

the

Monitor

February

The MRCS Officers

2020

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Ken Myers

Next Meeting: Date: Wednesday, Feb. 5

Time: 7 p.m. video, 7:30 meeting, EAA Building

What's In This Issue:

Ken's Jumper Presentation - Notice from Lynn Morgan - Model of the Month - Indoor Flying/Driving/
Pontiac - Legacy Center Indoor Flying/Brighton - Upcoming RCCD Swap Meet - Upcoming Flight
Line Hobby Swap Meet - Upcoming Keith Shaw Birthday Party Electric Fly-in - Upcoming Events

The January 7 p.m Video

Once again, a very interesting video on dynamic soaring was shown

There were many beautiful planes shown "slope soaring". The "scale" planes flew surprisingly well.

Ken Myers' Preview of the Jumper T16 Transmitter

There were 16 members present at the Wednesday, January 8, 2020 meeting during Ken's Jumper T16 presentation.

Ken Myers' presentation was about a fairly new, Feb. 2019, RC transmitter known as the Jumper T16. It is able to transmit using a large number of 2.4GHz protocols and therefore, it is compatible with many different brands of 2.4GHz receivers.

He started his presentation by asking a series of questions regarding the 2.4GHz brand radios that the members are now using.

1. How many of you are regularly flying with these 2.4GHz radios? The members

were told to included 72MHz radio brands that had been converted to 2.4GHz.

1. the RTF transmitter that came with your aircraft: 0

2. a Detrum Gavin Tx: 0

3. a Radiolink Tx: 0

4. an Orange Tx: 1

5. a Turnigy branded Tx: 0

6. a Graupner HoTT Tx: 0

7. a JETI Tx: 0

8. a FlySky Tx: 2

9. a FrSky Tx: 0

10. Airtronics: 0

11. a JR Tx: 1

12. a Hitec Tx: 1

13. a Tactic Tx: 6

14. a Futaba Tx: 5

15. a Spektrum Tx: 12

16. another brand: 0

transmitters to the flying field?

2. How many of you are currently flying 2.4GHz with more than one of the brands

Helicopter Frequencies

21,27,29,39, 41

Sailplane Frequencies

11, 12

mentioned? i.e. usually taking at least two different protocol/brand 2.4GHz: 4

3. How many of you are flying a module in your main Tx to use a different protocol than the one the main transmitter is using?

This also includes 72MHz radio brands that have been converted to 2.4GHz. 1

4. How many of you are using a multi-protocol module, like the Jumper JP4IN1 or the iRangeX IRX4, in your transmitter? 0

Dave Stacer helped Ken demonstrate how he could control 6 different aircraft, one at a time, using the Jumper T16 transmitter with very different 2.4GHz protocols. The six aircraft, set up with six different protocol receivers, were an RUA 2-4-10 with a FlySky iA6B receiver, a stick-type plane with a Tactic TR624 single antenna receiver, an E-Flite BNF Archer with a DSMX receiver, a SuperEZ with a Tactic TR625 dual antenna receiver, another RUA 2-4-10 with a Jumper X8 receiver, and a Pandora with a FrSky X8R receiver.

Two important things that he noted were that the two Tactic receivers use different protocols and that the Jumper X8 and FrSky X8R use the same protocol.

After the demonstration, he asked the members a few more questions.

1. How many of you have heard of a transmitter operating system known as OpenTX? 6
2. How many of you have heard that OpenTX is too hard to learn and program a plane with? 0
3. How many of you have heard that OpenTX is only for multi-rotor pilots and computer geeks? 0

Dave was also volunteered to program a plane on the Jumper T16. He had never seen, or held, that radio before.

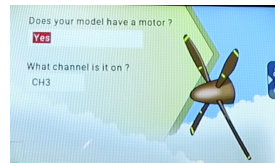
Ken talked him through the steps of how to turn on the transmitter and create a new model.

Dave read the onscreen question prompts and Ken told him how to enter his choices.

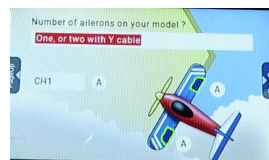
The guidance questions appeared to be simple to answer.



Screen 1: Choose between Glider or Plane
Plane was chosen.



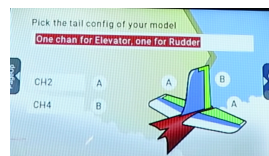
Screen 2: Does your model have a motor?
Yes was chosen.
What channel is it on?
CH3 was chosen.



Screen 3: Number of ailerons on your model?
Two
One, or two with a Y cable
One, or two with a Y cable was chosen.



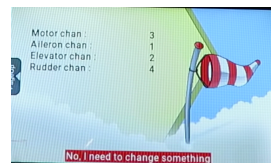
Screen 4: Does your model have flaps?
Yes
No
No was chosen.



Screen 5: Pick the tail config of your model.
One channel for Elevator, one for Rudder
Two chans for Elevator, one

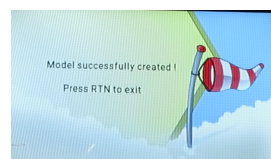
for Rudder
V-tail

One channel for Elevator, one for Rudder was chosen.

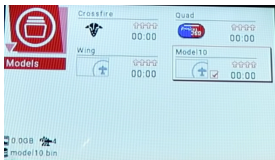


Screen 6: No, I need to change something (located near bottom of the screen)
Yes, all is well, create the plane !

Yes, all is well, create the plane ! was chosen.



Screen 7: Model successfully created !
Press RTN to exit



After pressing the RTN button, the model select screen appears.

The newly created model could have a name added and its protocol set to become active for a plane as well as other options.

For brevity, how to finish the setup was not demonstrated at the meeting, but it truly is simple.

A Few Quick Facts

The Jumper T16 was 1st advertised by Banggood in Feb. 2019.

Features include:

Required Battery: 2 x 18650 Lithium Ion or 2S LiPo (neither included)

Current: 350mA (NO CRSF - crossfire module)

Channel: 16 ch using SBUS/IBUS, 8 ch PWM
STM32F429BIT6 MCU

Shipped in Mode 2 (Throttle on Left) - can be changed to Mode 1

4.3 inch 480x272 outdoor readable color screen

Compatible with OpenTX

Angle adjustable, dual bearing, Hall sensor gimbals

Jumper JP4-in-1 Built-in Multi-protocol Module with TBS Crossfire support

Removable battery

Supports Telemetry

Memory 16 per protocol (can be expanded by SD card)

Voice function

Vibration reminder function

Standard JR module slot

6-Flight Mode Buttons

Two-color LED status display

Equivalent function of "Model Match"

Included with the transmitter:

MicroSD card - preloaded

USB cable

18650 tray

Throttle return springs and parts

Neck strap

Throttle spring adjustment set

Self-stick foam pad to secure the battery box

There are only a few sellers of the T16 in US.

It is difficult to find in stock in the USA.

Grayson Hobby \$159.99

<https://graysonhobby.com/jumper-t16-open-source-multi-protocol-radio-transmitter-jumpertx.html>

Says \$179.97 on page, but that includes the listed extras; two 18650 Lithium Ion batteries, custom 3D printed backplate, Jumper R8 Airplane Receiver. The base price plus any optional choices determines the price.

Shipping was \$12.10 for his and sent 2-day priority mail

ETA to Grayson was January 9, but it could already be out of stock.

Heli-Nation \$169.99

<https://www.heli-nation.com/latest-jumper-t16-pro-with-hall-gimbals-open-source-multi-protocol-built-in-radio-transmitter>

Out of stock on January 8, 2020

Price includes 2-day priority shipping if pre-ordered

Ken gave the members a **warning** about the 18650 Lithium Ion cells being supplied by Grayson Hobby. They are branded as Garberiel and listed with a capacity of 6000mAh. Ken tested them and found their capacity to be only 850mAh when discharged at 1/10 the capacity of 6000mAh. In other words, they were discharged at 0.6A.

Ken recommended the 18650battery.com online store as a source. The LGs that he purchased from that Website are no longer available, but there are good Samsung and Panasonic cells there. They do not need to be high discharge types as the system only draws 350mA.

Another good source is www.rcbatterykit.com. Bob can supply the cells, wiring for internal charging and a charger at a very reasonable price. The price depends on the options that you choose for the cells and whether or not you'll purchase a charger.

The Jumper R8 receiver seems fine, but Ken had not flown it yet, and at \$9.99 when purchased with the T16, that's a savings of \$5 over the regular price of \$14.99.

<https://graysonhobby.com/jumper-r8-16-channel-receiver.html>

There are four active threads on RC Groups regarding Jumper. Three are about the transmitter and one about the Jumper R8 receiver.

Jumper T16 2.4G 16CH OpenTX Multi-protocol Radio (started Feb 2019)

<https://www.rcgroups.com/forums/showthread.php?3243685>

Jumper T16 Owner's Thread - (2.4G 16CH OpenTX Multi-protocol Radio) (started May 2019)

<https://www.rcgroups.com/forums/showthread.php?3301299>

Jumper T16 hardware hacks (started June 10, 2019)

<https://www.rcgroups.com/forums/showthread.php?3332697>

Jumper R8 Receiver - 8-channel PPM/16 channel SBUS, D16 compatible, telemetry? (started October 16, 2019)

<https://www.rcgroups.com/forums/showthread.php?3433401>

There is also a RC Groups thread regarding the multi-protocol module.

DIY Multiprotocol TX Module (started May 2014)

<https://www.rcgroups.com/forums/showthread.php?2165676>

Ken also told the members about a supposed new radio that is based on the Jumper T16. It is called the RadioMaster by Hobby Porter. The person that started Hobby Porter worked for and with Jumper, so it is basically a Jumper T16 with a few upgrades that that person thought would make it better. It is not available at this time.

<https://www.rcgroups.com/forums/showthread.php?3493859>
and
radiomasterrc.com

A list of the supported protocols for the multi-protocol module can be found on github.

https://github.com/pascallanger/DIY-Multiprotocol-TX-Module/blob/master/Protocols_Details.md

He also noted that there is no protocol for the Futaba FASST receivers only the SFHSS is supported.

The radio does not come with a manual. Jumper has a manual online at jumper.xyz.

<https://www.jumper.xyz/portal.php?mod=view&aid=17>

The manual is dated Aug. 2019 and Ken did not find it all that useful.

To help him learn more about the Jumper T16, he created a Website with links to all of the useful YouTube video about the Jumper T16 and OpenTX.

Ken posted a link to that collection of YouTube videos on the homepage of our Website. He noted that the link is currently active, so that the members can learn more about this transmitter.

Table of Contents for the YouTube Videos

The videos are arranged by date with the newest first in each section.

1. OpenTX Companion Computer Software & Jumper T16 Firmware Updating for the transmitter's OS, the Multi-module's firmware & the SD Card
2. Model Setup and Programming How Tos
3. Hardware and Hardware Hacks
4. Range
5. Problems
6. Previews, Reviews and Full Disassembly (Ken suggested to start here.)
7. FrSky versus Jumper

Ken called for questions from the members. Some of the questions and Ken's answers follow.

Is the transmitter FCC part 15 certified?

Yes, here is the link to the FCC information for the Jumper T16.

FCC ID 2ANTI-T16

<https://fccid.io/2ANTI-T16>



Jumper T16 Pro

Is this going to become your daily transmitter?

Ken said that he wasn't sure yet, as he's only completed actual range tests on two of the receivers, the Tactic TR624 and FlySky iA6B, which both passed, but he's not flown them. He said that once he has done some actual flying with each receiver, he'll make his decision. But it seems to be looking good at this point.

The January Meeting

Roger Wilfong, club president, called on **Dave Stacer**, club treasurer, for the Annual Financial Report. The bottom line of the report was that we did end up negative for the year. Our expenses outstripped our income by about \$650.

As far as finances go, we are still okay as we do have a decent cushion in the bank at this time.

Other means of generating income were also discussed, but no action was taken.

There was a lot of discussion about not fertilizing the flying field and applying weed killer to the parking area. It was finally decided that we would not do it this year, and apply those funds to improving the road between the track and the parking area.

Lynn Morgan, club secretary, noted that he'd not be here for next month's meeting, February. He reminded us to get our dues in as soon as possible. Please send your 2020 application, copy of your AMA card and your check to Lynn as soon as possible. His address is in the header of this newsletter.

Roger Wilfong noted that he does have a speaker for our April meeting, but we are still looking for speakers for the February and March meetings.

The topic of the proposed new FAA regulations was discussed. It was noted that there is a lot of confusion and frustration regarding these proposed rules.

More information, as well as a link to a Template Comment on UAS Remote ID can be found on the AMA Website.

<https://amablog.modelaircraft.org/amagov/2020/01/03/template-comment-on-uas-remote-id/>

There is also a lot more information and links to even more information regarding FAA regulations on that page.

You are encouraged to read the proposed rules and to send your comments as soon as possible.

Important Notice from Lynn Morgan, Club Secretary

This is a reminder that our Midwest RC Society membership **dues are due by the March 4th** club meeting. We hope you are considering rejoining Midwest for the 2020 flying season!

This year we are planning to have the altitude limited glider competition at the field (schedule is TBD, probably the same as last year). Larry Markey is heading this event, it was a lot of fun so please consider coming out and participating!

FYI... Please remember that Club Dues are batch processed one month at a time. Checks are handed over to the Club Treasurer at the first Wednesday meeting of the following month. Checks are then typically deposited within a week that the Treasurer receives them.

We do appreciate your continued support of our club!

And from Ken Myers

Don't forget that Friends of the Flying Field (FOF) donations are accepted at any time and in any amount. These donations are always very much appreciated. The FOF funds help support the extra expenses that crop up during the year while trying to maintain our great flying field.

Model of the Month



Denny Sumner shared his new Robinhood 25.

As with all of Denny's planes, it is beautifully and meticulously covered. It is covered in Midnight blue and orange Ultracote.

The plane was constructed from an Old School Models Robinhood 25 laser cut kit.

<http://www.oldschoolmodels.com/rh25.htm>

He is using a Cobra 2820/10 motor, Cobra 60A ESC, Spektrum Rx and Hitec HS-81 servos.

A 3S 3300mAh LiPo pack provides the electrons.

The Robinhood 25 has a 50" wingspan and an area of 400 sq.in. It weighs 3 lbs. 1 oz.

More information on Denny's Robinhood 25 can be found on RC Groups, starting on this page 7, post #99.

<https://www.rcgroups.com/forums/showthread.php?3063798-Robinhood-25-From-Old-School-Model-Works/page7>

There are a lot more super photos of his project in his post.

2020 Skymasters R/C Club Indoor Flying/Driving at the Ultimate Soccer Arenas

The Best Indoor Flying Venue Anywhere!

Join Us on Tuesdays*

At the Ultimate Soccer Arenas

Where It Is Always Warm and Dry!

Located at 867 South Blvd., Pontiac, MI 48341

October 29th through April 14th

From 10 AM through 1 PM*

Spectators Welcome and FREE

Trainer Planes on Site

Come Check It Out

Single Flying Session ONLY \$10

Any 5 Session Punch Card \$40

25 Season Season Pass \$120

Pay at the door or register online at:

<http://www.skymasters.org>

Have Any Questions?

Contact the Event Director at:

indoorfly@Skymasters.org

Or call Fred at 248-770-3239

All Pilots MUST Have Proof of Current AMA Membership

A Special 3 Month Trial AMA Membership is Available

* Consult the Schedule on the Skymasters' Website for Exact Times and Dates

Indoor Online registration is open at:
www.skymasters.org

Schedule:

JANUARY:

* Mon. 20th-4 hrs. MLK Day

Tues. 28th

FEBRUARY:

Tues. 4th

Tues. 11th

Tues. 18th

Tues. 25th

MARCH:

Tues. 3rd

Tues. 10th

Tues. 17th

Tues. 24th

Tue. 31st

APRIL

Tues. 7th

Tues. 14th

Dates & Times Subject To Change.

Please note that a special area is set aside for electric RC Drivers. Did you note that Driving was added to the title?

Costs and dates are the same for drivers as fliers.

Indoor Flying at the Legacy Center in Brighton, MI

Start Date: Wednesday November 6

Time: 12 p.m.- 2 p.m.

Place: Legacy Center Sports Complex
9299 Goble Dr, Brighton, MI 48116

Cost: \$10 cost per session

Don't let the cold keep you from flying
 For More Information Visit the Hamburg Flyers
 Website
<http://hamburgflyers.org/forum/>

**Sunday, January 26, 2020, Radio Control Club of
 Detroit, 24th Annual Swap Meet**

Time: 9 a.m. - Noon

Location: Knights of Columbus Hall
 23695 Mound Rd., Warren MI 48091

1/3 Mile North of 9 Mile Rd. on the West side of
 Mound Rd.

Adults - \$5.00

Children under 5 - Free!

Children under 12 yr old - \$1.00

Free Parking

Door Prizes, 50/50 Drawing

Special Raffles all day

Food and Refreshments: \$3.00 Waffle Breakfast
 9:00 - 11:00

Contact info: To reserve tables or general info
 contact: Paul Newby at 586-747-7675 or email
 to: paul.newby51@gmail.com

Vendors: Tables \$20.00 each
 (Includes 1 admission per table)

Table set up at 7:30 AM

Vendors requested to stay until Noon

More Info at: www.rccd.org

**Feb. 8, 2020 Flight Line Hobby & John Hoover's
 2nd Annual Model Aviation Swap Meet**

9:00 - 12:00 am

Buy - Sell - Trade

Show Only Specials

Food & Refreshments Available

Local Vendors: Megajets & Aspect Aviation

Separate Vendor Entrance

Admission just \$5

Tables from \$20 when reserved in advance.

Visit FlightlineHobby.com for reservation details.

Event Location:

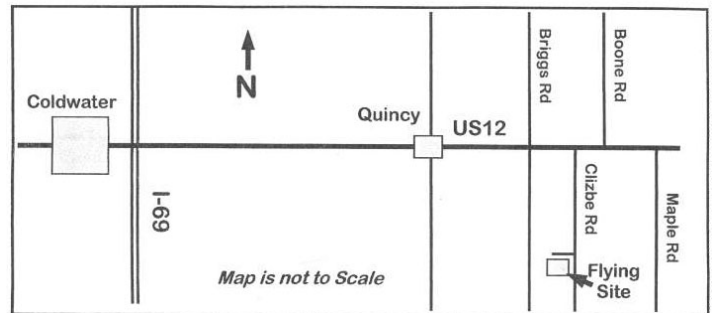
Clarkston United Methodist Church

6600 Waldon Rd, Clarkston, MI 48346

Questions? Call John at Flightline (248) 814-8359

Or email: flightlinehobby@yahoo.com

**The Upcoming Keith Shaw Birthday Party
 Electric Fly-in 2020**



The Balsa Butchers are hosting the “Keith Shaw Birthday Party Electric Fly-In”, for the 18th year, at their field near Coldwater, MI. The event takes place on Saturday, May 30, 2020. It is a one day event again this year.

The event consists of Open Electric Flying with a “Special Guest of Honor Theme”, Happy Birthday Keith Shaw [June 6].

Enjoy a day with the "Pioneering Master of Electric R/C Flight". 8 a.m. - 5 p.m., Saturday. NO LANDING FEE! Donations for field maintenance and lunch appreciated.

For additional information contact;

Dave Watson 517-250-6190 or

flybuddy619@yahoo.com

Contest Director: Dave Grife - E-mail:

grifesd@yahoo.com or Phone: 517-279-8445

Please e-mail or call with any questions.

The field will be open for guests to fly on Sunday as well.

To change your email address contact Ken Myers at kmmyersefo@mac.com

The 2020 membership application is available at the club Web site,

<http://www.midwestrcsociety.org>,
for downloading with the link on the homepage.

Upcoming Events:

Oct. 29 - Apr 14, mostly Tuesdays, Indoor Flying at the Ultimate Soccer Arenas (details in this issue)

November 6 and on:

Indoor flying at the Legacy Center in Brighton, MI, (details in this issue)

January 26, Sunday, Radio Control Club of Detroit, 24th Annual Swap Meet (details in this issue)

February 5, Wednesday, Midwest RC Society Monthly meeting, 7:30 p.m. meeting, EAA Building Mettetal Airport, everyone with an interest is welcome

February 8, Saturday, Flight Line Hobby & John Hoover's 2nd Annual Model Aviation Swap Meet (details in this issue)

May 30, Saturday, Keith Shaw Birthday Party Electric Fly-in 2020 (details in this issue)

Midwest RC Monitor
Editor: Ken Myers
1911 Bradshaw Ct.
Commerce Twp., MI 48390

The Next Meeting:

Date: Wednesday, Feb. 5, 2020

Time: 7 p.m. video, 7:30 Meeting

Place: EAA Building, Mettetal Airport