



PVRC Newsletter

May 2019

Newsletter Editor: John K3TN jpescatore@aol.com

Website: <http://www.pvrc.org>

Meeting Info: <http://www.pvrc.org/chapters.htm>

Facebook: <https://www.facebook.com/groups/PotomacValleyRadioClub/>

President's Letter – Tom K3AJ

The officers of PVRC have been studying the issues around revision of the by-laws. This matter became urgent in the fall of 2018, when the Trustees intervened in the elections as a result of a flaw in the existing by-laws. At a minimum, we are committed to correcting this deficiency regarding the election of Trustees. Upon reflection, the officers feel that a broader look at the by-laws is in order. The present by-laws were created in an earlier era in the life of PVRC when it was different and more geographically centralized.

Mindful of the attempt to revise the by-laws in 2017 that failed to garner the required support, we have also been carefully considering the need for a more open process with adequate provisions for review, comment and participation by a wide spectrum of our stakeholders, while respecting the need for forming a core team of manageable size to carry out the work. Longtime member and past president Mark, KD4D, has agreed to lead the effort. We are very grateful to Mark for agreeing to take on this important task.

The overall goal is as follows: Review the PVRC by-laws and propose changes to maintain the status of PVRC as one of the premier contest clubs in the United States and support our Mission Statement and our "Chapter-Based" PVRC Organization. After considering of the needs of the club at this point in time, we have identified a number of specific issues that should be studied. It will ultimately be up to the team developing recommendations to decide which of these issues should be addressed, as well as considering other issues we may not have thought of.

Please be assured that the officers and Mark are very sensitive to the need to keep the by-laws general in nature and not attempt to define every aspect of the day-to-day operation of PVRC. We have communicated our plans to the Trustees and have received some initial suggestions and comments from them. We will be proceeding to assemble a team under Mark's leadership to take us through the development and review process.

The officers will be naming three members of the team, and after they are named, Mark will be soliciting the membership for volunteers from which he will select three more team members.

We are mindful of the need to resolve comments and suggestions in a fair and open manner, recognizing that not everyone's ideas may be implemented. The team will be responsible for making judgments on the input received and ultimately the Trustees will approve the changes prior to their being presented to the membership for vote.

73 and Go PVRC!
Tom K3AJ
President, PVRC



PVRC Officers at the Galactic Luncheon: Mike N4GU, Tim N3QE, Tom K3AJ, Dan K2YWE and Jay W3MMM - Via Dan K2YWE and Facebook

PVRC Officers:		Trustees:
President:	K3AJ Tom Valenti	K3MM, N3OC, WX3B, W4ZYT, N4NW, K2AV, K4ZA, W3TB, K3ZO,
Vice President:	N4GU Mike Barts	K2PLF, W3LPL, N4MM, N4ZR, W3MSH, N4NQY, W2RU, K3WRY
Vice President:	W3MMM Jay Horman	PVRC Charter Members (all SK):
Secretary:	N3QE Tim Shoppa	W3GRF, W4AAV, W4KFC, N0FFZ, W4LUE, W7YS, VP2VI/W0DX,
Treasurer:	K2YWE Dan Zeitlin	W3IKN, W4KFT

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RARSfest-Joint PVRC/CDXA Luncheon - Mike N4GU

This year at RARSfest, aka the Raleigh hamfest, PVRC had a booth to promote the club similar to what we did at Frostfest. Afterwards, PVRC members joined together with members from the Carolina DX Association (CDXA) for a lunch at the nearby Backyard Bistro. There were almost 30 attendees distributed about evenly between CDXA and PVRC members (there are several who are members of both organizations). The luncheon was deemed a success and we agreed to make this the first annual luncheon. So, come join us next year for the hamfest and the luncheon afterwards.



Figure 1 PVRC table at RARSfest 2019



Figure 2 Joint PVRC/CDXA luncheon following RARSf

PVRC at the FrostFest – Hank K3YDX



Tom K3AJ and Mike W3IP at the PVRC booth at the FrostFest. Tablecloth provided by Timothy Leary.

NR4M Hosting Future Contesters – Ken KE3X

My 13-year old son Connor visited NR4M over ARRL DX CW weekend, and we camped overnight at the Goat Farm. Thanks to Steve for helping foster the interest in contesting in the next generation



Latest Predictions on Solar Cycle 25 – Your Mileage May Vary

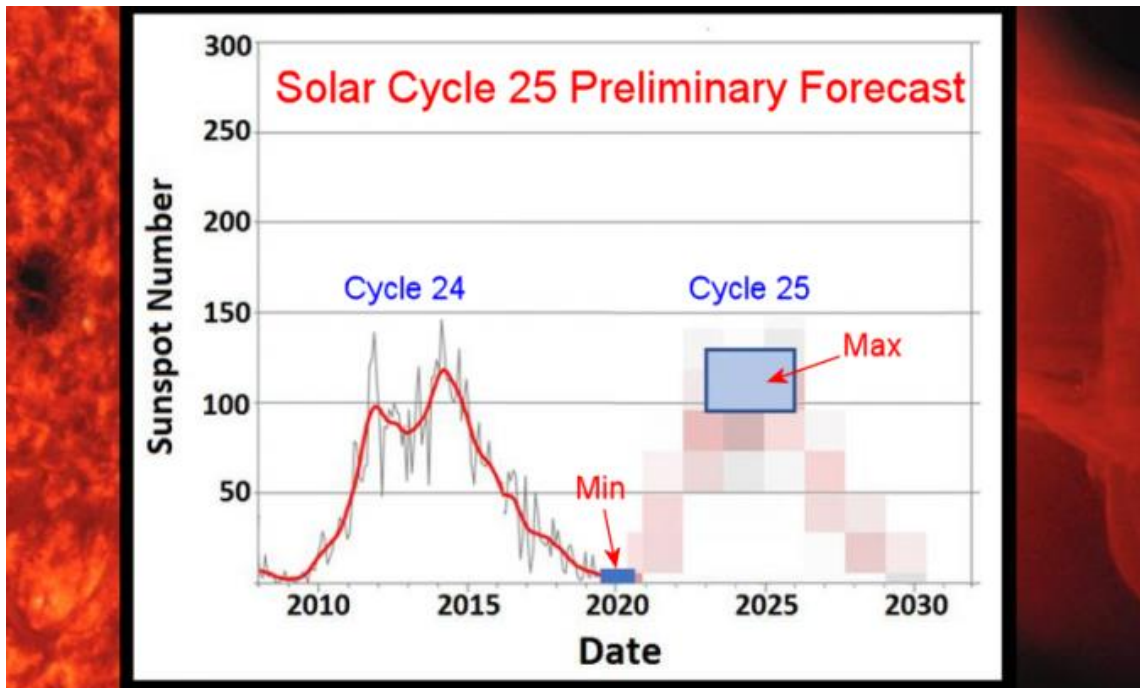
From [SpaceWeatherArchives](#):

Experts Predict a Long, Deep Solar Minimum

APRIL 10, 2019 / DR.TONY PHILLIPS

If you like solar minimum, good news: It could last for years. That was one of the predictions issued last week by an international panel of experts who gathered at NOAA's annual Space Weather Workshop to forecast the next solar cycle. If the panel is correct, [already-low sunspot counts](#) will reach a nadir sometime between July 2019 and Sept 2020, followed by a slow recovery toward a new Solar Maximum in 2023-2026.

"We expect Solar Cycle 25 will be very similar to Cycle 24: another fairly weak maximum, preceded by a long, deep minimum," says panel co-chair Lisa Upton, a solar physicist with Space Systems Research Corp.

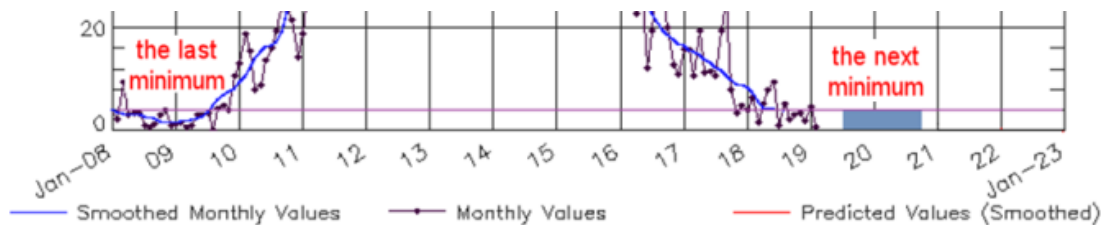


The solar cycle is like a pendulum, swinging back and forth between periods of high and low sunspot number every 11 years or so. Researchers have been tracking the cycle since it was discovered in the 19th century. Not all cycles are alike. Some are intense, with lots of sunspots and explosive solar flares; the Space Age began with a big booming solar maximum. Others are weak, such as the most recent, Solar Cycle 24, which peaked in 2012-2014 with relatively little action.

Researchers are still learning to predict the ebb and flow of solar activity. Forecasting techniques range from physical models of the sun's inner magnetic dynamo to statistical methods akin to those used by stock market analysts.

"We assessed ~61 predictions in the following categories: Climatology, Dynamo, Machine Learning/Neural Networks, Precursor Methods, Spectral/Statistical Methods, Surface Flux Transport, and Other," says Upton. "The majority agreed that Solar Cycle 25 would be very similar to Solar Cycle 24."

"Here," she says, "is a figure showing the last minimum and where we are with the current minimum."

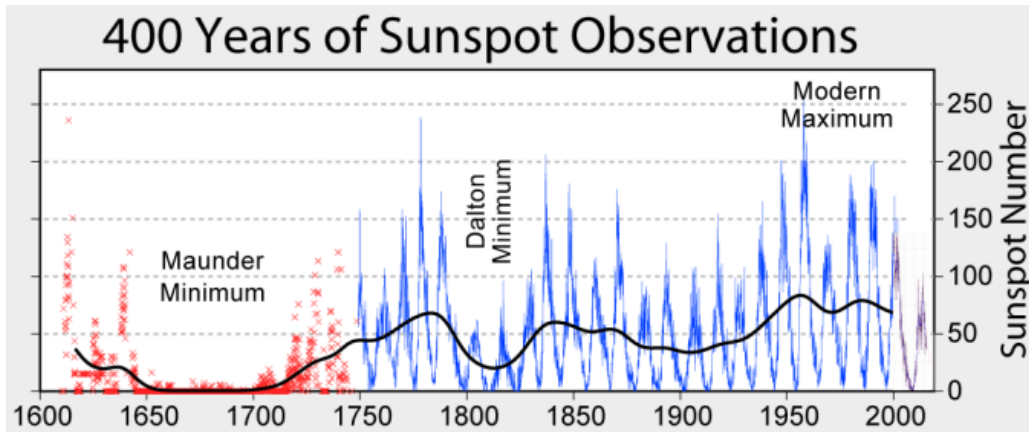


"As you can see – we haven't quite reached the lowest levels of the last cycle – where we experienced several consecutive months with no sunspots. However, the panel expects that we should reach those levels [between now and the end of 2020]."

In recent years, the Internet has buzzed with the idea that a super-deep solar minimum such as the 70-year [Maunder Minimum](#) of the 17th century might cool the Earth, saving us from climate change. That's not what the panel is saying, however.

"There is **no indication** that we are currently approaching a Maunder-type minimum in solar activity," says Upton. Solar minimum will be deep, but not *that* deep.

The panel predicts a "fairly weak" Solar Cycle 25. What does that mean? Saying that a solar cycle is "weak" is a bit like saying hurricane season will be "weak." In other words, there may be fewer storms, but when a storm comes, you'd better batten down the hatches. "Weak" Solar Cycle 24 produced a number of intense X-class solar flares, strong geomagnetic storms, and even a Ground Level Event (GLE) when solar energetic particles reached Earth's surface. An equally "weak" Solar Cycle 25 could do the same 3 or 4 years hence.



Meanwhile, we have solar minimum. This is a widely misunderstood phase of the solar cycle. Many people think it brings a period of dull quiet. In fact, space weather changes in interesting ways. For instance, as the sun's magnetic field weakens, holes open in the sun's atmosphere. Emerging streams of solar wind buffet Earth's magnetic field, sustaining auroras even without solar flares and sunspots. Some observers believe that Solar Minimum auroras have a distinctive palette, [pinkier](#) than during other phases of the solar cycle.

The sun's weakening magnetic field also allows cosmic rays to enter the solar system. Energetic particles from deep space [penetrate Earth's atmosphere](#) with a myriad of possible effects ranging from changes in upper atmospheric electricity to [extra doses of radiation](#) for people on airplanes.

Finally, [the sun dims](#), especially at extreme ultraviolet wavelengths. This, in turn, causes the upper atmosphere to cool and contract. Aerodynamic drag that would normally cause satellites to decay is reduced; space junk accumulates. This effect makes solar minimum [a terrible time](#) to blow up satellites—although [people do it anyway](#).

The Solar Cycle Prediction Panel is comprised of scientists representing NOAA, NASA, the International Space Environment Services, and other U.S. and international scientists. Their April 5th prediction was preliminary, and they plan to issue a refined forecast by the end of 2019. Stay tuned.

Solar Storm Day Reading: Radiocraft.com – Ed W3EKT

Good grief, save this [site](#) for a rainy day!



Membership News – Tim N3QE

PVRC did not add any new members in the latest reporting period.

Chapter leaders please remember to complete the [Meeting Attendance Report](#).
Members can check and update their roster details via the [Roster Lookup](#).

Upcoming Contests and Log Due Dates

Contests This Month

- May 4 – ARI DX
- May 11 – CQM DX
- May 11 – VOLTA RTTY
- May 18 – EA CW
- May 18 – Baltic Contest
- **May 25 – WPX CW**

Logs Due This Month

- May 2 – YU DX
- May 9 – JIDX
- May 14 – Yuri Gagarin
- May 16 - Manchester Mineira

See WA7BNM's [Contest Calendar](#) for more detail and the latest information.

Editor's Last Word – John K3TN

Thanks for great contributions this month from Mike N4GU, Dan K2YWE, Hank K3YDX, and Ken KE3X. For those of you going to Dayton/Xenia, take some pictures and send them in for use in the June PVRC newsletter! For those of you not making the trip to ham radio fantasy-land, put together a short writeup or take some pictures of your latest project and send them in to jpescatore at aol dot com!

I'll be doing a talk at the [Digital Contesting Forum](#) on the future of FT8 in contesting on Friday at 1040 am in Room 5 – stop by if you are around.



From the PVRC Treasurer – Dan K2YWE

PVRC has chosen not to implement an annual dues requirement. We depend on the generosity of all our club members to finance our annual budget. In addition, active PVRC members are expected to participate and submit logs for at least two PVRC Club Competition contests per year.

When contemplating your donation to PVRC, each member should consider the benefit you are receiving from PVRC and its many opportunities for your personal growth in our wonderful hobby, then donate accordingly.

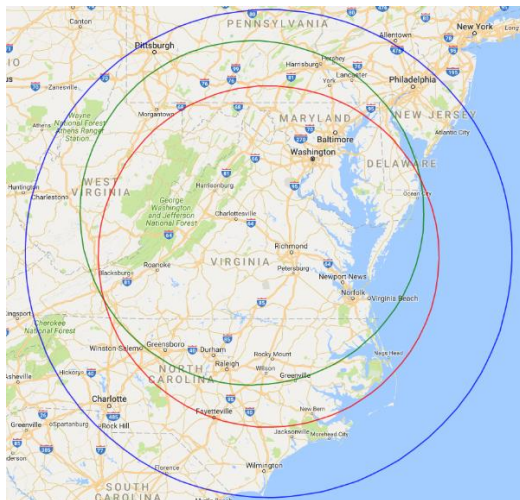
Direct donations to PVRC via Credit Card or PayPal may be made by clicking this "Donate" button and clicking the next Donate button that appears on your screen:



Donations to PVRC are not tax deductible

Eyeball QSO Directions

The latest info on local club meetings and get togethers will always be sent out on the [PVRC reflector](#) and posted on the PVRC [web site](#).



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Red: ARRL HF Circle
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77.858482W

Blue: CQ HF Circle
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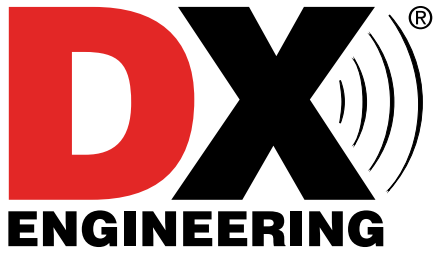


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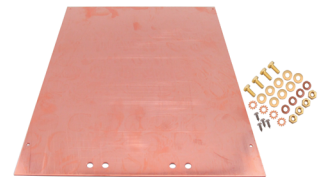
DXE-ISO-PLUS-10 10 Filters.....\$239.99



Braid straps and transceiver not included.

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These kits include a pre-drilled 1/16" thick copper sheet for placing under HF radios and other devices. Connected to a grounding bus, this improves single-conductor grounding by equalizing the RF electric field around equipment and cables—reducing voltage differences that cause RFI.



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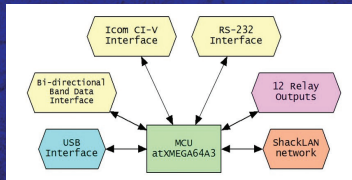
Announcing the new BM-5 BandMaster V

The next generation of the popular BM-3 with direct USB support for FLEX Radios

NEW!



The BM-5 BandMaster V is a full featured unit that contains a universal band decoder and antenna switch controller. It features five communication channels. All channels are active simultaneously and provide data translation for your station accessories. In other words, if you are using an Icom radio on the CI/V interface the BandMaster V will output 4-bit band data as well as RS-232 data in Yaesu or Kenwood format. In reverse, when using a radio on the RS-232 interface the BandMaster V will output 4-bit band data as well as an Icom CI/V data stream. The USB interface may be connected to your PC for radio control. **The USB interface may be connected directly to a Flex SDR with no additional cables or interfaces required.**



RatPack Remote Antenna Switch

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StackMatch

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TwoPak

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Off-Center Fed Dipole Antenna

AS-OCF-2K, AS-OCF-5K Seven bands antenna (80 to 6 m). Heavy duty materials. 4:1 balun included. Ratings: 2 or 5 kW or higher available.



PowerMaster II



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OM2000A+	Automatic 160-6 m 2 kW

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OM4000A - OM4000HF OM2500A - OM2500HF

The A-series are automatic band change amplifiers.

The HF-series are manual band change and tuning amplifiers.

OM4000: 4 kW SSB and CW, 3 kW RTTY, AM and FM

OM2500: 2.5 kW SSB and CW, 2 kW RTTY, AM and FM

OM2000A+ - OM2000+

The **OM2000A+** is the lightest and smallest 2000 W fully automatic HF/6 m power amplifier in the market. Its manual tuning version, the **OM2000+**, is our affordable unmatched best-seller.

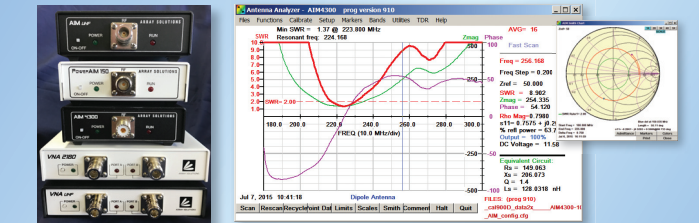
Frequency coverage:

Amateur bands 1.8 - 29.7 MHz including WARC + 50 MHz

Power output: 2000+ W in SSB/CW on HF bands, 1500 W in RTTY
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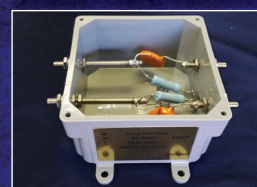
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AS-302, AS-303 Coaxial cable arrestors. DC to 500 MHz. N-type or SO-239 connectors. **AS-300SB** Stacking fixture available. **AS-309H**, ladder line arrestor. All have static bleed function. **AS-8SP, AS-12SP** and **AS-16SP** control cable arrestors. Protect your rotator's and other control cables.



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IC-7851 | HF/50MHz Transceiver

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IC-7100 | All Mode Transceiver

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- Analog FM/D-Star DV Mode • SD Card Slot for Voice & Data Storage • 50W Output on VHF/UHF Bands • Integrated GPS Receiver • AM Airband Dualwatch



IC-7700 | HF/50MHz Transceiver

- The Contester's Rig • HF + 6m operation • +40dBm ultra high intercept point • IF DSP, user defined filters • 200W output power full duty cycle • Digital voice recorder



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ID-4100A | VHF/UHF Dual Band Digital Xcvr

- Compact, Detachable Controller for Flexible Installation • DV/FM Near Repeater Search Function • Apps for iOS™ and Android™ devices • Wireless Operation with VS-3 & UT-137 Bluetooth® Headset & Module • MicroSD Card Slot



IC-7610 | HF/50 MHz All Mode Transceiver

- Large 7-inch color display with high resolution real-time spectrum scope and waterfall • Independent direct sampling receivers capable of receiving two bands/two modes simultaneously



IC-2300H | VHF FM Transceiver

- 65W RF Output Power • 4.5W Audio Output • MIL-STD 810 G Specifications • 207 alphanumeric Memory Channels • Built-in CTCSS/DTCS Encode/Decode • DMS



IC-R30 | Digital/Analog Wideband Xcvr

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IC-7300 | HF/50MHz Transceiver

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IC-2730A | VHF/UHF Dual Band Transceiver

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FTDX1200 | 100W HF + 6M Transceiver

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FT-891 | HF+50 MHz All Mode Mobile Transceiver

- Rugged Construction in an Ultra Compact Body • Stable 100 Watt Output with Efficient Dual Internal Fans • 32-Bit IF DSP Provides Effective and Optimized QRM Rejection • Large Dot Matrix LCD Display with Quick Spectrum Scope • USB Port Allows Connection to a PC with a Single Cable • CAT Control, PTT/RTTY Control



FT-857D | Ultra Compact HF/VHF/UHF

- 100w HF/6M, 50W 2M, 20W UHF • DSP included • 32 color display • 200 mems • Detachable front panel (YSK-857 required)



FT-2980R | Heavy-Duty 80W 2M FM Transceiver

- Massive heatsink guarantees 80 watts of solid RF power • Loud 3 watts of audio output for noisy environments • Large 6 digit backlit LCD display for excellent visibility • 200 memory channels for serious users



FTM-100DR | C4FM FDMA/FM 144/430 MHz Xcvr

- Power Packed System Fusion Transceiver • High Audio Output Power • Rugged Powerful Transmitter • Integrated 66ch High Sensitivity GPS • 1200/9600 APRS Data Communications



FTM-400XD | 2M/440 Mobile

- Color display-green, blue, orange, purple, gray • GPS/APRS • Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band



FT-70DR C4FM/FM 144/430MHz Xcvr

- System Fusion Compatible • Large Front Speaker delivers 700 mW of Loud Audio Output • Automatic Mode Select detects C4FM or Fm Analog and Switches Accordingly • Huge 1,105 Channel Memory Capacity • External DC Jack for DC Supply and Battery Charging



FT-2DR C4FM/FM 144/430 MHz Xcvr

- Analog/C4FM Dual Monitor (V+V/U+U/V+U) • System Fusion compatible • 1200/9600 APRS Data Communications • Integrated 66ch High Sensitivity GPS • Wide Band Receiver • Snapshot Picture Taking Capability With Optional MH-85A11U



FT-65R | 144/430 MHz Transceiver

- Compact Commercial Grade Rugged Design • Large Front Speaker Delivers 1W of Powerful Clear Audio • 5 Watts of Reliable RF Power Within a compact Body • 3.5-Hour Rapid Charger Included • Large White LED Flash-light, Alarm and Quick Home Channel Access



FT-60R | 2M/440 5W HT

- Wide receiver coverage • AM air band receive • 1000 memory channels w/alpha labels • Huge LCD display • Rugged die-cast, water resistant case • NOAA severe weather alert with alert scan



- **RETAIL LOCATIONS** – Store hours 10:00AM - 5:30PM - Closed Sunday
- **PHONE** – Toll-free phone hours 9:30AM - 5:30PM
- **ONLINE** – WWW.HAMRADIO.COM
- **FAX** – All store locations
- **MAIL** – All store locations

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