

May 2024

INTERFACE

MONTHLY BULLETIN
MARLBOROUGH AMATEUR RADIO CLUB INC. P.O. BOX 432 BLENHEIM NZ

Club Calendar

General Meeting;..... 9 May, 7.30pm, EOC
Social Group; 16 May, Dodson St Beer Garden
Committee Meeting; . 30 May, 7.30pm, Zoom

HF Net Tuesdays & Saturdays
2030 hrs 3876kHz

VHF - USB Net Wednesdays
1930 hrs 144.150MHz

Branch 22 Notices

1. Duplexers, Aerials & VNA's..... 9 May
2. Winery Tour Site Visit (TBC) 24 June
3. HamCram..... 22/23 June
4. Mid Winter Lunch..... 14 July



VHF Mondays 1930 hrs
146.950MHz,
145.600MHz, 147.225MHz

Net Controller;
Rob Carter, ZL2IW

Website: www.zl2ks.org.nz

Editor: Caryl Simpson caryl@simtronics.co.nz **MARC Contact:** marcbranch22@gmail.com



View coming down from Ward repeater

Thanks to Graeme McKay, ZL1BDS, for taking photos on the day, including this one

MARLBOROUGH AMATEUR RADIO CLUB GENERAL MEETING
at EOC, 11th April 2024

There are no April Minutes as the meeting was replaced with the trip up to the Ward repeater.

WESTFEST 2024 MURCHISON *DATE CHANGE*
now 7TH - 8TH SEPTEMBER 2024
(This is to avoid a clash with International Lighthouse Weekend)

This is to inform you and your club members that we, Br26, will be organising WESTFEST 2024 in Murchison. Programme is in its infancy and if any of your members would like to present a topic then please get in touch. Programme will start at 10am, go through to around 5pm, then again on Sunday from 9am finishing around 1pm. Please can you let your members know and, if going, they need to organise their own accommodation.

We will only be providing morning/afternoon teas.

We will be in touch when we get a programme together and other items finalised.

Any questions, potential presenters, please get in touch.

Stewart Robinson ZL2STR

HamCram organiser for Nelson ARC Br 26.

strobzn@gmail.com

022 459 0415



Bought in Sept 2021

Asking \$1200

Contact Nick Batt
nick@chaingang.co.nz



Picture for demonstration purpose only, not the actual radio on offer

Apparently several people asked for this recipe after enjoying some CRANZAC biscuits (ANZAC biscuits with cranberries) on the Ward repeater trip, so here it is...

CRANZAC BISCUITS

(recipe originally from The Breeze radio host, Steve Joll)

- 1 C flour
- 1 tsp baking powder
- 3/4 C shredded coconut
- 3/4 C rolled oats
- 3/4 C cranberries
- 2/3 C packed brown sugar
- 1/2 tsp cinnamon
- 110g butter
- 1 good Tbs golden syrup
- 2 Tbs water
- 1/2 tsp baking soda



Prepare a tray with baking paper & preheat oven to 180°C.
Combine the first 7 dry ingredients in large bowl.
Mix until brown sugar is broken down & cranberries are separated.
Put butter, golden syrup & water in a pot & warm over medium heat. Don't let it boil.
When butter has melted, turn off heat & stir in baking soda.
Pour into dry ingredients.
Using back of a tablespoon stir together, without over-mixing, until no dry flour is visible.
Roll into balls & flatten with fork.
Bake about 12 - 14 minutes, until golden brown & cooked.
Store in an airtight container when cooled.



Ian Conway

The club has radios available, as well as an antenna analyser, for members to borrow when required. Contact a committee member for more details if you would like to avail yourself of any of these.
marcbranch22@gmail.com



MARLBOROUGH AMATEUR RADIO CLUB COMMITTEE MEETING
via Zoom 25th April 2024 at 19:30 Hours

Present: John Errington (Chair), Greg Barton, Don Laing, David Rothwell, Gerard van Antwerpen, Graeme McKay

Apologies: Paul Rennie, Nick Batt

Health & Safety: No issues

Minutes of last meeting: of 28/03/24 confirmed. No matters arising. *Moved JE/ Seconded DL, Passed All*

Correspondence: (since CM MOM 28/03/24)

Inward:

30/03/24	Greg Barton	Mark Toplay W4NMA paid invoice
30/03/24	Gerard van Antwerpen	Remote HF rotator working
02/04/24	Nigel ZL2SEA	AREC Winlink weekly check-in updated instructions
04/04/24	Frith Chamberlain	HamCram registration for 2
06/04/24	Pamela Wegener	HamCram inquiry
06/04/24	Tony Baker	HamCram registration for son
06/04/24	Dominique Greenslade	HamCram inquiry
06/04/24	Mark McGowan	Antenna tuner inquiry
10/04/24	Aon Insurance	Notice of Broker transfer
16/04/24	MBIE	Beacon license invoice
18/04/24	NZART	2024 Circular forms
14/04/24	NZART	Break-In magazine

Responses & distribution of the above Inwards as applicable

Outward:

29/03/24	NZART	Request for copy of Conference remits
01/04/24	Committee	Confirmation of newspaper meeting notice
04/04/24	LandSAR	PO Box payment
15/04/24	Helen & Graham	Field Day appreciation letter & MTA vouchers

Motion: *The Inwards correspondence be accepted and the Outwards endorsed.*

Moved: DL/ Seconded: JE/ Passed: All

Matters Arising: To be covered in General Business

Finance: (In Committee) Treasurer presented his report

- Membership is now 51 with 6 unpaid

Upcoming payments:

Repeater batteries
Installation Kaikoura repeater

Motion: *The Accounts be accepted and the payments approved*

Moved: GB / Seconded: JE / Passed: All

NZART Conference:

- NZART Constitution requires that Branch Delegates to be approved at Branch General meeting

Motion: *That Committee proposes John Errington & Stuart Watchman be Branch 22 Delegates.*

Moved: JE / Seconded: GvA / Passed: All

- Remits

Motion: *That Committee supports both remits*

Moved: JE / Seconded: GB / Passed: All

Events:

HamCram	22~23 June 2024	
Mid-Winter Dinner	To determine date	(Post meeting confirmed date is 14th July 2024)

Repeaters & Systems:

Repeater Maintenance Program

Proposed that;

- A standard check list be prepared for each repeater and included in the respective repeater log book
- An annual check of at least one repeater be carried out

6m Beacon New Beacon with 'whisper' function now fully installed and operational.

Weld Cone Following site visit proposed to remove shed to workshop for significant repair and to tune repeater system. **DR**
To ascertain protection of shed stays to prevent damage from cattle rubbing

Kaikoura Installing mounting structure inside cabinet. **DR**
Now second priority to repairing Ward repeater

Picton Batteries No immediate action required **DR**

Brayshaw Park Rotator control now operational after hardware reload. **GvA**
Discussion re GURL interpretation and legality of remote international user access but to await final decision until after inquiries at NZART conference. **JE**
Need to change to Chrome software which requires setting up a specific Gmail account **GvA**

Speaker Schedule:

May 9	Duplexes, aerial & VNA's by JE & DR	
June 24 (TBC)	Winery Tour site visit with DR	
July 24	Brayshaw Remote & SDR's & Winlink -post meeting confirmed with Gerard, Nick & Greg	
August 24	Digital modes and QSO's - post meeting confirmed with Bill Cousins	
September 24	Constructors Awards	
October 24	Lightning characteristics, protection & earthing practices	DR

AREC:

- Noticed in NZART accounts that 86% of NZART income is from AREC Trust however, unlike LandSAR, very little is allocated to Base level and most spent on internal management.
- Plan further consideration of applying for an AREC grant to install a Win-Link South Island server at Brayshaw Park as present server located in upper North Island.

GENERAL BUSINESS:

- New Constitution – Await ratification of new NZART constitution at the next NZART conference following which NZART will issue a model Branch constitution.

Meeting Closed: 20:45

Next General Meeting: 9th May at EOC, 7:30pm

Next Committee Meeting: (NB: CHANGE) 30th May 2024, 7:30pm (via Zoom)



MUSEUM SHIPS WEEKEND 2024

This is an international annual event which attracts amateur radio activity from some 100 museum ships, mainly naval, around the world, In this respect it has similarities to the Lighthouse event in August which the club has supported for some years.

This year it is scheduled for our King's Birthday Weekend on the 1st - 3rd June.

In previous years I have worked 10 -12 stations from home, but this year I wondered about the possibility of activating the Edwin Fox in Picton for the event. To this end, I visited the site to gauge its suitability and had an initial talk to the manager. The response was quite enthusiastic!

The operation would involve setting up aerials on Saturday morning, operating from early afternoon, and dismantling on Monday morning. Hours of operation yet to be negotiated with the museum authorities. Accommodation is comfortable and within the existing building next to the ship itself. This also satisfies the event rules.

Although this activity is most likely to be an individual one on my part, I thought I would put it out there in case there may be others who may be interested in giving a little time e.g an hour or two to either installation and/or operating. No pressure, I'm happy to do this on my own if necessary, especially seeing it is a holiday weekend.

As I have had some success previously from home with just 200W and a dipole or vertical, I would expect similar success using similar gear at the Fox, especially with the aid of a linear amplifier.

Google "Museum Ships Weekend 2024" or "Battleship New Jersey" for an indication of activity.

Any interest?

- Bill, ZL2AYZ



ANNUAL MID WINTER LUNCH

WHERE: Armadillo's, Springlands Tavern, 18 Boyce St. Blenheim

DATE: Sunday 14th July

TIME: 11.30am with orders taken in time to serve just after midday

RSVP: Caryl@simtronics.co.nz by 11th July (which is the General Meeting night)



FROM THE WORKBENCH, MAY 2024

We have had a number of requests for more technical content in Interface.

With that in mind, I hope this column initiates contributions from you all. The thought is to share technical ideas that might be helpful to others.

I have called it "From the Workbench". Feel free to suggest something else.

This month I cover two topics, Insulators and End fed antennas, followed by a note on using SMD components. Hopefully someone else will send the Editor something from their workbench in time for next month's Interface.

Insulators and End Fed antennas.

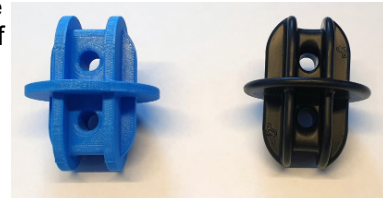
I have been experimenting with End Fed random wire antennas, and my first comment is that this is not for the faint hearted, there be dragons that way. You will need MMANA-Gal and a VNA to fight them off.

With a modern antenna tuner, you can match almost anything – that does not mean you have a good antenna. I asked ChatGPT to illustrate the concept.

I invite anyone who is experimenting with these sorts of antenna to get in touch, I am sure there are ideas we can share.

As part of this project, I needed some insulators to terminate the experimental antennas. There are some good US suppliers, for example <https://thewireman.com/> but when freight and delivery delay are added that seemed a bit over the top, so I decided to 3D print one. I have an ARRL kitset that includes an injection moulded plastic insulator, so I decided to 3D print something similar. The result is shown in the picture below. I printed it with both high density ABS and PLA, and it works well. If anyone would like the .stl file or the CAD files, get in touch.

This picture shows the original insulator (RHS) and the 3D printed one (LHS, blue)



Using SMD Components.

SMD components are unavoidable these days. Many components are only available in an SMD format, they are cheaper, and they make much more efficient use of PCB space, making the PCBs cheaper.

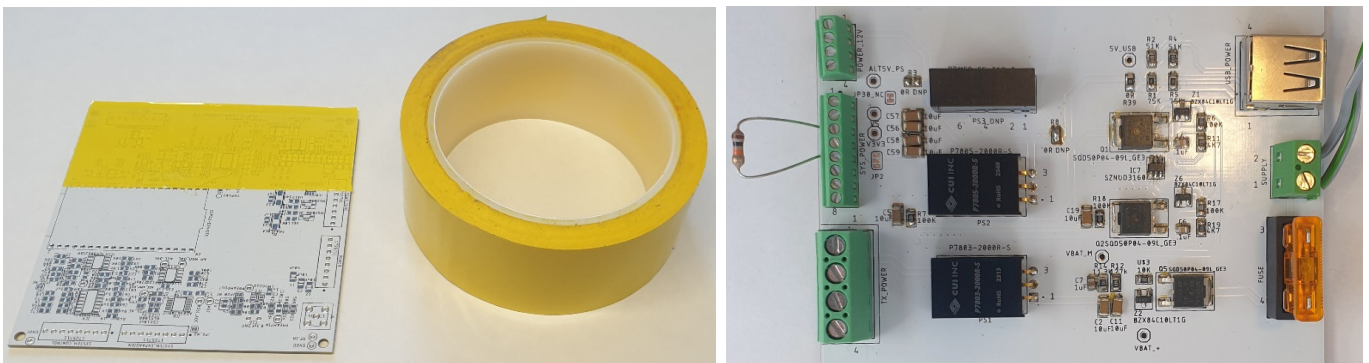
If you need small components or spacings of less than about 1mm, then you need to use a Fab. House that will use NC machines to place the solder and components.

But if you stick to 0805 components and spacings above 1 or 1.5 mm, then you can load small boards at home. The attraction is speed and cost. Getting a bare board made will cost only a few dollars and take a week or so. Getting the components placed will add substantially to the cost and will add 3 or 4 weeks to the build time.

Cheap solder ovens from China make it practical to flow solder your own boards, but getting the solder on the board is difficult. A common approach is to use a solder mask, made from mylar. The problem is getting the mask lined up with the board and then keeping it in place as the solder paste is applied. This is time consuming and messy. The resolution is limited, and variable.

It is now possible to get cheap laser etching machines, so I thought I would try sticking mylar tape (<https://www.amazon.com.au/gp/product/B078RP22Q4>) directly to the board and then using a laser to cut the solder mask while the tape was in place. This way registration is much easier. The resolution is limited to the laser beam diameter – for now about .75 mm in my case, but I expect to reduce this in time. Applying the solder paste was faster, easier and less messy because the solder mask did not move, not even a little.

It worked very nicely – the pictures show a power supply that was built this way, and tape as it is applied to the board before cutting the mask.



That is all for now. I look forward to seeing some other contributions next month.

73s, John E. ZL3TIL

ON THE AIR ACTIVITIES - Nick Batt, ZL2NEB

SOTA, POTA, BOTA, IOTA, the number of "On The Air" activities seems almost endless. It's impossible to keep track, and it's all a little confusing. Essentially though, they all have one thing in common – at their heart they all involve "getting on the air" in some form or another.

I'm not sure exactly why or how I got interested in OTA activities, but for whatever reason I clearly remember my first activation – an unactivated SOTA summit in the Molesworth. There was an almost pioneering feeling about traipsing up a mountain with a backpack full of radio gear and then attempting, (and hoping) to make the required 4 contacts necessary to complete the "activation". In the end I think that I got 14 – certainly more than necessary and more than enough to make me want to repeat the process again.

Since that time I've operated from mainly parks around the Marlborough/Tasman region but have ventured further south and activated locations in Canterbury and Oamaru.

The process is remarkably straightforward:

1. Find a suitable park (record the park number as that will come in handy later).
2. If you are very organised, then send out an alert about where you will be operating and when and what frequency – this is to hopefully encourage others to listen out for you.
3. Travel to the park, setup and start operating.

Enjoy wild success, record your logs and then upload them.

The "wild success" part isn't completely guaranteed and I have at least attempted one local park 3 times before getting any contacts at all. One trick to try and ensure that you at least get something is to put up a spot post (on the ontheair.nz website) to say that you are calling or alternatively ask someone else to do it for you. I've also been known to send a text message to another operator with simply the frequency that I was on in the hope that they would get the hint and give me a call.

If this sounds very much like fishing then you would be right – it is, and like fishing, there are no guarantees that you will return home with a catch.

Equipment wise there are a lot of options. My current preference is for some sort of portable transceiver (I'm often using a Xiegu G90 at the moment) and a random wire antenna which gives me plenty of options on what bands I can operate on but generally require me to carry a tuner to make use of their "frequency agility" (thankfully the G90 has one built in). Other operators are strong believers in "resonant antennas" which is also something worth considering. The pros and cons of dipoles vs verticals is something that I need to do some proper experimentation with but in many cases, it's the location which is going to dictate what is possible.

I generally carry a telescopic mast which means that I have some control over what I can deploy. Trees of a suitable height and disposition are not always in good supply and the process of getting your antenna up in one, while conceptually straightforward, can be surprisingly difficult from the ground. Like everything in life – it all comes down to what compromises you are willing to make.

NZ has a strong core group of OTA practitioners. You will often hear the same callsigns coming up (often on a weekend morning). While in America and Europe, CW might be a popular mode for SOTA and POTA, in NZ it's mainly SSB. We are, after all, talking about a niche activity within a niche hobby and the number of active radio operators in NZ is remarkably small.

Fundamentally it's all about operating radio and actually doing something.

If you would like to see a little more about what activations are like – both successful one and complete failures then perhaps have a look at some videos of my recent activations here: <https://youtube.com/@zl2neb>

- Nick Batt, ZL2NEB

Nick set up next to the trig station when they went up to the Ward repeater, in hopes of a SOTA (Summit On The Air).



Nick, ZL2NEB, and Gerard, ZL2GVA, head up to the trig station above the Ward repeater site.



Photos by Graeme McKay.

PICTORIAL REPORT ON TRIP UP TO WARD REPEATER. All photos thanks to Graeme McKay.



Sally Peter, historian, giving talk about local area & progress on new museum



Convoy heading up to repeater



Distant aerials (not club ones) higher up the hill



Same, but not so distant, aerials

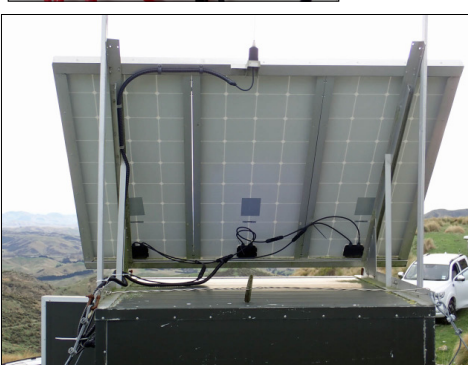


Repeater hut & Branch 22's aerial



Non club aerials from other side with old Ward cell site hut, shown above and below from different angles, now emptied and unusable after 2016, 7.8 quake.

What's in the repeater hut you ask? This stuff...



Back side of solar panels on repeater hut roof







It looked to me, at first glance, like these ladies were studying the large cow pat in front of them but perhaps they were just talking s***t 😊



MARC 6M BEACON

As I am not aware of any 6m enthusiasts in the Club, it is probable that very few are aware that the Branch 22 6m Beacon was restored to operation early last December, after a long period off-air.

This beacon is located on the Wither Hills, above the Cob cottage, at a site shared by a number of other services.

Not long after its re-installation, the transmitter became somewhat unstable but still functioned after a fashion. Unfortunately it could not be accessed for repair because of the fire ban put in place by the District Council. When the ban was lifted in February, the unit was repaired but, before it could be put back in place, a far better option became available.



Using a number of hours of his "NZ summer vacation", Tony Whitaker, ZL2RKL, had assembled a QRP Labs WSPR exciter and linear amplifier and had it working on our assigned beacon frequency of 52.094 MHz. However, this frequency is not in the beacon band and may have been missed by operators looking for DX on the 6m band. A decision had therefore been made late last year to apply to ELG for a change to a more suitable frequency. It also seemed advantageous to activate the WSPR facility also available from the exciter.

WSPR (Weak Signal Propagation Reporter) is a programme designed for the sending and receiving of low power transmissions to test propagation paths, in our case, on 6m. It therefore offers, in a potentially better way, a function similar to the original beacon. Our exciter was therefore programmed to function as a FSK beacon much as before, sending a series of pips, identified every minute as ZL2SIX. The new frequency is 50.054 MHz. However, every half-hour, this transmission is interrupted to send a WSPR signal on 50.29454 MHz for two minutes. The WSPR signal comprises callsign (ZL2SIX), maidenhead grid locator (RE68) and transmitter power (40 dBm). Again, the emission is FSK but in a very narrow bandwidth (FSD).

If you have a suitable decoding programme such as WSJT-X, as used for FT8, you can decode this transmission every half-hour.

The linear amplifier delivers 10W to a vertical antenna. Accurate timing is essential for the WSPR operation and is provided by a built-in GPS satellite receiver. Initially, this was a problem because, with other services on site generating so much RF interference, a proper timing signal from the seemingly elementary antenna used, was impossible. However, the use of a GPS antenna designed for such hostile environments solved the problem and the installation now functions as intended

i.e Standard FSK beacon on 50.054 MHz most of the time, with a 2-minute break every half-hour for a WSPR transmission on the 50.293 MHz band allocation.

A great vote of thanks is owed to Tony for not only his provision of the QRP Labs gear for the new installation but also the hours he put in for assembly and testing. It was his idea to include the WSPR facility which I'm sure will prove useful as well as updating the facility technically. The WSPRNet site allows for monitoring where our signal is being received.

- **Bill Cousins, ZL2AYZ**



These two photos, also taken by Graeme McKay, are from the Ward repeater trip and were taken as they headed back to the Ward Hall.



The obvious source of all the, often massive, cow pats seen in several of the photos.

2024 JOCK WHITE MEMORIAL FIELD DAY CONTEST RESULTS

Montgomery Cup - Northern Region

CALL	80 metres				40 metres				Tot Mult	Total Score	Pwr Out	BRANCH
	QSOs		Branches		QSOs		Branches					
	Ph	CW	Ph	CW	Ph	CW	Ph	CW				
1 ZL1AM	209	83	28	6	325	119	29	7	70	182840	100	28 Whangarei
2 ZL1REG	273		29		449		28		57	123462	100	89 REG
3 ZL1WIS	238		29		340		26		55	95370	100	90 Waiheke Island
4 ZL1IB	180		25		246		29		54	69012	100	53 Te Puke

Patea Trophy - Central Region

1 ZL2AB	191		28		214	55	26	7	61	90890	100	27 New Plymouth
2 ZL2AS	90		26		351		29		55	72765	100	13 Hawkes Bay
3 ZL2AA	121		26		192		29		55	51645	100	11 Gisborne
4 ZL2VH	53		19			27		7	26	7644	100	63 Upper Hutt

ZL3/4 Trophy - Midland Region

1 ZL3RR	236	108	26	6	380	135	28	6	66	202158	100	68 North Canterbury
2 ZL2KS	208	110	29	6	265	122	29	7	71	183109	100	22 Marlborough
3 ZL3ARC					379	110	29	6	35	59045	100	01 Ashburton

"4" Trophy - Southern Region

1 ZL4AA	165	62	28	5	262	103	26	7	66	138996	100	30 Otago
2 ZL4GQ	135		29		163		27		56	50064	100	37 Southland

Single Station: 80 and 40 metres

1 ZL2DS	65		22		354		29		51	64107	100	16 Horowhenua
2 ZL1ROD	67		25		63		24		49	19110	100	71 Rodney

W M Hall Memorial - QRP

1 ZL2MLQ					300		24		24	21600	5	14 Hawera
2 ZL1LC	54		16		105		23		39	18603	5	58 Helensville

Single Operator

1 ZL4AL	163		28		178		28		56	57288	100	08 Eastern Southland
2 ZL3BRC	98		24		229		29		53	51993	80	62 Reefton Buller
3 ZL1UTH	124		23		199		26		49	47481	100	38 Taumarunui
4 ZL2AMS					145		26		26	11310	70	23 Marton

80 Metres Only

1 ZL2ARG	262	41	29	6					35	34685	100	26 Nelson
2 ZL2KB	192	95	27	6					33	34683	100	69 Kapiti
3 ZL2QF	50	51	11	6					17	6885	100	87 South Taranaki

Hastings Trophy - Phone Only

1 ZL1VK	234		29		559		29		58	137982	100	65 Papakura
2 ZL2KO	309		28		460		29		57	131499	100	20 Manawatu
3 ZL1SA	316		29		396		28		57	121752	100	10 Franklin
4 ZL2AFV	251		28		342		28		56	99624	100	42 Titahi Bay
5 ZL1IZ	174		27		385		29		56	93912	100	55 Waitomo
6 ZL6YOTA	139		28		245		28		56	64512	100	73 Northern Wairoa
7 ZL3AF	45		12		160		29		41	25215	100	01 Ashburton
8 ZL1AA					248		29		29	21576	100	02 Auckland

Home Stations

1 ZL1ECG	120		30		197		26		56	53256	100	
2 ZL2ALW	49		20		209		27		47	36378	100	
3 ZL4W	26		15		194		30		45	29700	100	
4 ZL4MDX	71		18		143		24		42	26964	50	
5 ZL3YB					154	21	27	4	31	17577	90	
6 ZL2AGY		71		7		100		8	15	12825	90	
7 ZL1HOG					102		22		22	6732	100	
8 ZL4SA	54	1	15	1					16	2672	50	
9 ZL1JV	47		16						16	2256	100	