

INDIAN RIVER ARC

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

OFFICERS

PRESIDENT

VIRON PAYNE

VICE-PRESIDENT

DAVID LERRET Kuor

SECRETARY

ERNIE HOFFMAN

K 1 C P O

TREASURER

STEVEN LUCHUK N4UTQ

DIRECTOR

DAVID SLAWSON K4UZM

NEWSLETTER EDITOR

ARMANDO DELGADO KN4JN

Free ebook about 50 MHz ham radio band

The ebook, *Capture the MAGIC of Six Meters* by Jim Wilson K5ND is available for free download. Have you ever wondered about the "Magic" of Six Meters? It really doesn't take much on six meters — your existing HF+6 meter rig along with a simple antenna, even a dipole, will work. In this book you'll find out how I know that dipoles work along with

VOLUME XLII, NUMBER 1

SPURIOUS EMISSIONS

JANUARY, 2021

CLUB MINUTES

President Viron, N4VEP called the meeting to order at 7:18 PM. There were members in attendance at the meeting house and other members participated via Zoom.

Viron led on the Pledge of Allegiance .

Following the Pledge: Secretary's Report: There was no meeting in December because of

the Christmas party and thus no minutes. Treasurer's Report: Presented by Steve, N4UTQ. Equipment Fund,

\$946.39; General Fund, \$1192.39. The Treasurer's Report was accepted for audit.

Technical Committee Report: Presented by Viron, all repaters are operational.

ARES Report: Presented by Hylan Boxer, W4UTD, ARES is now operating as a team with a base of operations in the Mims Volunteer Fire Station where they have completed an antenna set up. ARES will provide a Skywarn training on 1/23/21. They will also hold a 10-12 weeks 4 hours weekly training on emergency procedures, covering all aspects of emergency communications, to be held at the Mims Volunteer Fire Station on Saturdays from 8AM to 12PM. President's Report: The emergency operation center at the River of Life church is now complete. The next

step is to make the antenna farm in the back property a reality. A tree trimming company has agreed to visit the site and help in hardware and antenna installation. On this issue, Viron called for a motion to approve a \$500.00 budget to purchase hardware to install the outside antennas. After a motion and discussion, the motion to approve a budget to purchase antenna hardware, not to exceed \$500.00 was approved.

Winter Field Day: the club will hold a Winter Field Day event on January 30-31 at Manatee Park on Merritt Island. Viron will bring his QRP equipment and all are invited to participate. This is a relatively new event, independent of ARRL, to promote training of amateurs in emergency communications when environmental conditions may be less than optimal. This event is growing in popularity, considering that not all participants operate from "sunny" Florida. The event starts a 2:00PM on Saturday, but participants should be there by noon to set up equipment. MOU with ARES for use of club repeaters: Under the new ARES guidelines, ARES operates independently form radio clubs. In emergencies they need access to repeaters for local communications. Under the new plan, ARES teams

will handle the manpower aspect in emergencies; that is, they will coordinate manning of shelters, etc. from the hams registered with them, instead of the clubs providing that manpower, but since they do not have repeaters or other communication equiaaaaaaaapment, they must work out agreements with local clubs.

The proposal is for ARES to be able to use the 145.37 MHz repeater as a primary repeater in an emergency for the central Brevard County area and the 224.12 MHz repeater as a back channel unit.

After some discussion, the members agreed to draft an MOU to be presented to the club at the February meeting. This motion was seconded and approved. Armando, KN4JN was elected to draft the wording of the MOU.

Following the business meeting, Viron presented a very interesting and informative Youtube video on <u>All You Need to Know to Under-</u> <u>stand 5G</u>

Following the presentation, the meeting adjourned at 8:18 PM

Respectfully submitted for the Secretary by Armando Delgado, KN4JN

HAPPENINGS

how to build one of your own. This book will also provide plenty of insight into how you, too, can "Capture the Magic of Six Meters." It covers propagation, equipment, software, antennas, awards and contesting, as well as assistance in finding the magic. Download the free PDF from https://www.k5nd.net/2020/08/ Capture-the-magic-of-six-metersebook/

Contest University to Host Propagation Summit

Several radio propagation experts will share their knowledge during a Propagation Summit via Zoom, sponsored by Contest University (CTU). The event is scheduled for **January 23, 2021**. The presentation schedule includes:

"Update on the Personal Space Weather Station Project and HamSCI Activities for 2021" with Nathaniel Frissell, W2NAF, at 11 AM EST (1600 UTC) "Solar Cycle 25 Predictions and Progress" with Carl Luetzelschwab, K9LA, at noon (1700 UTC)

"Maximizing Performance of HF Antennas with Irregular Terrain" with Jim Breakall, WA3FET, at 1 PM EST (1800 UTC)

"HF Ionospheric Propagation" with Frank Donovan, W3LPL, at

SPURIOUS EMISSIONS

HAPPENINGS

2 PM EST (1900 UTC).

Registration is free. An Icom IC-705 will be raffled off as a "door" prize. The winner must be present at most times, in dead band conon Zoom to win.

WSJT-X version 2.4.0 has introduced a new digital protocol called Q65, which is designed for "minimal two-way QSOs over especially difficult propagation paths," the Ouick Start Guide savs.

"On paths with Doppler spread more than a few hertz, the weaksignal performance of Q65 is the best among all WSJT-X modes. Q65 is particularly effective for tropospheric scatter, ionospheric scatter, and EME on VHF and higher bands, as well as other types of fast-fading signals." Transmit/receive sequence lengths of 15, 30, 60, 120, and 300 seconds are available. According to the Guide, "Q65 will enable stations with a modest

ON THE AIR

The 63rd Vermont QSO Party will take place during the first full weekend of February 2021. It will begin at 0000 UTC Saturday February 6 and will end at 2400 UTC Sunday February 7. In local time, this corresponds to a start time of 7:00 PM EST FRIDAY night February 5 and an end time of 7PM SUNDAY night February 7.

Randy, WW6RG will be active again from Diego Garcia, IOTA AF-006, Chagos Islands, starting 18 January 2021, as VQ9RA. He will operate on 14190 and 21280 SSB QRP.

Antonio, EA5RM will be active again as CP1XRM from Bolivia. 9 - 26 January 2021. He will operate on 40 - 10m, SSB, Digital modes, using 100 watt solar powered station and vertical antenna. QSL via home call direct, LOTW. ANTONIO

Yagi and 100 W or more and to work one another on 6 meters at distances up to ~1600 kilometers ditions."

The 2021 running of the AM Rally will take place from 0000 UTC on Saturday, February 6 to 0700 UTC on Monday, February 8. The AM Rally is open to all radio amateurs capable of operating on AM using any type of radio equipment from vintage to modern, vacuum tube to solid state. The AM Rally will use the 160-, 80 -, 40-, 20-, 15-, 10-, and 6-meter bands. An AM Rally 2021 promotional video is available.

With propagation improving, contacts with the other side of the world become more likely. The New Zealand Association of Radio Transmitters published a listing of New Zealand radio beacons. They can be seen here. Monitoring

03200 ELCHE, Spain.

14.250 7.250. QSL. John F.

Reisenauer, Jr, 2573 Old George-

town Rd. W., Kershaw, SC 29067.

KL7RST, KL7RST/KL7, VY1RST/

KL7, VE8RST/KL7 and VY0RST/

ing any 3 of the above when you

QSL. www.qrz.com/db/k7ice

Event Jan 23, 1700Z-2100Z,

various, various, TX. Deep East

modes, all bands. QSL. Dayton

site for, , Information.

www.parksontheair.com or

kg5tkg.radio@gmail.com

KL7. Certificate by email for work-

1st Annual Lone Star Frozen POTA

Texas Amateur Radio Club Inc.. all

Jones, KG5TKF, Email or see web-

beacons can detect radio openings.



January begins a new year and new membership dues.

General members: \$20 Family members: \$18 Associate members:\$10 You can pay at the meeting or mail your check to INDIAN RIVER ARC

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

UPCOMING CONTESTS

One of the best contest of the year will be with us soon. The International DX Contest encourages W/VE amateurs to work the rest of the world. The contest has two parts: CW, on the weekend of February 20-21, 2021 and phone two weekends later, on March 6-7.2021.

The contest runs on all amateur bands 160m-10m, except the WARC bands, and has a very simple exchange. W/VE stations send a signal report plus their state, or province and DX stations a signal report and power.

With propagation improving, the upper bands may open and provide contacts with parts of the world we have not heard in a long time. This is a very popular contest.

For more information and rules, go here.

GONZALEZ, P.O. BOX 930, E-Ground Hog Day Special Event Feb 6, 0900Z-1500Z, K3HWJ, Punxsutawney, PA. Punxsutaw-Alaska "RST" QSO Party Jan 15ney Amateur Radio Club. all Feb 15, 0000Z-2359Z, KL7RST, modes, all bands. Certificate. various, AK. North Country DX Stephen Waltman, KB3FPN, Association. 28.450 21.350

37 Clark St., Brookville, PA 15825. SASE for certificate. www.punxyclub.com

Shuttle Columbia Special

Event Feb 6-Feb 7, 1400Z-2359Z, K5C, Nacogdoches, TX. Nacogdoches ARC. 7.216 14.260 21.350 28.350. QSL. Army Curtis, 167 CR 2093, Nacogdoches, TX 75965. All contacts will be confirmed via LOTW. https://w5nac.com

Commemorating Howard E. Anthony, Father of Heathkit

Feb 7, 1200Z-2359Z, KD2FSI, Randolph, NJ. KD2FSI. 21.300 14.300 7.300 3.900. QSL. David R. Hackett, 3 High Ridge Road, Randolph, NJ 07869.

On Sunday February 7, 2021 from 1200Z -2359Z, Amateur Radio Station KD2FSI will operate as a special event station using a variety of vintage Heathkit gear to commemorate the life and legacy of Howard E. Anthony, the father of the Heathkit brand of electronic kits. Starting in the morning with 75 meter SSB, we will work our way up to the 40, 20, 15 and 10 meter bands and then back down again towards the evening. I will post additional information on my public Facebook page as the event draws near and the actual operating frequencies and modes in real time the day off. We hope all amateur radio operators with any type of equipment (new or old) will join us as we commemorate Mr. Anthony, the person responsible for starting Heathkit, the finest electronic kit company ever. 73, Dave Hackett KD2FSI davehackett@cs.com https:// www.facebook.com/ dave.hackett.9085

Page 2

VOLUME XLII, NUMBER 1

The State QSO Parties by Armando Delgado, KN4JN

Contesting, or radiosport as the ARRL likes to call it, is an increasingly popular amateur radio activity. Contests occur almost every day of the year and on weekends invariably there are multiple contests. WA7BNM lists most active contests in his website, which is a good reference to keep up to date as to current and upcoming contests.

A very popular type of contest is the State QSO Party. Presently, 49 states and British Colombia hold contests every year, Alaska being the only state that doesn't have a QSO party thus far; plus there are two regional QSO parties that group multiple states from a region in one contest. These are the 7th Area QSO Party that groups all the states in Area7 and the New England QSO Party that groups states from Area1.

The scheme of the State QSO Party is for hams in a given state to contact hams everywhere outside their state. The format for all the contests is very similar. Invariably, instate operators send a signal report and the county, abbreviated to three or four letters, from which they are transmitting, while out-ofstate operators send a signal report and their state name. Operators outside the USA will send a signal report and their country prefix or "DX". There are some variations, though. Some states require a sequential contact number and the state or county instead of a signal report. Other State Parties require the ARRL region of the out-of-state operator instead of just the name of the state. One state requires the name of the operators in the exchange.

For operating modes, they all allow SSB, CW, and digital modes, and some include FT8 as well among the digital modes. Also, operators could use multiple modes during the QSO party. In most contests, each mode counts as a separate contact and thus extra points.

These contests happen all around the year but concentrate primarily

in the Spring and Fall. They occur on weekends exclusively, and actually some weekends will see multiple QSO parties happening at once. The organizers try to space them out at different starting and ending times, but generally at some point in the weekend there will be multiple simultaneous contests on the air, which makes for careful listening so as not to confuse contests and enter the wrong data in the log; although, most logging programs that support the QSO Parties will not allow a wrong entry.

Each state has designated a specific weekend in the year for their QSO Party. The first one every year is Vermont on the first weekend in February. This coming year, it will be on February 6. In that weekend the Minnesota and British Colombia QSO Parties will also take place. Florida traditionally has its QSO Party on the last Saturday in April, and the last QSO Party of the year is Illinois that has its event on the third Sunday in October.

The exchange in these contests is brief, which makes a lot of contacts possible in a short period of time. How many, depends on propagation and pileups. Not uncommonly, particularly at the beginning of the contest, in-state stations calling "CQ" will be met by a barrage of call signs impossible to decipher. It takes patience and timing to learn the listening pattern of the operator and sneak in one's call sign in that mess.

These contests are tailor-made for CW. The brief exchanges make it possible to get many quick contacts when propagation and pile-up conditions are favorable. For those wanting to improve their CW skills, these contests are great. Most county abbreviations are groups of meaningless letters that will improve character recognition.

The transmitting speeds are in the range of 20-30 wpm, but most reports are repeated regularly and it is possible to decipher just about every transmission, even for those copying normally much slower speeds.

These contests can be entered just for fun without submitting any results. However, modern logging programs that support the State QSO Parties make logging very easy. Some states offer bonus points for contacting certain specially designated stations and the program will automatically factor in those contacts when they occur. All contest sponsors prefer Cabrillo format for the submitted logs, and the logging programs make this process very simple and easy. However, most sponsors will take paper logs or other computer formats, such as Excel.

Submitting the logs is also very simple since all QSO Party sponsors provide a website or email address where the logs can be sent, as well as an address for paper submissions.

One other factor to know about the States QSO Parties is that the web site States OSO Party Challenge began last year a special site to compile scores from all the QSO Parties that participants enter, thus creating a contest within a contest.

Many contest sponsors also will provide a certificate to stations that submit a log, and some even provide gifts, like coffee mugs, to participants who contact a certain number of designated stations.

All in all, State QSO Parties can be a lot of fun, and with propagation improving this year, they promise to be even better.



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.



Page 3

	ATERS INCL cket are open fo						RACESBRE0008 REV B
UTPUT FREQ.			TONE/CC	CALL	LOCATION	OWNER	NOTES
WBFM							
145.130	130 V B	-600	107.2	AB4AZ	VERO BEACH, INDIAN RIVER	AB4AZ	
145.350	350 SC	-600	103.5	K4OSC	St. CLOUD, OSCEOLA	K1XC	Radio Science Club, Fl Club
145.370	370 CO	-600		W2SDB	COCOA-BROADCAST CT.	IRARC	Yaesu Repeater replaced with Bridgecon
145.470	470 ME	-600	107.2	K4HRS	MELBOURNE- RIALTO PL.	HIRAC	
145.490	490 TI	-600		WN3DHI	TITUSVILLE SR405 & Fox lk rd.	WN3DHI	
146.610	610 ME	-600	None/107.2		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		K4KSC	NW of MIMS Hog Valley , W of 195	K4KSC	
146.850	850 ME	-600	None/107.2		PALM BAY- Port Malabar Rd.	PCARS	Tone Downlink Only
146.880	880 RO	-600		W4NLX	ROCKLEDGE- WUESTHOFF HOSP.	IRARC	FUSION Repeater replaced with Bridged
146.895	895 PB		107.2/107.2		PALM BAY- DeGroot Library	EOC	TSQL as of 5/2018
146.910	910 TI	-600	-	K4KSC	TITUSVILLE Water Tower on south st.	TARC	
146.940	940 RO		None	K4GCC	ROCKLEDGE Carver Rd.WLRQ Tower	LISATS	
146.970	970 TI	-600		K4KSC	TITUSVILLE-T'VILLE TOWERS	TARC	
147.075	075 SC		107.2/107.2		SCOTTSMOOR Near US1-Aurantia Rd		TSQL as of 5/2018 Relocated 4/2019
147.135	135 RO		107.2/107.2		ROCKLEDGE-EOC	EOC	TSql as of 5/2018
147.135	240 DE	+600	-	KV4EOC	DELAND	VARES	
147.255	255 PB	+600		K4DCS	Near Babcock & Palm City S City limit		
147.330	330 TI	+600		K4NBR	TITUSVILLE-PARRISH HOSP.	NBARC	DSTAR Catoway in work
147.360	360 TI			N4TDX	TITUSVILLE-PARRISH HOSP.	NBARC	
442.850	850TI4		107.2/107/2		TITUSVILLE-PARRISH HOSP.	NBARC	TSql;FUSION/WBFM/WIRES-X
444.325	325ME4	+5000		K4DCS	MELBOURNE-TRINITY TWRS-E	PBARC	
444.375	CNLBRE	+5000	107.2		195 FDT Twr 1/2 Mile N of County Line		"SARNet Sebastian Repeater"
444.425	425ME4	+5000		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.	K4UZM	
444.925	925KS4	+5000	131.8/131.8	N1KSC	KENNEDY SP. CTRVAB	KSCARC	FM Tsql ; P25 capable
224.120	120CO2	-1600	123.0	AA4CD	COCOA Broadcast Ct.	AA4CD	
MR							
444.150	150TI4	+5000	CC1	K2JO	TITUSVILLE-PARRISH HOSP.	KC2CWT	DMR FL
444.575	575CO4	+5000		K4DJN	COCOA BROADCAST CT.	AA4CD	DMR Brandmeister
444.675	675TI4	+5000		K4DJN	TITUSVILLE-T'VILLE TOWERS	AA4CD	DMR Brandmeister
+++.075	0/5/14	13000	005	K4D1N			Divir brandmenster
T /							
<u>TV</u> 427.250	250CO4			K4ATV	COCOA BROADCAST CT.	LISATS	NTSC INPUT 439.25 See www.lisats.org
427.230	250004			K4ATV	COCOA BROADCAST CT.	LISATS	NTSC INPOT 439.25 See www.lisats.org
ACKETSTATIO	NC.						
ACKET STATIO				14/2011 40			
145.090	WL2KPB	WINLINK			PALM BAY-W2PH QTH	PBARC	WINLINK GATEWAY
145.090	090 ME	PCARS		W4MLB-2	MELBOURNE-TRINITY TWRS-EAST		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
	S/ARES SIMPLEX	1					
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 BACK
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
MPLEX		Γ					
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 Activit	ties	
146.580	TAC B	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.420	TACC	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.420	IRARCX	SIMPLEX		N/A	IRARC 'FUN NET" and CLUB ACTIVIES		
147.420	TAC D	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
147.430	TACE	SIMPLEX	-	N/A	: ,		Standardized tactical option since 2006
				-	Station to station, anywhere		
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	L	Standardized tactical option since 2006
	TAC C4	SIMPLEX		N/A	Station to station, anywhere		Standardized tactical option since 2006
446.700							
446.700					ad it is for uplink (usor Tx) if two are	listed the ren	eater is set for uplink and downlink (use
446.700	WBFM repeate	rs use CTCS	S; if one free	quency is list	eu it is for uplifik (user ix), it two are	insteu tile rep	eater is set for upfille and downline (use
446.700 Veter & 70 cm					gement and are maintained by the co		
446.700 Meter & 70 cm							
446.700 Aeter & 70 cm peater Call Si	gns in bold are	owned by I	Brevard Eme	rgency Mana	gement and are maintained by the co		

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

HAMACB EQUIPMENT SECURITY SYSTEMS BATTERIES(ALL TYPES) REPAIRS(ALL TYPES) ANTENNAS - TOWERS 2-WAY RADIO EQUIPMENT



DISCOUNT

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

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 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