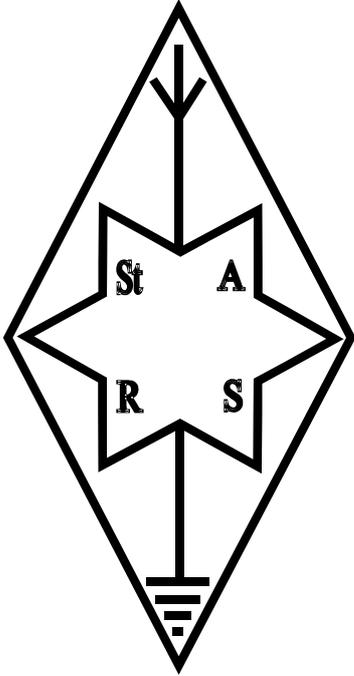


# STARLITE

G6OI  
1938

The Award Winning Newsletter for Members and Friends of  
**Stourbridge and District  
Amateur Radio Society**  
incorporating  
**Old Swinford Hospital School Radio Club**

G6SRS  
1938



G4CVK  
1969

**ISSUE**  
**01/2014**



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# STARLITE

## MEETINGS

Visitors always welcome  
The Society holds its full meetings on the  
1st and 3<sup>rd</sup> Monday of each month at

**Old Swinford Hospital School  
Heath Lane  
Stourbridge  
(8.00pm – 10.00pm)**

Additionally the shack is open during the same times on the  
intermediate Mondays

Telephone Enquiries to :-  
Hon Secretary  
John Clarke M1EJG  
(01562) 700513

Or by e-mail to :-  
honsec@g6oi.org.uk

All correspondence/enquiries should be  
addressed to the Hon. Secretary :-  
STARS  
c/o The Mill House  
21 Mill Lane  
Blakedown  
Kidderminster  
DY10 3ND

STARS Web Site URL :-  
[www.g6oi.org.uk](http://www.g6oi.org.uk)



# STARLITE

## THIS MONTH'S STARLITE

The Stars Club will be running a series of classes for the Foundation Course which it is proposed will be running from 27 Jan 2014 up to the examination on 10 March 2014. The various classes will affect the Calendar of Events to some extent during February and March. If you know of anyone interested in studying for the Foundation course, please contact James French as there may be places available.

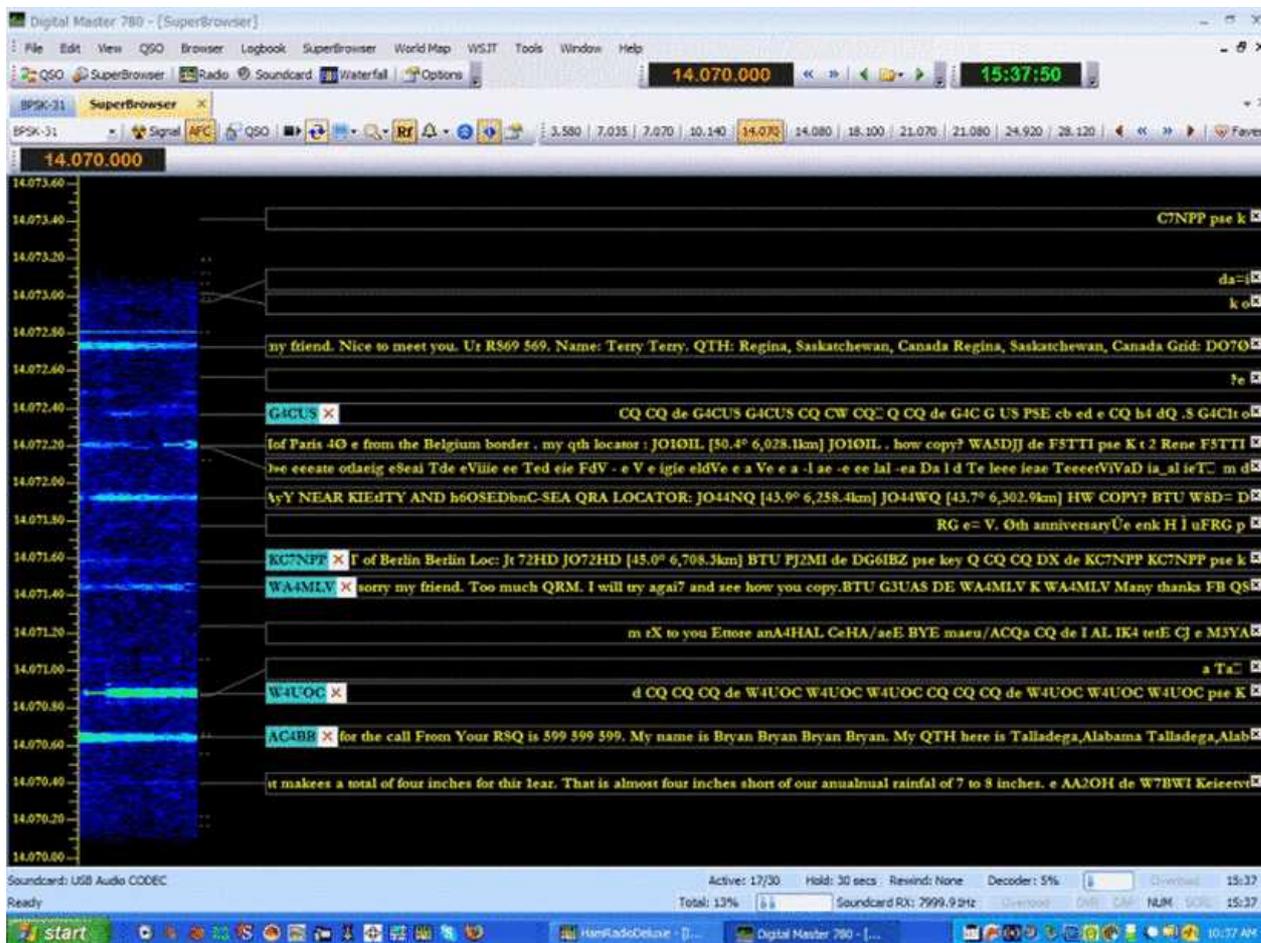
We had a large number of items in the club annual surplus sale. Please see Malcolm's regular Roving Reporter article near to the end of this newsletter for photographs and details, plus some interesting but chilling recollections from Malcolm.

We are again fortunate to have permission to reprint an article from John Haddleton on PSK31. You may find some blank space in this article. This has been necessary in order to print some of the screen shots at a reasonable size, so that they can be viewed easily.



# STARLITE

## A DUMMY'S GUIDE TO DIGITAL MODES - PART 2



### [A Screenshot of Digital Master 780, a program for PSK31](#)

This Program is a part of the Ham Radio DeLuxe Suite, which includes Rig Control and Logging all interlinked. (With this program you can monitor up to 20 Stations at once!)

## 2. JT65A

This digital mode is getting more and more popular.

Slow callsign and signal report digital mode, takes almost a minute to send a 13 letter message at the 60/0 second point of each minute.

Essential to synchronise PCs using the mode all to the same second this is done with a program called 'Dimension 4' which synchronises every computer to the Atomic Clock.

Extremely good with weak signals and low power.

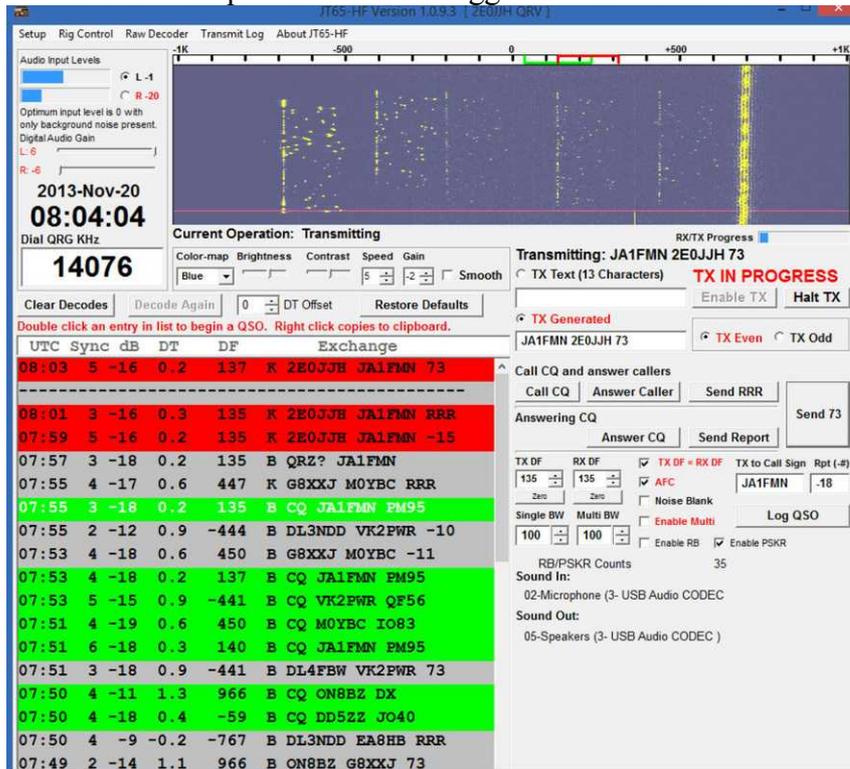
Lots of activity . great for long distance "hauls" to Asia and Oceania.

Only very low power is needed to get a signal round the world.



# STARLITE

Great where it is impossible to erect bigger and more efficient antennas.



## Screenshot of JT65HF Program in action

This shows me (2E0JH) 'working' a Japanese station JA1FMN on 14.076 Mhz .... You will see that he is calling CQ - I go back with 10 Watts, but he calls 'QRZ' - so I up the power to 20 Watts, and we exchange signal reports in -db, and then exchange 73's. This just shows what is possible, without anything more than a USB interface, and a free program.

Frequencies used are 7.0760, 14.0760, 21.0760 and 28.0760 Mhz.

### 3. WSPR

(PRONOUNCED 'WHISPER')

Slow weak signal mode.

Often one-way beacon only but some 2-way versions of the software still exist.

Callsign, QTH, and signal report mode only.

No QSO-type conversations. Fairly commonly heard on 30M.

Usual Power on Transmit is 5 - 10 Watts

'Distant Whispers'

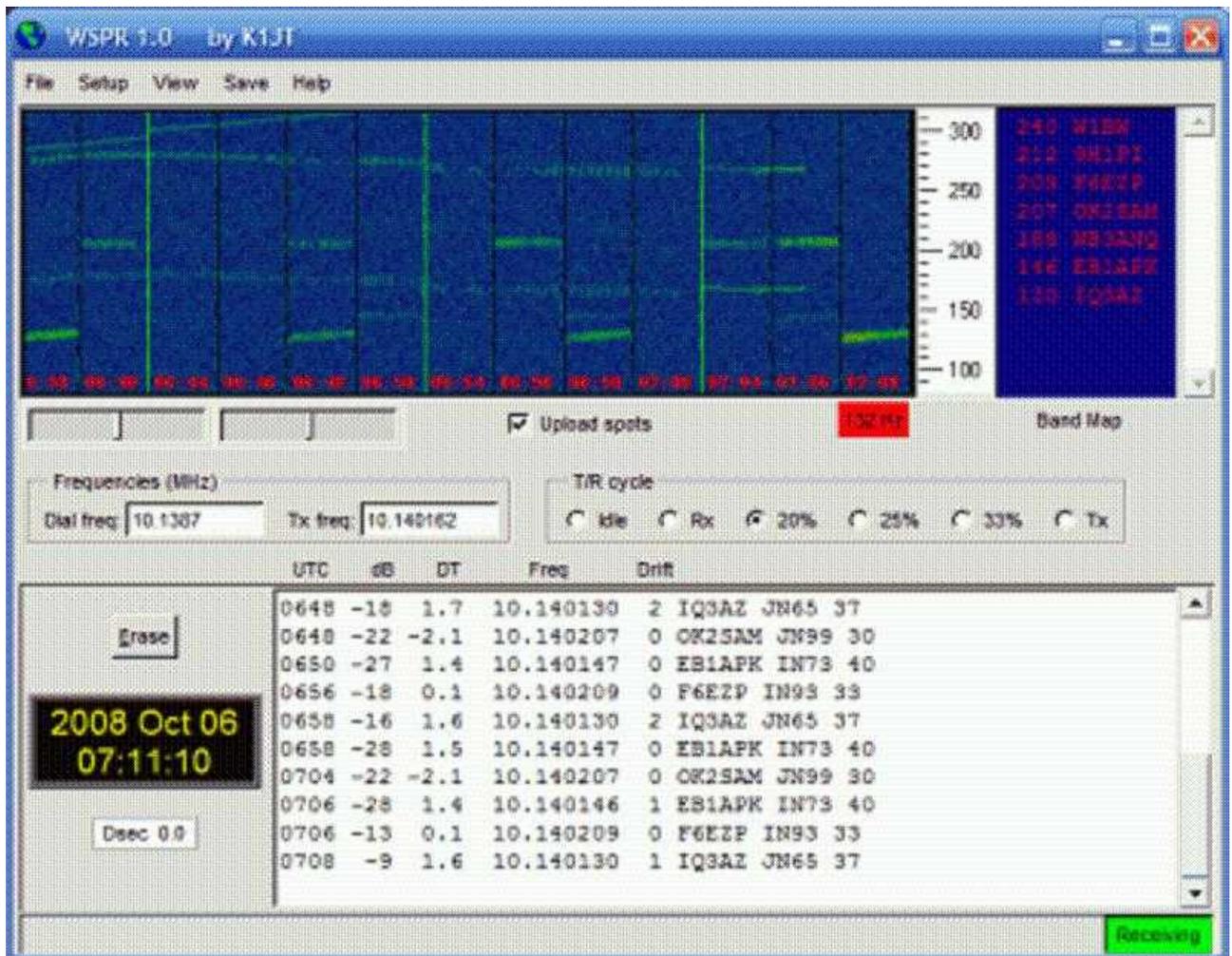


# STARLITE

One of the things that makes communicating with amateur radio more fun than using the Internet or the phone is that you never know where your signals will be received. Short wave radio propagation is never completely predictable, and can often surprise you. If this is an aspect of radio that fascinates you, then you'll enjoy using WSPR.

WSPR is a piece of software that enables you to participate in a world-wide network of low power propagation beacons. It enables your radio transceiver to transmit beacon signals, and to receive beacon signals from similarly-equipped stations in the same amateur band. Because participating stations usually upload spots that they receive in real time to a [web server](#), you can find out within seconds of the end of each transmission exactly where and how strongly it was received, and even view the propagation paths on a map.

If you left WSPR running while you were doing something else, you can also search the database to find out later where your signals were received during the day. You can analyze past signal reports to see the effect of seasonal propagation changes or antenna improvements.



## SCREEN PICTURE OF WSPR RUNNING ON 10 MHZ

Time, Signal Strength, Frequency, Callsign and Maidenhead Square are shown.



# STARLITE

## PSK REPORTER

Some Digital Mode Programs can be configured to interact with this Mapping Program. I am just using it to report on Stations receiving my signals from my WSPR program running at just 10 Watts !!!

Below is a 'Map Report' from WSPR on 13 August 2012 on 20 Metres for 3 hours. WSPR stands for Weak Signal Propagation Reporter, but it's pronounced "Whisper" - an appropriate name as it is all about sending and receiving signals that are barely audible.

WSPR is a software application written by [Joe Taylor, K1JT](#), a Nobel Prize-winning Princeton physicist. It was first released in April 2008. It uses a transmission mode called MEPT-JT. The "JT" stands for Joe Taylor, while MEPT stands for Manned Experimental Propagation Transmitter.

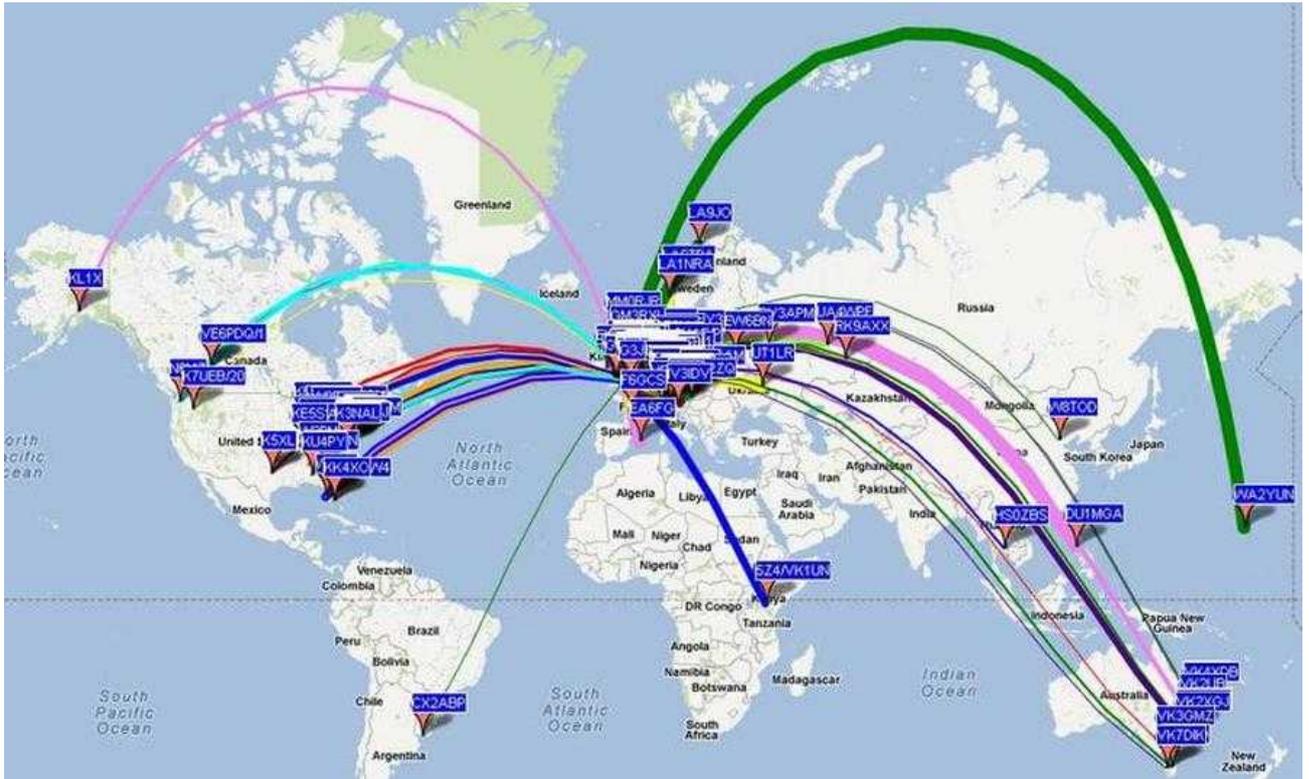
MEPT is not something specific to WSPR. MEPTs are very often simple home-built QRP transmitters that send beacon messages using very low-speed Morse (QRSS). Their very weak signals are copied visually using software called a "grabber" - a horizontal waterfall display capable of detecting and highlighting signals well below the noise threshold. The content of a transmission is determined - as with many other weak-signal QRSS modes such as EME (moonbounce) - by literally reading the dots and dashes as they are displayed on the waterfall.

The "manned" aspect of MEPT simply relates to the operator's licence conditions. It is not necessary to obtain a special dispensation to operate a MEPT station because you are present while it is in use, just as you would be when using CW, SSB or another data mode. In fact, some MEPT enthusiasts discourage the use of the term "beacon" because beacon operation without a special permit is prohibited by some licencing authorities.

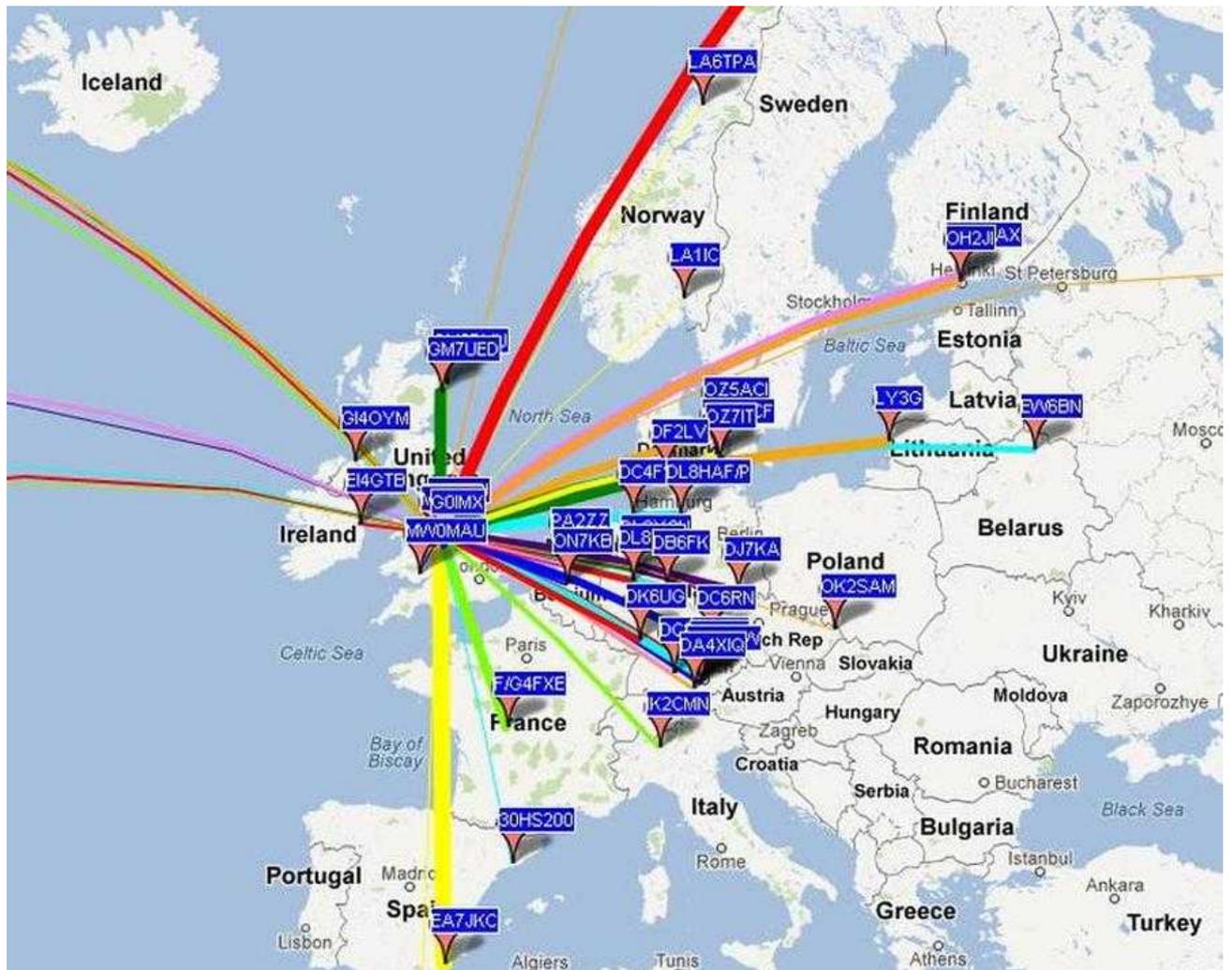
Once set up, operation of WSPR is completely automated. The software logs every transmission you make, as well as all the "spots" (decoded MEPT-JT signals) received. So this is something you can do when you are otherwise engaged and not able to get on the air and make normal QSOs. Just how "hands-on" you need to be when operating WSPR is a matter between you, your licence authority and your conscience, but some people leave their WSPR beacons running 24/7 and some of that time, they must be asleep.



# STARLITE



# STARLITE



## A CLOSER LOOK AT THE 'REPORT MAPS' ABOVE.

When there are many stations in the map, you can zoom in to separate them

The three farthest stations .

DU1SGA - **Manilla, Phillipenes** - 6682 Miles away

WA2YUN - **Wake Island, Hawaii** - 7399 Miles away

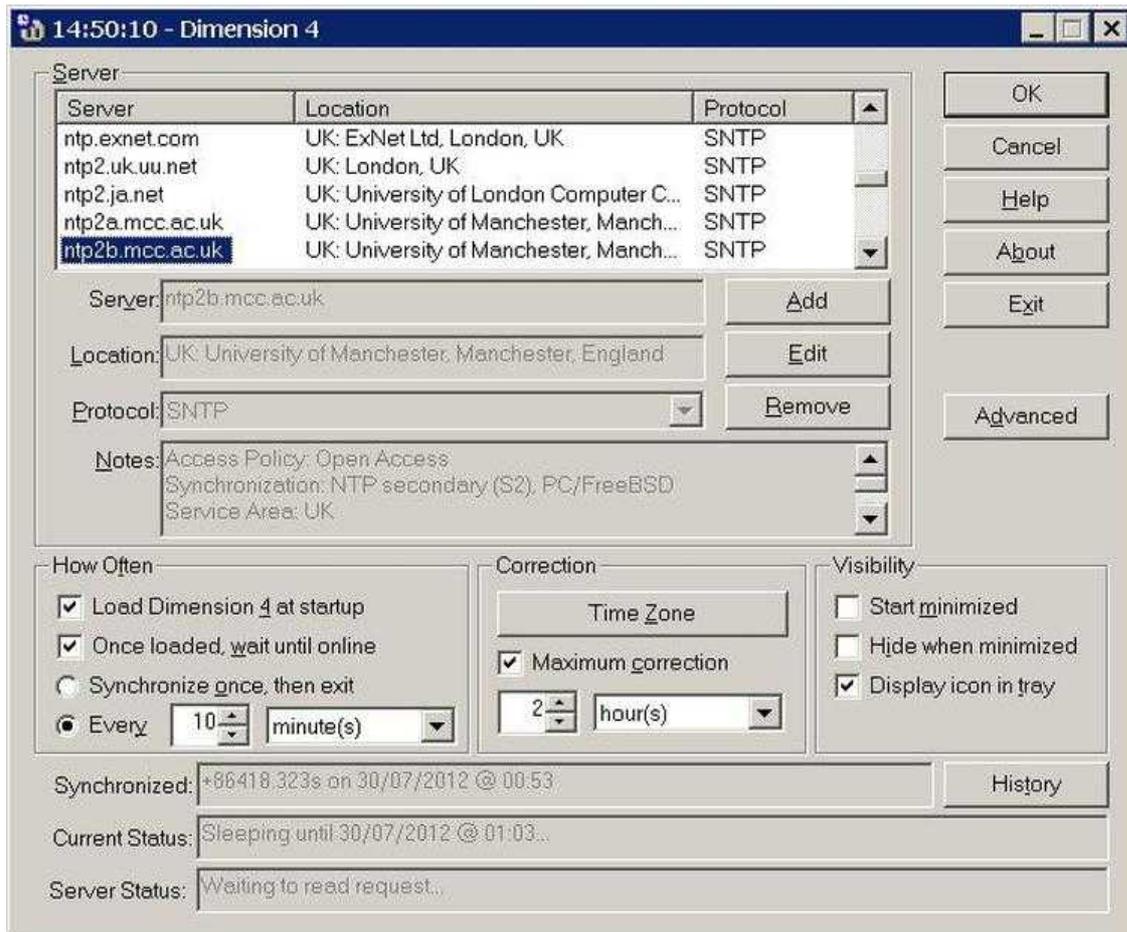
DP0GVN - **Atka Bay, Antarctica** - 8549 Miles away.

A confirmation Card of the contact was received electronically (Below)



# STARLITE

## Dimension 4



### A Screenshot of 'Dimension 4'

The most popular program for maintaining computers worldwide to an accuracy of less than one 100th of a second - essential for using JT65HF and WSPR as they have to 'Sync' with other Transceivers throughout the world

## 5. Packet

Still quite common on HF for APRS activity and bulletin-board email exchanges. Some Emcomm use. Slow and only fair when weak signals or QRM.



# STARLITE

## **6. Pactor**

Very common , part of world-wide network of stations that send and forward email(WL2K) Very good weak signal performance and speed.

Some keyboard QSOs to be had, but very rare. Peer to Peer exchanges possible when used in WL2K but mostly client to server activity.

## **7. Opera**

Like JT65A and ROS, generally a SLOW digital mode used for super weak signal detection. Callsign and signal reports. No conversations beyond that.

## **8. ROS**

Like JT65A and OPERA , generally a SLOW to medium speed digital mode used for super weak signal detection. Callsign and signal reports. Some conversational QSOs. Not legal on HF in USA since some feel it uses a prohibited Spread Spectrum technique.

## **9. Winmor**

Common , part of a world-wide network of stations that send and forward email (WL2K) Fair to good weak signal performance and moderate speed.

Some keyboard QSOs to be had but very rare.

Peer to Peer exchanges possible when used in WL2K but mostly client to server activity.. Also has a similar "cousin" mode , V4 Chat.

## **10. RTTY**

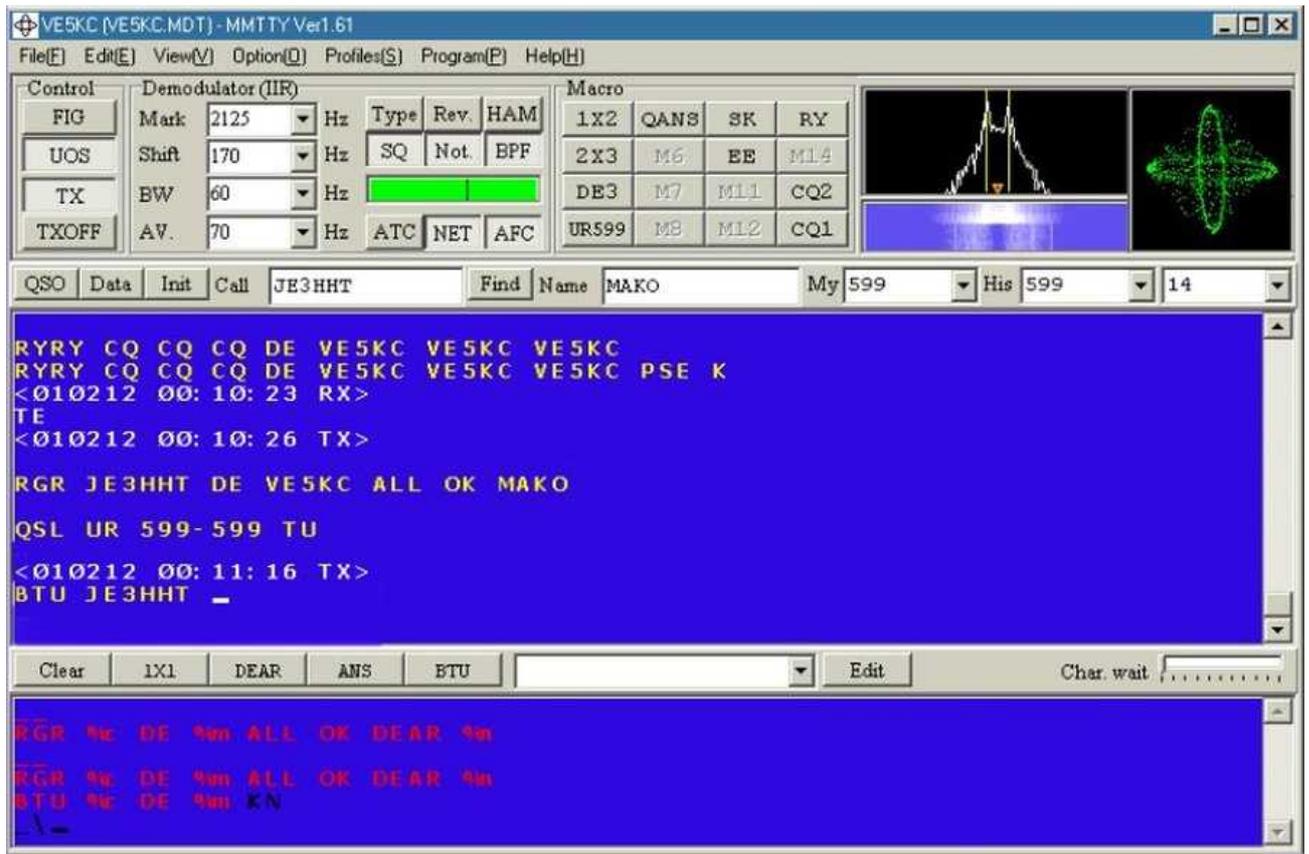
(Radio Teletype Telephony)

Used by DXpeditions , so good for chasing DXCC totals.

LOTS of RTTY contests on weekends. Fair performance when faced with weak signals, QRM, QRN. Conversational QSOs and quick contest-type exchanges are common. AFSK RTTY is used with soundcards. FSK RTTY is produced by most modern rigs and the filtering usually ensures better performance than AFSK RTTY.



# STARLITE



## Screenshot of 'MMTY'

A program used to simulate transmission and reception of RTTY Signals



# STARLITE

## ROVING REPORTER

January 2014

There were more items for auction at our annual surplus sale than I have seen for ages. I had brought along a few items, but I arrived late, just as the auction was about to start. When I saw the

Best 73s for Now Roving Reporter Malcolm G8BOP



# STARLITE

## YOUR COMMITTEE

Hon. President	JAMES	G7HEZ	
Vice President	NICK	G6DQN	
Hon. Secretary	JOHN	M1EJG	(01562) 700513
Hon. Treasurer	JOHN	G8UAE	
Committee Members	MARK	G7EDZ	
	MALCOLM	G8BOP	
	KELVIN	M6KTR	
	ANDREW	M6APJ	
	ADRIAN Sims	M3HBA	
	ADRIAN Bryan	G0NLA	

## CALENDAR OF EVENTS

**It should be noted that the Shack will be open every Monday evening unless shown otherwise in the Calendar**

December	Mon 2nd	Open Shack Night - Or on air natter
	Mon 9th	Christmas Meal
	Mon 16th	Open Shack Night - Or on air natter
	Mon 23rd	Christmas No Meeting
	Mon 30th	Christmas No Meeting
January	Mon 6th	Open Shack Night - Or on air natter
	Mon 13th	Committee Meeting
	Mon 20th	Richard Carol - BMW Rally Car Project
	Mon 27th	Foundation Course - Start
February	Mon 3rd	Open Shack Night - Or on air natter
	Mon 10th	Open Shack Night - Or on air natter
	Mon 17th	Constructors Competition
	Mon 24th	Open Shack Night - Or on air natter
March	Mon 3rd	Open Shack Night - Or on air natter
	Mon 10th	Open Shack Night - Or on air natter
	Mon 17th	A.G.M.
	Mon 24th	Open Shack Night - Or on air natter
	Mon 31st	Open Shack Night - Or on air natter
April	Mon 7th	Open Shack Night - Or on air natter
	Mon 14th	Open Shack Night - Or on air natter

