

Newsletter

Chesham & District Amateur Radio Society

www.g3mdg.org.uk

October 2020

We meet the 2nd and 4th Wednesdays of the month at the Ashley Green Village Hall, Ashley Green, HP5 3PP

Welcome

This month COVID-19 has again come to the forefront, though we did however manage a successful 2nd Wednesday of the month meeting with quite a good turnout. We've used Zoom for the 4th meeting with a precursor the week before to make sure everything works, our next meeting at Ashley Green Village Hall is planned for the 14th of October.

Summer appears to have returned, all at a time when we have restrictions imposed upon us!!

This month I have added "What's a good rig to start with?" and after spending some time on the internet checking out rig reviews I was quite surprised to learn of a few 'foibles' with the ever popular Icom IC-7300, Icom IC-9700 and Yaesu FT991A rigs. Having gone to the trouble of searching the internet, what is your experience, as a reader, of your rig, would you promote it, or are there 'hidden' problems, what would you advise as a first time purchase and why?

The Slim-Jim 2m antenna kits are here, hopefully to be handed out to those wanting one on the 14th of October, which is our next planned meeting at the Ashley Green Village Hall, they are £9 each and the payment details are as follows:

A/C Name: Chesham & District Amateur Radio Society
A/C No: 00492909
Sort Code: 30-91-91

Bryan M0IHY

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Contact details

Chairman - Jeremy Browne (G3XZG) Secretary - Angie Page (M6WTL)
Treasurer - Matt Whitchurch (M1DTG) Editor - Bryan Page (M0IHY)

All the above are members of the committee and can be contacted on cdars_committee@googlegroups.com

Chairman's Ramble

As I write this on the 25th September, we seem to have lost summer completely. We are past the equinox and nights are drawing in. This always signals the start of the series of affiliated societies contests, which seem to grow in number each year, and this time include a data contest on 80/40 meters next January, to go with the head-banging on SSB and CW. This is where the arrangement with Northampton reverses, as some of their members will be putting their efforts towards the entries in the name of the Chesham club. In fact the first contest, on 70 mhz has already taken place, with 7 entries, in effect an A and B team. As a club we usually have a good showing in this series and I hope this year will be no exception.

We have also achieved our first talk at Ashley Green and, since the COVID restrictions have changed again, our first zoom meeting, both being well attended, despite the thought that I was giving a talk on zoom. Thanks to all those who contributed to both meetings, though it is a little odd having disembodied voices chip in, rather than people sitting in the same room.

We have put together a risk assessment and the aim is to continue meetings at the hall if possible, with the first being on 14th October. We also will be exploring how to make talks at the hall available to people who cannot attend. The nets will continue for the moment on Wednesdays when we are not meeting. It will feel a little stilted, having to maintain groups of 6, but at least we can shout across at each other, or, I suppose, communicate between the groups with handhelds.

Since I last rambled, both Guy and Peter have got their intermediate licences and the RSGB has announced that remote invigilating will also now apply to the full licence exam, lasting 2 hours, which sounds quite a commitment from home. The longer the exam, the greater the danger of feline or other interruptions.

Looking back on the last 6 months I am grateful to everyone for their commitment to the club, the ideas that have kept us going and the organisation that has made events and meetings possible.

During a period of restriction, we have, changed venue; restarted a club newsletter; set up Foundation and Intermediate remote training; run a special call for a weekend; continued to hold meetings; run a net when meetings were not possible; taken part in what passed for SSB field day and the UKAC contests. That seems to me a tremendous list for a small but very active club, so thanks again.

73, for now, Jeremy.

The Editors Musings

"One step forwards, 2 steps backwards" seems to be the theme with COVID-19, yet somehow we still manage to meet up given the circumstances!

We have our antenna kits for those wanting one (see next page), following guidelines for constructing these kits is going to be a nightmare, somehow I suspect we'll find a way to do it.

Air Miles has been a bit slow for me this month, at the time of writing this I have but one QSO to my credit, the fact it's JA0FOX is a bonus!!

I've made changes to the training programs on my website, they now include what were PowerPoint slideshows from both Essex Ham (Foundation) and Chelmsford Amateur Radio Society (Intermediate) who allow use of their training material on the understanding it isn't altered. To achieve this I have had to convert the PowerPoint presentations to PDF and then to individual JPEG pictures, some 400+ in all but great fun, it kept me busy for a couple of days, now I have to see what we can do for the Advanced training.

The nights are now beginning to draw in quite quickly, hopefully I'll be able to devote more time to the radio.

Bryan M0IHY

Antenna builds.

Slim-Jim antenna build.

At our last club meeting (9th September) a show of hands gave us a count for the 2m Slim-Jim Antenna kit from HamGoodies (<https://www.hamgoodies.co.uk>), thanks to James (M0JCQ) for the tip, their kits are £12 plus P+P, I made an enquiry and we got 10 sets for just under £90 (P+P included), a great saving when you consider the cost of one unit plus P+P. Should the club require anything 'bulk-wise' again this may be a good route to take.

I ordered the antenna kits on Friday and to my surprise they were delivered by post Saturday morning, now that's good service! My only task on receipt of the antenna kits was to take the 3-page instruction set and duplicate it 9 times (you save £1 per order by not having the instructions in all of them), the quality of copying is what was delivered in the kits so my apologies for that, with that done I emailed the group.

We shall have to wait until the 1st meeting in October (14th) to hand out the kits, so please be patient.

For those of you wanting to 'do your own thing' I've included the build instructions on page 6.

Zoom, is this the way to go?

Zoom replaced our '4th Wednesday meeting of the month' with a precursor the previous week to see how a meeting might take place, this is good for those who want to be involved with the club, but are unable to make it to a meeting, it also covers us should we find ourselves back in a lockdown situation again.

It appears we may be able to run the construction evenings on Zoom, a test was done on the precursor and picture quality/sharpness proved to be okay, should we be unable to carry out construction at the village hall, we have another avenue to enable construction to take place.

Unfortunately I missed the precursor but have to say the meeting of the 23rd of September was great fun, my first real experience with zoom. Some of the backdrops were great from paradise islands to lunar scenes, all making for a very picturesque experience!

Bryan M0IHY

Storage for the club

On Monday the 14th of September Angie and I visited an industrial site at the back of the "Lazy Pig" eatery (pub), Rob from Ashley Green Village Hall had been kind enough to ask around for us. Unfortunately the facility want £80 per month making it £960 per annum, far too expensive.

We need to get a 4-drawer steel lockable filing cabinet (or multi-shelf double door steel cupboard) into which we would store anything we needed directly at hand, should anyone know of such an item for the club could they please email me at cdars_committee@googlegroups.com.

Jeremy has discussed moving what gear we want 'to hand' into storage at the Village Hall and putting tent/poles/whatever into the cupboard at the Whitehill Centre, paying them an annual subscription for use of the cupboard, all we need to find a home for is the generator and petrol cans. The club built the cupboard in the days when they were in the mezzanine room at the Whitehill Centre, fingers crossed we get a result as 'cheap' storage is non-existent.

Somehow the Whitehill Centre have got wind of our change of meeting place and have asked us to empty the cupboard - hmmm...

It really isn't what it seems (again)...

Last month I spoke of a faulty USB lead giving me grief, that's now been replaced with a good quality lead, this month it's the turn of my USB 3.0 hub!

Up until a couple of days ago my TS590SG had been quite happily working any mode I wanted, then for no apparent reason something strange happened and I lost all digital modes to a "Ham Lib error while connecting to rig" error presenting itself every time I tried to run any of my digital mode software. I duly checked the settings, rig controls, audio controls, everything seemed setup correctly, clicking on the CAT button turned the button green, clicking on the TRANSMIT button turned it red, all appeared to be correct and yet when I transmitted for real I got the Ham Lib error message every time.

Remembering what happened last month I decided to take the USB 3.0 hub out of the circuit and plugged the CAT control USB lead directly into the front of the computer, hey presto, it worked, and the best bit... I put out a test CQ on FT8, just to make sure things were working correctly, within 15 seconds of putting out the call I had JA0FOX come back to me, all of 5,901 miles away (9,497Km) at 50W, another Japanese station (JA1) called me at the same time but I was too slow on getting back to them, amazing, like waiting for a bus, none come, and then 2 come at the same time!

With a USB lead last month, USB hub this month, what's it going to be next month - hmmm...

What's a good rig to start with?

When we first get our licence most of us can't afford the brand new rig we'd really like and as such can either purchase a new rig that we can afford, or go down the second-hand route for the rig we'd really like.

The internet can help you decide on your purchase, eHam.net (<https://www.eham.net/>) is well established and informative, and radio wiki (<https://www.amateur-radio-wiki.net/best-ham-radio-base-station/>) offer you the best base stations for 2020, these are but 2 places to visit. The R.S.G.B have "**the Rig guide**", a comprehensive guide on what rigs are out there, their second-hand trade-in value and cost to purchase, both new and second-hand.

Before purchasing your rig you'll have to decide which modes you want to operate and what bands you want to cover. There are 'shack in a box' type rigs that cover all bands/modes, rigs for HF only and rigs for VHF/UHF. Do a bit of research on these as some have a few 'quirks' that may affect the band/mode you wish to operate, if you do your rig reviews you'll find useful information to help you decide.

Rig	Output	RX coverage	TX coverage
Yaesu FT-450D	100W	30KHz-56MHz (160-6m)	160-6m
BTECH Mobile UV-50X2	50W	65-108/36-174/400-520MHz	2m + 70cm
Icom IC-7300	100W	30KHz-74.8MHz	160-4m
Yaesu FT-857D	100W	0.1-56/76-108/118-164/420-470MHz	2m + 70cm
President Lincoln II Plus 10/12m	50W	12m + 10m	12m + 10m
Yaesu FT991A	100W	30KHz-56MHz/118-164/420-470 MHz	160-6m/2m/70cm
Icom IC-718	100W	30KHz-30MHz	160-10m

A list of the top 7 base stations of 2020 (radio wiki)

Top of the list is the Yaesu FT-450D, a good rig for its price. I owned one and exchanged it for a Yaesu FT-991 (because I wanted an 'all-band' rig), something I eventually regretted.

It would pay you to visit <https://www.amateur-radio-wiki.net/best-ham-radio-base-station/> just to get an idea of the Pro's and Con's of each rig, as I said earlier, also try eham.net.

What's a good rig to start with?

What's been said about these rigs...

Icom IC-9700

The stability is not satisfactory for most digital modes - for example up to 30 Hz drift on 144MHz and 300 Hz on 1296 MHz within 4 minutes each time the fan comes on - Rex Moncur VK7MO

Icom IC-7300

Comparing it with my IC-9100 and the IC-7410 it replaced I have to tell you that the noise blanker is marginally better on the 9100 & 7410.

Time to upgrade came and I put the 7300 in its box until I was satisfied I no longer needed it. I then sold it on ebay. I was then horrified to learn the buyer wanted a refund because the clock won't hold time. Speaking to Icom they tell me if the set is left unpowered for "too long" the clock battery dies and requires factory replacement at a cost of about 70 GB Pounds or over \$100 PLUS TWO WAY DELIVERY! I asked what is "too long" to be told the battery will only last for several days at best and only if it is initially charged for 48 hours then the radio is never disconnected from power for more than a "few days". - G4RNI

Yaesu FT-991A

I have worked on some of these miniaturized Yaesu's. The problem I experienced is the final stage was unstable and would break into 40Mhz oscillations on 20M. This of course was out of band and would create a lot of SWR such that the protection circuit try's cut the power back. But the self oscillation is not controllable by the APC and the finals would over heat. - ACOVJ

The above extracts have been taken from internet reviews.

Whilst the above rigs have their 'faults', they also have some extremely good and capable abilities, this was just to show that a rig is not necessarily the "best rig ever". There are hams out there who will swear blind by their rig and would not swap it for 'all the tea in China', it all depends whether it meets their needs, or not, which is why I said "**do your research**"!

Bryan M0IHY

The 2m Slim-Jim antenna build.

Yes, those purchasing the kit will have these instructions (but not as good quality as this!!). This article is for those wanting to do their own thing and also to indicate which tools we'll need.

Tools required for the build

- Soldering iron (25W or better) + solder.
- Wire cutters.
- Heat gun, or hair dryer.
- Craft knife, or Stanley knife.

For those attending Ashley Green this will give you the opportunity to beg, borrow (but not steal!), or purchase the tools you need.

Introduction

The Slim-Jim, invented by Fred Judd G2BCX, is a classic aerial...

For the 2m band, it is 150cm long and offers significant gain over a $\frac{1}{4}$ -wave "rubber-duck". With a basic 2m/70cm FM handset and a 7-10m telescopic fishing-pole, great results can be achieved from your nearest "high spot" or holiday apartment.

Not only does it perform well, but it's easy to build in either "fixed" or "portable" variants using welding rod, copper-pipe or - in this case - 450 ohm balanced feeder aka: ladder-line.

When made from a balanced feeder, it becomes an easily transportable aerial that can be carried in a suitcase or small /P accessory bag.

All you need to build the aerial is a soldering iron (25-watt or better), wire-cutters and a heat-gun/hair dryer.

This project is suitable for beginners and is an ideal Foundation or Intermediate "project". No expensive test equipment is needed as the Slim-Jim exhibits a 1.2:1 SWR across 2MHz so is very forgiving when tuning. If your radio has a built-in SWR meter, that will be fine.

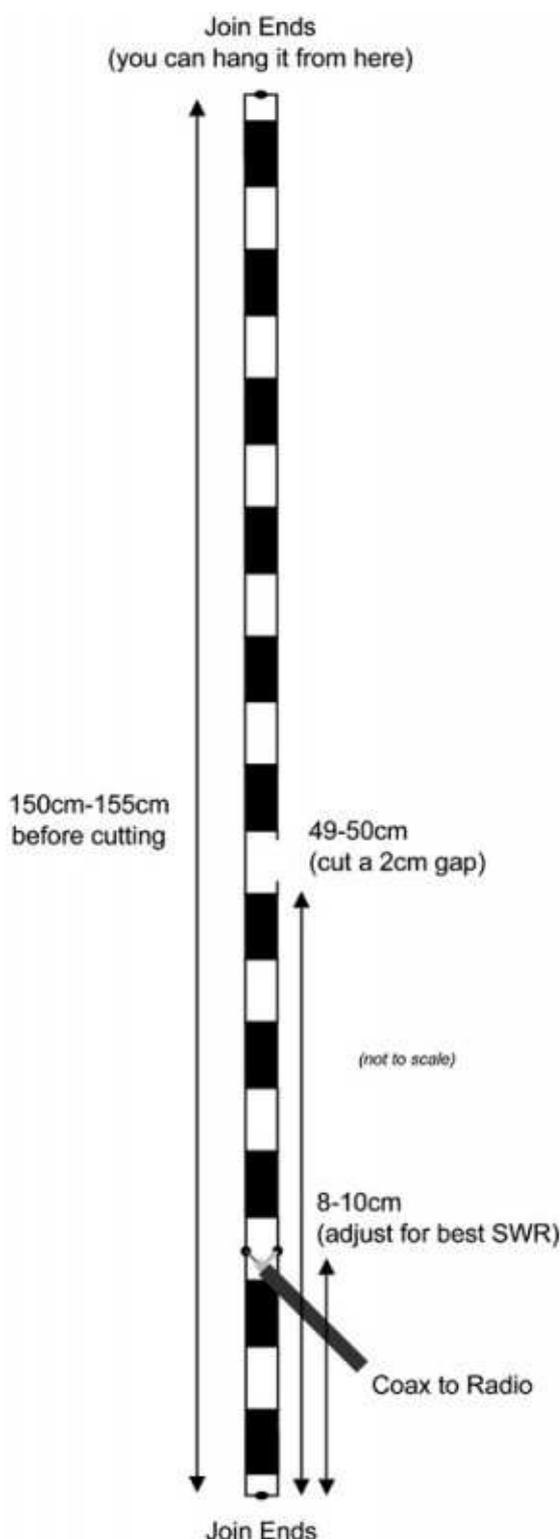
What's in the kit:

- Approx 150cm of 450-ohm ladder-line
- 30cm RG58 coaxial cable fitted with SO239
- 1x snap-on ferrite
- 5x adhesive-lined heat-shrink tubing (4 short, 1 long)
- 1x velcro cable-tie

Care should be taken when stripping wires - The best technique is to use a small craft knife and rotate around the insulation until you break through it - you can then twist it and pull it away from the rest of the cable. With practice, this becomes a fairly easy task.

Before you start - Please take a few moments to familiarise yourself with the instructions overleaf so that no mistakes are made during assembly.

Here we go...

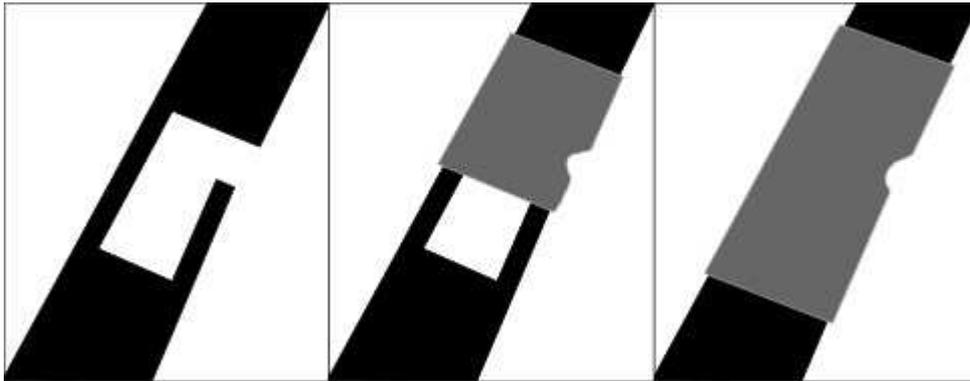


The 2m Slim-Jim antenna build.

Let's begin...

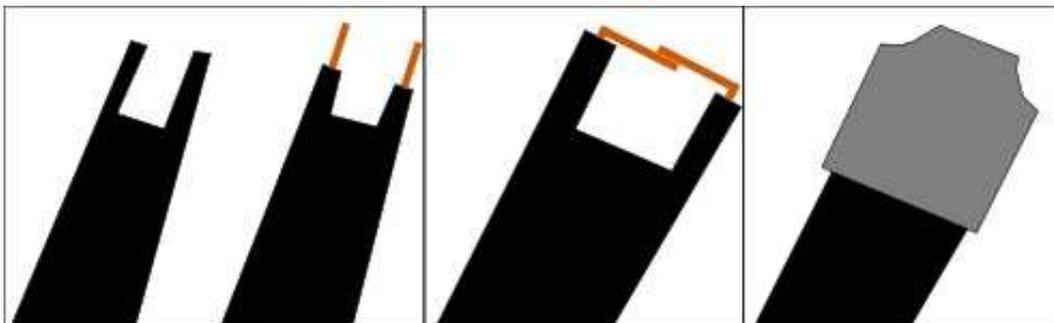
1. First, measure 50cm from the bottom of the ladder-line and cut 1 side of it. This *might* be at the top-edge of the *window* part as shown in the picture. Once this has been done, the ladder-line will now be weaker so 2 pieces of heat-shrink tubing will be used to strengthen it.

Slide one of the small pieces of heat-shrink tubing over the ladder-line and down to the split - use a heat-gun to "shrink" the tubing so that it covers the join - Then slide the longest piece of heat-shrink tubing over the top of this and heat/seal it - this will give the aerial strength when rolled and unrolled during use.



2. Next, strip both ends of the ladder-line, tin them with solder, bend to 90-degrees then solder together.

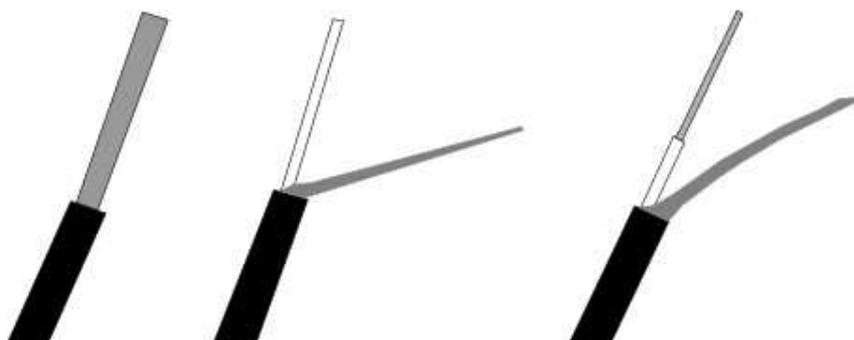
Add a small piece of heat-shrink tubing to the *far end only* of the ladder-line - this will be the top of the aerial.



3. Now take the RG58 coax and strip away 3cm of the outer sleeve.

Pull back the braid, split it into equal halves and remove 1 half. Twist the remainder into a single wire. Strip 2cm of the centre conductor and twist so that there are no frayed ends.

Slide 2 pieces of small heat-shrink tubing onto the coax before moving to stage 4...



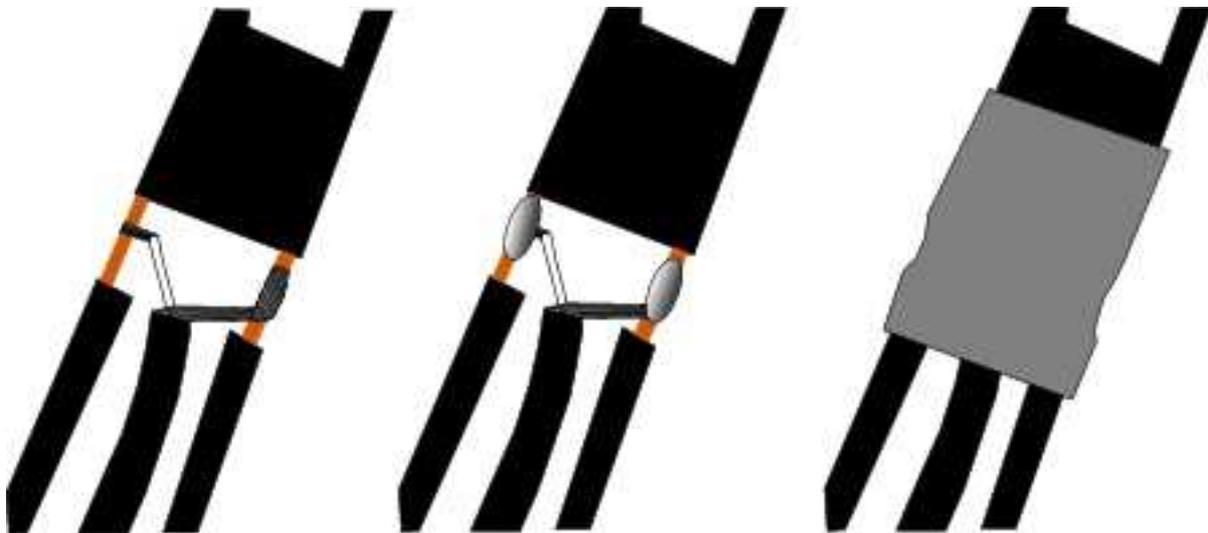
The 2m Slim-Jim antenna build.

4. At 80-100mm from the bottom of the ladder-line, removed the coloured electrical tape (this is on the kit only) - this marks the approximate location of the feed point. Strip 10mm of the insulation and twist the coaxial wires around each side. Ensure that the centre of the coax is on the left (*continuous*) side of the ladder-line, and that the braid is on the *right* - ie: the same side as the cut/notch you made earlier.

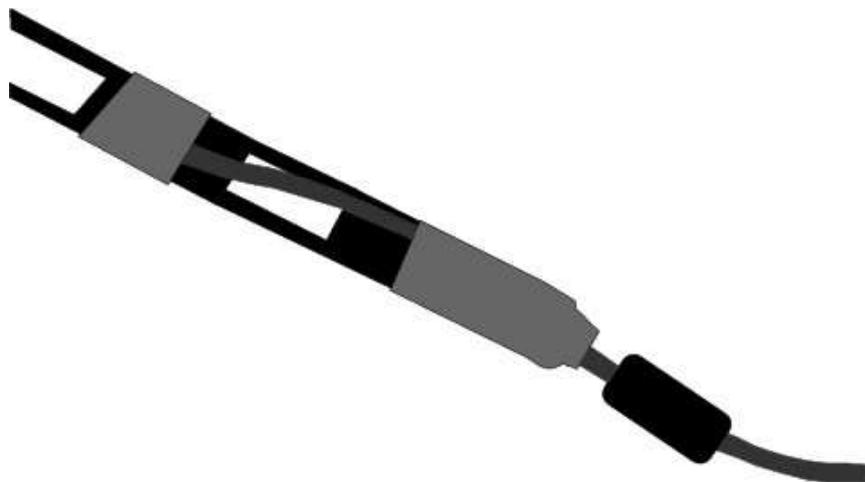
Now, solder the coax to the ladder-line ensuring that there is plenty of heat and solder-flow.

Place the aerial on a *non-conductive* pole (such as a fishing pole) and check that the SWR is less than 1.5:1 across the whole 144-146 (2m) band. With adjustment of the feed point, you should be able to get less than 1.2:1.

Once tuning has been completed, slide 1 piece of heat-shrink tubing to cover the solder joint. Place another at the bottom of the feeder as shown in the pictures below. The adhesive inside the tubing will act as a strain-relief on the coax during transport and use - it will ensure that the solder joints are not stressed due to movement.



Finally, place the snap-on ferrite just below the bottom of the aerial - you are now finished!



Using it

The Slim-Jim is a great performer when used in clear-space and away from people and metal objects.

It works great when attached (using the supplied velcro cable-tie) to a telescopic fibreglass fishing-pole - even at 15ft up with a typical 5-watt handheld: You'll be able to work distant stations and enjoy superior coverage to the "rubber-duck" that most radios have on them. We've included a velcro cable-tie which, not only keeps the Slim-Jim rolled up when in storage, but can also be used to secure it to a fishing pole.

This months contests

October

HF

Day	Date	Time UTC	Contest Name
Mon	05-Oct-2020	1900-2030	Autumn Series CW
Wed	14-Oct-2020	1900-2030	Autumn Series DATA
Thu	29-Oct-2020	2000-2130	Autumn Series SSB

VHF

Day	Date	Time UTC	Contest Name
Sun	18-Oct-2020	0900-1300	50MHz AFS Contest (AFS Super League)

November

HF

Day	Date	Time UTC	Contest Name
Mon	02-11-2020	2000-2130	Autumn Series DATA
Wed	11-11-2020	2000-2130	Autumn Series SSB
Sat	14-11-2020	2000-2300	Club Calls (1.8MHz AFS) HF Championship AFS Super League
Thu	26-11-2020	2000-2130	Autumn Series CW

VHF

Day	Date	Time UTC	Contest Name
Sat-Sun	07/08-11-2020	1400 to 1400	144MHz CW Marconi

'Air Miles', how far have we gone? / results

This month has been quieter for many reasons, but we're sticking with it and continuing...

So, how have we done this month?

(Running totals in red)

General

Most Miles

G3XZG	45,432	290,563
G3ZNU	42,610	783,527
M0IHY	5,901	613,911

Most QSO's

G3ZNU	132	962
G3XZG	27	268
M0IHY	1	630

Longest QSO

M0IHY	JA0FOX(5901)	CP6CL(6099)
G3XZG	W7SW(5243)	OA1F(6130)
G3ZNU	NE8Z(3751)	JR3NZC(5909)

Shortest QSO (miles)

G3ZNU	15	0
G3XZG	149	2
M0IHY	5901	4

Average per QSO (miles)

M0IHY	5,901	974.46
G3XZG	1,682.67	1,084.19
G3ZNU	322.8	814.48

Maidenhead Squares

G3ZNU	52	481
G3XZG	25	214
M0IHY	1	351

By Band

160m

M0IHY	1
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20m

G3XZG	17	70
M0IHY	1	167
G3ZNU		14

6m

G3ZNU	55	543
G3XZG		135
M0IHY		11

80m

M0IHY	13
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17m

G3ZNU	4	75
G3XZG	2	12
M0IHY		186

2m

G3ZNU	124	175
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40m

M0IHY	117
G3XZG	12
G3ZNU	8

15m

M0IHY	25
G3ZNU	11
G3XZG	4

70cm

G3ZNU	1
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30m

G3XZG	8	10
M0IHY		97

10m

G3ZNU	2	130
G3XZG		25
M0IHY		13

'Air Miles', how far have we gone? / results

By Mode

CW		FT8		JS8		
G3XZG	27	266	G3ZNU	118	788	
G3ZNU	4		MOIHY	1	626	
FM		SSB		Olivia 8/250		
G3ZNU	2	G3ZNU	14	33	MOIHY	1
M7CKP	2	G3XZG	2			
MFSK		MSK144				
G3ZNU	123	G3ZNU	52	481		

By Country

G3ZNU	88	121
G3XZG	16	88
MOIHY	1	90

Members items for sale

This month Terry (G0VFW) heads the list with items for sale.

ICOM IC-7600

g0vfw@thirlwell.me.uk
07846 446154



100 Watts, HF & 50 MHz Inc Mic, Power Lead, Boxed

£995

ME2HT-Pro

g0vfw@thirlwell.me.uk
07846 446154



2M Transverter IF-28MHz

£550

Members items for sale

2m Discovery-2 1KW Linear Amplifier

g0vfw@thirlwell.me.uk
07846 446154



£995

Having advertised a couple of antenna's for sale Terry was quite surprised to receive a response from the Isle of Man for one of them, seems the guy must have exceptionally long arms as the advert stated "buyer to collect"!

Any other business

Intermediate exams - the results

Congratulations to both Peter (2E0PTH) and Guy (2E0GUW) on passing their exams, Advanced licence next??

Having made the above statement, Guy informs us that he's put in for his Advanced Licence exam, Darren (M0TLI) did his 3 exams in 12 months, I believe James (M0JCQ) did the same, I took time out and did mine in 15 months so it's possible.