

JANUARY 1995

THE WEST AUSTRALIAN VHF GROUP (INC)
P.O. BOX 189 APPECROSS W.A. 6163

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COUNCILLOR KEN VK6AKT
MATERIALS CES VK6AO
PUBLICITY TERRY VK6ZLT
MUSEUM REP TOM VK6ZAF

JAN 16 COMMITTEE MEETING
21 FOXHUNT
23 GENERAL MEETING

FEB 20 COMMITTEE MEETING
25 FOXHUNT
27 GENERAL MEETING

MAR 20 COMMITTEE MEETING
25 FOXHUNT
27 GENERAL MEETING

APR 17 COMMITTEE MEETING
22 FOXHUNT
24 GENERAL MEETING

MAY 15 COMMITTEE MEETING
20 FOXHUNT
22 GENERAL MEETING

JUN 19 COMMITTEE MEETING
24 FOXHUNT
26 GENERAL MEETING

JUL 17 COMMITTEE MEETING
22 FOXHUNT
24 GENERAL MEETING

AUG 21 COMMITTEE MEETING
26 FOXHUNT
28 GENERAL MEETING

West Australian VHF Group Newsletter P.O. Box 189, Applecross W.A. 6153.

Circulation is 68. This consists of 38 city and 9 country fee paying members, 15 life members some of whom have donated \$10 to the club for the bulletin costs and 6 courtesy copies of the bulletin.

VHF Group Members Albany Regular Sked

Each Monday to Friday the following frequencies and times are used

144.100 MHz SSB 0730-0735 WST
432.100 MHz SSB 0735-0740 WST

Calls to be heard are VK6WG Albany, VK6AO, VK6KZ and VK6DD
Most days this session is followed up on 3670 MHz or 7060 MHz
All are welcome to join in.

VHF Group Beacons Frequencies and Locations

| | | | | |
|--------------|--------|------------|------|------------------------|
| 50.066 MHz | VK6RPH | Cloverdale | OF78 | Testing |
| 144.022 MHz | VK6RBS | Busselton | OF76 | Operating Continuously |
| 144.460 MHz | VK6RPH | Cloverdale | OF78 | Testing |
| 144.465 MHz | VK6RTW | Albany | OF84 | Operating Continuously |
| 432.066 MHz | VK6RBS | Busselton | OF76 | Operating Continuously |
| 432.460 MHz | VK6RPH | Cloverdale | OF78 | Testing |
| 1296.198 MHz | VK6RBS | Busselton | OF76 | Operating Continuously |
| 1298.400 MHz | VK6RPH | Cloverdale | OF78 | Testing |
| 10.300 GHz | VK6RUF | Roleystone | OF78 | Operating Continuously |

Satellite Frequency List

Note :All satellites up to and including AO-9 have crashed. UO-14 has been returned to the University of Surrey for Medical Research. UO-15 failed after a few orbits. RS-15 was launched on December 26, 1994. AO-21 was recently switched off by the main control centre for the Russian space centre as the mother satellite was no longer required. The RA-24 failed after several months with low battery voltage switching it to a 2m transmitter which has no antenna. PO-28 is currently only in use by the satellite owners transmitting on non amateur frequencies.

AO-10 Reported as Being Excellent at the Moment use it and enjoy the good conditions.

Mode B Uplink 435.030 MHz LSB - 435.180 MHz LSB
Mode B Downlink 145.975 MHz USB - 145.825 MHz USB
Downlink Frequency = 581.004 - Uplink Frequency

UO-11 The mode S beacon is on for experimenters at the moment
Beacons 145.826 MHz
 435.025 MHz
 2401.500 MHz

RS-10 Uplink Downlink
Mode K 21.160 - 21.200 MHz 29.360 - 29.400 MHz
Mode T 21.160 - 21.200 MHz 145.860 - 145.900 MHz
Mode A 145.860 - 145.900 MHz 29.360 - 29.400 MHz
Mode KT 21 MHz uplink into 29 and 145 MHz downlinks
Mode KA 21 MHz and 145 MHz uplinks into a common 29 MHz downlink
Beacons 29.357, 29.403, 145.857, 145.903 MHz
Robot 21.120, 145.820 MHz. Note wait until the robot is calling CQ

RS-11 Uplink Downlink
Mode K 21.210 - 21.250 MHz 29.410 - 29.450 MHz
Mode T 21.210 - 21.250 MHz 145.910 - 145.950 MHz
Mode A 145.910 - 145.950 MHz 29.410 - 29.450 MHz
Mode KT 21 MHz uplink into 29 and 145 MHz downlinks
Mode KA 21 MHz and 145 MHz uplinks into a common 29 MHz downlink
Beacons 29.407, 29.453, 145.830, 145.907 MHz
Robot 21.130, 145.830 MHz. Note wait until the robot is calling CQ

RS-12

| | Uplink | Downlink |
|---------|--|-----------------------|
| Mode K | 21.210 - 21.250 MHz | 29.410 - 29.450 MHz |
| Mode T | 21.210 - 21.250 MHz | 145.910 - 145.950 MHz |
| Mode A | 145.910 - 145.950 MHz | 29.410 - 29.450 MHz |
| Mode KT | 21 MHz uplink into 29 and 145 MHz downlinks | |
| Mode KA | 21 MHz and 145 MHz uplinks into a common 29 MHz downlink | |
| Beacons | 29.408, 29.454, 145.912, 145.958 MHz | |
| Robot | 21.129, 145.830 MHz. Note wait until the robot is calling CQ | |

RS-13

| | Uplink | Downlink |
|---------|--|-----------------------|
| Mode K | 21.260 - 21.300 MHz | 29.460 - 29.500 MHz |
| Mode T | 21.260 - 21.300 MHz | 145.960 - 146.000 MHz |
| Mode A | 145.960 - 146.000 MHz | 29.460 - 29.500 MHz |
| Mode KT | 21 MHz uplink into 29 and 145 MHz downlinks | |
| Mode KA | 21 MHz and 145 MHz uplinks into a common 29 MHz downlink | |
| Beacons | 29.458, 29.504, 145.862, 145.908 MHz | |
| Robot | 21.138, 145.840 MHz. Note wait until the robot is calling CQ | |

AO-13 *Currently good pointing angles for Australia on Mode S. Many stations on this band now.*

| | |
|----------------------|-------------------------------------|
| Mode B Up | 435.423 MHz LSB - 435.573 MHz LSB |
| Mode B Down | 145.975 MHz USB - 145.825 MHz USB |
| Downlink Frequency = | 581.398 - Uplink Frequency |
| Mode S Up | 435.601 MHz USB - 435.637 MHz USB |
| Mode S Down | 2400.711 MHz USB - 2400.747 MHz USB |
| Downlink Frequency = | 1965.109 + Uplink Frequency |
| Beacons | 145.812, 2400.664 MHz |

RS-15 *This is the new Russian Satellite launched December 26 1994*

Uplink: 145.858 - 145.898 MHz (from Earth to Sat.) - approx. 100 Watts ERIP

Downlink: 29.354 - 29.394 MHz (from Sat. to Earth) - up to 5 Watts

Beacon 1: 29.352.5 MHz - 0.4/1.2 Watts Beacon 2: 29.398.7 MHz - 0.4/1.2 Watts

AO-16 1200 bps *Mode S beacon is on for experimenters at the moment.*

| | |
|--------------|--|
| Mode JD Up | 145.900, 145.920, 145.940, 145.960 MHz |
| Mode JD Down | 435.051, 435.026, 2401.143 MHz |

DO-17 1200 bps *Mode S beacon is on for experimenters at the moment.*

| | |
|---------|--------------|
| Beacons | 145.825 MHz |
| | 2401.221 MHz |

WO-18 1200 bps *Continuously taking pictures of earth*

| | |
|---------|----------------------|
| Beacons | 437.102, 437.075 MHz |
|---------|----------------------|

LO-19 1200 bps

| | |
|--------------|--|
| Mode JD Up | 145.840, 145.860, 145.880, 145.900 MHz |
| Mode JD Down | 437.153, 437.125 MHz |

FO-20 *Analog mode is good to India from W.A.*

Analog Transponder

| | | |
|---------|----|-----------------------|
| Mode JA | up | 145.900 - 146.000 MHz |
|---------|----|-----------------------|

| | | |
|---------|------|-----------------------|
| Mode JA | down | 435.800 - 435.900 MHz |
|---------|------|-----------------------|

Downlink Frequency = 581.800 - Uplink Frequency

Digital Transponder 1200 bps

| | | |
|---------|----|--|
| Mode JD | up | 145.850, 145.870, 145.890, 145.910 MHz |
|---------|----|--|

| | | |
|---------|------|-------------|
| Mode JD | down | 435.910 MHz |
|---------|------|-------------|

| | |
|--------|----------------|
| Beacon | 435.795 MHz CW |
|--------|----------------|

UO-22 9600 bps *Currently all Satellite Bulletin Board Messages go on this satellite*

| | |
|----------|----------------------|
| Downlink | 435.120 MHz |
| Uplink | 145.900, 145.975 MHz |

KO-23 9600 bps *General Access for all users except Automatic BBS systems*

| | |
|----------|----------------------|
| Downlink | 435.175 MHz |
| Uplink | 145.850, 145.900 MHz |

KO-25 9600 bps *General Access for all users except Automatic BBS systems*
 Downlink 436.500 MHz
 Uplink 145.870, 145.980 MHz

IO-26 1200 bps
 Downlink 435.867, 435.822 MHz
 Uplink 145.875, 145.900, 145.925, 145.950 MHz

Phase 3D Frequencies

Transponder-Bandplan 01-DEC-94

These are based on the final crystal orders placed.

AMSAT P3-D U P L I N K B A N D P L A N

| UPLINK | Digital | Analog Passband |
|---------|-------------------------|-------------------------|
| 15 m | none | 21.210 - 21.250 MHz |
| 2 m | 145.800 - 145.840 MHz | 145.840 - 145.990 MHz |
| 70cm | 435.300 - 435.550 MHz | 435.550 - 435.800 MHz |
| 23cm(1) | 1269.000 - 1269.250 MHz | 1269.250 - 1269.500 MHz |
| 23cm(2) | 1268.075 - 1268.325 MHz | 1268.325 - 1268.575 MHz |
| 13cm(1) | 2400.100 - 2400.350 MHz | 2400.350 - 2400.600 MHz |
| 13cm(2) | 2446.200 - 2446.450 MHz | 2446.450 - 2446.700 MHz |
| 6cm | 5668.300 - 5668.550 MHz | 5668.550 - 5668.800 MHz |

Note: all receivers are inverting

AMSAT P3-D D O W N L I N K B A N D P L A N

| DOWNLINK | Digital | Analog Passband |
|----------|---------------------------|---------------------------|
| 10m | 29.330 MHz (+/- 5 KHz) | % |
| 2m | 145.955 - 145.990 MHz | 145.805 - 145.955 MHz |
| 70cm | 435.900 - 436.200 MHz | 435.475 - 435.725 MHz |
| 13cm | 2400.650 - 2400.950 MHz | 2400.225 - 2400.475 MHz |
| 3cm | 10451.450 - 10451.750 MHz | 10451.025 - 10451.275 MHz |
| 1.5cm | 24048.450 - 24048.750 MHz | 24048.025 - 24048.275 MHz |

Beacons:

| DWN | Beacon-1 | Beacon-2 |
|-------|---------------|---------------|
| 2 m | none | none |
| 70cm | 435.450 MHz | 435.850 MHz |
| 13cm | 2400.200 MHz | 2400.600 MHz |
| 3cm | 10451.000 MHz | 10451.400 MHz |
| 1.5cm | 24048.000 MHz | 24048.400 MHz |

Note: Beacon-1 and beacon-2 support command access and will be modulated in 400 bit/s BPSK AMSAT-format

Software Used for Satellites. All Available from Graham VK5AGR Amsat Australia.

PB by Jeff Ward

This is the original download program to be used for AO-16, LO-19, UO-22, KO-23 KO-25, AO-26, AO-27 and PO-28.

PG by Jeff Ward

This is the original upload program to be used for AO-16, LO-19, UO-22, KO-23 KO-25, AO-26, AO-27 and PO-28.

TRACK by Franklin Antonio

This is the standard tracking program used by many satellite users. It is not shareware but requires a donation to Amsat to use it.

WISP by Chris ZL2TPO

This is the windows suite that has taken the satellite community by storm and forced everybody into windows. It is a multiprogram package with message maker, view directory, unzipping and storage of files automatically into directories.