

## **BT: Looking to the Future**

*Broadcast Technology* begins a second decade with this issue and, as announced on page 88, we've added two new members, Peter and Brian Loney, to our small, hard-working staff. 'The twins' are very capable, good-natured young men — they're also my nephews — and we're confident that their presence here at BT will be very beneficial. (Jacquie and I are now counting on taking some of those 'days off' we've been missing these past ten years!)

We also want to extend our good wishes to Terry Frost, whose excellent work as BT's production manager has done much to improve the appearance of our 'book' over the past 15 months. Terry is changing her career, for a while at least, as she and husband Dave look forward to the birth of their first child early in October.

## **Highlights of Volume 11, Number 1...**

□ The fall convention season is upon us:

- By the time you read this, the Radio-Television News Directors Association will have held two annual meetings—RTNDA Canada in Halifax and RTNDA International in Nashville.

- In Dallas, Texas, *Radio '85* will bring together, for the second time, the National Radio Broadcasters Association convention and the Programming Conference of the National Association of Broadcasters. The rival organizations will be building on the experience of their first joint effort, held last year in Los Angeles. The collaboration makes a lot of sense.

- Back in eastern Canada, some regional meetings: ACRTF (French-language broadcasters); AAB (Atlantic broadcasters); and OCTA, the Ontario cable association, whose annual fall trade show is capably and cheerfully guided by Arnold Stinson.

- The big event, of course, is *Capital Communications '85* in Ottawa, which will co-site the CCBE engineering conference and trade show with the annual meeting of the Canadian Association of Broadcasters. Not only will this be 1985's largest Canadian broadcasting convention; with NAB and *Radio '85* again in western locations, the Ottawa show is probably the largest gathering of broadcasters and broadcast equipment in all of the eastern side of North America. Bob McKinstry, in his *CCBE Newsletter* on page 33, provides details.

The BT team will be attending both *Radio '85* and *Capital Communications '85*, and we hope to have reports on all of these events in coming issues.

□ As Phil Stone recounts in *Broadcast Beat*, it was a happy coincidence that Gerry Acton was selected to be profiled in this issue, with Phil interviewing him just hours before Gerry was

named '*Friend of the Industry*' at CCBA. Our cover photo shows Gerry with fellow award-winners Paul Hanover of CHML and Stuart Mackay of Selkirk. We join in congratulating these distinguished members of the broadcast community.

□ Sandy Day's *Technitopics* summarizes the problems and costs of installing STL facilities in Canada these days, and it's apparent that many broadcasters are dissatisfied with the situation.

Sandy sent along this timely update, which appears on page 42, just as he and Doreen were leaving for Geneva. Sandy has been participating in yet another World Radio Administrative Conference there — and while six weeks in Switzerland sounds great, we know WARC means work for Sandy. Just one of the many reasons that make him a leading authority on Canadian and international regulation of the broadcast spectrum...

□ Jacquie's *Ad Lib!* again brings us smiling faces from every part of the country: CCBA in London, ABES in Moncton and a whole raft of those friendly western folks at WABE in Calgary. Bruce Dingwall continues his thorough discussion of AM Stereo in *The Basics*. And there are all the usual features of BT that keep you up-to-date on developments in this fascinating business of broadcasting. Take time to read. Better still, take time to drop us a line about what *you're* doing...

## **That Windsor News Quota**

One development that we've been following is the furore over the CRTC decision which required CKLW/CKEZ-FM Windsor, Ontario, to have 45 per cent Canadian content in newscasts.

The criticism seems to be causing consternation at the CRTC. Replying to a letter from RTNDA Canada president Bob Beaton, chairman André Bureau says there has been a 'grave misunderstanding' by the press, and he offered to discuss the decision. The quota, he explains, was one of several proposals put forward by the Windsor licensees as part of an approach that would give them more flexibility to compete in a market dominated by U.S. stations, at the same time strengthening their Canadian identity in the area of news. Regulation of news content, says Bureau, 'was never the intent of the Commission.'

After all is said and done, I suspect that this assessment by Gary Dunford in the *Toronto Sun* will sum it up best:

*"Asks one news heavy:*

*'If a boat sinks in the Detroit River tonight,  
is that Windsor CanCon?*

*If Reagan changes auto import law, is that CanCon for Windsor?'*

*Darned if we know.*

*Who at the CRTC is keeping count?*

*And WHY?"*



## stations in the news

### CFMT FIRST WITH TV STEREO; CBC TESTING IN MONTREAL

• On July 27, 1985, CFMT-TV Toronto became the first station in Canada to broadcast in stereo sound. Multilingual CFMT, which operates on channel 47, is using equipment supplied by Gytek Inc., a Canadian firm located in Scarborough (3015 Kennedy Road, 416-297-0200), and headed by Paulo Di Mario. Gytek also plans to introduce a stereo receiver-decoder, compatible with any TV set, to retail as low as \$90. CFMT's chief engineer Pip Bola says it is estimated that in the next two years, 25% of Canadian homes will be equipped to receive stereo TV.

• In Montreal, CHC-EHQ has begun a 6-month test of stereo with a low-power transmitter on channel 46. Tony Caruso of EHQ's transmission department told BT that the test is designed to study the problems associated with 1) the conversion of equipment to stereo/Second Audio Program, and 2) transmission from studio through transmitter. Initially, stereo from Compact Discs, digitally processed, is originated using Sony equipment; the encoder is Broadcast Electronics (Orban's

will also be tested); the transmitter is a 10w Thomson-LGT with 200 watts ERP; and the decoder is Sony's MVL-1100. EHQ's research will include field tests of Hitachi, Philips, RCA and Sony receivers; Second Audio Program (SAP) encoders and other equipment will be tested as it becomes available.

### CIME: CANADA'S INNOVATIVE MOSQUITO ELIMINATOR

Since early June, CIME-FM Ste-Adèle, Québec, has been providing a new and unique service to its listeners. Every day from 11 am to 12 noon and 4:30 to 8 pm, the station broadcasts a background sound which repels mosquitoes.

News director Chris Coté explained to *Broadcast Technology* that the sound of the male mosquito—recorded under the supervision of acoustic biologists—is played on a continuous tape. (Mosquito bites are from the pregnant female which, once impregnated, is repelled by the call of the male.) The technique has proven effective in repelling 35 of the 44 types of mosquitoes in the area, and although some listeners have objected to the low

background sound, most have been surprised and pleased by the results.

Colette Chabot, president of CIME, brought the idea back to the Laurentian resort area after hearing about it in France. So far, it's considered to be in the experimental stage, and the tape is not yet available to other stations.

### FM ACTION: CKBB APPLIES; CKDK TO SWITCH FROM AM

The CRTC has called for applications in three Ontario locations: Barrie, Orangeville and Woodstock. In each case, letters of intent were to be filed by August 26, with formal application by November 25. Initial applications were from:

• CKBB Barrie, for a country format on 95.7 MHz. The 50 kw station would operate from a 300-ft. tower adjacent to the AM site south of Barrie, and new studios would be built at the mid-town CKBB building. President Don Lawrie told BT the proposed country format would fill a real void in the region's FM fare, and would be oriented to the Simcoe County audience.

• CFRM Orangeville, a new station on 103.5, also with a country format, proposed by Ted Randal and Chuck Connors of CKAN Newmarket (see BT, July, page 8).

• CKDK Woodstock, for a station on 100.5 MHz, to replace the existing AM. Station manager Gord Marratto said that CKDK is seeking to amend the proposed 'A' channel to a 20 kw 'B' channel, to provide improved, dependable coverage—now severely limited on 1340 kHz. The basic music format would remain adult contemporary 'gold'.

### MORE ADS ON RADIO-QUEBEC NET

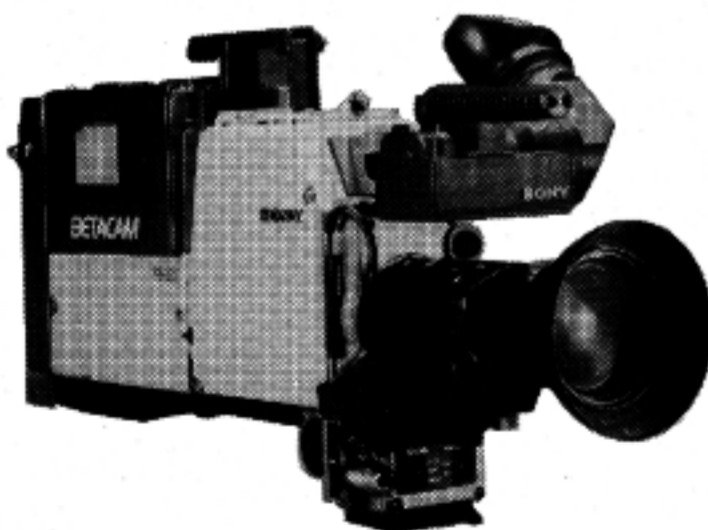
In renewing the licence of the Société de radio-télévision du Québec for a full 5-year term, the CRTC has approved a two-year trial of increased advertising—up to six minutes per hour. While it is expected that most of the advertising will continue to be of an institutional nature, ad revenues are projected to increase from the current 1% of Radio-Québec revenue, to 2.7% of all national ad dollars spent in Québec, by 1989. The network's 17 transmitters cover 90% of the province's population.

The ad revenues will help RQ to triple its co-production budget, currently \$4.5 million, during the next three years. In addition, some \$3 million has been invested in co-production of various TV series.

Negotiations are also underway with Québec's education ministry to transfer staff and a budget of \$2.5 million to Radio Québec, which would then be responsible for the production of all educational programming in the province. →

## LES LOCATIONS UNI VIDEO INC.

Pour tous vos besoins de tournage  
Location à court terme  
Équipement professionnel NEUF



- Sony Betacam Systèmes complets
- Sony BVU-800, BVU-820 (Ralenti)
- TBC ou Frame Store
- Générateurs de Caractères Chyron, VP-2
- Time Code — Micros sans Fil, Trépieds
- Caméras — VTR — Moniteurs . . .

Contacteur Serge Shanks  
Les Locations Uni Vidéo Inc.  
3572, Wellington, Verdun, Québec H4G 1T6  
TÉL.: (514) 766-6630

# A component for every camera. A tube for every transmitter.



Our purpose is clear: to provide the ultimate source for all broadcast related tubes and components.

We've geared our entire distribution system to ship virtually every order the same day.

Our highly personalized service and technical knowledge is legendary in the industry.



## Richardson Electronics Canada Ltd.

See Us At CCBE

24 Queen Street East, Brampton, Ontario L6V 1A3  
Telephone: (416) 454-5950, Toll free: (800) 387-2344

## stations in the news

### CHAM HAMILTON NOW ON 820

At 8:20 pm, August 18, 1985, CHAM Hamilton inaugurated its new frequency of 820, increasing power to 50 kw. The channel, assigned to Hamilton in the recent Canada-U.S. agreement on former 'clear' channels, was licensed to CHAM in January. A new array of six 300-foot towers was constructed and a Harris transmitter installed. The country music station is one of 9 (6 AMs, 3 FM) owned by Moffat Communications of Winnipeg.

### CJLA AND CHPR TO GO FM

CJLA Lachute, PQ, now on 630 AM with 1 kw power, has been licensed to move to FM, 104.9 MHz, with 3 kw. Its affiliate, CHPR in nearby Hawkesbury, ON, now daytime only on 1110 kHz, will also move to FM and will originate 32 hours of programs weekly. Both stations will have new studios. Owner Guy Vaillancourt has abandoned plans to operate in Cornwall; he had been authorized to revive CFIX, a French daytime AM silent since Dec/83, going full-time with a low-power FM.

### Other Stations in the news...

- *The Globe and Mail* recently reported that, after nine months of operation, **CKON-FM Cornwall Island** has been persuaded to apply for a licence from the CRTC. Located on the St. Regis Indian Reserve near Cornwall, ON, C-KON ('hello') transmits on 97.3 to some 10,000 Mohawk Indians in the border area.

- Power increases: **VOCM St. John's NF** from 10 to 20 kw on AM and 50 to 100 kw on FM; **Télémedia's CIMF Hull** from 74 to 84 kw.

- **CKRD Red Deer** has been authorized to move from 850 kHz (10 kw day/1 kw night) to 700 kHz (50 kw day/25 kw night) with a new tx site at Innisfail, AB.

- **CHRC Quebec City** has adopted a news/talk format, with 21.5 hours weekly being picked up by **CKVL Verdun**. The network portions include a 3-hour show of music from the 1930s and 1940s.

- **CBNT St. John's and Avalon Cablevision** co-operated to raise over \$340,000 in a recent telethon for childrens hospitals. CBC provided its Newfoundland network and Avalon produced local segments of the show, which starred Gordon Pinsent and local celebrities Patricia White and Joe Mullins.

- A new station, **CIHO-FM Baie St-Paul** came up with an innovative promotion prior to going on the air full-time. Various local events during the summer were broadcast from mobile facilities, using a temporary low-power transmitter.

- Recent applications for power increases include **CJLB Thunder Bay, ON**, from 1 kw to 4 kw; **CJMT Chicoutimi, PQ** from 2.5 to 5 kw; and **CFAC Calgary** for a power boost at **CHFC-1 Banff**, from 50w to 1000w day/250w night.

- **CKDA Victoria** will change frequency from 1220 to 1200 kHz.

- About 150 NABET technicians at **BCTV** have voted to accept increases totalling 14% during a 3-year agreement.

- Congratulations to the **CTV Network**, 24 years old on October 1st.

- An interesting idea comes from **WASH-FM Washington, DC**: with the introduction of cellular mobile telephone service, the station is enlisting cellular users to provide traffic reports from their cars. As an incentive, WASH-FM is offering car radios to the 'reporters' selected—who won't pay for the calls they make to the station.

## ONTARIO STATIONS RALLY TO AID TORNADO FUND



**CKLA-FM Guelph** raised over \$42,000 as part of the Telemedia Tornado Relief Fund Radiothon—6th highest fund-raiser on the network. Seen in photo are CKLA's *Marilynn in the Morning* and Member of Parliament Bill Winegard, guest host.

(See also *Broadcast Beat*, ENG, sections.)

- Approval has been given to CHUM Ltd. for the purchase of four radio stations: **CKGM/CHOM-FM Montreal & CKWW/CJOM-FM Windsor, ON**.

- A federal mediator will attempt to end a 32-month-long strike at **CHNC New Carlisle, PQ**. The action was taken after a half-dozen striking employees occupied the riding office of Prime Minister Brian Mulroney, in Baie Comeau.

Broadcast News reports that the effort by Telemedia was one of the most ambitious undertakings: **CJCL Toronto** was flagship station and some 30 other stations took part in the 10-hour telethon, hosted by Lloyd Robertson and Harvey Kirck of CTV News. The program was delivered via BN's satellite, with the final 20 minutes carried live on all 200 BN audio affiliates.

**CKBB Barrie**, **CFTR Toronto** and **CFGM Richmond Hill** staged fundraisers of their own; **CHUM Toronto** matched listeners' contributions dollar-for-dollar. **Global TV** was one of the first off the mark with a special 90-minute appeal, and **CKVR-TV Barrie** had a 10-hour concert as part of a 13-hour fund-raiser telethon.

## U.S. CHANNEL BUYS TVO SHOWS

TVOntario has sold more than 100 hours of programming from 12 series to The Discovery Channel, based in Washington. Launched in June, TDC operates 12 hours daily and can be tuned by 6 million U.S. cable TV subscribers—projected to grow to 10 million by year-end. Advertiser supported, it is (*MuchMusic, TSN et al, please note*) free to cable operators.

# THE SCIENCE OF SMOOTH MOVEMENT.



Silk-smooth pan and tilt action. A science perfected in all Manfrotto fluid heads. It includes an advanced technology fluid drag system. Perfect camera balance simplified by an exclusive guide release platform. A 45° safety lock to prevent accidental unbalanced equipment damage. Positive locking handle carriers for multi position handle placement. Independent pan and tilt locks. And a camera quick release system. Add to this the things you cannot see — the brilliantly engineered internal features, the inspired craftsmanship of working parts, the reliability even under extreme climatic conditions and the reputation for performance that Manfrotto has earned — and it's possible to understand how Manfrotto has mastered the science of smooth movement.

Manfrotto. The name that has become the affordable professional standard in light stands, tripods and fluid heads. Just ask anyone who uses one.

**THE MANFROTTO SUPER VIDEO HEAD 116. UNBELIEVABLY PRICED UNDER \$400.**

For a complete product catalogue write: Amplis Foto Inc., 22 Telson Road, Markham, Ontario L3R 1E5



## 123 Stations Respond to CAB Survey

### Studio-Transmitter Links for AM/FM Stations

With the large increase in operating FM stations and with the advent of AM stereo, the bands reserved for STLs have become more and more congested. Normally AM monophonic links have been at 450 MHz frequencies, FM mono or stereo in 956-960 MHz, and now a new band is available at 1700-1710 MHz, preferred by DOC for AM or new FM mono or stereo links.

STL licenses are issued by DOC regional offices. Some stations report problems such as refusal to allow a new FM STL in the 956-960 band even when uncrowded in the particular area, or immediate cancellation of the 450 MHz licence when the 1700 MHz channel was granted. (Both of those decisions were subsequently altered.) Others complain of the very high equipment cost, or of the unreliable path propagation at 1700 MHz. In some cases, DOC has favoured use of 1700 MHz even though 450 or 956 MHz channels were available in the area. In some areas STLs in this band interfere with meteorological satellite earth receiving stations.

The 1700 MHz band is unique to Canada, and only one manufacturer (Moseley) can supply equipment. This is at a premium price.

DOC policy now allows *shared* use of the 956-960 MHz band with very-low-capacity fixed systems on a first-come, first-served basis. Policy also permits broadcast auxiliary mobile as well as STL use in the 450-451 and 455-456 MHz bands. DOC has also suggested that *broadcast mobile* 450 MHz channels should be used for emergency STL standby, though they are considering permission to retain, (subject to future demand by others) the mono 450 MHz channel as a mono standby for new 1.7 GHz stereo links.

To assist the CAB in its efforts to obtain a more flexible policy, CAB sent a questionnaire to members in June asking details on their existing and future STL requirements. The response to that questionnaire was good, and we are thankful to the member stations who responded so effectively. The results of the questionnaire follow, based on responses from 44 FM and 79 AM stations.

It was apparent from the responses that AM stations faced a more difficult situation than FM, and the results are grouped below into FM and AM categories.

#### RESPONSES FROM FM STATIONS

All but one, (an AM rebroadcaster) transmit in stereo. The existing STLs are: 10 by landline, 28 by radio link, 3 by landline plus radio link, 2 by TV microwave discrete subcarrier, and the one mono station by off-air reception. Six used separate, discrete radio channels while 25 used composite.

The audio bandwidth carried:

	Frequency	
	Low Hz	High kHz
Maximum	80*	20
Average	40	15.5
Minimum	15	12*

\*The 80 Hz and 12 kHz figures were in all cases on landlines. All radio circuits were 50 Hz to 15 kHz or better.

Lease costs for landlines were a maximum of \$580 per month, \$252 average, and \$38 minimum. Construction charges ran from \$600 to \$10,000, with a \$4,150 average.


#### Approximate Total Capital Cost of Complete STL Radio System

COST \$	956 MHz two discrete channels	956 MHz one composite channel	956 MHz composite with stand-by	TV Subcarrier two discrete channels
Maximum	25,000	35,000	60,000	10,000
Average	23,500	19,100	31,000	9,000
Minimum	22,500	8,000	18,000	8,000

### Upgrading/Expanding Your AM/FM, TV Facilities?

- turnkey studio/transmitter systems design and implementation
- technical installation services for broadcasters, suppliers, consultants
- experience world wide

**Call us for a quotation.**



**IMMAD BROADCAST SERVICES**  
a division of AZCAR TECHNOLOGIES INC.  
233 Carlaw Avenue  
Toronto, Ontario, Canada M4M 3E9  
(416) 465-2463  
\* 06-22634

Circle #123 on Reader Service Card

**Stand-By STL Facilities (FM Stations)**

**LANDLINES:** 15—8 being mono only, and 7 stereo. Mono bandwidths were not all reported, but the minimum was 5 kHz and the maximum 10 kHz. Stereo landlines were mostly 15 kHz, but one was only 7 kHz.

**RADIO CIRCUITS:** 8 stations had stand-by 956 MHz STLs. One used a 450 MHz mobile base station, and one used a 450 MHz mono STL. Four stations had a stand-by FM transmitter at or near the studio. Three stations having discrete stereo STL equipment used the one channel for emergency mono operation. A few stations having radio stand-by also had access to a non-broadcast-quality landline.

Eleven stations reported no stand-by facilities while the remainder could provide emergency automatic programming and announcements at the transmitter site.

Asked whether they would require a different or additional STL channel, 30 stations said NO. Some YES answers pertained to other than STLs:

- 1 - engineering mobile, on a shared frequency;
  - 1 - remote pick-up, plus back-up for STL;
  - 2 - to replace stereo landlines;
- 2 - for a transmitter to studio telemetry link (TSL);
  - 1 - to carry additional SCMO signals;
  - 1 - for a 450 MHz mobile;
- 1 - to get signal to a rebroadcast station, 40 km;
  - 2 - for back-up STL;
- 2 - to improve landline quality, security and costs;
- 1 - for hot-standby STL on a different frequency.

Asked to describe any difficulties they might have with the DOC policy: 20 said none, their systems were adequate; four said none, provided they were not forced to 1.7 GHz frequencies; and two believed not likely since 450 MHz channels were still available in their areas (Northern Ontario and rural Maritimes). Opinions expressed by those seeing problems included difficulties in obtaining 450 MHz TSL frequencies and 956 MHz STL frequencies, and high costs and possible unreliability of 1.7 GHz systems.

Even the cost of adding 956 MHz filters was cited in one response. The opinion was also expressed that the 956 MHz band should not be shared with non-broadcast services.

**RESPONSES FROM AM STATIONS**

Responses from 23 stations indicated they were already transmitting AM stereo, while 56 were not. Of the latter, 44 stations stated they did plan to switch to AM stereo, with the following breakdown as to timing.

YEAR	86	86-87	87	87-88	88	90	90-95	UNKNOWN	OTHER
No of Stations	1	2	5	2	7	15	2	7	3#

\*Three stations indicated they would proceed when a single AM stereo system was decided upon in Canada.

Existing STLs were: 42 by landline, 29 by radio, and 8 were a combination of the two. Of the AM stereo stations, 11 employed landlines, 7 discrete radio channels and 5, a radio composite channel.



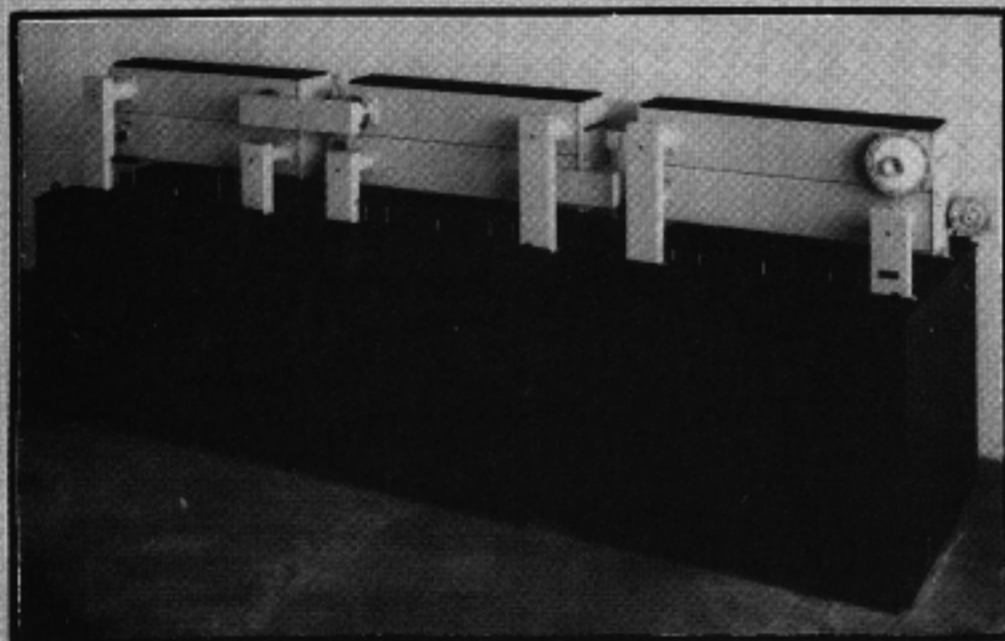
**TENNAPLEX SYSTEMS LTD.**

21 Concourse Gate, Nepean, Ontario K2E 7S4 Telex 053 4962 Tel.: (613) 226-5870  
 452 Five Farms Lane, Timonium, Maryland 21093 Tel.: (301) 561-1999

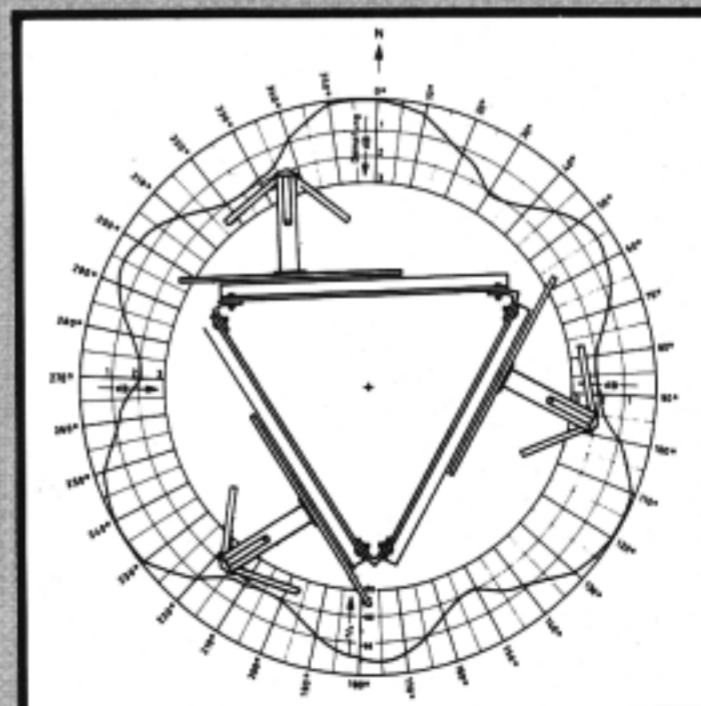
**ATTENTION FM BROADCASTERS**

Circle #136 on Reader Service Card

**LOOK** to Tennaplex for your hardware and state-of-the-art designs.



Antennas that are truly circularly polarized, and unaffected by the mounting structure or ice and snow without de-icers.



Combiners that are stable and reliable without controlled environments.

# You have a Problem? We've got the Solution!



## **CE** CALAWAY ENGINEERING EDITOR

**The System is called C.E.D.**  
A simple and low cost method of converting your IBM PC into a Professional videotape Editing system.

- Is the system capable of A,B,C Roll? **yes**
- Does the System interface with Sony 1/2", 3/4" and 1" VTR? **yes**
- Is it compatible with CMX or ISC? **yes**
- Does it control a Production Switcher? **yes**
- A Grass Valley, Ross or CDL? **yes**
- Is it Very Expensive? **no**

The System can be yours for **under \$15,000.00**  
(Does not include IBM PC).

**WE TOLD YOU WE HAD A SOLUTION  
TO YOUR PROBLEM.**



For a demonstration or additional information, contact:

**ORDIGRAPHE INC.**  
1445 Provencher  
Brossard, PQ. J4W 1Z3  
Tel: (514) 465-0360

Circle #131 on Reader Service Card

## technitopics

On the question of STL bandwidth carried, the following resulted:

STL FACILITY	LOW LIMIT-Hz			HIGH LIMIT-kHz		
	MAX.	AVG.	MIN.	MAX.	AVG.	MIN.
radio, mono	50	43	20	15	14.3	12
radio, stereo	50	34	20	20	15.2	12
landline mono	100	7.5	47	20	15	13.0
landline stereo	30	25	20	15	15	15

Lease costs for landlines averaged \$272 per month, running from a low of \$30 to a high of \$1150. Construction charges ran from \$450 to a \$7,000 high, and averaged \$2,042.

The capital costs for complete STL radio systems broke down as follows:

BAND	SYSTEM	MAXIMUM	AVERAGE	MINIMUM
450	single hop	\$25,000	\$ 12,500	\$ 6,000
450	two hop	\$30,000	\$ 19,750	\$ 8,000
450	dual system	\$45,000	\$ 27,250	\$17,500
956	single hop	\$20,000	\$ 15,250	\$10,500
1700	discrete stereo	\$70,000	\$ 56,000	\$28,000
1700	composite stereo	\$50,000	\$ 44,500	\$40,000
150	single hop	-	\$ 6,000	-
450	12 hop inter-strn	-	\$100,000	-
956/1700	two hop	-	\$ 70,000	-

### Stand-by STL Facilities (AM Stations)

Regarding stand-by STL facilities, some stations indicated that

they had more than one alternative. The figures below represent the facility most likely to be used in an emergency situation.

- 7 - no stand-by
- 31 - mono landline
- 3 - stereo landline
- 5 - 450 MHz mobile used in emergency
- 13 - stand-by 450 MHz STL
- 4 - other (SCMO, LD phone, taped program, etc.)
- 3 - mono on discrete stereo radio channel

Mono landlines used for stand-by had bandwidths ranging between 2.5 kHz (the telemetry line) and 15 kHz, with an average of 9.5 kHz. The stereo stand-by landlines varied from 8 to 15 kHz and the radio stand-by facilities were all either 15 or 12 kHz.

Questioned on whether they would require a changed or additional STL, 17 suggested NO, though some qualified their answers because of possible AM stereo operation later. Three others, already provided with dual 450 MHz facilities, answered NO provided DOC does not force a change in the future.

Those who answered YES included 16 who mentioned AM stereo, of which several (including a 12 hop interstation system in Manitoba) specified that 450 MHz should be used. The unreliability of telco landline circuits was mentioned by 16 stations as a significant reason. Four other stations simply stated that they needed to replace telco facilities. Three stations faced a change in transmitter site, and one of these indicated that DOC had refused his continued use of 450 MHz at the new site. Three wanted back-up radio facilities, 2 wish to update their existing radio systems. Improved quality over that of landlines was mentioned by 13 stations. Reduced cost over that of landlines was listed by 12 stations planning to go to AM stereo. And one poor soul expects to have to relinquish 1700 MHz in favour of (he expects) 450 MHz.

The final question was whether the station foresaw any difficulty or additional expense due to the current DOC policy on STLs: 29 answered NO outright, 2 said NO as they already had twin 450 MHz channels, and 2 others because 450 was available in their areas.

Those answering YES provided a litany of reasons. The chief complaint related to the cost of the 1.7 GHz alternative, 15 stations listing the cost increases ranging as high as 4 times that of existing systems. Another 11 stations condemned the DOC policy of "preferring" 1.7 GHz even though it represented a one-supplier, high price situation. One station even took a swipe at the DOC licence fees increase. It was also pointed out that even the test equipment cost for the higher STL bands was "skyhigh". Four stations were very upset about their existing 450 MHz link not being allowed as a backup to new STLs.

### COMMENTS

Some of the detailed comments, edited for brevity and as to the actual telco involved, are worth repeating:

- "We have applied for and been refused a two-hop 1.7 GHz application. We cannot use a single 1.7 GHz hop due to terrain. We could use two 450 MHz links for stereo but were told that this was out of the question."
- "Not now. After going stereo, we had several telco failures, coupled with the fact that DOC advised that there were no additional 450 channels available. Due to congestion we moved to implement operation on 1.7 GHz. This has been done."
- "At present, we are not moving to AM stereo because of the existing requirement of dropping the STL 450 link. We feel that the 1.7 GHz equipment is not reliable enough or field proven to justify the risk of moving to AM stereo and finding problems with our link. Please note that the landlines are not available in any form to our existing AM site. Therefore, we rely solely on radio STL."

- "Yes. We estimate it will cost in the vicinity of \$50-60,000 to make the change to 1.7 GHz (STL costs only) for stereo operation. There is also the possibility of reduced reliability at the higher frequency."

- "Yes. The 450-451, 455-456 and 956-960 MHz bands are not congested in this area... we should be allowed to use the lower frequency bands for the best cost-effective STLs and reliability."

- "We have a 1.7 GHz link okayed by DOC. They want back both our 450 and 455 MHz frequencies. We have asked to keep the 450 MHz link as a permanent backup to the 1.7 GHz but have not had a response from DOC yet."

- "Yes. Having to relinquish the 450 MHz STL means loss of an entire investment, no quality backup. Expense of the 1.7 GHz as opposed to variety of 950 MHz equipment available is excessive."

### Stations are Critical of DOC Policies, Telcos, and High Cost of Equipment

- "We looked at STL, but because of the DOC 1700 MHz extra cost, went with the telephone company. If the DOC gets its act together, maybe we will reconsider. The chance of interfering with anyone else out here in small-town B.C. is remote in any case. Another point of concern for us is the protection of retailers of both Moseley and Marti. Both are protected in B.C. such that U.S. retailers have been threatened not to sell to us because there is a supplier in Vancouver or Calgary—whose prices are much too high. This is very poor."

- "Not sure—We do not know what effect 35 foot tides have on 0.9 GHz or 1.7 GHz over a 49.6 km hop."

- "Yes—I would like to have 450 or 455 mono link. If we have to go to 1.7 GHz our test equipment doesn't cover that band."

- "Yes—we may be required to change the frequency of our 1700 system because of the interference problem with the meteorological satellite receiving station in this city."


- "Difficulties would be less if all DOC offices could understand the policy."

- "Yes—Cost to replace existing STL with 1.7 GHz equipment will be about \$30,000 if path loss and receive antenna gain are adequate. If not, there will be additional costs to reinforce receive tower for larger antenna."

- "Yes. 1) Cost: will certainly pay for itself over lines. 2) Reliability: our lines to the transmitter have already been cut twice this year. 3) To have the facility under our own control: the telco does strange things with the lines, amplifiers, etc., and it is a real hassle to find out what has happened and correct it. When anything happens on telco lines, first you have to send a man to each end and prove that the trouble is telco before you report it. Then you need a man at each end for access to their people. Then you have to stay with the telco people to make sure they don't cut off anything that you are still using, and when the service is restored you have to do a retest for frequency, phase, etc. So there are people tied up who might as well be fixing our own equipment as working with telco to fix theirs...the time lost is horrendous (and) much worse when you have stereo lines that have to be phase equalized. 4) Better quality: An STL can provide wider bandwidth which will become more important as stereo improves and receivers improve. It is difficult for telco to provide phase equalization over a much wider bandwidth than 8 kHz. This was the best we could get over our STL path."

It is quite evident that broadcasters, particularly AM station operators, are more than a little upset over the current DOC policies regarding STLs.

Sandy Day is vice-president of Engineering Services, Canadian Association of Broadcasters. Readers' comments or questions may be addressed c/o CAB, Box 627, Station B, Ottawa, ON, K1P 5S2.



**Abroyd Communications Limited**  
Communication Towers & Services  
Engineers & Contractors

COMPLETE SERVICE FOR ALL YOUR TOWER REQUIREMENTS

**NEW TOWERS AND STRUCTURES  
GUYED OR SELF-SUPPORTING**

ABROYD designs, supplies and installs  
ABROYD can provide you with a tower or support structure

- from our many standards
- from our special aesthetically designed group
- custom designed to your own special requirements
- short or tall/heavy or light/square or triangular

**EXISTING TOWERS AND STRUCTURES**

Let ABROYD check them for you. We will

- inspect and report on their condition • plumb, tension guys and repair as necessary • refurbish, modify or upgrade to meet new codes or loading conditions • analyze relative to the latest codes and provide you with a full comprehensive report • provide structural adequacy certificates to satisfy D.O.C. and insurance requirements

WHY BUY A NEW TOWER IF YOUR EXISTING TOWER WILL DO THE JOB

**OTHER SERVICES**

- Inspection • Maintenance • Plumbing • Guy Tensioning
- Engineering Services • Modifications • Rigger Services
- Tower accessories • Lights • Grounding • Safety rail • Antennas
- Transmission Lines • Alignment • Foundations • Access Roads
- Small Buildings

ALL WORK GUARANTEED AND BONDABLE  
ALL WORK TO CSA-S37  
TOWER SERVICES BY PROFESSIONALS FOR PROFESSIONALS

614 Colby Dr., Waterloo, ON, N2V 1A2 Tel: (519) 746-1743 Tx: 06-955187



---

---

# BROADCAST BEAT

by Phil Stone

---

---

**SUMMER SUMMARY:** **Brian Minton** is leaving the Radio Bureau of Canada after three and a half years as president, during which he accomplished a great deal for RBC. He'll open a corporate office in Toronto for Moffat Communications with the title of vice-president, marketing. A successor is yet to be named... Speaking of RBC, praise is still coming in for its Radio Product Measurement—a \$250,000 project which gives valuable data on radio demographics, media impact, shopping habits and product usage in the Toronto and Montreal markets... **Harold Grabowsky**, who left All-Canada to go with CFNY Toronto, returned to AC as a senior radio rep... Sadly, the fine magazine *Stimulus* folded after almost 20 years; publisher **Bob Bale** describes the curtailment as a suspension of publication. Bob continues to publish *AdNews* and his *News of Advertising* is now heard twice-daily Monday-Friday on the CKO network...

**SUPERSTATIONS:** With CRTC approval, CHCH-TV Hamilton would extend Ontario coverage using rebroadcasters, microwave links, and cable systems, to carry its Cancom satellite feed... And local CITY-TV Toronto hopes to go across Canada via satellite... *Different regions, different problems:* CFRW gave away 'I survived the '85 Winnipeg Canker Worm Invasion' T-shirts in a contest on the **Jim Brady** morning show... And some news of two famous Canadian band leaders: **Mart Kenney**, who lives out west (where else?) received an honorary degree from the U. of Lethbridge, which he can add to his Order of Canada. **Moxie Whitney** is back in Ottawa, at the Chateau Laurier...

**Andre Bureau**, the CRTC chief, is in a job where there is always pro and con—those for you and those against you. One of his fans is broadcaster-author-columnist **Barbara Amiel**, who wrote that Bureau should get a special award for 'common sense and exemplary behavior as a civil servant'... **Doreen Kays**, a former CBC-TV reporter and correspondent for ABC-TV, is now manager of CTV's Montréal bureau... The CRTC approved Télécapital's sale of CHRC/CHOI-FM Québec City to Capital Radio Operations Inc., and Rawlco's purchase of CFMC-FM Saskatoon from General Broadcasting... Many Ontario stations did yeoman service raising funds for victims of the tornadoes of May 31: outstanding were CKVR-TV Barrie, which ran a day-long telethon, CJCL Toronto, and CKBB, where **Jeff Walther**, one of our former students, now vp, programming, wrote of the fine effort (see his letter elsewhere in *Broadcast Beat*)... We remember when '**Jungle Jay**' **Nelson** came to CHUM's morning show and became an instant hit with the Toronto audience. He later moved to CITY-TV as weatherman, then to a CKFM daytime show. Now he has returned to the morning ranks at CHFI, succeeding **Sandy Hoyt**, whose unfortunate diabetes prevents him from continuing the morning role and who is now community affairs director for 'FI... At CKLN on the Ryerson campus, **Adam Vaughn** became manager and **Brad Reed** pd; they succeed **Anton Leo**, now with CBC Radio, and **John Jones**, respectively... **Jacklin Williams**, formerly of CKOY/CKBY-FM Ottawa, became news director at CKOA Arnprior, ON.

We hear that the CRTC will hold hearings for the new Toronto FM licence in late November or December, with the decision coming in early spring... **Louise Arcand's** claim that she was dropped as CBFT Montreal news anchor because of age raised some interesting points: a recent U.S. survey indicates that while 40% of news anchors 27-35 are women, only 1% are women over 40. Arcand, one of the first women to hold an anchor job with a major French-language TV station, was a month shy of her 40th birthday when she was replaced by a 28-year-old...

In an innovative promotion, Ontario cable TV companies teamed up with First Choice and Loblaw supermarkets; they offered free pay-TV subscriptions for one month to shoppers buying \$50 worth of groceries. The package included First Choice, TSN and MuchMusic... A scholarship program for high school students pursuing an education in the communications field has been set up by Classic Communications in Richmond Hill. The bursaries are worth \$500... **Dan Matheson** left CFTO-TV Toronto to join CTV sports as anchorman on *Wide World of Sports*, NHL and CFL telecasts... While the audience for the three major U.S. TV commercial networks declined over 10% in recent years, PBS grew by 36%... **Joan Collins** always does it up big: the star of *Dynasty* celebrated her 52nd birthday by giving a party in Paris, France... NBC-TV will compete with *Dynasty* this fall with a series about a tough-guy priest: *Helltown* will star **Robert Blake**, who wanted to go up against one of TV's most popular shows... **Jack Palance's** daughter, **Holly**, who appeared with him on *Ripley's Believe-It-Or-Not*, has bowed out of the program—her replacement is **Marie Osmond**... **Taylor 'Hap' Parnaby** relinquished the title of president at CKO; he's now editor-in-chief, assisted by **Bob Holiday**. **Sam Stewart**, who joined CKO in 1984 as c.e.o., is president; **John Gilbert** is pd... CKFM pd **Jerry Good** resigned. Jerry, who teaches at Ryerson, is reported to be working on a project to do with native broadcasting in the Yukon... **John Mackey**, who took over as gm from **Bill Ballentine**, will also for now serve as pd... CBC Radio appears to have scored a bulls-eye by hiring the very funny writer **Erika Ritter** as host of a new mid-afternoon show dealing with modern lifestyles...

---

## The 35th Annual CCBA Convention in London, Ontario

We travelled with Doug and Jacquie Loney to attend CCBA's excellent convention... Earlier we had contacted Gerry Acton and told him it was about time we profiled him in *The Phil Stone Report* and arranged to interview him during the convention. How great it was to be present later when he was named the 1985 winner of the Ruth Hancock Memorial Award—what a great piece of timing!

It was also a pleasure to renew acquaintances with so many friends in broadcasting, including: Ross McCreath, Stu Mackay, Wes Armstrong, Brian Minton, Carol Weir, Lyman Potts, Bob Macdonald, Don MacDonald, Gary Parkhill, Larry Taylor, Bob Quinn, Bill Hutton, Bob McKeown, Ralph Hart, Sheri Craig, Paul Hanover, Neil Aitchison, Howard Christensen, Bob Redmond, Jean Caine, Michael Caine, John Radford, Barry Hamelin, Charlie Fenton, Rick Richardson, Bill Brady, Gord Hume, Mike Hanson, Barry Sarrazin, David Bond, Mark Rogers... and the charming wives—some of whom we met for the first time, such as David Bond's attractive spouse. At lunch, we sat beside Carole Richardson (Rick's wife) and learned that, as a mature student, she had gone back to university, obtained her B.A., and will graduate this fall along with her daughter!

We visited the Radio Bureau of Canada display—many projects completed or underway testified to the innovative work being done by the RBC staff... Also, we dropped by Jim Adam's booth of promotional material—including the 'Sports Bug' ear-plug radio and 'Treasure Chest' promotion with its timely computer-game appeal... All in all, as perhaps you have gathered, we once again enjoyed coming together with the CCBA branch of Canada's broadcasting family... →

We're pleased to add CKPC AM-FM Brantford to the stations sending us news: **Dick Buchanan's** staff advises that **James Tuckett**, former Soo, Sudbury and Kitchener newsman, has become news director... **Bob Pickell** left TvB as vp, national sales, to be national sales mgr at CFMT-TV Toronto... In border cities, the under-40 group tunes to 10 hours a week of U.S. FM programming, compared with only 5 hours of Canadian listening. Reason: generally more music, more current hits, and newer kinds of music, Stateside... Canada lost one of its leading character actors, who appeared regularly on CBC, when **Sean Sullivan** died of cancer at 63... And former sports writer **Matt Dennis** of Windsor passed away at 63 after a long illness.

The family of the late **Raymond Crepault** has sold the Radiomutuel group to **Normand Beauchamp**, its president, and **Paul-Emile Beaulne**, exec vp; they'll retain control while making a public offering of shares... **Lorna Rogers** of CBC became co-chairman of the Women's Press Club of Toronto employment committee... A featured performer in the Toronto version of *A Chorus Line* is **Lisa Robertson**, daughter of **Lloyd Robertson**... BT, one constantly finds, is read everywhere—including New York. In a recent column, we mentioned Peoplefinders, which finds 'ordinary people' for TV ads. **Jessica Josell** of The Raleigh Group sent along some more info about Peoplefinders and its president, **Laura Slutsky**, who spends two-thirds of her time 'on the road' finding credible characters—mostly in shopping malls... For its weathercasts, CITY-TV Toronto now has two cameras on the CN Tower. Directed by remote control, they give live views of the skies and incoming weather... Sorry to hear of the passing of **Bill Guest**, the veteran CBC announcer, at age 57 of a heart attack. He was perhaps best known for his years as quiz-master of *Reach for the Top*... **Marlin Perkins**, now 80, retired from the long-running *Wild Kingdom* because of ill-health... Our weekly *Arts in Ontario* interviews first went on-air in October, 1975, with **Leon Major** as our first guest. The

Ontario Arts Council program, now entering its 11th year, is heard on stations across Ontario, plus the CKO national network.


*Profiles in Nature*, the half-hour wildlife TV documentary produced by Keg Productions and aired on Global TV, was sold to buyers in the Arab world where nature programs are popular because they're inoffensive—do not offend the Arabs' religious sensitivities. The show has also sold well in Singapore, France and Australia, via Ralph C. Ellis Enterprises. Another TV program with strong overseas sales is *The Cities* series—picked up by Germany, Saudi Arabia and some U.S. PBS stations... **Anne Murray** didn't hide the fact that she turned 40 recently... TV Ontario is to develop a separate 70-hour-a-week French service, to be delivered over cable via satellite. Costs of about \$6 million a year will be split by Ottawa and the province.. More jargon: *bi-modal* usually means a TV program that appeals to both the very young and very old... **John Burgess**, entertainment-society reporter for CITY-TV and CFRB Toronto, is a Queen's U. grad (geography, history) and taught high school in Ottawa before turning to show biz journalism... **Hal Linden** will star in a new series, *Black Magic*... **Howard English** called to say that he and **Ted Randal** now call their firm Randal-English Inc. and are in new quarters at 325 Yonge St. S., Newmarket, ON, (416) 898-4848. They're consultants for CISV Winkler, MB, and the Newfoundland VOXM network (VOXM topped the latest ratings for St. John's) and are Canadian reps for Drake-Chenault, marketing various formats adapted to CRTC requirements.

The Academy of Canadian Cinema, restructured to include TV, is now the Academy of Canadian Cinema and Television and plans national awards for TV programming by the end of '86. **Audrey Cole**, a program exec with the now-defunct C-Channel, is managing director of the new TV division... Radio Canada gave its \$1.7 million ad account to Cossette, Montreal... **Alan Thicke** is said to be very good in the ABC sitcom *Growing Pains* due this fall and bought by Global TV here... CFPL-TV London hired **Lorne Freed** as program manager (he'd been exec vp at CKWS-TV Kingston), and promoted **George Clark** from managing editor to news director... **Roy Bonisteel**, host of CBC's *Man Alive* was appointed 1985 honorary chairman of the Muscular Dystrophy Association and has been on a speaking tour across Canada... Agency mergers: Saatchi & Saatchi PLC of Britain bought Hayhurst, now Saatchi & Saatchi Compton Hayhurst Ltd.—**Jim Hayhurst** remains as chairman. And D'Arcy MacManus & Masius merged with B&B to become D'Arcy Masius Benton & Bowles Inc., now Canada's 10th largest ad agency... With **David Mazmanian** having returned to broadcasting, **Stan Larke** is again co-ordinator of the Humber Radio course... A TV quiz show featuring questions on various Québec regions was sponsored this summer by the Québec Ministry of Tourism on Télémétropole, at a cost of \$245,000. Two adults and one young person competed on the show, which was considered an effective way to promote vacation activities in the province...

TV shows in the works: a *Hollywood Wives II* mini-series, a TV re-make of *Boys Town*, a new sitcom called *Valerie* with **Valerie Harper**, and an expected spin-off of *Dynasty-The Colbys of California* with **George Hamilton** and **Charlton Heston**... For supervising a \$40.6 million budget, 46 stations and 450 employees, CBC Radio's **Margaret Lyons** is reported to earn \$80,000 a year... STEREO TV seems to be on the way: at last report, 70 U.S. TV stations were so equipped, mostly in major markets, reaching some 55% of U.S. TV homes... **Curly Morrison**, the former NFL star and colorful CBC sportscaster, is now 56, works for a securities firm in L.A... **Gord Haines** left CITY-TV news to join First Choice as vp/gm; promoted to replace him: **Stephen Hurlbut**, director, news programming, and **Marcia Martin** (sister of comedienne **Andrea Martin**), director of news operations, in addition to head of production... →

# STANDARDS CONVERSIONS

PAL • SECAM • NTSC



We convert  
1", 3/4" and 1/2" Beta and VHS Video Tapes  
to and from the three world TV Standards —  
For all your worldwide video needs  
Call Us At  
416-449-3033

**INTERNATIONAL  
Image  
CONVERSIONS INC.**

29 Prince Andrew Place, Don Mills, Ontario Canada M3C 2H2 (416) 449-3033

Circle #174 on Reader Service Card

**...We Get Letters...**

• **From Jeff Walther, CKBB Barrie:** As you know, the Barrie area was devastated by a tornado on May 31. Over 400 homes and 8 lives were lost in Barrie alone, and hundreds of jobs were lost... CKBB was not only an integral part of the 'Disaster Plan' instituted immediately after the tornado, but also a key element in raising funds for the victims. On June 7 and 8, a 32-hour 'Radio-Thon' urged people to visit a mobile studio on a main thoroughfare with cash or cheques... The project netted over \$125,000... actually worth \$500,000 to the Relief Fund, with the province of Ontario's 3:1 commitment...

• **From Dan Nyznik of CHRO-TV Pembroke:** Bob Karstens is not really 'another loss to the U.S.' (*Broadcast Beat, May 85*). He's originally from Texas, having moved to Canada in the late 1960s... I worked with Bob in Charlottetown (and) do agree that he's talented... Keep up the good work.

• **From Joe Reilly, CKCU-FM Ottawa:** Had the pleasure of reading your article on CHEZ-FM and thought you might be interested in another radio story here in Ottawa... our upcoming 10th anniversary and some of the celebrations being planned. CKCU-FM is the campus/community radio station broadcasting on 93.1 with 12,000 watts... it began as a radio club at Carleton University in the 1960s, and went through many stages of development, receiving an FM licence in 1975... The station is staffed by 150-250 volunteers, co-ordinated by an executive staff

of 10... It strives to provide alternative music... to cover events and groups often ignored by other media, and look behind the scenes... Each year we hold a public funding drive... At the culmination of this year's drive we are planning a gala party for CKCU alumni— on Saturday, Nov. 16 at Ottawa's Congress Centre... Some of those planning to attend include: Chris Henry of CBC-TV, Rob Braide of CHOM-FM Montreal, and Doug Coupar of CBC Toronto... (Alumni are invited to contact Pat Nagle or Joe Reilly, CKCU-FM, Rm. 517, Unicentre, Carleton University, Ottawa, ON, K1S 5B6, telephone (613) 231-4498.

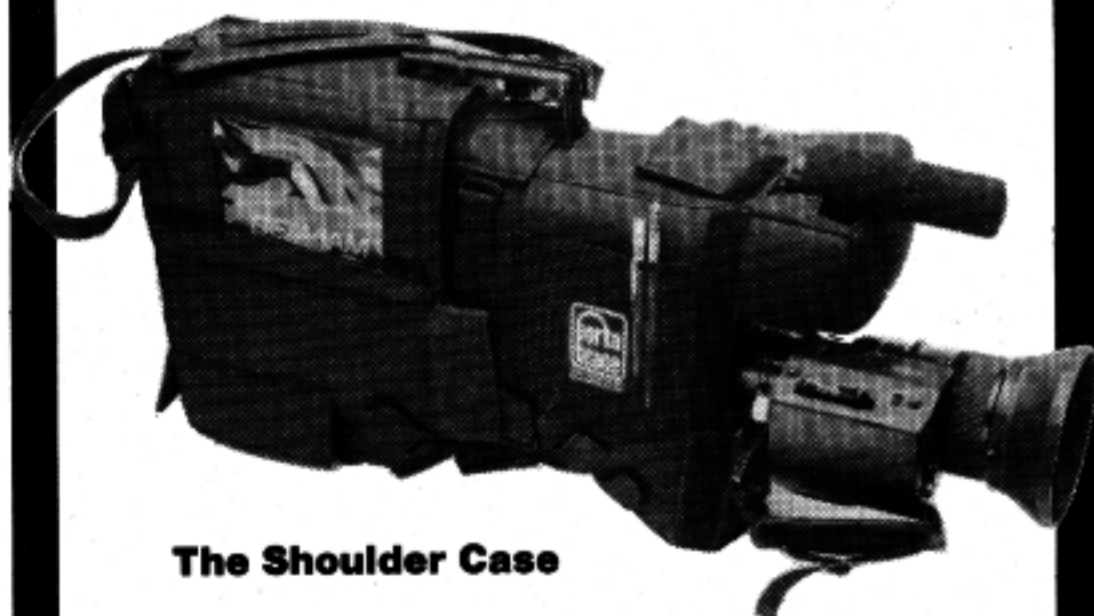
• **From Tony Cox of CHEK Victoria:** News of RTNDA's B.C. Regional meeting held in Victoria... Elected directors are J.J. Richards of CFUN Vancouver (radio) and Tony Cox (TV)... Pat Monk, manager of media relations for ICBC, won CP Air's two free tickets to Auckland to introduce their service to New Zealand... C-FAX Victoria and CKVU-TV Vancouver took the Dan McArthur awards, and a Charlie Edwards award went to CFJC-TV Kamloops.

• **From J.J. Richards of CFUN Vancouver:** ...1986: the year of Expo and the Vancouver Centennial—the national convention for RTNDA will be held in Vancouver at the newly-constructed Pan Pacific Hotel, located in Canada Place in the harbor, in Canada's most beautiful city... *And yes, J.J., we do recall your colorful background and the time I bought you lunch (once) at CHUM 'a thousand years ago'...*

**Bronwyn Drainie** resigned from CBC Radio... **Paul Kellogg**, we hear, is at CJCL Toronto... **Kirk Nesbitt**, from CFRB, became director of engineering at Rogers Radio... **Wanda Miller**, the former mayor of Gravenhurst, ON, passed away this summer. For nine years, she hosted *Rolling North* on CFOR Orillia... We were pleased to see **Michael Caine** elected vp of CCBA—he follows in the footsteps of his late father, Howard, and his mother, Jean, in caring about and working for the radio industry.

Our eldest son, **Jay Stone**, who had been assistant city editor, then design editor, at the *Ottawa Citizen*, was promoted to management as entertainment editor... While visiting we noticed **Larry Solway & Nuala FitzGerald** were appearing in *Same Time Next Year* at the National Arts Centre... Veteran broadcaster **Ralph Connor** joined CHEX Peterboro as exec vp... **Doug Shillington** is gm of re-organized CKST St. Albert, Alberta... Named manager of sales/marketing at TVOntario is **Janice Currie**, formerly of CFTO and Glen-Warren... CBC director of information, Atlantic region, is **Louise Imbeault**—succeeded by **Madeleine Champagne** as co-ordinator re: portrayal of women in programming... **Steve Low**, an account exec at CFPL-TV, was elected vp of the Ad & Sales Club of London... Typical costs of a 30-sec. spot on CBC-TV: \$15,000 on *Dallas*; \$8,000 on *Newhart*. CBC sells 90% of all avails in U.S. shows, 80% on Canadian shows... **David Walker** left TVOntario after 10 years as executive director... Two Stratford Festival productions were taped this summer by CBC-TV: *Pirates of Penzance* and *Twelfth Night*... Canada's largest co-op advertising data base has been put on micro disc by Radio Bureau of Canada, giving access to information on more than 700 co-op ad programs... RBC, with the Broadcast Executives Society and Canadian Association of Broadcast Reps, will sponsor the major radio commercials competition, to be known as the *1985 Star Awards*. **Vic Mengale**, president of Western Broadcast Sales, heads the awards committee, and the gala awards dinner will be held on October 23rd at Toronto's Sheraton Centre. For entry or ticket information, call **Carol Weir** at RBC... CHUM's **Dick Smyth** is now writing a weekly column for the *Sun* newspapers...

*Phil Stone welcomes your news for Broadcast Beat. Write c/o 2350 Bridletowne Circle, #1601, Scarborough, ON, M1W 3E6.*

**BETACAM Cases****The Shoulder Case**

No matter where you take it, no matter how you carry it, we have a case tailored to your BETACAM system. Our Shoulder Case, Quick-draw Beta Case, Hip-carried Recorder Case, and Field Player Case provide protection, comfort, and ease of operation under the most demanding ENG/EFP conditions. All our cases for BETACAM are made with the high-quality materials and workmanship that have made PORTA-BRACE® the leader in the field. See your dealer or call us for more information.



**K and H Products, Ltd.**  
Box 246, North Bennington  
Vermont 05257 (802) 442-9118

Circle #162 on Reader Service Card

---

---

# THE BASICS

---

---

## By Bruce Dingwall



## Conversion to AM Stereo

### Part 13 of *The Basics* takes a further look at AM Stereo—including Multi-System Decoders

Last issue, I attempted to describe the four AM Stereo Systems which had vied for public (read *industry*) approval, and told the story of the battle for supremacy. As I warned, I was working from the literature which I had at hand, most of it from the manufacturers. There were a few inaccuracies, which were pointed up to me by the wizard of AM Stereo, Bob Streeter.

I had sent Bob a copy of the Part 12 manuscript for just that reason, but his business kept him from replying until it was too late to get the correct information into the July/August installment of *The Basics*. In the following section, I will pass on some additional facts and correct a couple of errors with information from a recent letter from Bob.

#### Setting the Facts Straight

The FCC encouraged the AM Stereo system testing via NAMSRC, but did not actually participate.

It is the ferrite loopstick that causes the greatest loss in sensitivity, rather than the lack of an RF stage in AM radios. The loopstick is the source of the weak signal noise floor limits, while the IC chip sets the strong signal noise floor.

An RF amp will not help the loopstick limitations, although an RF amp might allow a better loopstick design. The loopstick is also the primary bandwidth limitation at the low end of the band, and the IF is secondary. In many cases, there is local radiated interference that overrides any limitations in the receiver.

In fact, it is weak signal (adjacent channel) interference that initially drove the AM receivers to narrow selectivity...congratulate the dense audio processing practices in broadcasting for that one.

The IF bandwidth is usually more significant against interference than its effect on internal noise limitations, although they are present. Few realized that wide IF response will reduce the station effective coverage due to the increased interference floor in weak signal areas. What

is needed is an IF response that will automatically narrow with weak signals or noisy strong signals.

Bob suggested we refer to the L-R signal into the transmitter as an *angularly modulated* RF carrier. Also, the only system which used a true quadrature detector was Harris, and that the PMX system used a linear phase detector (I should have known that).

As well, in quadrature, the carrier must be suppressed for correct operation, otherwise the carrier will be the vector resultant of the in-phase and the 90-degree offset carriers.

To correct a statement I made, there is *no* spectrum problem with the quadrature technique. Any problems might be in the detection hardware.

Also, there was a typo in my statement about the Motorola system: it trades the envelope detector compatibility problem for a complex stereo decode algorithm which can be optimized for *separation* or distortion, but not both at the same time.

#### Some Other Facts

Bob also made some other interesting revelations in his letter, many of which are too personal to the systems for me to go into in a general discussion.

There is one quality which I admire more than any other in Bob, and that's his honesty. It may get him in trouble, but at least you know that you are hearing unembellished facts. I would suggest that if you ever have the opportunity to hear Bob Streeter speak, or to talk to him at a convention, do so.

I also want to mention that after *The Basics* was published in July/August, I received a very nice call from Leonard Kahn. I had never met with or talked to the man before, but I came away from a very short conversation with a very positive impression of him. The industry owes this dynamo its thanks for motivating the whole idea of AM Stereo; we will definitely hear much more from

Leonard Kahn in the near future.

He pointed out something regarding solutions to the platform motion problem, and the use of WWV as a reference for all stations on the same frequency. The signal from WWV is not phase stable—it was never intended to be. Therefore, no practical solution for establishing a reference exists.

He also advised that the new series of Kahn exciter is producing single channel distortion figures of less than 0.7%. And, he told me why the chip that Sony use in the SRF-A100 radio is ideal for his system: (More about that later.)

And, in answer to the calls I have received about the stereo system I like...given the choice between Motorola and Magnavox, it's still PMX. I have heard the Kahn system on CHUM, and I'm impressed. But, without firsthand experience with it, I cannot make a choice between three systems.

I have expressed my interest in learning more detail about the Kahn system, in order to address comparisons between it and Motorola with more authority. This will ensure that the information I pass on to you, the reader, is as accurate as possible.

PMX is classic in its simplicity and ease of implementation, and it yields spectacular and consistent stereo performance results. I can only wish, along with its other supporters, that NAP Knoxville had had the resources to continue development of a second generation decoder, along the lines of the one under development at the time of the Delco tests.

With the use of an inverse modulator in place of a limiter, and control of the amount of negative peak expansion to limit the dynamic noise floor variations, it would have worked better than the Motorola decoder. (Sigh!)

This brings us to the question of *correct* versus *approximate* detection. The first detector offered for PMX was pretty much a *correct* detector. It was made up from the National LM1981N chip, and it

suffered from the problem of noise bursts occurring when there was deep negative envelope modulation, and the phase modulated channel was lost. The detector would chase for the information as the envelope pinched off, with the rumored noise bursts as a result.

I use the word 'rumored' with some authority, since I had the opportunity to hear CFRB's PMX system on a National LM1981N detector during the CCBE Convention in 1983, and despite listening at length to CFRB in stereo, I did not hear any noise bursts! And, while we are CFRB, we modulate right up there with everybody else. I did have one thing going for me—something which is only common sense and good engineering practice, as far as I'm concerned—I never let the negative modulation pinch the envelope off.

The PMX decoder proposed above would be an *approximate* detector for that system. It would offer excellent stereo performance, but it would acknowledge the fact that a point is reached where the decoder ceases to function as a detector, and allows the signal to collapse in place of having signal mixed with noise.

Besides, with *correct* detection, the Motorola system would do the same thing;

if they allowed the cosine term to go to infinity, it would suffer the noise burst while preserving the correct signal recovery for as long as possible. It should be realized that Motorola will have a noise problem with deep negative peaks in mono as well as stereo, but that the problem will be postponed until the carrier is reduced to the noise floor level.

As it is, the detector which Motorola offers us is an *approximate* detector, since they prevent the cosine term from increasing the L-R channel gain much above 10 dB (the 70% single channel modulation limitation of the system).

The *optimum* approximate detector for any system would have a dynamic decision on the collapse threshold as a function of the noise floor (noisy signals need a smaller allowed gain range).

**MultiSystem Decoders**

Finally, in the area of detection, here is what I have been able to find out about the multi-system receivers available from Sony. Much of this information comes from an April 1985 information package from Sony concerning "IC's for 4 System AM Stereo". In it they describe the chips, and an evaluation (typical) circuit.

The industry was very surprised and delighted when Sony brought the SRF-A100 and the SRF-A1 radios to market. Delighted, because they had produced an AM/FM radio with excellent Am stereo quality (in headphones).

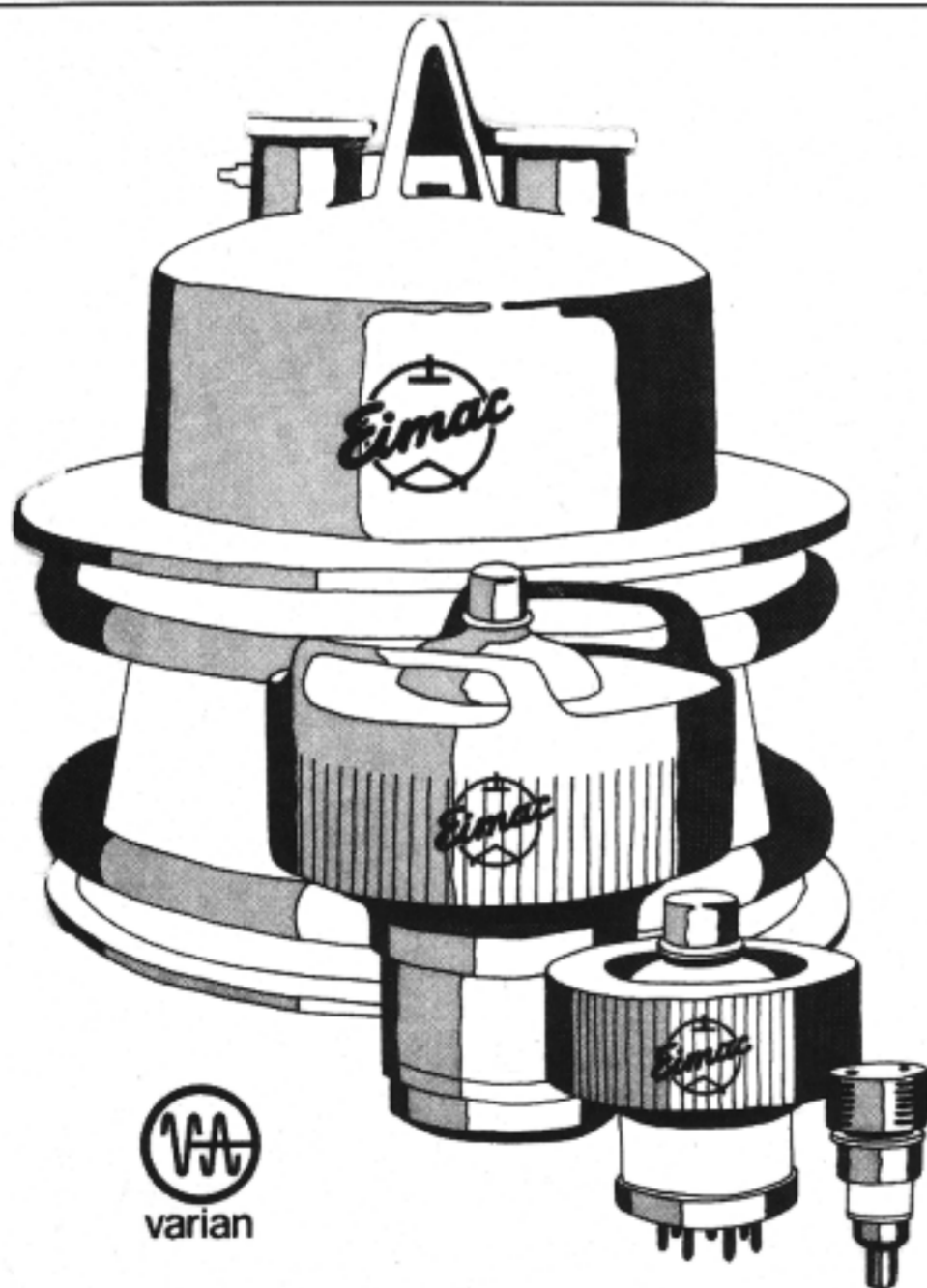
Surprised, because Sony had invested time and money into the development of a chip to decode a variety of systems. But let's look at exactly what kind of decoder chip they produced.

Called the CX857, the chip is identified as an AM Stereo Decoder. Its specification sheet lists the following functions: "Envelope Detector, PLL Synchronous Detector, Inverse Modulator, Muting, PM Detection and OP Amp". While the CX857 does produce an L+R and an L-R signal, it cannot actually tell one system from another, and thereby do accurate decoding of each system. Sony included a *synchronous* detector, required for correct decoding of Harris, but never used, according to the SRF-A100 circuit diagram.

In the early receivers, these signals were passed to another chip, the H8D1480A, which is identified as a "2-channel Amp Unit". This chip contains a Phase Shift Network and a Matrix. The PSN is used to adjust the phase relation-



**EQUIPMENT LIMITED**



**For All Your  
EIMAC Tube Requirements  
Contact:**



at

**1-800-268-4081**

**1-416-438-6230**

*"Remember to deal with the Pro's"  
at Caveco.*

1121 Bellamy Rd. N., Unit 10,  
Scarborough, Ont. M1H 3B9

ship of L+R and L-R in the B mode (for Kahn). The matrix produces the L and R signals which are passed on to the audio amps.

According to tests done by North American Philips using the CX857 in the SRF-A100, the lowest distortion figures were obtained from a PMX signal; the best separation was from a Kahn signal; and, according to one source in the company, "it doesn't do Motorola (signals) any favors."

However, AM Stereo couldn't have been happier. Sony had produced a radio with a (selectable) wide bandwidth. Whether the station was stereo or mono, the true quality that could be obtained from AM radio was apparent. As well, they included a dandy phase detector, the prime requisite for excellent operation.

I mentioned earlier the conversation with Leonard Kahn; the inverse modulator Sony used in the CX857 is compatible with the Kahn signal. This is the reason why the Sony radios produce the good results with the Kahn system signal.

The new series of home and car receivers being released by Sony appear to use the same CX857 chip, augmented by one of two new chips. The CXA1017 and CX20177 ICs were developed to take the place of the Matrix and single PSN in the H8D1480A.

The Sony spec sheet for the CX20177 lists one of the chip characteristics as "Full automatic MultiSystem detection". Sounds interesting, but looking at the system functional, it is evident that the chip only detects the four systems. It doesn't decode them separately and correctly.

Which is probably why Motorola don't particularly like the concept of multi-system, as represented by this chip set.

Remember that the new system consists of the original CX857 followed by a CX20177. On the specs sheet for the CX20177, it lists the following functions: "PLL Pilot Detector, PSN (90° Phase Shifter), Matrix, Safety Logic, Muting Control Output and LED Driver".

The new multi-system receivers have LEDs on them to indicate Stereo, Motorola, Magnavox, Harris and Kahn. The receivers switch in and out of stereo automatically when the Lock Detector operates. By using the pilot tone detected, for the Harris system the synchronous detector is used instead of the envelope detector, and for Kahn the phase shift network is switched in automatically.

This Sony system is certainly a step forward from the original radios, but is not exactly what broadcasters expected it to be.

**Down to Business**

The conversion of an AM station to stereo

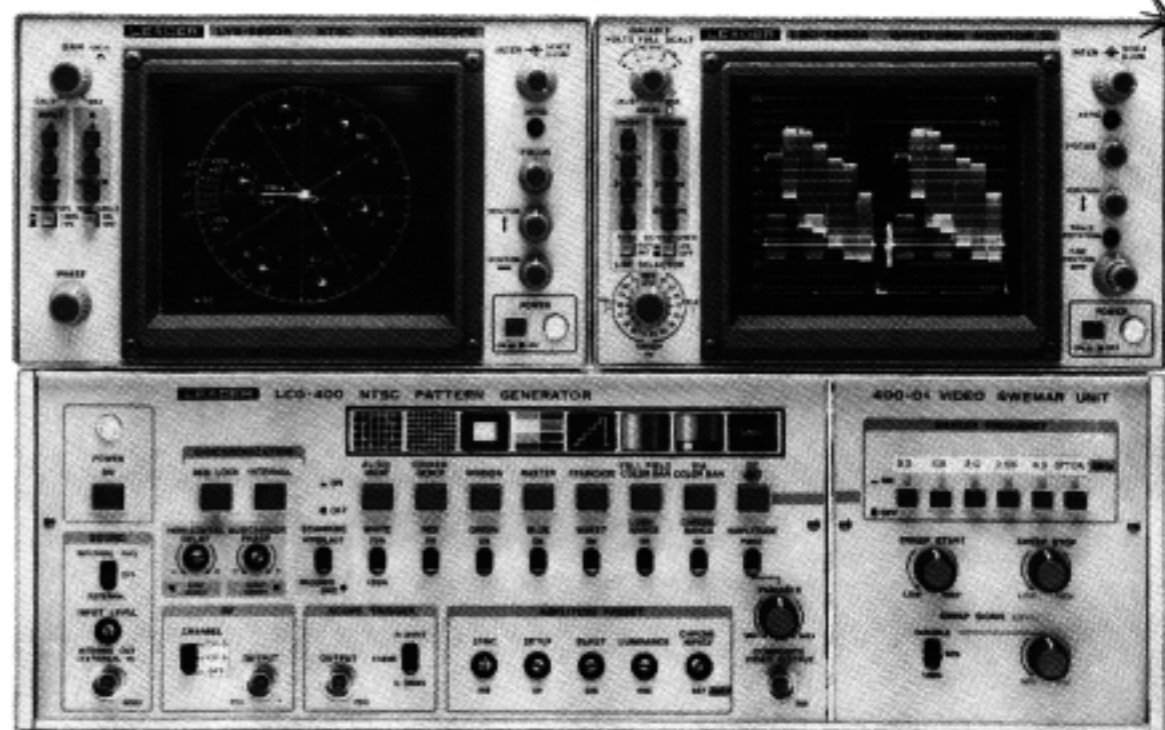
involves a number of areas which I want to address: the studio equipment, the STL (landline or microwave) and the most important link in the chain, the transmitter.

AM transmitters, and particularly older ones, were never designed to propagate anything through the RF chain other than the carrier frequency. Whether or not there were any distortions to the waveform was immaterial.

But, in order to successfully transmit AM Stereo, it is necessary to send a very carefully generated signal through a

rather imperfect path. The quality of the AM stereo perceived at the receiver is very dependent upon the degree to which that angular modulation L-R signal is unaffected by the RF stages of solid state and tube devices.

There are two main contributors of distortion to the L-R signal: incidental phase modulation (IPM) and time delay. The time delay problem is relative to the propagation time of the L+R signal through the conventional audio stages, and the L-R signal through the RF stages.



## The fastest rising stars in video test instruments.

Video engineers, studio and station managers all go for star-quality Leader features and value. With immediate delivery and a 2-year Omntronix warranty on all labour and parts, even CRT's, it's no surprise that more and more networks and stations are booking Leader. We've got the right performers at the right price.

**The only vectorscopes with etched and/or electronic graticules.**

Only Leader's half-rack LVS-5850 gives you a choice of standard graticule, or electronically generated targets which are easily read from afar or in the dark. • Electronic targets reduce parallax and non-linearity errors. • Three loop-through inputs

**LEADER**  
Instruments Corporation

including dedicated external sub-carrier reference.

**The first half-rack waveform monitor with a line selector.**

Leader's LBO-5860 has many more features than higher priced half-rack waveform monitors. • Front panel line selection for displaying VITS and VIRS. • Lines 14 through 21 on fields 1 or 2 can be individually selected. • Output blanks vectorscope to display selected line vector only.

**Get the generators with every important feature ... including economy.**

Compare the LCG-400 to any

other sync/test generators. Feature for feature, dollar for dollar, they can't be beat! • Seven primary test signals with many auxiliary outputs. • Genlock with adjustable horizontal delay and subcarrier phase. • Sync, set-up, burst, luminance, and chrominance levels, all front panel adjustable.

**The video engineer's oscilloscope.**

Video engineers will reach for the 100 MHz Leader LBO-518 first. It's the better way to troubleshoot systems and equipment. • 2 independent active sync separator trigger inputs. • 4-channel, 8-trace capability. • PDA CRT, with 20 kV potential.

Rack up some stars at your studio. Call or write today for our latest full-line catalogue.

2410 Dunwin Dr., Unit 4,  
Mississauga, Ont. L5L 1J9  
(416) 828-6221 Telex 06-22324

8100F, Trans-Canada Hwy.,  
St. Laurent, Que. H4S 1M5  
(514) 337-9500 Telex 05-824151



**Omnitronix** Instruments that measure up

Circle #203 on Reader Service Card

For proper stereo, they must arrive at the receiver at the same time.

All of the available AM Stereo Exciters have provisions for switching an adjustable delay chain into the L+R or the L-R path, in order to even things up.

The problems of IPM reduction are unique to each transmitter; Continental Electronics, and other transmitter manufacturers, have papers available to help the broadcaster with his particular problems. As a result, the information here will be an overview only, consistent with the pur-

pose of *The Basics*.

While the equipment necessary to measure Phase Modulation is usually not readily at hand to the average broadcaster, it may be possible to borrow it from the local Community College or University, in order that the amount of IPM in the transmitter can be quantitatively assessed and dealt with effectively.

It is also possible to do this work with a spectrum analyzer, and the instruction books I have seen from Motorola and Con-

tinental describe what the user should see if the performance is good.

Finally, outputs are available from the AM stereo system modulation monitors which can similarly be used for checking the amount of IPM in the transmitter, and how much it is reduced.

In general, IPM degradation of the L-R information can be reduced in a couple of ways. The first is by the elimination of phase modulated hum in the RF stages. A Sony SRF-A100 can be used to determine the presence of hum in the L-R information, simply by listening to your mono program with the receiver switched to the AM Stereo position; the mode switch can be in either the A or B position.

If there is a hum heard in the stereo mode that isn't there in the mono mode, then it is a phase noise problem. Usually, this can be corrected by improving the filtering in the power supplies feeding the low level RF stages in the transmitter.

Another method of reducing the IPM is critical tuning of the low level RF stages, particularly the IPA; sometimes broadbanding of the IPA is also necessary. Some fiddling with the valves in the PA neutralization circuits is sometimes necessary; low IPM is a by-product of careful neutralization. As well, careful tuning of the final stages is necessary.

In transmitters like the Continental 316AF or the Harris solid state low power transmitters, the tuning of the interstage coupling circuits in the exciter will improve the stereo performance.

Finally, the antenna system should be reasonably flat to at least 10 kHz on either side of the carrier; an anomaly on one side will affect the stereo performance sufficiently that the available adjustments in the exciter cannot overcome it.

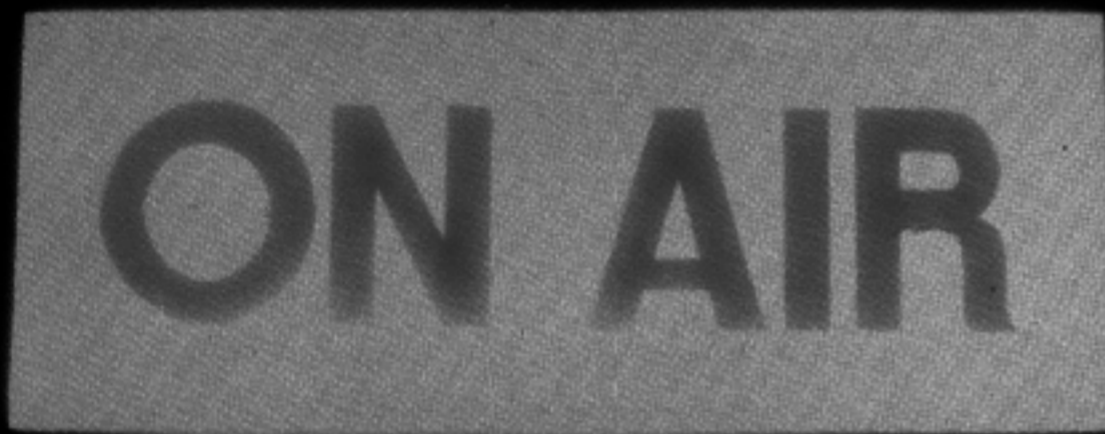
Figures from a CEMC report indicate that typical performance figures for AM stereo systems are: Midband separation of 35dB; 7500 Hz separation of 20 to 25 dB. The quirks in each installation are amazing, though. Great L to R figures, and poor R to L. Or good separation but high distortion.

It all takes work and patience because, as I indicated earlier, we are trying to do something with our equipment that it wasn't originally designed to do! And, the performance must be checked routinely, since it will degrade as the tuning drifts.

Next time, in *The Basics*, a bit more on getting ready for AM Stereo; then, on to something else.

*Bruce Dingwall, C.E.T., is chief technologist in charge of studios and transmitters for CFRB. The basics is a practical review of common engineering problems, and readers are invited to send their questions or comments c/o CFRB, 2 St. Clair Ave. W., Toronto, ON. M4V 1L6.*

# DBC TRANSMITTERS PUT YOU



## ON TIME — ON BUDGET — ONGOING

Our transmitters incorporate top current technology but have only a minimum of frills and no-nonsense features! DBC transmitters are designed to simply get down to work and keep on working - keeping costs low. So get your programming to stay on the air with a minimum of fuss and expense.

After 25 years experience and more than 1000 transmitters in operation, one can say we know what we are talking about. From economically priced Cancom LPTV versions to sophisticated exciters (internal or external diplexed) for high power transmitters, DBC meets the stringent standards of today's broadcasters. Let's talk more - please give us a call:

# DBC BROADCAST PRODUCTS

124 Belfield Road, Rexdale, Ontario, Canada M9W 1G1  
Tel: (416) 241-2651 Telex: 06-989357

A TRIPLE CROWN  CORPORATION

Circle #134 on Reader Service Card



**SIGMACOM**

**THE  
TOTAL SOLUTION**



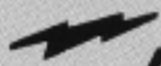
Subcarrier & SCPC Demodulators,  
FM Modulators, TVRO Uplinks

**GENERAL  
INSTRUMENT**

4 GHz & 12 GHz Satellite Receivers,  
CATV Amplifiers & Passives



Data Multiplexors, Alarm & Status  
Monitoring Systems



**ANDREW**

Satellite & Terrestrial Antennas

**COMVID TECHNICAL  
SERVICES INC.**

TVRO, CATV & Terrestrial  
Microwave Installation

**THE WIND TURBINE**

COMPANY OF CANADA LTD.

Microwave, CATV and Broadcast  
Towers



**TRIPLE CROWN  
ELECTRONICS INC.**

Satellite Receivers, CATV  
Amplifiers & Passives

**Lindsay**

Antennas, Amplifiers & Passives



CATV, TVRO and Terrestrial Filters

**DELTA-BENCO-CASCADE**

CATV Amplifiers and Broadcast  
Transmitters



**SIGMACOM SYSTEMS INC.**

111 Industrial Drive, Whitby, Ontario L1N 5Z9  
Telex 06-981266 • Telephone (416) 666-1991

**people in the news**

• Astral Bellevue Pathé Inc.—recent appointments include **Stuart H. Cobbett**, president of Astral Film Enterprises; **Gordon Guiry**, pres of Astral Films; **David Jackson**, pres of EPS-Entertainment Programming Services; **Stephen Greenburg**, vp of Astral TV; **Ian Greenburg**, vp / tres Astral Bellevue Pathé and vice-chairman of First Choice; **George Cohon** and **Bill L'Heureux** to board of directors.

• Atlas Electronics—**Keith Moore** named general sales mgr; **Martin Grace**, int'l sales mgr; and **Paul Stoneman**, commercial sound specialist; Toronto.

• Baton Broadcasting Ltd.—**John W. H. Bassett**, invested as Officer of the Order of Canada.

• Canadian Press—**Gary Jones**, appointed as audio sales mgr (technical) for Broadcast News.

• Canadian Bar Association—Awarded **Liss Jeffrey**, formerly with CITY-TV and CBC Radio, with Louis S. St-Laurent fellowship in legal journalism. She will study law at Queen's University, Kingston.

• CBC-TV—**Costa Babalis** has left private engineering consulting business in Montreal to join CBC eng, Toronto.

• CKDA / CFMS Victoria—appointments include **Sheridon Armstrong**, president; **Gowan Guest**, secretary; and **Gerald Laling**, gm. **Margaret Armstrong**, former vp; and **Ruby Masters**, former secretary have resigned as directors of Capital Broadcasting System Ltd..

• CHEX Peterborough—**Robert Rudd** promoted from asst. nd to vp of information.

• CKCK-TV Regina—**Douglas Lee**, director administration and community relations, invested as a Member of the Order of Canada.

• CKCL / CKTO Truro—N.S. Agriculture Dept. has awarded **Frank MacDonald**, the C.A. Douglas Extension Award for his involvement in agriculture extension work.

• CKX Brandon—**A. Stuart Craig** received 1984 business citizen of the year award from Manitoba Chamber of Commerce.

• CKDK Woodstock—**Rick Roi**, who joined CKDK as chief engineer in February, is keeping busy; he also provides engineering services for CHLO St. Thomas and the London station of CKO News network.

**IN MEMORIAM**



**Michael Stechly**

Michael Stechly, founder and president of Applied Electronics Limited, passed away on August 6th, 1985.

Mike, as he was known to his many friends and associates, was born and raised in Mississauga, Ontario. After graduating from Ryerson Polytechnical Institute in Electronic Technology, he was employed by McCurdy Radio Industries, working his way up to sales manager. In

1959, Mike founded Applied Electronics Limited, which now has offices in Toronto, Montreal, Vancouver and Calgary. Applied is wholly owned by the Michael Stechly Family Trust. Rick Stechly, a younger brother, is now president of the company, and Mike's two sons, Paul and John, both university graduates, are also involved in the company. Mike's only daughter, Susan, is a marine biologist. Mike's wife, Dorothy, is president of a sister company, Dynetech Limited, which is involved in the medical equipment business.

Mike also founded and maintained controlling interest in Listec Television Equipment Corporation of Plainview, N.Y. and Glendale, California. In more recent years, he founded Tristec Industries, a commercial fishing operation in Vancouver, managed by a brother, Ed Stechly; and his most recent venture was Starmil Imaging Sciences Inc. of Toronto, an X-Ray imaging firm.

Mike fought a courageous battle against cancer for over four years; he will be deeply missed by his family, friends, employees and associates.



SONY OF CANADA LTD.



Gary Osborne has recently joined the Sony Broadcast Sales Team.

Patrick Whittingham, general manager, Sony Broadcast Dept., is pleased to announce Gary's appointment as technical sales rep-audio, for central Canada.

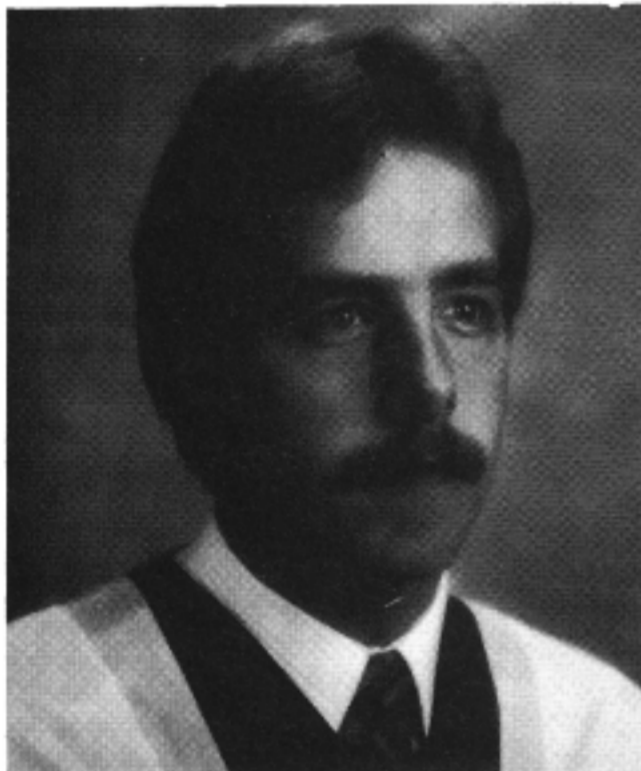
Gary brings to his new position, 6 years experience in sales and service of professional audio products for the broadcast industry as well as many years of activities in the recording studio environment and is the current vice-chairman of the Toronto chapter of the Audio Engineering Society.

ROGERS RADIO BROADCASTING

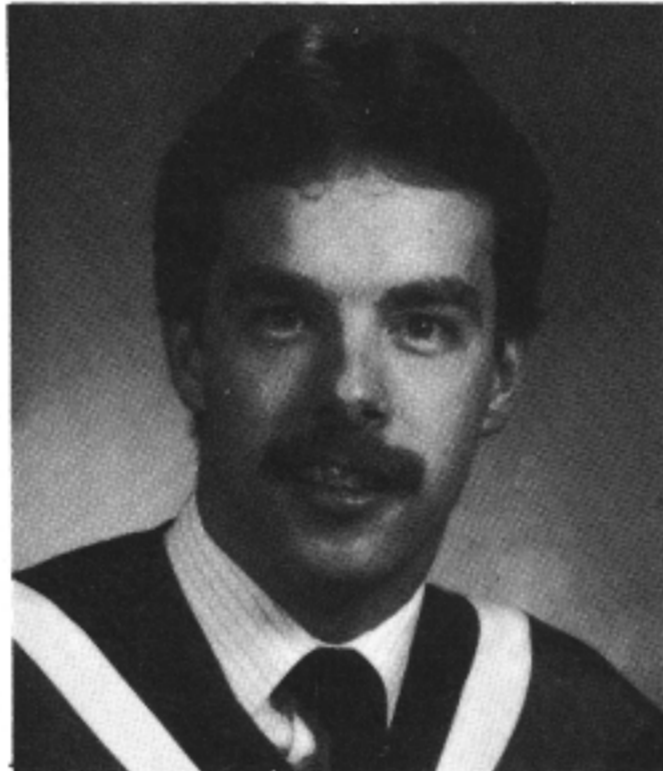


Mr. James F. Sward, President, Rogers Radio Broadcasting Limited, is pleased to announce the appointment of Kirk Nesbitt, P. Eng. as Director of Engineering, RRBL. Mr. Nesbitt will be responsible for all facets of transmitting and studio operations including DOC and CRTC liaison for Rogers stations CHFI/CFTR (Toronto), CHYR (Leamington), and CKJD/CJFI (Sarnia). Mr. Nesbitt will also be working with Mr. R.H. Turnpenny, Vice-President, Corporate Engineering in the exploration and development of new radio technologies.

BROADCAST TECHNOLOGY



Peter Loney



Brian Loney

Doug Loney, president of Diversified Publications Limited, is pleased to welcome two new additions to the staff of *Broadcast Technology*.

Peter and Brian Loney will be responsible for many of the day-to-day operations of the company, with Peter specializing in editorial and computer areas, and Brian in printing and production. Both graduated in 1983 with Honours Bachelor of Arts degrees in Geography—Peter from McMaster University in Hamilton, and Brian from Wilfrid Laurier University in Waterloo, Ontario. Born in Owen Sound, they received their elementary and secondary education in Owen Sound and the Town of Caledon.

To assist our business associates and readers in identifying the members of the Loney clan now involved with *Broadcast Technology*, we remind you that:

- Doug Loney is editor/publisher;
- Jacquie Loney (Mrs. Doug Loney) is advertising manager; and
- Bob Loney is advertising account manager.

(Bob and Doug are uncles of Peter and Brian, who are the twin sons of Bill and Marg Loney of Bolton, Ontario.)

- CTV Toronto—appointed **David Basskin** as director of business affairs.

- Dielectric Communications—Maine firm has promoted **Donald Millar** to sr. field service engineer; **Russell Knight** also joins field service/project implementation.

- Expo 86—**Jim Pattison**, the Vancouver entrepreneur whose numerous holdings include CJOR Radio, has become president, as well as chairman, of Expo 86. Pattison has enlisted **Mel Cooper**, owner of C-FAX Victoria, to raise money from potential sponsors as vice-president of Corporate Participation.

- First Choice—**Gord Haines**, formerly of CITY-TV Toronto, named vp/gm.

- Gerr Electro-Acoustics Ltd.—**Pat Jackman** appointed as Canadian product specialist for sound and communication systems applications.

- GNB Batteries, Calgary—**Terry Harkness** named sales / service rep for Western Canada.

- Key Radio Ltd.—**Douglas C. Trowell** has retired as president. A broadcaster for 39 years, Doug was with CKEY Toronto for 24 years. (The KEY group also includes CFCO Chatham, CHYM/CKGL Kitchener, CKOY/CKBY Ottawa, CHNS/CHFX Halifax, and Newsradio.) He was CCBA's 'Broadcaster of the Year' in 1976, and has served as directors of the boards of CAB, BBM, and BN.

- Knowledge Network—**Glen Farrell** has succeeded **Dr. Walter G. Hardwick** as president.

- Matsushita Electric of Canada Ltd.—Panasonic's industrial audio (Ramsa) division has named **Lee Swierszcz** marketing manager. She was previously with Tele-Tech Electronics, Arri/Nagra and Multivision Electrosonic.

- MSC Electronics—**Suzanne Girard** appointed video sales rep, Quebec.

- Research Technology Int'l—**Kathy Foldvary** named advertising manager.

- Telesat Canada—has appointed **Don Courcy** as account executive, broadcast services for Quebec/Atlantic provinces. He was previously with DOC, CRTC and CANCOM.

- TVOntario—**Janice Currie** named manager, sales / marketing branch.