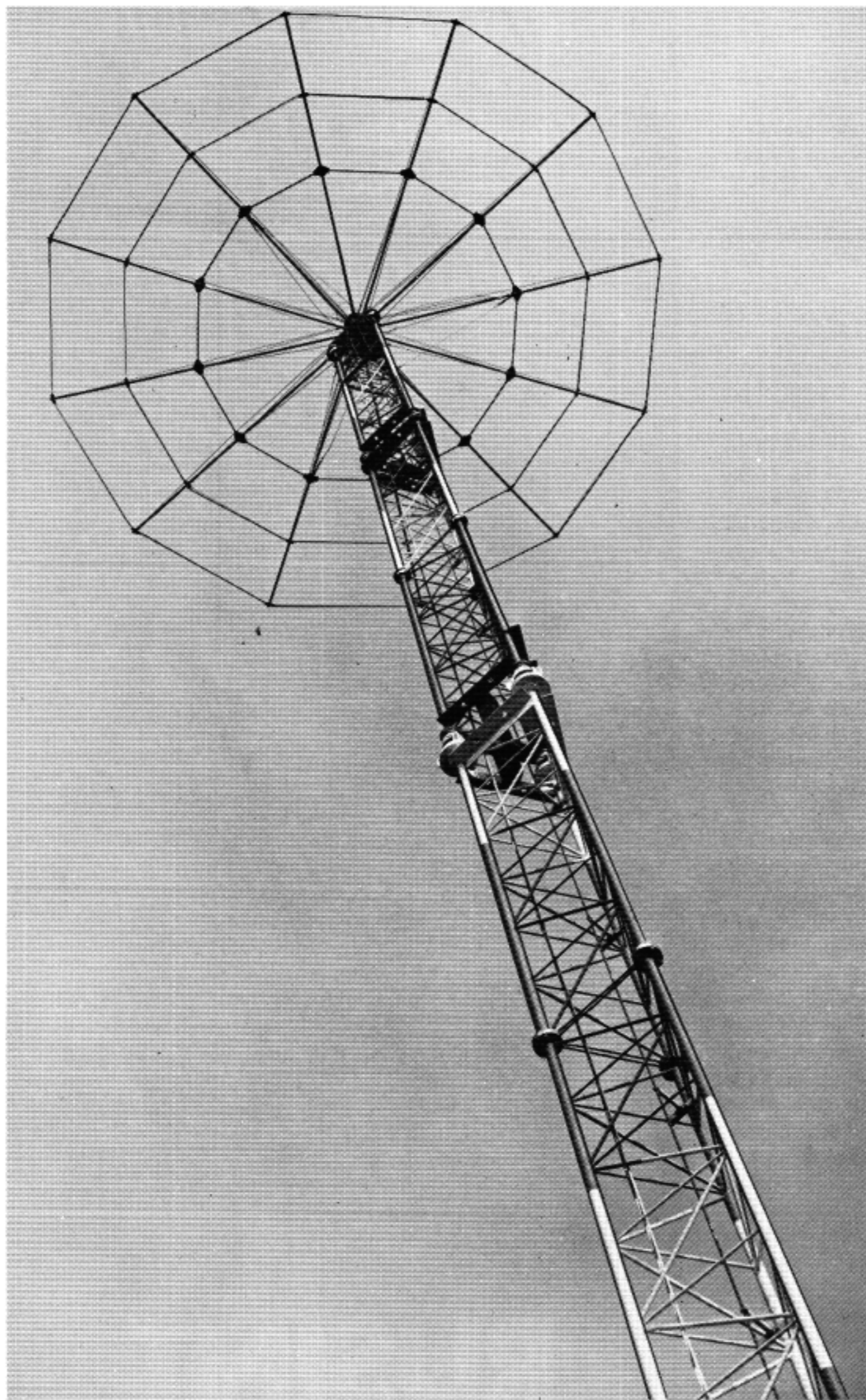


# PARALLEL OPERATION OF AM TRANSMITTERS

by Bill Onn



CKEY Toronto has a unique transmitter site. Its location is Toronto Island, with the transmitting equipment building located on the Island and the transmitting towers and associated equipment located off-shore in Lake Ontario.

This particular site came about as the

result of our change of frequency from 580 kHz to 590 kHz during 1961 to 1963. The actual granting of permission to use the site was not an easy accomplishment: we appeared and submitted briefs, artist's conceptions and technical evaluations to over 17 committees, commissions and boards.

This, for the most part, was done over the latter half of 1961 and the first half of 1962.

Work commenced on the site installation in the summer of 1962 and was completed in December, 1963. No work was done at the site over the winter of 1962-63.

Operation on the new frequency at the new site commenced at 5 kw day and night (DA-1) on 590 kHz during the first week of January, 1964.

Over the intervening years, CKEY has progressed to 10 kw day, 5 kw night (DA-1), to our present 10 kw day, 10 kw night (DA-2).

Obviously with such a site we had our initial problems. These problems were mostly related to underwater cables and were overcome within the first three years of operation from the site. The details of the "whys" and "hows" would be the subject of another paper, so for this time we can report that the installation is now stable and reliable, albeit difficult to maintain at certain times of the year.

One of the major problems we could not overcome was the adjacency of the site to the Toronto Island Airport, which limited the total height of our towers to 150 feet above the runway level. This height is a far cry from the average 60-degree height of about 280 feet for our frequency of 590 kHz. Add to this the fact that we had to be at least 16 feet above the surface of Lake Ontario in order that the highest wave action ever recorded (plus a little extra) would not wash over our tower base. You can understand that we had a substantial electrical problem to overcome in our proposed radiation system.

After many technical discussions, an extensive engineering brief showing the feasibility of a tower design was submitted to the Department of Communications and subsequently approved. The tower design described here deals only with electrical aspects—not the mechanical design which could also be the subject of another paper.

The electrical design of the tower, which physically is 32.4 degrees in height, provided us with a tower of 45 degrees in height. This certainly is not as good as the usual 60-degree tower, but was a good compromise, given the difficulties of the location. This 45 degree electrical height was obtained by the use of a top-loading coil and the installation of a 50-foot diameter top-hat.

The tower itself is sectionalized into three self-supporting insulated sections



## PARALLEL OPERATION OF AM TRANSMITTERS

(concluded from page 8)

having a 3½-foot face. The lower 75 feet are at ground potential. Running up the centre of the tower, but insulated from it, is a ¾-inch copper feed-line/radiator from the ATU to the loading coil located in a weather-proof box attached to the top-hat assembly.

Tower obstruction lighting power is fed up the ¾-inch copper pipe, with the tower lights insulated from the tower itself at the first level and fed through the loading coil to the lights on the top-hat.

The total weight of the tower assembly is about 15 tons, with the tower base assembly (a transition assembly, measuring about 23 feet per side at the base, to the tower section measuring 3½ feet per face) weighing about 3 tons, the top-hat weighing about 2 tons, and the constant cross-section insulated and sectionalized tower weighing about 10 tons. The tower and top-hat assembly was placed on the previously assembled base in one operation by the use of marine construction equipment including a floating barge and crane.

It can be seen that our site in Lake Ontario, with a top-loaded sectionalized tower, adds up to substantial icing of the structures under winter weather conditions. This icing caused transmitter loading changes which resulted in overload conditions, interruptions and usually a drop in output power to 5 kw to remain on-air.

From the commercial point of view, these overload interruptions meant "make-goods"—a costly item when the station is in a sold-out position, let alone the sponsor's dismay at not getting the commercial message on at the time he expected and paid for. Also, listeners expect us to be on the air 24 hours a day with a reliable and consistent signal at all times.

Finally, we had a transmitter of 1962 vintage which was just not capable of being 125% positive modulated. In the competitive Toronto market, a 10 kw station such as CKEY, located in a garden patch of 50 kws all pushing to the limit, needed to have the best possible to be competitive.

So we had several problems—for the most part winter problems—and a decision was made in 1974 to come up with a solution by the end of 1975.

Many solutions were considered, including the use of a 50 or 25 kw tx at 10 kw power, a new 10 kw transmitter, two new transmitters with one operating as a hot standby, and others. These were rejected for various reasons such as expensive building and power modifications, excessive power consumption, overload prob-

lems still possible, retention of old equipment, etc. The final decision was to proceed with the purchase of two new 10 kw transmitters and a combiner, with associated equipment, and operate each transmitter at half-power into the combiner to provide 10 kw into the antenna system.

### **CKEY's answer: two 10 kw transmitters, operated at half-power into a combiner.**

This solution would solve our previous inability to operate with 125% positive, since the new equipment would be designed with this capability installed. The operation of each transmitter at the 5 kw power level should solve our transmitter overload problem due to antenna icing. The present building was of sufficient size to accommodate two new 10 kw transmitters without crowding. Since we would be operating at the same power output, with only periods of testing requiring extra power, only slight power modifications would be required. Although this solution was not the least expensive, it was certainly within reason and satisfied all our requirements.

A decision then had to be made as to the type of transmitter to be used. This really means the type of modulation technique to be used. It has to be said that for the most part all units tested at factory locations performed almost identically. What was different was protection circuitry, complexity of the circuitry, and one-of-a-kind features. It was decided that a plate modulation technique transmitter would be used and that it would be a Collins Model 820 E/F.

This particular transmitter, while in no way a new design, has had substantial updating in the past two years. It has a very fast overload circuitry with only about ¼-second "off air" time, which is almost undetectable to the average listener. The equipment is capable of positive modulation well over the authorized 125%, and provides adequate leeway for aging tube performance. One very important plus to our situation was the transmitter circuitry built-in which monitors the antenna load and will automatically adjust the PA tuning and loading for best power output. In addition, Collins Radio had combiner design experience for international customers and the auxiliary equipment on hand for automatic operation of combined transmitters.

The two transmitters are combined in a bridge network with a reject load for mis-

match power dissipation. Normal operation uses an automatic controller, which monitors the operation of two transmitters operating at 5 kw to the antenna array. Should a failure occur in either transmitter, other than a momentary overload, the remaining transmitter operates as normal, with half the available power going into the reject load and the remaining half power into the antenna system. After a preset time-out period, the remaining transmitter is automatically switched up in power to 10 kw and switched directly into the antenna array, by-passing the combiner. This returns operation to the normal licensed output power.

The equipment was assembled in Dallas, Texas, at the Collins plant in the exact configuration and layout planned by David Craig of my staff. There, both David and myself put it through its paces, attended by Jack Sellmeyer of Collins Radio. Prior to our acceptance tests, it had been tested over 50 hours on the plant floor.

Once accepted, the equipment was shipped non-crated in a moving van non-stop to Toronto. The shipment left on Tuesday and arrived on Friday at our transmitter site, was off-loaded by heavy equipment sub-contractors into our building and our own installation proceeded. The equipment arrived the latter part of July, 1975, and was placed on air about one month later.

Results so far have been excellent. The frequency response of the total system is  $\pm 0.5$  dB over the range of 50-10,000 Hz. The single frequency harmonic distortion is less than 1% over the frequency range of 50-10,000 Hz at 95% modulation. This harmonic distortion is less than that with the individual transmitters, indicating that the combining procedure was not detrimental to the end result. Noise in the combined power mode is -68 dB which again is better than with the individual transmitters. Although at the time of writing this article we have not yet experienced icing, we feel that the system will solve the problems resulting from antenna icing.

While the parallel operation described is certainly not the answer for every station, for CKEY it provides the reliability and redundancy required to serve the large Toronto metropolitan area.

*William R. Onn is vice-president of engineering for Shoreacres Broadcasting Co. Ltd. The above article expands on a paper presented by Mr. Onn to the CCBA Engineering conference in Toronto, October 28th, 1975.*

# CCBA REPORT

## New Executive

The new executive of CCBA—Engineering is: Chairman—**Jim Smith**, CKCO-TV Kitchener; Secretary/Treasurer—**Larry Smith**, CJOY/CKLA-FM Guelph; Papers—**Bill Marchand**, CKLB/CKQS-FM Oshawa; Newsletter editor—**Jeff Guy**, CJBK Toronto, and Manufacturers' Liason—**Bill Onn**, CKEY Toronto, and **Austin Reeve**, CJOH-TV Ottawa.

Elected to the management executive: President—**Ross Hamilton**, CKNS Wingham; Vice-President and Convention Chairman—**Mike Hanson**, CHSC St. Catharines; Secretary/Treasurer—**Wally Rewegan**, CHEX Peterboro; Directors—**Bob Ancell**, CFCH North Bay; **Don Thomas**, CFCO Chatham; **Jim Kidd**, CJSS Cornwall; **Bill Valentine**, CKFM Toronto; and past-president **John Birmingham** of CKLC Kingston.

Members owe a debt of thanks to the outgoing executive members who have contributed much to the growth of CCBA and the success of its 25th anniversary convention. Special mention goes to **Gerry Acton** of the CAB office in Ottawa for his untiring work "behind the scenes".

CCBA Engineering Newsletter editor **Jeff Guy** advises that he can now be contacted by telex at CJBK London, Ont. The number to dial is 024-7507.

## Awards

- The Ruth Hancock Award was presented to **Andy McDermott** of Radio-Television Sales Inc. One of the industry's long-time favorite people, Andy was deeply moved by the tribute, but kept his sense of humor: it was, he said, "a fantastic award—especially for a station rep".
- The Howard Caine Award was presented by Mrs. Jean Caine of CHWO/CJMR to **Don W. Insley**, vice-president of programming for CFRB Toronto. Don, president-elect of the Ontario division of the Canadian Cancer Society, paid tribute to CFRB's "philosophy of public service".
- Broadcaster of the year was **Murray T. Brown**, president of CFPL AM/FM/TV in London, Ont. Harry Boyle, acting chairman of the Canadian Radio-Television Commission, presented the award to Murray, who has been active in various industry associations.

## Social Notes

One of the social events of CCBA was a reception provided by **Ward-Beck-Systems Limited**. Held in the Library of the Royal York Hotel, it featured music by the Peter Appleyard Quartet.

**Omer Richard** of CBC Montreal was the winner of the Kodak camera draw.

Draw winners at the Engineering luncheon were **Bob Cooke** of CHOK Sarnia, who took home a 3M Cassette tape deck; **Gaetan Boivin** of CKRS-TV Jonquiere, who won a set of crystal; and CBC's **Albert Ash**, winner of a Bulova clock.

## John Forrest's Notebook . . .

Now that we're beginning a new year, maybe we can get down to bringing you some news of what's been going on out there!

The fall CCBA convention had to be one of the quietest that I have attended. It seems some of the rooms closed up early—could it be that some of us are just getting too old to stay up late?

Let's thank the fellows from the west who represented WAB Engineering section: **Alex White** and **Lorne McBride** of CKCK-TV Regina and **Bob McCambly** of CFAC-TV Calgary.

Now some news of who is where: **Brian Matthews**, ex-CFTR Toronto is chief engineer at CIGO Radio, the new station in Port Hawkesbury, N.S. **Andre Bonneau**, ex-CJET Smith Falls, Ont., has moved to CJRC Ottawa as chief engineer, while **Dennis Disque** is new chief at CJET. Welcome to the club, Dennis! **Warren Parker** of CKTB St. Catharines should be on the air with his new FM transmitter by now—as should **Jack Hutchinson** of CFDR Dartmouth, N.S. with his new 50 kw AM transmitter. In Halifax, **Walter Labouki** of CJCH has been in the "news"—he's been remodeling the station's newsroom! While over at CHNS, **Ralph Parker** is working on new quarters for the CHNX shortwave transmitter. **Harry McRae** of CFGO Ottawa is happy with the move to new quarters—"now we have a parking spot", says Harry. And **Paul Firminger** of CHYM Kitchener reports the station is putting on a promotional push for the change of FM call letters to CKGL-FM.

That's all for this time!

## NASA's Evans Excels

The Engineering luncheon was sold-out, and the many who filled the hotel ballroom heard Capt. Ron Evans of NASA speak on his experiences as a member of the Apollo 17 moon shot in 1972. It was an entertaining and informative presentation, with Evans a top-notch goodwill ambassador for the U.S.A. Among the points he made: space technology has resulted in countless developments in everyday use—they fill a NASA publication the size of a large telephone directory!

## Update on Exhibitors

"Excellent show"—the comment of one exhibitor—sums up the general impression of the 1975 CCBA in Toronto.

But that's not to say conditions were ideal for everyone. Here are some of the comments and suggestions for the future:

- Have displays in an open area, rather than individual rooms which are "confusing and fragmented" and which tend to have inconsistent hours.
- Another opinion is that the individual rooms offer better opportunities to demonstrate equipment and discuss it with prospective buyers. Smaller exhibitors don't have the personnel for two kinds of displays, and the hospitality room provides an informal but effective contact with visitors.
- "Too few visitors" was one complaint, with the number of displays, and therefore traffic, not properly distributed between the two floors used.
- Separate the engineering meetings from management, holding them at a different time and place, as in the west.
- Schedule the equipment exhibit so that it can be set-up and dismantled on weekdays, without "overtime"; provide better freight handling facilities; appoint an exhibition contractor; and charge exhibitors only for the electrical and other services which each require.

While many felt the show could be improved, the consensus was "We're glad we were in".

The next CCBA takes place at the Skyline Hotel in Ottawa, October 17-19, 1976.

Here are reports received from individual companies on activities and new equipment at CCBA—and since.



# happenings

● The Department of Communications has announced that it will not object to the use of the Dolby 324B Broadcast Encoder by FM stations. DOC emphasizes that the encoder is now permitted, but not required. Stations using it must advise the Director, Broadcasting Engineering and Certification Branch, DOC, Journal North Tower, 300 Slater St., Ottawa, Ont. K1A 0C8, copying their regional DOC office. Here is the Department's evaluation:

"The Dolby Broadcast Encoder compresses high frequency audio to be transmitted by an FM broadcasting station in the same manner as the well-known Dolby noise reduction system for magnetic tapes, at the same time reducing the effective degree of pre-emphasis from 75 to 25 microseconds. Since the encoding process tends to compensate for the decreased pre-emphasis, listeners with conventional receivers generally do not notice the increased level of low volume high frequency audio and those who do tend to prefer it. Thus the permitted use of the Dolby encoder is conditional upon the simultaneous functioning of the encoding circuitry and the reduction of

the effective degree of pre-emphasis.

"For listeners with receivers equipped with complementary Dolby circuitry, the broadcast signal has a significantly improved signal-to-noise ratio. Furthermore, a station equipped with the encoder can, with certain programme material, modulate at a higher average level than would otherwise be possible. This tends to provide a certain improvement in signal-to-noise ratio with conventional receivers also.

"The Department's review has been restricted to the Dolby equipment because it is the only system to date which has received general acceptance for its ability to increase the signal-to-noise ratio without increasing the probability of interference, while at the same time remaining compatible with existing receivers."

● *Bill Onn claims that CKEY is the first station to benefit from construction of the CN Tower. The CKEY transmitting towers off Toronto Islands (see story in this issue), which used to attract "every lightning bolt over Lake Ontario", have been hit only twice in the last year. The CN Tower, Bill reports, makes "a very fine lightning rod".*

● Canadians participating in the annual New York fall sessions of the Audio Engineering Society were Charles Richmond of Richmond Sound Design Ltd., Vancouver, who gave a paper on "Noise Rejection in Audio Equipment for The Performing Arts", and John V. Hanson of Waterloo (Ont.) University who joined in presenting the paper "Toward a More Natural Sound System". Eighty exhibitors took part, including Richmond Sound and Amber Electro Design of Montreal, represented by Wayne Jones. Among those attending were Wiebe Bergsma, Bob Cook, Mel Crosby, Denise Galipeau, Burrell Hadden, Steve Hasleton, Bruno Hochstrasser, D'Alton Jolly, Rick Knowles, David Lee, George McCurdy, Doug McKenzie, Derek Roughton, John Sauder and Gene Sworin. The general feeling was that although AES was not as large as in previous years, there were many worthwhile new products and ideas. It was a well-organized show, surrounded by the stately charm of the Waldorf-Astoria, providing carpeted exhibit hall to display equipment and private suites to demonstrate it—an ideal set up.

## 1976 CONVENTION CALENDAR

- |                |  |
|----------------|--|
| March 2-4:     | Canadian Education Showplace (CES)<br>Exhibition Bldgs., Toronto, Ont.                     |
| March 21-24:   | National Association of Broadcasters (NAB)<br>McCormack Place, Chicago, Ill.               |
| March 24-27:   | British Columbia Assoc. of Broadcasters (BCAB)<br>Empress Hotel, Victoria, B.C.            |
| April 25-27:   | Canadian Association of Broadcasters (CAB)<br>Chateau Laurier, Ottawa, Ont.                |
| May 4-6:       | Western Assoc. of Broadcasters—Engineering (WABE)<br>Bessborough Hotel, Saskatoon, Sask.   |
| May 31-June 4: | Canadian Cable Television Association (CCTA)<br>Four Seasons Sheraton, Toronto, Ont.       |
| June 6-8:      | Western Association of Broadcasters (WAB)<br>Jasper Lodge, Jasper, Alta.                   |
| Sept. 19-21:   | National Radio Broadcasters Association (NRBA)<br>Embarcadero Hotel, San Francisco, Calif. |
| Sept. 26-28:   | Atlantic Association of Broadcasters (AAB)<br>Hotel Beausejour, Moncton, N.B.              |
| Oct. 17-19:    | Central Canada Broadcasters Assoc. (CCBA)<br>Skyline Hotel, Ottawa, Ont.                   |

## "CANADIAN" SUITE A HIGHLIGHT OF NAB

The "Canadian Hospitality Suite" will again be a feature of the annual National Association of Broadcasters convention, which takes place this year at the McCormack Place Convention Centre in Chicago, March 21-24.

The hospitality suite, which provides a meeting place and information base for Canadians from coast-to-coast while attending NAB, was started in 1964 by Clive Eastwood (CFRB Toronto) and Glen Robitaille (CFPL London). By 1966, the idea had grown to such an extent that equipment manufacturers and suppliers took over sponsorship, with English Electric Valve, Applied Electronics and RCA leading the way. This year, at least 24 will be participating.

Gord Ballantyne of Applied is this year's organizer, and as BROADCAST EQUIPMENT TODAY went to press, he reported the following list of sponsors: Adcom Electronics, Ampex, Applied Electronics, Caldwell AV, Canadian General Electric, Central Dynamics, Comad, Electrohome, EEV, Geleco, Glentronix, IVC, LeBlanc & Royle, Leitch Video, McCurdy Radio, Memorex, MSC, Philips, Pineway, RCA, Richmond Hill Labs, Sony, 3M, Ward-Beck.

The sponsors extend a cordial welcome to visit the suite and renew acquaintances while attending NAB.

# The Great Niagara Air-Jam

Last October, the three major television stations in Buffalo, New York, applied to the Federal Communications Commission to "jam" their own signals into Canada.

Their action is the result of the random deletion of commercials from U.S. signals by a number of Canadian cable systems. The deletion policy, supported, and in some cases ordered, by the Canadian Radio-Television Commission, is intended to discourage the flow of Canadian advertising dollars—over \$20 million a year—to U.S. television stations along the border.

The Buffalo broadcasters first considered relocating their main transmitters and using a directional antenna pattern to withdraw their service from Canada. But they concluded that this approach was not feasible and would not prevent reception by Canadian cable operators.

Their subsequent announcement that they would seek to jam their own signals was greeted by scepticism from the Canadian side. The Buffalo broadcasters and their engineering consultants admit that research is needed. But if the FCC gives its blessing, they claim they're ready and willing to go ahead with that research.

The application to the FCC proposes three transmitters, sharing a common 500-foot tower at Fort Niagara, N. Y. The tower would radiate interference toward Toronto on all three channels. The signals would create interference over an area about 40 miles wide from Toronto north to Georgian Bay. In the view of the applicants, the Fort Niagara location, on a direct line between the main transmitters of the Buffalo stations and Toronto, means that receivers in Toronto will not be able to discriminate between the proposed interference and the signals from the main transmitters.

Power of the "jammers" would be as follows:

Station	Channel	Power
WGR-TV	2 (54-60 MHz)	1.6 kw
WBEN-TV	4 (66-72 MHz)	1.6 kw
WKBW-TV	7 (174-180 MHz)	2.2 kw

Thomas Wright, a partner in the firm of A. Earl Cullum Jr., & Associates, a Texas firm of consulting engineers, who prepared the application, explains that the signals



"Jamming" pattern from proposed 500-foot tower at Fort Niagara, N. Y.



would "preclude significant viewing of those stations in the Toronto area, yet will not cause new interference to reception of Canadian-based stations within their normal service areas.

"It was considered that the viewing of each station would be eliminated in those parts of Toronto and vicinity where the signal of the proposed facility would be within 15 dB of the signal from the broadcast station operating on its frequency. It is planned that additional experimental work will be done in the laboratory to determine whether or not higher ratios of desired-to-undesired signals would be effective in eliminating service. Should that be the case the power output could be reduced accordingly."

The Buffalo broadcasters claim their research "is at the stage where the field use of actual radio transmissions is essential".

Estimated costs of the proposed facility at Fort Niagara are:

Transmitters (3)	\$45,300
Installation	1,500
Antennas	6,150
Transmission lines	10,800
Tower	81,000
Installation	58,500
Test, monitoring	30,000
Building	48,000
<b>Total</b>	<b>\$281,250</b>

In addition, operating costs for the first year are estimated at \$85,000.

How will the FCC deal with the application? Initial reports quote an official of the

lomatic level, talks are reported to be scheduled for January between Canada's external affairs department and the U.S. State department.

Canadian observers tend to consider the proposal contrary to international agreements and doubt that the FCC would antagonize Canada by approving it. The application itself reflects uncertainty as to the technical feasibility of the proposal.

Even if the FCC does give its approval, the plan is bad business for the Buffalo TV stations and would be a classic case of cutting off one's nose to spite one's face. Forty percent of their Canadian viewers are not on cable and receive the Buffalo shows, commercials intact, via rooftop antennas. That's too large and valuable an audience to throw away.

### Buffalo's blueprint for an electronic frontier.

According to Wright, there is "a wealth of background information and experience on the desired-to-undesired signal ratios at which objectionable interference is considered to occur" in TV broadcasting, but less data exists on the "considerably lower ratio" needed to eliminate the service of a station. He quotes the report of the Television Allocation Study Organization (TASO) submitted to the FCC in March, 1951, to support his contention that a signal-to-noise ratio of 15 dB would result in unsatisfactory reception by at least 80% of viewers.

Admitting that the techniques of the proposed jamming "are not widely practiced", and present "several novel problems", the application requests permission for experimentation to develop such techniques. It further suggests that these experiments would contribute to "the development of the radio art" by controlling the usable service area of TV stations in a more precise and selective way.

The first phase of the experiment would be construction of the facility at Fort Niagara.

The second phase—"if the initial phase of the experiment is successful"—calls for additional interfering facilities along the Niagara River to eliminate cable reception in most of the Niagara peninsula. The application envisages "multiple, relatively low-power interfering facilities" to frustrate "the sophisticated receiving capabilities of cable television systems". Laboratory experiments would determine the power required for such interference to be effective.

Wright is confident that further low-power jammers would prevent satisfactory reception by head-ends located in the Niagara peninsula. He says the expense would make it prohibitive to build many such head-ends for microwaving the Buffalo signals to Toronto.

commission as saying the jamming proposal is both legally and technically possible. However, a spokesman for the Department of Communications in Ottawa advised BROADCAST EQUIPMENT TODAY that the FCC had merely forwarded a copy of the application, without comment, for DOC's response. At the dip-

The proposal appears to be a colossal public relations gambit by the Buffalo broadcasters, seeking to win more attention and support on this side of the border.

Don't be too surprised if the great Niagara air-jam never gets off the ground. Half a loaf—or even 40% of one—is better than none.



**CCA BROADCAST TRANSMITTERS NOW AVAILABLE ON 6-WEEK DELIVERY!**

- FM TRANSMITTERS  
10 WATTS TO 50,000 WATTS
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100 WATTS TO 100,000 WATTS

6-week delivery on FM transmitters up to 25 kw and AM transmitters up to 10kw. Delivery on some AM transmitters may be 8 weeks depending on frequency. Delivery on high power and special transmitters upon request.

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# directions

A review of recent announcements, decisions and policies of the Canadian Radio-Television Commission.

## SCHEDULE OF HEARINGS

The CRTC has revised its schedule of public hearings as follows:

### January 13—Toronto

Harbour Castle

### February 3—Vancouver

Regency Hyatt

### February 5—Victoria

Empress Hotel

### February 9—Regina

Regina Inn

### March 9—Ottawa

Skyline Hotel

### March 29—Montreal

Quatre Saisons

### April 12—Moncton

Cancelled

### April 12—Halifax

Lord Nelson

### April 26—Edmonton

Edmonton Plaza

### May 3—Winnipeg

Winnipeg Inn

### May 18—Windsor, Ont.

Holiday Inn

### June 8—Ottawa

Chateau Laurier

## CABLE REGULATIONS

Regulations respecting cable television undertakings have been announced by the CRTC, to take effect April 1, 1976. The regulations will codify many aspects of CRTC policy which have already been in practice since the Policy Statement of July 16, 1971.

### Defining Stations

Official coverage contours, determined according to DOC procedures, will continue to be the basis for defining stations as

- local
- regional
- extra-regional

The CRTC states that this method provides well-established, uniform procedures for efficient and consistent administration by both DOC and the CRTC.

### Classes of Licence

- Class A cable licences are those with 3,000 or more subscribers.
- Class B cable licences are those with less

than 3,000 subscribers, and need not adhere to the program duplication clause nor supply FM radio service.

### Priorities

As already established by CRTC policy, cable systems are to give the following order of priority to television stations carried:

- (a) local CBC owned-and-operated stations;
- (b) local educational stations;
- (c) all other local stations;
- (d) regional CBC owned-and-operated stations, except where duplicated by (a);
- (e) all other regional stations, except those which carry a network service already provided by higher-priority stations;
- (f) a community channel;
- (g) extra-regional CBC owned-and-operated stations, except where duplicated by (a) or (d);
- (h) extra-regional educational stations, except where duplicated by (b) or (e);
- (i) any other extra-regional station, except those which carry a network service already provided by higher-priority stations.

The carriage of educational stations located in another province is permissive, not mandatory. Where no educational station yet exists, cable licensees are to reserve a channel on the basic service for such a station.

Where stations appear to have equal rank, priority is to be given to the station located (1) in the same province as the cable system, or (2) closest to the local head-end.

The CRTC reserves the right to designate the distribution channel for any service, e.g., where regional uniformity is desired or where there is disagreement between cable operators and broadcasters.

### Community Channel

The provision of a community channel is mandatory for all licensees. Only community programming is permitted on this channel, excluding advertising, feature films or any off-air signal. Program logs and audio tapes of all programming are to be kept for at least 4 weeks (8 weeks when requested in writing by the CRTC). Equitable time is to be provided to political parties and candidates and to differing views on matters of public concern.

### Radio Service

Class A licensees must provide FM service, giving priority to Canadian stations, as follows:

- (a) all local FM stations;
- (b) regional CBC stations, both AM and FM, unless duplicated by (a);
- (c) where all the above stations broadcast in the same language, the signals of any regional station, AM or FM, that broadcasts in the other official language must be carried.

Class B licensees choosing to offer FM service must follow the same priorities.

### Service Area

Cable systems are obliged to provide service only in residential areas where municipal water or sewer service is available.

Where an installation requires a cable connection in excess of 150 feet from the property line, or where other special or underground connection is necessary, the licensee may charge an amount equal to the expenses incurred, instead of the authorized installation fee.

### Program Substitution

The requirement to substitute higher priority signals for lower priority signals, when programming is identical, is limited to local and regional stations, in order to ensure an adequate level of technical quality. Stations must give written notice to the cable system at least seven days in advance. This requirement applies only to Class A cable systems (3,000 or more subscribers).

## FINANCIAL DISCLOSURE

The CRTC has made known the practice to be followed regarding financial disclosure by cable licensees.

1. All applications for rate increases are to include the applicants' most recent annual financial statements, which shall be part of the public file.

2. General projections of revenues and expenses will no longer be required, as rapidly-changing conditions in both the economy and technology make it "extremely difficult" to predict these data accurately. Any such financial information which is filed, however, will be part of the public file.

(continued on page 34)



## directions

(continued from page 33)

3. The CRTC retains the right to treat financial information confidentially upon request of an applicant, if it considers the public interest will best be served by so doing.

The commission notes that the majority of cable subscribers in Canada are served by public companies whose financial statements, on a consolidated basis, are already available to the public.

## DECISIONS

- A second television station for Trois-Rivières, Que., has been approved. Licensed to Philippe de Gaspé Beaubien, representing a company to be incorporated, it will operate on channel 8 with ERP of 5,120 watts (video), directional. The new station will be a satellite of CHLT-TV Sherbrooke—paralleling the operation of CKTM-TV Trois-Rivières and its Sherbrooke affiliate CKSH-TV—and is licensed on the condition that no local sales activity take place until local programming is provided.
- The way has been cleared for Saskatoon's new AM station, licensed to Roy H. Currie. It will operate with 10 kw, directional, on 1370 kHz, and technical difficulties have been overcome to avoid interference with CFOK, a new station at Westlock, Alta., on the same frequency.
- A bid by CFML Cornwall for a new daytime station at Hawkesbury, Ont., 1 kw on 1110 kHz, has been denied. However, the CRTC says it is willing to consider an application for low power rebroadcaster to improve CFML's reception in the area.
- Three CBC LPRT's are changing frequency: CBAM Edmundston, N.B., from 1490 to 1320; CBGL Mingan, Que., from 1290 to 740; and CBLH Hormepayne, Ont., from 1340 to 1090 kHz.
- New CBC stations have been approved at Cornwall to provide the AM network service on FM: 95.5 (English) and 98.1 (French); both 3 kw. Also approved is SCMO (Subsidiary Communications Multiplex Operation) for CBO-FM and CBOF-FM Ottawa to transmit programming to the Cornwall stations.
- SCMO has also been approved for CKMF-FM Montreal and CHUM-FM Toronto, while CHFI-FM Toronto will cease. The CRTC notes that the use of SCMO by CHUM for Muzak background music will, as demands on the FM spectrum increase, possibly have to be replaced by "a more meaningful use of SCMO".
- CBC rebroadcasters on both FM (82 watts on 105.1 MHz) and TV (5 watts) have been approved for Coppermine and Cambridge Bay, N.W.T. A local studio is to be provided at Coppermine for community access.
- Also in the N.W. Territories, CBC-TV rebroadcasters have been licensed for Hay River (540 watts), Lake Desmarais (143 watts) and Fort Providence (5 watts).
- At Nain, Labrador, the CBC will build a 40-watt AM rebroadcaster and 5-watt TV rebroadcaster.
- Radio-Nord of Rouyn will build a TV rebroadcaster at Bearn/Fabre to improve coverage of its network in northwestern Quebec.
- BCTV will add rebroadcasters at Campbell River and Coal Harbour, B.C.
- No public hearings are anticipated to put through minor changes for Gaspé, Que., and the Muskoka area of Ontario. Television de la Baie des Chaleurs Inc. (CHAU-TV) seeks a channel change for its rebroadcaster at Gaspé, and directional antenna for Chandler. With a new rebroadcaster for CKCO-TV Kitchener coming on channel 11 at Dwight, Ont., CKVR-TV-1 Parry Sound will move from Ch. 11 to 12, and CHEX-TV-2 Minden will move from Ch. 10 to 7.
- Cambrian Broadcasting Ltd. has been denied a bid for separate programming on its TV outlets in Timmins, Kearns and Kapuskasing, Ont. The CRTC was dissatisfied that Cambrian would provide local commercials but not local programming.
- Maclean-Hunter Cable TV in London, Ont., has been denied its request to use microwave to improve reception from CHCH-TV Hamilton. The CRTC considers other means more suitable to achieve this. In approving a rate increase for M-H, the commission noted that in the arrangement for joint programming with London Cable TV, each licensee must participate actively in the planning and production. M-H was also told to apply to carry the new CBC French TV rebroadcaster in London, scheduled to go on the air shortly on channel 40.
- London Cable TV will carry CBLFT-2 on channel 7 and Ontario educational rebroadcaster CICO-TV-18 on channel 2. Replay of Canadian programming, including the original commercials, on channel 1 is approved: however this opportunity is to be offered all stations in the area, not only CFPL-TV as proposed; and replay of feature films is forbidden.
- Northern Cablevision Ltd. has been licensed to serve Grand Centre and Medley, Alta. An intervention by the town of Cold Lake requested inclusion in the service area, but this was considered economically unfeasible at this time. Rates are to be \$25.00 for installation and \$8.50 per month, including microwave. The company had requested that microwave charges be an additional charge.

## NETWORKS

- Global Communications' six outlets have been augmented by stations in northern Ontario for the bi-weekly Wintario lottery show. Added are the Mid-Canada group (CHNB-TV North Bay, CKNC-TV Sudbury and CFCL-TV Timmins), CJIC-TV Sault Ste. Marie, CHFD-TV Thunder Bay, and CBCO-TV-1 Moosonee.
- Foster Hewitt Broadcasting has put together a network of four AM and four FM stations in Ontario to carry Maple Leafs hockey games.
- Radio Laval (Tele-Capitale Communications) has a Quebec network of five AM stations for games of Les Nordiques.
- Multiple Access Ltd. will feed Hockey Night in Canada to a network of four CTV affiliates in the Atlantic provinces, in addition to its Montreal station, CFCF-TV.

## APPLICATIONS

- Algonquin Radio-TV (CKCY Sault Ste. Marie) has applied for an AM station on 930 kHz with 10 kw at Espanola, Ont.
- Radio Beauce (CKRB St-Georges) seeks a rebroadcaster at Lac Etchemin, Que., on 920 kHz with 1 kw.
- The CBC has filed for a TV rebroadcaster at St-Pamphile, Que., to rebroadcast CKRT-TV Rivière-du-Loup.
- The CBC has also applied to take over CJAT-FM Trail, B.C., from Kootenay Broadcasting. Kootenay would retain CJAT-AM, and seeks to reduce CBC network programming to the basic information package of approximately 15 hours weekly.
- Green Lake (Sask.) Broadcasting Society requests an FM outlet, 78 watts on 94.9 MHz.
- The CBC has applied for an English TV station at Chicoutimi, Que.; 10 kw on ch. 58.
- In Newfoundland, the CBC plans TV rebroadcasters at Clareville, Wesleyville and four other centres, including Little Hearts Ease and St. Jones Within.