



**INDIAN
RIVER ARC**

P.O. BOX 237285, COCOA
FLORIDA 32923-7285

VOLUME XLII, NUMBER 8

SPURIOUS EMISSIONS

AUGUST, 2021

CLUB MINUTES

OFFICERS

PRESIDENT

VIRON PAYNE

N4VEP

VICE-PRESIDENT

DAVID LERRET

KU0R

SECRETARY

ERNIE HOFFMAN

K1CPO

TREASURER

STEVEN LUCHUK

N4UTQ

DIRECTOR

DAVID SLAWSON

K4UZM

NEWSLETTER EDITOR

ARMANDO DELGADO

KN4JN

President Viron, N4VEP called the meeting to order at 7:16 PM.

Following the Pledge of Allegiance Viron discussed the issue of the club quorum as defined in the Bylaws, that state a quorum being 50 members or 20% of the membership present in order to vote. The issue arose in regards to approval of the minutes. Since the last few meetings did not have a quorum, the meeting minutes were not approved.

Treasurer's Report: Equipment fund has \$1836.89 and checking \$793.67.

Next, Steve, N4UTQ reviewed the club's regular nets: Wednesday night at 7:15 PM the club's weekly net on the 145.37 MHz repeater, followed by the Ragchew net on simplex at 147.42 MHz; the Simplex net on the last Saturday of the month with check-in on 145.37 MHz then operate simplex on 147.42 MHz; the digital training net for NBEMS on 145.37 MHz on Tuesday nights at 7:00 PM. Technical Committee: Dave, KUOR mentioned that all re-

peaters are operational. The 146.88 MHz PA problem was fixed and the unit has a new PA. The broken one was sent to Henry for repairs.

The Winlink node at the EM-COM station is connected to the Internet, but there is a problem with the VARA FM in the radio used.

New Business: Viron suggested making an amendment to the Bylaws to fix the quorum issue. A Special Event Station is planned for September 10, 2021 to bring attention to Peak Hurricane Preparedness.

Following New Business, Dave, KUOR provided a review of the Field Day operation. We operated 3A with 3 HF stations running 600 watts. There were 292 phone contacts and 27 CW, 270 bonus points, and a total score of 346 points. The bands used were 80, 40, 20, 15, and 10 with contacts in all of them. Dave then gave a breakdown of numbers of contacts per band, per mode.

Things that worked: network logging worked great with the Internet link; the 40m and 20m

antennas performed very well; the QRO filters did a respectable job, although there was some interference; 11 operators participated and many other visitors joined in the fun; the food was great, thanks to Steve N4UTQ's efforts and cooking skills; and all had great fellowship and a good time. Things that did not work: too late we discovered that the Buckmaster Off-Center-Fed dipole does not work on 15m. We need a dedicated 15m antenna. Headphones are a must for all operators and loggers. Tuners must be checked prior to operations. Shielded Ethernet cables for computer links are a must, and must consider LMR-400 for inter-stations cables to minimize interference. For high power operations the radios selected must perform well in that high RF environment. Suggestions and comments are welcomed.

Following the presentation, the meeting adjourned at 7:40 PM. Respectfully submitted for the Secretary by Armando Delgado, KN4JN

HAPPENINGS

FCC signals FM CB will be permitted on 27 MHz 63 years after the introduction of Class D 27 MHz AM CB Radio the FCC has agreed to permit FM to be used.

The FCC says:

Continuing to mandate AM capability while permitting dual modulation will provide benefits to CB radio users who will have an additional modulation option, while maintaining the basic character

of the service. The addition of FM as a permitted mode will not result in additional interference because users who hear unintelligible audio on a particular channel can simply select another channel or switch modes.

Read FCC Memorandum Opinion and Order on Reconsideration WT Docket No. 10-119

<https://docs.fcc.gov/public/attachments/DOC-374114A1.pdf>

Using Your Smartphone on Shortwave A highly capable HF Data Mode for Android. Interesting article on new system to provide HF emergency communications in situations of limited available power or cell phone towers.

<https://qrper.com/2021/07/the-hf-pager-application/>

International Lighthouse Lightship Weekend

The ILLW usually takes place on the 3rd full weekend in August each year. This year: 00.01 UTC 21st August to 24.00 UTC 22nd August 2021 (48 hours). The event attracts over 500 lighthouse entries located in over 40 countries. It is one of the most popular international amateur radio events in existence probably because there are very few

HAPPENINGS

rules and it is not the usual contest type event. It is also free and there are no prizes for contacting large numbers of other stations.

An interesting website that allows testing hearing and audio equipment for frequency sensitivity: audiocheck.net. Beyond audio level differences, the site also can generate tones to challenge your hearing's frequency range.

From the ARRL Contest Update: "The [Portage County Amateur Radio Service](#) in Ohio is again sponsoring the [Ohio State Parks On The Air](#) contest for 2021 (our 14th year). The event is always on the Saturday following the Labor Day, so this year's event falls on Saturday, September 11." This SSB-only event is on 80,40,20, 15, and 10 meters. Working all seventy-five Ohio parks qualifies you to apply for the "[Worked All Ohio State Parks](#)" award. (Tom, KB8UUZ)

ON THE AIR

DOMINICAN REPUBLIC, HI. Special event station HI95RCD is QRV until the end of 2021 to celebrate the 95th anniversary of the Dominican Radio Club. Activity is on 160 meters to 70 centimeters using CW, SSB, FM, and FT8. QSL direct to RW6HS.

PANAMA, HP. Operators HP2AT and HP2NG are QRV as 3F200AT and 3F200NG, respectively, until November 30 to celebrate the bicentennial of the independence of Panama from Spain. QSL via LoTW.

D-Day Ohio D-Day Reenactment and WWII Living History Special Event Station Aug 19-Aug 22, 2000Z-0400Z, W8D, Conneaut, OH. D-Day Ohio Radio Amateur Club. 1.885 3.885 7.290. QSL. Garret Scott / W8D, 10236 Birch Hill Lane, Knoxville, TN 37932. Operations will be from the D-Day Ohio Event, in Conneaut Ohio, utilizing WWII period radio

To help navigate the new FCC exposure rules, the ARRL provides a free [RF exposure calculator](#) on its RF Exposure page. The website provides for printing the results to keep at the transmitter site.

WSJT-X rev 2.5.0-rc5 "release candidate" is [now available](#). These releases are intended for beta testers -- individuals interested in testing the program's new features and providing feedback to the WSJT Development Team. This is the fifth candidate release for WSJT-X 2.5.0, offering several enhancements and bug fixes. On Windows platforms, it includes MAP65 3.0.0-rc5, a wideband polarization-matching tool intended primarily for EME.

In a statement received by ARRL on August 14, 2021, Region 2 of the International Amateur Radio

Union (IARU-R2) has requested that radio amateurs in the Americas keep the following frequencies clear to support emergency communications in Haiti following an earthquake, 3750 kHz, 7150 kHz, and 14330 kHz. The statement came from IARU-R2 Emergency Coordinator (EMCOR) Carlos Alberto Santamaría González, CO2JC.

The schedule of FCC amateur radio application fees likely will not go into effect before 2022. The new estimate is that the fees won't go into effect until early next year. Once it's effective, the \$35 application fee will apply to new, modification (upgrade and sequential call sign change), renewal, and vanity call sign applications. When the FCC receives the examination information from the VEC, it will email a link with payment instructions to

each successful candidate who then will have 10 days from the date of the email to pay. After the fee is paid and the FCC has processed an application, examinees will receive a second email from the FCC with a link to their official license. The link will be good for 30 days. Licensees also will be able to view, download, and print official license copies by logging into their FCC ULS account. The FCC no longer provides printed licenses.

FEE SCHEDULE:
INDIVIDUALS: \$35 FEE: New, modification (upgrade and sequential call sign change), renewal, and vanity call sign applications. All fees will be per application.
NO FEE: Administrative updates, such as a change of name, mailing or email address, or license cancellation.
AMATEUR RADIO CLUBS: \$35 FEE: New, renewal, trustee change, and vanity call sign applications. .

equipment. Equipment operated will include SCR-177B, SCR-284, SCR-694, and others. Modes are AM and CW. w8d.us
Charleston Amateur Radio Society 50th Anniversary SES Aug 21, 1600Z-2200Z, WA4USN, Charleston, SC. Charleston Amateur Radio Society . 14.250. Certificate. N4JKA Bill Dean, 30 Lombardi Ln., Hanahan, SC 29410. The Charleston Amateur Radio Society (CARS) located in Charleston, SC is celebrating its 50th Anniversary. A Special Event Station aboard the USS Yorktown will be using the clubs call sign WA4USN and will be on the air August 21, 2021 from 12:00 PM EDT/1600 UTC to 6:00 PM EDT/2200 UTC. The General Class section of the 20 and 40 meter bands will be used. All operators are invited to reach out and say Hi. Certificate available given with a SASE. Contact Bill Dean, 30 Lombardi Ln. Hanahan, SC 29410 www.wa4usn.org

DOMINICAN REPUBLIC, HI. Max, HB9TUZ plans to be QRV as HI9/HB9TUZ from Las Terranas, IOTA NA-096, during the month of August. Activity will be on 40 to 10 meters using SSB. QSL to home call.

THAILAND, HS. Members of the Radio Amateur Society of Thailand are active as HS18IARU until September 30 to mark the 18th IARU Region 3 Conference 2021. QSL via E21EIC.

PERU, OA. Alex, DD5ZZ is QRV as OA7/DD5ZZ from Cusco until September 17. Activity is on the HF bands using SSB, FT8, FT4, and some CW. QSL via DD5ZZ.
MEXICO, XE. Special event station 4A2MAX is QRV during the month of August to honor the memory of Maximilian Kolbe. Activity is on 80 to 6 meters using CW, SSB and some digital modes. QSL direct to N5MEX.

India Operators will be active as AT8KLLH from the Kapu Light House 'Kapu' (ARLHS WL0L IND-091) during the 24th Annual International Lighthouse/Lightship Weekend (ILLW) between August 21-22nd (48 hours). QSL via VU2JHM.

Madeira Updated 2021-07-21 08:55:15 Views 9538 total, 27 today Comments 0 Leave a comment Giovanni, CT9/IZ2DPX will be active from Madeira Island, IOTA AF - 014, 14 - 29 August 2021. He will operate on HF Bands, SSB, Digital modes. QSL via IK2DUW direct. ANTONELLO PASSARELLA, VIA M. GIOIA, 6, 20812, LIMBIATE, MB, Italy.

THAILAND, HS. Special event station HS18IARU is QRV until September 30 to celebrate the 18th IARU Region 3 Conference in Bangkok. QSL via E21EIC. An [online log](#) is available

The E Region of the Ionosphere by Armando Delgado, KN4JN

The E layer of the ionosphere is located between the D and F layers at an altitude of 90-150 Km. It was the first ionospheric layer discovered. Arthur Kennelly and Oliver Heaviside first proposed its existence and altitude in 1902 as the electrified atmospheric layer responsible for the reflection of the initial Marconi signal across the Atlantic Ocean in 1901. The confirmation of the Kennelly-Heaviside layer hypothesis occurred in 1924 when Edward Appleton made actual radio signal measurements confirming its existence and altitude.

The E layer is ionized primarily by extreme ultraviolet radiation from the sun in the wavelengths of 10-100 Angstroms, and by soft X-rays to some degree; thus it is very dependent on solar activity to be sufficiently ionized to reflect radio waves. It is also, for the same reason, a daytime layer that disappears soon after sunset, to reappear before sunrise the next day. During daytime, the D layer absorbs most of the lower radio frequencies, but when the E layer is active, it will reflect those frequencies that pass through the D layer. However, higher HF and VHF signals may pass through the E layer to be reflected by the higher F layer.

Sydney Chapman, the British mathematician, proposed in 1931 a mathematical model for the formation of ionized layers in the ionosphere. According to this model, the ionization intensity is dependent on the density of the atmosphere and the zenith angle of the sun. With the E layer we see this theory confirmed in the trans-equatorial radio propagation, attributed to E layer propagation, that peaks at the time of the equinoxes in the spring and the fall. At those times, the sun crosses the equator following its annual north-south travels and thus is perpendicular to the Earth, showering it with the most intense radiation. Also, the Earth's atmosphere is denser over the equator resulting

in more effective E layer ionization.

Trans-equatorial propagation was first discovered by amateurs in 1947, when XE1KE made contacts with Argentinian stations on 50 MHz in the late afternoon and early evening, when F-layer propagation was unlikely. This was throughout Cycle 18, a solar maximum cycle. During the following years and solar cycles, extensive observational studies suggested that this propagation happened at equidistant distances north and south from the magnetic equator and at least 1000 miles from it.

In a seminal article published in the December 1959 issue of QST, R.G. Cragnell, ZE2JV summarized the detailed observations and conclusions of a number of amateurs that made multiple VHF contacts over several years, primarily between Europe and Africa, that clarify the patterns and qualities of the trans-equatorial propagation that make it a unique type of radio propagation.

There is also another propagation phenomenon attributed to the E layer but not related to the normal solar-induced atmospheric ionization. This phenomenon is called sporadic E propagation and can occur at any time of day or night. Currently, sporadic E is thought to be caused by metallic ions forming at the altitude of the regular E layer, but produced by meteoritic gases formed in the ionosphere. The metals from these gases, mostly Na^+ , Fe^+ , and Mg^+ , condense due to vertical wind shear and Earth's magnetic field effects at altitudes of 120 Km. These initial layers then drop to about 100 Km, where they become denser and trigger the sporadic E propagation. Presently, there are, sporadic E propagation prediction models based on

this theory. The website swc.nict.go.jp part of the Space Weather Forecast Center includes a sporadic E forecast.

Sporadic E has a peak in the solstices, that is summer and winter, in contrast to the regular E layer propagation that peaks in the equinoxes, or spring and fall. As a rule, the summer peak is more intense and persistent than the winter one.

As solar Cycle 25 advances and solar flux increases, the E region should open more frequently and openings should last longer. Although the E region reflects most HF frequencies, it seems to have a more profound effect on the VHF frequencies, particularly 50 MHz.

Most hams associate 50 MHz operations with high gain yagi antennas, but when the band opens any resonant antenna should perform well enough to allow contacts over long distances.



W1AW CW PRACTICE TRANSMISSIONS

7 PM EST Slow CW : 5-15 WPM
Mon, Wed, Fri

7 PM EST Fast CW: 35-10 WPM
Tue, Thu

FREQUENCIES:

1.8025, 3.5815, 7.0475,
14.0475, 18.0975, 21.0675,
28.0675, 50.350, 147.555



Editor's Note:

Send comments about the Newsletter or to contribute information or articles to the Editor's email address:

olardelga@aol.com.

ACTIVE REPEATERS INCLUDING DMR, PACKET & SIMPLEX							RACESBRE0008 REV B
Repeaters & Packet are open for all licensed amateur radio operators to use.							
OUTPUT FREQ.	STD. NAME	OFFSET	TONE/CC	CALL	LOCATION	OWNER	NOTES
WBFM							
145.130	130 VB	-600	107.2	AB4AZ	VERO BEACH, INDIAN RIVER	AB4AZ	
145.350	350 SC	-600	103.5	K4OSC	St. CLOUD, OSCEOLA	K1XC	Radio Science Club, FI Club
145.370	370 CO	-600	156.7	W2SDB	COCOA-BROADCAST CT.	IRARC	Yaesu Repeater replaced with Bridgecom FM
145.470	470 ME	-600	107.2	K4HRS	MELBOURNE- RIALTO PL.	HIRAC	
145.490	490 TI	-600	100.0	WN3DHI	TITUSVILLE SR405 & Fox lk rd.	WN3DHI	
146.610	610 ME	-600	None/107.2	W4MLB	MELBOURNE- HOLMES HOSP	PCARS	Tone Downlink only
146.625	625 MM	-600	100.0	KE4NUZ	NW of MIMS NEAR HARRISON RD.	KE4NUZ	Limited coverage
146.775	775 MM	-600	100.0	K4KSC	NW of MIMS Hog Valley , W of I95	K4KSC	
146.850	850 ME	-600	None/107.2	W4MLB	PALM BAY- Port Malabar Rd.	PCARS	Tone Downlink Only
146.880	880 RO	-600	107.2	W4NLX	ROCKLEDGE- WUESTHOFF HOSP.	IRARC	FUSION Repeater replaced with Bridgecom F
146.895	895 PB	-600	107.2/107.2	K4EOC	PALM BAY- DeGroot Library	EOC	TSQL as of 5/2018
146.910	910 TI	-600	107.2	K4KSC	TITUSVILLE Water Tower on south st.	TARC	
146.940	940 RO	-600	None	K4GCC	ROCKLEDGE Carver Rd.WLRQ Tower	LISATS	
146.970	970 TI	-600	107.2	K4KSC	TITUSVILLE-T'VILLE TOWERS	TARC	
147.075	075 SC	+600	107.2/107.2	K4EOC	SCOTTSMOOR Near US1-Aurantia Rd	EOC	TSQL as of 5/2018 Relocated 4/2019
147.135	135 RO	+600	107.2/107.2	K4EOC	ROCKLEDGE-EOC	EOC	TSql as of 5/2018
147.240	240 DE	+600	123.0	KV4EOC	DELAND	VARES	
147.255	255 PB	+600	107.2	K4DCS	Near Babcock & Palm City S City limi	PBARC	
147.330	330 TI	+600	107.2	K4NBR	TITUSVILLE-PARRISH HOSP.	NBARC	
147.360	360 TI	+600	107.2	N4TDX	TITUSVILLE-PARRISH HOSP.	NBARC	DSTAR Gateway in work
442.850	850TI4	+5000	107.2/107.2	N4TDX	TITUSVILLE-PARRISH HOSP.	NBARC	TSql;FUSION/WBFM/WIRES-X
444.325	325ME4	+5000	107.2	K4DCS	MELBOURNE-TRINITY TWRS-E	PBARC	
444.375	CNLBRE	+5000	107.2		195 FDT Twr 1/2 Mile N of County Lin	SARNET	"SARNet Sebastian Repeater"
444.425	425ME4	+5000	107.2	W4MLB	MELBOURNE- RIALTO PL.	PCARS	
444.525	525RO4	+5000	103.5/103.5	K4EOC	ROCKLEDGE-EOC	EOC	TSql; VOICE/NBEMS
444.650	CNMBRE	+5000	107.2	W4NLX	COCOA-FHP SR520	IRARC	"SARNet Cocoa Repeater"
444.750	750TI4	+5000	156.7/156.7	N4TDX	TITUSVILLE- TGO WATERTOER 230 ft.	NBARC	TSql
444.875	875MI4	+5000	107.2	KC2UFO	MERRITT IS. COURTNEY SPRS.	K4UJZM	
444.925	925KS4	+5000	131.8/131.8	N1KSC	KENNEDY SP. CTR.-VAB	KSCARC	FM Tsql ; P25 capable
224.120	120CO2	-1600	123.0	AA4CD	COCOA Broadcast Ct.	AA4CD	
DMR							
444.150	150TI4	+5000	CC1	K2JO	TITUSVILLE-PARRISH HOSP.	KC2CWT	DMR FL
444.575	575CO4	+5000	CC3	K4DJN	COCOA BROADCAST CT.	AA4CD	DMR Brandmeister
444.675	675TI4	+5000	CC3	K4DJN	TITUSVILLE-T'VILLE TOWERS	AA4CD	DMR Brandmeister
ATV							
427.250	250CO4			K4ATV	COCOA BROADCAST CT.	LISATS	NTSC INPUT 439.25 See www.lisats.org
PACKET STATIONS:							
145.090	WL2KPB	WINLINK		W2PH-10	PALM BAY-W2PH QTH	PBARC	WINLINK GATEWAY
145.090	090 ME	PCARS		W4MLB-2	MELBOURNE-TRINITY TWRS-EAST	PCARS-K1YON	BBS W4MLB-4 EASTNET
145.770	770 PB	SEDAN		K4EOC-7	PALM BAY	N2DB	http://www.fla-sedan.com
145.770	770 TI	SEDAN		KD4MWO-4	TITUSVILLE	N2DB	INACTIVE NODE
BREVARD RACES/ARES SIMPLEX							
146.480	CENTX	SIMPLEX		N/A	CENTRAL REG	IRARC	CENTRAL NET SIMPLEX BACKUP
146.550	SOUTHX	SIMPLEX		N/A	SOUTH REGION	PBARC	SOUTH NET SIMPLEX BACKUP
146.580	MLBX	SIMPLEX		N/A	MELBOURNE REGION	PCARS	MELBOURNE REGION NET SIMPLEX BACKUP
146.595	NORTHX	SIMPLEX		N/A	NORTH REGION	TARC	NORTH NET SIMPLEX BACKUP
147.540	EOCROX	SIMPLEX		N/A	RACES Bay	EOC	EOC VOICE/NBEMS
SIMPLEX							
146.520	CALL52	SIMPLEX		N/A	Station to station, anywhere		VHF national simplex calling freq
146.490	TAC A	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
146.560	NBRX	SIMPLEX		N/A	NBARC -Club/Parrish Hosptial Activities		
146.580	TAC B	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.420	TAC C	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.420	IRARCX	SIMPLEX		N/A	IRARC 'FUN NET" and CLUB ACTIVIES		
147.450	TAC D	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.570	TAC E	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.000	CALL46	SIMPLEX		N/A	Station to station, anywhere		UHF national simplex calling freq
446.500	TAC A4	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.600	TAC B4	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.700	TAC C4	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
2 Meter & 70 cm WBFM repeaters use CTCSS; if one frequency is listed it is for uplink (user Tx) , if two are listed the repeater is set for uplink and downlink (user Tx and Rx)							
Repeater Call Signs in bold are owned by Brevard Emergency Management and are maintained by the county. Repeater Trustee: Ron K2RJ							
NOT ON AIR							
Standard Names in Bold are recommended for Emergency Radio in Brevard *							
PBARC= Palm Bay Amateur Radio Club (Replaces DCS for South Brevard) See Ed W2PH for more info							

437 S. BABCOCK ST.
MELBOURNE, FL 32901
Ph) 321-727-2311
Fax) 321-727-2312



DISCOUNT ELECTRONICS

HAM&CB EQUIPMENT
SECURITY SYSTEMS
BATTERIES(ALL TYPES)
REPAIRS(ALL TYPES)
ANTENNAS - TOWERS
2-WAY RADIO EQUIPMENT

"SALES AND SERVICE"
TELEPHONE SERVICE
COMPUTER REPAIR
STEREOEQUIPMENT
POWER SUPPLIES
TUBE EQUIPMENT

2013 LINE LISTINGS ** THE ONLY REAL PARTS STORE LEFT IN SOUTH BREVARD **

AIM
ALINCO
ANTENNACRAFT
ANTENNA SPECIALISTS
ARRL
ASTATIC
ASTI

BEARCAT
BECKMAN (WAVETEK)
BUSSMAN FUSES
BUD

C.B.RADIO
CALRAD
CORNELL DUBILIER
CELLPHONE AMPS
CHICAGO MINIATURE
CINCH JONES
CLOVER
COBRA
CUSHCRAFT

DALBANI
DECIBEL PRODUCTS
DENNISON
DURACELL
DANTONA IND.

ECG (SEE NTE)
ELECTRONIC RESOURCES
ELECTROVOICE
EVEREADY

FANON-INTERCOMS
FLUKE (WAVETEK)

GC ELECTRONIC
GALAXY
GOLDLINE

HAM RADIO
HARADA
HITACHI
HYGAIN

ICOM RADIO

JSC WIRE
JW DAVIS SOUND
JVC PARTS

KENWOOD RADIO
KOSS
KESTER

LITTELFUSE
LOWELL

M & G
MALLORY
MACOM
MAXON
MIDLAND
MOTOROLA

NTE TRANSISTORS
NELLO TOWERS
NTE ELECTRONICS
NORMAN LAMPS

PANASONIC
PANAVISE
PHILIPS ECG (SEE NTE)
PHILMORE
PIONEER
POMONA
POWERSONIC
PRB
PROAM ANTENNAS

QUAM
QUEST

RANGER RADIO
RAYOVAC BATTERIES

RUSSELL IND.

SR COMPONENTS
SANYO BATTERIES
SHURE BROTHERS
SONY PARTS

SPECO SWITCHCRAFT

TEI
TNR BATTERIES
TELEX - HYGAIN
TRIPPLITE
TUBES - ALL TYPES
TV ANTENNA'S

UNIDEN
UNIDILLA
UNION CARBIDE

VARCO
VALOR
VECTOR
VIDEO EQUIPMENT

W2AU BALUNS
WALDOM - MOLEX
WAHL-CLIPPER
WAVETEK (BECKMAN)
WILSON ANTENNAS
WILSON ELECTRONICS

YAESU

WEB PAGE:
www.tedcoelectronics.com

EMAIL:
tedco@bellsouth.net

Hours:
MON - FRI 9 AM - 5 PM
SATURDAY 9AM-3PM

TED - W4LR - GENERAL MGR.

DOTTIE - OFFICE MANAGER