

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

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MEETINGS

Visitors always welcome
The Society holds its full meetings on the
1st and 3rd 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

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MESSAGE FROM THE PRESIDENT

General

Despite asking several times for a volunteer to take on board organizing the Christmas gathering at the usual carvery venue. No one came forward. Therefore I suggest we turn up on Monday 8th December at approx 7:30 and just buy a carvery as required. All invited including partners etc. if we head to the usual end of the carvery i.e. far end away from the servery counter.



November 24th saw the latest Foundation exam, of the 9 who took the exam 7 passed. 2 failed but only by a couple of questions. These 2 and hopefully 2 boys from the school are scheduled to take the next exam on Monday 12th Jan 2015. Good luck to these 4.

Committee meeting overview - in very brief summary.

If anyone is interested in a StARS logo-ed T -Shirt / Sweatshirt, please let me know - I have a sample and will obtain prices.

Approx £57 was raised at the surplus sale - not bad for an evening - obviously quality items as quantity was not high - thanks to all those who sold, bought and donated to club funds.

We have spent just over £100 on the new shack cupboard, but we have sold surplus shack equipment to a higher value. Outstanding - connecting up of other feeders, tidying up cables into external box, creating some draws, layout of the cupboard and also some roof aerial work is also required

As you are aware we now have to undertake CRB checks, this is more or less complete for existing members, we still have some points to clarify with the school regarding visitors and numbers of times they can visit prior to a CRB check. We are looking at the existing society rules to accommodate this requirement - any observations / comments to myself or John Hon Tres. Any proposed rule changes will be put to the membership at the next AGM.

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A Bletchley park visit has yet again been mentioned, suggested finding out dates from Stuart G0TBI as he will be there along with his "gang"

A new repeater application has been submitted - GB3KC to be housed at former member Richard Newton's QTH.

James French (President)

SEEN ON THE 'NET

Calling all programmers

The following is an interesting link for those with an interest in programming from Peter (M6ZXH)

<http://tutorialspoint.com/codingground.htm>

The range of tutorials is very extensive and covers most of the more recent languages and some of the mainstays available with Unix such as C, AWK, KSH, BASH and Perl to some of the early programming languages such as Pascal, COBOL, REXX, Fortran, Algol 68, Basic. Assembler also gets a mention along with database 'languages'.

Continued on next page

Jim's Australia contact has passed us a link to a talk given at their local radio club

The talk is given by Dick Smith who runs a large chain of electrical stores and used to sell some amateur gear. Dick has a ham radio license and flies his own planes and helicopter. He is very well heeled but very much an ordinary bloke. The above introduction undersells the talk as it is on a parallel with STARS getting Richard Branson as guest speaker. See :-

<http://youtube/fK2KBD07ISY> The talk covers his early modest business start-ups to flying around the world in his own helicopter and combining this with his ham radio interest. I don't want to say too much about the article as it will spoil it for those who decide to watch the talk which lasts over an hour, but is well worth watching.

Wire Antennas for Ham Radio

Robert Egan has passed us the following link which should be of interest to most club members. It is also a handy illustration of many antennas you may have heard of but can't readily visualise. You can find your way to the site via QRZ Now "Wire Antennas For Ham Radio - 70 Antenna Ideas" or at the following URL. Despite having the title 70 antennas, my attempt to display all the antennas stopped at 42, but an interesting site none the less.

http://www.slideshare.net/slideshow/embed_code/41665660

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ATU (Z MATCH COUPLER) FOR 3.5 – 28 MHZ

FIGURE 1

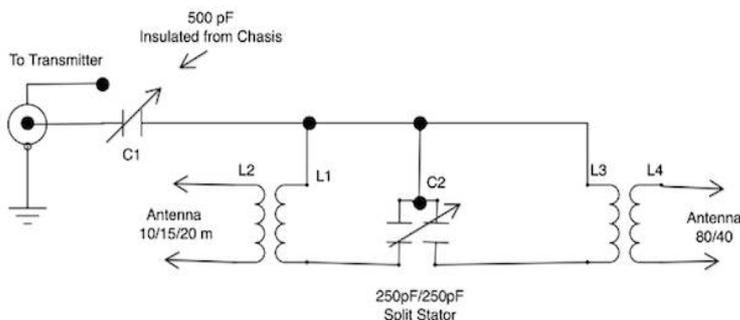
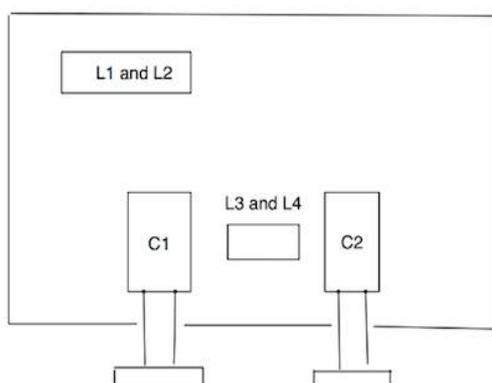


FIGURE 2



Notes
C1 is the series variable capacitor
C2 is the split stator in the multi-band tuning circuit

Multiband Couplers

A popular multiband aerial tuning unit for 3.5 – 28MHz is shown above (Figures 1 and 2) and is known as a “Z-match coupler”.

It is a compound network using two pairs of windings and is capable of matching the wide range of impedances, which may be presented by a tuned aerial line.

Coils L1 & L2 may each be 5 turns, tightly coupled. L3 & L4 are 8 and 6 turns respectively. L1 & L3 may be about 2.5” diameter and L2 & L4 about 3” diameter.

The series capacitor, C1, is 500pF maximum and it should be noted that it is “live” on both sides; the frame should be connected to the transmitter link cable and an insulated extension shaft provided.

The other capacitor, C2, is the split-stator type, 250pF per section.

C2 tunes the coupler and C1 adjusts the load to the transmitter. A standing wave indicator (VSWR bridge) should be used as an aid to tuning.

C1 & C2 are adjusted for minimum reflection and the transmitter can then, if necessary, be trimmed for maximum output.

Article Kindly Supplied by Robert Egan

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RUNNING VIRTUAL MACHINES WITH VIRTUALBOX

What is the article about?

I have recently installed a preview copy of Windows 10 on an old PC. I could have made use of an existing PC and used the dual boot facility to allow me to selectively boot my existing operating system or Windows 10. However, I am wary of using dual boot and in the past managed to corrupt my PC software either during the install or uninstall of dual boot.

Using Virtualbox allows (provides) a more flexible approach by allowing one to run more than one operating system on a PC. The article that follows should give you an idea of how to install virtual machines using the Virtualbox software.

A Brief Overview of Virtual Computers

With Virtual Machine software, computers give the appearance of multiple physical machines by using software that emulates hardware. Virtual computers are by no means a new idea and in the past often required substantial computer resources, however today they are within the reach of home computer users.

At first sight it seems as if this couldn't work very well and would be very slow, however this isn't the case. In fact most computers only 'work' for 5% of the time, for the other 95% they sit doing nothing.

There are two common terms that are used when talking about virtualisation:

Host – the computer that is running the virtualisation software, i.e. your PC.

Guest – a virtual PC and operating system that is running on the Host.

A Host may run many Guests, in fact in business environments a single server can run 20 or more Guests.

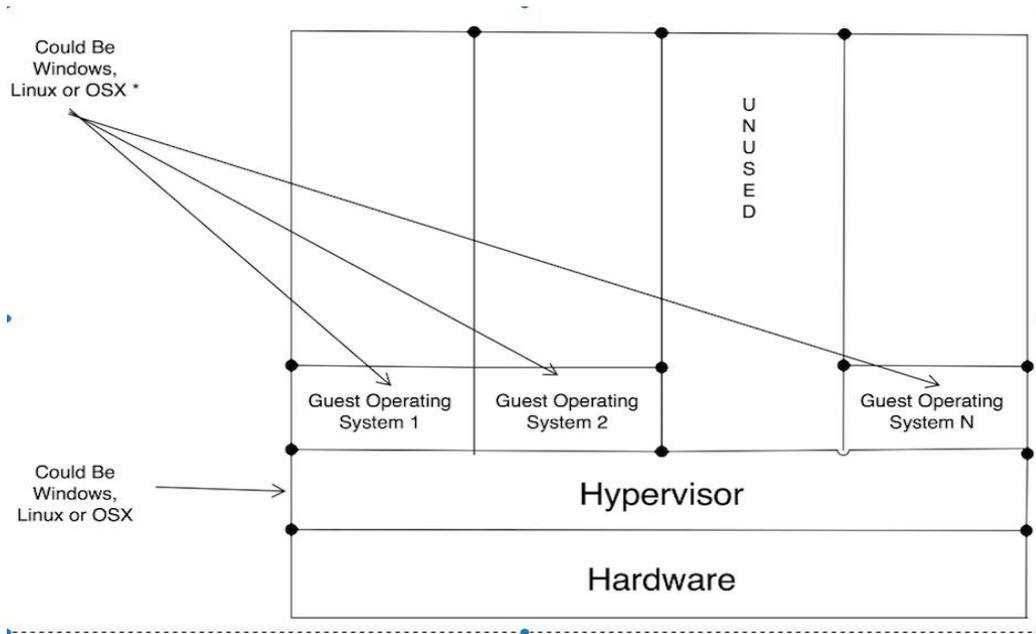
The two types of virtual environment are outlined very briefly below.

Type 1 – also known as Bare Metal

The Virtual Machine environment is provided by the hypervisor that acts like the hardware.

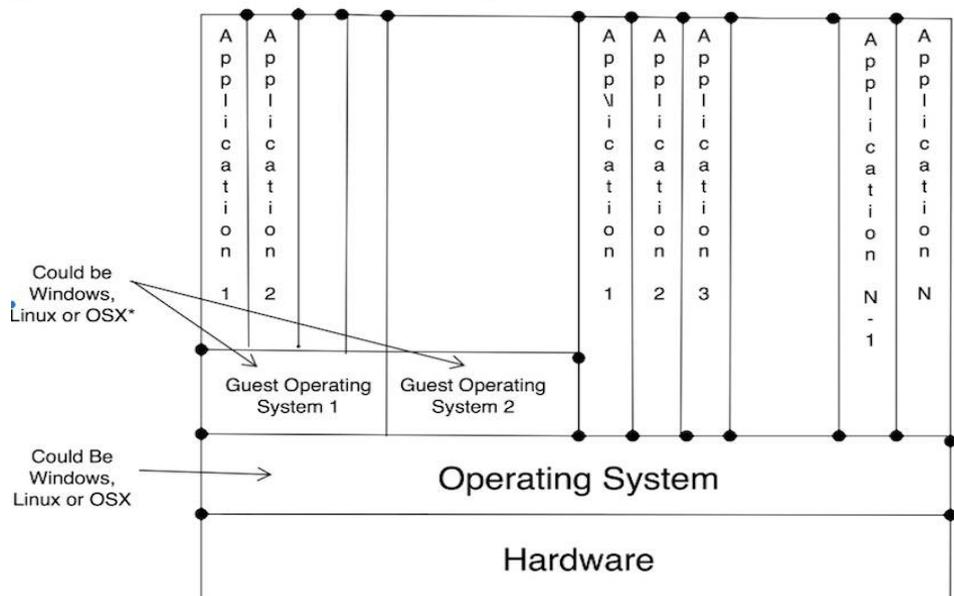
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Type 2 or Hosted Virtual Machine

With Type 2 or hosted Virtual Machines, the environment is provided by an application that runs on an existing operating system, for most readers you can assume Microsoft Windows.



Although it could however just as easily be Linux, Solaris (Sun's operating system) or OS X (Apple's operating system). The scope of this article is Hosted Virtual Machines using Virtualbox software. The good news is that the software can be downloaded at no charge for domestic use.

Examples of why I would want to use Virtualbox software at home

Self training on new releases of software.

You would like to explore Ubuntu for example.

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Would like to “play with” some other operating system.

You have an Apple PC, but there is some Windows software you still want to run.

Examples of why a company would be interested in Virtualisation

To reduce the number of servers they need to buy and manage.

To help reduce running costs such as electricity use, air conditioning.

To run legacy systems.

Get rid of old hardware which is becoming unreliable or is no longer available.

Improve availability – business virtualization products are very sophisticated and move Guest systems between Hosts whilst they are still running.

It is important to note that virtual machines do not get round the requirement to correctly licence the software – if you run a Windows virtual machine on a Mac, Microsoft expects you to pay for it!

Virtualbox Software Installation

The current version of Virtualbox can be found by visiting :-

<http://download.virtualbox.org/virtualbox/4.3.18/VirtualBox-4.3.18-96516-Win.exe>

The downloaded file will be around 130 Mb. \)

Click the .exe file to start the installation. See steps 1 to 3 on the next page.



Illustration 1: Step 1 - Virtualbox Installation



Illustration 2: Step 2 - Virtualbox Installation

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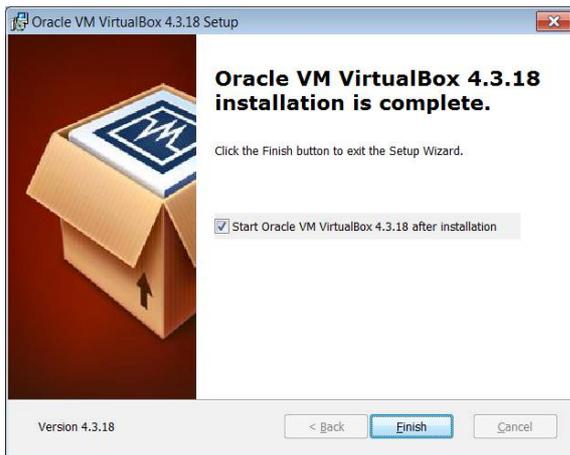


Illustration 3: Step 3 - Virtualbox Installation



Illustration 4: Step 4 - Virtualbox Machine Installation

To create a virtual machine follow steps 4 to 7. Click the blue gear icon (above) to get started. In the example given, I have created a virtual machine to run Ubuntu. You need to make decisions about how large you want to make your virtual hard drive and how much RAM you want to allocate to your virtual machine. Carefully consider how much RAM you allocate to your virtual machine. If you have 1.5 Gb of RAM and you allocate 1 Gb of RAM to your guest machine your underlying operating system may not have enough RAM to run correctly. It is better to start with a small allocation as you can increase the RAM size later.

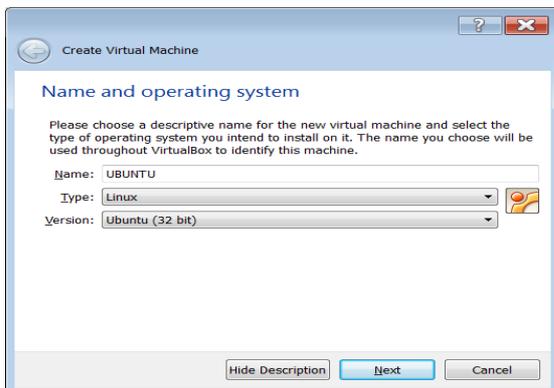


Illustration 6: Step 5 - Virtualbox Machine Installation

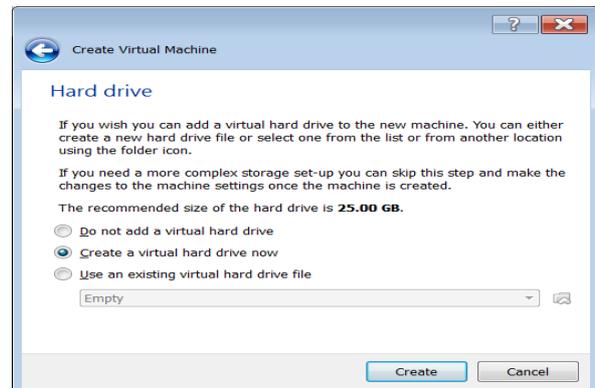


Illustration 5: Step 6 - Virtualbox Machine Installation

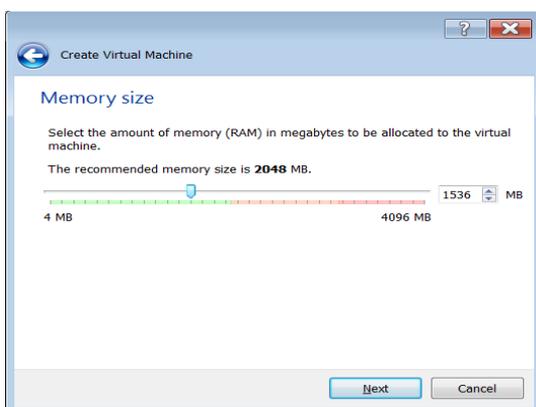


Illustration 7: Step 7 - Virtualbox Machine Installation

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The next step is to install an operating system on your newly created virtual machine. If you have the original installation media and licence key you can load this into your DVD drive and start the required virtual machine. Follow the normal installation process. However it is quite common to get supplied with an ISO file. As with a real PC, your virtual machine can not boot from an ISO file. If you have an ISO file, Virtualbox has a facility to allow you to point your virtual machine to an ISO file in, for example, your host machine's download folder.

Problems

I did encounter some problems with Virtualbox. I initially installed the Virtualbox software on an Apple Mac PC. I was able to create a Windows 10 virtual machine and a Vista Virtual Machine. As few if any club members have Apple Macs, I decided it would be more relevant to repeat the exercise on a Windows 7 machine. I was able install the Virtualbox software on a Windows 7 PC with no problems. The installation of Windows 10 on my Windows 7 hosting machine failed. I then installed Ubuntu as a guest machine on Windows 7 which worked ok. I have since looked on the Internet and it seems that there are some issues running a Windows 10 virtual machine.

There are considerations with 32 bit and 64 bit versions of operating system. You can install Virtualbox software on a 32 bit machine and run a 64 bit guest machine, but it will run slowly and it needs to be enabled as it is not set up by default.

The Apple Mac PC did have some limitations. Despite having four processors the guest machines only seemed to be running on a single processor machine. This I later found out was a limitation.

It may be that some Windows users would be interested to try out the Apple OS X environment. I have read that it is possible to do this, but it is neither easy nor supported by Apple. With Apple, the proposition is that you are only supposed to run Apple software on approved Apple Hardware. Apple only make a small charge for new releases software and several of the most recent versions have been free of charge.

AND FINALLY

Sometimes you need to run an old DOS program and either the Windows command prompt doesn't work or your modern PC is too fast to run old software.

There is another virtual machine tool to help with this, it's called DOSBox and can be downloaded, free of charge, from :-

<http://www.dosbox.com>

DOSBox emulates an Intel x86 PC, complete with sound, graphics, mouse, joystick, modem, etc., necessary for running many old MS-DOS games that simply cannot be run on modern PCs and operating systems, such as Microsoft Windows (XP, Vista, 7, 8 etc.), Linux and FreeBSD. However, it is not restricted to running only games. In theory, any MS-DOS or PC-DOS (referred to commonly as "DOS") application should run in DOSBox, but the emphasis has been on getting DOS games to run smoothly, which means that communication, networking and printer support are still in early development, but some USB devices do work such as USB serial interfaces.

DOSBox also comes with its own DOS-like command prompt. It is still quite rudimentary and lacks

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many of the features found in MS-DOS, but it is sufficient for installing and running most DOS programs, including old radio applications and PMR radio programming tools.

Adrian Bryan (G0NLA) with assistance from Martin Deeley (G4VZO)

YOUR COMMITTEE

Hon. President	JAMES	G7HEZ	
Vice President	NICK	G6DQN	
Hon. Secretary	JOHN	M1EJG	(01562) 700513
Hon. Treasurer	JOHN	G8UAE	
Committee Members	MARK	G7EDZ	
	KEITH	M0HPY	
	SEAN	M3XMJ	
	PETER	M6ZXH	
	MALCOLM (Co-opted)	G8BOP	
	ADRIAN	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 1st	Open Shack Night - Or on air natter
	Mon 8th	Christmas Gathering
	Mon 15th	Open Shack Night - Or on air natter
	Mon 22nd	No Meeting
	Mon 27th	No Meeting
January	Mon 12th	Foundation Course Exam.
	Mon 19th	Hancock's Half Hour
February	Mon 2nd	Committee Meeting
	Mon 16th	Constructors Competition and Quiz
March	Mon 16th	2015 AGM
April 2015	Mon 20th	Vintage Radios (Phil G4SPZ)