

W6OTX

W6ARA

PAARA NEWSLETTER
VOLUME 74, NUMBER 5, May 2023

K6OTA

K6YQT

PAARAGraphs



The Official Newsletter of the
Palo Alto Amateur Radio Association, Inc.

The Friendliest Club Around

Celebrating 86 years as an active amateur radio club—Since 1937

<http://www.paara.org/>

Ham Radio and an Adventure Game

At Quartzfest 2023, inventors Jeri Ellsworth (AI6TK) and Amy Herndon (AI6ZU) showcased the Quartzfeng

(Adventure Game — Continued on page 5)

This meeting will be a Hybrid Meeting Zoom and In Person

Time: May 5, 2023 07:00 PM Pacific Time

Please check <https://www.paara.org> for
Zoom Details

President's Corner

May 2023

What a busy month April turned into. We had a wonderful Home Brew meeting on April 7th! Thanks go to everyone that brought something to share. Participants included Henry, Connie, Larry, Christopher, Clark, Doug, Mikko, and myself. Congratulations go to Mikko, Henry, and Christopher for winning the awards for the best 3 projects. See Rob's story in this issue for a bit more detail. It was also good to see some old and new faces at the meeting.

As announced at the meeting, Mikko, needs to pass the baton for bringing coffee and cookies



(Pres — Continued on page 2)

Upcoming Events

May 5***	PAARA General Meeting, 7:00 PM *** Zoom and In Person Meeting
June 2	
July 7	

- May 17
- June 21
- July 19

PAARA Establishes Equipment Loan Program

Doug Teter, KG6LWE
Ric Hulett, N6AJS

Do you have a new or recent license upgrade? Are you interested in DX, SSB, international contesting? Are you concerned about the "thousand-dollar upgrade"? If so, PAARA has a program designed specifically for you!

Are you a 'seasoned ham', with experience to share? You should sign up as an 'Elmer' in support of this program!

PAARA, 'the friendliest club around' wants to encourage newer hams to get on the HF bands, and explore the many aspects of amateur radio. To that end, we have established an HF rig 'loaner program'.

This program was proposed by Doug, KG6LWE. He and Ric, N6AJS have put the details into practice.

Any PAARA member can arrange to borrow a club-owned transceiver system for 6 months, at no cost. A written agreement and a \$150 deposit are required.

A new General or Amateur Extra may not be familiar with the equipment or the required set-

(Loan Program — Continued on page 3)

(Pres — Continued from page 1)

to every meeting. He's done a stellar job since he took over the position. No one came forward during the meeting to volunteer for this position. Until someone does, we'll not have any refreshments at meetings. As mentioned at the meeting, one person doesn't have to cover every meeting. A number of people can coordinate amongst themselves to cover all the meetings. Reach out to Mikko if you have any questions.

PAARA in the Park was next up. The weather couldn't have been nicer! About 35 people came out to enjoy a day of conversation, asking questions, and enjoying ham activities. There were a handful of new hams who came to get a better idea of what one can do with that new license and to learn more about the hobby. A big shout-out goes to Darryl for the antenna building project, Rob for cooking up some fine

questions answered, and socializing. I hope everyone enjoyed the day! Stay tuned as we're



Fig. 2 — Another satisfied customer at the EFM likely to have another event later in the year.

PAARA in the Park was quickly followed by the 1st Flea Market (EFM) in a year. It was held at a



Fig. 1 — Conversation and antenna building

food, and Doug and Darryl for bringing their radios and Hex Beam antennas out. Hams who came and built an antenna were; Vicky, N7HBJ, Lars, AJ6WF, Barry, AI6SG, David KN6GHE, and Sam, N5EFI. Congrats go to them for building their antennas and getting them tuned. I know they all learned a lot about the process and how to tune an antenna. Another shout-out goes to everyone that came out for some fun talking about radios, playing with them, getting

new venue with more space than last year's location and is now a Sunday event. A big shout-out goes to all the PAARA members who volunteered their time to support PAARA's sponsorship of the event. Make sure to thank everyone that helped. Volunteers included, in no particular order; Doug, KG6LWE, Darryl, KI6LDM, Keith, K1OKS, Ric, N6AJS, Rich,

(Pres — Continued on page 3)

(Pres — Continued from page 2)

W6APZ, Clark, KK6ISP, Frank, AF0XX, Karen, KK6NIA, Jeff, KA6UIX, Bob, KD6KYT, Rob, KC6TYD, and Harry, K4YR. If you helped during the EFM, apologies if I didn't capture your name but please feel good about assisting us with this important event. Without everyone's assistance, this event wouldn't be possible. We should also doubly recognize those members who supported both events as going above and beyond in helping the club be the friendliest club around! We should also thank ASVARO for procuring a new and very good site with lots of space for both sellers and buyers! If you missed it this month, the next EFM will be on Sunday, May 14th.

Did you know that 4/18/23 was International Radio Amateur Radio Day? I hope you knew this and managed to make a contact or two or do some other radio-related activity. As for me, I spent it drafting this column, preparing for the Board meeting as well as my trip to the IDXC convention.

Doug, KG6LWE, received a reply from the City of Menlo Park regarding obtaining the needed approval to have Field Day (FD) at Bidwell Bayfront Park for the first time in many years. The city determined that we didn't need to pay a fee in order to have the event! Thus, we will have FD this year at Bidwell Bayfront Park! The board decided to operate 2A this year to get the ball rolling before trying to bite off more than we can manage after not having it for so long. We need to have one or two antenna parties as none of the antennas, except for one, have been used in 3 years. Keep your eyes out for the dates of the antenna parties and consider helping. It's a great way to learn about the care and feeding of antennas, their assembly, and getting them up in the air. We'll also need lots of help the weekend of the event to set up, operate the radios during the event, and take down all the antennas and equipment. Ric, N6AJS, and Randy, K8TR will be the station captains this year. Please reach out to Doug to become part of the FD team. Please make sure to block out the weekend of June 23 ~ 25 for the event. More information will be forthcoming as we get closer to FD and our plans solidify.

I hope you have blocked out August 19th for the PAARA tour of Hiller Air Museum. If you haven't

been, it's a very interesting aviation museum that's right in our neck of the woods. You can learn about the museum at: <https://www.hiller.org/>. More information will be forthcoming as we get closer to the date.

I look forward to seeing a room full of smiling faces at the May 5th meeting. It will be an IRL and Zoom meeting.

73, Jim K6SV

Get on the air to keep the airwaves alive!

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(Loan Program — Continued from page 1)

up. Each loan comes with an 'Elmer' as part of the package: A seasoned ham will assist with antenna selection, equipment setup and operation, and will give advice and support to put the station on the air, and making contacts.

II. Equipment

The Loaner station is an Icom IC-7300, which was a gift from the estate of a Silent Key club



Fig. 1 — Icom IC-7300 Loaner Station

member. Also included are the Icom desk microphone, and a power supply.

IV What you need to do

1. Get in touch with Doug or Ric (e-mail) to let us know you're interested. We will arrange contact with one of our club 'Elmers'. They will arrange a site visit to check out your QTH, and make suggestions for such things as antenna type and placement.
2. Build (or buy) and install an appropriate HF antenna.
3. Review the manual to familiarize yourself with the rig and its operation. Learn the bands and frequency limits that you are permitted, and that will work with your antenna.

(Loan Program — Continued on page 4)

(Loan Program — Continued from page 3)

4. Sign the agreement, pay the deposit and pick up the equipment.
5. Meet with your Elmer at your QTH to finalize the installation and get on the air!
6. Your Elmer will be available for questions and advice during the loan period.

Doug Teter, KG6LWE
Email dteter@wcwi.com
650-743-7892

Ric Hulett, N6AJS
Email N6AJS@arrl.net
408-332-4593a

We at PAARA are looking forward to putting this equipment in the hands of an eager new operator: This could be you! Contact us with an equipment request or any questions.

Traveling PAARAsale Flea Market

Rob Fenn, KC6TYD

For the second club meeting in a row, I brought a bunch of recently donated SK items. Most of which consisted of electronic components and misc. hardware. Jim, K6SV had picked up items from Vic Black's (AB6SO) estate, which took up another 2 tables. For the first half hour of meeting members and guests were allowed to rummage through the items and make purchases.

For me, the most interesting part was when an old relic was found and the subsequent stories about the item started.

I'll continue to bring what's left for future meeting. It appears items sell a lot faster when folks can see the items.



Homebrew Night

Rob Fenn, KC6TYD

A big thanks to the following participants that brought their projects to Homebrew Night during the April club meeting:

- Connie, W6EFI — Tips on HF wire connections.
- Clark, KK6ISP — Battery conversion for IC-215.
- Henry, W6REK — A new Network Boot Rom for a new Ethernet Card for an old 1980's Radio Shack Color Computer.
- Larry, K0YPC — 40-meter Wheatstone Bridge Regenerative (WBG) Receiver. A Switched Capacitor Audio Filter. A Balanced Line Tuner.
- Doug, KG6LWE — Unique KX3/Pandapter setup.
- Christopher, AI6KG — DDF Antenna Array Switching System.
- Jim, K6SV — Business band go box for King of the Hammers off road race.
- Mikko, AB6RF — Custom Bluetooth interface for IC-705 and 2.5GHz

All entries were very interesting and informative. With help from the audience three winners won Home Depot gift cards for the most creative projects.

Those winners were Mikko, \$60; Henry, \$40; and Christopher, \$20.



Left to Right: Mikko, Henry and Christopher

(Pres — Continued from page 3)



Fig. 3 — Discussions at PAARA in the Park

(Adventure Game — Continued from page 1)

2023 project, an electronic badge, designed to gamify Ham radio, that combined ham radio, GPS, APRS, an OLED display, and a Raspberry Pi Pico processor. This device allowed users to participate in a text-based fantasy adventure with monsters and dragons while exploring the campsite.

The badge connected to a base station and computer, transmitting GPS data via APRS to position users in the campground. As players moved around the campsite, their in-game locations updated. The APRS system facilitated communication between the badge and server, enabling multiple users to collaborate in real-time to defeat virtual foes.

An additional feature of the gameplay was the use of text-to-speech technolo-

gy, which narrated the gameplay to users as they received updates from the server. This added a deeper level of immersion for the users.

The project also taught practical ham radio skills through immersive gameplay. As players used the badge's radio transceiver, they gained hands-on experience with radio operation and network communication.

The Quartzfeng 2023 badge made Quartzfest enjoyable by blending engaging gameplay with valuable ham radio education, promoting teamwork, friendship, and skill development in a shared adventure.

Jeri and Amy will share details about how they created the badge and the lessons learned.

You won't want to miss this!

April 2023 Board Meeting Minutes

Present were President Jim Thielemann K6SV, Vice President Rob Fenn KC6TYD, Secretary Ric Hulett N6AJS, Directors Doug Teter KG6LWE, Joel Wilhite KD6W, and Walt Gyger K6WGY. Also present was Clark Martin KK6ISP. A quorum was present.

President's Report: PAARA in the Park was a great success. We had 35 visitors, a few new hams, and gained 3 new members. Darryl's KI6LDM antenna build project was very well received. We saw some vintage club members. We look forward to doing another one. We can improve our publicity on these meets.

Thanks to everyone who participated in the April Electronic Flea Market: We had a successful sponsorship, the first in 3 years for PAARA. We received a congratulatory e-mail from Mikel KN6QI (ASVARO) thanking PAARA for their support.

Secretary's Report: The April postcards brought a few more renewals, and some new hams have joined:

Welcome to Sameer N5EIF, David KN6GHE, Lars AJ6WF, and Barry AJ6SG. Our total membership is now 141.

Treasurer's Report: Field trip to the Hiller Air Museum: We have reserved August 19 with the museum. We will need to advise them of how many visitors to expect. Rob will put together a flyer, and start promoting on the nets.

VP / Program Chair Report: Congratulations to the club on their support of PAARA in the Park, and the EFM. Next month's guest speakers are Jeri Ellsworth AI6TK and Amy Hearn AI6ZU: They will show us a new item they have created that combines ham radio and a fun adventure game.

We have speakers lined up for April, May, and June.

The April meeting Homebrew Night had some interesting late additions. We had 30 members at the in-person meeting.

Radio Sales: Nothing has sold since the meeting in April. We have received \$1200 from sales of club radios and donated SK equipment. Our highlighted item for sale is the FT-991 from the estate of Vic Black AB6SO (SK). See the PAARA website for details.

Old Business

A key feature of PAARA is our newsletter, PAARAGraphs: And a key feature of PAARAGraphs is

member-written articles. You can be a published author: Write up a note or article describing your ham experiences for PAARAGraphs and submit to Jim K6SV: See you name in print! Buy five copies for your mother!

Our accountant has the books up to date. We are getting close to having all the requested reports for the California DOJ regarding the raffle filing.

ARRL Field Day: The Field day event is 10 weeks away. We will begin preparation: planning antennas, stations, et cetera. We have received confirmation from Menlo Park: We will not have to apply for a special event permit for Bedwell Park. Fees for park use are also waived.

Field day will be at Bedwell Bayfront Park this year. We will operate class 2A (plus a GOTA station).

propose 40m beam, wire for 80m. Doug KG6LWE will set up antenna work day(s).

We need a club member to take on food for Field Day.

Status of New Ham e-mails: Rob KC6TYD is working on some graphics and text. This will be a postcard size message, conveying: 'congrats... what's next?'

New Business

PAARA needs some volunteers to step up: Open posts include:

1. Refreshments (Coffee / snacks) for the club meetings
2. QSL manager for the club callsigns
3. Monday Night Net manager for one week during the month.

Contact any board member to sign up.

Electronic Flea Market report: The PAARA EFM was a success! Everybody liked the new venue. We netted about \$2500 to the club after the event fee, food and supplies.

The Internet Archive has a ham-radio section: The Digital Library of Amateur Radio and Communications. (<https://archive.org/details/dlarc>). They have requested to archive and publish the PAARAGraphs newsletter on their site. The board voted to approve this request.

Pacificon is 6 months away, from October 20 to 22. Mikko AB6RF will sponsor W1AW/6 operation, if the call sign is available.

The meeting was adjourned at 8:20 pm

Respectfully submitted,

Ric Hulett N6AJS
PAARA Secretary

Palo Alto Amateur Radio Association, Inc.

PO Box 911 Menlo Park, CA 94026

Officers

President	Jim Thielemann, k6sv	408-839-6815
	thielem@pacbell.net	
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Director ('23)	Doug Teter, KG6LWE	650-743-7892
	dteter@wcwi.com	
Director ('23)	Darryl Presley, KI6LDM	650 255-2454
	ki6ldm@arrl.net	

Appointed Positions

Membership	Ric Hulett, N6AJS	408-332-4593
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Station Trustee K6YQT	Doug Teter, KG6LWE	650-743-7892
Station Trustee K6OTA Ron Chester, W6AZ		
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Badge Coordinator.....	Doug Teter, KG6LWE	650-743-7892
	dteter@wcwi.com	
Historian Position	<i>Position Vacant</i>	
Raffle Coordinators	Rob Fenn, KC6TYD,	rtyd@aol.com
	Shrikumar, KA6Q	
	shri.paara@enablery.org	
Field Day Coordinator.	Doug Teter, KG6LWE	650-743-7892
ASVARO Rep	Clark Martin, KK6ISP	
	kk6isp@sonic.net	
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	webaron@gmail.com	
Technical Coordinator.	Christopher, AI6KG	408-348-0304
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QSL Manager.....	Marty Wayne, W6NEV	408-234-8023
Speaker Coordinator...Rob Fenn, kc6tyd		650-888-9060

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Member Profiles	<i>Position Vacant</i>
Technical Tips.....	Ric Hulett, N6AJS
Photographer	<i>Position Vacant</i>

VE Exams

De Anza Park, Sunnyvale, 2nd Saturday 10:30 am each month except November and December. See website for details and exceptions: <http://amateur-radio.org>

Electronics Flea Market (ESM)

Sponsorship: Association of Silicon Valley Amateur Radio Organizations (ASVARO)

The Electronics Flea Market is seeking a new location. Until that is resolved, the EFM is on hold. Website: <http://www.electronicsfleamarket.com/>

PAARA — Palo Alto Amateur Radio Association

Meets 1st Friday 7:00pm each month at Room H-6, Cubberley Community Center; Net 145.230 - PL 100Hz Mondays at 8:30. See website at <http://www.paara.org>. For more information. contact: Joel Wilhite KD6W, KD6W@ARRL.NET, 650-325-8239

FARS — Foothills Amateur Radio Society

Meets 4th Friday each month at 7:00pm at Covington School, Los Altos.

Website: <http://www.fars.k6ya.org>

NCDXC — Northern California DX Club

Meets 3rd Thursday 7:00pm each month,
Repeater for member info 147.360. Contact president@ncdx.org, Website: <http://ncdx.org>. YouTube content: "The Northern California DX Club Official Channel". Cohost of the International DX Convention.

The 50MHz & Up Group of Northern California

This organization specializes in vhf + wak signal and microwave activities. Meetings are held on the first Tuesday of each month. Time is usually 5pm for in person meetings, and 7pm for Zoom only meetings. In person meetings are held Sports Basement, 1177 Kern Ave, Sunnyvale. Always check the website, <http://50MhzandUp.org>, for correct information. Zoom information is also there.

San Mateo Radio Club W6UQ.ORG

Meets, 3rd Friday, January through November.

Tuesdays & Thursdays, [Directed] Net, 7pm, N6ZX 145.370Hz, -600kHz, PL107.2Hz

Contact: SanMateoRadioClub@gmail.com, Website: <http://W6UQ.org/calendar>

SPECS

Southern Peninsula Emergency Communication System users Group

Meets each Monday 7:30pm and 8:00pm.

See: <https://specsnets.org/monday-night-net> for more info.

Contact: <https://www.specsnets.org/contact> or board@specsnets.org

SCARES

South County Amateur Radio Emergency Service

Meets 3rd Thursday 7:30pm each month, Belmont EOC, Belmont City Hall, One Twin Pines Lane, Belmont CA 94002. Net is on 146.445 [PL 114.8] & 444.50 (PL-100) 7:30 Monday evenings. Contact: President Gary D. Aden, K6GDA 650-743-1265 (D), 650- 595-5590 (N)

Web: <http://k6mpn.org> E-mail: pres@k6mpn.org

SCCARA

Santa Clara County Amateur Radio Association

Operates W6UU & W6UU/R, repeater 146.985-pl

Nets: 2m, 7:30pm Mon; 70cm, 10M (28.385) 8PM Thur.

Meets 2nd Mon each month @ 7:30 PM.

ARRL/VEC license testing contact 408-507-4698

SVECS — Silicon Valley Emergency Communications

Operates AA6BT repeater (146.115 MHz+)

Website: <http://www.svecs.net> or contact: Lou Stierer WA6QYS 408 241 7999

WVARA — West Valley Amateur Radio Association

W6PIY six-meter repeater on 52.58MHz. Normally, six-meters is linked with 147 and 223, while 441 and 1286 repeaters are linked.

VHF: 52.58 (-500) 151.4 ctcss

147.39 (+600) 151.4 ctcss

441.35 (+5.0)

88.5 ctcss

223.96 (+1.6) 156.7 ctcss

1286.20 (-12m)

100.0 ctcss

Meetings are 2nd Wednesday of every month except July, August and December.

Website: <http://wvara.org>, Contact: info@wvara.org

(Please send changes to PAARAgaphs editor)



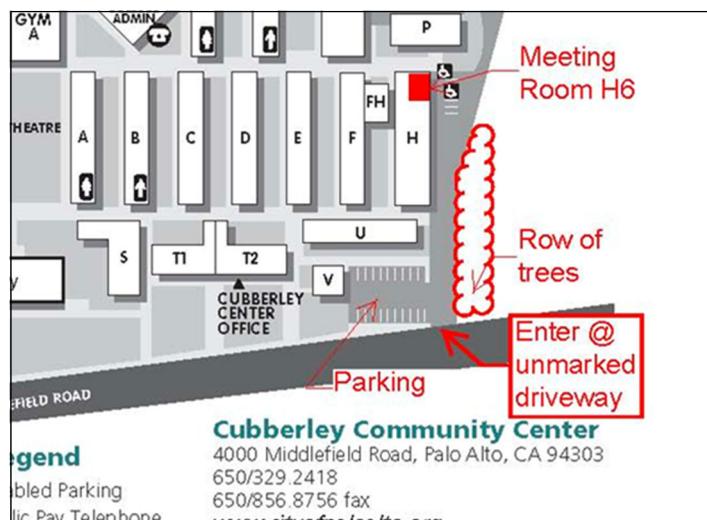
PAARA Weekly Radio Net

Info and Swap Session
 every Monday evening at 8:30pm
 on the N6NFI 145.230 MHz repeater

Week Control Operator

1 st	Doug - KG6LWE
2 nd	Doug - KG6LWE
3 rd	Ric - N6AJS
4 th	Rob - KC6TYD
5 th	Rob - KC6TYD

If you're interested in trying out at Net Control, Contact Doug, KG6LWE. It's good practice, and lots o' fun! Give it a try.



Meeting Location — Middlefield Road between San Antonio and Charleston in Palo Alto. 4000 Middlefield Road

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Opening hours
 Monday-Friday: 8 AM – 7 PM; Saturday-Sunday: 8 AM – 6 PM



Palo Alto Amateur Radio Association
P.O. Box 911, Menlo Park
California 94026-0911

Club meetings are on the first Friday of each month, 7:00pm at the Room H-6, Cubberley Community Center.

Radio NET & Swap Session every Monday evening, at 8:30pm, on the 145.230 – 600 MHz repeater, PL 100Hz.

Membership in PAARA is \$25.00 per calendar year, which includes one subscription to PAARAGraphs \$6 for each additional family member (no newsletter).

Make payment to the
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pages/members-current.html](https://www.paara.org/pages/members-current.html).

Scroll to the bottom of the page
and fill out the info. All badges will
be mailed.

The cost for a badge is \$25.00.

PAARAGraphs Ad Rates

PAARAGraphs accepts paid advertisements from non-members. (short personal ads remain free for members in good standing). **All ad rates listed are per issue.**

1. Not-for-profit ads by association members for ham-related items and wants. No cost for business card-size ads (additional space at \$2.50 per business card size per issue).

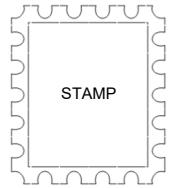
2. For Profit organizations and/or individuals: \$5-business card size, \$14.00-quarter page, \$25-half page, \$50 full page or back cover per issue.

These fees may be reduced or waived in exchange for a valuable consideration that is given to the Association or its general membership. Such consideration must be in addition to any existing arrangements with the association. The PAARAGraphs editors reserve the right to reject any ad deemed to be not in the best interest of the Association.

All fees payable in advance by the year with "scanner-ready" copy or text-only ads. **Give payment and copy to Walt Gyger, K6WGY.**

PAARGraphs — May 2023

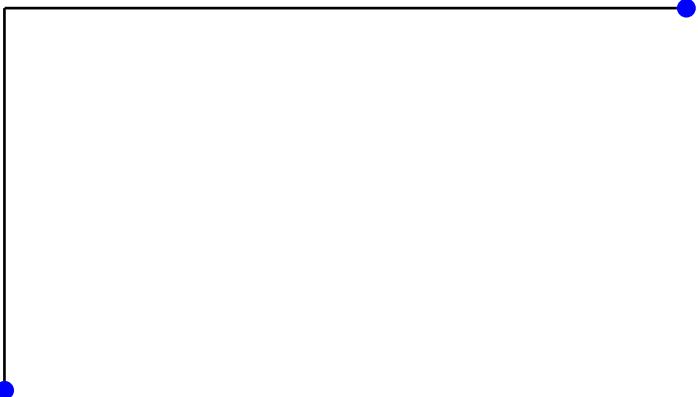
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- Hybrid SDR Configuration • Unparalleled 70 dB Max. Attenuation VC-Tune • New Generation Spectrum Display 3DSSC • M4 (Active Band) Indication & M4D (Multi-Position VFO Outer Ring) • PR Remote Control Software to Extend the Operating Range • Includes External Power With Matching Front Speaker

FT-991 HF-50 MHz All Mode Transceiver

- Narrow Band and Direct Sampling SDR • Down Conversion, 90Hz IF Roofing Filters • Precise Excellent Shape Factor • 5" Full-Color LCD Touch Panel w/3D Spectrum Stream • High-Speed Auto-Antenna Tuner • Microphone Amplifier w/5-Stage Preamp/EQ • External Power w/Optional LAN Unit (SCU-LAN10)

FT-300DR | 24MHz/144MHz Dual Band Mobile Transceiver

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

FT-400XD | 2MHz/40MHz X-Vari

- System Fusion Compatible • Large Front Speaker Delivers 700 mW of Loud Audio Output • Color Display • 2.4-inch High-Res Full Color TFT-LCD Analog and Synthesizers Accordingly • Huge 1,105 Channel Memory Capacity • External DC Jack or MicroSD Slot • 500 memory per band

FTDX101D | HF/6M/2M All Mode Transceiver

- Narrow Band SDR & Direct Sampling SDR • Crystal Roofing Filter • Phenomenal Multi-Signal Receiving Characteristics • Unparalleled 70dB Maximum Attenuation VC-Tune • 15 Separate (HAM 10 + GEN 5) Powerful Band Pass Filters • New Generation Scope Displays 3-Dimensional Spectrum Stream

FT-991A | HF/6M/2M All Mode Transceiver

- Real-time Spectrum Scope with Automatic Scope Control • Multi-color waterfall display • State-of-the-art 32-bit Digital Signal Processing System • 34kHz Roofing Filter for enhanced performance • 3.5 inch Full Color TFT USB Capable • Internal Automatic Antenna Tuner • High Accuracy TCXO

FT-300RD | 24MHz/144MHz Dual Band Portable

- Node with WiFi/BT • WRE55 Portable Digital Notebook

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

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

FT-50R | 144/430 MHz Transceiver

- Compact Commercial Grade Rugged Design • Large Audio • 5 Watts of Reliable RF Power • Winch Mount in a compact Body • 3.5-hour Rapid Charge included • Large White Bright Flashlight, Alarm and Quiet Home Channel Access

FT-600R | 50W VHF/UHF Mobile Transceiver

- All New User Operating Interface-EZ-II (Easy to Operate II) • Robust Dellers 3W of Clear Crystal Keyer • Detachable Front Panel Can Be Mounted in Multiple Positions • Supports Optional Bluetooth® Wireless Operation Using the BT10 or a Commercially Available Bluetooth® Headset

FT-818ND | HF/6M/2M/40 All Mode Portable

- Narrow Band SDR & Direct Sampling SDR • Crystal Roofing Filter • Phenomenal Multi-Signal Receiving Characteristics • Unparalleled 70dB Maximum Attenuation VC-Tune • 15 Separate (HAM 10 + GEN 5) Powerful Band Pass Filters • New Generation Scope Displays 3-Dimensional Spectrum Stream

FT-818ND | HF/6M/2M/40 All Mode Portable X-Vari

- Ultra-Compact/Portable • Multi-Color Easy to See LCD • 208 Memory Channels/10 Memory Groups • Built-in Electronic Keyer • Internal Battery Operation Capability • Two Antenna Connectors • Built-in High Stability Oscillator ±0.5 ppm

FT-600R | 50W VHF/UHF Mobile Transceiver

- All New User Operating Interface-EZ-II (Easy to Operate II) • Robust Dellers 3W of Clear Crystal Keyer • Detachable Front Panel Can Be Mounted in Multiple Positions • Supports Optional Bluetooth® Wireless Operation Using the BT10 or a Commercially Available Bluetooth® Headset

FT-600R | 50W VHF/UHF Mobile Transceiver

- All New User Operating Interface-EZ-II (Easy to Operate II) • Robust Dellers 3W of Clear Crystal Keyer • Detachable Front Panel Can Be Mounted in Multiple Positions • Supports Optional Bluetooth® Wireless Operation Using the BT10 or a Commercially Available Bluetooth® Headset

FT-600R | 50W VHF/UHF Mobile Transceiver

- All New User Operating Interface-EZ-II (Easy to Operate II) • Robust Dellers 3W of Clear Crystal Keyer • Detachable Front Panel Can Be Mounted in Multiple Positions • Supports Optional Bluetooth® Wireless Operation Using the BT10 or a Commercially Available Bluetooth® Headset

- RETAIL LOCATIONS - Store hours 10:00AM - 5:30PM - Closed Sunday
- PHONE - Toll-free phone hours 8:30AM - 5:30PM
- ONLINE - WWW.HAMRADIO.COM
- MAIL - All store locations

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