

March 2014



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

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Captain's Corner

by RACES Captain Ken Bourne, W6HK, Chief Radio Officer

Kenwood to Acquire EFJ

E.F. Johnson Company, formerly a very popular American manufacturer of amateur radio equipment, is poised to be acquired by Japanese Kenwood. E.F. Johnson is no longer in the amateur radio business. However, this article will recall the golden years of Johnson Viking transmitters and related products. But first I'll review the company's history..

In 1923, E.F. Johnson Company was founded in Waseca, Minnesota, by Edgar F. Johnson to sell radio transmitting parts to amateurs and early radio broadcasters. In 1939, the company introduced its first public-safety communications product—a mobile radio system for police cars in Minnesota cities. During World War II, the company devoted 100 percent of production to defense. In 1949, E.F. Johnson jumped into the amateur radio business with its Viking I transmitter.

E.F. Johnson began to lose its focus on its highly successful amateur radio business, when CB came along. It introduced its Messenger 202 AM transceiver in 1961. The company introduced its line of FM business two-way radios in 1967. It invested considerable money in the CB business, but, in 1977, Johnson reportedly lost \$19 million in one year as cheap CB radios from Japan flooded the U.S. market.



Johnson Ranger 160-10-meter transmitter.

Amateur radios from Japan were gaining in popularity then also. Like other U.S. amateur radio (and CB) manufacturers, Johnson didn't know how to compete against the Japanese, and that business went away. Old-time hams (like myself) are still mourning the discontinued production of Johnson Viking amateur radio equipment.

In 1980, E.F. Johnson introduced the Clearchannel LTR 800-MHz trunked radio system. In 1982, Western Union acquired publicly traded E.F. Johnson. In 1985, Minnesota's Diversified Energies bought E.F. Johnson from Western Union. In 1989, Johnson introduced the Multi-Net wide-area trunked radio system. In 1990, Arkla, an Arkansas utility, acquired E.F. Johnson through merger with Diversified Energies. In 1992, EFJ Acquisition Corp., led by two New York investors, bought E.F. Johnson from Arkla. In 1993, E.F. Johnson completed its initial public offering. In 1995, Johnson signed an MOU to develop products that complied with APCO Project 25. In 1997, Transcript International, a manufacturer of voice scramblers and encryption devices, went public and acquired E.F. Johnson. In 1998, Johnson's LTR-Net analog trunking system was introduced. In 2001, Johnson introduced



Johnson Viking II 160-10-meter transmitter.

**The Next
OCRACES
Meeting Is**

**March 3, 2014
1930 Hours**

**840 N. Eckhoff Street,
Suite 104, Orange**

**Guest Speaker:
Lenora Pena-Sanchez
Baker to Vegas**



Orange County Sheriff's Department
Communications & Technology Division

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Captain's Corner *Continued from page 2*

the first multi-protocol portable radio working in analog, SMARTNET/SmartZone, Multi-Net, and P25 systems. In 2002, Transcrypt International was renamed EFJ, Inc. In 2004, two-way radio manufacturing was moved from Waseca, Minnesota, to Irving, Texas. In 2005, EFJ introduced trunked IP25, a switchless P25 trunked infrastructure system for first responders. In 2007 EFJ introduced trunked IP25 MultiSite and the ES Series portable radio. In 2008, EFJ, Inc., changed its name to EF Johnson Technologies, Inc. and introduced the ES Series mobile radio. In 2009, EF Johnson Technologies introduced the StarGate IP-based dispatch console and Hybrid IP25, a P25-compliant wide-area conventional infrastructure system that enables first responders to roam between trunked



Johnson Viking Valiant transmitter.

and conventional systems. In August 2010, FP-EF Holding Company, an affiliate of Francisco Partners, completed its acquisition of EF Johnson Technologies. That same year, the company designed the 51FIRE

ES portable radio for firefighters. In 2011 they introduced ATLAS System Solutions, and in 2012 the Viking VP600 portable radio.

On January 31, EF Johnson Technologies announced that JVC Kenwood, the Japanese parent of Kenwood USA, entered into a definitive agreement to acquire the company from Francisco Partners. EF Johnson will continue to operate as a separate company with its existing brand. JVC Kenwood expects EF Johnson to lead the Japanese company's P25 infrastructure initiative, while Kenwood USA will continue to focus on subscriber devices and its NEXEDGE digital radio technology.



Johnson Viking Pacemaker transmitter.

Now that we reviewed company history, let's take a nostalgic look at the "good old days" of Johnson Viking ham gear. I don't expect Kenwood, even though it remains a prominent manufacturer of amateur radio equipment, will resurrect the Johnson Viking brand in the amateur radio field.

In 1949, E.F. Johnson entered the amateur radio field with its Viking I AM and CW transmitter, covering 160 through 10 meters. It was succeeded in 1952 by the Viking II, running 135 watts input on AM and 180 watts on CW. Production ended in 1957. I had the thrill of operating this big, beautiful transmitter (with a Hammarlund HQ-129X receiver) at the

DuPage County (Illinois) EOC on the County 10-meter AM RACES nets, beginning in 1956 when I became a new ham and a RACES member. The quality of its AM signal was superb. A less

expensive transmitter, and less power (65 watts AM input), was the Viking Ranger, covering 160-10 meters. I think it was the best sounding AM transmitter on the air back then. It was introduced in 1954, and was succeeded by the Ranger II in 1961, which removed 11 meters (changed by the FCC from a ham band to CB in 1958) and added 6 meters.

Johnson manufactured the Viking Adventurer 80-10-meter CW transmitter from 1954 to 1963. It ran 50 watts input. They offered the AM/CW Viking Challenger from 1959 to 1965. It ran 70 watts input. The Viking Navigator 160-10-meter CW transmitter, with 40 watts input, was offered in 1958. Johnson offered the Johnson Viking Mobile 60-watt AM transmitter from 1952 to 1959.

In 1956, Johnson introduced the 73-pound Viking Valiant 160-10-meter transmitter, running 200 watts on AM and 275 watts on CW. It was replaced by the Valiant II in 1962, which was discontinued in 1965. The Valiant also had an SSB adapter, providing 275 watts PEP input. Johnson also made the 6N2 transverter for 6 and 2 meters. The 80-10-meter Viking Pacemaker, running 90 watts SSB, 35 watts CW, and 90 watts AM, was manufactured from 1956 to 1959. The 273-pound (!) 80-10-meter Viking FIVE HUNDRED, running 500 watts input on AM, was produced from 1956 to 1963.

Johnson made the famous Match Box antenna tuners. It also made amplifiers, including the 500-watt desktop Courier. The 2000-watt PEP Thunderbolt desktop linear, covering 80-10 meters, was made in the 1960s. They also made the 6N2 Thunderbolt for 6 and 2 meters. With 5 watts input on SSB or DSB, it produced 1200 watts to the finals in class AB1. Six watts CW produced 1 kW class C. A real behemoth was the Johnson Desk Kilowatt, a 1000-watt-input AM/CW/SSB amplifier manufactured in 1958 that was actually a three-drawer desk with a 400-pound RF pedestal.

One of Johnson's last products was the 80-10-meter Viking Invader transmitter, running 200 watts input on SSB/CW, and 90 watts on AM, made from 1960 to 1963. A kit converted it to the Invader 2000, with 2 kW PEP SSB and 1 kW CW input.



Johnson Viking FIVE HUNDRED transmitter.



Johnson Viking Invader transmitter.

Next OCRACES Meeting: March 3rd

The next OCRACES meeting is on Monday, March 3, 2014, at 7:30 PM, at OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, in Orange. OCSD Senior Forensic Specialist Lenora Peña-Sanchez, ID Bureau, OC Crime Lab, will be our guest speaker, talking about the Baker to Las Vegas Challenge Cup Relay, and what is expected of OCRACES members who will be supporting the OCSD running teams on March 22-23, 2014. Even those who are not participating in B2V will find this to be a very interesting presentation. Also at this meeting, OCRACES Training Sergeant Tom Tracey, KC6FIC, will discuss RACES ICS forms and activation procedures.

Next City/County RACES & MOU Drill: May 3rd

The next City/County RACES & MOU Drill will be on Saturday, May 3, 2014, from 0900 to 1100 hours. OCRACES participation will be focused on our enhanced training program, led by Sgt. Tom Tracey, KC6FIC. We will be using some of the new forms he has developed for streamlined operations and message handling. The scenario for this drill is flooding in North County, with mutual assistance provided by South County City RACES units. The April 7th OCRACES meeting will include preparations for this drill.

Jeff Yost, KE6EWG, Becomes OCSD Intern

Jeffrey Yost, KE7EWG, recently became an intern with the Orange County Sheriff's Department, Communications & Technology Division. He is currently in his fourth year at California State University Fullerton, studying political science and human communications. He started his internship with OCSD at the end of January, and he will be working in the Emergency Communications section. Prior to moving to Southern California for college, Jeff lived in Southern Nevada and was an active member of Clark County ARES/RACES. He participated in numerous activities during his years with the group, including Point of Dispensing (POD) activations and providing emergency communications support to local events. Jeff looks forward to learning more about the Emergency Communications Section and working with the staff.



Division Celebrates 80th Anniversary

OCSD Communications & Technology Division will celebrate its 80th anniversary at a special breakfast meeting on Wednesday, March 19, 2014. Division Director Robert Stoffel, KD6DAQ, says, "This will not be the extravagant event we held for our 75th, but it will give us an opportunity to celebrate and recognize the past 80 years with some food and a few guest speakers."

On March 2, 1934, the Communications Division was established. The date coincides with the first day of operation for KGHX Police Radio, and thus the establishment of what would eventually become the Communications & Technology Division. "Over the past 80 years, the Division has moved from one County agency to another, and the focus of the Division has also changed as technology and public-safety needs changed," says Stoffel. "Today we remain a leader in public-safety communications and technology for the County and its 34 cities."

Dan Welch, W6DFW: Silent Key

With deep sorrow we report that former OCRACES Member Dan Welch, W6DFW, passed away on January 30, 2014, after a long illness. Dan was an active member of the Cactus Intertie and the San Bernardino Microwave Society. He was designing, constructing, and distributing 10-GHz omnidirectional slot antennas right up to the day of his passing. He was also the ARRL Official Observer Coordinator for Southern California. Dan is survived by his wife Julianna, KF6LYH, and by his son Mike, KG6FWH, and grandson Daniel, KG6WAP.

W6HK Hides at Serrano Park

Six T-hunting teams participated in the cooperative T-hunt on Monday, February 10, 2014. Ken Bourne, W6HK, joined by his son Don, KB6TVK, hid at Serrano Park in the hills in the northeast section of the city of Orange. They transmitted on the input of the OC-RACES 2-meter repeater, using a Byonics PicCon controlling a Kenwood TM-G707A running 5 watts into a quarter-wave antenna.

The first hunter to find the fox was Bob McFadden, KK6CUS, using an Icom IC-7100 transceiver with an Arrow portable beam, loop, and offset attenuator. He also found the “Foxhunt” app on his iPhone to be very useful.

The MESAC team consisted of Patrick Williams, KJ6PFW, Tom Pastore, N6HAM, and Joy Williams, K6JOY. Their Doppler direction-finding system got them into the area quickly, but reflected and blocked signals due to the nearby hills gave erroneous bearings toward a private, gated community. After driving up and down Cannon Street and surrounding streets for awhile, they homed in on the fox.

Another hunter who successfully found the fox was Ron Allerdice, WA6CYY, He was well-equipped, including a beam antenna mounted on his truck.

This was the first hunt for Fran Needham, KJ6UJS, and he did very well, in spite of some confusing hints that the fox gave about going east on Serrano Avenue, which did not continue through to the Serrano Avenue that the fox was near. Nevertheless, Fran was

persistent and finally arrived at the fox’s den.

Sue Mickelson, KJ6LCJ, and Yihong Yang, KJ6QMJ (who checks into our weekly nets from Irvine CERT), were the other two hunters, who, unfortunately, did not find the fox.

Patrick Williams, KJ6PFW, will be the next fox, on Monday, March 10, 2014, immediately following the 2-meter OC-RACES ACS net (about 7:20 PM).

He says he will hide within the Newport Beach area. Patrick will transmit on the input (146.295 MHz) of the repeater. Hunters will compare bearings via the 449.100 MHz repeater. Anyone is welcome to participate. The cooperative T-hunts are held to provide practice in working together to quickly locate interference.



Don Bourne, KB6TVK, at the fox’s den at Serrano Park.



Tom Pastore, N6HAM, Bob McFadden, KK6CUS, and Joy Williams, K6JOY (left to right), with the fox, Ken Bourne, W6HK.



Ron Allerdice, WA6CYY, after finding the fox.

InnovAntennas Acquires Force 12

InnovAntennas has acquired Force 12 antenna company and product line and has moved the Force 12 factory from Bridgeport, Texas, to Grand Junction, Colorado, into a facility shared with InnovAntennas America. InnovAntennas Ltd in England is now manufacturing Force 12 products for the European market at its Canvey Island plant. The Grand Junction facility is up and running, manufacturing and shipping antennas. InnovAntennas says it plans to produce updated versions of classic Force 12 antennas as well as all-new models.

Pacific Ex 2014: March 27th

March 27, 2014, marks the 50th anniversary of the Alaskan Earthquake and Tsunami. In conjunction with this historic event, OCS&D's Emergency Management Division is conducting an exercise of the EOC to test response to a tsunami. Pacific Ex 2014 will be held on that anniversary date, from 8:00 AM until noon. Targeted EOC positions will be activated to ensure that all personnel are properly trained and comfortable in their position or roles.

Two OCRACES members (Sue Mickelson, KJ6LCJ, and Tom Riley, K6TPR) will participate in the exercise on March 27th. Prior to that, they will participate in EOC Section Training on Tuesday, March 4th, or Tuesday, March 18th, from 10:00 AM until 11:30 AM.

12-Volt Portable Rotator Offered to Hams

The Portable Rotation 12-volt ultra-portable rotor system, Model 12PR1A, has been designed for amateur radio applications. Its interface allows easy operation while offering advanced features such as "Auto Rotation" and "Any-Direction Calibration." The heart of the system is a microprocessor that takes user input from three buttons and then controls the antenna motion, displaying antenna heading and other information on an LCD screen. User-provided information is saved in internal memory along with antenna heading data. The controller can be turned off when not being used, to conserve power, while no user or heading data is lost. The system supports a standard USB computer interface for remote computer control.



The system is designed to turn antennas as large as the Super Antenna YP-3 three-element beam. The price is \$329.95. Options include a dual-pocket carry bag (\$29.95). A 50-foot extension cable (\$24.95) allows the user to extend the total cable length between the controller and rotor unit to 100 feet. The cable has one male and one female connector. The four-conductor cable uses stranded 18-gauge conductors. A Buddipole adapter kit (\$29.95) uses a replacement antenna mast to mount a Buddipole VersaTee to the rotor unit. The kit includes an antenna mast with 1/2-inch NPT threading, 90-degree BNC adapter, and 5/32 Allen wrench.

For additional information, go to the Portable Rotation Web site at <http://www.portablerotation.com/>.

Configure Antennas with Universal Hub

The ALPHA~NODE antenna hub provides easy assembly when configuring HF, VHF, and UHF ground plane, J-pole, or multi-band vertical antennas. It is manufactured from 6061 corrosion-resistant aluminum. The basic ANA-H-5/8-24 hub (\$84.95) has a 5/8-24 threaded center hole to accept standard SO-239 and N-type threaded barrel connectors. It comes with set screws and Allen key for tightening to a 1.25-inch to 1.5-inch outside-diameter mast. Featured are six horizontal 3/8-24 threaded holes and six 3/8-24 threaded holes angled down at 26 degrees. Shown in the picture at right is the ANA-H-NMO-UHF with NMO to SO-239 connector (\$99.95). Other models are available with 3/8-24 threaded adapter to SO-239, SO-239 to SO-239 connector, NMO to N-female connector, and N-female to N-female connector. A custom hub is available for use with Quadrifilar Helix antennas.

In a typical configuration, simply attach a mobile antenna (with NMO connector if using the pictured hub) to the top, and up to six 3/8-24 threaded whips as radials to the side and/or bottom. If the mobile antenna is a 2-meter/440-MHz dual-band, for example, you can attach six horizontal 440-MHz radials and six sloping 2-meter radials. For additional information, go to the ALPHA~NODE Hub Web site at <http://alphanodehub.com/>



RACES/MOU News from Around the County

"RACES/MOU News" provides an opportunity to share information from all City & County RACES/ACS units and MOU organizations in Orange County.

Please send your news to NetControl Editor Ken Bourne, W6HK, at:

w6hk@ocraces.org

Seal Beach/Los Alamitos RACES

Seal Beach RACES Chief Radio Officer Mike Maronta, KC6YNQ, announces, "Seal Beach/Los Alamitos RACES has moved their Web site to a new URL. The new URL is simply <http://races41.org>—same great Web site, new location. Please bookmark your browsers accordingly."

Orange County SKYWARN

Orange County SKYWARN Coordinator Scott O'Donnell, WX6STO, submits the following information:

"First, we are alive and well. Several people have expressed feelings of disconnect with being a spotter and we are working to alleviate this. I was sending out a few e-mails reminding our ham radio operators of our SKYWARN radio net. The current method I have to e-mail sends this to all weather spotters (including non-ham spotters), which doesn't necessarily help those who do not want to participate in the ham portion of our SKYWARN program. The Orange County SKYWARN program and each spotter who supports it are very important assets to the National Weather Service, and your participation is highly valued.

"Having said that, this current drought has brought us very mild weather so far during much of this winter. We have had no activations for our area, so the staff hasn't had a need to be in contact with you as much as during a normal winter. This does not mean that hazardous weather is not capable of occurring. Recently, dense fog has created problems as well as several king tides, low humidities, and the Santa Ana winds. This is where spotters become the key, even during non-activation events!

"Our new online storm report interface has several great benefits. First, the new form sends the report directly to the forecaster's desk and flashes until they acknowledge the report. Secondly, the method of data input by the forecaster makes data integration seamless on national-level databases. Finally, spotters will be able to provide better detail in their reports.

"This new interface was created by the NWS as an effort to standardize all online previous regional (including eSpotter) and local storm report interface efforts. Unfortunately,

due to it being designed at a level above our local NWS San Diego office, DENSE FOG, EXTREME HEAT, and HEAVY DUST/SMOKE are several event types that were not included on this new form. The NWS San Diego office is well aware of the problem. It is not helpful to send e-mails or add comments on how the form does not have these events in the additional comments. This interface is intended to be used solely for the relay of storm information to the NWS. The local office has expressed the need to include these events and is waiting for them to be added.

"The NWS encourages reports that fit the listed criteria and not the 'forecast' at the observation site. However, if a spotter sees a report of chain control, weather-related accidents, flooding, or impacts on the news or Internet, it might be helpful to report this to the area coordinator (to relay) or to call the NWS office directly. You do not need to remember your personal spotter number to report an event. If you forgot yours, e-mail me directly and I will let you know what your spotter number is.

"Spotter phone number: Call 858-675-8700 if you lost the 800 spotter number (restricted to weather spotters only).

"More details on methods for reporting these "other" events will be explained in the future. The new online reporting form can be found at <http://www.srh.noaa.gov/StormReport/SubmitReport.php?site=sgx>."

County of Orange RACES

Jim Dorris, KC6RFC, has stepped down from his position as OCRACES Sergeant (Assistant Radio Officer), due to the attention he must give to his wife Nancee, N6ZRB, and has rejoined our North Squad. Nancee continues to suffer from a medical condition and requires extensive care. Nancee is a dear member of OCRACES, and we pray for her recovery. We deeply appreciate the service that Jim has provided as an OCRACES Sergeant. He is a conscientious and dedicated member. We hope he will be able to return to full participation soon, and we hope to see Nancee return to our meetings in the not too distant future.

Congratulations to OCRACES Sergeant (Assistant Radio Officer) Bob McFadden, KK6CUS, who now holds an Extra Class amateur radio license.

March 2014

Upcoming Events:

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 OCRACES Meeting & Weekly ACS Net	4	5	6	7	8
9	10 Weekly ACS Net & Cooperative T-hunt	11	12	13	14	15
16	17 Weekly ACS Net	18	19	20	21	22 Baker to Las Vegas Challenge Cup Relay
23 Baker to Las Vegas Challenge Cup Relay	24 Weekly ACS Nets & SWACS Radio Test	25	26	27	28	29
30	31 Weekly ACS Net					

- **Mar 3:** OCRACES Meeting, 1930, 840 N. Eckhoff Street, Suite 104, Orange
- **Mar 10:** OCRACES Cooperative T-hunt, 1920, input of 2-m repeater (146.295 MHz), bearings compared on 449.100 MHz repeater
- **Mar 22-23:** Baker to Las Vegas Challenge Cup Relay
- **Mar 24:** OCRACES Nets on 2 m, 70 cm, 6 m, and 1¼ m, beginning at 0700, followed by CESN on 3960 kHz at 2000, followed by Southwest ACS Frequency/Radio Test at 2015, at OC EOC
- **May 3:** City/County RACES & MOU Drill, 0900-1100
- **May 19:** City/County RACES Meeting, 1915, 840 N. Eckhoff Street, Suite 104, Orange



www.ocraces.org



Mission Statement

County of Orange RACES has made a commitment to provide all Public Safety departments in Orange County with the most efficient response possible to supplement emergency/disaster and routine Public Safety communications events and activities. We will provide the highest level of service using Amateur and Public Safety radio resources coupled with technology, teamwork, safety, and excellence. We will do so in an efficient, professional, and courteous manner, accepting accountability for all actions. We dedicate ourselves to working in partnership with the Public Safety community to professionally excel in the ability to provide emergency communications resources and services.

County of Orange RACES Frequencies

- 6 m: 52.620 MHz output, 52.120 MHz input, 103.5 Hz PL
 - 2 m: 146.895 MHz output, 146.295 MHz input, 136.5 Hz PL*
 - 2 m: 147.480 MHz simplex
 - 1.25 m: 223.760 MHz output, 222.160 MHz input, 110.9 Hz PL
 - 70 cm: 446.000 MHz simplex
 - 70 cm: 449.100 MHz output, 444.100 MHz input, 110.9 Hz PL (private)
 - 70 cm: 449.180 MHz output, 444.180 MHz input, 107.2 Hz PL (private)
 - 23 cm: 1287.650 MHz, 1287.675 MHz, 1287.700 MHz, 1287.725 MHz, 1287.750 MHz, and 1287.775 MHz outputs, -12 MHz inputs, 88.5 Hz PL
- *Primary Net—Mondays, 1900 hours

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Questions or Comments?
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**“W6ACS ...
Serving
Orange County”**

Meet your County of Orange RACES Members!



Ken Bourne
W6HK



Scott Byington
KC6MMF



Harvey Packard
KM6BV



Ralph Sbragia
W6CSP



Delia Kraft
KF6UYW



Marten Miller
KF6ZLQ



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Ernest Fierheller
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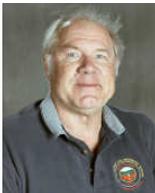
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