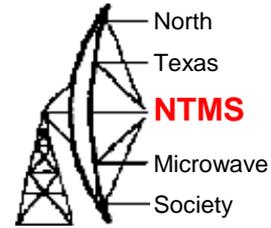


Welcome to the
North Texas Microwave Society
at St. Barnabas Presbyterian Church,
Richardson, Texas

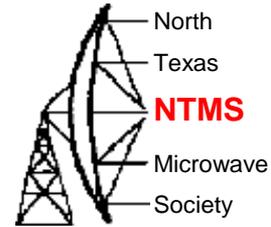
October 3, 2015

October 3rd NTMS Meeting Schedule



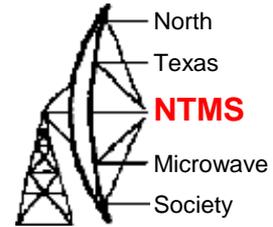
- **Noon – Welcome**
Informal bull and show & tell
- **1PM – Meeting**
Group 10 GHz Contest Results and discussion by
Ross K5ZSJ & AI W5RLG
Bob WA5YWC
Greg AA5C
Bob N5BRG
AI W5LUA
W5LUA Projects (RTL Dongle and Epson 10 MHz reference)
- **Business Meeting**
- **Close**

ARRL 10 GHz Activity



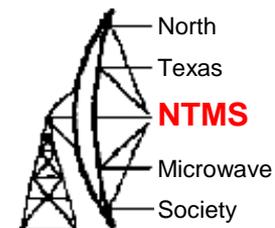
- DFW
W5LUA, WA5YWC, AA5C, WA5VJB,
K5ZSJ, KA5BOU, N5WCO, N5QGH,
K5GW, W5RLG, AA5AM, KC6QHP,
N5BRG, WQ5S
Total of 14 - Excellent!
- Austin
K5LLL, NO5K, K5TRA, Austin stations I did
not work included K5VH and K5TR

AA5AM 10 GHz Success

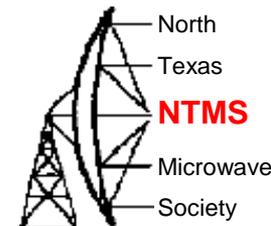


DBM and 8 inch offset fed dish
We worked at 13 miles
Scott also heard W5RLG at 68 miles
And N5WCO at 56 miles
It is a start!

K5TRA's Attic 10 GHz Antenna

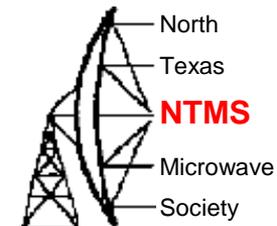


W5LUA Results



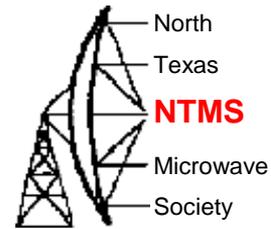
- I entered the 10 GHz & Up class
- 34 QSOs, 17 different stations on 10 GHz including VE4MA on EME, N5QGH and AA5C on 24 GHz and N5QGH on 47 GHz
- 5530 km DX points
- Total score 7530 points
- It was great to see all the DFW activity guys!
- Please send in your score and mention affiliation with the North Texas Microwave Society

Send in your Score!



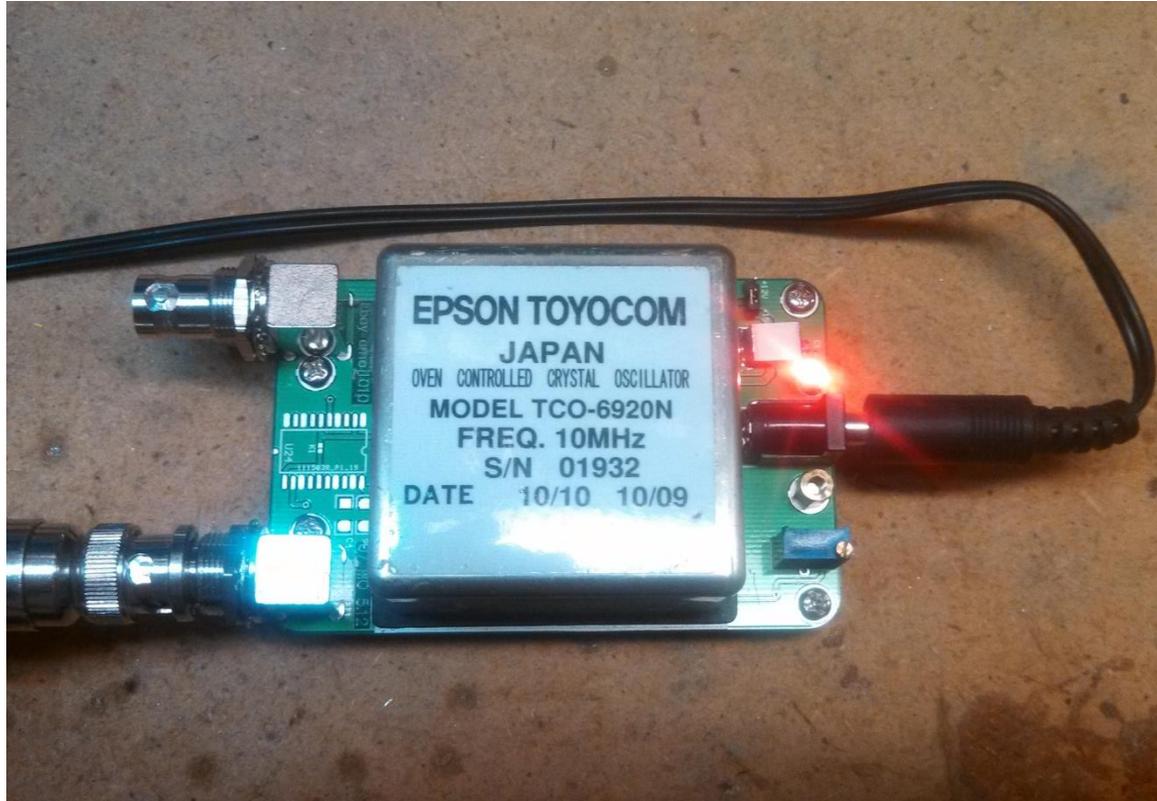
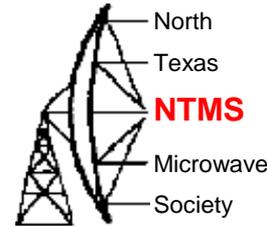
- No matter how big or how small, please send in your score for the ARRL 10 GHz and up contest – It shows NTMS participation!
- Logs must be submitted to the league no later than 0000Z on October 20th
- Paper logs are fine and can be sent to the ARRL Contests, 225 main St, Newington, CT 06111
- Or just draft an email starting with the summary sheet followed by the listing of stations worked and then send to 10ghz@arrl.org
- Date, time, station worked , your 6 digit grid, the other station's 6 digit grid and dx in km
- 100 points for each unique station worked on each band
- I always send my results in email form. Always nice to get a reply from the robot saying all is ok.
- Let me know if you need and help

Sample Log



- From home in EM13pb, W5RLG worked W5LUA in EM13 qc at dx of 9 km
- From EM13ej, W5RLG worked W5LUA in EM13qc at dx of 99 km and N5WCO in EM12mo at dx of 108 km.
- From EM03ub, W5RLG worked W5LUA in EM13qc at dx of 156 km and N5WCO in EM12mo at dx of 135 km.
- W5RLG has worked 2 unique call signs for 100 points a piece plus the sum of all his dx km which amounts to 507 km or 507 distance points.
- Total score = $200 + 507 = 707$ points
- Total QSOs = 5 but this does not enter in to the score

Epson TCO-6920N 10 MHz Reference Oscillator

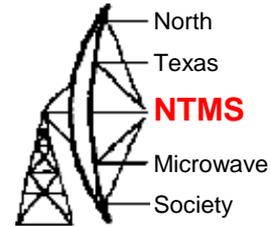


12V or 15V input selectable
Pout = -8 dBm from each port
20 MHz down -50 dBc

Disappointing output power
results since on-line data
sheet for TCO-6920A
suggested an output power of
+ 5 dBm

However, there is a solution....

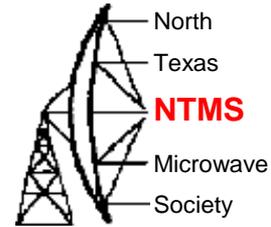
Mod to TCO-6920N



Remove zero ohm resistor at L2
Remove L3
Remove C9
Add 0.1uF cap as shown in picture

Performance
Pout = +5dBm @10 MHz at 1 port only
20 MHz down -36 dBc
30 MHz down -54 dBc
Adequate for our applications
Success!

Email sent to the NTMS Reflector



Hello NTMS

The data sheet for a similar module TCO-6920A that is used by the company that has installed it on the circuit board that is available on EBay suggests an output power of +5 dBm. The circuit board as-is has 2 outputs each of which is putting out about -8 dBm as verified by several listeners out there. The circuit consists of 2 low pass filters tied to the common output of the module. One would normally expect a 3 dB decrease in power with a well designed Wilkinson divider that does not use any resistive elements. That only suggests that the module may be putting out -5 dBm. I decided to bypass the low pass filtering and couple directly to the output of the module and only use 1 output. The following mod increases the power output up to the rated +5 dBm with the second harmonic still being down -36 dBc and the third harmonic down -54 dBc.

Here are the mods

Remove zero ohm resistor at L2

Remove L3

Remove C9

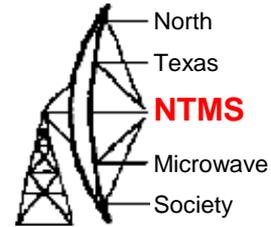
Add 0.1 uF cap as shown in picture.

Let me know if you need any help with the mod.

73

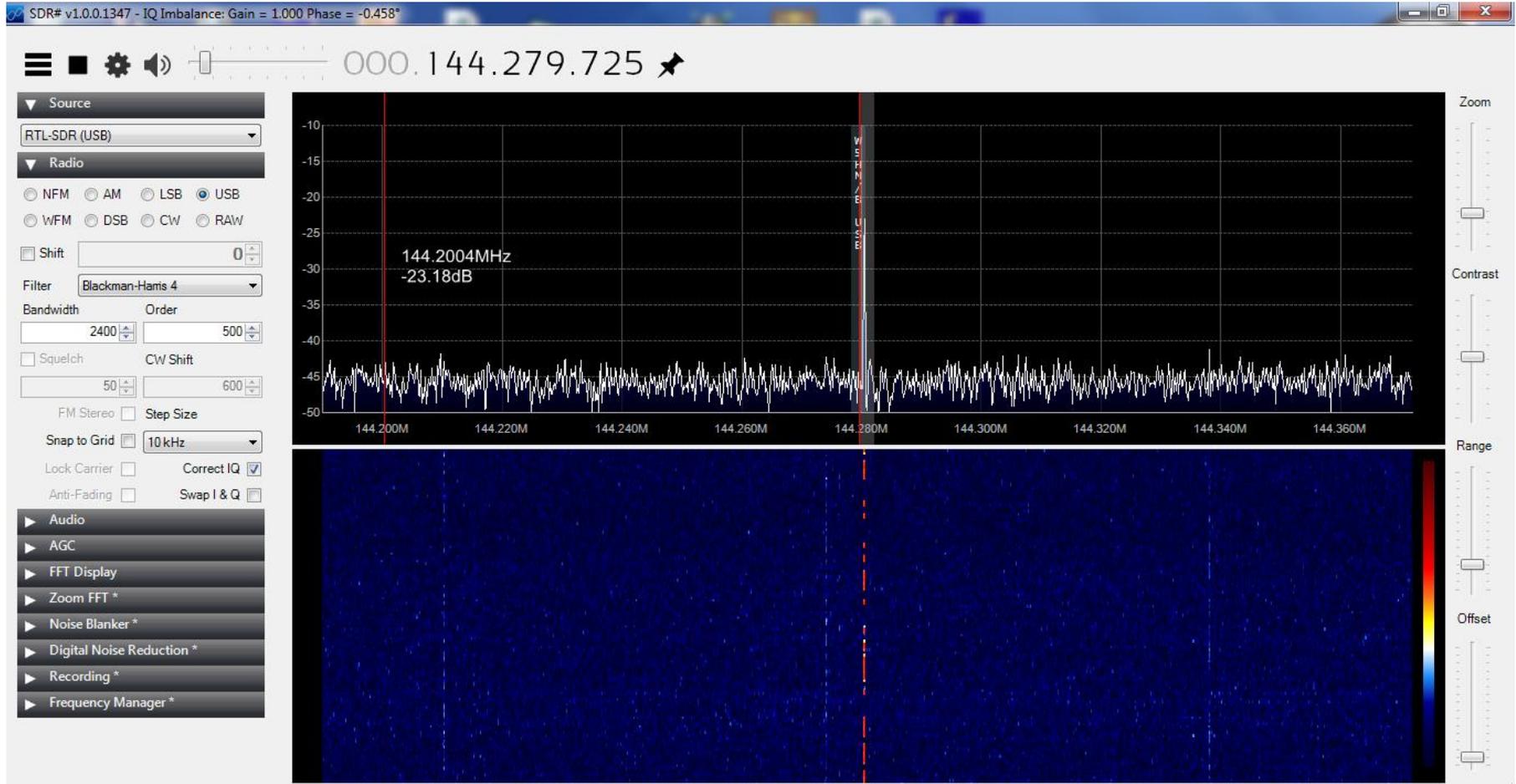
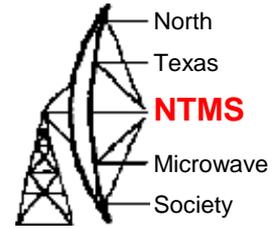
AI W5LUA

Inexpensive SDR

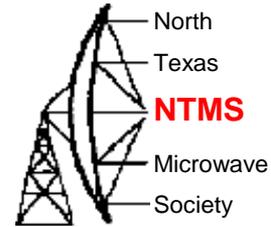


- RTL 2832u (Uses R820T chip)
- Download SDR Sharp
- WinBook 7" TW700 Tablet
- Frequency error of about 10 kHz at 144 MHz – had to offset frequency in setup by 76 ppm under Setup button

W5HN/B 2M Beacon

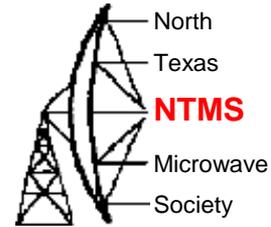


November and December Meetings



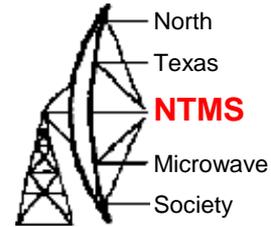
- Using video carriers as propagation monitors by Wes WA5TKU
- USRP Transceiver with SoDa Radio Software by Eric KC4YOE @ November Meeting
- Using an RTL Dongle as a panadapter by Eric NM5M ?

2015 NTMS Schedule



- October 3rd – NTMS Meeting @ St. Barnabas Church (12 - 4PM)
- November 7th – NTMS Meeting @ St. Barnabas Church (12 – 4 PM)
- December 5th – NTMS Meeting @ St. Barnabas Church (12 – 4 PM)
 - Election of 2016 NTMS Officers

Business Meeting



- Treasurer's Report – WA5TKU
- Secretary's Report – KC4YOE
- Old Business
- New Business
 - Re-instating Dues
 - Flea-market?
 - Other items?
- Any other discussion?
- Adjourn