What's New at Dayton 2010?

One of the many reasons amateurs come to Dayton Hamvention® each May is to look over the new gear announced by many manufacturers. The number of vendors at Hara Arena can be mind boggling, especially on your first trip. We have attempted to summarize what we considered the new offerings of most interest to hams, either to fill in what you saw, or to provide insight to those unable to attend this year. We obviously don't have time or space to discuss everything, but this is what we thought might be of most interest. ~ *Joel R. Hallas, W1ZR*
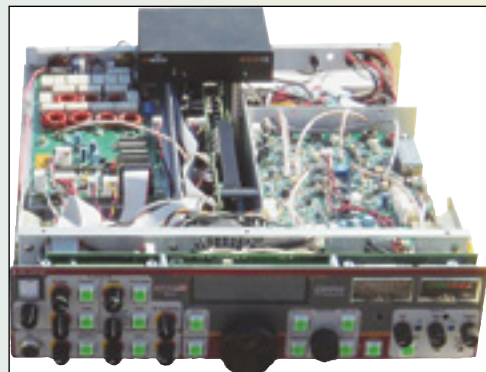
New HF Transceivers

Alinco

Alinco introduced their new HF transceiver, the DX-SR8. This compact transceiver is designed with the portable or mobile operator in mind, featuring a removable face plate to increase mounting options. Coverage is from 160 through 10 meters, including the US 60 meter channels with operation on AM, FM, CW and SSB modes. The general coverage receiver operates from 0.15 to 30 MHz. Standard selectivity is 2.4 or 6 kHz, with provision for a narrow CW filter. A dynamic microphone and speech processing are provided. The DX-SR will be available later this year. Alinco is now represented in the US by GRE at **greamerica.com**.

The new Alinco DX-SR8 HF transceiver.

DZKit

DZKit showed off their Sienna HF transceiver kit, in full production this year. The Sienna is a real do it yourself kit, with instructions in the Heathkit™ style. The kit can be purchased in modular form starting with a basic receiver with optional modules added as time and budget permit to result in a fully featured 100 W transceiver with a built-in PC. See **www.dzkit.com** for more info.

DZKit Sienna HF modular transceiver transceiver kit.

FlexRadio

FlexRadio showed off a number of new products this year. The FLEX-1500 is an all mode 5 W software defined radio (SDR) designed to provide an opportunity for amateurs to experience the capabilities of SDR at an entry level price. The FLEX-1500 uses the same PowerSDR software that runs its larger brethren and provides more than 80 dB of dynamic range on 160 through 6 meters. It can be used as a stand-alone (using a PC) low power HF transceiver, or can serve as an IF strip for V/UHF transceivers.
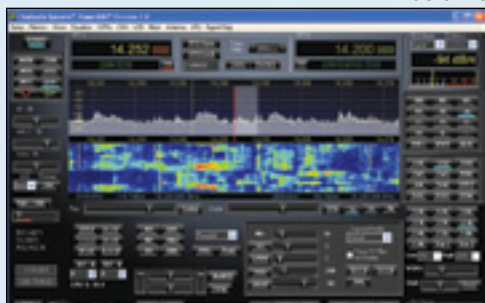
FlexRadio also demonstrated a new version of PowerSDR, the software that runs their SDRs. Version 2.0 is said to include a new user interface, automated wide band image rejection, enhanced noise reduction and notch filter capability, completely revamped CW timing and faster transmit-receive turnaround time as well as other features.
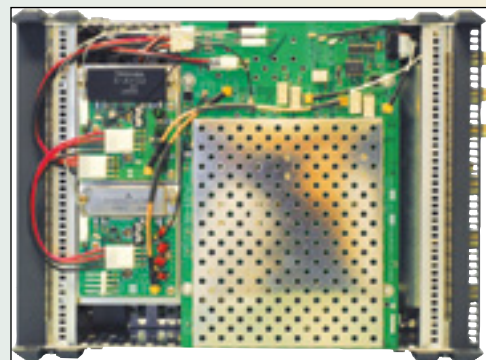

FLEX RADIO SYSTEMS

The FlexRadio FLEX-1500 entry level SDR HF and 6 meter transceiver.

FLEX RADIO SYSTEMS

Main screen of Version 2 of FlexRadio's *PowerSDR* transceiver control software.

FlexRadio also introduced the FLEX-VU5K, a 60 W, 2 meter and 70 cm transverter module that fits into and operates with their FLEX-5000 software defined transceiver. There is also a low power version with 50 mW output, designed to drive microwave transverters.

ICOM IC-9100, their new HF, VHF and UHF SSB transceiver.

Kenwood's new TS-590 HF and 6 meter transceiver features a down converting architecture and multiple roofing filters for improved close-in dynamic range.

Yeasu's new FTDX5000 HF and 6 meter transceiver features a down converting architecture and multiple roofing filters for improved close-in dynamic range.

Alpha Radio Products 8406 6 meter legal limit amplifier.

The new compact, self contained, Elecraft KPA-500, 500 W HF and 6 meter amplifier shown next to the K3 transceiver.

ICOM

ICOM introduced their new IC-9100 HF, VHF and UHF transceiver. This radio essentially merges the capabilities of the previous generation's IC-746PRO HF and 6 meter transceiver and the IC-91 V/UHF transceiver in a single box. In this case, the result is greater than the sum of the parts because near-in HF dynamic range is likely improved by the addition of selectable roofing filters at the first IF.

Kenwood

Kenwood introduced an engineering model of their new HF and 6 meter transceiver, the TS-590. This compact transceiver features a down converting design with multiple HF roofing filters included to provide good near-in dynamic range. The '590 features 32 bit IF DSP filtering for operating selectivity and other filtering. Kenwood expects that the '590 will be available in the fall at a price below $2000.

Yaesu

Yaesu showed off their new FTDX5000 series of HF and 6 meter transceivers. These 200 W transceivers all offer dual receivers and many features and options of the other FTDX series radios at a lower price point. The primary receiver features a 9 MHz first IF and selectable roofing filters as narrow as 300 Hz (optional in some models) that should result in excellent close spaced dynamic range.

HF and VHF Power Amplifiers

Alpha Radio Products

Alpha showed off their new 6 meter legal limit amplifier, the 8406. This amplifier uses a single 4CX1500B and is expected to be available later this year for $4295.

Elecraft

Elecraft introduced a 500 W HF and 6 meter solid state power amplifier designed to complement their K3 HF and 6 meter transceiver. The amplifier is in a package matching the dimensions of the K3, including a built-in ac power supply. As with other Elecraft radio products, this amplifier supports full break-in operation. Elecraft predicts that the amplifier will be certificated and available later this year.

Palstar

Palstar introduced their Commander VHF-144 2 meter 1 kW amplifier. The Palstar update of the popular Commander II uses a single 3CPX800A7 pulse rated external anode triode in grounded-grid AB2 with forced air cooling as the amplifying element. See **www.palstar.com**.

Palstar's Commander VHF-144, 2 meter, 1 kW linear amplifier.

Yaesu

Yaesu showed their new full legal limit HF and 6 meter linear amplifier, the VL-2000. This will be available later this year, augmenting the Quadra amplifier line. See **www.yaesu.com** for more information.

VHF/UHF Transceivers

Alinco introduced the DJ-175 2 meter handheld transceiver. This unit offers CTCSS, DCS and tone burst repeater access along with selectable 5, 2 or 0.5 W RF and 500 mW audio output levels.

Kenwood introduced the THD-72 dual band handheld transceiver offering built-in GPS and TNC, integrated APRS and Skycommand functionality and 5000 memory channels for use with Google Maps. See **www.kenwoodusa.com/communications/amateur_radio** for more information.

Yaesu displayed two versions of the VX-8, the VX-8DR and VX-8GR. The '8DR operates on 6, 2, 1.25 (222 MHz) and 70 cm, while the '8GR is a traditional 2 meter and 70 cm dual bander. Each supports APRS with a built-in interface and GPS receiver. The '8DR requires an optional antenna that mounts on the top of the unit or on an optional speaker mic. The '8GR has the GPS antenna built in. Both units have wide range receivers, with the '8GR covering V/UHF from 108 through 999.99 MHz, while the '8DR extends the range downward through HF into MF at 500 kHz.

Antennas
Alexandre Grimburg

Alex, PY1AHD, offers his *Alex Loop* antenna that will operate from 7 to 30 MHz, handling up to 20 W of RF. It can be used as a portable or stealth antenna structure with a transition from small pack to on the air in minutes. The manual tuning unit can be adjusted by listening to receiver noise and the antenna can be rotated to eliminate noise or peak received signals. For information, see **www.alexloop.com**. W4RT (**www.w4rt.com**) is US distributor.

Yaesu's VL-2000 HF and 6 meter legal limit linear amplifier.

Alinco DJ-175 2 meter handheld transceiver.

Kenwood THD-72 dual band handheld transceiver with built-in GPS.

Yaesu VX-8DR V/UHF four band handheld transceiver with built-in GPS and APRS capability.

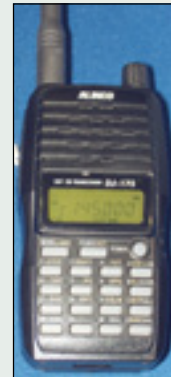Alex, PY1AHD, shows off his Alex Loop deployed for operation.

DX Engineering

The DXE-SMBA-1 is a low profile antenna tuning solution for a stealthy wire antenna. It includes a of radial connection plate, an MFJ-927 auto tuner and an MFJ-4117 bias T to allow powering the tuner via the coax. The system will handle 200 W and can operate with wires as short as 26 feet on 40 through 10 meters, and on 80 through 10 with longer wire structures.
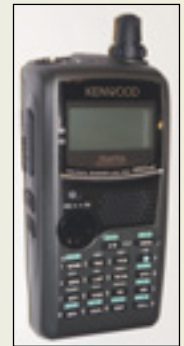
DX Engineering also offers both component kits and complete antennas in the form of the G3TXQ design multiband compact Hexx configuration. Of particular note is the multiband feed system using a custom 50 Ω balanced strip line type transmission line with a Teflon dielectric.

DX Engineering DXE-SMBA-1 low profile antenna tuning solution for a stealthy wire antennas.

DX Engineering balanced multipoint feed for Hexx beam antennas.

DZKit

DZKit has announced the availability of a portable HF beam antenna especially designed for ARRL Field Day or other portable operations. The Yagi design can be configured as a single band two element full size design for 20 meters, or as a three element configuration for 17, 15, 12 or 10 meters. The fiberglass boom, aluminum element structure can be assembled from its 5 foot long package into a full size Yagi without tools in a predicted time of less than 10 minutes. It is scheduled to be available in August.

M² Antenna Systems

M² Antenna Systems announced a new rotatable loaded dipole for 40 meters. The unique feature of this 52 foot antenna is the design and fabrication methodology of the loading coils. Each coil (shown with a cutaway view for photo purposes) is entirely machined from a solid piece of 5 inch diameter round aluminum stock. This allows a solid electrical and mechanical path without joints from one side to the other, eliminating potential failure points. The antenna is available in 7 to 7.2 or 7.1 to 7.3 MHz versions.

Accessories

Array Solutions

ARRAY SOLUTIONS

Array Solutions introduced their new vector network analyzer, the VNA 2180. This device measures the magnitude and phase of impedance or filter and device transmission parameters over the range of 5 kHz to 180 MHz. Outputs are displayed graphically on a PC as shown in the photo.

DX Engineering

DX Engineering RTR-1 external receive antenna interface.

DX Engineering showed off their new RTR-1 external receive antenna interface switch designed to allow users of radios without a port for a separate receive antenna to benefit from the low noise potential of a dedicated receive antenna on the lower bands.

Elecraft

Elecraft introduced a stand-alone panoramic receiver (panadapter) to display the signals received on their K3 HF and 6 meter transceiver. The P3 is the same height as the K3 and is designed to sit next to it, as shown on the right in the photo.
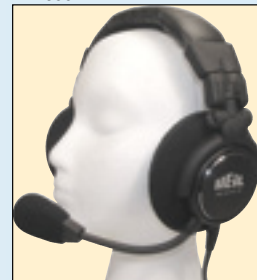
Heil Sound

Elecraft stand-alone P3 panoramic receiver (panadapter) displays signals received on their K3 HF and 6 meter transceiver.

Heil Sound introduced the HC-6 wide range microphone element. This element is said to offer a flat response with the −3 dB points fixed at 100 Hz and 12 kHz with sensitivity of −57 dB at 600 Ω output impedance (centered at 1 kHz). The microphone is intended to have its response tailored to support multiple applications through the use of equalization, commonly available in many transceivers. Initially available in the available boom microphone for the Heil Quiet Phone Pro headset, this element will be added to the other microphones and headsets in the amateur line, as announced below.

HEIL SOUND

The Heil Pro Set Elite headset is available with a number of different mic elements including the new HC-6.

Heil also introduced the Pro Set Elite, a headset with boom microphone designed for commercial sportscasters, podcasters and Amateur Radio operators. This boomset features the new wide response Heil HC-6 microphone element. The Pro Set Elite offers dual side, full coverage ear muffs with high rejection of outside noise.

Hendricks QRP Kits

Doug Hendricks, KI6DS, of Hendricks QRP Kits (**www.qrp.com**) showed off new 40 and 15 meter QRP transceiver kits. The kits can be used with an available digital display. A new dummy load and speaker console were also shown.

Idiom Press

Idiom Press introduced two new products, an RF speech processor designed to increase the average power output from an SSB transmitter and the LogiTALKER, a multimemory voice keyer based on a June 2009 *QST* article by Allen Baker, KG4JJH.

Doug Hendricks shows off his new transceiver kits.

The Idiom Press LK-1 RR speech processor increases effective RF power output of SSB transceivers.

LogiTALKER voice memory keyer from Idiom Press

Kanga US

Bill Kelsey, N8ET, introduced a kit version of the hardware for both the RS-232 and USB (see photo) versions of the PIC-EL. This programmable integrated circuit (PIC) programmer is designed to help amateurs learn how to program these useful devices. These were described in *QST* articles (Feb, Mar 2007 and Feb 2010) by Craig Johnson, AAØZZ.

Kanga US kit version of Craig Johnson's USB model PIC-EL.

MFJ

MFJ introduced the MFJ-828 digital auto-ranging wattmeter and frequency counter. This unit measures over the range from 1.8 to 54 MHz at powers from very low to 1500 W.

The MFJ-828 measures true peak or average forward and reflected power, SWR and frequency, which can all be displayed simultaneously.

Palstar

Palstar is offering a deluxe wide range loudspeaker in a custom Baltic birchwood enclosure measuring 11 × 8¼ × 10 inches. The specified frequency response is 55 Hz to 8 kHz. It is offered in black or birch finish at $179. See **www.palstar.com** for more information. They are also offering their compact R30A broadcast and shortwave receiver with a front facing speaker in a similar birch enclosure.

PowerFilm

Pat Rundall, NØHR, showed off a sample of the PowerFilm line of portable solar panels and chargers. They are available as compact foldable or rollable units from 5 through 60 W with included charge controller up to tent sized units in use by the military in Asia.

MFJ ENTERPRISES

MFJ-828 digital auto-ranging wattmeter and frequency counter.

Palstar deluxe wide range loudspeaker in custom Baltic birchwood enclosure.
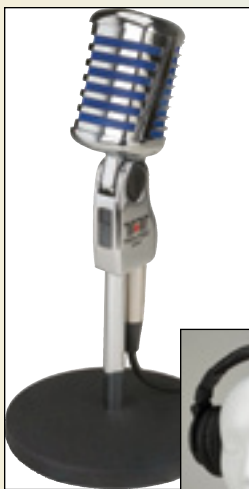
RigExpert AA-230PRO antenna analyzer.

RigExpert Plus multimode transceiver to computer interface with USB connectivity.

Telepost LP-500 digital station monitor.

Ten-Tec Regal 707 dynamic microphone in a classic retro style case with a slide PTT switch.

TEN-TEC

Ten-Tec 777 headset.

Rig Expert

RigExpert introduced the AA-230PRO model of their antenna analyzer time domain reflectometer. This laboratory grade antenna analyzer is designed for testing, checking, tuning or repairing antennas and antenna feed lines in the 0.3 to 230 MHz range.

RigExpert also introduced the RigExpert Plus, a multimode transceiver to PC interface designed to communicate with modern PCs using a USB interface.

Rig Expert equipment in available in the US from Array Solutions at **www.arraysolutions.com**.

Telepost

Telepost introduced a digital station monitor using a high resolution 24 bit color TFT display. It combines a power/SWR meter with auto selection of up to four couplers (any mix of HF, VHF, UHF), with simultaneous bargraphs for average power, peak power and SWR. It also displays numerical values for these plus meter status and a number of signal metrics such as reflected power and compression ratio. It also can display waveforms of transmitted signals of any mode or a spectral analysis of signals. A built-in two-tone audio generator is provided to facilitate checking SSB linearity.
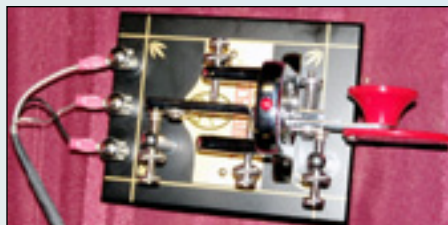
Ten-Tec

Ten-Tec introduced two 25 A switching power supplies designed to power 100 W class amateur transceivers from an input of 115 or 230 V ac, 50 to 60 Hz. The model 940 includes an internal 4 Ω, 5 W, speaker as well as three dc outputs for accessories, up to 1 A, in addition to the 25 A transceiver connection. The model 941 is a 25 A power supply only in a compact, 4 pound, slimline enclosure designed for either vertical or horizontal mounting.

A new microphone, the Regal 707, was also introduced by Ten-Tec. This high quality dynamic microphone is provided in a classic retro style case including a slide PTT switch. The mic, connected via an XLR connector, is always live, permitting VOX operation in any switch position. The element promises a tailored frequency response from 50 Hz to 16 kHz designed for excellent transmit audio in SSB, AM and FM modes. The accessory model 716 base is also available, as are cable and connector sets for most popular radios.

They also introduced their model 777 headset, available in single and dual earpiece model. They both include a high quality dynamic microphone element.

Vibroplex

Vibroplex announced a special 100th anniversary model of their original bug (1904-2004) that has a finish that duplicates one of the most popular early bases, a weathered black Japanese-like powdered coat finish with gold pinstripe border. The special finish is available in other models, such as the Vibrokeyer shown in the photo.

Vibroplex 100th anniversary model of the Vibrokeyer features a 1904 style finish.

West Mountain Radio

West Mountain introduced two new items in their dc power distribution and control line. The ISOpwr battery isolator is particularly suited to the mobile operator who wants to use an auxiliary battery to power the radio equipment, preserving the starting battery for engine starting. If the engine is on and the car battery is at or above 13.5 V, the auto system is connected to the auxiliary battery and radio load to allow charging. If the auto system voltage drops to 12.7 V, the ISOpwr isolates the auto system from the auxiliary battery to maintain the charge of the starting battery. The system can safely switch up to 40 A.

West Mountain also announced their PWRguard. This automatic safety switch can go between any power source and any load. It automatically switches off if the supply voltage goes over 15 V, or below 11.5 V. It switches off quickly enough to protect a radio from high voltage transients, but will delay switching on the low side to avoid drop outs during modulation peaks. It recovers automatically once a transient is over, or after a low battery returns to normal voltage.

West Mountain also showed a compact 10 W amplified mobile speaker that is designed to take the output of a handheld transceiver up to a level that can compete with road and wind noise.

See **www.westmountainradio.com** for more information.

West Mountain Radio ISOpwr battery isolator.

West Mountain Radio PWRguard protects radio equipment from high voltage spikes on a 12 V dc line.