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The Bi-Monthly Magazine  
of the  
Redcliffe and Districts Radio Club Inc.

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ISSN: 1441-9386/ Vol. 10 No. 4

June 2008

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## Amateur Radio Stations VK4RC & VK4IZ



Trip to Mountain

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## From the Editor

Greetings to all Club members, radio enthusiasts, family supporters and friends.

Welcome to QRM for June 2008. This my first issue as Editor of the Club magazine. Some of you have known me for quite a few years and to many you hardly know me.

My father, also Gerry was an Amateur. He obtained his Licence in the days when you had to travel to the nearest PMG office (I think he had to go to Nambour for one exam), apply for and sit for a written exam, plus sit for your Morse (one on one). Then wait for the results to see if you passed or failed. Dad obtained his callsign of VK4YB (he could not get VK4GB as it was already issued). He was a member of this same club, along with Dave Richards, Don Clark and many others, some from interstate like Stan Dixon (VK4LF) who regularly came up from Victoria for holidays. I grew up helping with the installation and repairs of Antenna's (I was small enough to climb the Hills Tower) and toddled along when he visited various Redcliffe Radio Club members.

My Father's QSL cards had a drawing of Yogi Bear, lounging on rocks with a fishing line dangling in the water (the symbolism was fishing and water for Redcliffe's attractions). I have seen many changes to the face of Amateur Radio during that time. I also followed my father in the field of Electronics but sadly did not have time for embracing his hobby, having a wife and young family and all that goes with it, which precluded me from entering this exciting field of electronics.

When my father passed away I managed to hang onto some bits of his equipment which continued to niggle at me over the years. I eventually passed my Theory and Regulations, obtaining a LAOCP. This was short lived and my call lapsed due to work commitments. But now my children have all flown the coop (as much as that could mean) and once again I have taken up the challenge of this exciting hobby. Sometimes my XYL (Rose) wonders what she got herself in for when she encouraged me to re-ignite desire.

I wish to take this moment to thank Alan Jenner (VK4KZ) for his outstanding contribution to the club as Editor amongst other things over the past 7 years. I hope I can keep up his high standard in the magazine.

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#### **What's inside this Edition.**

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On our recent trip to Tasmania we came across this House with a large amount of Antenna's. It brought to mind our recent Tech talk and pictures of Peter VK4TGV's collection on his small block.

That night (Monday 2<sup>nd</sup> of June) back at our Accommodation I fired up Charlie's (VK4YZ) VHF Handheld and attempted to log to the Club via IRLP or Echolink but to no avail. I had the assistance of Gavin VK7HGO and I still could not get in. He said that currently there was someone logged in.

During our discussions I described the house we saw on the way to the Huon Valley. Gavin said to me Oh! You noticed the house and yes he is an amateur and also a club member. Later on Brian VK7BW (owner of the house) called in to say hello. I told him of my wife's astonishment of approx 19 antennas adorning the buildings and received his permission to publish the photo in our newsletter. Sadly I could not attend their club meeting as we got back too late from our day trip.

Gerry VK4UGB

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## **2007/08 COMMITTEE MEMBERS & CLUB DIRECTORRY**

<b>President</b>	David Close VK4FDRC	Phone: 3862 8700
<b>1<sup>st</sup> Vice President</b>	Charlie Strong VK4YZ	Phone: 5495 1565
<b>2<sup>nd</sup> Vice President</b>	Roger Wilson VK4IPE	Phone: 3385 7624
<b>Secretary</b>	Peter Richardson VK4TAA	Phone: 3261 4225
<b>Treasurer</b>	Glenn Wood VK4FZ	Phone: 3351 4295

**Meetings:** **EVERY MONDAY** with regular guest speakers and ongoing projects

**Time:** 1930hrs (local)

**WHERE:** Redcliffe and Districts Radio Club clubhouse - Cnr Klingner Rd & Macfarlane St, Kippa Ring

**Clubhouse:** Open every Monday evening 1930hrs (local) **INCLUDING PUBLIC HOLIDAYS**

**2<sup>nd</sup> Monday of each month: General Members Discussion Meeting**

**CLUB NETS:** Sunday evenings at 1900K 2m on 146.925MHz Redcliffe repeater VK4RRC and 1945K 80m 3.618 MHz ± QRM VK4RC Net control: 27 MHz, channel 20, 27.205 MHz LSB, Thursday at 8pm

REDCLIFFE and DISTRICTS RADIO CLUB Inc.

PO Box 20, WOODY POINT QLD 4019

WEBSITE: <http://vk4rc.we.net.au>

EXAMS: Alan VK4KZ, Glenn VK4FZ & John VK4WX

NET\_1: Sunday 1900K 146.925

NET\_2: Sunday 1945K 3.618

REPEATERS: VK4RRC VR 146.925, 438.325

**Contributions to Editor QRM – Gerry Bahre VK4UGB**

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### **Forthcoming Events**

- General business meeting, 2<sup>nd</sup> Monday of month
- Foxhunts, 4<sup>th</sup> Monday of each month
- Wednesday activities – mornings 9.00am each fortnight – next 10<sup>th</sup>, 17<sup>th</sup> October  
Contact Ken (VK4FKEN), **32832564** for further information or to offer suggestions for activities.
- Trivia Nights every Wednesday evening on 70 cm repeater, 7.15pm for check-ins

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## Another Trip to the Mountain

"Saturday morning, 3rd of May, lovely day, saw me picking up Cec (VK4CES) from his house at about 7.30 am, ready for a trip up the mountain, again. On the way we stopped at Martin's place (VK4JVC) to pick up the Unilab 70cm radio, which I had removed from the site a week earlier suspecting it had developed a problem. Fortunately the repeater radio checked out just fine, indicating the problem was still to be investigated. Quick stop at the Wamuran shops for a nice strong coffee and we were off to the site.

Upon arrival the Diamond high gain antenna was reassembled and readied for its reinstallation, whilst the ground crew worked on the new antenna, Cec bravely scaled the pole (see front cover) to remove Glenn's (VK4FZ) Nagoya vertical. Things were going quite well until the time came to fire up the repeaters for a test. A pesky crackle was heard; thankfully this was easily traced to a poor earth connection at the mast clamps which was fixed quickly with a smear of Aluminox and a hefty twist of the wing nuts.



The feedline with and without a dummy load was swept to ensure it is 100%, VSWR was checked at the duplexer input verified to be less than 1.5:1, so then everything was then bolted together for the final testing. The problem with the 70cm repeater turned out to be the power supply, which allowed the backup battery to run flat. This device was removed and the 70cm connected to the 2 metre repeater battery. After about 20 minutes of testing we tied the ribbons on it, sprayed some weed killer and headed home.

To date good reports have been received, the coverage appears to be much improved, so we feel the effort was worthwhile."

Peter Schrader,  
VK4TGV/9V1PS



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## ----- Club second hand market -----

Do you have any radio gear, components, bits and pieces you would like to sell or swap. You can advertise in QRM for free. Please call, email or send details to the QRM Editor, Alan (VK4KZ). Similarly if you want something you think someone might have, you can also advertise in QRM. Your Club is there working for you. For current items for sale/wanted, see below.

## DONATIONS WANTED

**Peter Schrader (VK4TGV) is requesting equipment donations to the Club for emergency communications gear, to complete the fit out of the radio room, namely:**

- a 27MHz CB (AM/SSB) in good working order
- UHF CB in good working order
- UHF CB base antenna
- Marine VHF radio
- Marine VHF antenna

**All donations of equipment will be gratefully accepted, however if the equipment offered is of some value, could the person offering indicate to Peter via email [peters@edmi.com.au](mailto:peters@edmi.com.au) what they think it is worth to them.**

I am pleased to report that there have been some generous donations of equipment for the radio room WICEN fit out. The club now has sufficient equipment to begin the fit out, but still are always looking for more W, U and A band Phillips FM92's if they are sitting in a box doing nothing. The club is also looking for Codan 8525, 7727 or Wagner HF radios ready to be recriyalted to the WICEN 5MHz frequencies.

Could I ask that a thank you note be placed in the next edition please, the equipment received so far will be utilised with thanks.

Regards,  
Peter Schrader,  
VK4TGV/9V1PS

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## WICEN – Wireless Institute Civil Emergency Network – How to become involved?

This piece is to inform all readers how simple it is to get involved with the newly resurrected WICEN effort in South-East Queensland. The resurrection is mainly due to the magnificent efforts of the Sunshine Coast Amateur Radio Club (SCARC). Over the last 12 months Emergency Management Queensland (EMQ) have been running a trial in the North Coast region where local amateur radio operators obtained a special type of SES membership termed “WICEN Radio Operator”. The member belonged to a special SES unit which is not confined to the local region, but directly under the control of EMQ, so in effect the SES Radio Operator Unit transcends the SES Local Controllers. Also this status allowed for other special treatment where the normal SES training requirements are drastically reduced to two days.

The trial has now been completed and reported to State Cabinet as a resounding success. This was helped by a couple of natural disaster events in the North Coast region, illustrating how useful skilled radio operators can be in situations like the Noosa floods experienced recently. As a result of this successful report EMQ are now extending the involvement to all amateur radio operators, hence you may recall Mark (VK4DGG) speaking the need for amateur radio operators in times of need. The Club needs to be involved if we are to be a community organisation, that is, to put something back into the community, the most effective way to achieve this is to get and stay involved.

So how do you, the club member help out? Simple, get the SES application forms from Mark or myself, fill in the details for the police check and SES membership, provide a photocopy of your drivers license or passport photo page and give them to me. From there once processed we will organise the two days of training at the clubhouse (First Aid, SES Ops and Workplace Health and Safety). Once this training is complete there is no obligation for you to undertake any further training unless you wish to. You will then belong to the Redcliffe WICEN SES Unit and be covered by the SES insurance for personal injury when on a call out. Note, we will never be expected to tarp roofs, man flood boats, look for dead bodies or rescue cats from trees.

Future developments will be to further develop our Standard Operating Procedures and run at least two to three exercises per year to get our capability relevant. Our field days provide technical training for portable station setups, these types of activities will be extended to provide relevant training and practice for emergency situations.

Any questions please feel free to contact me at [vk4tgv@wia.org.au](mailto:vk4tgv@wia.org.au).

Thus far, in South East Queensland WICEN is well represented, with SCARC, The Brisbane WICEN Group and now the Redcliffe and Districts Radio Club, all coming under the umbrella of the Qld WICEN Secretariat.

Peter Schrader,  
VK4TGV/9V1PS

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## APRS – Automatic Packet Reporting System

I recently sat down to write a couple of pieces on my latest APRS experiments, and it occurred to me that perhaps I was jumping the gun. In that, I am sure that most people reading this publication have absolutely no idea what APRS is all about. So let me try and fix that situation and bring everybody up to date with what APRS can do for you.

APRS, Automatic Packet Reporting System (note, not Positioning, but Packet), is a real time situational awareness tool, delivered by packet radio. The key difference between traditional packet services and APRS is that APRS embraced the Internet early, where packet tried to compete and clearly packet lost the battle. Never fear, there is still a use for the TNC that is probably in a box somewhere.

APRS provides a means to provide situational awareness to operators in an area, this achieved by objects being “placed” onto a map. Objects can be many, many things, ranging from vehicles, hikers, balloons, earthquakes, cyclones, fires, accidents, hospitals, emergency operations centres, hamfests, the list is long. Another key bit of APRS functionality is messaging and bulletins, where the operator can use a radio to transmit and receive short text messages in near real time. Bulletins are designed to update operators without needing their full undivided attention to a display, think of an airline departure times screen to give you an idea of bulletins. At the moment, bulletins in Australia are generally reminders to operators to configure their stations correctly!

Text messages are a really effective way of communicating amongst many, particularly in noisy environments, details in writing are less prone to errors, and again full and undivided attention to a display is not mandatory. The APRS system also provides for telemetry, that is, five figures are sent with the beacon object allowing for things like voltage and temperature to be logged from a remote location. An extension of telemetry is the weather station objects which provide up to date real time weather information at various locations.

The more well known feature of APRS emerged with the advent of cheap GPS receivers, meaning that mobile objects could be tracked in near real time, hence most people know APRS incorrectly as Automatic Position Reporting System, rather than Automatic Packet Reporting System. Mobile tracking has proved to be the “killer app” of APRS bringing this part of the hobby well and truly into the “mainstream” range of amateur radio activities.

Imagine in an emergency situation knowing exactly where and when events are happening in the local area, without a single word required on a voice frequency. It is envisaged that this type of information has the capability to free up decision process making to the really important matters, like preservation of life, rather more than trivial matters that could clog up Emcomm frequencies.

And, while not being utilised for Emcomm, APRS is a lot of fun.

Anybody can look at APRS objects via the Internet through websites like <http://aprs.fi>, <http://www.findu.com>, <http://aprsworld.net>. There are many more, punching in APRS

Peter Schrader,  
VK4TGV/9V1PS



## **MAINTAINING REPEATER RADIO EQUIPMENT**

The Redcliffe and Districts Radio Club's VHF and UHF repeaters are available for all amateurs to use, and all are welcome to use them, however, the radio equipment must be maintained and upgraded from time to time. If you would like to make a donation towards this upkeep, it may be forwarded to: The Secretary, Redcliffe and District Radio Club Inc, PO Box 20, Woody Point, QLD, 4019.

## **AMATEUR RADIO THEORY COURSES AT REDCLIFFE**

If you would like to get your amateur license, upgrade, or do a refresher course, you can study for the theory, regulations and practical for Foundation, Standard or Advanced at Redcliffe Radio Club. See Alan VK4KZ, Glenn VK4FZ, or anyone from the Executive. You don't have to be a Club member to participate. Special courses will also be arranged to prepare people for the Foundation License. Please let one of the above know if you wish to attend one of these. There may be limits to class sizes.

My contact details (Alan VK4KZ) are under "Contributions to Editor QRM", page 4 of this magazine. If you do contact me, please keep in touch, to make sure I don't forget (which unfortunately I am sometimes inclined to do). The dates for future courses are not known at this stage but will depend on demand at the time.

## **----- WIA Membership -----**

Please let the Secretary, Peter know if you have recently become a member of WIA. WIA membership of our Club members is important because we are able to derive insurance benefits. If you are not in WIA, please consider this seriously – it is our representative body.

----- Contest Calendar -----

**June 21<sup>st</sup>, 2008 (Sat) – June 22<sup>nd</sup> (Sun) Inaugural Winter VHF-UHF Field Day**  
 For the first time, the Spring and Summer VHF -UHF Field Days are joined by a third event, the Winter VHF-UHF Field Day, which will be held over the weekend of June 21/22. Operation can be for 24 hours or 8 hours. If you don't feel like heading for the hills at this time of year, there is also a home station section. Full details of the rules, a scoring sheet, and other information is available in the Contests section of the WIA web site.

**July 5<sup>th</sup>, 2008 Saturday 160 Metre Phone VK - ZL Trans Tasman Contest.**  
 160 Metre Phone VK-ZL Trans Tasman Contest.  
 For info, Bruce Renn VK3JWZ vktasman@hotmail.com  
 START 1800 hrs EAST  
 END 2400 hrs EAST

**July 6<sup>th</sup>, 2008 Sunday VK/Trans Tasman 160 metre Phone Contest SSB**  
**July 20<sup>th</sup>, 2008 Sunday VK/Trans Tasman 160 metre CW Contest .**

**Aug 16<sup>th</sup>, (Sat) 2008 – Aug 17<sup>th</sup>, (Sun) International Lighthouse/Lightship Weekend. Field Day, for info go to [www.illw.net](http://www.illw.net)**

**Aug 16<sup>th</sup>, (Sat) – Aug 17<sup>th</sup>, (Sun) 2008 Saturday Remembrance Day Contest**  
**Aug 30<sup>th</sup>, 2008 (Sat) – Aug 31<sup>st</sup>, 2008 ALARA Contest.**

**CELEBRATIONS** (*July/August and September/October* )

**Birthdays:** Grace Isdale (harmonic, VK4TWI), Bob Tencati (VK4TEN) 1<sup>st</sup> July  
 Mike Young (VK4TMM), 17<sup>th</sup> July  
 Doug McDonald (VK4KET), 21<sup>st</sup> August  
 Laurie Pritchard (VK4BLE), 26<sup>th</sup> August  
 Alfred McDonald (harmonic, VK4KET), 3<sup>rd</sup> September  
 Brian Bartlett (VK4UW), 12<sup>th</sup> September  
 Charlie Strong (VK4YZ), Mike Lambert (VK4VZK), Lawrie Hill (VK4DAH), 14<sup>th</sup> September  
 Andy Wood (VK4KY), 15<sup>th</sup> September  
 Emily Pritchard (harmonic, VK4BLE & VK4HAD), 18<sup>th</sup> September  
 Anne Isdale (XYL, VK4TWI), 19<sup>th</sup> September  
 Donna Wood (XYL, VK4KY), 24<sup>th</sup> September  
 Daphne Nunn (XYL VK4AX), 13<sup>th</sup> October  
 Kevin McDonald (harmonic, VK4KET), 20<sup>th</sup> October  
 Vanessa Morris (XYL, VK4YOL), 30<sup>th</sup> October

**Celebrations:** John (VK4WX) & Beryl Prestto, 23<sup>rd</sup> July  
 Andy (VK4KY) & Donna Wood, 9<sup>th</sup> August  
 Arnold (VK4AX) & Daphne Nunn, 18<sup>th</sup> August  
 Stewart (VK4TSB) & Vicki Bodarenko, 1<sup>st</sup> September  
 Don (VK4KZT) & Linda Laing, 21<sup>st</sup> September

**Congratulations and best wishes to all above .**

**Apologies to anyone who has been left out. If you are not the on Celebrations List, please give Asst Secretary Celia your details as soon as possible. Celia is currently updating the list.**

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## APRS – Club APRS Station and Digi-peater

Recently you may have noticed a PC in the club radio room which is now permanently switched on? This is the club's APRS station, the intent is to illustrate to members how easy it is to become active on APRS using standard components you probably have sitting in a box somewhere.

Recall from previous articles what APRS is all about, that is, real time object reporting for the local area. Also recall that APRS is available via RF and the Internet. As the club house does not have internet connectivity the only option for APRS is via VHF (145.175). This is not strictly true, in fact there is a UHF APRS frequency in Brisbane, but being located at my home QTH in Northgate is a little far away for reliable operation.

The procedure was relatively simple, I installed UIView32 on the PC, connected the KPC3 TNC (kindly donated by Phil, VK4FIL) to the club's FT1500m 2 metre radio, installed the ex-repeater Azden vertical antenna on a hockey stick, ran some coax and viola, a dedicated APRS station.

The map shows all beacons in Queensland which are originated from the IGate located on Mt Mee (run by Mick, VK4OG). Stations heard directly by the radio are also displayed, so on Monday evenings you can observe several club member vehicles travelling to and from the club house.

Additionally the setup also provides a local digital repeater (digi-peater) for APRS traffic, in that mobile tracking radios are normally 5W or less, so a local digi-peater helps with retransmissions of packets so they are propagated to the entire Queensland system. The concept is to have many of these low power, poorly located digipeaters located in many locations to improve the network coverage. The approach is very similar to the cellular telephone network approach where more cells improve the capacity of the overall system.

So in summary you can always lookup VK4RC-1 on the APRS system (<http://www.findu.com>, <http://aprs.fi>, <http://aprsworld.net> or <http://www.db0anf.de/app/aprs> .

The other key reason this was setup is for emergency communications, in that APRS has the potential to be a very useful tool for real time object locations and information gathering.

If you are sitting at the PC, send me a message to VK4TGV-7 and it will pop up on my dashboard display unit, you never know, I might even answer it! But please, do not power down the PC or other equipment attached to it, the APRS network viability depends on these types of stations. Any questions please feel free to contact me, [vk4tgv@wia.org.au](mailto:vk4tgv@wia.org.au) .

### APRS – Telemetry, a practical application

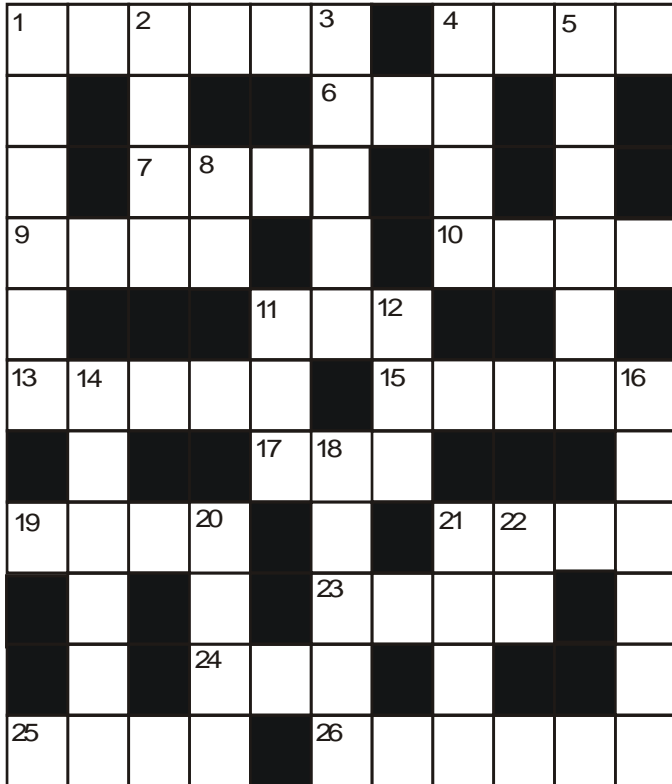
Continuing on from the previous APRS articles, and as a result of some issues with the repeater radios I got to thinking about remote administration of the repeater equipment, the answer came to me whilst researching about APRS applications. APRS provides a telemetry feature which neatly supplied a means of logging various parameters into the APRS database.

For the equipment I chose an Argent Data Tracker2, which is a hybrid tracker/TNC/digipeater device, coupled with the venerable Maxon DM2550 telemetry radio. The Tracker2 offers a rich feature set ranging from the simple tracking functionality to full digipeater and weather station support. I chose this model so that the system on the mountain has the capability of being upgraded in the future. The key functionality I was after was remote administration, which is provided by the Tracker2 via APRS messages.

As part of the APRS network re-development I have been noticing that APRS stations on the Northside sometimes struggle to be gated into the APRS-IS, so I enabled the digi-peater function in the Tracker2, acting as a fill-in only. The key functionality is the ability to inform mobile operators where the repeater is located and the frequency. If the mobile operator has APRS display capability they will see the repeater object appear on their screen and even better if they have a Kenwood APRS capable radio, in that the radio has the ability to auto-tune to the repeater, setup the offset and tone automatically.

For us people who can't afford a nice new TM-710, the telemetry unit provides a means of logging temperature and battery voltage as well as advertising the repeater presence via APRS.

**R & DRC Crossword No. 23 (Solution next QRM)**



**R & DRC Crossword No. 22 solution**



**ACROSS**

- 1 Material of which crystals made
- 4 Breaks circuit
- 6 Marine animal
- 7 Principal
- 9 Yagi
- 10 Propagation of cyclic displacement
- 11 Deviate from intended direction
- 13 Graphical record
- 15 Atmospheric disturbance
- 17 Amount (abbrev)
- 19 Social organisation
- 21 Short length of transmission line used for tuning
- 23 Prefix for  $10^{-9}$
- 24 In past time
- 25 Leave out
- 26 AC component of rectified DC

**DOWN**

- 1 Letter Q
- 2 Govt agency which issues licence (abbrev)
- 3 Semiconductor diode
- 4 Fluid movement
- 5 Metal with higher conductivity than copper
- 8 Type of modulation (abbrev)
- 11 Arrival time (abbrev)
- 12 Reception report
- 14 Rare gas in atmosphere
- 16 Transportable
- 18 Less significant
- 20 Resultant frequency from addition of two close frequencies
- 21 Break suddenly
- 22 Towards

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