



North Fulton Amateur Radio League NFARL eNEWS

February 2018

*Over 40 Years Promoting
Service | Friendship | Education | Fun*

www.nfarl.org



FT8 Is Calling You / Bob Hensey, K4VBM

Hey all you hams out there - do you want to learn how to get set-up and use the new FT8 digital mode? *Especially you technician class hams!*

FT8 is all the rage - invented by Joe Taylor, K1JT, of Princeton University and crew. The creators are even creating a special version of the software for Dxpeditons that will allow the rare DX stations to answer multiple calls at the same time using this really cool digital mode that works so well in poor band conditions.

I myself have snagged some new DXCCs using FT8 while participating in this years ARRL Grid Chase contest. You send messages in 15 second cycles that are built into the software (there are free form messages too) and in less than 2 minutes you have a completed QSO in your log!

A few days ago Tom Koch, W4UOC, and myself did some experimenting on 2 meters with FT8. We were curious to see if it would work. After some trial and error with computer, software, and radio set-up, we finally had success and completed 2 FT8 QSOs between Tom in Sandy Springs and myself in Peachtree Corners.

We had a lot of fun -- we experienced the exhilaration and excitement of figuring something out, and getting it working, that hams know and love! I was amazed that using only 30 watts of power I was getting an extremely good signal report from Tom, and I was giving him good reports as well. Here are the messages we exchanged:

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180214_202330 Transmitting 144.125 MHz FT8: CQ K4VBM EM73
202445 1 0.1 759 ~ K4VBM W4UOC EM73
180214_202500 Transmitting 144.125 MHz FT8: W4UOC K4VBM +01
202515 -1 0.1 759 ~ K4VBM W4UOC R+10
180214_202530 Transmitting 144.125 MHz FT8: W4UOC K4VBM RRR
202545 1 0.1 760 ~ K4VBM W4UOC 73
180214_202600 Transmitting 144.125 MHz FT8: W4UOC K4VBM 73 <- end of QSO1
180214_202700 Transmitting 144.125 MHz FT8: CQ K4VBM EM73
180214_202730 Transmitting 144.125 MHz FT8: CQ K4VBM EM73
202745 8 0.1 905 ~ K4VBM W4UOC EM73
180214_202800 Transmitting 144.125 MHz FT8: W4UOC K4VBM +08
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(Continued on page 3)

NFARL Upcoming Events and Dates

- **Every Sunday — NFARES net** - 8:30 PM - 147.06 MHz (+) PL 100
All licensed Hams are welcome, you do not need to be an ARES member!
- **Every Monday — Tech Talk** - 8:30 PM - 145.47 MHz (-) PL 100
NFARL's flagship technical based "non check-in" net. The net is always better when using the web based chat room but Internet is not required to join the net. Check NFARL Nets [website](#) for more information and "how to".
- **Every Wednesday — Hungry Hams Lunch Bunch** - 11:15 AM
Meet with your fellow club members every Wednesday!
Slope's BBQ, 34 East Crossville Road, Roswell.
- **Every Thursday — YL OP Net** — 8:00 PM - 9:30 PM 145.47 MHz (-) PL 100
Check NFARL Nets [website](#) for "how to."
OM's (guys) are welcome to listen in to this YL net.
Great opportunity to get your YL's on the radio!
- **Every Saturday — Royal Order of the Olde Geezers (ROOG) Lodge No. 1**
9:00 AM - Reveille Café, 2960 Shallowford Road, Marietta (at Sandy Plains and Shallowford). Everyone is welcome: You don't have to be "old" or a "geezer" to join this breakfast get-together.
- **Second Tuesday — NFARES Meeting** - 7:00 PM - 9:00 PM
Fellowship Bible Church, 480 W. Crossville Road, Roswell.
Check [NFARES.org](#) for more information.
- **Third Tuesday — NFARL Club Meeting** - **February 20, 2018**, 7:30 PM.
Pre-meeting activities begin at 7:00PM.
Location: [Alpharetta Adult Activity Center at North Park](#)
13450 Cogburn Road, Alpharetta, GA 30004
Program: North Fulton Amateur Radio Emergency Services - NFARES
Presented by Grant Register, KK4PCR & Mike Cohen, AD4MC
- **Fourth Tuesday — NFARL Executive Team Meeting**
February 27, 2018, 7:00 PM
Location: [Arbor Terrace at Crabapple](#)
12200 Crabapple Road, Alpharetta, GA 30004
Meetings are open to all NFARL members. Space is available on a first arrival basis. Please contact the [President](#) to ensure available space.

(Continued from page 1)

202815 8 0.1 904 ~ K4VBM W4UOC R+10

180214_202830 Transmitting 144.125 MHz FT8: W4UOC K4VBM RRR

202845 8 0.1 904 ~ K4VBM W4UOC 73

180214_202900 Transmitting 144.125 MHz FT8: W4UOC K4VBM 73



Bob Hensey, K4VBM

If you have a radio and a computer you may be ready to go. Depending on the radio you chose you may need to acquire some cables and possibly an interface like a Signalink. In my case I used an IC-7100 which has everything built-in that is needed for most digital modes - I only needed a basic USB cable to connect the radio to my computer.

The only other thing you need is some free software that you will download, install and configure. After a little training (or self education) in frequencies and radio/computer settings to use, and you will be making QSOs!

Earlier I mentioned "especially Technician class hams" because you may already have a radio that is VHF/UHF capable, and with the VHF/UHF bands you Technicians can participate and use FT8 and other digital modes on the air.

If you are interested in getting set-up for FT8 and other digital modes like JT65 and JT9, I would be happy to host a meet-up on one of the club's repeaters to answer your questions and help you attain the knowledge and materials you need to get going in the new and very popular digital modes for ham radio. Please [email](#) me or post a message on the NFARL reflector with questions.

I am looking forward to seeing you on the air and making an FT8 QSO with you soon.

Bob Hensey, K4VBM (Very Bad Memory)

Annual QCWA QSO Party / Terry Joyner, W4YBV

The 62nd annual QCWA, Quarter Century Wireless Association, QSO PARTY is March 10th and 11th. This year's QCWA QSO party starts at 1800 UTC on Saturday and ends on Sunday at 1800 UTC (24 hours).

Mode classifications are CW/Digital and Phone. Bands are 160 meters through 6 meters.

Suggested starting Frequencies for CW are:

1.810 3.540 7.035 14.040 21.050 28.050

Suggested starting frequencies for Phone are:

1.845 3.810 7.246 14.262 21.365 28.325

Be sure to be on the look out for the QCWA Memorial Station W2MM for an extra 100 bonus points on each band and mode.

IT'S GREAT FUN ! Good luck to all.

Terry W4YBV

Ham Radio Activities / Mark Coleman, KJ4YM

Hello NFARL members!

Here are some activities for the next few months that we recommend you take a look at. Please update your calendars and plan to participate with us during these events.

Dalton Ham fest

- ◆ Saturday 02/24/2018
- ◆ Location: Dalton, GA
- ◆ Type: ARRL Hamfest
- ◆ Sponsor: Dalton Amateur Radio Club
- ◆ Website: <http://w4drc.com/hamfest/>

Georgia QSO Party

- ◆ April 14, 2018 1800z – 0359z
- ◆ April 15, 2018 1400z – 2359z
- ◆ NFARL goal this year is to have 45 participants for the QSO party.
- ◆ <http://georgiaqsoparty.org/>

Dayton Hamfest

- ◆ May 18-20, 2018
- ◆ <http://hamvention.org/>
- ◆

Atlanta Hamfest

- ◆ Saturday June 2, 2018
- ◆ Cobb County Civic Centre
- ◆ <https://www.facebook.com/AtlantaHamfestival/>

NFARL Field Day

- ◆ June 23-24, 2018
- ◆ Groveway Community Park, Roswell

Don't forget our ongoing regular and recurring activities like meetings, Hungry Hams Lunch, Repeater Nets and of course the ROOG breakfast! All of these activities are listed and can be seen each month in the [NFARL eNews](#) (usually page #2) or on the [NFARL website calendar](#).

See you soon at a Ham Radio event or activity!

Mark Coleman, KJ4YM
NFARL Activities Chairman

How To Get Started With a 40M Pixie / Garry Brass, AK4NA

Want to start a group of new hams on the QRP/CW path? How about setting up a Pixie network for new hams or just for a fun group activity. The Pixie is a popular, very simple, low power (maybe 1 Watt), CW only, crystal controlled, single frequency transceiver. Pixies have made contacts over distances approaching 1000 miles (back in the days of great propagation).

To order Pixies go to E-bay and search for "Pixie Transceiver Assembled", they should cost around \$8 or \$9 each. Unless you want to solder a kit, be sure to get one that says "assembled" and looks as pictured right. Unassembled kits with a case are about half price and kits without a case are even cheaper.



You will need a Key to create a signal from the Pixie. The Ameco AM-K1 key, pictured left, is available from Gigaparts for \$11.50. You will also need an ear bud to listen to the radio. Everybody has earbuds.

For a dummy load you will need a "BNC male to screw terminal adapter" (Amazon has them in packs of ten for around \$7) and a 50 Ohm, five Watt resistor (They're 10 for \$6.21 from Mouser). Just stick the resistor leads into the adaptor, tighten the screws and attach to the Pixie's BNC connector. **You must always use a 50 Ohm dummy load when keying the Pixie without an antenna.** The Pixie has a built-in buzzer which makes a dandy code practice oscillator. You can silence it by removing the jumper with the yellow tag sticking out of the top of the Pixie.



For power, Amazon sells a kit containing two AA battery holders (each holder accommodates 8 batteries), with snap connectors, four snap connector cables with 2.1mm barrel connectors and two breadboard power supplies for producing 3.3 or 5 volts from the batteries. Each kit is \$8.99 with free delivery. Eight AA batteries in series gives 12 Volts, just right for the Pixie. Put eight batteries in the holder, snap on a connector and plug it into the Pixie. Save the other holder, snap connectors and the 3.3 and 5 Volt boards for future projects.

To transmit on 40 meters you need a few more things. First you will need an FCC license. If you are a beginner, NFARL runs a training and exam class called a "Ham Cram." See the NFARL web site and find the Ham Cram button on the left side. The class runs all day on a Saturday (the cost is \$25). It is run about every 3 or 4 months. If you pass the test at the end you will receive an FCC Technician Class License and call sign in a few days which will allow limited use (<200 Watts, Morse code only) on part (7.025 to 7.125 MHz) of the 40 meter band.

The PIXIE comes with a 7.023 MHz crystal but this frequency is in a part of the 40 meter band (7.000 to 7.025 MHz) reserved for holders of the Amateur Extra license. Until you get your "Extra" you are not allowed to transmit on this frequency. You will have



(Continued on page 6)

(Continued from page 5)

to unsolder the 7.023 MHz crystal and install one of the frequencies you can use with a Technician license such as 7.030 MHz or 7.040 MHz. You can get ten 40 meter crystals for \$10.49 on eBay. If you build from a kit just throw the old crystal in your junk box and install a new one.

You will also need about 80 feet of wire to build a 40 meter, half wave dipole antenna. A 500 foot roll of 14 AWG, Black, Stranded, THHN Wire for \$40.97 from Lowes is enough for 6 antennas for less than \$7 each. Two end insulators (white ceramic egg insulators 10 for \$8.00 on eBay), a dog bone center insulator (10 for \$13.90 on eBay) and some RG-58 coax cable with a BNC male connector on each end will complete your rig (50ft RG58 BNC Coaxial Cable SKU # RG01-50 \$8.95 from SFCable). Wrap one end of the coax around the dog bone insulator and secure with a cable tie and some black electrical tape. Leave the BNC sticking out about a foot.



For a cheap and easy connection to the antenna install a "BNC female to screw terminal adaptor" on the antenna. Strip 1/4" of insulation from the wires from each side of the dog bone, stick one into each side of the connector, tighten the screws and attach the BNC connector on the coax. Connect the other end of the coax to the Pixie in place of the dummy load. (Not weatherproof without a lot of tape.)



So, with a group buy, ten kids (or grownups for that matter) can each have a Pixie station for about \$50.00 for parts with shipping and get on the air on 40 meters QRP/CW with a real radio, a real antenna and a real CW key.



73 Garry AK4NA

Did you know?

NFARL member Jeff Otterson, N1KDO, has created a tool for mapping your confirmed LOTW grids. This tool is designed to be helpful during this year's ARRL Grid Chase. As of a few weeks ago there were already about 200 Hams utilizing this tool. Give it a try. Thanks Jeff!

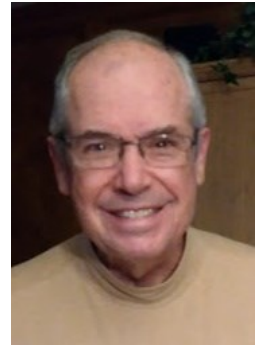
<https://www.n1kdo.com/lotw-gridmapper/GridMapper.html>

Do You Know?

NFARL Resources For You To Explore & Learn

Jim Stafford, W4QO

NFARL has had a club library for several years now. The bookcase was built beautifully by Keith, K4KRX a few years ago and it is open "for business" at almost every club meeting by our club librarian, Reed, W2CQH. There is also a page with old library inventory data: http://nfarl.org/library/library_nfarl_v28.pdf. Although it is not up to date, it will give you an idea of the fantastic resources typically available.



Jim Stafford, W4QO

Another resource you may not know about is the club's great collection of bound QSTs dating back to 1920. This includes the smaller sized QSTs through 1975, roughly. The bookcase for those issues was built by Nathan, K4NHW, and holds them neatly in place. The club presently stores these, yes, at my QTH! This means I get to read them any time I wish BUT you can as well. You may check out up to 2 bound copies at a time with a 30 day return policy. These were donated to the club and are worth over \$400 so we guard them rather closely. ☺ Just drop me, w4qo@nfarl.org a note and we'll get them to you. Now I realize that you can go online as an ARRL member and search for articles, etc. in QST from Day 1 but what is interesting about the older "small" format issues is that these books contain all the ads! And those can be almost as much fun as reading articles. That said, as I go through a volume, I almost always find a article or two in each issue of current day interest, especially antenna articles.

While I'm on the subject of ARRL and QST, did you know that if you renew your membership to ARRL through NFARL the club gets a portion of that renewal for handling it. You can add or renew ARRL membership [here](#).

Also, since we are a Special Service Club we must maintain our ARRL membership at over 50%. I know it's \$49 per year but ARRL membership is much more than just a subscription to QST. Did you attend HamJam? Speakers from ARRL explained how they are working hard to make/keep ham radio vibrant in its second century.

Another great resource is our own NFARL website: nfarl.org. Bill, K4YJJ, has developed this website into one of the (if not the one) best ham radio websites in the country. AND IT'S CURRENT! So many club websites I go to are 6 months or more since anything has been posted, OUCH! Take a tour through our [website](#). Look at such things as the ABOUT US button for a website overview: <http://nfarl.org/about/WebSiteOverview.html> Echolink is explained under the Echolink "button". FEATURED ARTICLES, HAM RADIO INFO, and LINKS to RESOURCES are other buttons you should explore.

Did you know that you can connect the 145.47 or 147.06 to another repeater that has Echolink anywhere in the world just by dialing the corresponding node number for that repeater. Now, don't abuse this feature and be absolutely sure you bring down the connection when finished. Also, you can connect to those repeaters from your home computer using a headset and having Echolink installed on your computer. This approach does not even tie up our repeater. Also, be

(Continued on page 8)

(Continued from page 7)

sure you are connecting to a computer in an English speaking country and it's not the middle of the night there!

A lot of folks do not know that NFARL has a Youtube channel. On our channel we have video recordings of many of our meetings, HamJam, etc. Go to the button at the very bottom of the left hand column on the website to jump into that channel.

Also, don't forget that a great resource from NFARL is the club's ELMERs. Yes, there is a button on the website for that subject as well: <http://nfarl.org/elmers/elmers.html>

These are just some of the things that you might find interesting about the North Fulton ARL – the 2010 Dayton Hamvention (USA) Club of the Year. Oh, you didn't know that? Stick around and yes, renew!



NFARL QST Bookshelf / Library

Dear club members:

I was overwhelmed, surprised, and speechless when awarded the "Ham of the Year" award at our 2017 Christmas dinner.

I want to thank the club again for this award. When Danny Turner WA4BRO and I started this club 40 years ago, it was because of our love for amateur radio. I continue to have that same love for this great hobby and hope I will be able to contribute to the club in positive ways for many years to come.

Thank you again.

Terry W4YBV

'HamFest Time ! / Jim Stafford, W4QO

February is always a good time to start thinking about Hamfests.

Starting off is the Orlando HamCation. I and about 15 NFARLiteS attended some portion of that one. I really enjoyed it. It was in the mid 80s and party sunny. Took a picture of a few of our members who gathered near the Polish Sausage vendor. Both the photo and the sausage were very good! The HamCation was about like I remembered it 4 years ago, the last time I attended. It is a large HamFest attendance wise but by number of vendors and flea market sellers it is still only about 1/3 the size of Dayton/Xenia. Some say it draws as many as 15,000. Still it does have quite a few vendors.

I did find out the procedure to update the Computer Battery Analyzer (CBA) from West Mountain Radio guys and will be sending it in this week. R&L was selling Baofeng UV5Rs and UV6Rs for \$19.95, one of the better prices I've seen on these. I was drawn to a small "mobile" unit that ran about 20 watts on both 2M and 440 for \$65. Ricky, the past president of the Kennehoochee club, was selling those but by the time I decided to get one, he was sold out. Oh well!



I rode down to Orlando with Martha, W4MSA, and Chuck, AE4CW, (also known as Parnelli Jones). Martha and I spoke briefly at Carol Perry's (WB2MGP) "Attracting Youth" forum. I also attended a forum about new ways to pass the amateur radio tests. If any of you want to discuss, let me know. It was interesting. That reminds me of the only complaint I had about

the HamCation... The forums were at the far ends of the property. Some were about 1/8 of a mile away and in the other direction, about 3/8 mile away. They did have golf carts to take us to the latter. There was no additional charge for the rough ride! Oh, and I forgot, there was nothing aimed at YOUTH or the MAKER movement. Sad IMHO. <https://www.hamcation.com/>

Now coming up February 24 is the Dalton Hamfest. That one is a little over an hour away. It has a very nice flea market. You can usually spend a few bucks on things you do not need but is that ever a factor at hamfests? We should be forming car pools for Dalton so if you are going or want a ride, be sure to post it on Yahoo reflector for NFARL. Let's see if we can get a good number of members doing to Dalton. <http://w4drc.com/hamfest/>

Following this is the Birmingham Hamfest March 2-3. I've not been to this one in years but I understand it is no larger than Dalton these days. Still, a nice 3 hour drive to take in some more ham radio aroma. See <http://w4cue.com/> for information. Again, if you are going, let others in the club know if you are willing to take passengers.

Also, the Charlotte Hamfest is March 9-10 and it's only 3 1/2 hours away. Road trip? <https://charlottehamfest.org/>

For other hamfests coming up soon in GA and nearby, always check out the ARRL page: <http://www.arrl.org/hamfests-and-conventions-calendar>

HV FN!

FT8 & VHF Contesting / John Kludt, K4SQC

The introduction of new technology is always a challenge. There will be early adopters. You can always tell who they are because of the arrows in their backs. Mike, AD4MC, comes to mind. There will be late adopters and there will be those who never sign on for the new gig. It is just the way it works.

VHF contesting for decades has been the world of big arrays, high power and lots of SSB and CW. In an attempt to open the contest to more folks that seem to be working, recently the ARRL added FM only and what is referred by some as the "FT-8x7" class – not more than 100 watts on 6 meters, 2 meters and 70 centimeters. The rule in VHF contesting is simple. Each station except rovers may be worked once on each band without regard for mode. Worked on CW, SSB, or FM, once and you have worked them. Rovers are a little different in that they may be worked once from each grid as they move around. Contesting strategy calls for the accumulation of as many Q's as possible by band. Grids serve as multipliers so there is additional emphasis on getting as many grids as possible.

As with all new technologies, there has been a lot said, sometimes rather heated, about the role of FT8 in particular in VHF contesting. The first objection is that it is too slow, it negatively impacts run rate. And especially on 6 and 2, if the bands are open that is true. Some see it as cutting into the other modes, especially CW. And then there is all of the usual stuff about "no skill involved", "it's just a computer talking to a computer" etc., etc.

So is there a place for FT8 in VHF contesting? Recall the role of multipliers and the "once you have worked them you have worked them" rule. If any of you have even casually tried a VHF contest, you know that the run rates can be very, very low. With no opening, they can, as my math teacher used to say, "asymptotically approach zero." In those settings any Q no matter how long it takes is better than no Q. Or, we could sit around, consume adult beverages and complain about no propagation.

So, especially on 6m because right now that is where most of the action is, if you decide to give FT8 a try, here are some suggestions:

Remember it is a weak signal mode. Just like HF with FT8 you need a clean signal. And just like HF FT8 does not take a kilowatt to be successful. Start out at the same power levels you would use on HF. Most rigs today have 6 meters on them. Put up an antenna and give it a try. Contests tend to draw people to bands and bring the bands to life.

Always, always check the box NA VHF Contest. The contest exchange is your grid. A signal report is not required. Most people you will encounter on contest weekend are in the contest and are expecting grids, not signal reports. If you check the box, WSJT-X will take care of that change for you and everyone will be happy.

Expect to see much more use of RR73 (double click on <TX4> to change between RRR and RR73). It saves time – remember the thing about run rate?

And, if you can work them on SSB and/or CW, do that instead as it is quicker.

It has been 25 years since CW was a regulatory requirement for a license so there may well be an entire generation of hams out there not skilled in high speed weak signal CW. FT8 is your

(Continued on page 11)

(Continued from page 10)

alternative to SSB and as a bonus it is reportedly 20dB more sensitive than CW. Using FT8 during a VHF contest is a great way to pick up new grids, even if you are not in the contest. Predictably it will be a time of high activity. The band may appear to be otherwise dead but you can still make a number of Q's on FT8. During the contest that just concluded we saw that. On the panadapter there were a few beacons at the low end of 6 meters then a long stretch of flat band and then a blip of activity at 50.313 MHz, the FT8 frequency.

The next VHF contest is the weekend of June 8-10, 2018. If you run FT8, and you have a rig with 6 meters on it, we hope to see you on the bands. You don't need a lot of power. In fact you should not run a lot of power. Just remember to check the <NA VHF Contest> option before you start.

Heck, in the year of the Grid Chase Challenge who doesn't want some more grids on a different band? And FT8 on VHF is a great way to get them!

Hope to see you on the air,

John, K4SQC

Annual QCWA QSO Party / Terry Joyner, W4YBV

The 62nd annual QCWA, Quarter Century Wireless Association, QSO PARTY is March 10th and 11th.

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Suggested starting frequencies for Phone are:

1.845 3.810 7.246 14.262 21.365 28.325

Be sure to be on the look out for the QCWA Memorial Station W2MM for an extra 100 bonus points on each band and mode.

IT's GREAT FUN ! Good luck to all.

Terry W4YBV

CERTIFICATE OF EXCELLENCE AWARDS

At our February 20th club meeting we will acknowledge members that participated in our Club's 40th Anniversary US Islands celebration. Ten club members will be honored for activating 46 US Islands with over 900 QSO's.

These members are:

Scott Straw KB4KBS, Jeff Otterson N1KDO, Grant Register KK4PCR, Daryl Young K4RGK, Lori Young K4UPI, John Norris N4IHV, Bob Hensey K4VBM, Bill Cobb K4YJJ and Terry Joyner W4YBV.

Our club members activated islands in six states and qualified six new islands for the US Islands award program.

This is the first time any radio club in the U.S. or Canada has qualified and activated this many islands in one year! This is a once in a lifetime honor for our club!

NFARL members Scott Straw and Bill Cobb will also receive club awards for activating islands in our club contest.

Great job goes out to all members who took part this past year.

Terry W4YBV



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eNews can be located online at:

<https://www.nfarl.org/enews/eNewsIndex.html>

Club Repeaters

Frequency—Description	P.L. Tone	Location
145.470 (-) EchoLink Node 56086 NF4GA-R	100 Hz	Sweat Mountain
147.060 (+) Primary ARES Repeater	100 Hz	Roswell Water Tower
224.620 (-) Joint Venture with MATPARC	100 Hz	Sweat Mountain
443.150 (+)	No Tone	Roswell Water Tower
444.475 (+)	100 Hz	Sweat Mountain
927.0125 (-)	146.2 Hz	Sweat Mountain

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