



• DBS/ Friend or Foe?



• IVC's 80¢ A Day Program



• 'Dish It Out' / Suppose HBO Doesn't

THE TWICE PER MONTH BUSINESS JOURNAL OF TVRO

COOP'S SATELLITE DIGEST



AUGUST 15, 1984



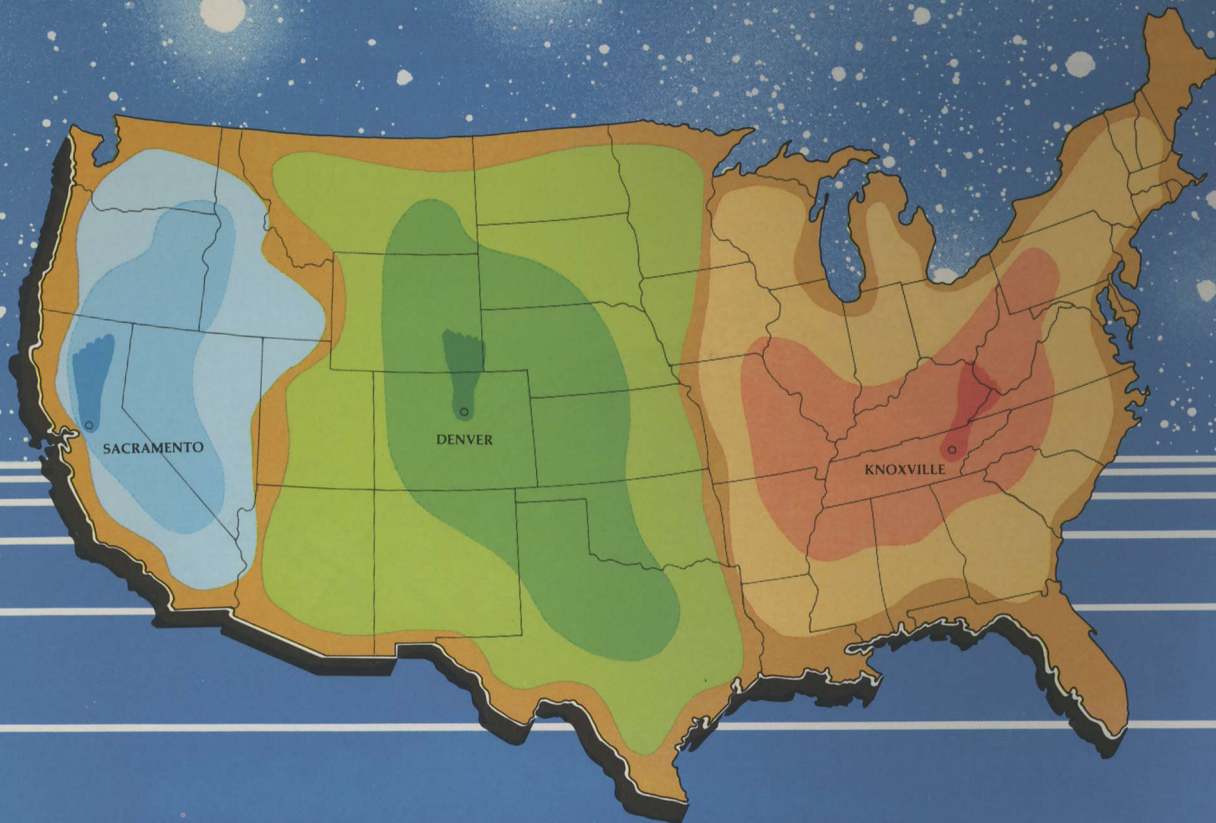
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AUGUST 15, 1984

PREPARING For Nashville

I like a party. Years ago, while working my way through college, I did a weekend stint for about two-years on an AM radio station in California. I played records and tried to be bright 14 hours each weekend, and usually failed miserably. Without regard to the format the radio station was running, I chose my own records and crassly called my weekend stint "Coop's Bash." They put up with my record selection (getting somebody to work weekends was a challenge) but I was called on the carpet for referring to my stint as a 'bash.'

"What does that MEAN?" asked the usually suspicious general manager. "Explain BASH to me." I tried, and failed. I didn't call it 'Bash' anymore.

I'm ready to bring back the word. We are going to have a 'bash' (perhaps that should be 'Bash' or even 'BASH') in Nashville. **A real party.** Not only will CSD be helping to co-sponsor the industry's Fifth Birthday Celebration (to be held Monday evening now, at 6 PM) but I see every sign of total involvement from the industry in a wide range of events that should spell the rebirth of our industry.

SPACE's Chuck Hewitt wants a 'blood letting' session on the agenda; a period where everyone with a beef or gripe can get it said. I hope he has 40 hours or so for this purpose; I could fill up twenty by myself

and never even mention SPACE! Hewitt is a brave man; possibly even bright.

Equipment pricing, consumer advertising, reliability are sure to be big topics. I hope people quit pussy-footing around and speak what is on their mind. We won't get our problems resolved by beating around the bush and forgetting to name names. If somebody has it coming (me included), hit them (or me) squarely on the chin; verbally of course.

We may have an exciting bit of news regarding HBO's C band direct (CBD) service in our **September 1st** CSD. I think this whole project has gone far enough on speculation and my efforts to force them out into the open with information leaks. I'm tired of playing 'their game' and in September we start playing 'our game.' That should make Nashville hummmm.

Most of all, I am very much looking forward to standing up on the stage with around ten close industry friends and introducing our carefully selected set of "Seven Pioneer's Pioneers." I think there may be some surprises in there for you; nobody has come very close yet in 'guessing' who the seven are. You are invited to attend the 'CSD/Industry Fifth Birthday Party Celebration' where the food (cake and goodies) and entertainment is free of charge. This is my 'bash' and it is **your 'bash' too.** See you there!

SPACE UPDATE

The SPACE Executive Committee, meeting in Washington late in July, arrived at a combined legal and administrative budget 'compromise' of approximately \$1.1M, plus unspecified funding from the 'Super-Fund.' EXCO also decided to reduce dealer member annual fees to \$95. At the end of this session Prexy **Peter Dalton** requested the resignation from the Chairmanship and Board of Paradigm's **David Johnson**. EXCO disliked the Johnson revelations appearing in **CSD/2** for July 15th.

The full **SPACE** board, meeting in Plymouth, Michigan August 2-3, voted to 'censure' Johnson for his 'attacks on the board.' They also: (1) voted to INCREASE the board to 46 (up from 25; now 24 manufacturer/Pioneers, 12 distributors, 8 dealers and 2 SMATV), (2) create a 'Dealer Sub-Board' (21 on THAT Board, from which 6 would be elected to serve on 'full board' while **Pioneers** would appoint 2 more dealers to the full board).

Elections have been 'postponed' with ballots now planned for late in August. 'Friends-of-SPACE' dealer activist **Charlie Brown**, attending the meeting, told CSD/2 "I feel like we had hit a home run and just as the ball was going over the fence, they moved the fence back on us." FOS supporter George Jones, formerly with **Conifer**, called the changes 'gerrymandering of the board at the last minute.'

**COOP'S
SATELLITE
DIGEST
/2**



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ADT ELECTRONICS (Sydney, Australia) has been appointed as the Australian distributor for the Microdyne Corporation (Ocala, Florida) line of satellite communication products. ADT is a division of IRT Electronics Pty., Ltd., a major supplier of broadcast television system facilities in Australia.

CALE COMMUNICATIONS, INC. (693 Henderson Drive, Regina, Sask., Canada S4N 2A8; 306/949-9181) reports their Third Annual Trade Show, held in Regina, was successful and they plan a fourth in April of 1985. Cale brought U.S. vendors such as Bob Dushane (Janeil), Royal Lamb (PenTec MTI), Doug Dehnert (USS Maspro) as well as Canadian suppliers Dennis Shouldice (Danex Microwave), Mark Sheldon (Chaparral) and David Strachan (M/A Com Canada) to conduct sessions with Canadian dealers. Chris Budd of Canadian C-SPACE also attended to announce the creation of an all-Canada 'Action Line' to help consumers, dealers and distributors obtain accurate information regarding Canadian TVRO problems and events. Cale began with an annual sales volume of \$1,000,000 in 1981; forecasts a volume close to \$15,000,000 during 1984.

CARTWRIGHT COMMUNICATIONS COMPANY (7812 Red Sky Drive, Cincinnati, Ohio 45249; 800/543-8614; Ohio 800/582-2641), which reports it is "the nation's largest distributor of communication accessories," has expanded its product line to TVRO products. Cartwright has more than 2,000 dealer accounts in all 50 states and maintains stocking warehouses in Ohio and southern California. Among the several dozen TVRO product lines carried, Cartwright includes Winegard, Raydx, and Wilson antennas; Dexel, Drake, STS, STS, Luxor, Locom and Wilson receivers; Avantek, Uniden and Locom LNAs.

DELSTAR SYSTEMS, INC. (7800 Bissonnet, Suite 200, Houston, Tx. 77074; 713/776-0542) has announced a three year extended-warranty program for dealers covering all major TVRO system components. There is no deductible, no limit on claims, 72 hour turn around on covered equipment and existing as well as new equipment (sales) can be covered. Delstar has also announced a new Texas-Wide delivery system for equipment purchased from the distributor.

ECHOSPHERE CORPORATION (1925 W. Dartmouth Av., Englewood, Co. 80110; 303/761-4782) plans additional TVRO Dealer Training Seminars following up on the successful trio of such events held in Denver (May 5-6), Sacramento (June 30/July 1) and Knoxville (July 21-22). Dealers interested in 'inputting' seminar session contents and scheduling should contact Margaret Blum.

HIGH FRONTIER DISTRIBUTION (headquarters at 1145 W. 12th Place, Tempe, Arizona 85281; 602/966-9824) has added factory-authorized warranty service at all three firm locations (Tempe, Van Nuys [California] and Seattle, Wa.) for products from Luxor, STS, Janeil. Factory trained, in-house service technicians now repair products from all three firms for dealers purchasing from High-Frontier.

INTERNATIONAL VIDEO CORPORATION (North Little Rock, Arkansas) has added a new 15,000 square foot facility in North Little Rock for dealer training, office and showroom purposes. They will continue to operate from the former North Little Rock location as well, turning it essentially into warehousing space for their expanded operations (See **IVC's 80¢ A Day Plan**, this issue of **CSD/2**; page 11).

SATELLITE ANTENNA TRADING COMPANY, a division of over-the-counter traded United Telecommunications Corporation (5800 East Skelly Drive, Suite 712, Tulsa, Oklahoma 74135; 918/665-7850) has added Wilson Microwave Systems (Inc.) TVRO receivers (YM-1000 and YM-400) to its product line.

SATELLITE VIDEO SERVICES (RR# 1, Box 85-S, Paul Saxe Rd., Catskill, New York 12414; 518/678-9581) announces they have added the Uniden UST 1000 and UST 3000 receivers, Uniden 11 foot mesh antenna, Uniden LNAs and the M/A COM T-1 receiver to their product line-up.

SOUTHEASTERN SATELLITE SYSTEMS, INC. (51-A Seascape, P.O. Drawer 6250, Destin, Florida 32541; 904/837-8007) will hold an intensive three-day satellite dealer's SMATV Seminar November 10-11-12 at Destin, Florida. Students attending will be following a customized course manual, visit operating SMATV systems to inspect and be taught how such systems are designed, installed and operated. Limited enrollment is available, early registration is advised.

NEW PRODUCTS/ SERVICES/ EVENTS



• **LOCOM's 30,000**



• **KLM's 8**

RECEIVERS/Receiver Related Announcements

AUTOMATION TECHNIQUES, INC. announced a new service-depot address for all AT equipment returned to the factory for repair. All units should now be addressed to 1839 N. 105 E Avenue, Tulsa, Oklahoma (918/836-8283 for **service only**). Any equipment returned for repair or retrofitting must include a letter packed with the unit stating the repair problem or change requested. For additional information, talk with Gayle Towe or Tom Elmore.

GENERAL INSTRUMENTS (RF Systems Division, 4229 S. Fremont Av., Tucson, Arizona 85714; 602/294-1600) has announced a new consumer version TVRO system. Model MRS-2 uses block downconversion so multiple receivers can enjoy independent program selection from a single antenna system. The receiver has a pair of continuously tuned audio sub-carrier detectors for mono, discrete stereo or matrix stereo reception. Audio bandwidth is either 160 (narrow) or 240 (wide) kHz.



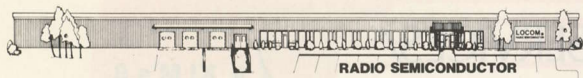
GI's New MRS-2 block receiver

INTERSAT CORPORATION (1000 Lake Saint Louis Blvd., Suite 300, Lake St. Louis, Mo. 63367; 314/625-4617) has now placed IQ-160 receiver systems at three NASA Visitor Information Centers; Johnson Space Center, Houston; Kennedy Space Center, Florida; and, Marshall Space Flight Center in Huntsville. Systems are installed to teach visitors how satellite signals are transmitted from the ground to the satellite, and back again, and the systems will provide continuous, live-satellite delivered coverage of all Shuttle missions when in progress.

Intersat also reports that their special summer promotion program which offers dealers a free 'Baby Q' receiver package with every 3 IQ-160 systems purchased has exceeded projections with more than 2,000 Baby-Q receiver units shipped during May and June shipping months.

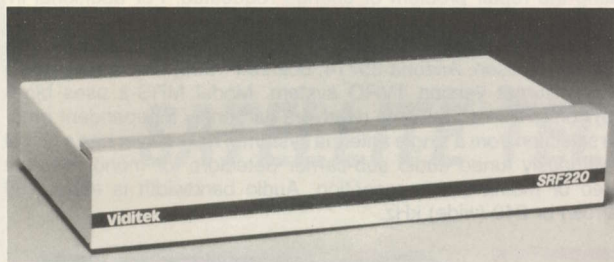
KLM ELECTRONICS, INC. (16890 Church Street, Morgan Hill, Ca. 95037; 408/779-7363) has introduced a moderately priced, synthesized tuning single conversion receiver which eliminates user turning adjustments and calibration. Model 'SSD' is a break from tradition for KLM in many ways and features a new, more stable downconverter unit (said to be 'drift-free' over temperature extremes of -40 to +140 F), tunable audio (5.5 to 7.5 MHz), polarization skew, polarization select and format (Westar/Satcom) select. Interfacing is for the Polarotor 1 family units. Tuning is detent (click stop).

RADIO SEMICONDUCTOR/LOCOM (315 Benner Pike, State College, Pa. 16801; 814/238-2133) has a new 30,000 square foot CAD/CAM Microwave plant under construction near State College. The new facility will become the world headquarters for the firm's line of TVRO receivers and LNAs as well as an expanded line of TVRO receiving hardware.



NEW Radio Semiconductor (Locom) World Headquarters

VIDITEK INTERNATIONAL (9134 Independence Av., Chatsworth, Ca. 91311; 213/998-8029), only 'slightly ahead of their time,' has announced a new Stereo RF decoder, designed to function with the new (yet to start) stereo television broadcast services. Their model SRF220 unit will recover either single or two channel audio allowing new **broadcast television stereo** transmission to be played in monaural or two channel format. The unit works on VHF channel 3, compatible with most TVRO receiver modulators and VCRs.

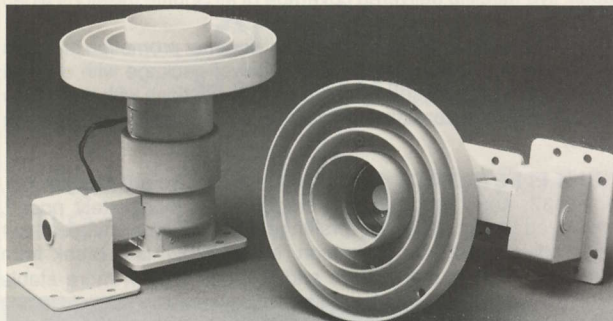


VIDITEK SRF220 NTSC stereo-television decoder

ANTENNAS/Antenna Controllers/Accessories

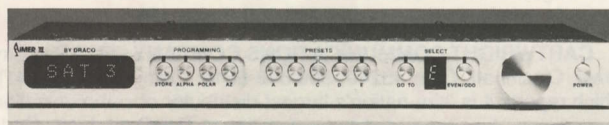
CAYSON ELECTRONICS, INC. (Rt. 3, Box 160, Fulton, Ms. 38843; 601/862-2132) which pioneered fiberglass home TVRO antenna structures late in 1979 has introduced their first screen mesh dish; a 10.5 foot model. The antenna utilizes 8 primary ribs, and sixteen support braces, self-tapping screws and a quad legged feed plus LNA support system. The dish is 127 inches in diameter with a focal length of 43". Fill declination adjustment for virtually any location is included in the mounting system and the antenna is UPS shippable.

CHAPARRAL COMMUNICATIONS, INC. (2360 Bering Drive, San Jose, Ca. 95131; 408/262-2536) has introduced a new feedhorn for ortho-mode coupled feed systems (offering both polarizations, simultaneously). The 'Side winder' has a number of innovative features including allowing the installer to independently adjust for polarization skew on both polarizations. The polarization adjustment system is ferrite, and solid-state drive.



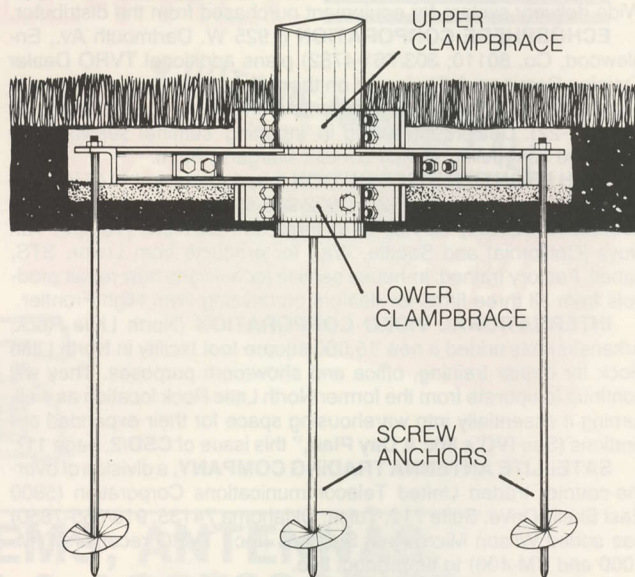
SIDEWINDER 'Skews' Both Poles

DRACO LABORATORIES, INC. (1005 Washington Street, Grafton, Wi. 53024; 414/377-0770) has added a brand new feature to the latest version of the popular Aimer III control; the controller remembers the commands given by the user and is prepared to 'rat on' the user by confessing all of the user's 'error commands' to the dealer, when properly interrogated. To assist dealers in analyzing customer use or mis-use of the controller/actuator package, the new AIMER III will store and recall on command the following events which it was subjected to: (1) how many times the user re-aligned the satellite belt, (2) how many times the unit has experienced power failure, (3) how many times the dish has 'jammed' or run into something that does not move, (4) how many times the user has replaced the fuse, and, the total number of errors recorded by the user in all categories. The new AIMER III also makes the adult-lock-out code cancel itself after 8 hours time, to insure that adult programming locked out of view will be possible by the following morning.



AIMER III ... 'tells all' when interrogated by the dealer

EARTHBOUND, INC. (telephone 913/266-4944 in Topeka, Kansas) has created an interesting new method of placing a TVRO dish antenna into the ground; either as a permanent installation, or for temporary service. Their new ClampbraceTM Anchored Platform consists of a three-point leveling system that uses no concrete for installation (see illustration). Single-pole antenna mounts from 2 inches OD to six inches OD (schedule 40 pipe) can be accommodated by the system and the system will support antennas up to 12 feet in diameter according to the manufacturer.



TRIPLE threat of Clampbrace Anchored Platform

THE HAMMERBLOW CORPORATION (1000 First Street, Wausau, Wi. 55401; 715/842-0561) has introduced the 'MESA' series of TVRO antenna actuators in both manual and motorized versions. Hammerblow says they have carefully analyzed all causes of environmental failure in TVRO actuators to date, and have systematically set out to overcome all of those 'points of failure.' Both manual and motorized versions are rated at 2000 pounds capacity, with 12, 24, 36 and 90 volts (DC) powered actuators in lengths from 18 to 36 inches.



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CLEARLY A SPECIAL ISSUE / front cover identifies this special 'Re-Sale' issue of CSD as one designed to acquaint consumers with the wonders of TVRO and the amazing growth story of TVRO in North America, and, the world. Even if you do not wish to offer this special issue for re-sale in your TVRO store, **you will want extra copies** for your banker, your 'special customers' and your own staff!

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WHO'S AFRAID OF DBS?

Look out Philadelphia — DBS (Direct Broadcast Satellite) is here

... or is it?

Cable TV for the video hungry Philadelphian has been delayed again... except now... a new alternative has been unveiled. Just in the nick of time USCI (United Satellite 'Consortium,' Inc.) arrived on the scene and saved the "City of Brotherly Love" from riots. Promises of direct to the consumer satellite reception has created the hope of receiving a full cable type video selection with this new innovation. But wait, is it really what the public has been led to believe it is?

During the past eighteen months or so, many confusing and cloudy articles have appeared regarding Satellite Television. Seldom, if ever, has the media spent the time to thoroughly investigate the differences between MDS, LPTV, STV, C-Band, DBS, Ku Band, et al. It's all been mixed together oftentimes with the entire industry being tagged as "cable pirates" and violators of various zoning restrictions and in general, painting a very illegal picture of the "dish owner."

It is obvious that mass confusion prevails. Enter USCI from "The Big Apple" announcing the salvation is here and all has been made right; **but what is all?** Are there really literally hundreds of television programs available for viewing from a multitude of satellites? Will all of these and more be accessible to all of Philadelphia, thus eliminating the need for cable? Can all these programs be had for the paltry price of \$39 per month? And only a small 2 foot dish is necessary? Not quite!

The amazing plan to provide "non-cabled America" is called Direct Broadcast Satellite (DBS) television. The new "birds" that glisten on the drawing boards of a dozen big companies will be up to 50 times more powerful than current satellites. Their revved-up power will enable homeowners to receive signals via a tiny antenna resembling a two-foot metal cereal bowl though the high power will also limit these satellites to a maximum of six video channels each, as opposed to the 24 channels on today's C-band "birds."

The ideas are dazzling; broadcasters are already in a panic at industry gatherings. DBS has started to enter the new video technologies market with a big bang. But the Center City videophile had better not hold his breath. If more than 5 or 6 U.S. firms succeed in acquiring an excess of the billion dollars needed to provide national DBS service, the earliest they can deliver is 1986 since it takes three years to build a DBS satellite.

DBS is steeped in more misconception than any other new video-delivery technology — primarily because it has a few similar competitors and relatively few have taken the time to understand, let alone explain the differences.

Many thousands of Americans can already receive TV directly from C-band satellites and currently enjoy over 120 viewing alterna-

tives.

The typical dish antenna (Earth Station) can pick up more than 100 cable program services plus many non-cable video programs being beamed from coast to coast as network news feeds, closed circuit sporting and entertainment events and more. These larger sized dishes are usually nine to ten feet in diameter and can be purchased for under two thousand dollars complete with all the necessary electronics.

They are placed on the roof, or near the home and are therefore direct-to-home satellite broadcasting, right? Sure, but that **isn't DBS** according to the FCC definition.

This type of earth station receives the "low power" C-band signal which is in the 3.7 - 4.2 GHz (Gigahertz) electromagnetic spectrum. DBS (according to the FCC) will be broadcast in the Ku-Band at a "high power" 12.2-12.7 GHz spot. In addition to being able to receive the 120 plus available programs currently available, most of these earth stations will be able to receive the DBS satellite signals if and when they become a reality. This type of satellite-to-home reception is an exploding industry experiencing a growth rate in excess of 300 percent per year. By far it is the fastest growing high tech market today. With the exception of a very few X-rated services, the programming is not scrambled as DBS will ultimately be, and therefore once the homeowner purchases his system he does not have to pay a monthly fee for the services. Many of these broadcasters are advertiser supported and willingly authorize individual homeowner reception even though such a practice is not necessary.

Additionally, the recently publicized technology by USCI in Philadelphia doesn't fit the FCC definition, even though it **can deliver** several (five at this time) video channels directly from satellite to home. This new service is being marketed as **DBS** and the public is led to believe that it is just as affordable as cable. This broadcasting is done at a "medium power" within the 11.7 - 12.2 GHz range, which is not compatible, should **true DBS** become a reality. What is not being said is that this is quite different than DBS, since USCI had the only satellite service available for reception with a smaller type antenna until true DBS arrives in 1986/87.

USCI is currently utilizing a Canadian, Anik C-Bird, satellite, modified to offer Philadelphians three video channels for \$39 per month. This programming consists of Showcase, Movietime, and ESPN. The related cost charged **by local area cable companies** for these same type services varies, but normally is in the **\$14-\$20 range per month** and includes various other satellite programs. (At least two rival firms, SBS and Hubbard, are protesting the fact that the FCC is allowing USCI to use a Canadian satellite).

Because these signals aren't as high-powered as real DBS, consumers will need a slightly wider dish; about **4 feet** in diameter. These dishes, as with all satellite antennas, must be placed to obtain the proper "look angle" for satellite reception. Since the signals involved are not on the same frequency as local TV, consumers will additionally need to purchase an electronics package to go with their dish. Current marketing and installation plans have not been announced for Philadelphia, however the approach utilized by USCI in Indiana will most probably be duplicated here.

The electronics and antenna are marketed by a national retailer known primarily as an electronic hobby shop store for a price of \$995. Once the consumer has made his purchase the system is then shipped to him and the installation is handled by yet another national company whose service personnel are trained in the repair areas of washers, dryers, televisions and VCR's. Not quite the same field as satellite communications! The minimum installation charge is \$300. Simply put, the charges to the consumer in the **first year** alone amount to \$1763... certainly not a great buy for three satellite channels!

In addition, because the signals in this quasi DBS market will be scrambled to deter piracy, viewers will also need an addressable decoder. "Addressable" is the key word. It means that the programming company can turn the decoder on and off by tapping a few computer keys at its home office. Since the combination of codes is virtually unlimited this system is ideal for excluding non-paying freeloaders. Addressability also enables the programmer to offer what's considered TV's next great gold mine: "pay-per-view events"

by
Blair A. Gilbert, President
StarTrak Satellite Systems
P.O. Box 349
Kulpsville, Pa. 19443

and that is another cost to be added from this quasi DBS broadcaster. To date, "main events" like the Hagglar-Duran slugfest, costing consumers about \$15 each, have generated million-dollar pay-offs for those involved. Hollywood is now experimenting with selling big movies the same way. Star Wars was offered as a video pay-per-view event of \$8 per home.

Now the bad news. USCI has only planned three satellites for distribution of this signal. One dedicated to the East Coast, one Central and one West Coast, all carrying identical programming but in the case of movies, at various times. Obviously the limitation of six television selections in this situation will not increase. Also unknown, is how (if it's even possible) can these systems be retrofitted to the real DBS, even if it comes of age, since it is on a different frequency.

And what about the real DBS (as defined by the FCC)? To date, the FCC has received more than a dozen applications from companies wanting to shell out close to a billion dollars each to scoop-up the non-cable market. Among the first fourteen applicants only nine survived the FCC's initial scrutiny. Their designs show a lot of variety.

Hubbard Broadcasting hopes to create an advertiser network connecting local TV stations as well as reaching homes. CBS (*) expected to utilize a large chunk of the available channels to test high definition TV. This type of testing requires the bandwidth necessary to deliver up to three channels of standard TV.

RCA American proposes two channels to test high definition TV and national stereo radio. RCA promises to complete the system within four years of receiving FCC approval. Western Telegraph has blueprints for sale or lease for a four channel service with stereo-TV and teletext functions. They are also considering adding "spot-beam service" to Alaska, Hawaii and the Virgin Islands.

The most ambitious plan of the nine comes from a subsidiary of Comsat called Satellite Television Corporation (STC). STC, the first to receive FCC approval last September, plans to spend \$700 million by 1987 to launch a DBS service catering to the Eastern Time Zone. Later, three more satellites are to be launched, one each for the remaining Continental U.S. time zones. STC plans to offer three channels consisting of movies, sports and news/public affairs in programming.

There has never been such an expensive and risky venture attempted with so little (if any) indication of potential consumer acceptance. How these companies will market their products, service their equipment and collect their bills in these remote areas throughout the United States seems to be the \$64,000 question (in this case, possibly a \$64 billion dollar question). If USCI gets a three year jump on these others, it's a good chance that "real" DBS will become too risky to launch.

Even further complicating the DBS dilemma is the fact that various Broadcasters are filing legal actions through their trade associations to bog down DBS in the courts for years.

It appears that all things considered the videophile in Philadelphia still has but three choices. Continue waiting for cable to become a reality, gamble with the USCI version of DBS or invest in his own earth station in the C-band range and enjoy over 120 various programming choices today.

* CBS has recently given up on DBS saying the potential rewards do not justify the risks.

Editor's Note: Gilbert prepared this article originally for circulation in the Philadelphia area through local media; an excellent example of how a 'TVRO Dealer' can use his 'expertise' to reach the media with Sunday Newspaper Supplement material which will generate plenty of free publicity for the dealer and our industry. He reports that since USCI actually entered the Philadelphia market, everything about C band TVROs has been easier to explain (to consumers), and everything the dealer says is more 'credible.' USCI typically spends big bucks going into a market, to get people's attention for 'satellite TV.' That helps break the ice for C band system sales, and with USCI often editorially related to its backers (Prudential Insurance, General Instruments/Jerrold, and RCA Service Company), the whole concept of satellite TV benefits. Gilbert is NOT afraid of DBS; and find business far better with it in Philadelphia than it was before USCI arrived on the scene. Who says USCI is a failure; **look what they are doing for C band business!**

THE 10 MINUTE TVRO DEMO

Demonstrations for the customer are hardly new in our industry. My objective was to make the demonstration as painless and 'low tech' as possible. I have a theory that customers first exposed to satellite TV may well suffer from 'high-tech-backlash' after watching you and perhaps a crew wrestle with a substantial trailer mounted demo rig, run cables, attach LNA and feed and generally make a

'quick, temporary' installation just to 'prove' that something can be done or 'really does work.' My approach is different.

- 1) I want to convey to the customer a feeling that the system is simplicity itself; 'no big deal.'
- 2) I want the atmosphere relaxed, even casual, like two friends meeting to sit and drink coffee together.

Below the surface feeling I want my demonstrations to create, I also want the system to be fast, efficient, and foolproof. In other words, good engineering should apply. And that led me to the demonstration system shown here.

12:00/ Arrive at site, maneuver van into parked position so it faces True North (I use something called the **Whiskey Compass** in the van; it relates only one reading; 'True North'; talk with your nearby aircraft accessory store about a 'Whiskey Compass.'). The van's rear end is now 'true south.'

12:00:30/ Release antenna holding springs, pull antenna fully down. Insert single post button hook feed with LNA and cables.

12:03:30/ Connect LNA and Polarizer plugs to bulkhead connectors on back of van.

12:05:15/ Raise antenna to position where elevation turnbuckle slips into collar sleeve and slip retaining pin into place.

12:06:15/ Adjust elevation turnbuckle to preset elevation as indicated on antenna mounted bubble level (typically F3R).

12:06:30/ Start generator or run reel stored power cable to nearest AC outlet (note: if you pull out the reel stored AC cable, it has an RF cable sandwiched with it as well).

12:07:30/ Using single switch on 'spike/transient protected' power strip turn on all TVRO and TV receivers activating scan tune or selecting a pre-set channel.

12:08:00/ Swing elevation preset antenna to approximate azimuth of desired satellite. If elevation was properly set, you 'have to' cross the location of the desired satellite. Using a remote field

by
Leo B. Comalie
COM/WAY Satellite Systems
P.O. Box 1729
Alamogordo, NM 88310



COM/WAY Satellite Systems self-contained demo van puts satellite TV pictures on the screen in less than ten minutes time.

strength meter jacked in at the rear of the van, final touch up of the dish will complete the peaking exercise.

12:09:00/ Invite customer into 'world of satellite TV.'

12:10:00/ Coffee finishes brewing.

The van we use is a Dodge Travco equipped for travel jaunts with a stove and refrigerator, table, upper and lower bunks, plenty of storage for tools, spare equipment and sales brochures. The top has heavy, dark curtains for daytime viewing and the self-contained generator is a necessity in this part of America when your customers may be located where there is no power available. As noted previously, we can 'demo' in the van, or reel-out the 'Siamese' RF and power cable and connect directly to the customer's TV set in their home.

Construction

The rear deck extension was the only real challenge in designing and building the system. It is all-aluminum construction to keep the weight low; five inch channel extensions are actually inserted into the body main frame and the 1/4 inch aluminum plate bolted on. The original bumper went back on at the end of the extension.

A four inch aluminum pipe is inserted into a five inch base pipe to support the D & H 8 foot spun dish. The antenna post is screwed into the decking and supported about half way up to the rear door hinges. Two heavy duty turnbuckles attached to heavy springs hold the dish down against the foam-padded top rear rail on the van. This is the 'stowed' position for the dish while traveling.

The antenna, basically Az-El mounted, can be swung down and secured to a large turnbuckle for elevation adjustment. The turnbuckle is attached to a collar on the vertical post which allows the antenna to be swung to cover the entire satellite belt and then locked into position for a particular satellite. The LNA/feed is a single post button-hook type that slides into the antenna center post. I have a hose clamp secured on the button hook pipe so the feed is automatically at the correct focal length when inserted. The RG-213 cable from the antenna is fastened to a chassis-mounted 'feed-through' and this connects to a coaxial relay that allows me to select either my Drake or Sat-Tec downconverters. In a demonstration, both receiver performance and capabilities can be quickly compared at the flip of a switch. I also carry 'on board' 90 and 120 LNAs mounted on button hook posts and to show this comparison takes far longer; about two minutes total time!

We also carry a complete set of photo posters (a giant 'scrapbook') to show off the systems we have installed. When a customer asks 'how many of these have you installed' we simply load up the table with the display books; that usually answers that question! Also on board are contract forms and proposal forms and site survey equipment.

The curiosity created by the van is an excellent form of advertising. It 'breaks the ice' so people feel more comfortable talking to you, and that is a major part of any selling operation. Most of all, operating the van is 'fun' and it has made an already 'fun business' even more fun!

My experience is that you can travel at 55 MPH and experience strong cross winds and have no problems. At speeds in excess of 55, with a 20 MPH 'load wind' I do notice a slight 'flutter' of the dish. I

cannot document any measurable reduction in fuel mileage with the system.

IVC's 80¢ A DAY TVRO SALES PLAN

UNUSUAL Marketing Approach?

Until very recently TVRO systems had been sold on the simple premise that the buyer desired the television reception systems provided. And in most instances, the TVRO system buyer lived in a location where direct terrestrial television was either inadequate or unreliable. There are only so many such locations and only so many such potential buyers in North America. And while it may be several more years before the industry 'saturates' that particular 'have need-will buy' portion of the market, there is none the less a strong argument for developing new, additional, marketing outlets using marketing techniques which 'tickle' other buyer sensitivities.

Even when the buyer has what is deemed 'adequate' television reception, there is a considerable lure for a TVRO simply because it is the 'ultimate TV experience,' the fantasy of **any program from any place, at any time.**

People do not usually part with big bucks for fantasies; not unless they are into an income bracket which allows unscheduled spending for non-essential 'toys.' For every such well endowed person, there are 100 who covet the same fantasy but who, with a more rational pocketbook, demand some 'justification' for spending money on a fantasy.

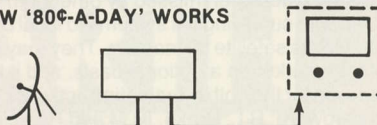
International Video Corporation's Dave Mullenax is a spinner of fantasies. He also has a rather advanced concept of TVRO marketing; one which possibly escapes those in TVRO marketing who are still struggling with local bank financing plans for simplistic \$1995 systems. Mullenax believes that if you can demonstrate to potential buyers that their TVRO system can help pay for itself, you can help the buyer with a 'crutch' which in turn will move you closer to making the sale.

Mullenax announced his 'TVRO For 80¢ A Day' program this past spring. The 80 cents per day obviously comes out to around \$24 per month and on the surface that may sound like he is financing some sort of low-ball TVRO system for a very long period of time. The truth is far more complex than that.

Mullenax knows that a TVRO is 'space-age.' He also knows that most people have at least read about or heard about 'computer controlled in-house energy management systems.' And he believes that is pretty 'space-agey' as well. His project marries the two concepts together; a TVRO system (and a quality system at that) with a computer-based energy management system. The two are sold as a package, and financed as a package. And one (the energy management computer system) compliments the other because with the energy management computer system the homeowner can and will realize substantial energy savings. Those savings in turn reduce the home owner's electrical or gas utility bills, which in turn helps reduce the actual 'overhead increase' for the combination TVRO plus energy-computer package.

HOW '80¢-A-DAY' WORKS

1)

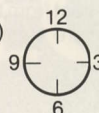


CUSTOMER PURCHASES TVRO (\$00. DOWN, 72 MONTH FINANCING) PLUS

2)

CUSTOMER 'PACKAGES' DISH WITH ENERGY COMPUTER SYSTEM . . . WHICH

A)



FOUR TIMES PER HOUR ADJUSTS HOME ENERGY USERS (HOT WATER HEATER, AIR—CONDITIONER OR HEATER) AND ADJUSTS USE AS A FUNCTION OF TIME OF DAY PLUS 'DUTY CYCLING'!

B) IVC 'GUARANTEES' (INSURANCE COMPANY BACKED) A 45 TO 55% SAVINGS FOR CUSTOMER UTILITY BILLS — AND

C) WHEN THIS SAVINGS IS FACTORED INTO THE COMBINED SALE PRICE OF AN IVC TVRO PLUS ENERGY COMPUTER SYSTEM . . .

D) NET COST TO BUYER OF PACKAGE IS APPROXIMATELY 80¢ PER DAY FOR TVRO.

The concept is unique, and therefore it invites suspicion. Not everyone accepts that one way to save money, is, to spend money! Yet there is plenty of precedent for exactly that . . . in business. The parallel is not exact, but the principal is there none the less. Volume production, or buying of virtually any commodity typically results in lower per unit costs. The Energy Computer portion of the IVC works that way, in reverse.

IVC, in literature prepared for the consumer, explains it in this way:

- 1) The energy villain is the heating and air conditioning system in the typical home. And the present control 'element' in the heating and cooling is the thermostat.
- 2) The thermostat is a mechanical device. Let's assume you set it for 75 because that is where it is comfortable. The thermostat however does not turn the system 'on' at 75.1 and off at 74.9 (in the case of air conditioning; reversing for heat). If it did this, the machine would sit and 'cycle' every few seconds or every time somebody walked by the thermostat. It would (typically) 'come on' at 76.5 and turn off at 73.5. This, they call, 'dead band,' a region within which nothing happens.
- 3) The Energy Computer replaces all of this with a user programmed computer system which balances the 'dead band' period by shortening the running times.

IVC warrants that the customer will save money. In fact they guarantee the customer a savings of 20% each year the system operates. When that 20% savings is 'factored' against the cost of the combined TVRO plus Computer, there is a dollar amount which eventually calculates to show the prospective customer how that savings reduces the effective cost of the TVRO. Oh yes . . . the savings are backed **in writing**, to the customer, by an insurance company. The customer, seemingly, cannot lose.

IVC has brought this program 'to market' first as a move to attract new dealers to its distributor operation. They point out that when a dealer sells an IVC 'combo system' they will:

- 1) "Make \$1,000 to 1,500 or more on each installation,"
- 2) "Offer no down payment financing, and full warranty coverage,"
- 3) "Offer a complete system to the home owner for as little as 80¢

a day," and,

- 4) "Have this backed with a complete and comprehensive dealer support and national advertising program."

IVC is one of the 'older line' TVRO distributors in our field, but they have always done it 'their way.' For some years they have cultivated a segment of the marketplace often missed by others. They have been very much involved with supplying full systems to local church groups through various religious satellite telecasters. They may well have the largest chunk of that market on a national basis, and it has provided them with a foundation for their other marketing activities. They distribute name-brand hardware; R.L. Drake, KLM and Paraclipse to name just three.

Dave Mullenax explains. "Basically we felt that we needed to provide our dealers with a unique marketing tool; a marketing 'system' which would set our dealers apart from all of their competition. Our own success depends upon the success of our own dealers. We could be like everyone else and simply shuttle equipment from the receiving dock to the shipping dock. We chose to be more supportive of our dealers than that."

How effective has the program been to date?

"It is now going very well, but it didn't start off as rapidly as we anticipated initially. Perhaps it was ahead of its time, or, perhaps it was complicated enough that the dealer couldn't shift mental gears to understand why he should add energy control equipment as a 'tool' to help him sell TVRO systems. The program is old enough now that we can point at precise results. The dealers who took the program, who made good use of our (supplied) radio and television commercials, and our print media advertising, report overall dollar sales increases in the 200 to 250% range."

How does the dealer make the presentation to the prospective customer?

"You explain the basic satellite system and using our prepared time payment charts show the customer how the TVRO system, financed, will cost them \$60 a month, for example. Then you take their utility bill, right from their own records, and you calculate what a 20% savings in that bill would be. Let's say for discussion the customer's utility bill is \$180 a month. If the energy computer portion of the package will provide a guaranteed savings of 20%, the dollar savings is 20% of \$180 or \$36 a month. That means the effective cost of the TVRO (plus energy computer) is \$60 minus \$36, **or \$24 a month.**

"It takes an experienced salesman to present this just right, but if you concentrate of saving the customer money, and then showing that his TVRO (plus computer) payment ends up amounting to say 80¢ or \$1.00 a day, the customer now has two things they can identify with:

- 1) The real increase in their budgeted payments is far less than the \$60 a month of the TVRO system alone, and,
- 2) For whatever the cost per day, they can now look at the 'entertainment value' they receive for that money and equate what they will be getting, in their living rooms, for say 80¢ a day.

"This is a good sales and selling program."

This is a suburban type of sales pitch, it may be more effective to a middle class family living in the suburbs than to a rural family; true or false?

"Well, there is one more wrinkle. If you are selling in the suburbs, where the family has cable TV, you can also point out that with the home TVRO, there is no longer a need for the 'expensive' cable TV connection. Most families average at least \$25 a month with cable, if they opt for a couple of the premium program channels. You can actually show them that they can spend less money, and get more entertainment from their TVRO terminal!"

What was the basis for the marketing plan, initially?

"It is a sophisticated marketing plan; it forces the salesman and the customer to think beyond direct costs. Here's an example of our thinking. If you walked into a Mercedes Benz dealership and the salesman could show you that you could be driving a Benz for \$145 a month, you'd buy one. But for him to do that, he had to **prove to you** that if you spend money on say a Ford or Buick that costs half as much, before you have that car paid for, and re-sold at the end of your use of that car, you will **actually spend** a good portion of that half-again pricing difference. The Benz salesman knows his re-sale value will hold up far better; he knows his cost of operation, because of their

warranty, is far lower than say a Buick. He puts all of these numbers together and he explains that the **REAL** difference is not as great as you thought. The customer only looks at the sticker price and the monthly payments. The customer never really stops to think what the **TOTAL** cost for the Benz, versus the Buick, might be over the lifetime of each vehicle. If he's a good salesman, he points out what these **REAL** differences are. We have taken the same approach; we want the customer to realize that by spending a little more, he saves a lot more!"

And the dealer reaction?

"Skeptical. That's honest. The average dealer may be new to being in business himself. He's just a step beyond the average customer and he has a great deal of learning and maturing to do himself. He just recently figured out how to piece-together the TVRO hardware to make up an effective, profitable system. Now we come along and offer him a selling tool that requires some study. He is skeptical, no doubt about it."

The insured savings seems key in the selling success of the program.

"It is. The insurance company is one of the highest rated firms in the insurance field. The procedure for claims is straight forward. People simply compare a year's worth of records after the energy saving system is installed with a year's worth of records in the prior year. The savings have to be there, or they collect. This tells us, it should tell the dealer, that the computer part of the program is no unproven technology. You don't get those types of guarantees on an unproven product."

How about the numbers. What do we know about qualification of the consumer?

"To qualify for financing, the customer must have a net income of \$15,000 or more per year. The University of Arkansas did a national study and found that for home owners earning \$15,000 (net) or more per year, the average utility bill is \$200 per month. That gave us our foundation of a \$40 savings average (20% of \$200) and that helped us identify the market."

"Based upon those numbers, we can show the customer a guaranteed savings of \$3,200 in five years. However, we instruct our sales people and our dealers that they should not only offer the TVRO system packaged like this. They should offer it as an alternative sales argument, that leaves them ready to prove to you that **they can afford it**, even as a cash purchase. The 80¢ a day program works when it is needed and it gets the dealer into the prospect's home where he can make the full sales presentation. You can't sell a system unless you can make a presentation. Having this plan available may well be the key to getting into the home to make that sales presentation!"

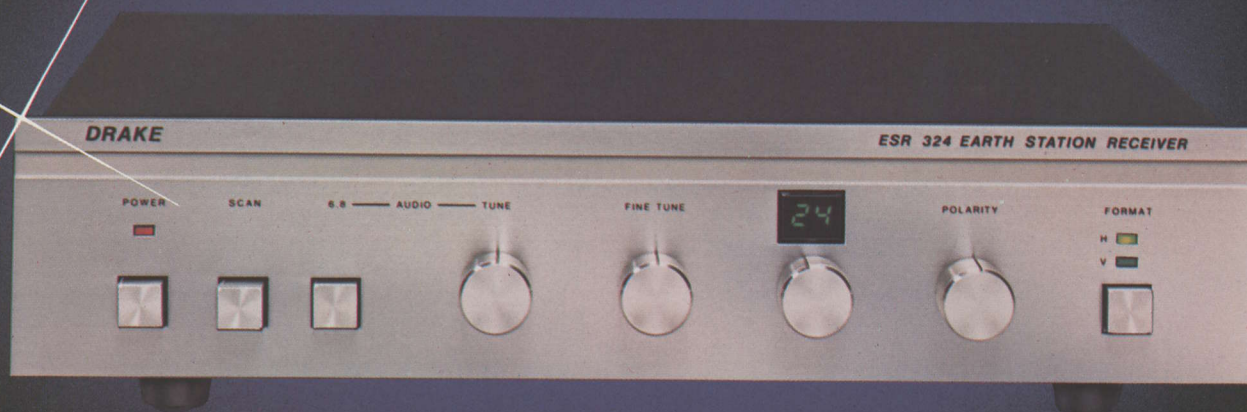
After 'skeptical,' what has been the most common dealer reaction?

"They are quick to point out that they are not in 'the energy business.' And we are equally quick to respond that we, also, are **NOT** in the energy business. **We are in the TVRO business**, and we are here to help our dealers sell TVROs. If we could figure out a program that gave a TVRO customer a free watermelon every day for seven years as an incentive to buy a TVRO, we'd be offering free watermelons with each TVRO! The Energy Computer is a tool, **a marketing tool**, to sell TVROs. We are not trying to change the nature or complexion of the satellite dealer's livelihood. We are simply trying to give him a tool to make him more successful at his chosen avocation."

The typical TVRO dealer is nervous about sophisticated equipment. He knows, instinctively, that everytime he sticks another piece of hardware in the home, he is buying a new set of warranty or replacement problems. Talk about the increased liability the dealer takes on when he has to stand good for an Energy Computer in addition to the TVRO system. At least watermelons seldom fail in the field . . .

"The Computer is like any similar computer; it is microprocessor based. It has a 12 month full warranty. We have yet to have one fail. However, the system has manual override controls in it so if it does fail, the customer is not stuck with a machine that insists on turning on the air conditioner when it is 10 below outside! On top of the 12 month full

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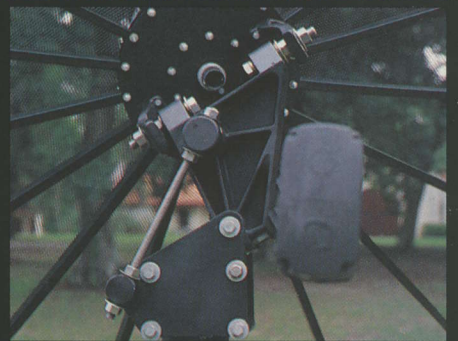
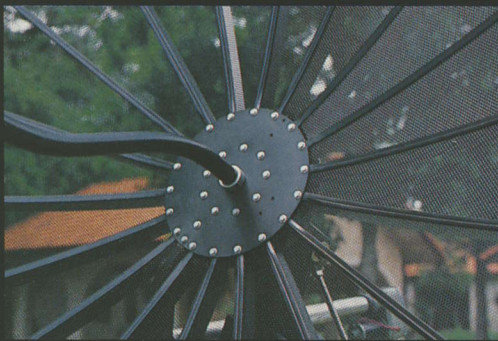


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Cartwright Communications 7812 Red Sky Drive, Cincinnati, OH, 45249, 800-543-8614, OH Watts 800-582-2641.

Echosphere Corp., 2250 S. Raritan, Bldg. A, Englewood, CO, 80110, 1-800-521-9282, Eastern 800-223-1507, Western 800-338-5477, CA: 800-338-5478.

Eclipse Electronics, Inc. 1739 28th Street S.W., Wyoming, MI, 49505, 616-538-7148.

International Video Communications Corp., 4005 Landski, North Little Rock, AR 72118, AR: 501-771-2800.

Mid American Telecommunications, 420 North Lancaster, P.O. Box 629, Hesston, KS, 67062, 316-327-4243.

National Microtech West, Inc., 510 29½ Road Grand Junction, CO 81504, 1-800-223-8967, 800-321-2417.

National Satellite Communications, 21 Century Park, Clifton Park, NY, 12065, 518-383-2211, 1-800-821-8659, NY Watts: 1-800-522-3538.

National Satellite Communications, 10779 Satellite Blvd., Orlando, FL 32821, FL: 305-851-4738, FL Watts: 1-800-821-8659, Out of FL 1-800-322-4044.

Precision Satellite, Inc. 715 Grove Street, Clearwater, FL, 33515 1-800-HOT-DISH or In FL 813-441-9438.

Quarles Satellite Systems, 1616 Calhoun Road, Greenwood, SC, 19646, In SC 1-800-922-9704 or Out of SC 1-800-845-6952.

Spectrum Satellite 3200 Sunnyside Avenue, Burlington, IA, 52601, 319-753-0176, In IA 800-582-0200.

Universal Satellite 3050 Territorial Road, Benton Harbor, MI 49022, 616-925-0143, 616-926-1939.

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As a BR Satellite Communication dealer, you can offer "Futureproof"™ coverage for a minimal cost to your customers (and a profit for you).

Backed by one of the world's largest insurance companies, BR Satellite will guarantee all electronic components against any manufacturer defects for a total of five years (Including the first year which we cover automatically). Contact us to discuss all the details—then "Futureproof"™ your reputation.

Immediate Free Replacement Service.

BR Satellite is the only distributor in this industry who will replace any defective TVRO product with a new unit, just by making one toll-free phone call. Before you send the defective unit back and at no cost to you.

The "Futureproof"™ Decal—a Sign of Success.

If you've got it, flaunt it! The "Futureproof" warranty sticker in your store window could be your best salesman. We'll send brochures and in-store displays, too.



Our Standard Warranty—Still the Ultimate, Still Free.

Every piece of equipment we sell is backed by our unconditional replacement policy for a full year.*

It's an irresistible sales tool, and it won't cost you or your customers a cent.

We'll ship a replacement via UPS Blue Label, at our expense, the same day you call us. We ask only that you ship the defective unit, at your expense, within 5 days *after* you receive the replacement.

At BR Satellite, there is no "turnaround" waiting time. And only a bare minimum of your valued customer's down time.

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Every product we distribute is in stock at all times. If you call our toll-free number before 2 PM, we'll ship your order the same day. And unlike some distributors, we're happy to ship C.O.D.

*All products and items discontinued during warranty period not subject to immediate replacement.

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BR SATELLITE is the only distributor in this industry who will replace any defective TVRO product with a new unit. We'll ship a replacement via UPS Blue Label, at our expense, the same day you call us.

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Introducing the quiet one—the remarkable Norsat LNA! Norsat has combined years of experience with traditional Japanese manufacturing excellence to produce a low noise amplifier of exceptional quality.

Quiet quality, for better pictures even on today's smaller dishes. Degree for degree, dollar for dollar, the Norsat is simply the quietest, most efficient LNA ever made.

Unique all GaAsFet four stage design (no bi-polars) with min. 51 db gain.

Total weatherproofing—precision milled recessed top cover; computer-milled aluminum body.

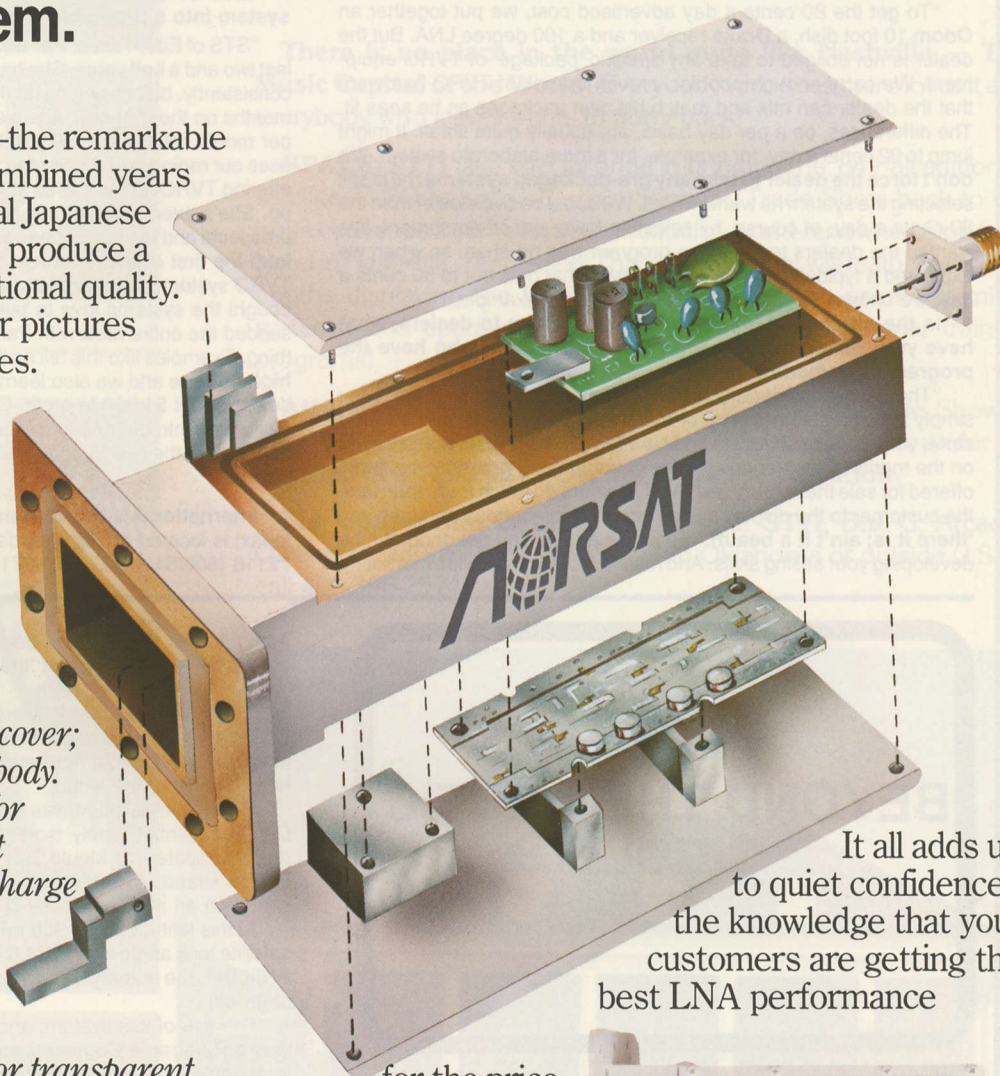
Grounded input probe for maximum protection against failures due to lightning discharge or high ambient RF fields.

Triple sealed and ruggedly mounted type "N" output connector.

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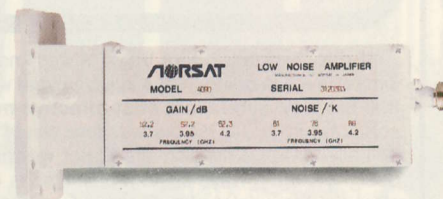
Separate power supply board featuring ultra-stable regulation with built-in protection against polarity reversal, voltage fluctuation, and static discharge.

Available in 100°, 90°, 85°, 80°, and 75° noise temperatures.



It all adds up to quiet confidence—the knowledge that your customers are getting the best LNA performance

for the price. BR Satellite is proud to be the only distributor in the Eastern United States for Norsat LNAs, and one of only three distributors nationwide. *Quantity Prices Available.*



"We Distribute Trust."

Dealers Only.

NORSAT

warranty, there is a 36 month limited warranty as well. We recommend that a heating-air conditioning man actually hook up the energy system portion and that additional labor cost is factored into any package price. It takes an experienced man about 30 minutes to do the job and most dealers who handle it this way will 'sub' it out for perhaps \$50. If the unit does fail, it is a 100% replacement back through IVC."

What about the satellite portion of the package? The dealer who is selling systems has to feel comfortable with the TVRO portion, which comes from you as the master distributor, or the entire program is dead in the water.

"To get the 80 cents a day advertised cost, we put together an Odom 10 foot dish, a Drake receiver and a 100 degree LNA. But the dealer is not obliged to take any specific 'package' of TVRO equipment. We carry enough popular, proven brands of TVRO hardware that the dealer can mix and match his own packages as he sees fit. The differences, on a per day basis, are usually quite small. It might jump to 92 cents a day, for example, for a more elaborate system. **We don't force the dealer to take any pre-packaged systems;** he is still selecting the system he wants to sell. We could be even lower than the 80 cents a day, of course, by selecting lower priced equipment. We wanted the dealers to know the program was no sham so when we explained a typical package of equipment that nets out to 80 cents a day, we chose high quality equipment for our example."

In the process of intruding this program to dealers, what have your observations been regarding dealers who have the program explained to them?

"There is a considerable lack of maturity in our dealer level. They simply lack marketing 'savvy' or experience. If you walk into a stereo store, you will get a complete and carefully planned sales presentation on the merits of the various pieces of equipment, or stereo systems, offered for sale there. Very few TVRO dealers do much more than take the customer to the display system, push a few buttons and then say **'there it is; ain't it a beaut!'** Selling is an art. You get good at it by developing your selling skills. And having tools to work with, marketing

tools, is a very important part of being good at sales. We have tried to focus on that aspect of the business because we want dealers to enjoy and profit from doing business with us.

"Many dealers have passed off the Energy Computer marketing tie-in as a 'sales gimmick.' In other words, they think of it as a 'leader,' much like advertising low-ball priced equipment. It is not that of course; in all reality you **can have** a satellite system **for 80¢ a day.** But the dealer has to believe in everything he sells, and that includes his own marketing programs."

Give us a case history of a dealer who really turned this system into a profitable promotion.

"STS of East Texas, **Pat Bailey**, has been a dealer of ours for the last two and a half years. She has been selling ten systems per month, consistently, before getting on this marketing program. In the first two months on the program, she went to sixty TVRO systems sold or 30 per month. That's a several hundred percent increase for her. She uses our radio and TV commercials and when those commercials run offering TVRO for 'as low as' 80 cents a day, her telephones just light up. She's even stopped her advertising because she has so many prospects and leads that she can't handle them all. **Plus**, the referrals from the first customers have been phenomenal. When you drop a TVRO system into a yard for around 80 cents a day, **the people** who bought the systems love to talk about the **'bargain'** they got. They seeded the entire area with Pat's message; it has really been something. Examples like this tell us that satellite systems **can be sold at a high volume** and we also learned that the typical system nets to the dealer about \$1,000 in profit. Our job as a distributor is to get retail customers into our dealer's shops. We provide the tools to make that happen . . . the rest is up to the energy and commitment level of the dealer."

International Video Communications Corporation (Dave Mulenax) is located at 4005 Landski Drive, North Little Rock, Arkansas 72118 (800/643-5427; 501/771-2800).

BEYOND THE ARCTIC CIRCLE

Editor's note: Author Vines is well known to industry old-timers. Jim believes in doing things 'his way' and while many would question that **his way** is the **most cost-effective method** of producing high-surface-quality TVRO dishes, few would argue that the ability to actually 'proof' a dish on-site is not worthwhile. His nearly-custom-designed and always custom-built dishes (to more than 7 meters in size) dot the western hemisphere from Central America to the high-

by
Jim Vines
Paraframe Communications, Inc.
15606 - 116 Avenue
Edmonton, Alberta T5M 3S5
Canada /
611 Farmview Road
University Park, IL 60466

Arctic. In this report Vines deals with practical performance at look angles below 5 degrees at 'the top of the world.'

During the last week in March W.P. Teletronics, Ltd., a prominent CATV contractor headquartered in Calgary, Alberta installed what may well be the most northerly private cable systems in the western hemisphere, or the world.

The first installation was to provide a pair of channels from ANIK D-1 at an unbelievably isolated Atmospheric Environment Service outpost located at Mould Bay (76.3N and 119.3 west), on Prince Patrick Island. AES Mould Bay's 13 souls are the only human presence on an island the size of the state of New Jersey.

At this latitude, **only 950 miles from the North Pole**, the highest satellite look angle was but 4.8 degrees. When the dish was aimed at ANIK D-1, the antenna was virtually looking at the horizon (up only 4.7 degrees).

The eye of this system, and the second system to be described, was a Paraframe Communications TVRO antenna. At this very low look angle CNRs of 14 to 16 dB were registered on the Standard Communications receivers, translating to broadcast quality signal to noise ratios in the 52 dB (+) region.

Naturally we could not leave Mould Bay without at least an attempt to **look at F3R**. The look angle was but 4.4 degrees assuming a clear horizon; which may or may not have been the case. The results; signal levels that were read in the 5 to 9 dB CNR region with no hint of noise in transponders 3, 7, 11, 15, 19 and 23. Transponders 1, 5, 9, 13, 17 and 21 plus 4, 8, 12, 16, 20 and 24 had occasional 'hits' and the weakest transponder set (2, 6, 10, 14, 18 and 22) were hit with constant, low level sparklies.

The reception surprised us since we were using a 4.85 meter (15.9 foot) dish at a location 800 miles northeast from the eastern edge of Alaska's north-slope oil field. The 4.85 meter Paraframe was working in an air temperature of -39°F and the M/A-Com 100 degree LNA was probably achieving a practical noise temperature closer to 90 degrees.



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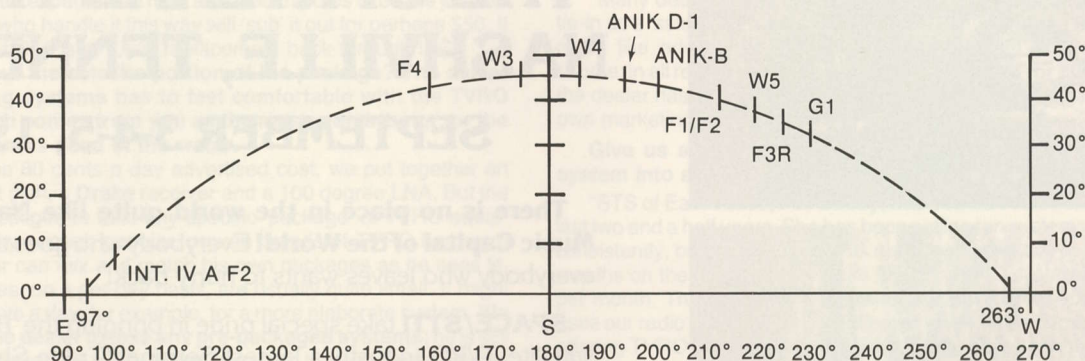
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For Convention Details: Call or write **STTI**, Box G, Arcadia, Oklahoma 73007. 1-800-654-9276 (In Oklahoma or outside U.S.A., call 405-396-2574).





THE CLARKE ORBIT BELT AS VIEWED FROM 39°N, 95°W (KANSAS CITY, MO.)

A special note concerning the field performance of the Standard receivers. This CATV Line of receivers may have substantial weak signal performance going for it that has been overlooked by commercial installers in our home/semi-commercial field. For example, F3Rs levels measured from 5.5 to 9.5 dB. Black sparklies were not evident until the antenna was purposefully pulled off the bird and even then transponders measuring in the 5.5 dB region were not badly degraded by the low carrier to noise ratios. The Standard Agile 24 is a master-slave system; one receiver acts as master with an IF range of 760 to 1260 MHz. Add-on units 'slave' to the master so you can stack up as many receivers as required on the single polarization, using a single master (with down converter) receiver unit.

There are special constraints or challenges on an antenna when you are dealing with such low look angles. The antenna's precision parabolic geometry is harder to 'hold' in proper shape when the dish is sitting virtually straight up and down. The f/D on this antenna series is .375 and that translates to the majority of the dish energy (84%) being seen by the primary lobe of the feed system; the remainder (16%) is found off on side lobe patterns for the dish plus feed. **This is not to say** the antenna itself achieves 84% efficiency, only that if the dish surface is accurate and the f/D is carefully considered when selecting a feed and feed pattern, it is possible to retain a carefully controlled main beam pattern even when the dish is trying to fall over on its face!

In optical language this is called diffraction-limited performance, meaning that the main lobe is as narrow as possible for a given aperture, the maximum percentage of the wavefront falls within the main lobe (16 dB down at the edge of the dish, translating to 84% of the feed's signal coming from the dish surface), and, the smallest

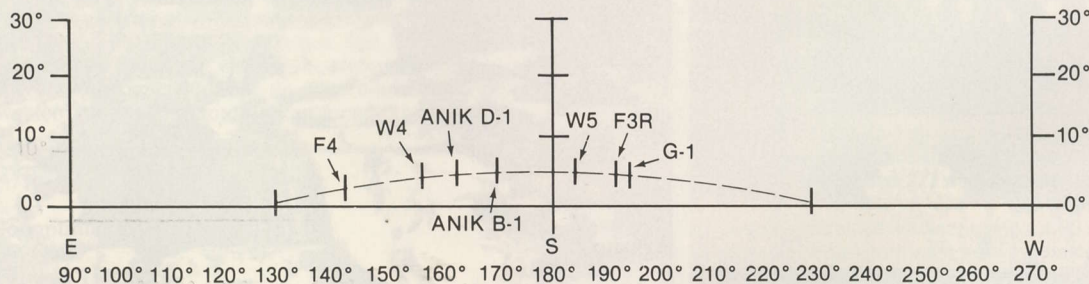
possible amount (16% in this case) of the feed's illumination pattern 'spills' into the sidelobes. Whether it is the 200 inch optical telescope at Mount Palomar or an 8 foot dish in a backyard in Kansas City, the same rules always apply.

Our next 'stop' was Resolute Bay at 74.7 north and 94.9 west, on Cornwallis Island. The customer here was called 'The Arctic Circle Club,' a consortium. Where Mould had no prior TV except videotapes, Resolute Bay was able to receive the CBC feed from a nearby LPTV transmitter some one mile to the south; located at the Telesat Canada 8.5 meter **uplink** site. The Telesat uplink provides telephone and industrial communications contact to the rest of the world from Resolute Bay and Resolute Bay Village. **In an area the size of Texas**, the two "resolutes" have over half of the region's 500 population!

Just how isolated is this region? Well, the nearest tree is almost 1,000 miles to the south (a dog has a long 'hike' here!). Departing Polar expeditions virtually always start out from Resolute Bay. So against this backdrop of isolation it is easy to understand why **some** of the **locals** had previously **attempted** to get satellite television. Several lightweight antennas, torn to shreds by howling Arctic winds, bare mute testimony to man's desire for contact with fellow man. During the long four month-long-winter night even sync bars have been known to bring joy to Resolute Bay!

The satellite of choice here was F3R. The **calculated** look angle was 3.6 degrees, but it would turn out that a slight rise in the wrong place on the distant horizon would reduce the real look angle clearance to just under 2 degrees! That was calling it just a little bit close.

The results were exciting on a 6 meter Paraframe dish. F3R pictures, set against the earth's 'thermal-glare' just two degrees below



THE CLARKE ORBIT BELT AS SEEN FROM MOULD BAY, N.W.T. — 76.3°N, 119.3°W



the antenna boresight, were exceptional. 11 dB CNRs were recorded on TR's 3, 7, 11, 15, 19 and 23 while totally clean pictures in the 9 dB CNR region were found on TRs 1, 5, 9, 13, 17, 21 plus horizontal side 4, 8, 12, 16, 20 and 24. Only TRs 2, 6, 10, 14, 18 and 22 had light sparklies with CNRs in the 7 dB region.

At Resolute Bay Cliff Paterson and Greg Johnston had to com-

pletely assemble and proof (verify the surface accuracy of) the 6 meter dish in temperatures that hovered between -17 and -25 F with blowing snow and howling winds. In this part of the Arctic, when you are dealing with tough-nosed customers such as Esso Resources and Gulf Oil, purchasing decisions are based upon both performance and reliability.

DISH
IT OUT!

ON THE TABLE: 'Suppose HBO Does Not Offer CBD Service . . . ?'

THE OPPORTUNITY TO SPEAK OUT ON ISSUES FACING OUR INDUSTRY TODAY.

The **August 01** edition of **CSD Magazine** carries a report on the technical inter-connection parameters for HBO's Videocipher II descrambling system. The report comes to the reasoned conclusion that very few, if indeed any, of the TVRO receivers presently in the marketplace are compatible with the present Videocipher II descrambler package. And it points out that retrofitting of the receiver with internal modifications to make the receiver compatible with Videocipher II may

turn out to be one of those 'nice on paper' but 'impossible in the real world' situations.

We asked our industry board of advisors how they felt the industry might handle a decision from HBO to 'not offer a **Galaxy 1 CBD service**.' The bottom line here would be that if HBO decided home terminals, at C band, were more trouble than they were worth, we would awaken one day to find all of the premium service channels

(except, perhaps, SelecTV) scrambled, and, no marketplace option available to sign up for that service on an individual home basis.

This is all conjecture. It is not based upon any 'insider information.' However, as with any business, it is better to 'be prepared than to be surprised.' By 'talking about the possibility,' openly, we at least have a dialogue going and that prepares us for the possibility. Again, this question is **NOT based upon any special information** or knowledge and readers should **not infer** into the 'question' that some decision such as this has been made, nor is expected, from HBO.

FERNANDO BATLLE Santo Domingo, D.R.

"If HBO were not able to make their home descrambler system perform properly and was unable to offer it in the market place along with a packaged group of Galaxy-One transponders, there simply won't be ANY scrambling at all; at least until such a system is successfully developed.

"There are two concurrent thoughts to back up this conclusion:

- 1) It appears that the movie studios, in their insatiable quest for more and more profits, are claiming that HBO does not have the 'rights' for DBS. The unscrambled signal is HBO's BEST reason to 'persuade' the movie studios that they do, indeed, have such rights. Until this issue is settled, it is unlikely that HBO would scramble. The time required to resolve the issue will be dependent upon the successful development of the home descrambler system vis a vis the possible deals between the movie studios and the K band DBS operators. The movie studios would just love to make a 'direct deal' for DBS that would by-pass HBO. In the meantime, this situation suggests a 'holding pattern' for all parties, until either K band or C band DBS becomes a practical reality.
- 2) The second thought is strictly a business consideration. HBO is in the business of selling a service. It is NOT in the business of foiling unauthorized viewers. Without a DBS program, scrambling is not likely to increase HBO's revenues; in fact its revenues are likely to fall either by losing cable systems to other unscrambled premium services or by having to subsidize or finance descrambler costs. Deciding on a sizeable investment with the strong possibility of having a negative return is an unlikely scenario for a profit-oriented corporation.

"If there will NOT BE any scrambling until the DBS question is settled, our market and marketplace will remain at least as healthy as it is today. However, such a conclusion is based upon the mistaken premise that was inherent in the original supposition that ANY scrambling will hurt TVRO sales. I submit to you that most TVRO owners are not pirates who have individually purchased their TVROs only because they want a 'free ride' from HBO and the movie producers. Scrambling will NOT hurt TVRO sales and if HBO does scramble, we will not even notice the effects in the marketplace."

TOM HARRINGTON Universal Electronics, Inc.

"The effect of HBO and other premium programmer's inability to supply and properly perform their Videocipher II home descrambler system would have an adverse impact upon the total TVRO market. It could place a lengthy 'hold' on planned purchases by the consuming public. There could very well be an extended 'dry spell' between the announcement of scrambling and the industry's ability to deliver suitable equipment capable of descrambling even IF the HBO plan is put into effect.

"I would prefer to address the sequence of events likely to occur when HBO **DOES announce scrambling** and **DOES announce** the availability of home descrambler equipment. First of all, it is apparent to me that very few of the receivers are 'Videocipher II Compatible.' I would expect HBO to announce their firm plans quite soon, and I

would further expect that announcement to be at least six and perhaps 8 months out in front of the actual 'start date' of the full scrambling and the availability of individual home service.

"This scrambling announcement could have a devastating effect on all levels of the TVRO business. Many firms are presently selling LNAs at below their actual costs, as one example. Can they afford to lose money on LNAs and see a sudden dealer/consumer resistance to purchase **existing receivers** in the 'stream' when the consumer and dealer suddenly becomes aware that receivers in stock **today will not be capable** of working with CBD in say May of 1985?

"Part of the present oversupply and accompanying price erosion has come about by the expansion of the product base by virtually every level of OEM. When we are 'tooled' up for mass quantities of present generation equipment, and HBO suddenly advises us that most of this equipment will not work even with outboard Videocipher II add-ons after May 1st or some such date, what does that do to the equipment now being produced or in the distribution stream? I look for the HBO announcement, when it comes, **regardless of what it says**, to further add to the industry's problems for quite some time."

KEN SCHAFFER New York, N.Y.

"Finding themselves unable to deliver an encrypted C-DBS service for another year or two would not be the death kneel of the plan. Not without irony, such a technically-imposed scenario would ultimately wind up as the greatest blessing to befall HBO, and as a group, the whole of the Galaxy programmers allied in this plan.

"Everyone, 'we,' 'they,' and 'Joe Six-Pack' will survive and indeed even prosper.

"It takes a certain maturity of vision, not inconsiderable wealth, and perhaps some stretch of the imagination to grasp how such a 'delay' would work to the programmer's (read HBO) benefit. The scenario is based upon deep genetic grasp of some very historical marketing laws well-known to the folks who own the skyscrapers on Sixth Avenue in Manhattan. It goes something like this:

"An announced, encrypted C-DBS service package would be attractive enough to the mass of non-hobbyist, non-wealthy Americans for a few (\$25) bucks per month; a neat package of sports, news and movies.

"More attractive, however, would be if **all of this were FREE!**

"From the long view, a view genuinely held by those who practice Madison-Avenue-Technology, the permanent 'infrastructure' of homes equipped for such a service would and will be significantly larger say five years from now . . . if the first two years of the service were 'free' (following the purchase of a 'cheap' terminal for perhaps \$1,000). There is a considerable incentive here for HBO (et al) to 'water' the ground segment (ie. the home terminal business) without which no C-DBS service could or would exist.

"We have terminal prices tumbling. We have the demonstration that if you are not a videophile, if you will accept less than 'perfect' pictures, you can put in a five or six foot terminal for around \$1,000. This says big numbers to HBO (et al); big consumer numbers. I predict that if the scrambling is delayed, 'customers will flock to grab this windfall.' And, after say two years or so of watching these precious programs, they will be transformed into every program marketer's dream: **an addicted customer base** which will be unable to stop itself from continuing, watching, and . . . **paying for . . .** this stuff once encryption begins and huge gobs of money fly. Just like the 'dope business': **'First One Is Free!'** Pre-existence of an operating hardware base (ground segment in our jargon) is the precursor to success in any software business. It goes back at least as far as the razor + blade . . . and probably pre-dates that. To the major programmers, if there are not several million terminals in place, there is no business; not enough to justify even a single bookkeeper! That's how a company like Time, Inc. works and that is where **we** come in.

"As a people, Americans are moderately larcenous at heart. The street-word, sure to be well-leaked and publicized would follow this scenario.

Announcing the Surveyor™ Dealer-Direct Program

NO COMPETITION.

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Counter never miscounts or drifts	YES	YES	NO	NO
50,000 volt lightning surge protection	YES	YES	NO	NO
No batteries to replace	YES	YES	NO	YES
Delayed reversing prevents motor burnout	YES	YES	NO	NO
• 25 turn pots never lose memory	YES	YES	NO	NO
• Soft stop for longer life and more accuracy	YES	NO	NO	NO
• Adj. torque limit prevents motor burnout	YES	YES	NO	NO

Convenience Features

Fully programmable—no fine tuning required	YES	NO	YES	NO
Easy knob selection of satellites	YES	NO	NO	YES
• Soft start for easy fine adjustment	YES	YES	NO	NO
Easily read 3 digit LED display	YES	YES	NO	NO

Safety Features

UL recognized motor drive circuit	YES	YES	NO	NO
• Natl. Electric Code class 3-non fire hazard	YES	YES	NO	NO
• Stops if feedback circuit becomes inoperative	YES	YES	NO	NO

Installation Features

Accurate programming set by touch	YES	NO	YES	NO
• Natl. Electric Code allows one cable run	YES	YES	NO	NO
• Self diagnoses wiring problems	YES	NO	NO	NO
Independently adjustable travel limits	YES	YES	YES	NO
• Exclusive compensator for long wire runs	YES	YES	NO	NO
Manufactured in the USA	YES	YES	NO	NO

- No other drive in the industry offers this feature.



Satellite TV Magazine's December 1983 product review on Surveyor 7 concludes:

"I can't say it is the best because I haven't tested all the drive systems in the market, but it certainly must be one of the best."

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Surveyor 5 package	\$239
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"All you have to do is go out and spend \$1,000 or so, spread over three years, and this wonderful programming is FREE! I can see it now; 'gorgeous five foot dishes' on the front cover of **Good House-keeping** pounding away at the 'beauty' of the 'small dish.' Now that's power (and, this IS America)!"

"**Sure, I know** . . . five foot dishes do not make for respectable 'TVRO'. But, this is NOT TVRO; it is 'DBS'. Programmable actuators and 50 dB gain LNAs have zero relevance to a guy content to sit back with a sixpack and watch the plethora offered on Galaxy. And that's probably 90% of what the average consumer watches in the sky anyhow. This consumer couldn't care less about Molniya, Hall Effect, horizon to horizon or the amazing specs on the latest LNA. He simply wants to watch 'TV' and he does not care whether it comes to him via C-band, K-band, or for that matter, on two Dixie Cups and a piece of string."

"**We are the pawns here.** To our own benefit and to the benefit of the programmers. We run about selling our 'little terminals' with their implicit 'blessing' **because we are seeding the ground segment** they so sorely (unlike USCII) need to start a business. Symbiosis!"

"Sufficient terminals on America's roofs and verandas; the business WILL be there, and, at the right time, the announcement WILL come. (Which is not to say it might not come next week. These fellows, at whose pleasure this plan of ours rides, are VERY conservative. More important, they made some mistakes in getting the 'first HBO' launched and they now have the bucks to NOT MAKE those same mistakes again. This time, they can afford to be prudent, or conservative, if you like.)"

"**This has been 'the problem' since Cooper's Creation of TVRO; HBO (et al) were NEVER 'against us.'** That's silly. We were just not even close to being a factor in their lives. The Constitution be damned . . . there was no business here!"

"Like the Elephant and the Horsefly; even beyond the delicacy demanded by their very understandable and not insignificant affiliate relations problems (put yourself in **their** shoes!), big league programmers could not be bothered with us. Certainly not for a couple hundred thousand dishes out there, half run by abberrent techno-freaks who, almost by definition, are just the folks who'd rather spend ten times the subscription fee just to roll and grab it on their own rather than 'pay' Big Brother (i.e. I climbed Mt. Everest: 'Because it was there!')."

"Certainly in this light, ours has been far more of a 'hobby' than an industry. **Until now** when the technology . . . here on Earth as in Space . . . makes consumer attractive, consumer affordable terminals an attractive mass-market proposition."

"I suppose that even a cursory understanding of the script proposed here will not sit well with those of us who have big stakes involved in the production of big dishes. Me? I'll always love them . . . if it takes a ten footer, I will opt for a ten meter! But I learned through successes in the record industry that you cannot 'program for your own tastes' (assuming you have any) and be successful in the 'pop' (as in mass) market."

"It has been more than six months now since Galaxy began speaking high-powered entertainment-English. Even without the public talk and announcements, the mere 'coincidence' of the tenant roster on Galaxy 1 (the 'Cream of The Sky') made it obvious more than a year ago that intentions (you read it here first!) were launched on this very expensive high-powered satellite that had nothing to do with servicing cable firms (done far more cheaply, 'next door,' on F3R). The programmers are sure trying; problems like the ones they face in their existing market I would not wish on the normal breed of folk."

"For the programmers to go slow is prudent and realistic. Procrastinating the announcement/institution of C-DBS attributing the 'delay' to a Videocipher II engineering problem would be the perfect way to buy additional time. Remember: Time, Inc. is **the** very most intelligent and astute media-manipulating organization in the world! Even within our own field: 'Pirates!' propaganda; 'It's scrambled.' propaganda; 'We don't have DBS rights from Hollywood!' propaganda. And by my little scenario, 'Linkabit Errors.' propaganda (conveniently attributed to an outside organization no less). These people are careful, complete and calculating. Most of all, they are impressive in every way."

"**But, like computer-hacking in the early Seventies,** what we have had to date has been a wonderful, moderately lucrative and

endlessly rewarding **hobby**. But there were very few true computer millionaires until the 'hobby' wore off a few years ago. Just, as I suppose, there will be few true **Big Dish** millionaires when this evolves into something different than a hobby or a dillitante's plaything. **Which will be soon . . .**"

GUY C. DAVIS

Uniden Corporation of America

"I believe that if HBO is not able to make their Videocipher II home descrambler system perform properly before bringing it to the marketplace, we will see very little real effect on the marketplace. This is due to the fact that virtually nobody at the consumer level is really aware of the HBO plans in this area anyhow."

"In a recent letter from (HBO's) Ken Kinderman, he reveals that HBO is having problems convincing the cable operators of the reality of the home satellite market. The reason for this is the lack of organized effort on the part of **our industry** to be recognized by consumers on a large scale. We must make a concerted effort to make customers aware of our industry and what our products offer to consumers."

"If HBO brings Videocipher II into the marketplace and it fails to perform properly, this could cause other potential programmers to drop out of the programming coalition. Also, this would confirm the myth that the technology to scramble is not readily available today. I see this problem as having **far more impact** on our industry because it would set the entire scrambling argument and marketing for home descramblers back many months or years. The ideal scene would be for HBO and others to bring out a fully perfected scrambling system at reasonable pricing, **available to all people evenly**. Even though this announcement would cause some bubbles in the industry, and a mad 'scramble' to get into the equipment stream suitable receivers capable of handling the Videocipher II interface, I am sure that this will be in the best long term interests of our industry and the viewing public at large."

Readers with differing views are invited, as always, to submit them to **CSD/2 Feedback**, P.O. Box 100858, Fort Lauderdale, FL. 33310. Readers who would like to become a part of our 'Advisory Board,' receiving the initial 'Dish It Out' questions each month should contact Carol Graba at the above CSD/2 address or call 305/771-0505.

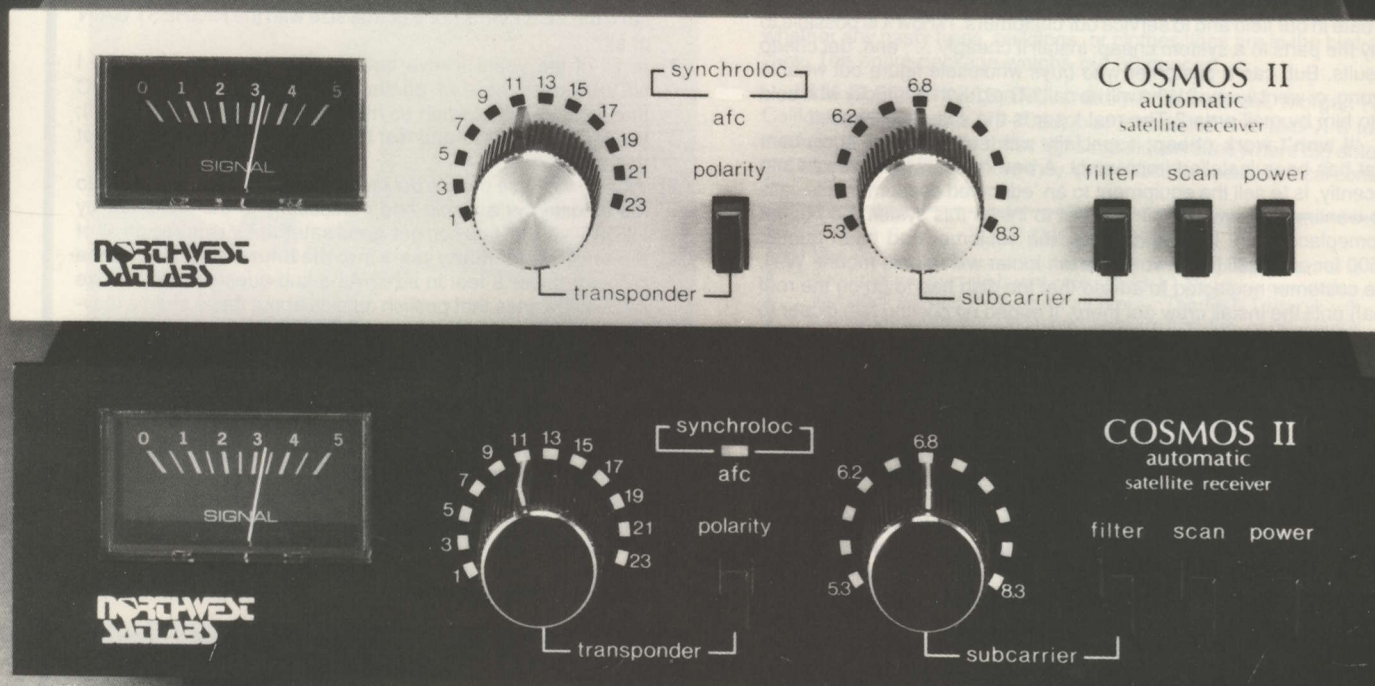
CSD

FEED
BACK

In **CSD/2** for July 15th, we asked our board of advisors to comment on the recent trend to 'sell direct,' wholesale, TVRO hardware to the consumer. The responses were all **against** such practices. In our Feedback section this issue we have **John J. Zelenka of Star Video Systems** (64-42 Palmetto Street, Queens, New York 11385) joining the chorus. John also has a suggestion as to how you can satisfy the consumer's need to have satellite program information without exposing them to the 'wholesale-direct' advertising which permeates so many of the guides."

"**I have always felt** very strongly against ANY pricing being advertised or quoted in a publication which is intended for, or apt to be

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AUDIO: Get set for a real treat. Listen to virtually all the narrow band audio channels *without* the usual static. So clean that the TV speaker becomes the limiting factor. Features include automatic muting and automatic narrow band volume compensation.

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(503) 754-1136

read by the consumer. It is for that very reason that I automatically enter a subscription for each system customer to **SatGuide** (the 'original' guide still published by Commtek). I do not want my customers exposed to this sort of pressure. Let's face it . . . everyone likes to save a buck and I hate to think my customers will be reading about \$99 LNAs!

"**You see, I keep an inventory.** We have two fulltime vehicles and we employ and train people and we pay rent and we pay our business taxes. In short, we do everything a good business should do to stay up to date in our field and to service our customers. I know it is possible to buy the parts to a system cheap, install it cheaply . . . and, get cheap results. But, can a customer who buys wholesale figure out what is wrong, or went wrong? Who will he call? The guy in Kentucky who sold it to him by mail order? The real loser is the customer himself.

"**I won't work cheap;** especially with sub-standard equipment that has been installed improperly. A new 'trick,' which we ran into recently, is to sell the equipment to an 'educated consumer'. He calls up wanting to know what it will cost to install this system he bought 'someplace else.' In one instance, the customer had been quoted \$500 for an install for a two-piece ten footer with a pole mount. Well, the customer neglected to advise that the dish had to go on the roof (ha!) until the install crew got there. It ended up costing him closer to \$2,500.

"**When you don't sell it yourself,** you have no control over the bits and pieces. The customer says 'we have everything here; we bought a complete system.' Sure he did. You arrive and find bolts missing, clamps missing, fittings missing. So you end up taking valuable time to run to the hardware store and the nearest Radio Shack to complete the package. And the customer who bought his system wholesale and then farmed the installation out to you wonders why you tacked several hundred extra dollars on to the job! I don't need this kind of hassle; I'm sure other dealers who try to conduct themselves in a business-like-way also don't need it. And until this industry matures a little more, it will be the old fashioned **SatGuide** publication for me and my customers. It may not have all of the glamour of the consumer publications, but it also doesn't have all of the hassles!"

Readers with differing views are invited, as always, to submit them for consideration to **CSD/2 Feedback**, P.O. Box 100858, Ft. Lauderdale, FL 33310.

FEEDback / Direction?

Responding to the general concerns of the Friends of Space group, USS's Doug Dehnert, a **nominee to the Board** in the Pioneer/Manufacturer class of SPACE, ponders the 'direction' of the industry. The Friend's Of Space announcement and platform appeared in the July 15th edition of CSD/2.

"I have been directly involved in our home TVRO industry since October of 1979. I have seen it grow at a staggering rate. I have seen it create new millionaires, virtually overnight. I have also seen it create a condition known as 'Chapter 11,' again virtually overnight. I have seen big names come . . . and big names go. I have been to trade shows; in one case, two trade shows in the same day (!). I have seen LNA prices plummet from \$2,400 to \$99.95. I have seen a desk-top-full of new publications spring up to service this new, dynamic and growing industry that we are all a participant in. And, I see future potential that is absolutely staggering.

"In the past five years, as all of this has been happening, several questions have popped into my mind again and again. I have never been able to resolve good answers to these questions and perhaps we as an industry need to focus more of our attention on these and similar questions. For example:

- 1) Why do we have an industry that is one large, continuing, price war? As a sub-question, why is the distribution chain structured so that the profits accumulate unevenly at the top (OEM) level and seldom are appropriately shared through the full chain to the dealer, in the proper proportions.
- 2) Why do many of the magazines dedicated to our industry, **magazines which we support** with our advertising dollars, insist on cutting our throats by allowing a few IDIOTS to advertise wholesale prices in publications which ultimately wind up in the hands of retail customers?

- 3) Why have we allowed our industry trade association to become structured so that it has 'the appearance' of only benefitting its board of directors or its employees?
- 4) How can anybody be so foolish as to advertise 'We will not be undersold' or 'Guaranteed lowest prices'?
- 5) Why have I never read a product review that says 'We tested this product at out highly scientific lab and found that it is a piece of crap'?
- 6) How can **EVERYBODY** that manufactures a parabolic reflector have the **VERY BEST** one of that size with the **HIGHEST GAIN** of all?
- 7) In all of the years I have been in this industry, why have I **NEVER** been able to purchase a genuine '8 dB STATIC threshold' receiver when so many advertise 8 dB (or better!); yet when I purchase and test them, I find **none** that can meet this number.
- 8) Why do we have people out there doing a terrible disservice to the industry as a whole and particularly to the customer by **INSISTING** that you can get 'good satellite TV pictures on all of the satellites' **for many years into the future** using an antenna reflector under 8 feet in size? As a sub-question, why do we have magazines that publish articles about these shams leaving the impression that they really **DO** work?
- 9) Why do certain manufacturers claim that mesh antennas are virtually impervious to the forces from the wind?

The list of questions is endless but those cited serve to illustrate my concerns. Most of these questions, and concerns, indicate to me a serious need for a strong, well-supported industry trade association which will work towards the following goals:

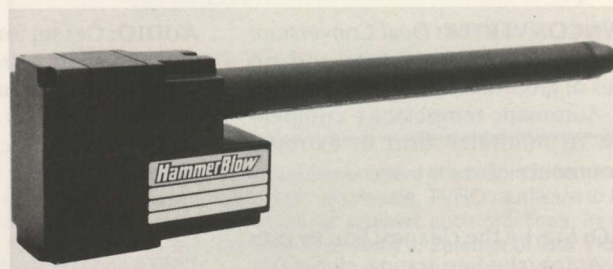
- A) Serve ALL of its members;
- B) Create an impartial set of industry equipment and performance standards;
- C) Create within our industry the **WILL** of self regulation;
- D) Represent effectively our industry interests at ALL levels of Government;
- E) And last but hardly least, work towards greater consumer awareness of our product and industry and a centralized consumer information service explaining our industry's services.

Doug Dehnert
President
United Satellite Systems
St. Hilaire, Mn. 56754
(218/681-5616)

Dehnert's points can be responded to by others who agree or disagree by addressing communications to **CSD/2 Feedback**, P.O. Box 100858, Fort Lauderdale, FL 33310.

PRODUCTS/ continued from page 6

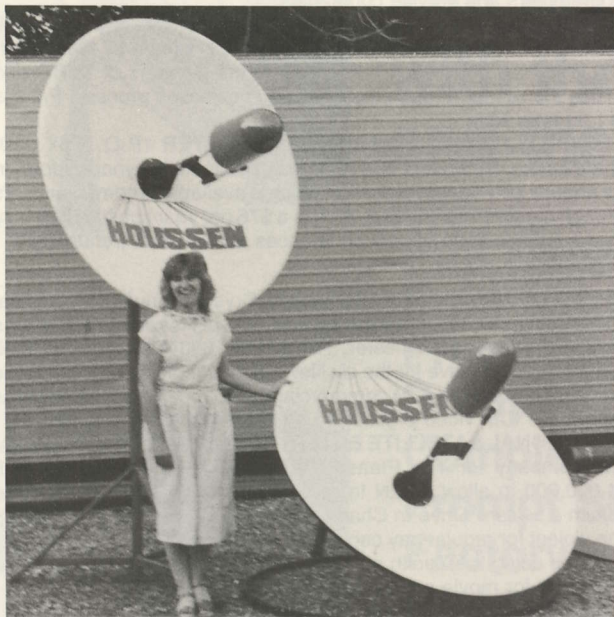
Positive electrical shut-off is featured for pre-set limit shutdown on both ends of the arc.



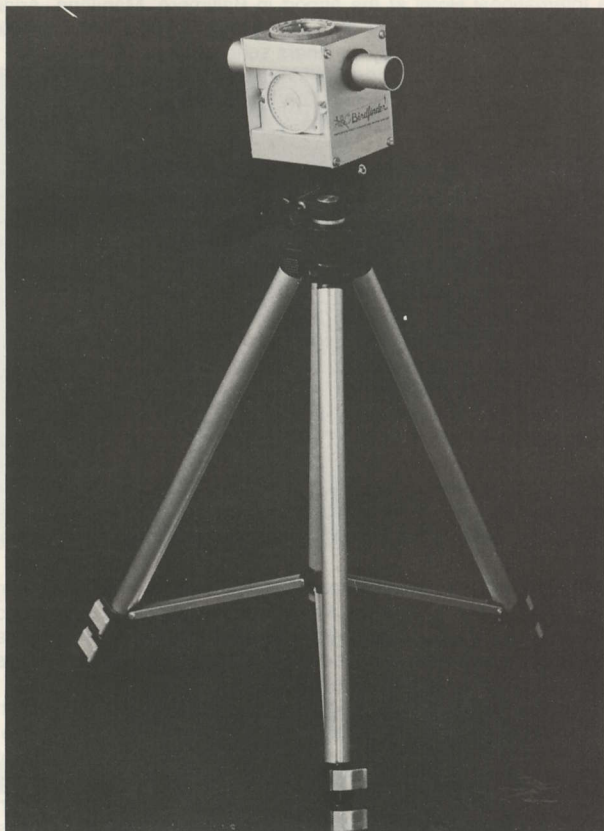
HAMMERBLOW fights the environment

HOUSSEN TECH, INC. (P.O. Box 2126, Moncton, New Brunswick E1C 8H7, Canada; 506/534-2530) first displayed their '4.5 Housen Satellite Dish' at the Niagara Falls STTI show in June. They claim their 54 inch diameter dish has superior reception qualities and in-

deed, the F3R and other low look angle satellites from a New Brunswick testing ground would present quite a challenge to even larger dishes. The antenna is designed for RV applications or for mini-SMATV systems where appropriate BDC techniques could provide



HOUSSEN 4.5 DISH struggles against the odds (and evens)



EASY AS 'ABC'

multiple satellite signals to a multitude of residential units in the same living complex.

J & J SATELLITE TELEVISION SYSTEMS (9504 Tara Blvd., Jonesboro, Ga. 30236; 404/477-1030) has created the 'ABC Birdfinder,' an instrument which they claim makes locating of the Clarke orbit belt (and the birds that reside there) 'child's play.' The composite instrument combines a fully extendable tripod that compresses for ease of storage and transport, an orbital leveler, a compass and an inclinometer. A built-in siting tube allows the installer to determine whether any nasty trees, buildings, or clothes lines are in the bird-arc view. The entire package weighs but 36 ounces.

KLM ELECTRONICS, INC. (16890 Church Street, Morgan Hill, California 95037; 408/779-7363) has introduced the 'Mini-X 8 foot' modular dish system for those tight installation sites where big antennas either will not fit, or where they have difficulties passing local zoning

THE DISH TESTER

Dish surface accuracy is probably *The* most important part of a good picture. Ever wish you could check it? Now you can, with a tool small enough to fit your tool box — The Dish Tester. It will answer questions like: Do I have to replace that dish, or can I pull it true? Are my sparklies caused by the electronics or a bad dish — factories get tired of returned electronics that work good. Was the metal dish bent in shipping — the Dish Tester will tell you. Did you assemble the dish correctly? Has the base warped the dish? Why sparklies in every other dish, they're all the same? Is it TI causing sparklies, or a bad dish? Where do I put the clips or extra braces to make that mesh dish more efficient? It didn't have sparklies before the windstorm, but it does now — is the dish bent — the Dish Tester will tell you. Am I taking the right dish to the show? Are my mfg. tolerances O.K.? Send \$20.00 (any way you want), and we will send you a Dish Tester postage and tax paid.

Send to: STV Co., Dept. A
516 W. 33rd
Hays, Ks. 67601

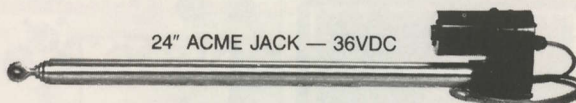
PUT SOME RELIABILITY IN YOUR TVRO SYSTEMS



MODEL 2350

IR REMOTE

24" ACME JACK — 36VDC



Our Model 2350 features 16 programmable satellite locations plus manual override and is easily programmed from the front panel. Dual adjustable end limits, motor stall protection, on-off switch, optional infrared remote control, 125 ft. cable, and the quietest, smooth running 24" jack in the industry make this the best actuator system available today.

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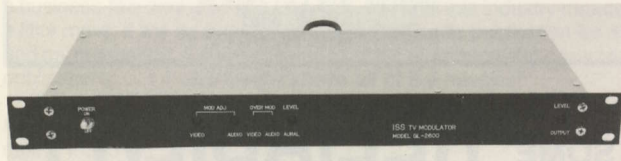
ordinances. Available in black, dark green or brown, the Mini-X is UPS shippable, goes together in approximately 90 minutes time, and claims 55% antenna efficiency. KLM calls the antenna the final ingredient in their all-KLM-brand low-end package designed for dealer re-sale.

WILSON MICROWAVE SYSTEMS, INC. (One Sunset Way, Henderson, Nv. 89015; 800/634-6898) is now shipping a brand new 9 foot perforated surface dish antenna called 'Airstream.' The dish uses perforated metal as the reflector surface attached to a framework originally designed by Wilson for a solid dish system. Each leaf or panel weighs approximately six pounds and is painted your basic black for blending purposes.

MICRODYNE CORPORATION (P.O. Box 7213, Ocala, Florida 32672; 904/687-4633) has announced a heavy duty motorized polar mounting system for their line of 5 and 7 meter commercial (as in broadcast and big buck) TVRO antennas. The new polar mounted system is programmable with 16 preset positions and pre-programmable polarization at each of the 16 memory stop positions.

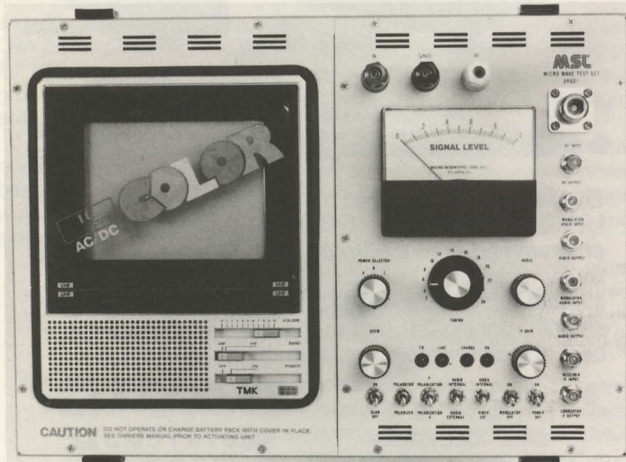
MODULATORS and Tests

INTERNATIONAL SATELLITE SUPPLY (the Norman Gillaspie Company at 2225 Sharon Rd., # 224, Menlo Park, Ca. 94025; 415/854-8987) has released a new frequency-agile modulator capable of spanning all of the channels from 2 to 13 and A-W. The 35 channel GL-2600 unit incorporates a saw filter for adjacent channel, clean operation and a saw resonator for low phase noise and superior modulator stability. IF modulation with loop throughs for both video and audio is standard. The '35 channel modulator' is priced in rack mounting configuration for use in SMATV and other budget-based systems.



35 CHANNELS and no crud

MICRO-SCIENTIFIC LABS, INC. (4719 South Cobb Drive, Smyrna, Georgia 30080) 404/435-8630) has added a new all-color receiver package to their popular line of TVRO testing set systems. Model DR-601-A performs all of the TVRO installation test and set ups of the earlier 601 black and white monitor equipped unit but gives you eye pleasing and sparklie revealing full color in the process, on the built-in monitor. Dealers use the 601 series package for site surveys, TI testing, satellite locating and dish set-up applications.



COLOR BARS in color

SERVICES

EAGEN & ASSOCIATES announces they will no longer consult in the SMATV or private cable fields following the involvement of Ed Egan as Chief Executive Officer for publically held Wiresat Corporation. The firm will continue to consult for equipment manufacturers, programmers and service companies.

KLM ELECTRONICS has underwritten the cost of a new book entitled 'The Complete Guide To Satellite TV' written by Martin Clifford. The new publication helps explain the wonders of TVRO and guides the reader through the equipment selection process. Price is \$11.50 from KLM.

SATELLITE TELEVISION NEWSLETTER (P.O. Box 510, Chanhassen, Minnesota 55317) is now available in synopsis form in the popular UPI NewsNet service which is available to computer users through modem interconnect. STN is a \$76 per year subscription-only insider letter with emphasis on finances and product trends.

APPOINTMENTS

ICM VIDEO (division of International Crystal Manufacturing, Oklahoma City) has announced the appointment of **Associated Systems** (P.O. Box 5211, Manchester, NH 03108; 603/472-2297) as their factory representative for the six New England states. Included in the rep agreement is the ICM commercial TVRO receiving equipment as well as the ICM video processing equipment.

NATIONAL SATELLITE ENTERTAINMENT NETWORK, the parent company for The Pleasure Channel, has been funded with \$1,000,000 to allow NSEN to acquire NBS-Video. NSEN hopes to launch a 'violent' Drive-In Channel this fall featuring movies deemed 'too violent for regular pay cable.' The Pleasure Channel is presently encoded using the Zenith scrambling system (\$350 consumer price plus \$100 for movie service for a year).

SHOWS/Shows and Meetings

General Instruments RF System Division will hold a Technical Seminar on Broadband Systems October 30/31 and 1 November at the International Hotel at the airport in Baltimore, Maryland. Additionally, satellite fed master antenna systems (SMATV) will be the subject of a pair of two-day seminars scheduled as follows:

- 1) Chicago, Illinois/ Rodeway Inn O'Hara September 18 and 19;
- 2) Culver City, Ca./ Ramada Inn December 4 and 5.

For information, contact Joanne Wilcox at 602/294-1600; extension 251.

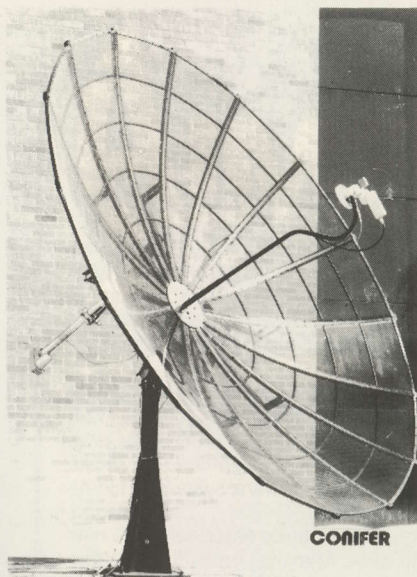
SATELLITE SHOWTIME '84 will be back with another, new, two-hour television 'special' from Nova Video Productions just ahead of the forthcoming SPACE/STTI trade show early in September. The dates are August 27 from 8 to 10 PM eastern time and August 30th from 10 PM to midnight on SATCOM 4, TR8 (note bird and transponder change from previous show). Interested parties should call 608/583-4833.

PHILLIPS Publishing, Inc. plans their 'DBS IV' seminar meeting at the Mayflower Hotel, Washington, DC September 10 and 11. For information, contact 301/986-0666.

FUN/Fantasy Unrestricted Network has settled down on Westar 5, transponder 24 with an expanded seven day a week schedule that begins at 12 midnight and runs to 5:30 AM eastern time. Three XXX-rated adult features are transmitted each night and the fees are \$125 as a deposit for the first year use of the decoder (non-refundable), and \$150 for the programming itself. Contact Betty Rodgers at 408/559-8812.

MOVIE TIME is a new, planned, satellite service to begin operation early in 1985. The new service will be intended for cable systems to carry, and will include 'movie trailers' (promotional shorts) and 'movie industry news' ultimately intended to be used within movie theaters as 'filler pieces' during pre-movie-schedules.

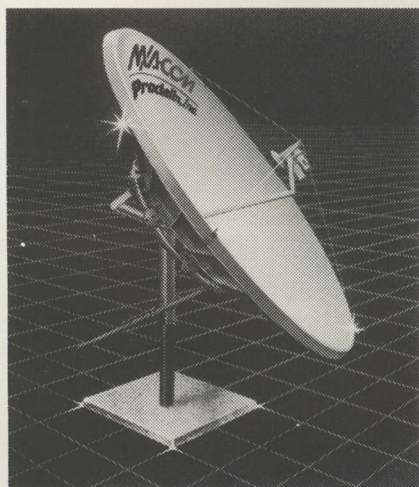
PLEASURE CHANNEL says they are pushing hard to establish TVRO dealers as 'retailers' for their service. The XXX-rated service, currently carried on Westar 5, is using Satellite Entertainment, Inc. of Cedar Rapids, Iowa as a coordinator for setting up TVRO dealers as Pleasure Channel reps. They say 50 dealers have now been appointed and a goal of 200 dealers has been set for the end of this year. The descrambler system retails for \$350 and the annual subscription fee is \$100. For information, contact Dick Brooks at 213



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(800) 242-3860 PA only**

273-8477.

SHELburne FILMS, the producers of the 'Satellite TV Basics' videotape which is widely used by dealers as an in-home or in-store demonstration tool, has a new tape in production; 'Installing TVROs.' The new tape will be generic in nature, pushing no particular brands of equipment, designed to help new dealers better understand the problems and pitfalls associated with installations. For information, contact 614/378-6297.

KAUL-TRONICS will be presenting a seminar just for its own dealers on SATCOM F4, TR8 August 14th from 9 to 10 PM; the first such 'private' seminar service scheduled from within our industry.

DOLLARS/And People

Birdview Satellite Communications (908 West Chestnut, Chanute, Kansas 66720; 316/431-0400) reports sales totaling \$21,800,000 with a net profit of \$168,000 for the fiscal year ending

March 31, 1984. The firm had sales of \$13,212,000 in the prior year and a net loss totaling \$1,590,000.

Continental Satellite Systems announces the following new appointments: **Peter Froeb** as General Manager and **Roger Blummer** as Sales and Marketing Manager. Froeb has a background in banking and business administration. Blummer has a background from our industry being formerly associated with Wespercom in Bend, Oregon.

GOULD/Dexcel has appointed **Jerry Moore** as the new director of consumer and commercial products; Moore was formerly with Amplicia as Vice President of Marketing. Gould/Dexcel also announces **Henry Horne** as the new Manager of Commercial Microwave Products (SMATV and minicable hardware systems). Horne comes to Dexcel from Scientific Atlanta.

Hero Communications announces **Claude Macrina** as the new marketing manager for domestic sales. Macrina comes to Hero from Chaparral Communications.

International Video Communications Corporation has announced **Judy Hester** as their new Vice-President. Ms. Hester has been with IVC in the capacity of credit manager.

INTERSAT announces **Bruce Weston** as the new National Sales Manager.

Wespercom Group Ltd. announces **Dan Ellis** as the new President and Chief Executive Officer. Ellis was previously Corporate Controller for the firm.

DAN BRUST has joined Satellite Reception Systems as the Michigan Sales Manager for the newly opened SRS outlet in Lansing, Michigan.

MICHAEL MANNING has been appointed Director of Marketing for STS/Satellite Technology Services, Inc. and will coordinate the national dealer network for STS as well as be responsible for the development of STS business outside of the United States.

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TRAINING IN SALES, QUOTES, CONTRACTS,
DESIGN, INSTALLATION --- ALL AREAS OF SMATV
BUSINESS, FIELD TRIPS TO SMATV SYSTEMS IN
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Commercial & Residential Earth Stations

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*Commercial Grade Satellite Receiver
With 62 dB Output Built-in Modulator*

60 Days Trial Basis — 100% Refundable

Compare our receiver with any other on the market for a full 60 days if you are not completely satisfied, return to us for a 100% refund.

Guarantee: SAT/COM International Corp. offers an **Unlimited 2 Year** warranty.



The Electrohome model SRM-36 is the ultimate in satellite receivers designed exclusively for the CABLE SYSTEMS MARKET. This unit adds a full output +62 dBmV modulator to the Electrohome model SR-24 satellite receiver to guarantee system performance and simplify installation.

Microprocessor control for ease of operation and optimum performance. Synthesis for both video and audio, eliminates frequency drifting while continuous tuning ensures the ultimate in noise-free reception. Similarly, the modulator uses synthesis for stability and total agility in low, mid, high and super band.

Satellite Communications International Corporation

1820 N. LeJeune Road, Miami, Florida 33126 U.S.A. /opposite Miami International Airport
Telephone: (305) 871-1554 Telex: I.T.T./4996587 Answer back Sat/Com-U.I.
TWX No. 8108484041-W.U.

CALENDAR/ Through September 30th

AUG 21/23: Jerrold Technical Seminar, Denver. Contact Kathy Stangl; 215/674-4800.

AUG 27: Satellite Showcase '84, two hour industry TV special, sponsored by **STV Magazine**; 8 PM, F4, TR8.

AUG 28/31: Sixth Annual Satellite Communications Users Conference, Louisiana Superdome, New Orleans. Contact 303/694-1522.

AUG 30: Satellite Showcase '84 repeat; 10 PM, F4, TR8.

SEP 3/5: **JOINT STTI and SPACE fall industry trade show, Opryland Hotel, Nashville, Tn.** More than 500 exhibit spaces, crowd of 10,000 forecast. SPACE banquet Tuesday evening September 4th. Contact STTI at 405/396-2574 for details.

SEP 3: **TVRO INDUSTRY FIFTH BIRTHDAY PARTY**, Washington Ballroom, Opryland Hotel (6 PM). Admission tickets from co-sponsor booths: BR Satellite, Boman, California Amp, Channel Master, CSD, Delta/Draco, Intersat, Paradigm, Uniden, USS/Maspro.

SEP 6/7: Second Annual Swiss Videotex Congress, Basel, Switzerland. Contact 061/262020.

SEP 10: The Home Video Explosion Conference, sponsored by Knowledge Industry Publications, Hilton New York, NYC. Contact 914/328-9157.

SEP 10/11: DBS IV sponsored by Phillips Publications, Washington, DC. Contact 301/986-0666.

SEP 14: The Home Video Explosion Conference, at Hyatt Airport Inn, Los Angeles. Contact 914/328-9157.

SEP 15-19: National Satellite Communications Association (private cable/SMATV) convention, Hyatt Regency Hotel, Orlando, Fl. Contact 202/659-2928.

SEP 18-20: Jerrold Technical Seminar, Atlanta. Contact Kathy Stangl at 215/674-4800.

SEP 21-23: SMATV Private Cable Hands-On Workshop, sponsored by Burrull Communications, Washington, DC. Contact 608/873-4903.

AIMERS

BY DRACO

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AIMER III

The complete answer to satellite dish movement and polarotor control. Up to 64 satellite locations with microprocessor accuracy of position and polarotor. Easy to use — simply turn the knob until the satellite reads out and push "GO TO." The Aimer III does the rest. Built-in power supply — low profile — superb styling.

ACTUATOR GIMBAL BRACKET

Eliminates side and up and down pull on the Actuator. Prevents premature failure of the power drive unit.



AIMER II

Precise antenna movement with push button ease. Built-in power supply, dynamic breaking. A solid solution to low cost dish power positioners.

POWER ACTUATOR

Designed and built for satellite dish movement. Sealed tubes, solid lubrication, gimbal rod end, Timken roller bearings, anti-jamming. Rated at over 2000 lbs. The Draco Power Actuator operates at 12 to 36 volts with self-resetting current protection. Infrared light eruptors are impervious to all electrical interference. Positively the best Actuator built.

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DRACO LABORATORIES, INC.
1005 Washington Street
Grafton, Wisconsin 53024 U.S.A.
Phone: 414-377-0770
Telex: 26886



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Paracclipse

HIGH PERFORMANCE
SATELLITE TELEVISION SYSTEM



The Paracclipse 4.8 meter
(16 ft.) antenna.

PIONEER MEMBER OF
SPACE

Survival of the Fittest

It's a tough world out there. Every minute of every day the effects of wind, rain, heat, cold and corrosion will do their best to defeat your investment.

If your system is to survive and perform accurately day after day, year after year, you will need to start out with equipment strong enough to endure nature's worst.

The famous Paracclipse design rib and ring truss system is simply unequalled in terms of rigidity, strength and parabolic symmetry.

The antenna framework is a precision welded aluminum alloy structure covered with heavy expanded aluminum mesh. The result is a strong, lightweight, dimensionally stable mesh reflector that is capable of supporting the kinds of loading that a solid dish would impose.

The hub assembly, polar drive,

pedestal mount and counterweight are all fabricated from steel. Precision tooling and manufacturing techniques enable the 4.8 meter Paracclipse to track from horizon to horizon and from zero to 90° elevation with perfect, dead center accuracy.

Our counterweight assembly offsets the forward weight bias imposed on the polar tracking mechanism. By placing a mass equal to that of the reflector behind the polar T, we've greatly reduced the demands placed on every component of the drive system. With the drive disconnected, the entire superstructure swings smoothly to the center position and can easily be moved by hand to any position in the arc.

Every part is powdercoated with a beautiful baked-on epoxy finish that effectively seals the antenna from the elements. The entire assembly is put

together with stainless steel bolts, nuts and fasteners.

We're so confident in the way we build the 4.8 meter Paracclipse that we guarantee it for three full years against wind damage. That's right, a three year unlimited wind speed warranty. If it is damaged by wind in the first three years, we fix it. You are protected right up to, but not including an officially declared disaster.* We are that confident.

You will want your investment to last. You will want your equipment to perform. You will want accuracy and reliability for a long, long time. And you will want all of these things at a reasonable price from a manufacturer who will stand squarely behind his products.

At Paracclipse we think you deserve no less.

Paracclipse Inc. 3711 Meadowview Drive, Redding, California 96002 (916) 365-9131 244-9300

* Full warranty information available upon request.

Mark Fator photographer

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