The SPARTAN

VOL. IV • NO. 2 MARCH 1975

DAVE EVANS (left), Audio Products Division manager, and John Fernandez, mechanical engineer and Fabrication Shop supervisor, discuss some packaging aspect of the new Sparta 3000-series console. It will be featured in a Showcase furniture group setting at the NAB Convention. –Sparta Photo

New Equipment For NAB-Las Vegas

At this writing the Sparta plant is humming with NAB-related production; both new and current models of transmitters and audio products are undergoing checkout for the trip to Las Vegas.

There are new Sparta products to show in three areas: the Model 635 35kw FM Transmitter (see 'Product of the Month'; Ed.), an all-new limiter/amplifier series, and an all-new 10-mixer console!

The new console will be featured in a completely operable 'Showcase' furniture group, with GT12 Turntables, Century Series tape cartridge equipment, and related items.

The NAB exhibit model of the console will be the dual-channel mono version, with 28 inputs into the ten mixers.

Two departures from conventional design offer extreme flexibility: (1) five bridging inputs for Mixer No. 8 allow mixing audio from several cartridge playbacks without interaction, and the ten switch-selected remote lines in Mixers No. 9 and No. 10 can be used either to send or receive audio, while (2) all mixers can be turned on and off by remote control, such as a video switcher, or by a studio announcer or newsperson.

Other features include optically-coupled audio-switching, built-in cue speaker and intercom, 12 Watt monitor amplifier and amplified headphone output for low 'phones.

The console size is 36-1/8"W x 7"H x 15¼"D (the stereo model will be the same size, have similar features), and its price will be competitive with 8-mixer consoles from other manufacturers.

The Model 900 AM Limiter to be seen at the NAB Convention is a completely new design from the Sparta Transmitter Division engineers. Input and Output levels are both -10/+24 dBm, with 100 mS recovery time, less than 15 mS attack time (depending upon program content). Noise level is -80 dB below +24 dBm output, with harmonic distortion less than 0.1% below limiting. Input and output impedences are both 500-600 ohms balanced or unbalanced.

Input and output levels are adjustable, and the 900 is also capable of selecting symmetrical or asymmetrical limiting. A one-inch meter on the face panel indicates input level.

The FM Limiter in the line is the Model 901, with similar specifications to the Model 900. Its limiting is adjustable for flat or 75 mS limiting, and maximum limiting level is 18 dB or more, compared to the AM model's 10 dB or more.

The Model 902 FM Stereo Limiter combines the features of two Model 901's in the same package. The resulting specifications show combined noise of both channels is -75 dB below +10 dBm output, with phase/gain tracking between channels at least -40 dB below limiting at 50-15,000 Hz. In the 902 twin one-inch meters for input level adjustment are provided.

All models of the series are packaged in 19" standard rack mount, 11" deep, and 1¾" high.

The limiters (the 900-Series) will be seen in all three configurations: AM, FM, and FM Stereo.

Besides the new Model 635 FM Transmitter, the Model 600B 250 Watt FM Transmitter (see March-April 1974 'Spartan', Ed.), which has been ordered in quantity by the Canadian Broadcast Corporation, will be on display in its export dress. The Models 602A 2.5 kw FM Transmitter and 701B 1 kw AM Transmitter will be available for examination, too.

The audio lineup in Booth 312 (North Hall) will include the major Centurion cus-

(continued on page 4)

Don Laws —Sparta Photo

Sparta Team Signs Laws As Controller

Appointment of Don C. Laws as Controller of Sparta has been announced by Bill Overhauser, Sparta president.

The new appointee was virtually born on the move, which may explain why he has spent his 28 years (as a bachelor, so far) climbing the ladders of both the business and sports worlds.

Don was just two weeks old when his family headed from Florida to Michigan to live. In Battle Creek the six Laws children (Don is next to youngest) grew up with high family standards for both academic and athletic achievement. Don showed such prowess in high school that he earned many athletic scholarships; he settled on junior college in Colorado, where he became All-Empire-Conference in football, then All American!

He transferred to Utah State to continue his accounting/econ major, and play more football with a bit of basketball on the side.

Don eventually turned his back on a possible pro football career (after stints with the Cleveland Browns, Orlando Panthers and Sacramento Capitols) when he turned down a Dallas Cowboys' contract to study for his MBA at Golden Gate University.

During and between football seasons, Don's professional business experience has included Kellogg Corporation and Post Cereals (both in Battle Creek), Aerojet General Corporation in Sacramento, Cal Western States Life Insurance, and now Sparta. His titles have been variously manager of the budgeting department (Cal Western), staff accountant to controller (Aerojet), cost and financial analyst (Kellogg and Post), and was assistant controller at Cal Western.

Sparta On The Overseas Scene

Richard Johnson

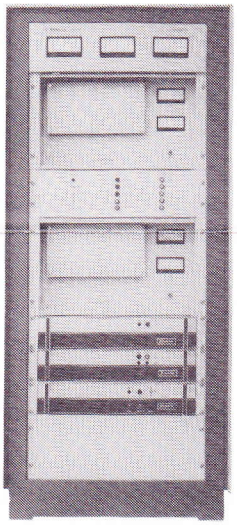
Richard Johnson, Sparta Transmitter Design Engineer, will conduct training of Malaysian broadcast technicians on use and maintenance of their new Sparta FM transmitters during March (see Sept.-Oct. "The Spartan" – Ed.). Antenna and transmitter installations on Mt. Ulu Kali above Kuala Lumpur have been completed and tests will commence on the arrival of Johnson. He will school the Ministry of Information technicians on both the Sparta AM transmitters in Mersing and the FM operation at the nation's capitol.

A Model 703B 3 kw AM transmitter is being installed, as you read this, high in the Andes Mountains of Peru at JAEN. Its operations will be under the Mission San Francisco Xavier, with Padre Luis Uriarte, S.J. heading the effort to reach native Peruvians who have not been in regular contact with the Church because of the terrain. The 703B was the result of a fund-raising effort in the U.S., headquartered in Illinois, called "Mission Unlimited".

Four Model 701B 1 kw AM transmitters are headed for duty in Mexico. One each is being supplied to XEQP, Guadalajara, Jalisco; XELZ, Mexico City, D.F.; XEZU, Zacapu, Michoacan; and XEIN.

The CANADIAN BROADCAST CORPORATION formulated the "Accelerated Coverage Plan" in the summer of 1974 which was designed to reach virtually all Canadians with information and news via broadcast. The plan, developed by Engineering Headquarters of C.B.C., outlines full projections for services and equipment necessary and specifies that all areas of Canada in which 500 persons reside, should have both radio and TV coverage at the end of five years. 1979 is the target date for completion with 1977 probably the peak construction year.

It is impossible to adequately convey the scope of this Canadian venture in this brief space . . . suffice it to say that 600 projects, including 450 complete stations, involving tower heights totalling 100,000 feet, and 1,000 antennas of various types, with 500 new buildings and appropriate survey and consulting work, is a large order for any organization to begin . . . even one as expert as C.B.C.



Model 600B

For Sparta's part in the program, orders have been received for the first lot of Model 600BX 250 watt FM transmitters (see "Sparta Scores A 'First' with Battery Xmtr", May-June, 1974, "The Spartan" – Ed.) to be delivered at the end of this month.

Further orders are expected and we're proud to be a part of the Canadian government's massive effort toward communicating with all of its citizens.

a little of . . .

EVERYTHING

Over a year ago, when it became apparent that our industry would experience slower parts delivery, and some critical shortages, we embarked on a plan to streamline the Sparta ordering and delivery systems to partially offset the expected results.

Parts and components delivered to us from our suppliers became even slower than we had foreseen . . . and the shortages more exasperating! But, we found our internal reorganization paid off in reasonable enough delivery of our finished products to keep most of our customers happy most of the time.

Now, we're happy to report, there is a marked easing of shortages and our suppliers are speeding up parts deliveries to us. The change for the better is so definite that, in some cases, we have been able to put completed items in stock for immediate delivery . . . a situation we had not experienced in more than a year.

With the faith we've developed in our new computer and staff re-organization, we're looking forward to either keeping all of our customers happy most of the time . . . or most of our customers happy all of the time!

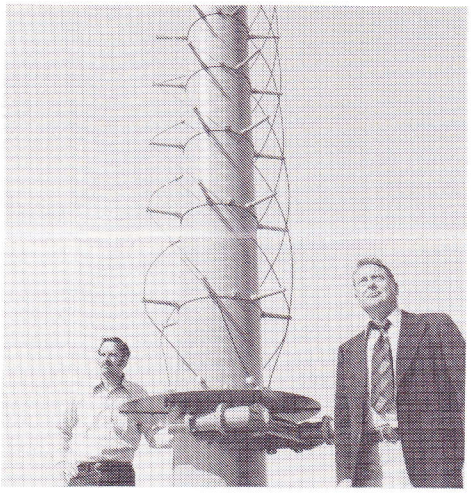
We welcome a chance to prove to you what we claim above. Give us a call next time you are ready to make an equipment purchase decision!

BILL OVERHAUSER
President
Sparta Electronic Corporation

News of

Cetec Corporation

JAMPRO ANTENNA COMPANY of Sacramento has its new circularly-polarized antenna installed for technical experimentation at KLOC-TV, Modesto. The FCC-authorized testing is expected to go on for



JIM OLIVER (left), Jampro Antenna Company production manager, and Ray Duhamel, inventor of the circularly-polarized TV antenna system, flank the unit to be tested at KLOC-TV in Modesto, CA. Its twin will be on display at the NAB Convention.

a full year during daylight hours . . . the first time that an omni-directional, circularly-polarized antenna will be used for TV broadcasting.

The new antenna is unique in both appearance and performance. It transmits 50% of the energy in conventional horizontal mode, the other half vertically. Jampro's Pete Onnigian tells us the unit is expected to provide stronger signals into both rabbit ears and loops and reduce ghosts when used with the proper receiving antenna.

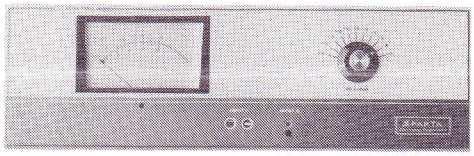
From VEGA/DIVISION OF CETEC CORPORATION, in El Monte, comes initial release of new product information . . . a pre-NAB peek. It' s the Model 401 Tone Frequency Generator, for either continuous or burst tones. Burst times are adjustable from 100 ms to 1.2 seconds. Tone frequency between 50 and 5,000 Hz is generated with 0.02% accuracy, adjustable in 0.1 Hz steps.

The Model 401 comes in user's choice of AC operated only, or battery-operable (re-chargable NI-CAD batteries). With the 401 the engineer can test, troubleshoot and adjust CTCSS or voice frequency equipment.

Further details are available from Vega/ Division of Cetec Corporation, 9900 Baldwin Place, El Monte, CA 91731.

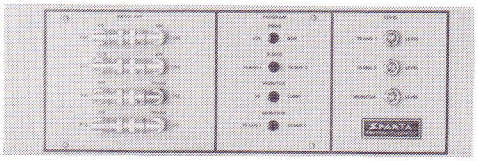
New Xmtr Accessories Now Available

A handy addition to any audio monitoring facility is the new Sparta VU Meter Panel. A 4½" easy-to-read VU meter accepts levels from +4 to +24 VU, at an accuracy of ±2%. Input to the assembly is through a 2-position terminal block or phone jacks which will accept any standard two- or three-conductor patch cords (top photo). –Sparta Photo

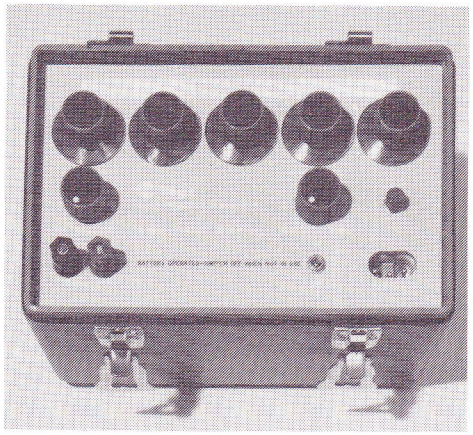


With the popularity of composite STL systems, many FM transmitter sites are left without a professional manner of providing standard program input sources.

The new Sparta Stereo Patch Panel provides a means of relay controlled switching that gives instantaneous selection and balancing of local program or test sources (bottom photo). –Sparta Photo



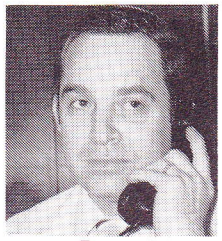
See us at the NAB!
BOOTH 312



THE VEGA MODEL 401 TONE FREQUENCY GENERATOR . . . It will be part of the NAB Convention display in the Cetec Broadcast Group booth . . . No. 312 . . . with Jampro, Cetec Audio, and Sparta.
–Sparta Photo

=Tech Tips=

–by DAN PELUSO
Mgr. Customer Service



Peluso

Right after you read this paragraph, why not get together your tools and lay out isopropyl alcohol, 20-weight NON-DETERGENT oil in can, a lubricant similar to Lubriplate in type and quality, clean and soft cotton cloths which won't shed threads, and both small and large cotton-tipped swabs.

All we need now is a turntable. Preferably one that was last given maintenance no more than 90 days ago if your station runs less than 24 hours.

Okay, you're within arm's reach of a turntable. Let's say it has a synch motor; six drops of that 20-weight NON-DETERGENT oil in each oil cap of the motor will suffice. Four-poles should get just a couple of drops in the felt just inside the armature, top and bottom. In either case, allow the motor to run about five minutes, then wipe any oily areas you don't want oily with soft cotton cloth dampened with isopropyl alcohol, paying particular attention to the motor capstan, idler wheel and inside of the turntable platter rim.

Next, carefully, and MINIMALLY, use the grease-type lube of your choice on all mechanical moving parts such as the shift lever. Too much lube here can splatter about in areas you don't want lubed; just a LITTLE dab will do you, in this case.

Clean away any dust which has gathered about the motor and hanger assembly. Inspect motor shock mounts; if they prove to be cracked or stiff, make a note to replace them soon!

In removing the idler from the link assembly, it doesn't hurt a thing to note down the order in which washers and spacers come off. They should go back on in exact reverse order. Clean the link assembly shaft with alcohol, and . . . using a swab . . . the inside of the idler wheel as well. When all foreign matter and dirty grease is off, relube and replace idler. Run the idler against the motor with the platter off for about five minutes, then clean again to remove any lubricant which has worked out onto the surfaces it shouldn't be on. Use alcohol again, but only dampen your cloth slightly so alcohol doesn't work into friction areas and disturb the lubricant.

As a final tip, it's a good idea to pull the platter and re-clean turntable platter rim, idler wheel and motor capstan after 24 hours operation; my own experience, and word from other engineers, tells us that a little of the lubricants will prove to have gotten into areas where you didn't want it. Cleaning it up now will save trouble (in 90 days) when you repeat the operation.

—Sparta At NAB

(continued from page 1)

tom consoles, the 1000-Series consoles, AC155B Audio Studio/Remote Control Center, the 3-speed GT3-12 Turntable, and the complete line of accessory items.

For the first time our NAB Convention booth will bear the identification of "Cetec Broadcast Group". In the same booth will be sister companies Cetec Audio (which participated in the Houston booth last year), Vega/Division of Cetec Corporation and . . . Jampro Antenna Company.

Vega will display the major items in their lineup of wireless microphone systems, and a new item for the broadcast audio engineer. The latter item is described briefly elsewhere in this issue.

Jampro will again be showing the new circularly-polarized TV antenna, and quite possibly will have initial reports on the success of its operational tests at KLOC-TV.

Cetec Audio's Series-10 and Series-20 consoles will again be the focal point of their display, with related interest being provided by their speakers and tape/cassette duplication equipment.

We know the broadcaster who attends the first-ever NAB Convention at Las Vegas won't be disappointed. Show officials point out that it will be the biggest exhibit ever held, both in number of exhibitors and sheer floor space occupied. The Cetec Broadcast Group booth is the largest ever, and will have the greatest variety of broadcast hardware we've ever shown.

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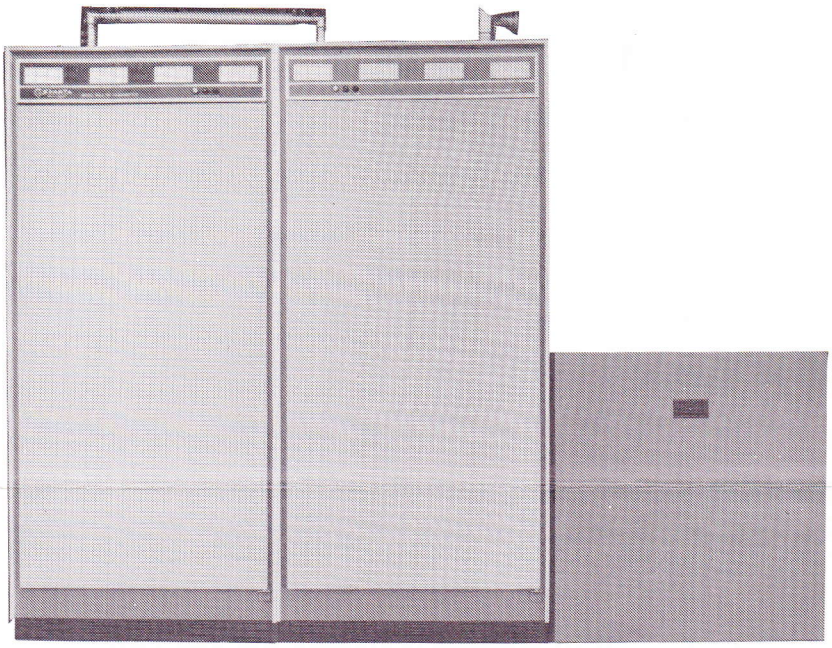
Product Of The Month



Newest in the Sparta lineup is the Model 635 35,000 Watt FM Transmitter. We believe it offers the answer to the single-transmitter approach to high power FM problems.

A major factor in using the Model 635 to reach 100,000 Watt ERP is the saving in transmission line; 3-1/8" can still be used, and a 6-bay circularly polarized Jampro antenna provides the gain.

To reach 35,000 Watts the Sparta 635 uses only three tubes; the Model 605B 5 kw FM Transmitter driver employs only one 3CX3000A7 and a 4CX250B, while the grounded grid final is a high gain ceramic triode, the 3CX20000A7.

Another advantage to the modular approach is having a complete 5 kw transmitter as backup if the high power section fails or needs maintenance. And, like the recently developed Model 625A, the 635 can be installed in various configurations of its three components to better suit older transmitter buildings without renovating them.

Standard features include Automatic Power Control and VSWR protection, use of the Model 680 Direct FM Exciter and (if needed) the companion 682 Stereo and 683 SCA Generators.

A 10,000-hour prorated warranty is presently offered on the 3CX20000A7 tube, which is the minimum expectation of Sparta transmitter engineers.

RETURN ADDRESS REQUESTED

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