



A NEW AM TRANSMISSION SYSTEM

by Bill Jones

As the oldest form of broadcasting, amplitude modulation has been the poorest served by modern technology: it still operates in the pre solid state micro processing age, particularly with the transmission concept itself.

As early as the late 1930s, all fundamental methods of transmitter modulation, with the exception of pulse width, were operating and patented—high level plate or Heising, out phasing, Doherty, grid, suppressor grid, screen grid, absorption, suppressed, etc. Pulse width was a wartime development circa 1942.

Today we are left with, as an industry practice, plate, Doherty, outphasing and pulse width modulation systems for AM broadcasting. Whatever system is used, the final output of the transmitter is a modulated RF carrier in powers which rate from 5 watts to 50 kilowatts according to the licensed power of the particular station.

If the station is fortunate enough to have an assigned frequency which allows omnidirectional radiation, then a simple matching network is the only requirement to energise the antenna.

However, if the assigned frequency is such that directional radiation patterns are necessary, the connection between the transmitter and the antenna array becomes much more complicated and in Canada this is much more the rule than the exception. Moreso when the tendency to increase power to 50 Kw often necessitates tighter patterns and hence, more complicated antenna arrays requiring 10 to 12 towers, compounded by the possibility that power and pattern may have to be switched to provide night time protection.

For a multi tower array, the basic circuitry between the transmitter output and the physical antenna requires a matching network between the transmitter and the

feeder system, a power dividing network to ensure that the correct power is fed to each individual antenna tower, phasing network in each fed to the antenna towers less one, and matching networks to impedance match each feed to the respective tower.

(See Figure 1)

When multi tower arrays are necessary, there is no need to stress the complexity of such networks, particularly when operating at 50 kw and where for pattern adjustment switching has to be provided which is capable of handling these powers. The currents and voltage developed in the network when handling 50 kw of power require not only expensive, bulky components and cable, but large physical space resulting in costs often running into the \$80,000 to \$100,000 region.

Furthermore, the tuning and alignment of these large systems becomes intricate and often time-consuming, even when



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making routine adjustments.

One is lead to the opinion that there is an element of "brute force and ignorance" in having to generate 50 kws of power in one lump and then proceed to divide it down into smaller units. The logical approach is to have each tower energised by its own transmitter generating the appropriate wattage, the advantage being the avoidance of having to generate 50 kws by one source with all of its attendant disadvantage of high current, high voltage requirements.

The disadvantages are obvious if complete transmitters are envisaged—the necessity for phasing networks in the transmitter output plus matching in and out of

the phasor, the generation of audio modulation power, the matching of modulation, both in frequency response and level with the other transmitter and in the cost of multi transmitters.

A Solution

It could be suggested that to reduce cost, a single source of audio power could be created to a power level adequate for the total of the transmitters. Such a scheme becomes inelegant when it is recognised that it would necessitate piping relatively large amounts of audio power to the various tower bases.

As a further development of this concept, it might be considered feeding low level modulated carrier to linear amplifiers at each tower. This would have the advantage of allowing phasing to be accomplished at low levels thereby reducing markedly the cost of the phasing operation. The disadvantages lie in the necessity to use linear amplifiers with their inherent inefficiency. Carrying the concept further, to obviate the above disadvantages, the idea of outphasing modulation provides the solution.

Outphasing Modulation

Before further discussion on the application of outphasing to high power AM broadcasting, it would be appropriate to discuss the technical aspects of this method of modulation.

If two identical signals—identical in frequency, phase and amplitude are combined the resulting signal will be twice the amplitude of each component signal.

(See Figure 2, page 12)

If, on the other hand, one signal is phase shifted by 180° and then combined, the resulting signal will be zero. Therefore, by varying the phase relationship between two identical signals, the combined output can be caused to vary in amplitude between zero and twice the amplitude of each signal. If the phase shift is controlled by an audio signal, the combined output will appear as a modulated carrier.

(See Figure 3, page 12)

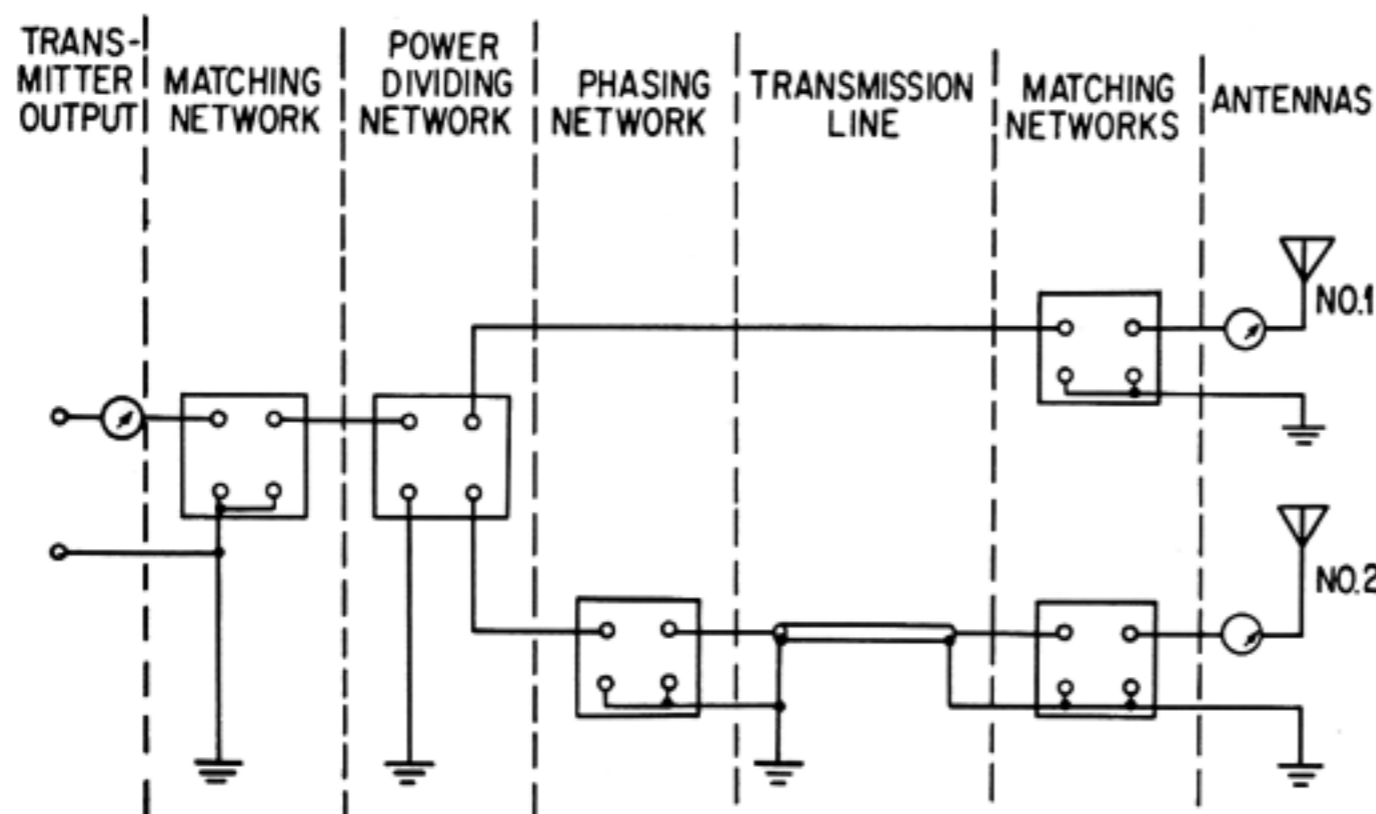


Figure 1

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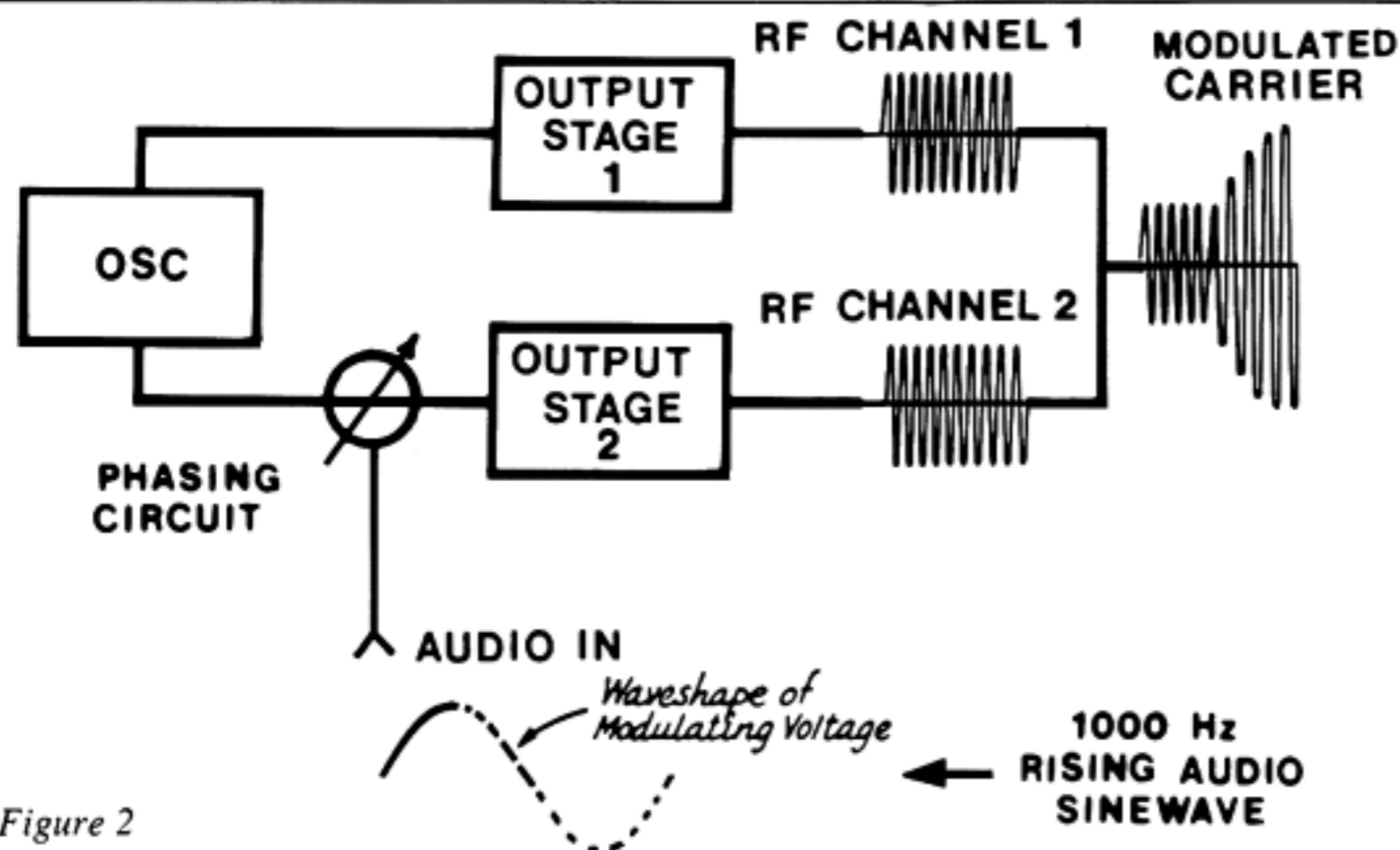


Figure 2

This is the simplistic description but there are variations, all achieving the same end result.

Since the combining of the two signals occurs at the output load impedance of the transmitter, the IPA and PA stages can operate as efficient Class C amplifiers, thereby avoiding the necessity for linear amplifiers.

If now an outphase exciter is employed to drive antenna based amplifiers, a number of system advantages are obvious. First, since the base amplifiers are being driven by low level signals, the necessary phasing required to energise the antenna can be accomplished with small and simple components.

Second, any pattern switching can be done by small low power relays and switches.

Thirdly, power adjustments can be achieved by voltage control. If base amplifiers are fitted with suitable circuitry, both phase and power can be varied by electronic control.

Fourth, the amplifier can be accurately matched into the particular antenna it is driving.

Fifth, a large element of redundancy is inherent in the system since the failure of one amplifier does not put the station off the air, hence removing the necessity for standby transmitters.

The proposed system as it stands comprises a common exciter driving a number of base amplifiers at the transmitter site.

The exciter is being fed by an audio signal originating at the studio. This signal can arrive either by Telco line or by STL feed. In either case it is assumed that there is a physical distance between the studio and the transmitter. If both are co-located then matters are simplified.

However, assuming what is the general case where separation occurs, it would be advantageous if the RF signal could originate at the studio, removing the exciter from the transmitter location to the studio. By doing this, a significant improvement can be attained by enabling feedback developed by linear modulating the off air signal and applying it for audio correction.

This application, combined with the fact that the wide variations in antenna common point impedance, often noticeable with multiple tower arrays when driven by a single transmitter source, cannot occur in the new system, ensures minimum audio distortion over the whole system.

To transmit RF from the studio to transmitter requires in the first instance, two channels to carry the out of phase carriers or the information inherent in the carriers.

Since the broadcast band covers frequencies from 540 kHz to 1600 kHz, it is obvious that wideband STLs are required as other than audio frequencies are to be handled.

The Additional Step

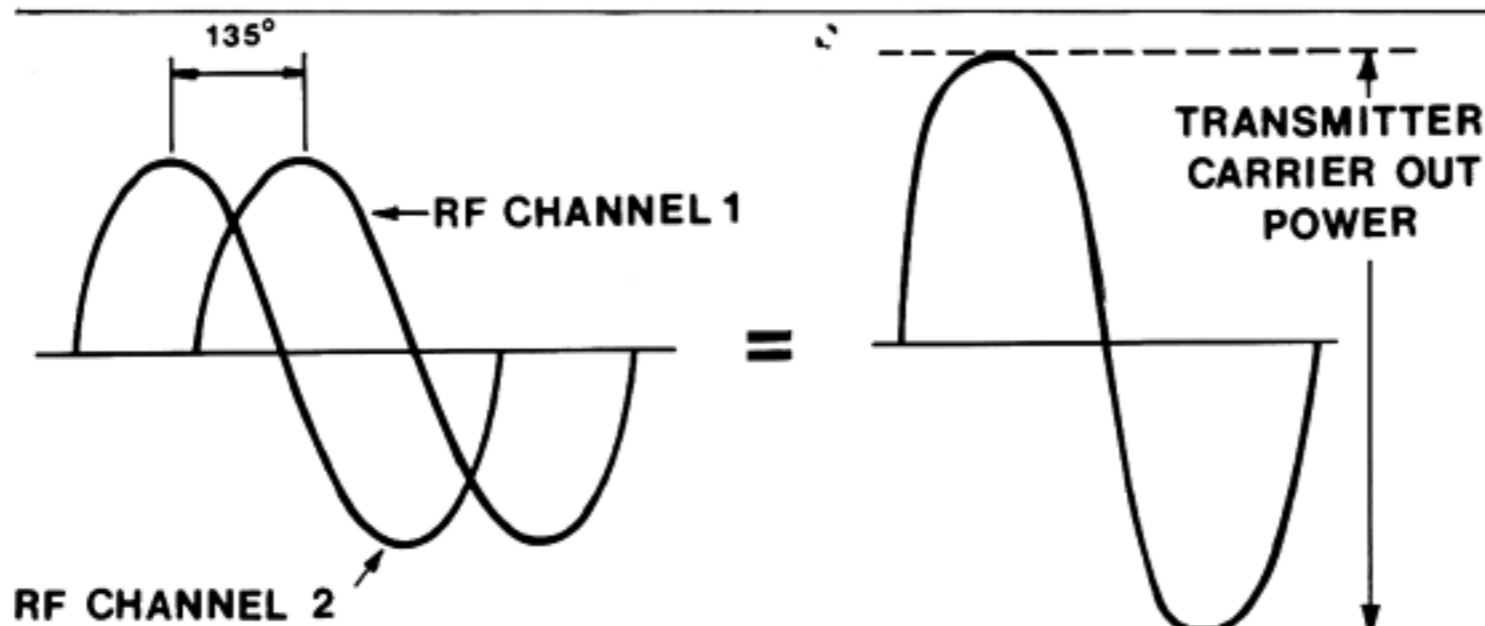


Figure 3

Furthermore, the carriers are phase modulated, which is similar to FM in that the bandwidth for the latter is determined by the deviation frequency and the modulation frequency. Whereas in PM, the bandwidth is determined by the phase angle deviation and the modulation frequency. The other difference lies in the fact that for FM, the modulation index decreases with increase in audio frequency, while for PM it remains constant. With a fixed modulating voltage the required bandwidth for PM is proportional to the modulating frequency. With FM, the bandwidth is independent of the modulating frequency when the modulation index is other than small.

By keeping the phase shift equal to or less than $\pm .5$ radian, only a single pair of sidebands are developed in PM. It might be considered feasible to divide down the carrier to a more manageable frequency, but unfortunately the phase angle will also be divided down. For instance, if a division of ten is applied the phase angle would be reduced to approximately $\pm 3^\circ$ which is equivalent to a very low modulation level with consequent noise problems.

In reverse, a lower carrier frequency with a .5 radian shift, will multiply up—a process utilised in indirect FM excitation—thereby increasing the phase shift beyond 180° which is not acceptable for out phase modulation.

These parameters therefore compel the use of wideband STLs which are available for TV usage but it would be necessary to convince the DOC that AM requires better tools to do a better job of broadcasting.

Summary

The system described is a feasible one with all the component parts available. The advantages are obvious:

The use of lower power Class C amplifiers brings closer the possibility of all solid state transmission systems.

The economics are within ballpark figures of the cost of existing systems.

The flexibility of power adjustment and phasing for pattern requirements also leads to simplification of power increases wherein costly changes in power dividers and phasors do not occur.

Power changes require only the change of the base amplifiers not whole transmitters, with the possibility, according to power division in the antenna system of using existing amplifiers on different towers.

The operational advantages lie in the better antenna matching, the avoidance of a swinging common impedance point and the application of full feedback over the system if wideband STLs are allowed.

Bill Jones is president of TranSonic Limited, Ajax, Ontario. This paper was indirectly prompted by the article written for BET by Ray Carnovale on "AM Stereo" who stated the problems of the swinging common impedance point and the necessity for feedback in AM systems.

Other News:

● CJOH-TV in Ottawa has completely rebuilt its mobile unit and installed a new Ross switcher and four E.M.I. cameras.

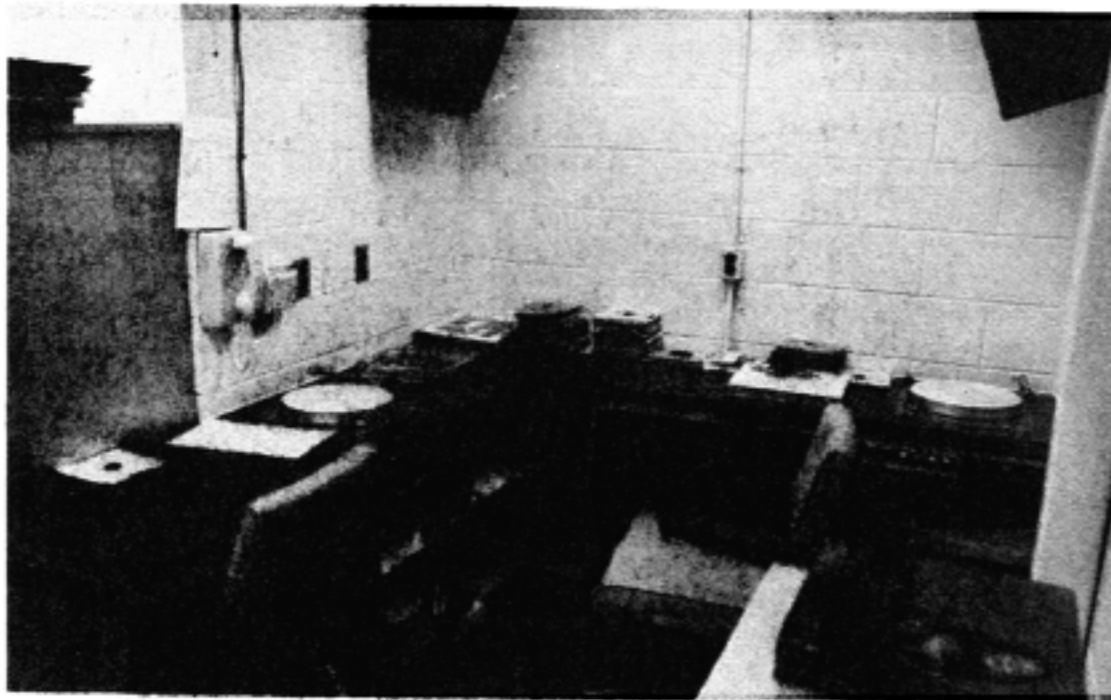
● **John Forrest** of Tele-Tech Electronics, while horseback riding with his daughter in Quebec, fell and broke five vertebrae in the lower part of his back. Hope you are feeling better soon, John!

● CFOS Owen Sound, now at 2500 watts, is concentrating on getting the Port Elgin satellite operational. **Jim Hutchins**, chief engineer, reports that the only problem encountered was with the STL signal path. This problem has now been overcome using only one hop. Jim has also been working on his private pilot's licence—having logged 44 hours, he's all set to write his exam.

● As promised, **Scott Reid**, Chief Engineer of Wingham's new FM radio station, CKNX-FM Stereo 102, has sent us a few pictures.

Please keep me informed by mailing or phoning your station news and projects to John Evans, c/o CKBB, Box 950, Barrie, Ont. L4M 4Y6 Telephone (705) 726-9500 or BET at (416) 463-5304.

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● CKPT Radio is now located atop Peterborough Square, the city's prestigious new downtown mall. In CKPT control room, disc jockey Ric Johnson operates McCurdy SS4312 console. McCurdy Radio also supplied two SS3157 turntables and six ITC cart machines. Panel on the right at front of console provides automatic start for all equipment.

● A new plant was opened recently by Capitol Records-EMI of Canada Ltd. at Malton, Ont. Capable of pressing over 10 million records a year, the 40,000-square-foot facility increases Capitol's Toronto staff from 200 to 300.



● Cecil Son Hing, after having been with Sony of Canada for more than 11 years, has now become a Sony franchised dealer. His company, Cecom Electronics Ltd., is also the exclusive distributor for Echolab special effects generators; PCD, a pulse cross display, waveform sampler and distribution amplifier combined in one package for small studios; and (in Eastern Can-

ada) Winsted Corporation's electronic editing consoles to fit Sony, J.V.C. or Panasonic's VTRs, programming trucks, video-tape storage systems, video consoles and stands. Cecom is located at 2455 Cawthra Rd. Unit 15, Mississauga, Ont. L5A 3P1, telephone (416) 272-1971.

● CFBK Huntsville and CFBQ Parry Sound are the new call letters for the Countryside Broadcasting stations formerly known as CKAR. Another station in the group, now owned by Eastern Broadcasting, changed call letters earlier this year when CKOX Woodstock became CKDK.

● The industry has been saddened by the loss of Dick Salway, who died as the result of a car accident in Toronto on June 17. A highly-regarded member of the engineering fraternity, Dick had been with CFRB for 26 years, having previously worked at CFRA Ottawa. He had also been active on CCBA committees over the years.

● RCA has supplied a unique TV production package to the Rex Humbard organization. The equipment, which includes color cameras, VTRs, switchers, and monitoring, audio and editing systems, is assembled in four cargo "pods" for air transport. On arrival, the pods are placed

on a flatbed truck to form a complete mobile broadcast facility. It is used to produce TV programs of religious rallies overseas.

● A new daily newspaper for the nation's capital, *Ottawa Today*, was scheduled to make its appearance on September 1st. The city's only morning paper, it is said to be patterned after the *Toronto Sun's* successful tabloid format, and is to be printed by *Le Droit's* plant. The venture was organized by William Morrison, formerly an executive with Bushnell Communications and CFGO Radio in Ottawa.

● Cinema Products Corp. will conduct a two-day Maintenance Training seminar on October 14-15 at its Los Angeles factory. Intended for cinematographers, professional equipment dealers and technicians, the seminar precedes the fall SMPTE conference. Inquiries to: Ray Tamba, Cinema Products Corp., 2037 Granville Ave., Los Angeles, CA 90025.

● A new company has been formed in Toronto to provide computer assisted music programming for radio stations. International Radio Computing Inc. is located at 1201 Sheppard Ave. East, Willowdale, Ont. M2K 1C9, telephone (416) 493-8888.

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directions

A review of current policies and decisions of the Canadian Radio-television and Telecommunications Commission.

PUBLIC HEARINGS

OTTAWA—SEPT. 13

TILLSONBURG FM CALLED TO EXPLAIN "VARIATIONS"

Tillsonburg (Ont.) Broadcasting Co. Ltd., licensee of daytime AM station CKOT and CKOT-FM, has been called to the September hearing in Ottawa to explain possible "violation or failure to comply with conditions of the licence for CKOT-FM".

The CRTC says it is concerned about various aspects of the station's performance, based on monitoring which took place March 31 and April 1-2, and an examination of program logs for the periods March 21 to April 11 and July 4-10, 1977. These concerns include the extent of "foreground" and "mosaic" format programming, simulcasting, and commercial content. The commission notes that revocation of licence is one possible consequence if violations have, in fact, occurred.

Applications scheduled for the September 13 hearing at the Chateau Laurier hotel in Ottawa include:

• Power increases for the following stations in Ontario:

CJBQ-FM Belleville, from 17.4 to 50 kw;
CFOR Orillia, from 1 kw to 5 kw (night);
CKOB Renfrew, from 250 watts to 1 kw (day);
CJCS Stratford, from 500 watts to 1 kw (day);
CHSC St. Catharines, from 1 kw day, 500 watts night, to 10 kw day and night.

• CBC radio rebroadcasters at the following locations:

Banff National Park, Alta., 5 watts on 1230 and 1490 kHz;
Manning, Alta., 13.5 kw on 100.5 MHz;
Peace River, Alta., 732 watts on 92.5 MHz, (French);
Spence Bay, N.W.T., 82 watts on 105.1;
Fort Hope, Ont., 41 watts on 101.5;
Kenora, Ont., 38 kw on 98.7;
London, Ont., 22.5 kw on 100.5.

• CBC-TV rebroadcasters at the following locations:

Drumheller, Alta., 10 watts;
Peace River, Alta., 1.27 kw (Fr.);
Marten Mountain/Slave Lake, Alta., 1.14 kw;
Wabasca, Alta., 10 watts;
Spence Bay, N.W.T., 8.9 watts;
Fort Hope, Ont., 10 watts;

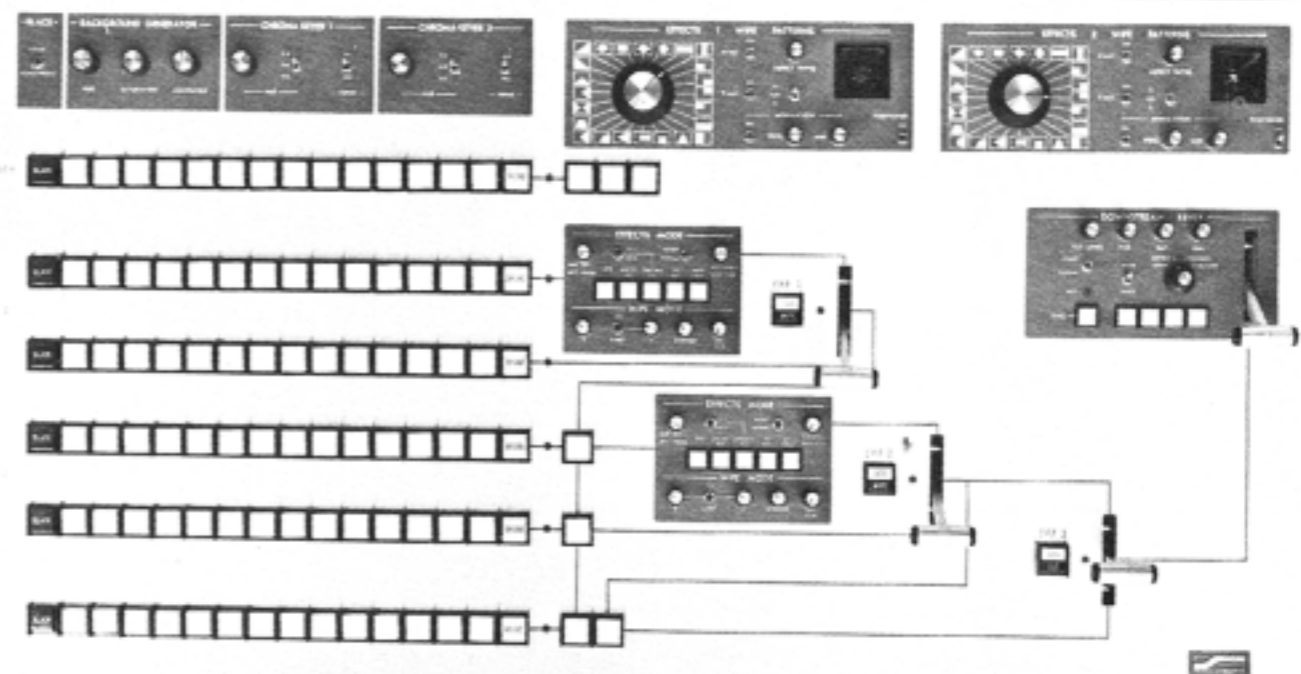
Gros-Morne, Que., 16 watts;
Marsoui, Que., 5 watts;
Temiscaming, Que., 75 watts (Eng.).

The CBC also seeks a power increase for CBCP-TV-1 Shaunavon, Sask., from 1.488 to 4.5 kw, with a change of antenna site.

• Ownership changes:

A company formed by Keith J. Dancy, 304298 Ontario Limited, would acquire CJJD Hamilton from Radio Rogers Ltd., while Rogers Management Services Ltd. would acquire CKJD Sarnia and CHYR Leamington from Dancy Broadcasting Ltd.

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Dancy, who established the Sarnia station in 1968, has in recent years served as an executive of the Rogers organization.

CKCH Radio Ltee, Hull, Quebec, would issue 9000 common shares (90%) to Radio Trois-Rivières Inc., while acquiring the assets of CHLN Trois-Rivières. Both stations are part of the Télémedia group.

Cablecasting Ltd. would acquire Graham Cable TV Ltd., Toronto.

M. and J. Firman would acquire 100% of Oliver (B.C.) Tele-Vue Ltd. through the purchase of 50.1% from R. and F. Ferguson.

● **Other applications:**

Bushnell Communications (Rochland, Ont.) and Huron Broadcasting (Sault Ste. Marie, Ont.) for increase in authorized service area for their respective cable systems.

The Students' Administrative Council of Ryerson Polytechnical Institute, Toronto, for a 5-watt carrier current operation on 970 kHz.

TORONTO—SEPT. 20

**3 BID FOR TORONTO
MULTILINGUAL TV**

A hearing at the downtown Holiday Inn commencing September 20 will consider the prospect of a multilingual television

station for Toronto. Three applications have been filed, all for channel 45:

● **Leon Kossar**, representing a company to be incorporated (for 1,119,000 watts). Kossar is the founder of Toronto's annual international "Caravan", a week-long festival presented by over 50 cultural organizations throughout the city.

● **MTV Broadcasters Ltd.** (for 693,000 watts), headed by Johnny Lombardi, owner of multilingual radio stations CHIN AM and FM. Lombardi is also well-known as the organizer of concerts and Toronto's annual International Picnic.

● **Multilingual Television (Toronto) Ltd.** (for 104,000 watts), headed by Dan Iannuzzi, publisher of the daily newspaper *Corriere Canadese*.

MONCTON—SEPT. 28

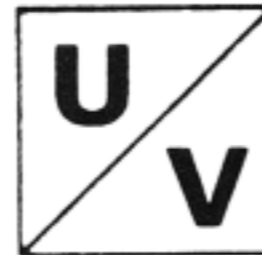
Applications scheduled to be heard at the Hotel Beausejour in Moncton, commencing September 28, include:

● Arthur Houde, New Carlisle, Que., for a French AM station at Caraquet—Grand Anse, N.B., 5 kw daytime on 730 kHz.

● Eastern Broadcasting, for a power increase to 5 kw daytime at CFAN Newcastle, N.B.

● CJC-B-FM Sydney, N.S., for a power increase to 61 kw.

● CBC, for 100 kw FM stations in Monc-



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ton: 95.7 MHz (English FM network); 94.9 (French FM network); and 90.1 (CBAF); in Neguac, N.B., 92.1 (CBAF); and Halifax, 89.7 (CBAF). The CBC also plans an FM rebroadcaster at Swift Current, Nfld., 32 watts on 99.5 MHz.

- CBC, for television rebroadcasters at 19 locations in Newfoundland, Grand Falls, N.B., and a power increase for the rebroadcaster licensed at Garden of Eden, N.S.

- CHSJ-TV Saint John, N.B., for part-time programming of its northern New Brunswick stations with regional programming from Saint John, and for a low power rebroadcaster at Parker Ridge, N.B.

Cable Systems:

Applications to establish cable TV operations in several areas of New Brunswick are as follows:

- Bathurst: by Cablevision Chaleur Ltd.; Robert de Grace, representing a company to be incorporated; and North Shore Community Television Ltd. of Campbellton.

- Chatham-Newcastle: by Miramichi Cable Ltd.

- Dalhousie; by Leo Barthelotte, representing a company to be incorporated; and North Shore Community Television Ltd.

- Grand Falls: by William R. Duffie, E. K. Jones and William Stanley, each repre-

senting a company to be incorporated.

- Perth/Andover: by J & K Enterprises Ltd., Woodstock, N.B.

Various cable systems seek rate increases, and Woodstock Community T.V. Ltd. has requested an increase in service area and the addition of a distant head-end at Green Mountain, N.B.

FUTURE HEARINGS

September 28—Moncton, N.B.

Beausejour Hotel

October 18—Montreal

Loew's La Cité

November 15—Sudbury, Ont.

Holiday Inn

November 15—Ottawa

Chateau Laurier

December 13—Edmonton

MacDonald Hotel

December 13—Winnipeg

Winnipeg Inn

January 17—Toronto

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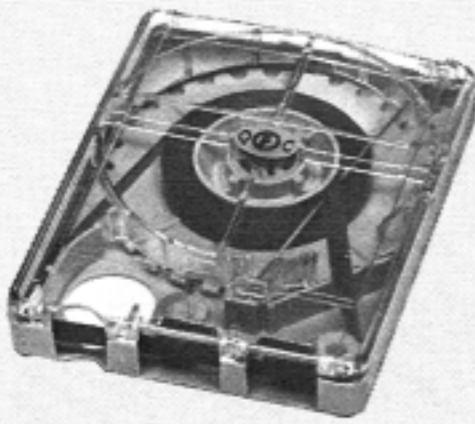
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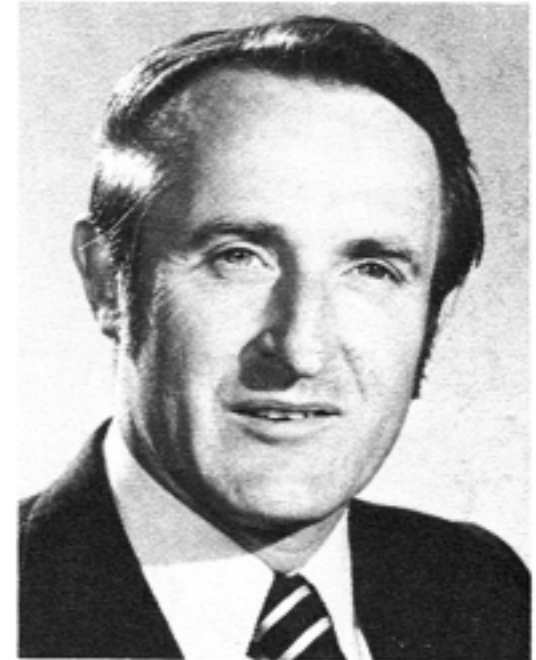
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Leitch Video APPOINTMENT



John H. Walter

Leitch Video is pleased to announce the appointment of John H. Walter to the position of Marketing Manager.

Mr. Walter brings with him 20 years experience in the broadcast industry, both in Canada and abroad. He started in television in Australia in 1956 (with TCN-9) and after working in all branches of the industry, came to Canada in 1968 to gain experience in color television. In 1969, John joined CFTO-TV as VTR Maintenance Supervisor and in June of 1974 was promoted to Assistant Director of Engineering.

We take pleasure in welcoming John to Leitch Video and wish him every success in his new venture.

DECISIONS

AM Radio

The following AM applications have been approved by the CRTC:

- Canada All-News Radio Ltd., for purchase of CFOX Montreal (Pointe Claire) and change of programming to all-news format. Also approved is a power increase from 10 kw day/5 kw night to 50 kw day and night, to be implemented in 1980.
- Sudbury Broadcasting, for a power increase for CHNO from 10 kw day/2.5 kw night to 10 kw day and night.
- CBC, for a new LPRT on 1450 kHz at Kispixox, B.C., and for community access facilities at CBWG Gillam, Man.

FM Radio

CFBC-FM RENEWAL DENIED; APPLICATIONS CALLED

Renewal of the licence of CFBC-FM Saint John, N.B., owned by Fundy Broadcasting Co., has been denied. The decision follows a one year renewal in 1976, in which the Commission outlined requirements to be met regarding simulcasting, program content and automation. It states that the licensee's responses at the June 21 hearing in Ottawa were "inadequate" and as a result the licence, which expires September 30, will not be renewed.

At the same time, the Commission called for applications to be filed by September 30 for the station's frequency, 98.9 MHz.

CFBC-FM was established in 1965. Other FM stations have recently been licensed to Canada All-News Radio (100 kw on 99.7), and the CBC (100 kw on 101.5), to serve the Saint John area.

CBC APPROVALS

The following FM rebroadcasters have been licensed to the CBC:

City	MHz	Watts
Kelowna, B.C. (Fr.)	99.1	2,000
Red Deer, Alta.	102.5	1,560
Red Deer (Fr.)	103.5	1,560
Fox Lake, Alta.	96.9	148
Jean D'or, Alta.	102.5	52
Gods Lake Narrows, Man.	99.9	1,800
Waasagomach, Man.	105.1	1,700
Oxford House, Man.	95.5	78
Manigotagan, Man.	101.3	154
Sydney, N.S.	105.9	100,000
Baie Verte, Nfld.	97.3	5,850
Fleur de Lys, Nfld.	94.5	83.6
Roddickton, Nfld.	103.9	2,000
Mt. St. Margaret, Nfld.	99.9	10,000
Portland Creek, Nfld.	103.1	850

The sale of CFDM-FM Drummondville, Que., to the CBC was also approved. It is now a rebroadcaster of CBF-FM Montreal.

Other FM actions:

- Power increase approved for CKLC-FM Kingston, Ont., to 95.5 kw.
- The frequency approved for CKO-1 Ottawa, which went on the air July 1st, is 106.9 MHz (100 kw, EHAAT of 931 feet).
- CKOI-FM Verdun, Que., was renewed for a 30-month period, with the requirement that it submit semi-annual reports on steps taken to conform to the FM regulations.
- FM rebroadcasters have been licensed to Club Social LaGrande at Laforge, Brisay and Camp LG4 in northern Quebec.
- Revised ownership structure was approved for CIME-FM Ste-Adèle, Que.
- A change in programming for CHFI-FM Toronto was approved to permit increased classical music between midnight and 5:00 a.m., rather than before midnight.

Television

BIDS FILED FOR HULL STATION

August 31 was the deadline for applications for a new television station to serve the Ottawa-Hull area.

The new station will provide TVA network programming, replacing CFVO-TV. On June 30, the CRTC revoked the licence of CFVO, which had ceased broadcasting March 29, and approved an application by Radio-Québec to rebroadcast its educational network using the former CFVO facilities (727 kw on channel 30).

A date for the public hearing of applications had not been announced as BET went to press; however the Ottawa hearing scheduled for November 15 appears the most likely choice.

CBC approvals

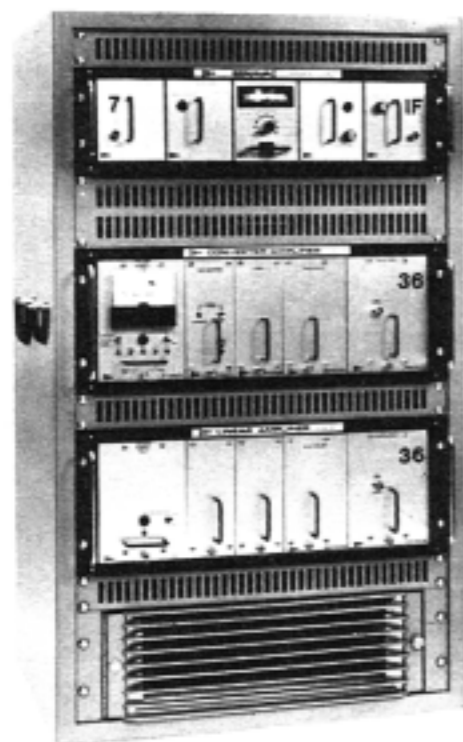
The following television rebroadcasters have been licensed to the CBC:

- Kelowna, B.C. (Fr.)—1,673 watts, ch. 21
- Red Deer, Alta. (Fr.)—2,370 w., ch. 31
- Fox Lake, Alta.—10 watts, ch. 9
- Jean D'Or, Alta.—28 watts, ch. 13
- Harvie Heights, Alta.—10 w., ch. 61
- Gods Lake Narrows, Man.—2.4 Kw, ch. 13
- Waasagomach, Man.—3.4 kw, ch. 9
- Oxford House, Man.—5 w., ch. 8
- Manigotagan, Man.—151 w., ch. 22
- Pine Falls, Man. (Fr.)—1.5 kw, ch. 11
- Dryden, Ont. (Fr.)—10 kw, ch. 6
- Kenora, Ont. (Fr.)—3.8 kw, ch. 2
- Vermilion Bay, Ont. (Fr.)—10 w., ch. 74
- Fermont, Que. (Eng.)—10 w., ch. 9
- Sept. Iles, Que. (Eng.)—1.5 kw, ch. 3
- Gagnon, Que.—16 watts, channel 9

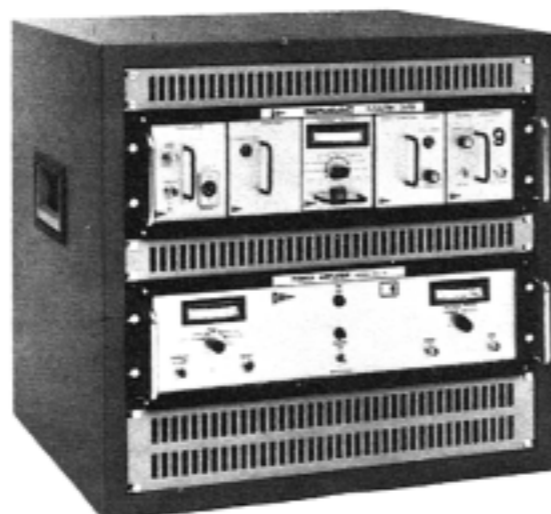
In Saskatchewan, French language rebroadcasters were approved for Saskatoon (98 kw, ch. 13) and Prince Albert (13 kw, ch. 3). The original applications were for

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higher power and for channel 9 in Prince Albert. A power increase for CBKFT, the French station in Regina, from 126 to 140 kw, is also approved.

Other TV decisions:

- CHEK-TV Victoria, B.C., is to change affiliation from CBC to CTV when the CBC station in Victoria commences operation, maintaining local production at the current level of approximately 25 hours weekly. Approval has also been given for CHAN-TV-4 Courtenay to change its program source to CHEK (from CHAN Vancouver) on the same date.
- Rebroadcasters have been licensed to CKSA-TV Lloydminster at Provost and Wainwright, Alta.
- A power increase from 186 to 1733 watts has been approved for Radio Nord's CKRN-TV-3 Bearn/Fabre, Que.
- Rebroadcasters have been licensed to Club Social La Grande in seven northern Quebec communities: Brisay, Duplanter, Eastmain, Lac Boyd, Laforge, Petite Opinaca and Camp LG4.

Cable Television

APPLICATIONS CALLED FOR ALBERTA, WINDSOR AREAS

The CRTC has called for cable TV applications to serve locations in Alberta within the A and B contours of stations providing

second Canadian service. The deadline for filing is October 31, 1977.

Distant signals are to be imported via the headend at Mount Kelly, B.C., unless other means can be justified, and applicants are to include details of tentative agreements with the owners, MKC Properties Ltd., as well as microwave routes and costs.

Meanwhile, applications were to be filed by September 6 for Windsor, Ont., and unlicensed communities within the overlapping Grade B contours of:

- CBET Windsor and CKCO-TV-3 Oil Springs
- CFPL-TV London and CKCO-TV Kitchener/Oil Springs
- CKNX-TV Wingham and CKCO Kitchener/Wiarton
- CBLT Toronto and CKCO Kitchener

NEW SYSTEMS

Licences have been approved for cable systems at Agassiz and Harrison Hot Springs, B.C. (Peter Koch, representing a company to be incorporated), and at Pincher Creek, Alta. (Crowsnest Cablevision Ltd.).

Other cable decisions:

- Various systems in the Toronto-Hamilton area have been permitted to continue CBLFT on phase-lock to October 1, 1979.
- Increased service areas have been approved for Trans-Vision de Danville

(Que.), Cottagers' Security & Service of Minden and Haliburton, Ont., and Banff (Alta.) Community Antenna Ltd.

• Viking Cable T.V. Ltd. is the successful bidder for the cable system at Yarmouth, N.S., which went into receivership in January of this year. All of Viking's shareholders are local residents. The company is to complete wiring of the service area within two years and technically upgrade the system by November 30, 1977.

• Ownership changes have been approved for systems at Gillies Bay, B.C., Banff, Alta., Windsor and La Guadeloupe, Que., and Stephenville, Nfld.

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SOCIETY**

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8:00 p.m. Thursday, Sept. 27th

A tour of the McCurdy Radio Industries plant, 108 Carnforth Road (south of Lawrence, west of Victoria Park Ave.) All welcome.

For further information, contact the secretary, Doug Loney, at 463-5304.

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