jeff Turkington, we employed two extra technical personnel for the summer, Chris Sia and Buddy Williams. Without their installation and technical expertise, the studios would have been far from complete by the time the station had to move.

Throughout our installation, all the building trades co-operated with us beyond expectation. Everyone knew our deadline and did their ultimate to see that their particular trade was not impeding progress. Special thanks go to Craig Patterson of State Electric and Gus Dardengo of Wakefield Construction, whose project insight and patience contributed greatly to our successful installation.

Four Pacific Recorders BMX consoles were installed in our new facilities. Our decision for this console was based on a number of requirements, mainly: →



Each news position contains two identical switching panels. The remote audio inputs to the crossbar switcher consist of remote feeds, news feeds, monitoring sources and control room outputs.

• The number of mixing channels in a given physical size.
• Low profile, console drop in mounting, which allows 12" of working space in front of the operator.
• Channel on-off controls with remote interface at operator's fingertips.
• Remote interface designed as an intricate part of the console and not as an afterthought.
• Sourceability of components.
• Good technical specifications, and a well-thought-out design.
• Good documentation and drawings.
• Operator simplicity.
• Excellent feedback from stations using this board.

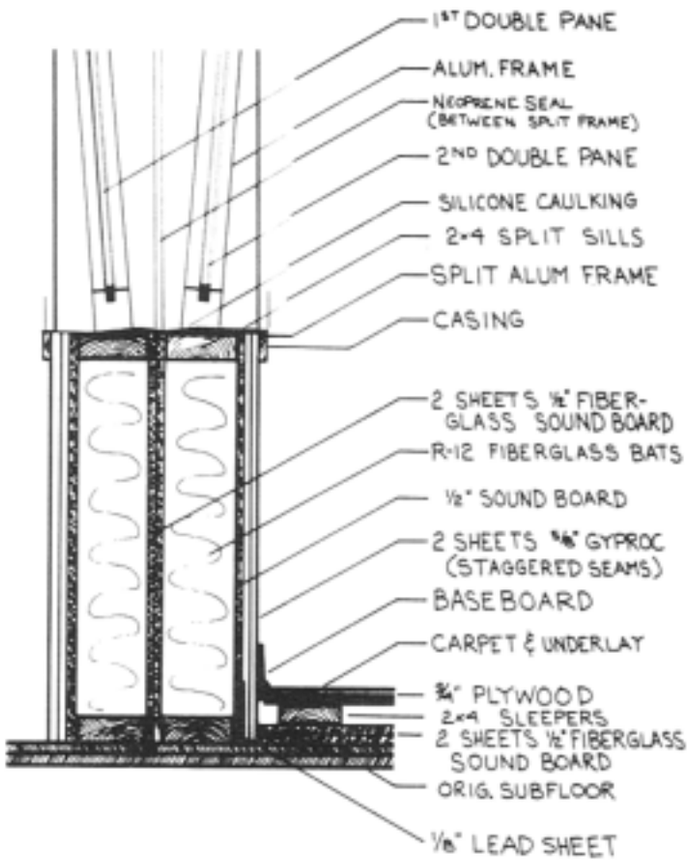
Control Room Facilities

The main control room equipment consists of a BMX 22 console, two ITC 3 deck playback units, two Ampex recorders, a recessed SP10 turntable, an RSM85 cassette deck and Neuman U89 microphone. Two guest microphones are mounted on the millwork counter.

All music and commercials are recorded on cartridge for simpliciy and convenience of operation. The cartridge interface units supplied with the console were modified by adding a 555 timer and flashing the channel 'off' lamp on cartridge run-out. Replay lockout is provided. Cart decks throughout the station operate similarly. All control room wiring, including pairs to the central rack are installed for stereo. Most of the cartridge playdecks are stereo, however they are equipped with mono heads and the right channel is disabled. The Jones connector is strapped to give the mono signal to both left and right channels in the console. At present, the only stereo recording done at C-FAX is recording music for the cartridge library: here the stereo signal is encoded to provide a mono signal on the left channel for compatible playback.

The news control room is smaller but similarly equipped and also serves as an on-air control room. The on-air announcer may bring news or sports in through his board, or the news announcer may bring sports in through his board, a simple and flexible arrangement.

The studio move was completed in six weeks. I have read many stories of stations moving offices and equipment overnight and having the last wire connected just before the morning announcer opened his microphone, but this certainly was impossible in our case and not practical either.



STUDIO WALL & WINDOW CROSS SECTION

Studio wall/window detail. All control room and studio floors are built with 2×4 sleepers. (An exception is the Bruce Innes Recording Studio floor, which consists of a floating concrete slab.)

The first part of the move would require that the telephone company loop every news and program feed through the new studio rack area and back to the old studios. This allowed us to pick off the news feeds and remotes at the new facilities as required, and provided spare pairs back to the old studios.

The second part of the move consisted of moving our main dual STL transmitter to the new rack area, along with signal processing equipment. The digital delay was also moved. (It is located just before the main STL input after signal processing). Controls for switching were remoted back to the old studio. Next, the standby diesel was moved and an auxiliary tape was readied at the new studio to start programming if audio failed from the auxiliary STL receiver at the transmitter site.

The next part of the move consisted of moving the emergency studio transmitter as well as all general offices. To maintain the flow of traffic information, one traffic person was at the new offices and one remained at the old facilities. Six locals from the new switchboard were extended back to the old studios. With the assistance of a 'runner', the station operated in this manner for one month, a "shakedown period". Next, the two-hour open-line show was moved to the new facilities, with the old main control room operating as a remote into the new on-air console. All other rack equipment was then moved over with two program feeds from the old control room and an off-air feed back to the old control room. One program feed tied to one of the new control board remote inputs and the feed connected directly to the alternate STL system now at the new rack area. With this switching system, we could turn down any part of the system to make further checks and measurements. A production room was completed and checked out next. When the second room was completed, except for some tape recorders, the production staff moved over. All that remained was the news department, on-air, and a traffic person. That weekend we moved the news department equipment. And on the Monday following the open-line, which was now taking place at the new facilities, we carried on with regular announcer shifts at the new studios.

Our facilities are still expanding. At the end of April we completed installation of a Columbine Computerized Traffic System. We are presently investigating better methods of distributing print data in the news operation and on-air facilities. At present, radio news, in its

Assistant engineer Dave Shearer in C-FAX rack equipment area. Rack in foreground is alternate STL equipment; next contains all transmitter status equipment; third, adjacent to RCA emergency transmitter, contains transmitter control equipment.

Skylight over workshop gives natural light to a comfortable working area. Mark Friesen is documenting parts on a PC board for spare parts inventory.

effort to keep pace with the flurry of activity in television ENG, has adapted basically business data terminals and is expanding somewhat in isolation to the rest of the station. This approach, while providing for the possibility of vast information storage, relatively quick retrieval and text editing, does not provide for storage of voice actualities—an important requirement, as it is radio and not newspaper information we would like to recall.

Dramatic improvements in audio storage and retrieval will be the next technological steps for radio as we know it. The technology is available now, and may place the audio cartridge in a secondary role. Perhaps we will see a workable system at the same time that we are deciding which brand of AM stereo exciter to buy...

Bob Calder is director of engineering for C-FAX 1070 Radio Ltd. Broadcast personnel visiting Victoria may arrange to tour the C-FAX studio facilities by telephoning (604) 386-1070.

In future issues of Broadcast Technology, Bob Calder will describe in detail the Bruce Innes Music Recording Studio, and the C-FAX News operation.

BROADCAST BEAT

by Phil Stone

A mobile section of petrified matter agglomerates some bryophytes. Which is to say, a rolling Stone gathers some moss...

Two additions to the CRTC—both as part-time commissioners: they are former MP **Marke Raines**, who represented Burnaby-Seymour, B.C., between 1974-79, and prior to that was reporter and news editor for CKNW; and professor **Marc Gervais** of Concordia University, a Jesuit priest who has appeared extensively on CBC as a specialist on film and contemporary culture...If you haven't read **Warner Troyer's** fact-filled book on Canadian broadcasting, *The Sound and the Fury*, we recommend you do so, if for nothing else but the rare photos of early radio and television in this country...**Chuck Greene**, who writes for CBC Radio among other show-business activities, is a son of **Lorne Greene's** first marriage. He and his father are working on a new, syndicated wildlife TV series...It's always good to hear of a former Humber student doing well: **Terry Moorehead**, who worked at CHWO/CJMR after graduation, is now the all-night man at CFRB...Did you know that the Ontario Labour Department has a program acronymically called SWIM? It stands for Students Working in Media and primarily concerns itself with getting students temporary jobs in the electronics and print media.

Is your weatherman a Lothario type? Does he look into girls' eyes to see whether?...**Bob Kennedy** makes it known that Standard Broadcast Corporation (U.K.) Limited and Broadcast Marketing Services have joined forces to offer training scholarships at the recently-created National Broadcasting School in London, England...The well-known CJAD Montreal broadcaster **Helen Gougeon** moved to Toronto after marriage and has been doing some fill-in work for **Betty Kennedy's** radio show when the CFRB personality is away...If you hadn't heard, **Jack Davis**, P.Eng., was elected for a second term as chairman of the Canadian Cable Television Association (CCTA)...October 25-27 are the dates for the annual CCBA conference at Toronto's Sheraton Centre, where the annual RBC *Soundcraft* awards will be handed out...Speaking of RBC, did you know that vice-president, creative, **Larry Heywood** is now eligible for a gold CAB Quarter-Century Club badge as he celebrates 40 years in the industry? And RBC president **Lou Tamienko** tells us he is really excited about the Canadian Radio Commercials Festival, the first of which is scheduled for next year...If you don't think we are all getting along in years, consider the fact that the Quarter-Century Club started in 1951 with 21 members and now has over 855...Famous parents, famous children department: Global TV has **Ann Trueman**, daughter of Peter, and **Ann Rohmer**, daughter of Richard...

It was **Mel Blanc** who said "I don't know who created the first jingle but I'd gladly shake the hand of the man who writes the last one." In Canada, **Ernie Bushnell** is generally credited with having composed the first jingle. To the tune of *Three Blind Mice* it extolled the services of Toronto Wet Wash Laundry. It is estimated that today jingles comprise one-half of all top-40 radio advertising...To record an album these days, it takes about $50,000; 33,000 pressings have to be sold for the producer (who earns usually $1.50 per album) to break even. A gold record in Canada is one that sells 50,000 copies...The Chinese *Workers' Daily* as quoted by UPI, reports that brides and bridegrooms in newly status-conscious China carry TV sets and tape recorders in their wedding procession to display their wealth: now there's a franchise to look into!...**George Daniels** became v.p. and general sales manager of CFRB...Come January 1st, look for ABC Radio to introduce two full-service networks. One will be beamed at listeners between the ages of 15-35; the other with a demographic target of 18-49. Both will offer news, features, special programs and public affairs presentation...The power of TV to make or destroy those seeking public office was handily summed up by **Allan Fotheringham**: "Politics, as it always has been, is the art of communicating. Only those who can conquer TV can now succeed."...

The information officer for the Canadian Motion Picture Distributors Association has to be one of the best-named persons in any field of communications: she is **Ann Marie Flack**...A restructuring of the Canadian Advertising Advisory Board has **Bob Oliver**, president of CAAB since 1967, heading up the Advertising Standards Council, while **Kenneth Barnes**, a senior v.p. of the Houston Group PR firm, takes over as president of CAAB...Fellow I know has what he thinks is a great idea borrowed from radio: an all-news newspaper...In Chicago, the Car Audience Rating Service (CARS) polled over 3,000 motorists during morning and afternoon drive times and found that almost 81% were listening to their radio...**Anna Kashfi**, ex-wife of **Marlon Brando**, in her book *Brand for Breakfast* offered this aphorism: "stage is for actors, film for directors, television for residuals"...Speaking of TV, consultant and ad man **Fred L. Lemont** had some gloomy things to say in the *New York Times*: "Television used to be a miracle worker—15 years ago you put a product on TV and the consumers broke down the store doors. Today, it's just another medium."

Russell Shoub is now at D'Arcy-MacManus & Masius Ltd., as v.p., director of creative services...**Barry Slater** was named v.p., senior account director at Needham, Harper & Steers of Canada Ltd...McKim Advertising appointed **David Cooper** a v.p...**Roger Jobin**, with CJPM-TV for close to nine years, has been named assistant g.m...**Dan Iannuzzi** added **Gordon Carter** to his Multilingual Television operation as a consultant. Gordon, a broadcast veteran whose background includes CFCN Calgary, CTV and CHAN-TV Vancouver, is to be with MTV for three months...Who is Canada's oldest broadcaster? No, it's not **Gordon Sinclair**. There is someone two years older than his 81 years—**Peggy Holmes** of Edmonton, now 83, who got into radio as a script writer for CBC when she was 79!...**Mark Fowler**, appointed chairman of the FCC, appears to be a man in favor of deregulation of television in the U.S. He may support repeal of some regs on ownership, licensing and the fairness doctrine...And the FCC approved the proposed $106-million sale by RKO of its interests in Cablecom General to Capital Cities Communications. Cablecom operates cable TV systems in 13 states... →

Jack Hines, a familiar name in the cable industry, joined Calgary Cable TV/FM as v.p. and g.m...By the time a child gets to school, chances are that it will have seen 20,000 commercials a year. This from **Mary Alice White**, Teachers College/Columbia University professor of psychology and education and one of the leading U.S. researchers on the effects of TV on children. She said that by the time most children in America start school, they have learned to learn from TV and are totally unprepared to learn from print...Veteran newsman **Gordon Donaldson** joined the Global TV News team as a senior writer...**Sheri Craig** is now editor of the magazine, *Media Forum*...**Anne Murray** is very big in Japan, where she recorded commercials for a sugarless gum product using as theme music her *Where Do You Go When You Dream*...The Federal Government was the largest Canadian advertiser in 1980, with General Foods second, followed by Rothmans, P&G, Labatts, and the Province of Ontario. Surprising that Ontario spent more than McDonalds and Coca-Cola combined... **Tommy Darling's** daughter, **Kelly**, graduated from Ryerson's Radio & Television Arts course...Two top rep firms merged when Group One and McDermott Broadcast Sales united...**Debra Craine** is Broadcast News' first full time overseas correspondent, reporting for both BN wire and audio operations from London, England. She's been with BN and CP for some eight years as reporter, editor and writer...**Stew Coxford** was re-elected president of the Ontario Cable Television Association, with **Phil Brown** the new v.p...

Arnie Celsie is programming Greater Vancouver's newest AM station, C-ISL...**Jim Brady** has left CFTR's morning slot to take over the same role, plus that of p.d. at CJCL Toronto...The attractive **Janice Currie**, who had been talent co-ordinator for Glen-Warren Productions, moved to CFTO as program and promotion manager...**Tom Scott** is the new president of Foster Advertising...**Jim Waters** is p.d. now at CHUM, while **Ross Davies** is p.d. of CHUM-FM; both work under **J. Robert Wood**, who has CHUM Group responsibilities for the programming of both stations...**Fraser Kelly** leaves CFTO to go with CBC's new program *Newshour* as host...Radio Bureau of Canada's *Radio 81-82* is available; it's described as the most current and comprehensive statistical report on Canadian radio...**Babs Pitt**, always a major name in broadcasting from her days at CFCF onward through CTV and CBC, became director of sales development at All-Canada Radio & Television Ltd...Definition of religious programming: "Pray TV"...

Television across the world takes on different standards. The limit of decency in India for example is a kiss on the cheek, while Japan dotes on strippers and titillating documentaries. Australia is pretty liberal, while Russia, as one might expect, is not. Yugoslavians see it all, but Pakistan, Argentina, Brazil and Malaysia are very rigid. By European standards, Canada is prudish. Overseas, nudity is common and sex scenes might be described as soft-porno. Overall, there is generally a dichotomy of puritan and libertine...It has always been my theory, for what it's worth, that a good announcer is one who knows what to leave out...

A complaint has been registered against General Motors of Canada, charging that automakers are unfairly cutting makers and distributors of car radios and stereos out of potential sales by making it inconvenient to order a car without a standard radio. The aftermarket audio suppliers have lodged their complaint with Consumer and Corporate Affairs in Ottawa...A great broadcasting name was brought back to mind when **Agnes Brockington**, widow of **Leonard Brockington**, Q.C., died recently...**William J. Curley** was appointed v.p., group account director, at V&B...At the Straiton, Pearson & Martin ad agency, **Kurrie Storey**, formerly of O&M and C-B, is account supervisor/director, while **David Goldfarb**, once of McCann and FCB, became associate creative director...A TV sales manager decided he needed a phone in his car. He now finds it never rings until it is in the middle of a car wash...The Toronto Star's "Neighbours" section ran a feature on CHOO radio's **Joe Frechette**: after a career that included promotion rep for Columbia Records, station relations manager with PRO Canada, and g.m. of Capitol Record's publishing division, Joe attended Humber College as a mature student in radio broadcasting...

J. Gurd Agnew was appointed v.p., account director, at Crombie Advertising...**Bob Elsden**, a long-time broadcaster with CFPL, was made g.m. of the TV arm; Bob has contributed greatly to both CCBA and the TV Bureau...**Ray Provan** and attractive **Christine Pretty** are now account supervisors at the Jerry Goodis Agency while **Peter Logan** is media director ...**Alan Purves**, who has been executive v.p. of Foster Advertising, became president of Sherwood Communications Group...**Barbara Byers** left *Broadcaster* magazine, where she had been editor, to be succeeded by **Barbara Moes**. Byers is free-lancing, including handling some early morning newscasts on CJRT-FM...Friend of mine is tired of all those books that tell you how to make millions. "What I'd like to find," he told me, "Is one that tells me how to make a living"...**Larry Nichols**, senior v.p. of Standard Broadcasting, figures a Pay-TV system could lose $12-14 million before it becomes profitable; that, he estimates, could take up to three years...In 1977, less than a million households bought video recorders; by 1984, the figure is expected to reach 16 million recorders or about $11 billion in sales—just about what TV set sales are currently. Look for competition for this bonanza to be stiff between Japan, Western Europe and the United States...

North Continent Holdings Ltd., which holds 99% of Western Broadcasting shares, has been working to obtain those shares outstanding and when it does Western will then become a private company, no longer publishing financial statements ...**Ernie C. Poscente** became programming v.p. at Capital Cable TV—he had worked in radio and TV in Trail, Saskatoon, and CBC Edmonton...Global TV appears to have pulled a major coup in signing **Peter Newman** as a panelist and commentator for their business, news and public affairs programs. Newman is author of the highly successful books *The Canadian Establishment* and *The Bronfman Dynasty*...**Gale Gingrich**, known to the advertising world in Canada, is *TV Guide's* national account manager...**Rob Wilson** returned to Gordon Hill Advertising as executive v.p. He wrote the recent textbook, *Advertising in Canada*...

We had just finished writing that **Casimir Stanczykowski** had become president of the Canadian Association of Ethnic Radio Broadcasters, with **Johnny Lombardi** as vice-president, when word came of his untimely death. Casimir died at the age of 53 as the result of a traffic accident near Rawdon, Que. Founder of CFMB Radio, he was a pioneer in Canadian ethnic broadcasting...

A Visit to CFJC

We left home on April 4th to drive to NAB in Las Vegas, on to California, up the coast to Vancouver for WABE and then returned across Canada. A truly incredible experience that can only make one very proud to live in this wonderful country—all through the United States and Canada, little towns and big cities, terrain of every description, people of only one: warm, helpful and friendly. An experience we'll never forget. After WABE, our time was a little more our own and we had an opportunity to stop in and say hello to some fellow Canadians...

CFJC Kamloops, B.C. is located in a 12-year old studio building on Pemberton Terrace, high on a hill overlooking the city and beautiful view of the mountains acting as a backdrop to this panorama.

It was Saturday, May 9, and Gordon Werner, switcher/director at CFJC-TV welcomed us and gave us a grand tour of the facilities. Gordon was very enthusiastic, particularly about the station's new CDLCD-480 model 4 switcher, which has increased the capability, versatility and ease of operation of TV production. Local production and editing is all-electronic—no film—and is chiefly news, sports, public affairs and commercials, including a daily half-hour public affairs program. CFJC also operates a rebroadcaster of BCTV (CTV network), inserting local commercials. A satellite down-link was added recently to receive a daily 2:30 pm feed for the CBC early evening news.

Gord also proudly pointed out some ten Can Pro awards won by CFJC-TV for local production, largely the work of producer **Peter Reynolds Long** (now with CFTK-TV, and again a winner at this year's Can Pro).

Total staff for the AM, FM and TV operation numbers 75 to 80.

Thanks, Gordon, for the hospitality—and see, I didn't mention what you were going to be doing later that day....

A Visit to CFJC. Above: Gordon Werner, TV switcher/director and unofficial welcoming committee of one, seated at new CDL switcher; Gordon Rye, newsman and local alderman, in newsroom. Below: Bob Park at CFJC-AM control; Scott Russell at CFFM-FM control.

Million Dollar Transmitter Plant for Toronto's CFRB

CFRB Radio began a new era this summer in its 54-year history of commercial broadcasting.

At a cost of $1 million, a new transmitter building was constructed to upgrade the existing building and transmitter facilities. Providing a separate building with all new equipment permitted the construction to proceed with very little risk to existing 'on air' equipment and allowed the new plant to be thoroughly tested prior to the cutover to the new transmitters.

To maintain continuity of operations, it is essential that every major piece of equipment have an alternate or "back-up" system. This allows for preventive maintenance as well as the ability to correct for catastrophic failures. The new building was designed on these principles and provides substantial improvements over the older facilities.

Two 50 kw transmitters were purchased from Continental Electronics. They have several advantages over the old transmitters (a 50 kw RCA that served CFRB for 35 years, with 10 kw back-up). The new transmitters are identical and can be used interchangeably. Each requires only one-eighth the space of the old 50 kw—made possible, in part, by the use of solid state electronics in the audio and control circuitry. Other features include higher efficiency, improved frequency response, better transient response, more reserve power capability and self diagnostic and fault correction ability.

The transmitter plant has been designed for unattended operation and is remote-controlled from the studios. Commands from the remote control system to switch transmitters or antennas are processed by a micro-computer controller. This versatile device can scan several inputs to indicate equipment status and detect any failures.

A diesel generator, capable of handling the total building load for 72 hours, automatically supplies power within 10 seconds in the event of Hydro failure. This is a substantial improvement, as the old generator could power only essential equipment.

The building is one-quarter the size of the old one and is energy efficient: heat from the transmitters is recirculated to heat the building. The transmitters, diesel generator, and ventilation system are situated in separate fire-resistant rooms for protection in the event of a fire. If one transmitter develops a fire, heat and smoke detectors automatically cut off the power and air supply in that room. The transmission line from the new building to the antenna system is a buried coaxial cable, replacing the above-ground open wire line from the old building.

The new CFRB transmitter plant provides a higher degree of reliability and is easier to maintain, resulting in less 'off-air' time. It also broadcasts a better quality signal with the use of state-of-the-art technology.

Some of the smiling faces at the CFRB grand opening of their new transmitter site: Also included is a door logo suggested by Clive Eastwood—the familiar 'half-moon', great idea Clive. Oh yes, that's Willie Mitchell from Continental Electronics behind the wire fence—it's okay Willie, I'm sure they'll let you out as soon as they figure out what you're saying with your Dallas accent.... The balance are famous and well-known CFRB personalities, executives and engineers—don't you just love the shot of Gordon Sinclair....

DECISIONS

AM Radio

MOFFAT BUYS CJJD

Moffat Communications, which has long had an eye on eastern acquisitions, has won approval for the purchase of CJJD Hamilton from Keith Dancy. Moffat committed $225,000 in year one for major construction and renovation of CJJD's facilities, and is also to hire two more newsmen and a community service director. New programming will includea local newsmagazine, kids show and an "East/West Dialogue" to be aired on all Moffat stations; an annual budget of $50,000 will promote local talent.
Approval was also given for CJJD to carry the John Michael Talk Show, which originates at Dancy-owned CJRN Niagara Falls, Ont.

Also approved:

- B.C. Institute of Technology, Burnaby—20 watts (carrier current) on 650 kHz.
- Condu High Radio Station Inc., Uranium City, Sask.— 12 watts on 1600 kHz.
- St. Francis Xavier University (society to be incorporated), Antigonish, N.S.— 2 watts (carrier current) on 690 kHz.
- Radio CJYQ, Gander, Nfld.—power increase from 1 kw on 1350 to 5 kw on 1010 kHz.

FM Radio

CFCY, VOCM, GET FM

New FM stations have been approved for Charlottetown, P.E.I., and St. John's Nfld.

CFCY Ltd. will operate a country format on 93.1 MHz, with a power of 25 kw ERP. It has allocated $8,000 a year for a weekly show using local talent, and plans an annual country music festival to be aired throughout the Maritime provinces.
There is also to be a high level of news and information programming.

At St. John's, Colonial Broadcasting will operate an MOR format on 97.5 MHz, 20 kw ERP. A $100,000 recording studio, plus $10,000 a year, will be allotted to develop local talent.

Denials:

- Radio CJYQ, St. John's (100 kw, 98.3 MHz)
- Dartmouth (N.S.) Broadcasting (100 kw, 104.3 MHz)
- Gerald Fraser, CFQC Broadcasting and CKOM, all of Saskatoon— CRTC ruled that none of the three proposals offered a significant alternative to existing stations or an adequate commitment to develop local musical talent.

Other approvals:

- Seabrook Broadcasting Ltd., for rebroadcasters of CKAL Vernon, B.C., at Kaslo (95.3), Nakusp (103.1) and New Denver (93.5), all 42 watts.

crtc

1981-1982 HEARINGS

The CRTC has scheduled the following hearings re: broadcasting from September, 1981, to June, 1982. (Those planning to attend hearings should verify the time and place, as unforeseen circumstances may require changes to be made in this schedule.

October 6	**Kamloops, B.C.** Dome Motor Inn	**1982**	
October 20	**Regina, Sask.** Regina Inn	**January 25**	**St. John's NF.** Hotel Newfoundland
October 20	**Moncton, N.B.** Hotel Beausejour	**February 1**	**Regina** Sheraton Centre
November 3	**Winnipeg, Man.** Fort Garry Hotel	**February 9**	**Toronto** Sheraton Centre
November 3	**Hull, Que.** Conference Centre	**March 9**	**Hull, Que.,** Conference Centre
November 17	**Montreal, Que.** Auberge Richelieu	**March 23**	**Hull, Que.,** Conference Centre
November 23	**Halifax, N.S.** Château Halifax	**April 20**	**Vancouver** Hyatt Regency
December 1	**Hull, Que.** Conference Centre	**April 27**	**Moncton, NB** Howard Johnson's
December 15	**Edmonton** Château Lacombe	**May 4**	**Halifax** Lord Nelson Hotel
		May 11	**Winnipeg** North Star Inn
		May 31	**St. John's, NF.** Hotel Newfoundland
		June 8	**Edmonton** Château Lacombe
		June 15	**Hull, Que.** Conference Centre

• C101-FM Prince George, B.C., for power increase from 3.5 to 7.1 kw, with change of site.
• Alberta Educational Communications Corp. for a rebroadcaster at Spirit River (50 w. on 99.5).
• CBC rebroadcasters:
Moricetown, B.C. (100 w., 96.5)
Vavenby, B.C. (80 w., 91.9)
Fahler, Alta. (2.8 kw, 103.7)
Medicine Hat, Alta. (800 w., 100.5)
Port Saunders Nfld. (261 w., 90.5)
Stephenville, Nfld. (350 w., 89.7)
• Native stations (all 107.1 MHz):
Arctic Bay, NWT (29.4 w.)
Chesterfield Inlet (29.4 w.)
Clyde River, NWT (16.6 w.)
Coral Harbour, NWT (29.4 w.)
Fort Liard (16.6 w.)
Grise Fiord, NWT (16.6 w.)
Pelly Bay, NWT (24.4 w.)
LaLoche, Sask. (1 watt)
• Student stations:
University of Moncton (N.B.)—50 w., 105.7 MHz.
University of Western Ontario, London—50 w., 94.7 MHz.

Television

Stations approved:
• CBC—Medicine Hat, Alta. (619 w. on channel 34, ex-CBXFT), Leoville, Sask. (10.7 kw on ch. 31), and North Battleford, Sask. (10kw on ch. 41), both ex-CBWFT.
• Yorkton Television—Esterhazy (5.5 watts on ch. 6, ex-CKOS-TV, and ch. 13, ex-CICC-TV), and Humboldt, Sask. (6.7 w. on ch. 32, ex-CICC-TV).
• Atlantic TV—Bridgetown, N.S. (8.4 w. on ch. 13, ex-CJCH-TV-1).
• Native stations—Arctic Bay, Chesterfield Inlet, Coral Harbour and Pelly Bay, NWT (all 10 w. on channel 9); Fort Liard (10 w., ch. 12).
• New Denver, B.C., Co-op TV Society—1 w., ch. 13, ex-CHKL-TV Kelowna.
• CBC—Nipigon, Ont. (2.3 kw on ch. 26, ex-CBLFT); also power increase for CBNT-2 Placentia, Nfld., to 11 kw.

Cable Television

Applications denied:
The CRTC has denied the following applications for new cable systems in New Brunswick on the grounds that they are not financially viable:
St. Andrews, St. George, Blacks Harbour and areas (Ronald Wm. Noble);
Caraquet, Shippegan, Tracadie and areas (V.H. Lanteigne);
Neguac, Tabusintac (Edgar Legresley).

The latter two applications were opposed by the Société des Acadiens of N.B., which complained of an "imbalance" of English service over French; the applicants proposed to carry both of the French services available, and four English stations—two Canadian and two American.

Also denied was the application by Wm. C. Stanley to acquire City Cable-vision of Fredericton, on financial grounds.

Other cable TV decisions:
• Transfers approved—Cape Breton Cablevision, Sydney, N.S., to Medallion Communications Ltd (H.J. Tweedie and M.I. Chernin); Metrovision Ltd., Bedford, N.S. to Capital Cable TV of Edmonton (100%).
• Saskatoon Telecable—closed-circuit music channel approved; in reply to the concern of local broadcasters over the impact of such services on the radio market, the CRTC noted that this issue will be among those discussed in the general review of radio.

APPLICATIONS CALLED

Applications have been called to provide new services in the following areas (deadline in brackets):
AM Radio—Cornwall, Ont. (Sept. 15), Canmore/Banff, Alta. (Sept. 30).
Television—Halifax, N.S. (July 20). Applicants were to address basic question of whether Halifax can support a third English station.
Cable TV—areas of Grey, Simcoe, Dufferin- and York counties, Ontario, including Stayner, Wasaga Beach, Thornbury, Markdale, Shelburne, Creemore, Midhurst, Alcona, Nobleton and King City. (June 30).
Windsor and other areas of southwestern Ontario (August 31).

DOC BULLETINS

Two new technical bulletins are now available from the federal Department of Communications. They are TRC-59, Technical Requirements for the Certification of Scrambled TV Systems; and TRC-60, Technical Requirements for Radio Apparatus capable of receiving Broadcasting (decoders, closed-captioning devices, etc.)