

## Introducing the Epic PWRgate

Pg 2 ..... Introducing FT8 New  
Digital Mode

by Sholto Fisher K7TMG

Pg 3..... Five Reasons Why I Love  
Ham Radio So Much!

by Simon Davison MOYKS  
Yorkshire, UK

Pg 5..... Product Spotlight:  
Epic PWRgate

Pg 6..... Amateur Radio in the  
News: Hurricane Harvey  
Edition by Dan KB6NU

Pg 6..... Upcoming Events



See Page 5 for details!

## Introducing FT8 New Digital Mode by Sholto Fisher K7TMG



Introducing FT8 - A new digital mode from Joe Taylor, K1JT and Steven Franke, K9AN. From the people who gave us JT65, WSPR, MSK144 & JT9 comes a brand new mode called FT8. Similar to JT65 in operation but 4 times faster, FT8 is taking the Amateur Radio digital mode world by storm. In fact, I don't think I've seen such uptake of a new mode since the early days of PSK31.

The mode is frequency shift keyed with 8 tones spaced at 6.25Hz for an overall bandwidth of 50Hz. According to the authors, FT8 is sensitive down to -20dB.

Although FT8 is still in beta there is a public release of WSJT-X v1.8.0 which means you can get in on the fun right now by visiting:  
<http://physics.princeton.edu/pulsar/k1jt/wsjt.html>  
Versions for Windows, Linux and Mac OS are available.

Suggested frequencies for FT8 are: 1.84 MHz, 3.573 MHz, 7.074 MHz, 10.136 MHz, 14.074 MHz, 18.1 MHz, 21.074 MHz, 24.915 MHz, 28.074 MHz, 50.313 MHz.

Just like JT65 and other 'JT' modes, precise computer clock synchronization is required. Time keeping software and an internet connection are the usual methods to ensure this need is met. A commonly used program is NetTime which works on all version of Windows and is available from:  
<http://timesynctool.com>

For those operating 'off the grid' or portable, you may be interested to learn West Mountain Radio has a new RIGblaster GPS accessory. This inexpensive USB GPS can be connected to your computer and a new version of the WMR Diagnostics Software will keep your computer clock precisely synchronized.

The first thing you will notice about operating FT8 is that it is fast! There's almost no time to click on the QSO buttons to send your reply in time. Thankfully, the program has an auto-sequence feature which can be used to complete a standard QSO without having to manually select each message. Like JT65 the QSO is a rubber stamp contact which exchanges call signs, locators and signal reports. It's not a ragchewer's mode and although the ability to send a custom message is there it's advisable to stick to the QSO format.

In time I see this mode gaining popularity for DXpeditions and contests. It may not be quite as fast as some of the experienced RTTY or CW stations can go but the chances of needing a repeat are much lower which I think will compare favorably with overall QSO rates.

As always, our RIGblasters are fully compatible with this new mode and make an ideal companion for your radio to explore this 21st century technology!

73

## What's New

### USB GPS Module

Sku #58141-1681



USB GPS dongle with magnetic base and 6' cord. Use with the West Mountain Radio diagnostic software for accurate timekeeping without the need of an internet connection. The software also calculates your Maidenhead Grid locator automatically. Ideal companion for your RIGblaster when working JT-65 and FT8 modes.

# Five Reasons Why I Love Ham Radio So Much!

by Simon Davison M0YKS Yorkshire, UK



I decided to put a few sentences together to help describe some of the reasons behind why I love ham radio so much. Over the years I have grown, learned and developed knowledge relating to radio which has inspired and enthused myself as well as others.

I first began as a child playing around with two way wired Walkie-talkies and of course CB radio and basic electronics kits. When I began working I got involved with broadcast radio and helped to run a local station as both DJ and technical support. I have always been fascinated on just how far you can radiate and receive a simple signal by using either a piece of wire or a length of tubing.

Back in the early days before I obtained a license I enjoyed listening to foreign voices coming through as I spent hours playing around with homemade vertical antennas as well as large dipoles trying to improve my reception. I remember the weeks would come and go as I monitored the frequencies patiently awaiting for the radio conditions to improve and then all of a sudden from out of nowhere I would hear a faint signal and boom I was inundated with lots of interesting and excited voices calling CQ or QRZ.

After playing radio for almost 40 years these days it's slightly different of course, I hold a full license and am permitted to more or less do what I want providing its lawful. For myself, this has taken the world of radio communications into a totally new level and I have been loving every minute of ham radio for almost 15 years where I have discovered some very interesting ways to use my radio equipment deploying my engineering skills at the same time.

I thought I would list some of the activities I have carried out and the reasons why I love the hobby so much.

1. As a engineering/mechanical type of person I enjoy the whole concept of having real hardware such

as transceivers and shack accessories like ATUs, RIGblasters and test equipment. Virtual or software defined tech is very clever but you cannot beat the real thing, when it comes to having physical contact with the knobs and buttons my radio shack is pleasant to the eye and inspirational when on the air. I can spend hours and hours just turning the VFO and listening up and down the bands whilst gazing at the equipment nicely illuminated.

2. I have always had a passion for antenna systems and get excited when I spot a fellow hams antenna array. The amount of man hours spent on home brewing or just fine tuning antennas more than likely outweighs my entire life of radio communication. This is the part that I really enjoy especially the making and installation side of radio antennas. There is something very satisfying about knocking up a delta loop, dipole or something a bit more challenging like a satellite dual band antenna. Once it is built, installed and working properly it gives you a sense of achievement whilst gaining confidence and skill levels you never knew you had. You also have a great talking point the next time you make a contact using your homemade antenna. It does not end there either; I am addicted to improving my commercially built antennas that are Cushcraft MA-5B mini beam, Carolina Windom 80m and Hustler 6BTV. You will often see

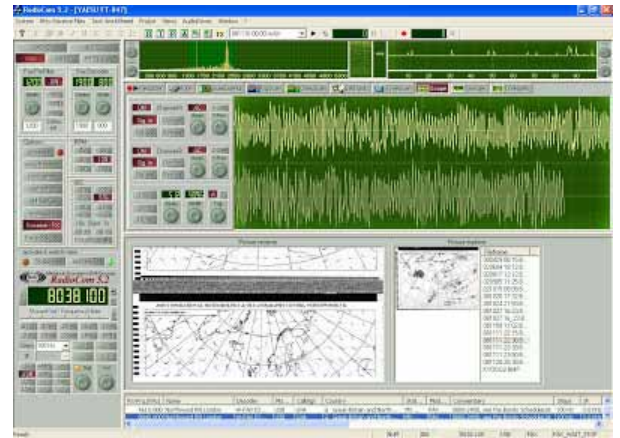


me up a ladder or hanging off a trellis trying to gain a few extra feet of height or building some additional radials. The neighbors are blessed with some amusing act of balancing as I strive for the optimum install of my various HF antennas. I was recently told I looked like Mary Poppins holding her umbrella when I was spotted putting up my mini beam.

3. Making radio contacts overseas and worldwide is very exciting and fires up the adrenaline every time I press the PTT whereas local radio contacts can be fun and enjoyable in different ways and often lead to friendships and meet-ups with other similar minded people. Also using radio to communicate to local Hams can inspire you to visit a local club or activation. I particularly enjoy using my mobile HF station from my vehicle where I have worked all over the World using 100 watts and a simple mono band HF base loaded vertical. I am always impressed with the performance of my little mobile station and find that most other Hams are always willing to pull out a mobile signal from the pileup of other Hams calling. For myself the use of mobile radio is just a fun as operating from the shack and can sometimes actually be better due to being able to park up in some great locations.

4. The sounds and noises can be too much for some but I like the sound of SSB as well as the off frequency voices heard. Whilst tuning up and down the bands I enjoy hearing the many weird and wonderful sounds like data, psk, rtty and CW they are strong and clear tones that pierce through the noise of any happy children laughing and shouting as well as any engine noises or other QRM that might be around. I like hearing the loud stations belting in with compression on their audio as well as the lovely BBC quality sounding audio that you also get on the bands. When operating on Satellites the entire quality thing is scrapped and the world of digital filters and noise suppression comes into its own. Again the adrenaline kicks in and before you know half a day has passed by and you have worked through Satellites communicating with dozens of Ham radio operators scattered about in different locations near and far. Equally as exciting is the reception of live SSTV images on your PC whilst interfaced to your radio transmitted from another ham operator located across the Atlantic or sent directly from the International Space Station also the reception of a weather

image/fax from NOAA weather Satellites can be very useful and lots of fun.



5. The final reason is the whole caboodle; I just love how radio is something everyone uses in one form or another from TV to telephone. The past couple of weeks I had my radio equipment set up at College (work) and I have been demonstrating amateur radio to various groups of young engineers, which has been highly welcomed by the students who all participated in making radio contacts. The young engineers took to the mic without hesitation and within 20 minutes, they were calling CQ quite fluently making QSOs. Previously early this year I took my radio equipment to my daughter's school where the learners are lot younger just 6 years old. The response from all of the learners was fantastic, each one made a radio contact and sent and decoded Morse code, which resulted in the radio demonstration becoming one of the highlights of their school year. This feedback was very pleasing and motivating and that is another reason why I love ham radio so much!

Simon Davison MoYKS Yorkshire. U.K

# Product Spotlight



## Epic PWRgate

Sku #58404-1673

~~\$179.95~~ Special Introductory Price \$154.95

**\* NEW \***



### Features

- Instant switch from a power supply to/from a battery
- Only a 0.05V drop from the power source to the output (compare to 0.33V on Super PWRgate PG40S)
- Properly charges a Lead-Acid (AGM or Gel) and LiFePO4 batteries
- Operates at a considerable lower temperature than Super PWRgate PG40S, thus eliminating the large heat sink
- Support for direct connection to a solar panel for battery charging of all chemistry types
- Continuous output current of up to 40A fully supported
- Charge rates up to 10A supported
- USB port for monitoring the system or to program specific charge parameters
- Complete LED status indicators of unit status
- Battery charge suspend switch to eliminate charger noise for 30 minutes
- May be programmed for vehicle use where charging is suspended when the vehicle is not running
- Optional temperature probe to control charging based on battery temperature

**12V Back-up Power System w/  
Built-in Smart Battery Charger**



## Amateur Radio in the News: Hurricane Harvey Edition by Dan KB6NU



UPDATED 9/2/17

I haven't heard of many news stories covering amateur radio's role in Hurricane Harvey relief and recovery yet, but here are a couple of stories. And, at the end, is a link to the ARRL's coverage so far.

**HARVEY AFTERMATH:** Ham Radio activated for emergency communication (with video). TYLER, Texas (KETK) – After Hurricane Harvey knocked out electricity and cell towers for thousands of people, emergency communication services are in place. “Sister groups at the coast would be activated right now,” John Newman, Ham Radio Operator, said. “Because some of the cities affected from Harvey have lost everything as far as communications.” Ham radio in Tyler is on standby to send more help.

[Ham Radio Operators Help Metro East Woman Find Her Son](#)  
(click to read online)  
[Why Amateur Radio Operators Are Watching Hurricane Harvey.](#)  
Emergency response teams and communities are readying for

Hurricane Harvey's potentially devastating impacts. Amateur radio enthusiasts are, too. In a statement released earlier today, the American Radio Relay League released a statement saying that its members—amateur radio enthusiasts known as ham radio operators—were ready. That's because ham operators play a big part in disaster response, from monitoring and reporting on storms to providing a method of communication when other methods are down.

[Amateur Radio Volunteers Assisting Where Needed in Hurricane Response.](#) Amateur Radio Emergency Service (ARES®) volunteers are pitching in to support communication at some Red Cross shelters in South Texas in the ongoing aftermath of catastrophic and unprecedented flooding resulting from Hurricane Harvey. ARES members also are serving as net control liaisons to the Harris County Office of Emergency Management (OEM). At least 3 dozen volunteers were assisting at shelters. Another dozen were on tap to serve as OEM liaisons. ARRL Emergency Preparedness Manager Mike Corey, K11U, said

the Red Cross is in need of Red Cross-trained shelter managers and volunteer management specialists. Anyone interested should contact him.

A variety of emergency, health-and-welfare, traffic, and tactical nets in South Texas are active on HF at various times of the day as well as on a wide array of VHF and UHF repeaters, which remain available as needed. The Salvation Team Emergency Radio Network (SATERN) has been active on 14.265 MHz, while the Military Auxiliary Radio Service (MARS) has been using the 5.330.5 (USB) interoperability channel on 60 meters. As of mid-week, Harvey, now a tropical storm, was headed northeast toward Louisiana, where ARES volunteers are on standby.

**[Follow the Blog for Up-to-Date Information:](#)**

**<http://www.kb6nu.com/amateur-radio-news-hurricane-harvey-edition/>**

## Upcoming Events



### Visit Our Booth

*Spokane Hamfest  
September 23, 2017*

*Chicago FM (Belvidere, IL)  
September 23, 2017*

*Maker Faire Milwaukee  
September 23-24, 2017*

*HRO Superfest - Milwaukee  
September 29-30, 2017  
In-store demonstrations!*

*West Mountain Radio Presentation on  
DC Power Distribution, Batteries and Solar  
Saturday 9/30 at 10:00 am*



### WHAT IS NEW?

Order a customized  
**DC-to-Go Box**  
for **Lithium** too!

Use the online tool to configure size,  
power products, connectors,  
and accessories:

[www.westmountainradio.com/custom-go-boxes](http://www.westmountainradio.com/custom-go-boxes)

or look for the button



Available in mid-October

### INTERESTED IN MICROCONTROLLERS?

Click here for more info:

[www.westmountainradio.com/pic\\_resources](http://www.westmountainradio.com/pic_resources)

Want to Learn C programming for microcon-  
trollers?

Click here for details of  
a **NEW** book that includes a **FREE** compiler:  
[www.ccsinfo.com/e3book](http://www.ccsinfo.com/e3book)

If you would like to submit an article for consideration  
in future newsletters please contact  
[marketing@westmountainradio.com](mailto:marketing@westmountainradio.com)



West Mountain Radio  
1020 Spring City Dr. Waukesha, WI 53186  
[www.westmountainradio.com](http://www.westmountainradio.com)