

# Single Yagi EME

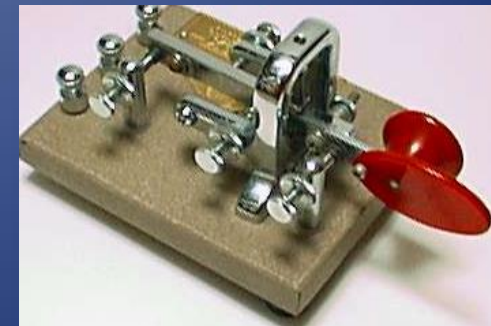
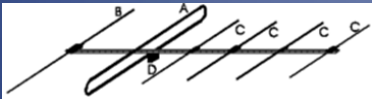
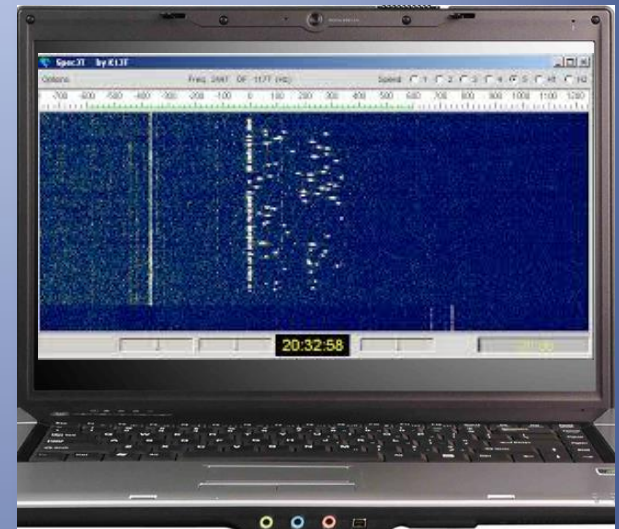


Rick Rosen K1DS

Mid-Atlantic States VHF Conference  
2018



# What you may need for an EME QSO



# N0UK WSJT EME - 2. <https://www.chris.org/cgi-bin/jt65emeB>

PingJockey Central WSJT Terrestrial WSJT EME - 1 CW EME Who's Earwigging?  
Distance/Bearing Locator Refresh Look back Update User details Refreshed 28Sep  
13:38

Due to recent abuse of this system, you will be unable to post any messages until you complete the User Details page  
Exchanging any contact details on here before you're complete, invalidates the contact, and, if it's not WSJT via Moonbounce it doesn't belong here!

Enter your message here

DDMMM UTC

27Sep 23:58 ..... ===== {WC4N Mike TN EM86uk 47.40.234.137}  
26Sep 01:08 CQ 432.065 1st ===== {LU1HKO Fernando xx FF78vn 181.110.169.173}  
26Sep 01:08 432.065 ===== {LU1HKO Fernando xx FF78vn 181.110.169.173}  
26Sep 01:05 Anyone for 432 ? ===== {LU1HKO Fernando xx FF78vn 181.110.169.173}  
25Sep 00:40 Anyone for 432 Test? ===== {KD2LGX/2X9H/500 Larry NY FN13ig 74.74.225.168}  
24Sep 00:29 432.065 ===== {LU1HKO Fernando xx FF78vn 181.110.145.237}  
24Sep 00:29 GN, Anyone for 432 test? ===== {LU1HKO Fernando xx FF78vn 181.110.145.237}  
24Sep 00:23 rx on 432.065 ===== {LU1HKO Fernando xx FF78vn 181.110.145.237}  
23Sep 03:54 CQ 144.120 AB4YK FM18ar ===== {AB4YK Neil VA FM18ar 174.204.19.53}  
23Sep 03:52 cq AB4YK Neil FM18ar ===== {AB4YK Neil VA FM18ar 174.204.19.53}  
23Sep 00:23 Stop CQ 432.088 73, GL QRT ===== {KD2LGX/2X9H/500 Larry NY FN13ig 74.74.225.168}  
22Sep 23:36 Understood Filippo, tree will be out of my way in a bit hi hi ===== {KD2LGX/2X9H/500 Larry NY FN13ig 74.74.225.168}  
22Sep 23:34 Yes, I'm tx but conditions are really border-line ===== {IU2KXV Filippo xx JN45up 146.241.242.170}  
22Sep 23:33 Yes, I'm tx but conditions are really border-line ===== {IU2KXV Filippo xx JN45up 146.241.242.170}  
22Sep 23:20 NP was wondering if you were still transmitting, looking for you now .088 ===== {KD2LGX/2X9H/500 Larry NY FN13ig 74.74.225.168}  
22Sep 23:19 Hi Larry, didn't see your question. I'm still here on .088 ===== {IU2KXV Filippo xx JN45up 146.241.242.170}  
22Sep 23:16 cq 432.088 second ===== {IU2KXV Filippo xx JN45up 146.241.242.170}  
22Sep 23:14 CQ CQ 432.088 first ===== {KD2LGX/2X9H/500 Larry NY FN13ig 74.74.225.168}  
22Sep 23:10 IU2kxv Filippo, are you still QRV? ===== {KD2LGX/2X9H/500 Larry NY FN13ig 74.74.225.168}  
22Sep 22:37 cq cq 432.090 ===== {IU2KXV Filippo xx JN45up 146.241.242.170}  
11Sep 23:36 stop cq 432.090 ===== {KD2LGX/2X9H/500 Larry NY FN13ig 74.74.225.168}  
11Sep 23:16 CQ CQ 432.090 first ===== {KD2LGX/2X9H/500 Larry NY FN13ig 74.74.225.168}



EME LOGGER (CW, SSB, JT)50MHz144MHz222MHz432MHz902MHz1296MHz2300-5760MHz10000MHz and up

Who's online? K1DS (me)

|                |       |                |  |
|----------------|-------|----------------|--|
| 09-28 05:07:48 | DK3WG | Jurg           | gm/ge  |
| 09-28 04:50:02 | KA1GT | Bob            | KA1GT will be QRT unless there's anyone else who wants to try  |
| 09-28 04:47:01 | KA1GT | Bob            | Tnx and 73   |
| 09-28 04:46:50 | KA1GT | Bob            | Hope you can get a little more power. Even 3dB would make a huge difference. Dgrd is -1.2, so at perigee we might make it without AP help! |
| 09-28 04:46:45 | 4x1aj | Andrey B.Ezhov | 73!  |
| 09-28 04:46:36 | 4x1aj | Andrey B.Ezhov | thank you so much,Bob.It's about Moonset here.I'm gonna park the dish  |
| 09-28 04:45:34 | 4x1aj | Andrey B.Ezhov | SWR is below 1.1   |
| 09-28 04:44:55 | KA1GT | Bob            | RR. I have around 250W at feed, so ~ 10dB difference. Sounds about right   |
| 09-28 04:43:55 | 4x1aj | Andrey B.Ezhov | It means about 30-35 W outbut and 30 w at feedpoint  |
| 09-28 04:43:09 | 4x1aj | Andrey B.Ezhov | BTW,part of my dish has been closed by trees already.Yes,but the cable is short enough - 5 m LMR400  |
| 09-28 04:41:40 | KA1GT | Bob            | Is that 30W at the feed?   |
| 09-28 04:40:09 | KA1GT | Bob            | You are my init #88 and first 4X1  |
| 09-28 04:39:41 | 4x1aj | Andrey B.Ezhov | Of course, here is 30 Watts only   |
| 09-28 04:39:10 | KA1GT | Bob            | That was incredibly weak! Got your RRR and 73's by eye (no decode), but it counts!   |
| 09-28 04:38:27 | 4x1aj | Andrey B.Ezhov | TNX FOR A NEW init #41   |
| 09-28 04:35:26 | 4x1aj | Andrey B.Ezhov | THANK YOU!!!   |
| 09-28 04:35:25 | KA1GT | Bob            | Got you -30 with AP 0434 -30 2.7 606 ## KA1GT 4X1AJ OOO a3   |
| 09-28 04:34:03 | 4x1aj | Andrey B.Ezhov | answering...   |

2m CW EME DX station antenna gain approx 21 dB, +KW EIRP = 126 KW  
 My station antenna gain est 14 dB, +350 W EIRP = 7 KW



**OZ1HNE**  
 Jorgen Kristiansen  
 Stidsholtvej 27  
 9300 Saeby  
 Denmark  
 oz1hne@post8.tele.dk

**Confirming EME QSO With:** K1DS **Date (MM/YY)** 28/11/10 **Time (UTC)** 0428 **Freq (MHz)** 144 **2 way** CW **RST** 529

**RX/TX:** FT-1000 MP + LTDS + 8877  
**Ant:** 8x8 elm. cross yagi's H/V **Vy 73** **OZ1HNE** **Jorgen** **PSE** **I await QSL** ☒  
**Remarks:** TNX FB CW EME QSO! **TNX** **QSL already received** ☐

**POLISH VHF/UHF/SHF STATION**  
**SP7DCS**

**QTH:** ŁÓDŹ **LOCATOR:** JO91RT **OP:** CHRIS  
**K1DS**

**TO RADIO**  
 Thanks for QSO on 19.01.2006 at 03:30 UTC  
 Freq 144 MHz **EME** Your Rpt 0 Mode CW  
 TCVR IC-746 + 6535B W out PSE **TNX QSL**  
 Antenna: 16x8 el Yagi **VY73!** Chris **Direct or PZK**

**Address:** Krzysztof Moczowski, ul. Nastrojowa 52 m 6  
 91-496 ŁÓDŹ - Radogoszcz Wschód POLAND

**SV1BTR** **TO RADIO** K1DS

| DATE        | G.M.T.      | FREQ    | MOD | RST     | RIG INFO   |
|-------------|-------------|---------|-----|---------|--|
| 21 NOV 2010 | 21:52-22:03 | 144,042 | CW  | "0" 529 | RX: FSC11LF 0.3m + TRV<br>TX: IC-735<br>ANT: 6x6 el. xpol 21,5 ddb<br>POWER: 2xgu74b |

**QSL:** **PSE** ☐ **TNX** ☒ **LOCATOR:** KM17VU  
KM18NO

**MODE:** **EME** ☒ **MS** ☐ **E-s** ☐ **FAI** ☐ **TROPO** ☐ **SAT** ☐

Thank you for the FB 2m CW EME QSO Rick!  
 Congrats for your fine setup!

73s.....de SV1BTR  
**TNX FOR THE NICE QSO**  
 Jimmy

**DIMITRIS VITTORAKIS**  
 THIVON 6 - 16673 VOULA  
 ATHENS GREECE  
 e-mail: jimmyv@hol.gr





K1DS Single Yagi est gain 15 dBi + 100W = 3KW EIRP







25 meter dish = 38.9 dB gain 432 MHz  
+200W = 1.5 MegaWatts EIRP

48.3dB gain at 1296MHz  
+150W = 10.1 MegaWatts EIRP

**PI9CAM**





16 X 13 element Yagis = gain est 26 dBi + 750W = 300,000 Watts EIRP

GERMAN  
AMATEUR  
RADIO  
STATION



D  
L  
7  
A  
P  
V



# DL7APV newly erected 128 11 element Yagi EME array





8m dish = 28.9 dB gain at 432 MHz + 750W = 582 KW EIRP





8.3m dish = 29.3 dB gain at 432 MHz  
+ 1KW = 851 KW EIRP

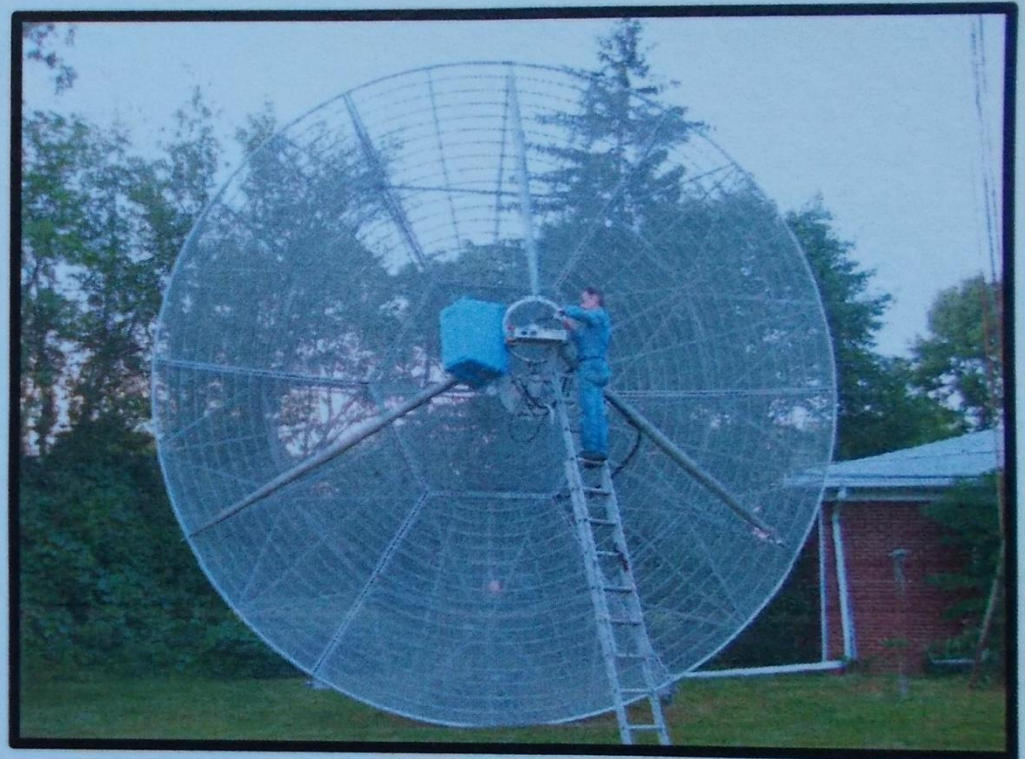
38.9 dB gain at 1296 MHz  
+400W = 3.1 MegaWatts EIRP

## WEST WINDSOR, NEW JERSEY USA

Al Katz  
1621 Old Trenton Road  
West Windsor, NJ 08550

EME ~ FN20qg

[a.katz@ieee.org](mailto:a.katz@ieee.org)



# K2UYH



# VK3UM EME Calculator [EMECalc]

This software, with the addition of a simple level indicator and preferably an in-line switched attenuator, will provide a most accurate way of assessing your equipment's performance.

This software will accurately predict, to a very high degree;

- the level of your own Moon echoes

- the level of Echoes you will receive from another Station

- the level of Echoes the other Station will receive from you

- the level of Sun Noise you and the other Station will receive.

- the level of Moon Noise you and the other Station will receive and

- the level of received Galactic Noise you will expect to receive with combinations of Sources.

Download EMECalc at:

<http://www.vk3um.com/eme%20calculator.html>

<http://www.vk5dj.com/doug.html>



30 X 15 el Yagis = est gain 27 dBi at 432 MHz + 1300 W = 650 KW EIRP

## EUROPEAN RUSSIA

WAZ: 16 ITU: 29 Loc.: KO93BS RDA: TL-07

# UA3PTW

TO RADIO

KIDS

VIA

DATE

5, Nov 2017

UTC

0143

MHz

432

RST

0  
-22

2-way

JT650  
EME

**Dmitrij Kozlov**

P. O. Box 6, Bogoroditsk  
Tulskaya obl. 301835  
RUSSIA

e-mail: [ua3ptw@inbox.ru](mailto:ua3ptw@inbox.ru)

Pse **QSL** Tnx

**73!**

UA1OMS QSLprint <http://www.quadrat.ru/qs1>



UA3PTW 432MHz





# NC11

48 X 15 el K1FO 432 MHz Yagis  
Est gain = 28 dB  
+ 1500 W = 940 KW EIRP

4.5m dish at 1296 MHz  
Est gain = 33.4 dB  
+1 KW = 2.1 MegaWatts EIRP



16 X 27 element Yagis at 432 MHz est 26 dB gain + 700 W = 278 KW EIRP

**DF 3 RU**





This is the QSL from the W3CCX Camelback June 2017 10GHz QSO using the WA3LBI station

Czech Republic  
Club station

# OK1KIR

WAZ 15 ITU 28

## JN79DW740Q

Lat.: 49.938136 N Lon.: 14.313319 E

432 MHz up to 24 GHz

**DXCC**

432 MHz #8  
1296 MHz #3

**WAC**

144 MHz  
432 MHz  
1296 MHz  
2300 MHz  
5760 MHz

**WAZ EME**

37 zones

[www.ok1kir.cz](http://www.ok1kir.cz)



Cables maintenance



Arrangement for 1296 MHz and MW operation



15.3m dish gain at 432 MHz = 34.5 dB  
+ KW = 2.8 MegaWatts EIRP

10m dish at 1296 MHz = 40.4 dB gain  
+ KW = 40.4 = 10 MegaWatts EIRP

# HB9Q



**DX-Group HB9CRQ**



**KP4AO** Arecibo, 530m dish, 61 dB gain at 432MHz.  
Using 35W = 34 MegaWatts EIRP Using 500W=498 MegaWatts EIRP



WAZ 8 ARECIBO, PUERTO RICO ITU 11  
Grid-FK68OI

✓ **KP4AO WP3R**  
Club Station op. Angel M. Vazquez  
PC Systems Specialist-Consultant/Advisor

Confirming QSO with: K1DS

18 APR 10 1957Z 432MHz 2xCW 599

TNX EME QSO!

QSL manager  
W3HMK

UNSLD post

Thanks for QSO / QSL  
73











# My Florida QSL card

