W8TQE
145.370 - 85.4 pl 444.675 + 123 pl

The Tickler

Volume 43, Issue 7 July, 2014

From the Prez.....

Hi everyone. I hope you are enjoying your summer.

There was at least one hamfest in the area this month and that was the Van Wert Hamfest. It was held on July 20th. Norm was able to attend and took his father with him, but once again my family reunion was on the same Sunday and I needed to be there with my daughters and grandchildren. It was a beautiful day weather-wise and the food and company was good. However, my reunion seems to get smaller and smaller every year. It reminds me of the hamfests over the past few years unfortunately. I am sure as soon as the original cousins and family have pasted on our reunion will be a thing of the past.

I would like to thank Bill KD8TTM for running the Sunday night net this month. He did a fine job and it was nice to see a lot of you check into it each week.

Once again I want to remind everyone that our Hamfest is coming up soon. September 14th will be here before we know it. Please contact Mark NU8Z to find out where you are needed. Help is always appreciated and there is always room for suggestions on how to make things better.

Don't forget to check out the website at www.w8tqe.com and get any new information and pictures to Bob K2IBM. He is our web master and we need to support him and the club by sharing he keeps up the website.

Ted has informed the club that he will be retiring as editor of the paper by the end of this year. He is also not going to be available to do the paper for the next two months. Donna Monson Waldrup (soon to be a new Ham) one of our new club members has volunteered to take over the editing job and hopefully she will have some time to work on this during Ted's absence. Thank you Donna for volunteering, the Tickler is a very important part of our club.

I hope to see you at the meeting on July 28th.

73,
Ginny W8TTX

July Program

This months program will be a very special presentation of the club's history being involved with the Museum Ships Operating Event. The program will cover our operations from 2006 through 2014.

This program will also present information on the "major" effort planned for 2015 running the special calls: "K8H, K8O, K8M, K8E and K8S" (HOMES….one for each lake).

13 Original Colonies Special Event

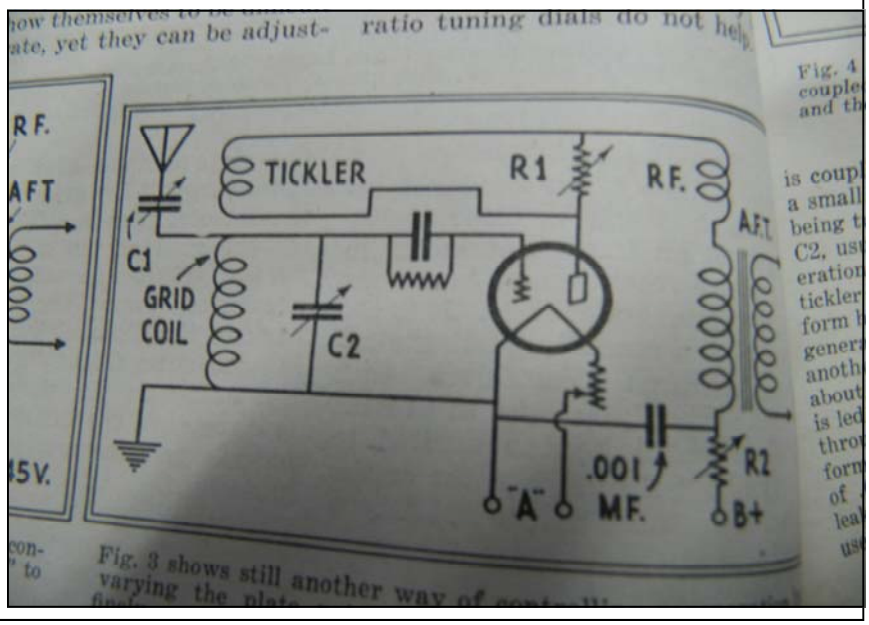
During this past 4th of July holiday a special event was held with the chance to be awarded a "nifty" certificate. Here is one awarded to Jeremy KD8VSQ. Jeremy had to work a special event station in each of the original thirteen colonies during the specified time this past holiday weekend. K8KIC and KD8TTM were also chasing these special stations. The thirteen station were on all modes and had special 1 x 1 call signs.

Congratulations to Jeremy for achieving this certificate. Jeremy runs 100 watts to a homemade multi-band dipole.

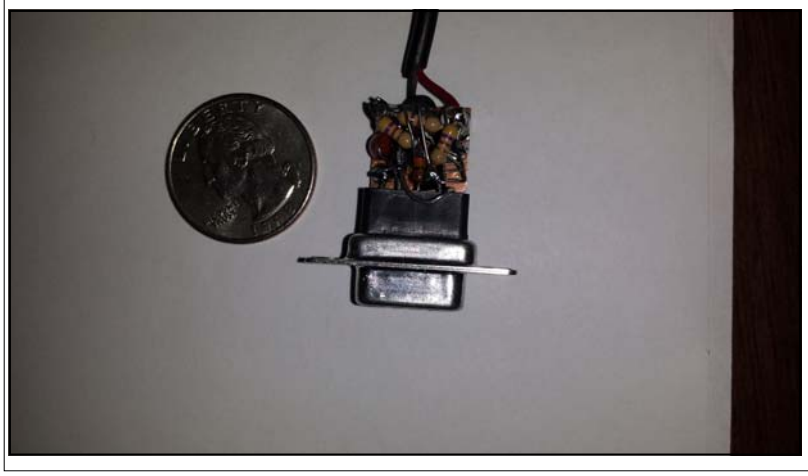
The Tickler

Ever wonder how and why our paper is called "the Tickler?" Here is the answer provided by Rich K8UV. Back in the days of tubes a feedback oscillator circuit was developed and called "the tickler."

While cruising through some old books Rich ran across this diagram from a 1937 electronics book. You can clearly see the feedback oscillator labeled "Tickler." And now, as Paul Harvey" use to say, "Now you know the rest of the story." The Tickler has been the name of our paper since the club began back in the early 50s.



How Well Can You Solder?



Neil K8NP has an Icom IC-706 he would like to connect to his computer. Icom sells the IC-V data interface for this radio at $150...way too much! Neil ran across and article telling how to build one and decided that since he had the parts he'd build his own. The entire unit is built to fit within the hood of the DB 9. Neil says there are also two transistor in that photo...phew!

Ed note….I ran across a CI-v for this radio (new) at $10.00. Maybe $10 is worth the hassle free effort of micro soldering?

AARC Club Gossip! .....

Did you know that…
...K8KIC made 165 Field Day QSOs from home. All CW?
...KD8TTM Bill, is in-charge of FD for the club next year?
...N8AMM has aluminum now for a 3 element 6m yagi?
...K8AQM installed an "I" beam for guy wires after killing a huge oak tree? Ugh!
...KD8VSQ is going QRO?
…"Donna" will be the new Tickler editor in January?
...KD8TTM built and tuned a set of 20m coaxial traps for a 40/20 dipole?
...KD8VSQ built a "super-duty" multi-band dipole?
...K8AQM bought "another" tribander (Cushcraft A4-S)to install? The quad comes down!
...K8KIC may be the owner of "another" accordion?
...K8NP is getting ready to begin some serious SKCC logging?
...neither K2IBM nor K8AQM can get KD8TTM's call right? Heck to get old!
...Rebecca Lulfs is now KD8ZCV? Congratulations!
...WE8Z is looking at joining K8NP as a "Florida home owner?"
...the Monday night gang tried to talk K8NP into have cattle at his Florida home?
...KD8TTM will be "W4M" as of August 14?
…The K8AQM shack will host "W1AW/8" in October?
...KD8TTM has his mobile seup now for 40, 20, 17 and 15m?
...more than 300 K8V QSLs were sent out?
...K2IBM has an antenna that rotate 360 degrees? Finally!
...KD8SKO has been listening/checking out satellites?
...KD8YUI, Ruben is just about ready to check in to the 2m net….encourage him!
...KD8VSQ Jeremy, is a "space nut" (that's NASA stuff)?

AARC Club Minutes

The Adrian Amateur Radio Club Board met at the Civil Air Patrol building at the Lenawee County Airport on June 30, 2014. The meeting was called to order at 7:00 PM by President Genny W8TTX with the following persons present: Larry W8LNR, Norm W8TTH, Dick K8GX, Mark NU8Z, Bob K2IBM and Bill KA8ARK. Items discussed were: Adrian Hamfest scheduled for September 14, 2014, Museum Ship activity, Duplexers, Field day, Ted's resignation as editor of the Tickler as of December and the financial report. The meeting was adjourned at 7:30 PM.

The Adrian Amateur Radio Club meeting met at the Civil Air Patrol building at the Lenawee County Airport on June 30, 2014. The meeting was called to order by President Ginny W8TTX with 17 persons present. The May minutes were not included in the Tickler so a hard copy will be provided at the July meeting. The treasurer's report was presented by Mark NU8Z and was approved by a motion, second and voice vote. A proposal to purchase Duplexers for $300 was approved by a motion, second and voice vote. Ted K8AQM is planning on retiring as Editor of the Tickler in December so the club membership is to think of a replacement for that position. The meeting was adjourned at 9:00 PM followed by a presentation on fibre optics by Neil K8NP. Secretary Bill KA8ARK

Club Presentation

If you came to last month's meeting then you heard the presentation given by Neil K8NP on fiber optics. If you use the internet services for computing, telephone and television then you're probably getting your signal through fiber optic cable.

As Neil explained, you just can't "twist" two pieces of fiber optics cable together and expect them to work! It takes practice and skill to learn how to join two pieces of fiber optic cable together.

Fiber optic cable is one of the fastest-growing transmission mediums for both new cabling installations and upgrades, including backbone, horizontal, and even desktop applications. Fiber offers a number of advantages over copper.

On the next page you can find eight great reasons why fiber optic cable is better than copper wire cable.

Thanks Neil for the great presentation!

Ed...the eight reasons for using fiber were gathered from the internet.

New Sky Hook!

Jeremy KD8VSQ takes his antennas seriously! When Jeremy first started out his multiband antennas covered 40, 20 and 10 meters, the wire used was 16 gage wire and the swr figures were great for all bands….problem. After some serious wind Jeremy found the antenna had stretched and as a result required retuning. The retuning also promoted "reconstruction" using a carrying line of rope thus allowing the antenna to "float" and eliminate further stretching. With the addition of an automatic antenna tuner to his station KD8VSQ was now on 10-40m.

The new sky hook: worried about further stretching and wishing more bands Jeremy now has put together another "floater" using heavy Dacron UV resistant rope and number 12 wire! More wires were added and this new antenna covers 40, 20, 17, 15 and 10m. He even managed to get the antenna a few feet higher. SWRs are great and Jeremy is a happy camper!

Of course he now has the addition of an SB-200 to use so that new multi band dipole will be crushing those DX pileups. Jeremy is also planning to add digital modes to his abilities and by the time you read this he will have made his first PSK QSOs. Guess there is no stopping these young bucks!

1. Greater bandwidth

Fiber provides far greater bandwidth than copper and has standardized performance up to 10 Gbps. While not currently a standard, these speeds could become a reality in future proposals and ratifications. Keep in mind that fiber speeds are dependent on the type of cable used. Single-mode cable offers far greater distance than either 62.5- or 50-micron multimode cable. In addition, fiber optic cable can carry more information with greater fidelity than copper wire. That's why telephone and CATV companies are converting to fiber.

2. Low attenuation and greater distance

Because the fiber optic signal is made of light, very little signal loss occurs during transmission, and data can move at higher speeds and greater distances. Fiber does not have the 100-meter (328-ft.) distance limitation of unshielded twisted pair copper (without a booster). Fiber distances can range from 300 meters (984.2 ft.) to 40 kilometers (24.8 mi.), depending on the style of cable, wavelength, and network. Because fiber signals need less boosting than copper ones do, the cable performs better.

3. Security

Your data is safe with fiber cable. It doesn't radiate signals and is extremely difficult to tap. If the cable is tapped, it's very easy to monitor because the cable leaks light, causing the entire system to fail. If an attempt is made to break the physical security of your fiber system, you'll know it.

Fiber networks also enable you to put all your electronics and hardware in one central location, instead of having wiring closets with equipment throughout the building**.**

4. Immunity and reliability

Fiber provides extremely reliable data transmission. It's completely immune to many environmental factors that affect copper cable. The core is made of glass, which is an insulator, so no electric current can flow through. It's immune to electrometric interference and radio-frequency interference (EM/RFI), crosstalk, impedance problems, and more. You can run fiber cable next to industrial equipment without worry. Fiber is also less susceptible to temperature fluctuations than copper and can be submerged in water**.**

5. Design

Fiber is lightweight, thin, and more durable than copper cable. Plus, fiber optic cable has pulling specifications that are up to 10 times greater than copper cable's. Its small size makes it easier to handle, and it takes up much less space in cabling ducts. Although fiber is still more difficult to terminate than copper, advancements in connectors are making termination easier. In addition, fiber is actually easier to test than copper cable.

6. Migration

The proliferation and lower costs of media converters are making copper to fiber migration much easier. The converters provide seamless links and enable the use of existing hardware. Fiber can be incorporated into network in planned upgrades**.**

7. Standards

TIA/EIA-785, ratified in 2001, provides a cost-effective migration path from 10-Mbps Ethernet to 100-Mbps Fast Ethernet over fiber (100BASE-SX). An addendum to the standard eliminates limitations in transceiver designs. In addition, in June 2002, the IEEE approved a 10-Gigabit Ethernet (10-GbE) standard.

8. Cost

The cost for fiber cable, components, and hardware is steadily decreasing. Installation costs for fiber are higher than copper because of the skill needed for terminations. Overall, fiber is more expensive than copper in the short run, but it may actually be less expensive in the long run. Fiber typically costs less to maintain, has less much less downtime, and requires less networking hardware. And fiber eliminates the need to recable for higher network performance.

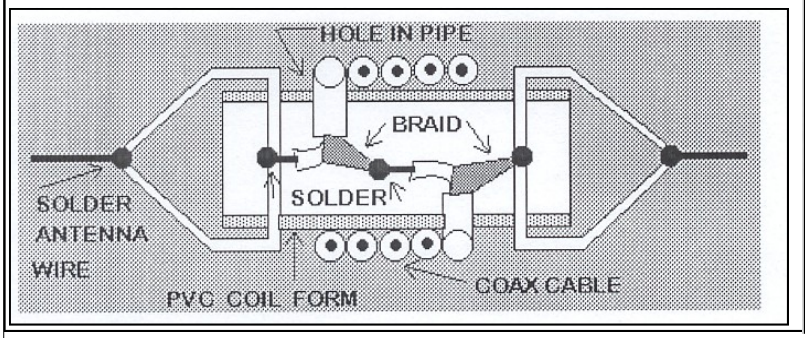
The Coaxial Trap

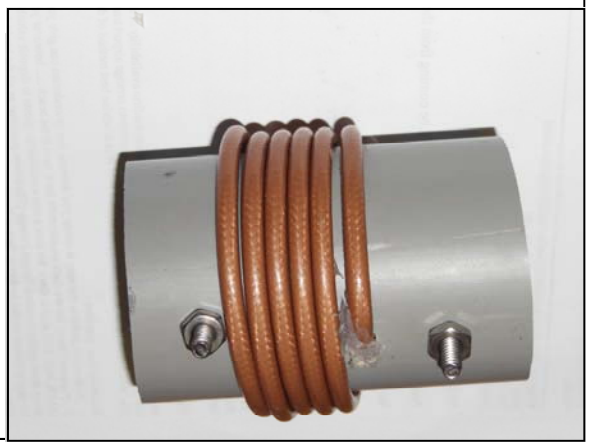
Multi band dipoles and verticals are easy to make using coaxial traps. You can see by the diagram below how they are wound and connected. The photo on the right is a 1500 watt version made with Teflon coax but any coax can be used depending on how much power you're going to be running. KD8TTM even made a couple traps (40/20 dipole) using RG-174 which will handle 100 watts.

The number of turns depends on the type of coax and the diameter of the pvc used. Fortunately there is a wonderful little program by Tony Fields VE6YP and is "free" at **http://www.qsl.net/ve6yp/** . You need to read the help file as it explains everything on how to use this program. After the trap is built you need to tune it but it tunes very easily with a grid dip meter. If you're careful in the construction there is very little tuning required.

A very good source that explains the pros and cons of the coax trap can be found by W8JI at: **http://www.w8ji.com/traps.htm** .

KD8TTM's dipole was tuned and the wires for both 40m and 20m are shorter than the lengths calculated for a started dipole for those bands. These make excellent Field Day type antennas.



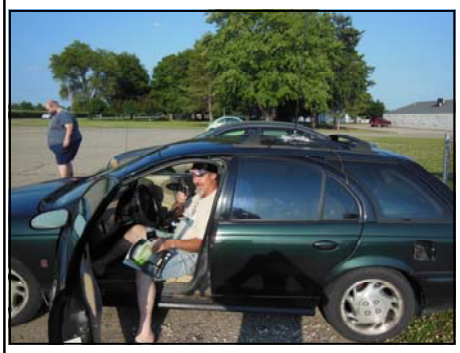


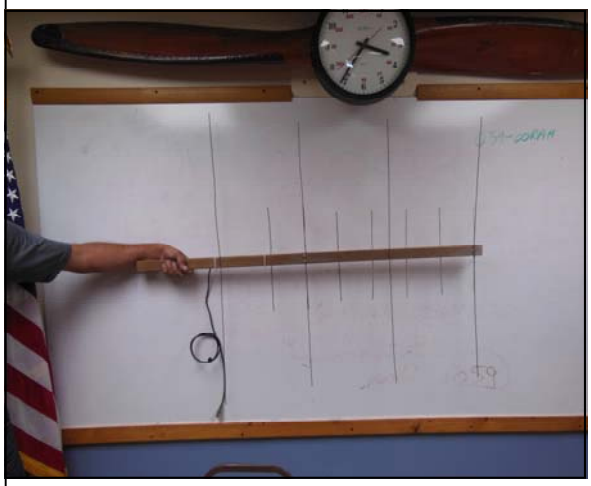
KD8TTM Mobile Ready to Roll!

Bill KD8TTM will be heading for a Marine Corps reunion next month in South Carolina and will be QRV with the call "W4M" as a special event station. It's a long way to South Carolina and Bill plans to do plenty of hamming now that he has Alinco rig, 4 magnet roof mount and antennas for 40m, 20m, 17m, 15m and even 10m if the band ever opens! Bill has the "head" of his radio mounted on the dash as shown while the actual radio is on the floor in the back.

Running 100 watts the antennas and radio seem to be doing very well as Bill has worked several stations while driving around the county.

Information on W4M can be found in this month's QST.

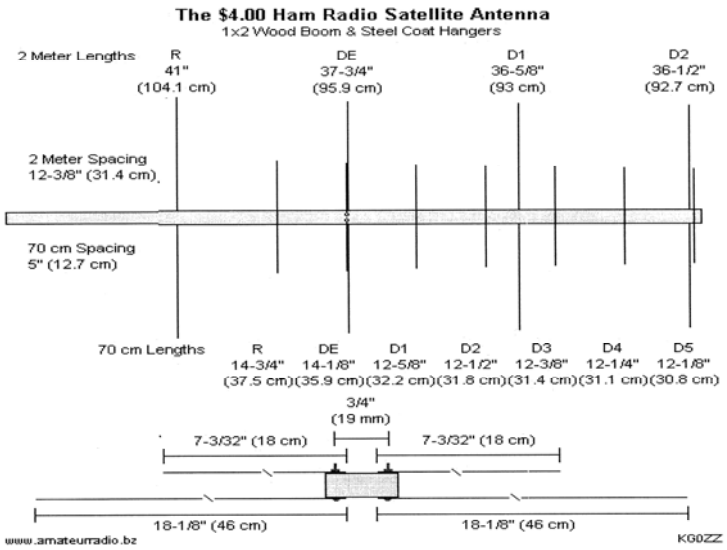




KD8SKO's Satellite Antenna

Don KD8SKO, has an interest in working satellites and brought along his new "$4.00 Satellite Antenna" to the Monday night gabfests. Don said it was very easy to build and seems to work very well. He has heard several satellites with his handheld HT and even used the antenna standing in his yard to bring-up the University of Michigan repeater. You can see from the diagram that the antenna is four elements on 2m and seven elements on 440.

Don made the boom of the antenna from cedar and would advise another choice as his staples went in so far when attaching the elements that the staples actually bent the elements! As you can see, the directions call for the use of coat hangers for the elements!



Don provided the data sheet used in building his antenna. When quizzed about the "dual feed" Don knew exactly that rf (electricity) will always take the path of least resistance. In this case,"RF" takes the path of least resistance. And this is the same principle used in the multi-band dipoles KD8TTM and KD8VSQ built.

So we exspect to hear from Don on his satellite work soon. Talk also began about possible EME work...phew! Are there any other "satellite aficiónatos" out there working through space?

The first step was to mark the boom for the elements using a tape measure and a carpenter's square. Some planning ahead of time on paper allowed me to make room for an extra 70 cm director just past the last 2 meter director.

In starting from scratch I began by marking the 2 meter elements on the straightest 1 x 2 x 8' long furring strip that I could find from the lumber yard. An equal spacing of 12-3/8" is what I used for the 2 meter band so that I could add an extra director to give the antenna a little extra gain over a three element yagi and still have a fairly short antenna. That would make the 2 meter yagi antenna length just over three feet long not including the handle.

At first I marked five 2 meter elements on the boom instead of four but after thinking about it I decided that the extra mark was a good spot to cut off the boom. This made the wood boom 50-3/4" (128.9 cm) long.

Starting from the director end of the boom mark the boom as follows. A mark at 1-1/4", 13-5/8", 26", 38-3/8", and 50-3/4" (3.2 cm, 34.6 cm, 66 cm, 97.5 cm & 128.9 cm).

Use a carpenter's square and mark a straight line across the boom at each mark. This will also help to square the coat hanger elements. Cut the boom off at the 50-3/4" (128.9 cm) mark.

Also along each line, mark the center of the boom. Doing this will simplify adding the elements.

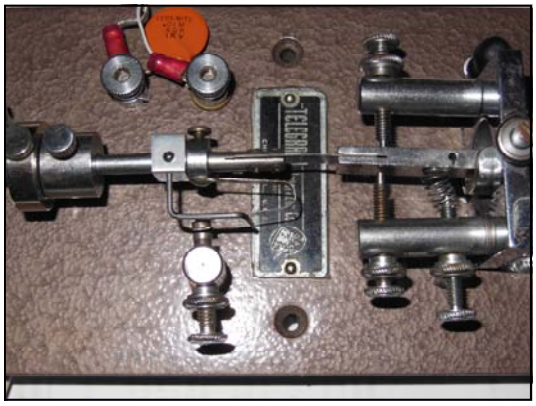
Flip the board over, and ágain starting with the director end of the boom, mark the 70 cm elements as follows. A mark at 1", 6", 11", 16", 21", 26" and 31" (2.5 cm, 15.2 cm, 27.9 cm, 40.6 cm, 53.3 cm, 66 cm & 78.7 cm). After using the square to mark a line across the board, mark the center of the boom along each line.

The next step in preparing the boom is to mark the two holes for the feed-point. The feed-point is located at the 26" (66 cm) mark on the boom. From the center mark on the boom, measure out 3/8" (9.5 mm) in both directions and mark for drilling two holes. The spacing between the two marks should end up being 3/4" (19 mm) apart. If you are using #6 hardware then drill two 9/64" holes through the boom to attach the dipole elements.

"The Dot Descratcher"

Here is a device back from the 30s. It was first offered by TR McElroy and Co. This device eliminates "scratchy dots" resulting from both spring bounced and well pitted dot contacts on bugs. This one is offered by Jim W0EB and sells for $20. It is made from aluminum block stock and uses .055" music wire as the "catch." I have installed two on my bugs and pictured below is my favorite 1937 Telegraph Apparatus Co. "Hole-in-the-Wall" bug.

Because transmitters in yesteryear had high voltage across the contacts the contacts often became pitted and would not make a solid "dit" hence the scratchy sound. The dit spring can "slide" across the dit and "slurry" the sound. I am very pleased with the performance of the "Dot Descratcher."



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Local Area 2 Meter Net and 10 Meter Chats

Sunday 9:00 p.m. The ARES Net on 145.370 - Ken, K8KIC -Net Control
Tuesday and Thursday 10 Meter CW Chat at 8:00 p.m. on 28.050 +/- QRM
Tuesday and Thursday 10 Meter SSB Chat 9:00 p.m. on 28.325 +/-QRM

Local Area Repeaters

W8TQE 145.370 - 85.4 pl Adrian, Michigan
W8TQE 444.675 + 123 pl Adrian, Michigan
K8ADM 443.375 + 107.2 pl Adrian, Michigan
K8ADM has access to Echo Link

Adrian ARC 37th Annual Hamfest and Computer Show

September 14, 2014
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