

# The 144 MHz EME NewsLetter

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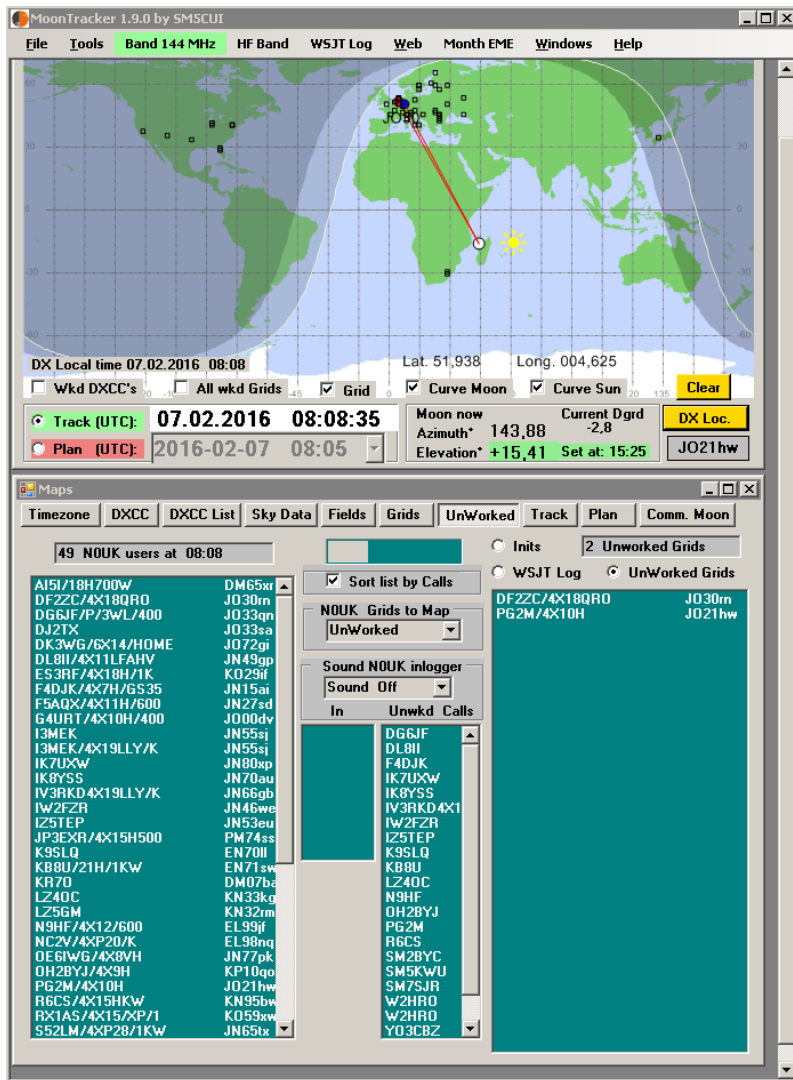
[www.df2zc.de](http://www.df2zc.de)



Issue 2/2016 7 Feb 2016

## MoonTracker - Calculating the Moon And More

There is a fair number of EME calculating software available: VK3UM EME Planner, MoonSked by GM4JJJ, Skymoon by W5UN, EME system by F1EHN etc to name but a few. Rune SM5CUI has now added yet another one with some very special features.



Main window of MoonTracker including the “unworked grid” feature

His project “MoonTracker” started early in 2014 when he tried to find a way to get auto elevation for his antennas. For a long time he had been using the F1EHN software to rotate his antennas in azimuth while he manually set the elevation using an actuator. Rune writes he was inspired by F1EHN’s world map with the moving moon curve in real time and planning date and time. He wanted to create something similar, but his knowledge of programming was then limited to old QBasic only.

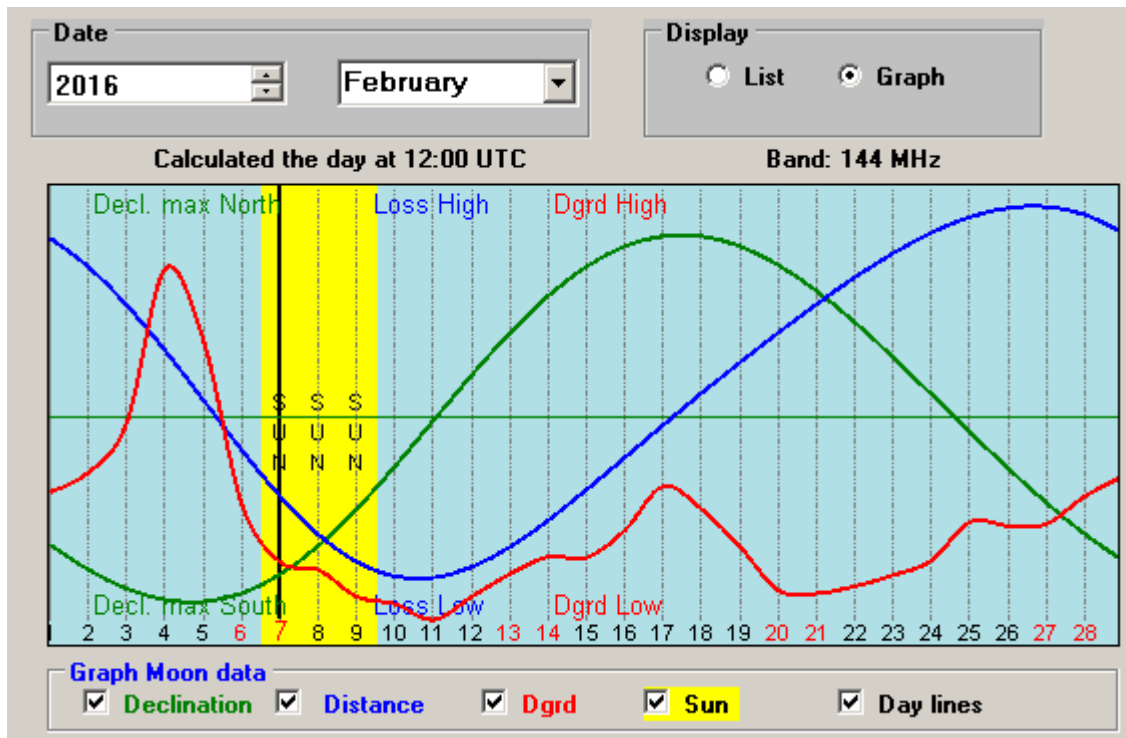
Sometimes however it pays off to have the right relatives: His wife’s sister’s son Jonny is an experienced programmer and was very happy to help when asked. So right from the start this was a combined work of Jonny and Rune. They decided to use C# (C Sharp) which for both of them was a new programming language, with lot of fun learning and playing with it. Their goal was to make a software for tracking the

moon and that's why they gave it the name MoonTracker. The initial idea was to track Rune's antenna elevation with data from the program to an Arduino hardware. For some time there even was a working version, but later Rune and Jonny decided to separate the programs.

Tracking		DX Station		UTC Now		
Locator	Home Station: JO30RN	PF95jg		07.02.2016 08:16:28		
Latitude*	+50,562500	-34,729167		Doppler 144 MHz		
Longitud*	+007,458333	+138,791667		Home	DX	Common
Azimuth*	+145,64	+252,84		+203 Hz	-286 Hz	-42 Hz
Elevation*	+16,12	+02,33		Moon Rise / Set / Max elevation		
Home Set UTC		DX Set UTC		Polarity Offset*		
15:25 at Az 244*		08:29 at Az 251*		+32		
Max elev. 22,8* at 10:41		Max elev. Past		Dgrd 144 MHz		
				-2,8		

Tracking window

Jonny also got hold of a world map. It was not so detailed as required but most importantly with correct dimensions. So he programmed the moon and sun footprint curves on it. As Jonny is not a radio ham Rune then started to include ham related things such as maps, DXCC list, fields and grids. The Sky map is a copy of F1EHN's software. Jean-Jacques kindly gave him the permission to use it in MoonTracker.



Monthly moon conds calendar

During the development process Rune added a lot special features such as common moon and EME month display, also triggered by some other EME hams acting as testers of preliminary versions. Wayne VK5APN for instance came up with the idea to analyse the NOUK logger and display it whenever a new station logs in.

Not surprisingly MoonTracker also tracks the DXCCs and grid squares worked. They easily can be imported in ADIF log file format, for example from VQLog by EA6VQ. As many EME stations are QRV on HF as well, Rune has also added an import feature for those bands. However, it is also possible to enter the data manually. Having that data base available Rune added an alert ping, whenever a user with a not worked grid square logs in. So grid chasers can now easily check if a new square appears in the NOUK users list. Of course all sounds can be muted.

**Common Moon**  
Band 144 MHz

Not available now.  
 Count Down current Moon pass

February 2016

Mo	Di	Mi	Do	Fr	Sa	So
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	1	2	3	4	5	6

Heute: 07.02.2016

14 Days of Common Moon JO30RN --- PF95jg

\*\* Click a line for a detailed list \*\*

	Start		End	Duration	Dgrd
2016-02-07	08:16	2016-02-07	08:29	00 : 13	-2.8
2016-02-08	06:38	2016-02-08	09:16	02 : 38	-2.5
2016-02-09	07:13	2016-02-09	10:00	02 : 47	-1.7
2016-02-10	07:45	2016-02-10	10:42	02 : 57	-1.4
2016-02-11	08:16	2016-02-11	11:22	03 : 06	-0.9
2016-02-12	08:46	2016-02-12	12:02	03 : 16	-1.7
2016-02-13	09:17	2016-02-13	12:43	03 : 26	-2.4
2016-02-14	09:51	2016-02-14	13:26	03 : 35	-2.9
2016-02-15	10:28	2016-02-15	14:11	03 : 43	-2.9
2016-02-16	11:10	2016-02-16	14:59	03 : 49	-3.9
2016-02-17	11:58	2016-02-17	15:51	03 : 53	-5.2
2016-02-18	12:52	2016-02-18	16:45	03 : 53	-3.9
2016-02-19	13:51	2016-02-19	17:42	03 : 51	-2.9
2016-02-20	14:53	2016-02-20	18:39	03 : 46	-1.7

Common moon: By clicking on a particular date a detailed list is being displayed.

Most of the needed data in real and planning time is already included in the software. However the software is still under construction and new ideas and comments are welcome. The application is

Maps

Timezone DXCC DXCC List Sky Data Fields Grids UnWorked Track Plan Comm. Moon

Field: KH 5 Grids

09	19	29	39	49	59	69	79	89	99
08	18	28	38	48	58	68	78	88	98
07	17	27	37	47	57	67	77	87	97
06	16	26	36	46	56	66	76	86	96
05	15	25	35	45	55	65	75	85	95
04	14	24	34	44	54	64	74	84	94
03	13	23	33	43	53	63	73	83	93
02	12	22	32	42	52	62	72	82	92
01	11	21	31	41	51	61	71	81	91
00	10	20	30	40	50	60	70	80	90

Info  
Click to set a Grid  
Double Click to Clear  
Select Field in tab Fields

Grid(s) to World Map

Band  
144 MHz

Enter a Field

1133 Grids total

- AH16
- AH36
- AH45
- BG08
- BH01
- BH52
- BK29
- BL02
- BP40
- BP51
- CM87
- CM88
- CM94
- CM96
- CM97
- CM98
- CM99
- CN72
- CN73
- CN80
- CN82
- CN83
- CN84
- CN85
- CN86
- CN87

rather small (~680 kB) and can be downloaded free from [sm5cui.weebly.com](http://sm5cui.weebly.com). It runs with Windows XP (Microsoft.NET then needs to be installed) and up. No changes to registry and internal settings on the PC are done. All data is saved only in the MoonTracker directory.

Left: Example of Grid square tracking (Screen shots DF2ZC)

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## A Video from HV0A

Chris PA2CHR has uploaded a very nicely made video about last years activity by him and Lins PA3CMC from Vatican City to the youtube platform:

<https://www.youtube.com/watch?v=uzjPD46tR1s> It brings back the real DXpedition feeling...

On youtube you also find videos of other DXpeditions Chris and friends have conducted the recent years or even decades. Just search for "PA2CHR".



## V51PJ (Namibia) QRV on EME!

Usually rare DXCC entities only become QRV when there is a dedicated DXpedition. Namibia is a good example for this. In 2005 there was some activity by V51/ZS5Y who used his free time during a work stay there for EME. And in 2009 a real DXpedition was QRV led by Dan HB9Q.

That was all...until now: In January 2016 a local station showed up on 2 m EME. Pieter V51PJ lives in JG82IE and is currently QRV with 2 x 13 elements and 1 kW out. So far no elevation is available but many QSOs were made though.

Pieter shows up on N0UK every now and then.

Left: V51PJ's antennas (Photo V51PJ)

## Upcoming DXpeditions

For more information on current and upcoming DXpeditions please have a look at [www.mmmonvhf.de](http://www.mmmonvhf.de) from where most of the information here was gathered.

### FG4KH Guadeloupe

F1DUZ will be QRV from the FG4KH location (FK96HF) in Guadeloupe from February 17<sup>th</sup> to March 31<sup>st</sup>. All EME activity will be holiday style only. Please keep an eye on the latest news at [www.mmmonvhf.de](http://www.mmmonvhf.de) as well as on the N0UK logger. FG4KH will be QRV with the usual setup: FT 857D, LNA, 600 W SSPA (home made) and 2 x 10 ele DK7ZB. Have a look at Philippe's dedicated website for more information: <http://fgdexpeditionf1duz.monsite-orange.fr/>

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## KH6/KB7Q (BK29)

Gene has arrived on Hawaii and settled into the rental house. All the gear arrived safely. He has already been to the EME ocean-side operating QTH 10 miles north of his house (BK29MO) and it looks superb. A big thank you goes to KH6LC for helping find the best location. Start of activity is scheduled for February 11<sup>th</sup>. Latest news are on <http://kb7qgrid.blogspot.de/>

## Time Table

*Due to travel by DF2ZC there will be no March Newsletter this year.*

13 Feb	1000-1200 Z	CW Activity Event
	1900-2100 Z	CW Activity Event
12 Mar	0900-1100 Z	CW Activity Event
	1730-1930 Z	CW Activity Event
4 Apr		April issue of the 144 MHz EME NewsLetter ready for download at <a href="http://www.df2zc.de">http://www.df2zc.de</a>
19 – 21 Aug		17 <sup>th</sup> International EME Conference, Venice/Italy <a href="http://www.eme2016.org">www.eme2016.org</a>

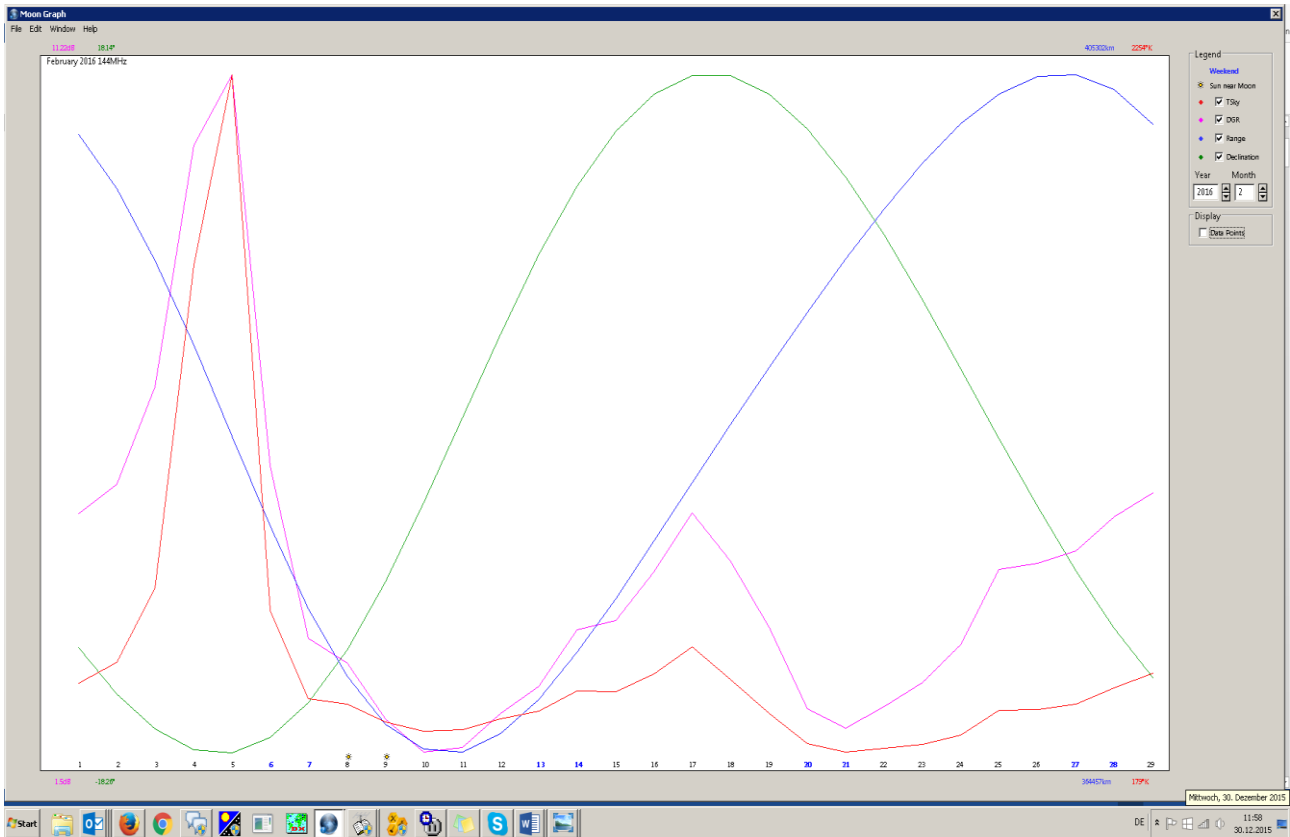
### **The 144 MHz EME NewsLetter**

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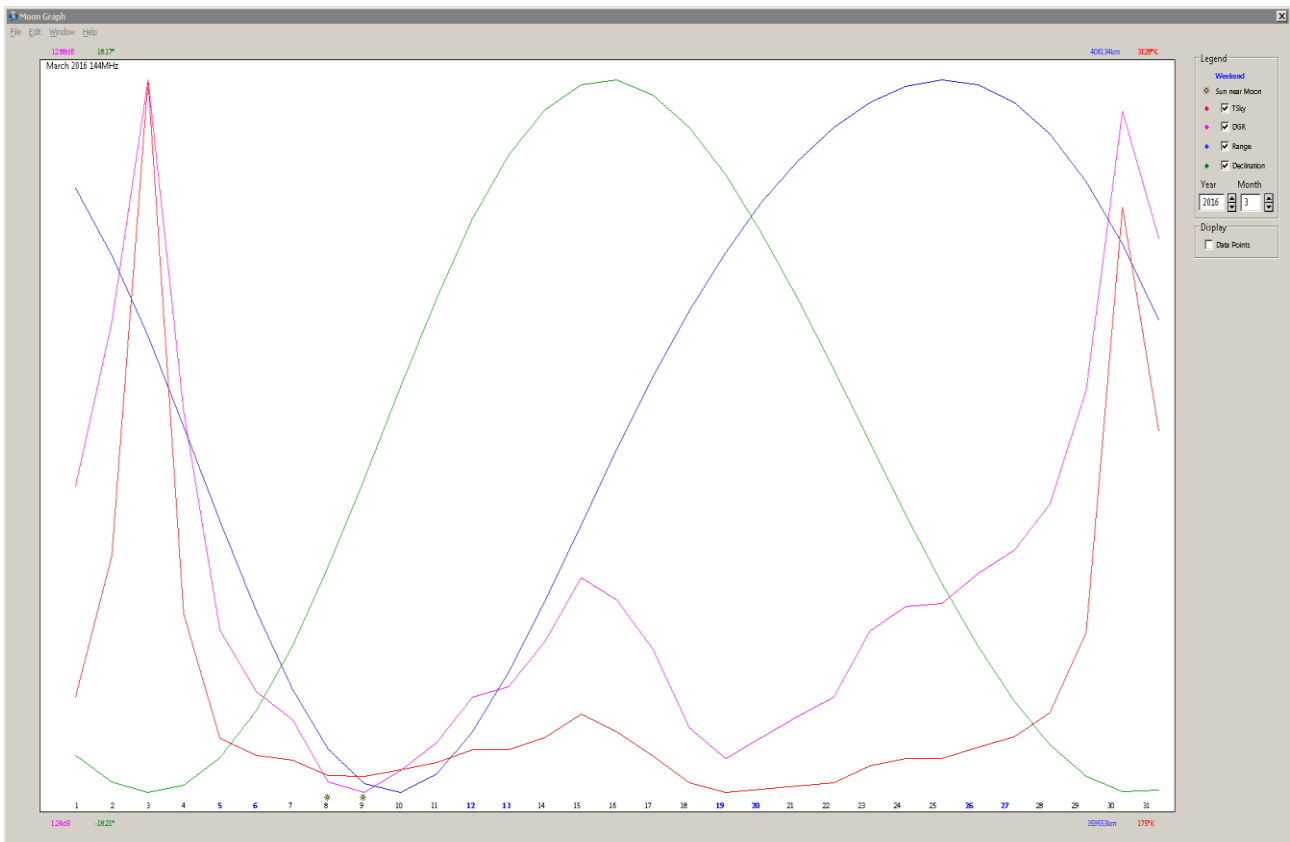
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**Latest DXpedition Info:**  
[www.mmmonvhf.de](http://www.mmmonvhf.de)



Moon Graph February 2016



Moon Graph March 2016

(Courtesy of David GM4JJJ ([www.gm4jjj.co.uk/MoonSked/moonsked.htm](http://www.gm4jjj.co.uk/MoonSked/moonsked.htm)))