



# Radio & Television Pre-Construction Survey at the Ryan Corner Wind Farm

Ryan Corner Development Pty. Ltd.

**Report No.:** 10265612-AUME-R-02, Rev. E

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**Task and objective:**

This report presents the results for Radio & Television ("TV") signal strength survey (pre-construction) at the Ryan Corner Wind Farm.

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**Keywords:**  
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Reference to part of this report which may lead to misinterpretation is not permissible.

Rev. No.	Date	Reason for Issue	Prepared by	Verified by	Approved by
A	22 December 2020	First issue	Juan Becerra	Kevin Bleibler	Kevin Bleibler
B	18 January 2021	Detail added to the section 1 and section 2.1 of the report.	Juan Becerra	Kevin Bleibler	Kevin Bleibler
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D	15 April 2021	Turbine coordinates updated (APPENDIX A). Editorial changes. Dwelling (ID: 113) added.	Juan Becerra	Kevin Bleibler	Kevin Bleibler
E	28 June 2021	Second Campaign. Additional measurements based on new coordinates provided by the customer. Editorial changes.	Juan Becerra	Kevin Bleibler	Kevin Bleibler



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## 1 SUMMARY SURVEY

Ryan Corner Development Pty. Ltd. ("the Customer") retained DNV Australia ("DNV") to complete a pre-construction survey of radio and TV signal strength ("the Survey") at the Ryan Corner Wind Farm ("Ryan Corner" or "the Wind Farm") in West Victoria, Australia ("the Project").

This report documents the results of a pre-construction radio and TV Survey at the Ryan Corner Wind Farm to satisfy the requirements of Condition 44 of Planning Permit No 20060222-A [11]. The results presented here are intended to provide a baseline for future comparison with the results of a post-construction radio and TV signal strength survey, and for reference in the event that any complaints of degraded radio or TV reception are received after the Wind Farm is operational.

For the purposes of this Survey, DNV measured the signal strength of commercial FM radio stations and commercial and national TV broadcasting channels (with the parameters: Power, MER, and BER) at 60 selected dwellings, as detailed in the Survey test plan [10] and Section 2 of this report. The measurements were taken in the period from 16 November 2020 to 25 November 2020 (first campaign). Of those 60 dwellings, 50 were located within five km of the nearest proposed wind turbine location. The remaining 10 dwellings were located more than five km from the nearest proposed wind turbine.

The Customer previously retained DNV for an EMI assessment [1]. Information presented in the EMI assessment, including but not limited to general information and data will be used in this report.

In February 2021, the Customer updated the coordinates for ten wind turbines [12]. DNV reviewed the changes on the coordinates and their possible effect on the Survey. Only three wind turbines (out of the ten updated) are in the Wind Farm's boundaries, partially expanding the five-km zone by  $\pm 100$  m. The expansion of the five-km area does not include any additional dwelling.

In April 2021 the Customer further updated the coordinates [13]. DNV reviewed the updated coordinates. The partial expansion of the five-km area does not include any additional dwelling; hence the representative measurements are still valid.

In May 2021 the Customer provided coordinates for 81 additional dwellings in the surrounding of the Wind Farm [14] (for a list of all the dwellings see APPENDIX B). 18 representative measurements were taken between 22 June 2021 and 23 June 2021 (second campaign).

The first campaign was completed during summer weather conditions and clear skies. The second campaign was performed during winter weather conditions, generally overcast and with periods of light rain.

## 2 TEST SITE

### 2.1 Permit Condition

With regard to the TV/radio impact assessment, the relevant permit conditions [11] are below:

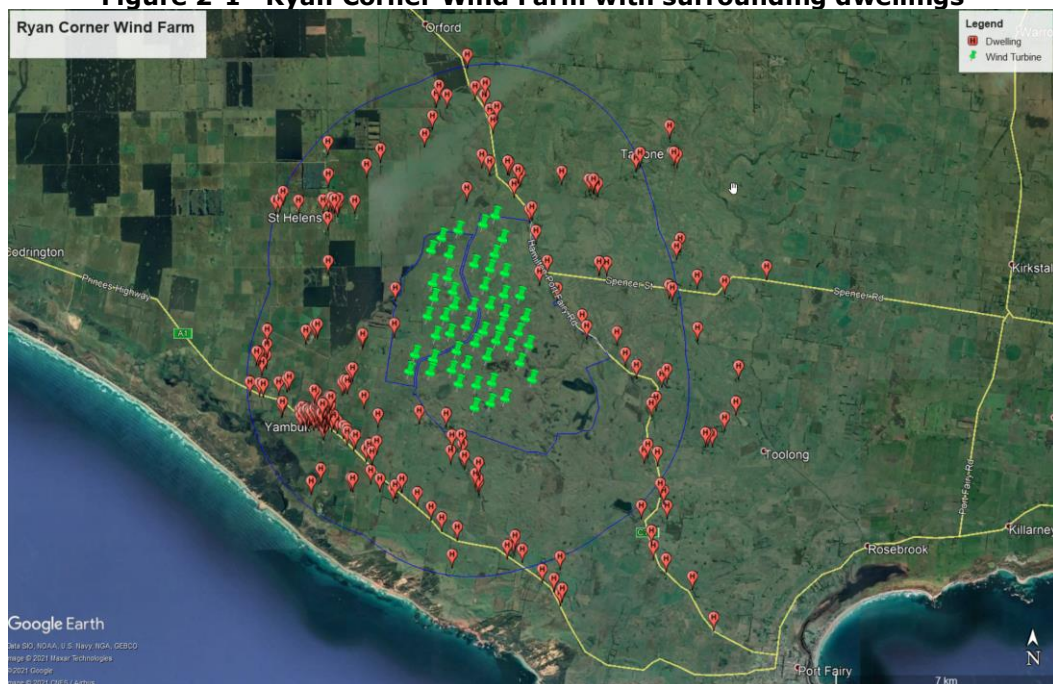
#### TELEVISION AND RADIO RECEPTION AND INTERFERENCE

44. A pre-construction survey must be carried out to the satisfaction of the Minister of Planning to determine television and radio reception strength at selected locations up to 5 kms from all wind turbines. The location of such monitoring is to be determined by an independent television and radio monitoring specialist appointed by the operator under this permit.
45. If, following commencement of the operation of the wind energy facility, a complaint is received regarding the wind energy facility having an adverse effect on television or radio reception at the any dwelling in the area which existed at the date of the pre-construction survey, a post - construction survey must be carried out at the dwelling
46. if the post-construction survey establishes any increase in interference to reception as a result of the wind energy facility operations, the wind energy facility operator must undertake reasonable and feasible measures to mitigate the interference and return the affected reception to pre-construction quality at the cost of the wind energy facility operator and to the satisfaction of the Minister for Planning.

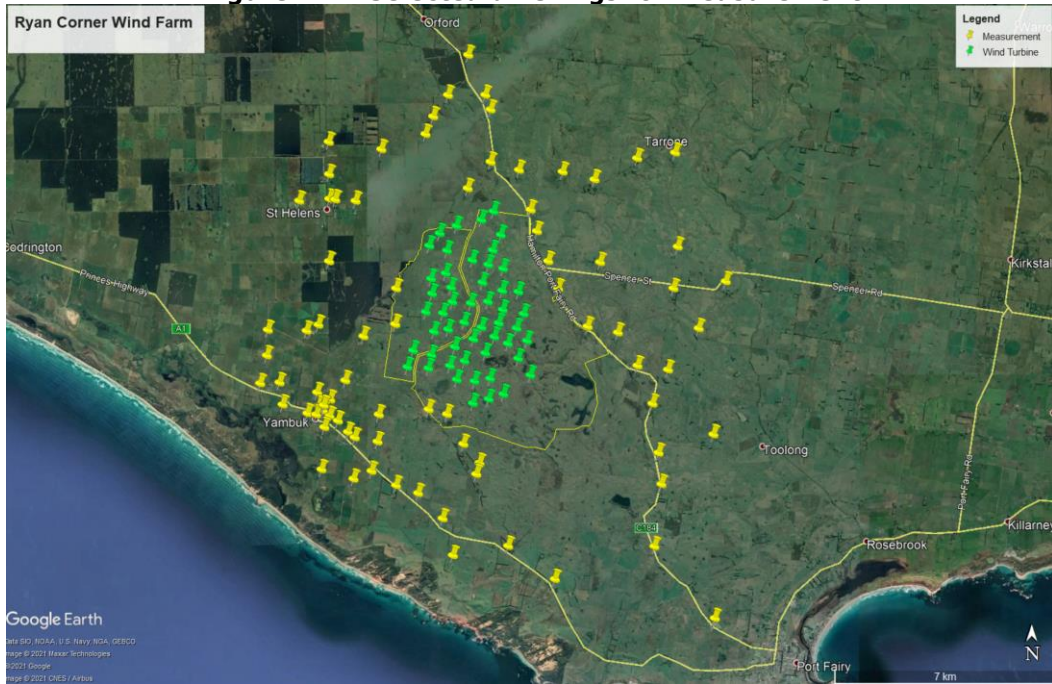
### 2.2 Test Site and Selected dwellings

The dwellings in the vicinity of the Wind Farm are shown in Figure 2-1. In the test plan [10] 60 dwellings were selected for the Survey (see Figure 2-2).

**Figure 2-1 Ryan Corner Wind Farm with surrounding dwellings**



**Figure 2-2 Selected dwellings for measurement**



Each measurement can be considered representative for different dwellings (see Table 2-1).

**Table 2-1 Dwellings covered by measurements**

Measurement Name	Easting <sup>1</sup> [m]	Northing <sup>1</sup> [m]	Dwellings covered
M2	597878	5756402	RY1, RY2
M3	597981	5756747	RY3, RY4
M6	597484	5757347	RY5, RY6, RY7, RY113
M8	596985	5758281	RY8
M9	596409	5758436	RY9, RY10
M11	597717	5765306	RY11
M14	603420	5754084	RY14, RY15
M19	603660	5756021	RY16, RY17, RY18, RY19
M20	603411	5758532	RY20, RY179
M21	602957	5759722	RY21, RY22
M23	602358	5760760	RY23
M24	601413	5760961	RY24, RY25
M26	600505	5762154	RY26
M27	600206	5763008	RY27, RY28
M29	599864	5763944	RY29
M30	599672	5764614	RY30, RY31
M38	599327	5765854	RY32, RY38, RY114
M33	598442	5766120	RY33, RY190
M34	598464	5767743	RY34, RY180
M35	598304	5768202	RY35, RY37
M36	603583	5756999	RY36, RY192A
M39	600689	5765783	RY39
M40	601682	5765530	RY40, RY41, RY44
M42	603023	5766174	RY42, RY43
M45	604208	5766335	RY45, RY46
M48	604258	5763410	RY47, RY48
M49	604108	5762116	RY49, RY189
M50	603909	5759583	RY50, RY192B
M52	604884	5760860	RY52, RY53

<b>Measurement Name</b>	<b>Easting<sup>1</sup> [m]</b>	<b>Northing<sup>1</sup> [m]</b>	<b>Dwellings covered</b>
M55	601828	5762954	RY55, RY56
M58	605747	5762311	RY58, RY59
M60	597138	5768213	RY60, RY61
M62	596668	5767554	RY62
M63	596419	5767007	RY63
M64	595034	5766551	RY64
M65	594208	5764955	RY65
M68	593571	5765006	RY66, RY67, RY68
M73	593389	5765028	RY69, RY73, RY74
M70	592447	5764982	RY70, RY182, RY183
M71	593393	5766801	RY71
M72	593391	5765794	RY72
M75	593354	5763088	RY75
M76	592993	5761115	RY76
M77	594399	5760739	RY77
M78	595399	5761105	RY78
M79	595442	5762217	RY79
M80	594850	5758295	RY80
M81	594802	5757453	RY81, RY82, RY87, RY173
M83	593568	5758118	RY83, RY84, RY85
M86	594088	5757591	RY86
M89	595363	5756082	RY89, RY177
M91	596050	5755830	RY91, RY92
M93	596806	5755033	RY93, RY94
M95	597115	5753882	RY95
M96	598847	5754153	RY96, RY97, RY178
M100	600296	5753102	RY98, RY99, RY100, RY101
M104	593815	5759371	RY104, RY105, RY106, RY115
M107	594600	5756537	RY88, RY107
M110	605306	5757550	RY108, RY109, RY110, RY111
M112	605285	5751821	RY112
M116	592623	5760931	RY116
M117	591412	5760975	RY117
M120	591371	5760178	RY118, RY119, RY120, RY121
M123	591151	5759311	RY122, RY123, RY124
M125	591756	5759330	RY125, RY126
M128	591842	5758642	RY127, RY128
M134	592619	5758359	RY129, RY130, RY131, RY132, RY133, RY134, RY135
M137	592896	5758311	RY137, RY138, RY186
M148	593107	5758440	RY141, RY142, RY144, RY145, RY146, RY147, RY148, RY149, RY150
M152	592979	5758596	RY136, RY143, RY151, RY152, RY153
M157	593130	5758607	RY154, RY155, RY156, RY157, RY158, RY159, RY160, RY163, RY164, RY165
M161	593333	5758776	RY159B, RY161, RY162, RY166, RY188
M169	593311	5758264	RY139, RY140, RY167, RY168, RY169, RY170, RY171, RY187



Measurement Name	Easting <sup>1</sup> [m]	Northing <sup>1</sup> [m]	Dwellings covered
M172	593878	5757761	RY172
M174	593034	5756607	RY174, RY175
M176	594033	5756300	RY176
M181	597785	5769449	RY181
M184	592931	5759008	RY184
M185	593141	5757922	RY185

## 2.3 Deviations from the test plan

Due to the geographic location and the obstacles surrounding some of the measuring points, it was not possible to carry all the measurements. Table 2-2 shows the deviations from the test plan.

**Table 2-2 Deviations from the test plan**

Measurement point	Measurement	Reason
M09	TV	Barrier of trees blocking the signal from the transmitter.
M11	TV	Entrance not possible, gate closed, and measurement point further than 1 km.
M76	TV	Due to the closeness between M76 & M77 and take the measurement from the road, both measurements were joined.

### 3 SURVEY RESULTS

#### 3.1 Radio Strength Signal Survey - Results

During the site visit the radio stations as listed in Table 3-1 were identified.

**Table 3-1 Identified FM commercial radio stations**

<b>Radio Station<sup>1,2</sup></b>	<b>Frequency (MHz)</b>
Vision Radio Network or Orbit FM or Kiss FM	87.6
Triple J	89.7
ABC News	91.3
ABC Classic	92.1
ACE Radio Network	94.5
Coast FM	95.3
Hit FM	96.9
ABC News Radio	97.7
Radio National	98.5
Not identified	99.4
Vision Christian Radio	100.9
Radio National	101.7
3 Way FM – Community Radio	103.7

Table 3-2 shows the results of the survey. Refer to APPENDIX F for the detailed measurement results of the survey.

**Table 3-2 Radio – Survey Results**

Measurement	87.6 (Mhz)	89.7 (Mhz)	91.3 (Mhz)	92.1 (Mhz)	92.9 (Mhz)	93.7 (Mhz)	94.5 (Mhz)	95.3 (Mhz)	96.9 (Mhz)	97.7 (Mhz)	98.5 (Mhz)	99.3 (Mhz)	101.7 (Mhz)	103.7 (Mhz)	107.9 (Mhz)
<b>Measurement Campaign November 2020</b>															
M02	5.75	20.72	23.58	22.03	27.55	26.91	20.23	17.36	29.19	29.76	28.54	15.22	27.72	12.27	7.07
M03	9.05	24.35	22.61	22.95	24.27	25.35	17.45	18.42	26.58	31.74	29.23	17.85	11.29	7.52	8.99
M06	7.44	22.26	21.43	20.63	17.08	22.28	14.72	16.78	17.73	11.9	20.09	13.05	16.06	8.52	7.53
M08	8.76	18.41	24.78	25.34	23.91	27.66	12.76	6.65	17.11	20.05	21.99	11.33	6.96	7.46	12.64
M09	5.75	20.72	23.58	22.03	27.55	26.91	20.23	17.36	29.13	29.76	28.54	15.22	27.72	12.27	7.07
M11	NA	NA	NA	NA	NA	NA	12.27	11.28	22.6	22.53	18.32	8.1	21.4	6.65	7.16
M14	6.96	45.47	44.04	43.74	6.33	13.97	38.93	36.93	20.77	20.14	22.37	13.01	40.04	24.24	11.93
M19	6.74	14.49	25.31	26.6	23.72	22.05	30.64	29.86	31.36	30.75	34.83	17.13	47.1	25.05	16.86
M20	8.82	33.82	31.97	36.44	22.82	26.7	30.8	31.69	19.91	23.11	24.14	8.87	40.09	18.56	11.26
M21	6.17	42.78	48.82	50.77	33.33	35.16	28.4	31.91	30.86	31.67	30.43	14.37	52.49	7.81	9.15
M23	6.43	34.94	38.38	40.54	29.92	33.36	32.7	34.73	33.18	32.4	30.89	17.65	44.16	20.18	11.06
M24	6.88	44.45	44.65	46.25	20.26	25.63	40.61	39.71	15.39	17.36	20.13	11.28	52.17	24.62	13.67
M26	8.02	32.45	38.8	40.41	37.67	41.91	27.41	28.18	33.07	33.22	37.19	16.71	44.75	16.1	11.73
M27	9.15	30.91	34.24	32.55	37	39.76	25.72	26.31	32.92	28.96	23.8	14.72	42.69	21.25	15.79
M29	12.26	45.47	45.22	46.52	27.78	29.18	39.15	38.99	32.51	35.84	36.41	12.55	46.77	23.32	18.62
M30	11.47	38.31	42.16	44.51	27.89	33.57	32.66	33.72	34.41	30.38	34.3	19.44	47.99	19.77	17.21
M33	8.53	28.45	22.78	28.94	20.64	24.8	20.26	18.4	24.6	24.15	21.83	10.56	15.01	9.75	9.26
M34	5.78	24.47	25.75	26.86	11.93	22.25	11.97	12.14	29.45	29.23	29.08	12.46	21.96	6.72	7.27
M35	7.22	32.74	32.21	32.12	21.03	24.07	8.58	6.34	28.34	28.01	26.96	12.48	29.1	6.67	7.38
M36	9.07	21.36	22.29	23.32	25.72	28.66	17.9	18.54	23.67	22.12	21.38	9.41	26.55	13.73	15.94
M39	5.84	37.01	35.27	36.48	19.41	22.54	16.77	15.6	23.92	23.23	23.02	7.57	34.79	6.79	6.29
M40	6.3	41.83	40.89	40.75	5.35	17.39	19.98	18.85	22.04	15.12	14.77	8.48	23.66	13.82	5.76
M42	5.14	41.8	40.56	40.74	10.68	10.17	17.36	20.54	18.95	17.05	18.25	6.87	41.16	13.44	6.9
M45	7.42	45.31	46.88	46.07	23.36	28.12	27.18	13.72	28.13	27.07	24.66	11.68	49.45	11.98	14.76
M48	8.36	43.22	43.13	43.54	10.13	13.91	22.29	23.81	13.46	13.58	14.66	5.18	39.34	10.28	7.05
M49	7.54	31.66	30.22	32.39	6.09	14.46	5.29	6.25	5.03	6.08	5.6	5.61	10.29	7.32	4.34
M50	7.23	34.65	36.1	38.62	26.24	30.02	26.3	26.99	32.03	29.88	30.83	14.46	43.48	16.6	8.76
M52	11.24	52.32	51.26	54.16	19.46	28.02	33.1	36.07	23.56	25.05	26.89	13.59	54.81	24.26	21.14
M55	7.84	21.94	23.53	27.92	14.22	18.86	30.44	31.64	23.26	21.68	21.29	11.28	39.17	17.79	12.62
M58	4.76	45.4	47.03	48.34	15.81	15.78	31.05	31.03	27.01	27.39	26.01	11.12	51.9	21.64	25.22
M60	7.95	37.55	29.22	33.72	5.95	8.81	22.58	23.26	12.11	11.8	11.56	4.35	35.9	10.38	7.43
M62	NA	NA	NA	NA	NA	NA	15.35	16	25.38	25.75	25.21	7.94	34.42	10.27	6.66
M63	5.69	39.35	37.4	37.04	19.7	22.81	22.1	22.13	23.22	23.82	22.46	11.06	34.89	11.81	5.39

Measurement	87.6 (Mhz)	89.7 (Mhz)	91.3 (Mhz)	92.1 (Mhz)	92.9 (Mhz)	93.7 (Mhz)	94.5 (Mhz)	95.3 (Mhz)	96.9 (Mhz)	97.7 (Mhz)	98.5 (Mhz)	99.3 (Mhz)	101.7 (Mhz)	103.7 (Mhz)	107.9 (Mhz)
M64	3.64	37.31	36.9	36.75	20.39	22.72	22.21	22.38	23.8	21.93	21.9	7.15	33.94	12.5	6.08
M65	NA	NA	NA	NA	NA	NA	25.1	25.81	22.3	24.21	24.46	10.21	36.51	10.27	7.14
M68	6.52	42.39	41.11	40.85	25.6	27.68	18.74	18.87	33.39	29.91	27.72	14.76	35.16	11.29	5.46
M70	5.92	34.92	29.82	25.8	22.24	26.52	16.04	15.81	24.75	24.46	24.26	10.39	31.25	6.81	7.54
M71	6.54	33.54	33.96	33.7	22.94	27.09	17.82	20.01	26.81	24.24	24.91	12.68	32.22	9.22	9.17
M72	6.41	39.27	41.66	42.73	22.25	26.72	30.94	31.91	29.07	28.92	27.87	17.19	31.22	11.67	8.02
M73	5.51	33.22	30.35	28.6	15.68	12.81	20.59	21.38	23.48	25.29	20.8	8.86	26.16	8.98	5.7
M75	5.62	34.82	32.28	32.73	22.3	27.65	18.96	20.21	26.01	23.04	23.78	10.15	30.7	9.81	6.02
M76	4.95	33.07	30.45	29.46	24.09	24.03	9.1	10.12	25.67	22.63	27.33	17.69	15.29	7.46	6.7
M77	12.24	25.92	25.31	25.71	20.71	23.76	27.16	26.18	26.69	27.83	29.42	15	19.62	12.87	8.79
M78	10.55	24.36	24.58	24.57	25.54	29.79	20.06	21.66	29.34	27.52	31.5	18.16	29.49	10.06	8.69
M79	11.38	31.6	30.1	35.81	20.09	28.03	19.92	23.54	21.15	22.16	23.63	15.79	35.15	20.08	11.15
M80	7.35	33.49	34.96	36.53	24.62	29.85	25.33	25.4	18.22	27.33	31.06	10.49	33.14	17.93	14.41
M81	4.24	31.68	32.19	32.1	22.23	29.19	22.82	23.02	26.68	26.78	27.87	22.27	29.02	15.03	7.61
M83	7.88	29.14	30.08	31.65	30.52	32.37	23.33	22.9	22.53	29.56	29.94	18.93	35.95	19.82	22.44
M86	12.39	29.14	26.46	26.35	21.82	18.54	16.84	21.31	28.74	28.69	27.34	14.11	33.46	17.11	13.03
M89	6.28	38.43	37.53	36.75	26.9	30.35	19.29	23.4	19.43	24.39	27.76	21.06	35.11	9.09	9.54
M91	5.21	31.92	29.8	28.78	21.88	22.2	14.64	13.87	27.56	25.55	20.89	19.33	28.18	12.12	7.56
M93	7.18	41.98	41.88	40.98	20.26	23.85	28.4	29.28	18.04	18.72	21.33	10.51	37.72	17.02	7.27
M95	5.45	40.54	38.89	38.51	28.95	29.38	24.94	24.97	18.76	16.72	8.41	17.99	38.59	11.42	8.31
M96	5.68	40.96	38.54	37.78	24.01	26.72	24.2	22.57	20.14	17.11	18.5	7.78	39.39	15.88	16.84
M100	5.25	34.16	34.02	38.97	19.09	21.14	10.96	21.34	24.56	23.26	22.77	16.27	37.43	8.86	7.67
M104	8.1	36.1	36.02	37.26	31.23	34.81	31.89	33.24	33.39	30.18	34.34	17.88	39.4	21.23	11.63
M107	5.6	29.16	31	32.29	23.95	27.08	17.45	18.73	21.71	21.21	22.01	12.41	32.55	9.13	7.48
M110	8.2	48.58	49.55	50.4	21.64	24.06	38.56	38.98	24.82	24.66	24.55	16.26	41.05	25.11	9.98
M112	9.8	38.48	41.06	44.29	22.88	26.65	43.29	44.39	27.4	29.94	31.15	15.69	54.91	35.25	15
<b>Measurement Campaign June 2021</b>															
M116	7.91	31.18	32.42	34.52	24.36	30.36	27.32	27.83	31.15	34.52	32.82	18.36	34.20	16.02	8.64
M117	13.00	23.38	27.88	30.13	31.44	35.71	19.84	20.70	33.67	32.90	32.10	15.04	31.23	13.61	9.94
M120	9.03	27.79	28.84	30.22	37.07	41.32	23.79	25.07	37.32	37.25	42.04	22.13	29.03	14.20	11.82
M123	16.73	30.30	32.08	33.92	33.40	39.16	28.52	28.00	33.39	37.32	37.45	17.47	32.64	14.25	9.89
M125	7.10	23.61	27.27	28.25	29.21	31.67	19.17	16.97	28.24	32.62	32.78	13.19	27.89	9.72	11.73
M128	6.75	26.06	25.84	23.98	26.87	22.96	21.43	21.04	19.27	26.81	22.11	11.48	28.7	11.84	9.22
M134	6.96	12.36	23.45	28.79	35.84	41.10	15.88	23.36	34.82	35.38	32.85	16.43	31.87	14.20	7.95
M137	5.98	27.20	30.40	32.28	26.10	32.41	29.35	29.81	29.52	30.04	32.42	11.01	35.36	19.92	15.08

<b>Measurement</b>	<b>87.6 (Mhz)</b>	<b>89.7 (Mhz)</b>	<b>91.3 (Mhz)</b>	<b>92.1 (Mhz)</b>	<b>92.9 (Mhz)</b>	<b>93.7 (Mhz)</b>	<b>94.5 (Mhz)</b>	<b>95.3 (Mhz)</b>	<b>96.9 (Mhz)</b>	<b>97.7 (Mhz)</b>	<b>98.5 (Mhz)</b>	<b>99.3 (Mhz)</b>	<b>101.7 (Mhz)</b>	<b>103.7 (Mhz)</b>	<b>107.9 (Mhz)</b>
M148	7.57	30.27	31.96	34.06	18.57	22.69	26.99	26.37	12.47	14.04	8.47	7.89	30.54	14.20	11.18
M152	9.18	24.50	29.10	29.45	32.13	33.01	32.97	32.45	26.30	29.38	30.62	10.24	33.76	18.89	5.06
M157	6.20	20.22	18.86	17.74	16.03	19.05	21.77	22.20	23.29	22.66	14.63	13.24	30.64	11.54	8.53
M161	9.69	25.46	31.20	34.45	17.10	31.81	31.48	29.96	26.60	34.26	33.26	11.76	33.77	16.53	14.42
M169	9.91	29.00	30.71	26.77	33.02	33.86	27.27	27.65	28.58	29.59	27.85	18.64	27.74	13.42	7.10
M172	9.62	21.50	21.41	19.93	30.94	30.17	14.99	8.54	30.84	35.44	34.01	20.04	19.76	12.32	10.04
M174	9.74	34.56	36.84	38.18	25.65	27.96	30.01	31.04	20.69	26.95	25.62	8.70	33.07	13.47	9.48
M176	5.53	24.51	28.87	29.64	17.42	21.96	26.67	25.29	21.73	23.22	23.32	10.44	30.59	14.31	8.75
M181	12.64	34.76	41.12	43.88	24.49	19.01	37.92	35.61	19.20	19.92	18.27	12.17	31.86	22.19	12.23
M184	6.98	23.96	27.36	27.11	28.96	32.86	21.77	20.95	29.94	32.16	32.39	9.72	31.11	11.87	8.08
M185	12.63	27.74	27.92	26.16	27.46	26.07	24.24	22.98	18.00	12.12	23.38	14.35	27.64	11.82	8.75

Note: All the measurements are in µdBV

## 3.2 Television Strength Signal Survey - Results

The measurement on the television strength signal is highly dependent on the available towers serving the area. Three transmission towers serve the region, see Table 3-3.

**Table 3-3 Transmission Towers serving the region**

Transmission Tower	Approximate Distance [km]	Power [W]	Polarization
Tower Hill	22	8,000	Vertical
Warrnambool	30	630	Vertical
Narrawong	40	5,000	Horizontal

Note: it is possible in specific locations to detect signals from further towers. Nevertheless, only the channels mentioned in the test plan were investigated.

Tower Hill (see Figure 3-1) is the closest and signal-strongest transmission tower serving the area; therefore, the television antenna was aimed towards Tower Hill in a vertical configuration for the majority the measurement.

Additionally, at some of the locations the television antenna was aimed at Narrawong using the horizontal configuration. These locations were selected arbitrarily.

**Figure 3-1 Tower Hill – Transmission Tower**



As stated in the test plan [10] five television channels were identified (see Table 3-4) covering the area surrounding the wind farm

**Table 3-4 Television channels and frequencies**

Channel	Number	Frequency (MHz)
SBS	47	662.5
Nine	48	669.5



<b>Channel</b>	<b>Number</b>	<b>Frequency (MHz)</b>	
Win	49	676.5	
ABC	50	683.5	
Prime	51	690.5	

Table 3-5 shows the results of the survey. Refer to APPENDIX G for the detailed measurement results of the survey.

**Table 3-5 Television Survey Results**

Measurement	Channel	power (dBuV)	MER (dB)	bBER (x10 <sup>-2</sup> )	Notes
<b>Measurement Campaign November 2020</b>					
M02	47	27.9	17.4	1*10 <sup>-2</sup>	
	48	< 25.0	18.5	1*10 <sup>-2</sup>	
	49	31.9	19.4	1*10 <sup>-2</sup>	
	50	25.2	17.2	1*10 <sup>-2</sup>	
	51	29.8	16.8	1*10 <sup>-2</sup>	
M03	47	32.0	19.8	1*10 <sup>-2</sup>	
	48	< 25.0	19.8	1*10 <sup>-2</sup>	
	49	28.7	19.9	1*10 <sup>-2</sup>	
	50	31.3	19.8	1*10 <sup>-2</sup>	
	51	28.1	17.7	1*10 <sup>-2</sup>	
M06	47	< 25.0	17.5	1*10 <sup>-2</sup>	
	48	30.4	17.7	1*10 <sup>-2</sup>	
	49	25.2	18.1	1*10 <sup>-2</sup>	
	50	30.7	20.3	1*10 <sup>-2</sup>	
	51	26.0	19.2	1*10 <sup>-2</sup>	
M08	47	28.6	17.7	1*10 <sup>-2</sup>	
	48	35.8	21.5	6*10 <sup>-3</sup>	
	49	32.7	20.8	1*10 <sup>-2</sup>	
	50	35.3	21.5	5*10 <sup>-3</sup>	
	51	28.7	20.0	1*10 <sup>-2</sup>	
M14	47	40.2	24.2	2*10 <sup>-3</sup>	
	48	< 25.0	23.2	8*10 <sup>-3</sup>	
	49	36.0	23.3	1*10 <sup>-2</sup>	
	50	35.4	22.3	7*10 <sup>-3</sup>	
	51	32.1	23.0	1*10 <sup>-2</sup>	
M19	47	59.4	32.3	<10 <sup>-6</sup>	
	48	53.9	34.6	<10 <sup>-6</sup>	
	49	54.0	>36	<10 <sup>-6</sup>	
	50	55.4	33.3	<10 <sup>-6</sup>	
	51	54.7	27.9	<10 <sup>-6</sup>	Image pixelated
M20	47	28.6	17.7	1*10 <sup>-2</sup>	
	48	40.4	28.3	2*10 <sup>-5</sup>	
	49	41.9	24.1	1*10 <sup>-2</sup>	

Measurement	Channel	power (dBuV)	MER (dB)	bBER (x10 <sup>-2</sup> )	Notes
	50	35.5	16.6	1*10 <sup>-2</sup>	
	51	31.8	24.9	10 <sup>-3</sup>	
M21	47	49.7	30.8	<10 <sup>-6</sup>	
	48	48.6	31.7	<10 <sup>-6</sup>	
	49	50.9	34.2	<10 <sup>-6</sup>	
	50	52.7	31.6	6*10 <sup>-6</sup>	
	51	50.9	31.7	<10 <sup>-6</sup>	
M23	47	28.6	17.7	1*10 <sup>-2</sup>	
	48	53.2	32.0	<10 <sup>-6</sup>	
	49	53.0	>36	<10 <sup>-6</sup>	
	50	49.0	32.8	1*10 <sup>-6</sup>	
	51	51.3	34.6	<10 <sup>-6</sup>	
M24	47	38.5	23.8	9*10 <sup>-4</sup>	
	48	40.3	25.9	6*10 <sup>-5</sup>	
	49	39.2	24.4	1*10 <sup>-3</sup>	
	50	28.4	18.0	1*10 <sup>-2</sup>	
	51	33.9	20.5	1*10 <sup>-2</sup>	
M26	47	48.2	31.4	<10 <sup>-6</sup>	
	48	48.8	30.8	<10 <sup>-6</sup>	Image pixelated
	49	48.5	32.3	<10 <sup>-6</sup>	
	50	49.1	32.1	<10 <sup>-6</sup>	
	51	48.9	34.9	<10 <sup>-6</sup>	
M27	47	48.3	23.1	3*10 <sup>-3</sup>	
	48	42.8	26.8	6*10 <sup>-5</sup>	
	49	37.1	26.7	1*10 <sup>-4</sup>	
	50	46.7	28.3	4*10 <sup>-5</sup>	
	51	46.7	29.9	<10 <sup>-6</sup>	
M29	47	49.1	30.9	<10 <sup>-6</sup>	
	48	50.2	29.3	<10 <sup>-6</sup>	
	49	48.1	32.1	3*10 <sup>-4</sup>	
	50	48.8	30.9	<10 <sup>-6</sup>	
	51	46.5	30.1	<10 <sup>-6</sup>	
M30 - V	47	< 25.0	19.8	1*10 <sup>-2</sup>	
	48	34.2	18.7	1*10 <sup>-2</sup>	



Measurement	Channel	power (dBuV)	MER (dB)	bBER (x10 <sup>-2</sup> )	Notes
M30 - H	49	33.5	22.7	1*10 <sup>-2</sup>	
	50	36.1	23.7	1*10 <sup>-2</sup>	
	51	< 25.0	19.6	1*10 <sup>-2</sup>	
	47	28.3	15.3	1*10 <sup>-2</sup>	
	48	33.8	17.5	1*10 <sup>-2</sup>	
	49	29.5	21.1	9*10 <sup>-3</sup>	
M33	50	29.7	21.6	1*10 <sup>-2</sup>	
	51	34.6	21.3	6*10 <sup>-3</sup>	
	47	28.6	17.7	1*10 <sup>-2</sup>	
M34	48	28.3	17.5	1*10 <sup>-2</sup>	
	49	NA	NA	NA	Image Ok.
	50	27.5	18.7	1*10 <sup>-2</sup>	
	51	< 25.0	21.0	1*10 <sup>-2</sup>	
	47	31.6	20.9	1*10 <sup>-2</sup>	
M35	48	36.3	21.0	7*10 <sup>-3</sup>	
	49	36.3	23.0	2*10 <sup>-3</sup>	
	50	35.4	22.3	4*10 <sup>-3</sup>	
	51	27.5	18.9	1*10 <sup>-2</sup>	
	47	33.4	19.0	1*10 <sup>-2</sup>	
	48	31.9	18.1	1*10 <sup>-2</sup>	
M36	49	30.5	19.0	1*10 <sup>-2</sup>	
	50	NA	NA	NA	
	51	30.1	18.5	1*10 <sup>-2</sup>	
	47	59.7	31.3	<10 <sup>-6</sup>	
	48	59.6	30.9	<10 <sup>-6</sup>	
M38	49	57.7	>36	<10 <sup>-6</sup>	
	50	57.3	34.9	<10 <sup>-6</sup>	
	51	54.3	27.3	<10 <sup>-6</sup>	
	47	NA	NA	NA	Image available
	48	32.0	20.9	1*10 <sup>-2</sup>	
M39	49	35.5	22.4	2*10 <sup>-3</sup>	
	50	NA	NA	NA	Image available
	51	34.2	21.7	1*10 <sup>-2</sup>	
M39	47	37.5	22.9	2*10 <sup>-3</sup>	
	48	36.8	24.2	1*10 <sup>-3</sup>	

Measurement	Channel	power (dBuV)	MER (dB)	bBER (x10 <sup>-2</sup> )	Notes
M40	49	39.3	25.5	3*10 <sup>-5</sup>	
	50	39.6	26.5	2*10 <sup>-4</sup>	
	51	39.7	25.3	4*10 <sup>-5</sup>	
	47	30.1	18.3	1*10 <sup>-2</sup>	
	48	34.4	19.8	1*10 <sup>-2</sup>	
	49	31.0	19.2	1*10 <sup>-2</sup>	
M42	50	36.0	22.8	2*10 <sup>-3</sup>	
	51	39.1	24.5	8*10 <sup>-4</sup>	
	47	44.1	29.2	2*10 <sup>-6</sup>	
M45	48	42.9	27.5	4*10 <sup>-6</sup>	
	49	43.9	29.2	7*10 <sup>-6</sup>	
	50	41.5	27.2	7*10 <sup>-6</sup>	
	51	41.7	27.4	<10 <sup>-6</sup>	
	47	38.7	25.3	3*10 <sup>-3</sup>	
M48	48	28.4	27.7	9*10 <sup>-3</sup>	
	49	36.8	25.1	8*10 <sup>-4</sup>	
	50	35.1	27.5	1*10 <sup>-2</sup>	
	51	35.7	29.9	9*10 <sup>-4</sup>	
	47	39.7	22.6	6*10 <sup>-3</sup>	
	48	36.0	21.5	1*10 <sup>-2</sup>	
M49	49	36.3	17.9	1*10 <sup>-2</sup>	
	50	35.3	24.5	7*10 <sup>-3</sup>	
	51	37.5	21.3	1*10 <sup>-2</sup>	
	47	50.3	31.3	<10 <sup>-6</sup>	
	48	37.7	34.2	2*10 <sup>-5</sup>	
M50	49	40.2	26.5	2*10 <sup>-3</sup>	
	50	37.2	14.7	1*10 <sup>-2</sup>	
	51	35.0	25.4	1*10 <sup>-3</sup>	
	47	46.4	30.0	<10 <sup>-6</sup>	
	48	40.1	25.1	1*10 <sup>-3</sup>	
M52	49	42.4	27.4	6*10 <sup>-5</sup>	
	50	44.6	30.3	<10 <sup>-6</sup>	
	51	47.2	31.9	<10 <sup>-6</sup>	
M52	47	42.2	30.6	1*10 <sup>-4</sup>	
	48	45.8	28.6	2*10 <sup>-4</sup>	

Measurement	Channel	power (dBuV)	MER (dB)	bBER ( $\times 10^{-2}$ )	Notes
M55	49	43.4	30.2	$1 \times 10^{-5}$	
	50	51.5	28.8	$8 \times 10^{-5}$	
	51	54.9	29.1	$6 \times 10^{-4}$	
	47	51.3	>36	$< 10^{-6}$	
	48	49.4	32.9	$< 10^{-6}$	
	49	49.3	35.5	$< 10^{-6}$	
M58 - V	50	48.7	32.0	$3 \times 10^{-6}$	
	51	46.5	30.8	$< 10^{-6}$	
	47	28.6	17.7	$1 \times 10^{-2}$	
	48	35.8	21.5	$6 \times 10^{-3}$	
M58 - H	49	32.7	20.8	$1 \times 10^{-2}$	
	50	35.3	21.5	$5 \times 10^{-3}$	
	51	28.7	20.0	$1 \times 10^{-2}$	
	47	28.6	17.7	$1 \times 10^{-2}$	
M60	48	35.8	21.5	$6 \times 10^{-3}$	
	49	32.7	20.8	$1 \times 10^{-2}$	
	50	35.3	21.5	$5 \times 10^{-3}$	
	51	28.7	20.0	$1 \times 10^{-2}$	
	47	28.0	17.7	$1 \times 10^{-2}$	
M62	48	NA	NA	NA	Image unavailable
	49	32.1	19.5	$1 \times 10^{-2}$	
	50	35.3	21.5	$5 \times 10^{-3}$	
	51	29.7	18.4	$1 \times 10^{-2}$	
	47	32.2	23.0	$3 \times 10^{-3}$	
M63	48	NA	NA	NA	Image available
	49	NA	NA	NA	Image available, pixelated
	50	36.0	23.0	$2 \times 10^{-3}$	
	51	36.0	22.5	$3 \times 10^{-3}$	
M64	47	33.8	19.2	$1 \times 10^{-2}$	
	48	30.9	17.2	$1 \times 10^{-2}$	
	49	28.8	17.3	$1 \times 10^{-2}$	
	50	28.2	17.3	$1 \times 10^{-2}$	
	51	30.4	18.5	$1 \times 10^{-2}$	
47	40.4	27.3	$5 \times 10^{-5}$	Image pixelated	

Measurement	Channel	power (dBuV)	MER (dB)	bBER ( $\times 10^{-2}$ )	Notes
M65	48	27.8	18.9	$1 \times 10^{-2}$	
	49	29.1	19.0	$1 \times 10^{-2}$	
	50	36.7	21.5	$6 \times 10^{-3}$	
	51	26.8	21.8	$6 \times 10^{-3}$	
	47	31.3	19.1	$1 \times 10^{-2}$	
	48	32.1	18.4	$1 \times 10^{-2}$	
M68	49	35.7	19.9	$9 \times 10^{-3}$	
	50	32.7	19.7	$1 \times 10^{-2}$	
	51	33.9	21.4	$1 \times 10^{-2}$	
	47	30.2	18.8	$1 \times 10^{-2}$	
M70	48	31.1	20.1	$1 \times 10^{-2}$	
	49	36.5	20.4	$1 \times 10^{-2}$	
	50	27.4	20.2	$1 \times 10^{-2}$	
	51	27.1	18.0	$1 \times 10^{-2}$	
	47	31.1	19.1	$1 \times 10^{-2}$	
M73	48	31.0	19.0	$1 \times 10^{-2}$	
	49	28.4	18.5	$1 \times 10^{-2}$	
	50	28.5	18.0	$1 \times 10^{-2}$	
	51	29.6	18.5	$1 \times 10^{-2}$	
	47	28.3	17.7	$1 \times 10^{-2}$	
M76	48	29.4	17.9	$1 \times 10^{-2}$	
	49	28.8	19.5	$1 \times 10^{-2}$	
	50	33.9	21.6	$6 \times 10^{-3}$	
	51	33.0	20.3	$1 \times 10^{-2}$	
	47	40.2	24.2	$2 \times 10^{-3}$	
M78	48	< 25.0	23.2	$8 \times 10^{-3}$	
	49	36.0	23.3	$1 \times 10^{-2}$	
	50	35.4	22.3	$7 \times 10^{-3}$	
	51	32.1	23.0	$1 \times 10^{-2}$	
	47	29.0	17.3	$1 \times 10^{-2}$	
M79	48	28.0	18.1	$1 \times 10^{-2}$	
	49	29.5	20.1	$1 \times 10^{-2}$	
	50	33.4	20.5	$1 \times 10^{-2}$	
	51	< 25.0	22.5	$4 \times 10^{-3}$	
	47	< 25.0	20.7	$9 \times 10^{-3}$	

Measurement	Channel	power (dBuV)	MER (dB)	bBER (x10 <sup>-2</sup> )	Notes
M80	48	35.8	21.5	6*10 <sup>-3</sup>	
	49	34.1	21.1	9*10 <sup>-3</sup>	
	50	33.4	21.1	7*10 <sup>-3</sup>	
	51	34.4	20.7	1*10 <sup>-2</sup>	
	47	28.6	17.7	1*10 <sup>-2</sup>	
	48	35.1	23.3	4*10 <sup>-3</sup>	
	49	32.7	20.8	1*10 <sup>-2</sup>	
M81	50	39.3	24.5	6*10 <sup>-4</sup>	
	51	28.7	20.0	1*10 <sup>-2</sup>	
	47	32.4	20.3	9*10 <sup>-3</sup>	
	48	< 25.0	20.4	8*10 <sup>-3</sup>	
	49	NA	NA	NA	Image available
M83	50	35.3	21.5	5*10 <sup>-3</sup>	
	51	31.5	18.2	1*10 <sup>-2</sup>	
	47	< 25.0	15.4	1*10 <sup>-2</sup>	
	48	28.9	16.2	1*10 <sup>-2</sup>	
	49	30.5	17.4	1*10 <sup>-2</sup>	
	50	25.8	15.9	1*10 <sup>-2</sup>	
M86	51	< 25.0	16.7	1*10 <sup>-2</sup>	
	47	30.6	20.5	1*10 <sup>-2</sup>	
	48	29.4	20.0	1*10 <sup>-2</sup>	
	49	31.1	17.6	1*10 <sup>-2</sup>	
	50	30.2	17.9	1*10 <sup>-2</sup>	
M89	51	< 25.0	17.8	1*10 <sup>-2</sup>	
	47	30.9	19.2	1*10 <sup>-2</sup>	
	48	30.4	19.2	1*10 <sup>-2</sup>	
	49	36.4	19.2	1*10 <sup>-2</sup>	Image pixelated
	50	30.5	17.5	1*10 <sup>-2</sup>	
	51	NA	NA	NA	Image available, pixelated
M91	47	32.0	19.6	1*10 <sup>-2</sup>	
	48	30.1	20.9	1*10 <sup>-2</sup>	
	49	31.8	19.1	1*10 <sup>-2</sup>	
	50	34.0	21.0	9*10 <sup>-3</sup>	
	51	33.9	20.7	1*10 <sup>-2</sup>	

Measurement	Channel	power (dBuV)	MER (dB)	bBER (x10 <sup>-2</sup> )	Notes
M93	47	31.7	19.0	1*10 <sup>-2</sup>	
	48	29.3	18.2	1*10 <sup>-2</sup>	
	49	26.7	17.7	1*10 <sup>-2</sup>	
	50	31.4	19.3	1*10 <sup>-2</sup>	
	51	30.8	19.0	1*10 <sup>-2</sup>	
M95	47	30.2	21.2	1*10 <sup>-2</sup>	
	48	29.8	20.7	1*10 <sup>-2</sup>	Image pixelated
	49	31.7	18.7	1*10 <sup>-2</sup>	
	50	27.1	19.4	1*10 <sup>-2</sup>	
	51	34.5	21.0	9*10 <sup>-3</sup>	Image pixelated
M96	47	29.5	20.0	1*10 <sup>-2</sup>	
	48	30.5	18.2	1*10 <sup>-2</sup>	
	49	< 25.0	19.0	1*10 <sup>-2</sup>	
	50	< 25.0	18.7	1*10 <sup>-2</sup>	
	51	< 25.0	17.1	1*10 <sup>-2</sup>	Image pixelated
M100	47	NA	NA	NA	Image available
	48	39.1	19.1	1*10 <sup>-2</sup>	
	49	31.8	19.2	1*10 <sup>-2</sup>	
	50	34.0	17.7	1*10 <sup>-2</sup>	
	51	34.1	17.8	1*10 <sup>-2</sup>	
M104	47	< 25.0	20.0	1*10 <sup>-2</sup>	
	48	34.8	19.7	1*10 <sup>-2</sup>	
	49	NA	NA	NA	Image available
	50	33.2	20.7	1*10 <sup>-2</sup>	
	51	32.4	19.4	1*10 <sup>-2</sup>	
M107	47	31.8	19.9	1*10 <sup>-2</sup>	
	48	30.2	19.9	1*10 <sup>-2</sup>	
	49	34.3	20.7	1*10 <sup>-2</sup>	
	50	29.4	19.9	1*10 <sup>-2</sup>	
	51	28.8	16.9	1*10 <sup>-2</sup>	
	47	62.6	34.4	<10 <sup>-6</sup>	
M110	48	62.6	31.4	<10 <sup>-6</sup>	
	49	61.9	>36	<10 <sup>-6</sup>	
	50	62.4	34.1	<10 <sup>-6</sup>	
	51	62.0	>36	<10 <sup>-6</sup>	

Measurement	Channel	power (dBuV)	MER (dB)	bBER (x10 <sup>-2</sup> )	Notes
M112	47	36.9	28.0	3*10 <sup>-3</sup>	
	48	31.4	21.8	1*10 <sup>-2</sup>	
	49	32.1	20.1	1*10 <sup>-2</sup>	
	50	37.5	20.2	1*10 <sup>-2</sup>	
	51	38.6	25.9	1*10 <sup>-3</sup>	
<b>Measurement Campaign June 2021</b>					
M116	47	33.0	19.3	7*10 <sup>-2</sup>	
	48	29.2	19.8	1*10 <sup>-2</sup>	
	49	33.2	19.3	1*10 <sup>-2</sup>	
	50	30.9	18.7	1*10 <sup>-2</sup>	
	51	28.5	17.1	1*10 <sup>-2</sup>	Image pixelated
M117	47	36.9	22.3	3*10 <sup>-3</sup>	
	48	35.4	21.4	6*10 <sup>-3</sup>	
	49	34.7	21.4	6*10 <sup>-3</sup>	
	50	33.0	21.0	9*10 <sup>-3</sup>	
	51	31.6	20.3	1*10 <sup>-2</sup>	
M120	47	40.3	25.8	8*10 <sup>-5</sup>	
	48	39.3	25.1	1*10 <sup>-4</sup>	
	49	40.0	25.8	1*10 <sup>-4</sup>	
	50	40.3	26.2	1*10 <sup>-5</sup>	
	51	38.7	25.5	1*10 <sup>-4</sup>	
M123	47	41.5	25.3	3*10 <sup>-4</sup>	
	48	41.6	25.2	5*10 <sup>-4</sup>	
	49	39.6	24.9	6*10 <sup>-4</sup>	
	50	37.8	25.6	1*10 <sup>-3</sup>	Image pixelated
	51	37.0	23.6	1*10 <sup>-3</sup>	
M125	47	40.2	26.6	7*10 <sup>-6</sup>	Image pixelated
	48	38.2	25.1	2*10 <sup>-4</sup>	
	49	39.8	26.2	2*10 <sup>-4</sup>	
	50	43.7	28.1	<10 <sup>-6</sup>	
	51	41.2	27.4	<10 <sup>-6</sup>	Image pixelated
M128	47	36.9	20.7	9*10 <sup>-3</sup>	Image pixelated
	48	36.5	21.6	4*10 <sup>-3</sup>	
	49	29.9	19.8	1*10 <sup>-2</sup>	
	50	36.0	20.7	1*10 <sup>-2</sup>	

Measurement	Channel	power (dBuV)	MER (dB)	bBER (x10 <sup>-2</sup> )	Notes
M134	51	35.4	21.2	7*10 <sup>-3</sup>	
	47	39.1	24.5	3*10 <sup>-4</sup>	
	48	38.1	23.4	1*10 <sup>-3</sup>	
	49	37.5	23.4	1*10 <sup>-3</sup>	
	50	38.9	24.8	2*10 <sup>-4</sup>	
M137	51	38.8	25.3	1*10 <sup>-4</sup>	
	47	33.9	21.0	9*10 <sup>-3</sup>	
	48	32.6	19.9	1*10 <sup>-2</sup>	
	49	32.5	18.5	1*10 <sup>-2</sup>	
	50	32.5	18.9	1*10 <sup>-2</sup>	
M148	51	31.5	18.3	1*10 <sup>-2</sup>	
	47	35.6	25.2	7*10 <sup>-4</sup>	
	48	38.9	25.3	1*10 <sup>-4</sup>	
	49	41.4	25.1	8*10 <sup>-4</sup>	
	50	38.8	25.0	6*10 <sup>-5</sup>	
M152	51	39.4	25.3	1*10 <sup>-4</sup>	
	47	31.5	19.4	1*10 <sup>-2</sup>	
	48	30.7	18.5	1*10 <sup>-2</sup>	
	49	30.2	18.3	1*10 <sup>-2</sup>	
	50	36.1	23.1	1*10 <sup>-3</sup>	
M157	51	35.0	21.7	6*10 <sup>-3</sup>	
	47	41.7	26.2	3*10 <sup>-5</sup>	
	48	38.8	24.8	2*10 <sup>-4</sup>	
	49	41.8	24.5	3*10 <sup>-4</sup>	
	50	40.1	25.6	2*10 <sup>-5</sup>	
M161	51	40.1	25.4	1*10 <sup>-4</sup>	
	47	35.4	23.0	2*10 <sup>-3</sup>	
	48	35.6	21.7	5*10 <sup>-3</sup>	
	49	35.8	22.3	3*10 <sup>-3</sup>	
	50	37.9	23.9	5*10 <sup>-4</sup>	
M169	51	36.3	22.7	2*10 <sup>-3</sup>	
	47	36.6	22.1	4*10 <sup>-3</sup>	
	48	31.6	20.1	1*10 <sup>-2</sup>	Image pixelated
	49	29.9	17.8	1*10 <sup>-2</sup>	
	50	29.7	17.7	1*10 <sup>-2</sup>	

Measurement	Channel	power (dBuV)	MER (dB)	bBER ( $\times 10^{-2}$ )	Notes
M172	51	32.4	18.4	$1 \times 10^{-2}$	
	47	40.6	25.4	$1 \times 10^{-4}$	
	48	39.1	24.5	$6 \times 10^{-4}$	
	49	36.3	24.1	$9 \times 10^{-4}$	
	50	35.1	22.0	$5 \times 10^{-3}$	
M174	51	29.6	18.7	$1 \times 10^{-2}$	Image pixelated
	47	39.7	25.3	$1 \times 10^{-4}$	
	48	36.5	23.0	$2 \times 10^{-3}$	
	49	32.6	20.4	$1 \times 10^{-2}$	
	50	32.7	20.1	$1 \times 10^{-2}$	
M176	51	31.8	19.7	$1 \times 10^{-2}$	
	47	28.4	17.4	$1 \times 10^{-2}$	
	48	27.6	17.5	$1 \times 10^{-2}$	
	49	30.5	18.0	$1 \times 10^{-2}$	
	50	36.0	19.6	$1 \times 10^{-2}$	
	51	28.2	18.1	$1 \times 10^{-2}$	

Measurement	Channel	power (dBuV)	MER (dB)	bBER ( $\times 10^{-2}$ )	Notes
M181	47	41.6	26.0	$6 \times 10^{-4}$	
	48	38.9	22.1	$1 \times 10^{-2}$	
	49	37.5	23.8	$1 \times 10^{-2}$	
	50	34.8	26.7	$4 \times 10^{-4}$	
	51	44.6	28.2	$< 10^{-6}$	
M184	47	40.4	26.0	$5 \times 10^{-5}$	
	48	37.7	23.1	$2 \times 10^{-3}$	
	49	33.1	21.1	$9 \times 10^{-3}$	
	50	37.9	23.2	$1 \times 10^{-3}$	
	51	36.2	23.0	$1 \times 10^{-3}$	
M185	47	44.0	27.2	$< 10^{-6}$	
	48	39.7	25.9	$6 \times 10^{-6}$	
	49	40.3	26.5	$1 \times 10^{-4}$	
	50	39.5	26.1	$1 \times 10^{-5}$	
	51	37.8	24.1	$4 \times 10^{-4}$	

### 3.3 Measurement equipment

The Survey was carried out with the measurement equipment listed in Table 3-6.

**Table 3-6 Measurement Equipment**

<b>Device</b>	<b>Description</b>
Spectrum Analyser	Anritsu MS2712E 4 GHz Spectrum Analyser
Television Analyser	Rover HD TAB EVO Lite CATV, SAT, and TV Analyser
Radio Antenna	Rojane, Omnidirectional Antenna, APN 16 Base, 1.6m long, bandwidth 88 – 108 MHz;
Television Antenna	Antsig Fringe 65 Element outdoor Antenna

The calibration certificate for the Spectrum Analyser is shown in APPENDIX E.

## 4 REFERENCES

### No. Reference

- [1] DNV, "EMI Assessment Ryan Corner Wind Farm", document: "170492-AUME-R-01-C", 18 February 2016.
- [2] Australian Communications and Media Authority (ACMA), broadcasters for postcode 3284, <https://www.acma.gov.au/search-broadcasters-place-name>, consulted on 06 November 2020.
- [3] Radio Heritage Foundation, "The Australian Radio Guide FM Stations in Victoria", <http://www.radioheritage.net/AusG-Full.asp?band=FM&ste=VIC>, consulted on 06 November 2020.
- [4] Radio Heritage Foundation, "The Australian Radio Guide FM Stations in Port Fairy", <http://www.radioheritage.net/AusG-Full.asp?band=All&loc=Port+Fairy&ste=VIC>, consulted on 06 November 2020.
- [5] Radio Heritage Foundation, "The Australian Radio Guide FM Stations in Warrnambool", <http://www.radioheritage.net/AusG-Full.asp?band=All&loc=Warrnambool&ste=VIC>, consulted on 06 November 2020.
- [6] ABC, "Help receiving ABC TV and Radio - Coverage & Frequency Search", <http://reception.abc.net.au/>, consulted on 06 November 2020.
- [7] Oz Digital TV, "Warrnambool Digital TV Broadcast Site", <https://ozdigitaltv.com/transmitters/VIC/769-Warrnambool>, consulted on 09 November 2020.
- [8] Oz Digital TV, "Tower Hill Digital TV Broadcast Site", <https://ozdigitaltv.com/transmitters/VIC/314-Tower-Hill>, consulted on 09 November 2020.
- [9] mySwitch, "Coverage Summary, port fairy Vic 3284", <https://myswitch.digitalready.gov.au/#27>, consulted on 09 November 2020.
- [10] DNV, "Test Plan for Radio & Television Pre-Construction Survey at the Ryan Corner Wind Farm", document: "10265612-AUME-R-01-A", 10 November 2020.
- [11] ERM, Email from Fiona Koutsivos; Subject; "RE: Ryan Corner/Hawkesdale Project Meeting Notes 28.09"; 08 October 2020.
- [12] ERM, email from Fiona Koutsivos; Subject; "RE: RC WF Layout Plan Changes (TV and Radio Survey)"; 18 February 2021.
- [13] ERM, email from Christine Hartley; Subject; "RE: RCWF - amended site layout"; 07 April 2021.
- [14] ERM, email from Christine Hartley; Subject; "RCWF and HDWF coordinates"; 31 May 2021.

## APPENDIX A PROPOSED WIND TURBINES COORDINATES

**Table A-1 Proposed turbine layout for the project<sup>1</sup>**

WTG	GDA94 – MGA Zone 54		AGD66 – AMG Zone54	
	Easting [m]	Northing [m]	Easting [m]	Northing [m]
B6	598877	5759061	598757	5758884
B8	599727	5759643	599607	5759466
B9	599166	5759598	599046	5759421
B10	597917	5758790	597797	5758613
B13	597978	5759475	597858	5759298
B14	597425	5759531	597305	5759354
B15	597672	5760108	597552	5759931
B16	597376	5760551	597256	5760374
B17	597955	5760786	597835	5760609
B18	598326	5760346	598206	5760169
B20	599349	5760165	599229	5759988
B21	599635	5760715	599515	5760538
B22	599032	5760635	598912	5760458
B23	598613	5760850	598493	5760673
B24	599316	5761108	599196	5760931
B25	598757	5761276	598637	5761099
B26	598219	5761151	598099	5760974
B28	599542	5761555	599422	5761378
B29	598888	5761690	598768	5761513
B30	598430	5761948	598310	5761771
B31	599385	5762242	599265	5762065
B32	598877	5762286	598757	5762109
B33	598914	5762968	598794	5762791
B34	598263	5762550	598143	5762373
B36	598452	5763098	598332	5762921
B37	597956	5763248	597836	5763071
B38	598599	5763549	598479	5763372
B40	598854	5764021	598734	5763844
B43	598636	5764754	598516	5764577
B44	598253	5764493	598133	5764316
B45	597473	5764315	597353	5764138
B46	596945	5764092	596825	5763915
B48	596613	5763711	596493	5763534
B49	597168	5763552	597048	5763375
B52	597119	5762847	596999	5762670
B54	596658	5762679	596538	5762502
B55	597282	5762400	597162	5762223
B58	596683	5762220	596563	5762043
B59	597315	5761955	597195	5761778
B60	597891	5761905	597771	5761728
B62	596480	5761649	596360	5761472
B63	597013	5761607	596893	5761430
B64	597676	5761315	597556	5761138
B66	596725	5761036	596605	5760859
B67	597173	5761103	597053	5760926
B69	596072	5760456	595952	5760279
B70	595888	5759942	595768	5759765
B72	596642	5760305	596522	5760128
B73	597214	5759966	597094	5759789
B74	596541	5759897	596421	5759720





<b>WTG</b>	<b>GDA94 – MGA Zone 54</b>		<b>AGD66 – AMG Zone54</b>	
	<b>Easting [m]</b>	<b>Northing [m]</b>	<b>Easting [m]</b>	<b>Northing [m]</b>
B75	598465	5759554	598345	5759377
B76	598416	5758916	598296	5758739

Note 1: coordinates obtained from [13].

## APPENDIX B DWEALLINGS COORDINATES

**Table B-2 Existing dwellings in the vicinity of the Ryan Corner Wind Farm<sup>1</sup>**

Dwelling ID	Easting <sup>2</sup> [m]	Northing <sup>2</sup> [m]	Nearest Turbine	Distance from nearest turbine [km]	Within 5 km	Measurement at
<b>Measurement Campaign November 2020</b>						
RY1	598044	5756143	B10	2.5	Yes	M2
RY2	597917	5756409	B10	2.3	Yes	M2
RY3	597945	5756770	B10	1.9	Yes	M3
RY4	597551	5756991	B10	1.7	Yes	M3
RY5	597103	5757115	B10	1.7	Yes	M6
RY6	597467	5757338	B10	1.4	Yes	M6
RY7	597386	5757610	B10	1.1	Yes	M6
RY8	596979	5758276	B10	0.9	Yes	M8
RY9	596409	5758436	B14	1.3	Yes	M9
RY10	596143	5758383	B74	1.4	Yes	M9
RY11	597717	5765306	B44	1.1	Yes	M11
RY12	604630	5753104	B8	8.1	No	N/A
RY13	603817	5753670	B8	7.1	No	N/A
RY14	603420	5754084	B8	6.6	No	M14
RY15	603370	5754550	B8	6.2	No	M14
RY16	603058	5755340	B8	5.3	No	M19
RY17	603865	5755329	B8	5.9	No	M19
RY18	603766	5755796	B8	5.5	No	M19
RY19	603660	5756021	B8	5.3	No	M19
RY20	603424	5758523	B8	3.9	Yes	M20
RY21	602937	5759687	B8	3.4	Yes	M21
RY22	602633	5760114	B21	3.1	Yes	M21
RY23	602374	5760786	B21	2.8	Yes	M23
RY24	601413	5760961	B21	1.9	Yes	M24
RY25	601289	5761306	B28	1.9	Yes	M24
RY26	600505	5762154	B28	1.3	Yes	M26
RY27	600212	5763010	B35	1.2	Yes	M27
RY28	599969	5762688	B31	1.0	Yes	M27
RY29	599879	5763927	B40	1.1	Yes	M29
RY30	599676	5764630	B43	1.2	Yes	M30
RY31	599758	5764693	B43	1.2	Yes	M30
RY32	599198	5765407	B43	1.1	Yes	M38
RY33	598500	5766149	B43	1.5	Yes	M33
RY34	598404	5767756	B43	3.2	Yes	M34
RY35	598353	5768235	B43	3.6	Yes	M35
RY36	603629	5757011	B8	4.7	Yes	M36
RY37	598390	5768613	B43	4.0	Yes	M35
RY38	599341	5765865	B43	1.5	Yes	M38
RY39	600683	5765800	B43	2.4	Yes	M39
RY40	601674	5765545	B43	3.3	Yes	M40
RY41	601806	5765482	B43	3.3	Yes	M40
RY42	603032	5766153	B43	4.8	Yes	M42
RY43	603160	5766369	B43	4.9	Yes	M42
RY44	601541	5765562	B43	3.3	Yes	M40
RY45	604208	5766335	B43	5.9	No	M45
RY46	604305	5766271	B43	6.0	No	M45
RY47	604371	5763651	B35	5.4	No	M48
RY48	604258	5763410	B35	5.2	No	M48
RY49	604118	5762114	B28	4.7	Yes	M49

Dwelling ID	Easting <sup>2</sup> [m]	Northing <sup>2</sup> [m]	Nearest Turbine	Distance from nearest turbine [km]	Within 5 km	Measurement at
RY50	603916	5759537	B8	4.3	Yes	M50
RY51	604080	5767164	B43	6.1	No	N/A
RY52	604884	5760860	B21	5.3	No	M52
RY53	606155	5759651	B8	6.6	No	M52
RY54	606057	5758536	B8	6.5	No	N/A
RY55	601828	5762954	B31	2.8	Yes	M55
RY56	602065	5762934	B31	3.0	Yes	M55
RY57	604892	5762497	B28	5.6	No	N/A
RY58	605747	5762311	B28	6.4	No	M58
RY59	607068	5762746	B28	7.8	No	M58
RY60	597151	5768184	B43	3.9	Yes	M60
RY61	596929	5768512	B43	4.3	Yes	M60
RY62	596551	5767521	B45	3.5	Yes	M62
RY63	596397	5766993	B45	3.0	Yes	M63
RY64	595093	5766481	B46	3.2	Yes	M64
RY65	594231	5764866	B48	2.7	Yes	M65
RY66	593701	5765060	B48	3.2	Yes	M68
RY67	593689	5764897	B48	3.1	Yes	M68
RY68	593581	5765026	B48	3.3	Yes	M68
RY69	593244	5765020	B48	3.6	Yes	M73
RY70	592419	5765031	B48	4.3	Yes	M70
RY71	593342	5766815	B46	4.5	Yes	M71
RY72	593335	5765839	B48	3.8	Yes	M72
RY73	593366	5765030	B48	3.4	Yes	M73
RY74	593333	5764466	B48	3.3	Yes	M73
RY75	593354	5763088	B54	3.2	Yes	M75
RY76	592972	5761092	B69	3.1	Yes	M116
RY77	594382	5760726	B69	1.6	Yes	M77
RY78	595399	5761105	B65	0.8	Yes	M78
RY79	595427	5762220	B54	1.1	Yes	M79
RY80	594877	5758293	B70	1.8	Yes	M80
RY81	594830	5757467	B70	2.6	Yes	M81
RY82	594622	5757129	B70	2.9	Yes	M81
RY83	593601	5758160	B70	2.8	Yes	M83
RY84	593813	5758024	B70	2.8	Yes	M83
RY85	593885	5757903	B70	2.8	Yes	M172
RY86	594134	5757644	B70	2.8	Yes	M86
RY87	594519	5757253	B70	2.9	Yes	M81
RY88	594891	5756249	B70	3.7	Yes	M107
RY89	595375	5756071	B10	3.5	Yes	M89
RY91	596063	5755860	B10	3.3	Yes	M91
RY92	596319	5755192	B10	3.5	Yes	M91
RY93	596819	5755059	B10	3.8	Yes	M93
RY94	597495	5754935	B10	4.0	Yes	M93
RY95	597082	5753836	B10	4.8	Yes	M95
RY96	598841	5754144	B76	4.6	Yes	M96
RY97	599037	5754289	B76	4.5	Yes	M96
RY98	599934	5753384	B76	5.6	No	M100
RY99	600495	5753780	B6	5.4	No	M100
RY100	600296	5753102	B76	6.0	No	M100
RY101	600296	5753102	B76	6.0	No	M100
RY102	600554	5752786	B6	6.4	No	N/A
RY103	600486	5752655	B6	6.5	No	N/A
RY104	593763	5759382	B70	2.1	Yes	M104

Dwelling ID	Easting <sup>2</sup> [m]	Northing <sup>2</sup> [m]	Nearest Turbine	Distance from nearest turbine [km]	Within 5 km	Measurement at
RY105	593902	5759347	B70	2.0	Yes	M104
RY106	593980	5759734	B70	1.8	Yes	M104
RY107	594593	5756566	B70	3.5	Yes	M107
RY108	605095	5757584	B8	5.8	No	M110
RY109	605164	5757571	B8	5.9	No	M110
RY110	605306	5757550	B8	6.0	No	M110
RY111	605699	5758051	B8	6.3	No	M110
RY112	605285	5751821	B8	9.5	No	M112

**Measurement Campaign June 2021**

RY113	597094	5757601	B10	1.2	Yes	M6
RY114	599004	5766120	B43	1.6	Yes	M38
RY115	593749	5759305	B70	2.1	Yes	M104
RY116	592623	5760931	B70	3.4	Yes	M116
RY117	591412	5760975	B70	4.5	Yes	M117
RY118	591408	5760528	B70	4.4	Yes	M120
RY119	591125	5760272	B70	4.7	Yes	M120
RY120	591371	5760178	B70	4.4	Yes	M120
RY121	591225	5759957	B70	4.5	Yes	M120
RY122	590853	5759343	B70	4.9	Yes	M123
RY123	591151	5759311	B70	4.6	Yes	M123
RY124	591269	5759278	B70	4.5	Yes	M123
RY125	591756	5759330	B70	4.0	Yes	M125
RY126	592018	5759435	B70	3.8	Yes	M125
RY127	591861	5758710	B70	4.0	Yes	M128
RY128	591842	5758642	B70	4.1	Yes	M128
RY129	592483	5758552	B70	3.5	Yes	M134
RY130	592404	5758480	B70	3.6	Yes	M134
RY131	592496	5758395	B70	3.5	Yes	M134
RY132	592632	5758504	B70	3.4	Yes	M134
RY133	592620	5758417	B70	3.4	Yes	M134
RY134	592619	5758359	B70	3.4	Yes	M134
RY135	592665	5758295	B70	3.4	Yes	M134
RY136	592854	5758483	B70	3.2	Yes	M152
RY137	592896	5758311	B70	3.2	Yes	M137
RY138	592992	5758224	B70	3.2	Yes	M137
RY139	593157	5758154	B70	3.1	Yes	M169
RY140	593205	5758302	B70	3.0	Yes	M169
RY141	593072	5758350	B70	3.0	Yes	M148
RY142	593006	5758365	B70	3.1	Yes	M148
RY143	592934	5758524	B70	3.1	Yes	M152
RY144	592990	5758461	B70	3.1	Yes	M148
RY145	593024	5758454	B70	3.0	Yes	M148
RY146	593045	5758450	B70	3.0	Yes	M148
RY147	593062	5758448	B70	3.0	Yes	M148
RY148	593107	5758440	B70	3.0	Yes	M148
RY149	593115	5758478	B70	2.9	Yes	M148
RY150	593117	5758500	B70	2.9	Yes	M148
RY151	592960	5758650	B70	3.0	Yes	M152
RY152	592979	5758596	B70	3.0	Yes	M152
RY153	593017	5758584	B70	3.0	Yes	M152
RY154	593050	5758582	B70	3.0	Yes	M157
RY155	593103	5758568	B70	2.9	Yes	M157
RY156	593129	5758569	B70	2.9	Yes	M157
RY157	593130	5758607	B70	2.9	Yes	M157

Dwelling ID	Easting <sup>2</sup> [m]	Northing <sup>2</sup> [m]	Nearest Turbine	Distance from nearest turbine [km]	Within 5 km	Measurement at
RY158	593118	5758630	B70	2.9	Yes	M157
RY159A	593098	5758651	B70	2.9	Yes	M157
RY159B	593337	5758866	B70	2.6	Yes	M161
RY160	593133	5758700	B70	2.8	Yes	M157
RY161	593333	5758776	B70	2.6	Yes	M161
RY162	593207	5758736	B70	2.8	Yes	M161
RY163	593184	5758599	B70	2.8	Yes	M157
RY164	593181	5758563	B70	2.9	Yes	M157
RY165	593237	5758548	B70	2.8	Yes	M157
RY166	593359	5758589	B70	2.7	Yes	M161
RY167	593321	5758413	B70	2.8	Yes	M169
RY168	593288	5758278	B70	2.9	Yes	M169
RY169	593311	5758264	B70	2.9	Yes	M169
RY170	593455	5758282	B70	2.7	Yes	M169
RY171	593403	5758190	B70	2.8	Yes	M169
RY172	593878	5757761	B70	2.8	Yes	M172
RY173	594565	5757357	B70	2.7	Yes	M173
RY174	593034	5756607	B70	4.2	Yes	M174
RY175	592733	5756223	B70	4.7	Yes	M174
RY176	594033	5756300	B70	3.9	Yes	M176
RY177	595587	5756254	B10	3.2	Yes	M89
RY178	599317	5754021	B76	4.8	Yes	M96
RY179	603554	5758726	B8	4.0	Yes	M20
RY180	598695	5767846	B43	3.3	Yes	M34
RY181	597785	5769449	B43	4.9	Yes	M181
RY182	591967	5765263	B48	4.8	Yes	M70
RY183	591870	5765034	B48	4.9	Yes	M70
RY184	592931	5759008	B70	2.9	Yes	M184
RY185	593141	5757922	B70	3.2	Yes	M185
RY186	592827	5758229	B70	3.3	Yes	M187
RY187	593185	5758193	B70	3.0	Yes	M169
RY188	593271	5758748	B70	2.7	Yes	M161
RY189	604011	5762199	B70	8.6	No	M49
RY190	598201	5766338	B70	7.0	No	M33
RY192A	603286	5757247	B70	7.9	No	M36
RY192B	603868	5759611	B70	8.1	No	M50

Note 1: coordinates obtained from [14].

Note 2: coordinate system used is Zone 54M, AGD66 datum.

## APPENDIX C IDENTIFIED RADIO TRANSMITTERS AND AREA SERVED





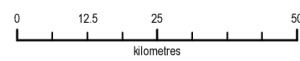
**Legend**

-  Coastline; State Borders
-  Licence Area
-  Principal Roads; Cities (Medium & Large)
-  Secondary Roads; Towns, Cities (Small)
-  Minor Roads; Localities

**WARRNAMBOOL RA1**

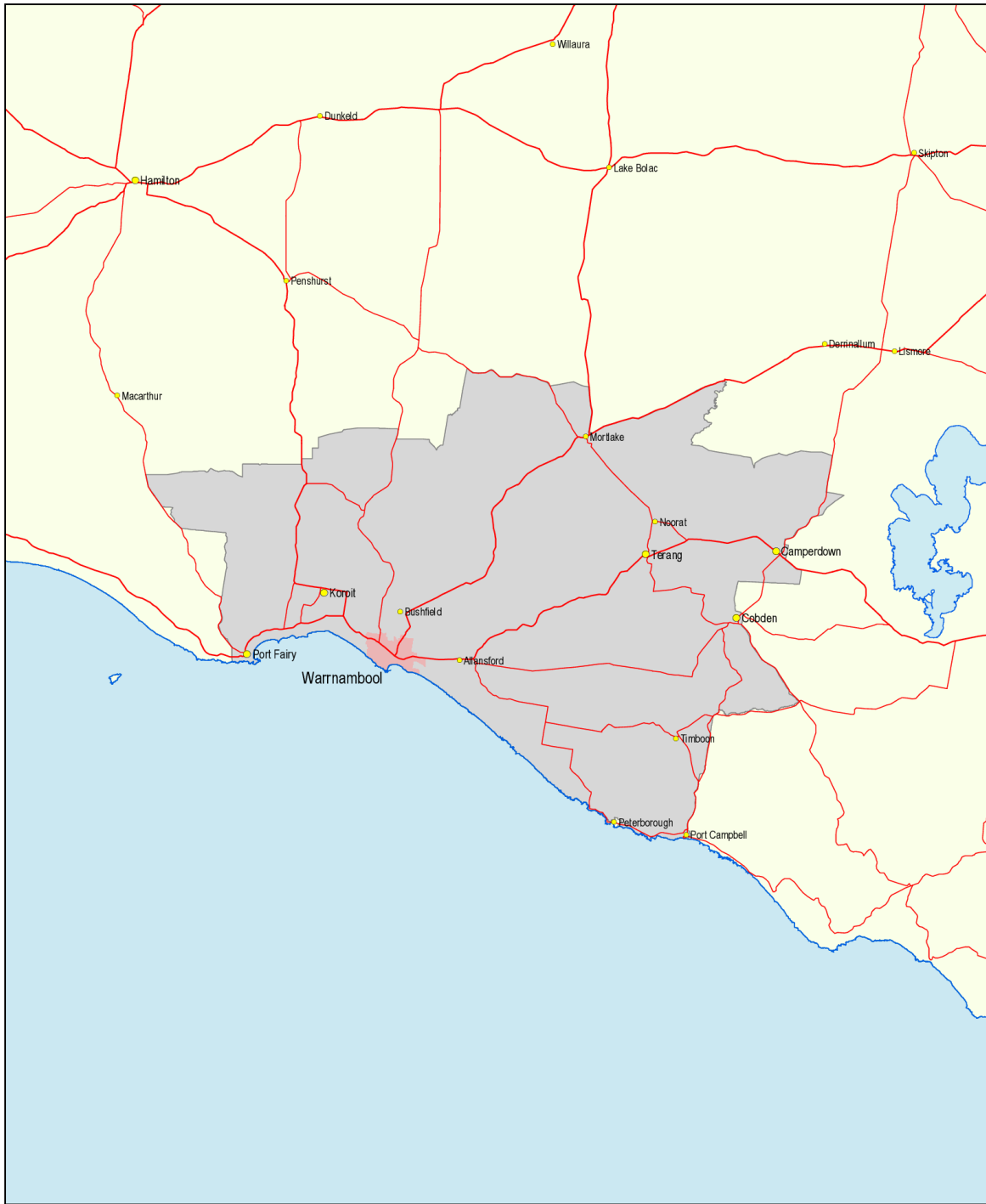
Area ID: 441

Determined: 22 March 2018 (2001 Census)



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21/12/2018 1:32:33 pm



**Legend**

-  Coastline; State Borders
-  Licence Area
-  Principal Roads; Cities (Medium & Large)
-  Secondary Roads; Towns, Cities (Small)
-  Minor Roads; Localities

**WARRNAMBOOL RA2**

Area ID: 465  
Determined: 22 March 2018 (2001 Census)



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21/12/2018 1:33:08 pm





**VICTORIA COMMUNITY RA1**

Area ID: 1212

Determined: 22 March 2018 (2001 Census)



**Legend**

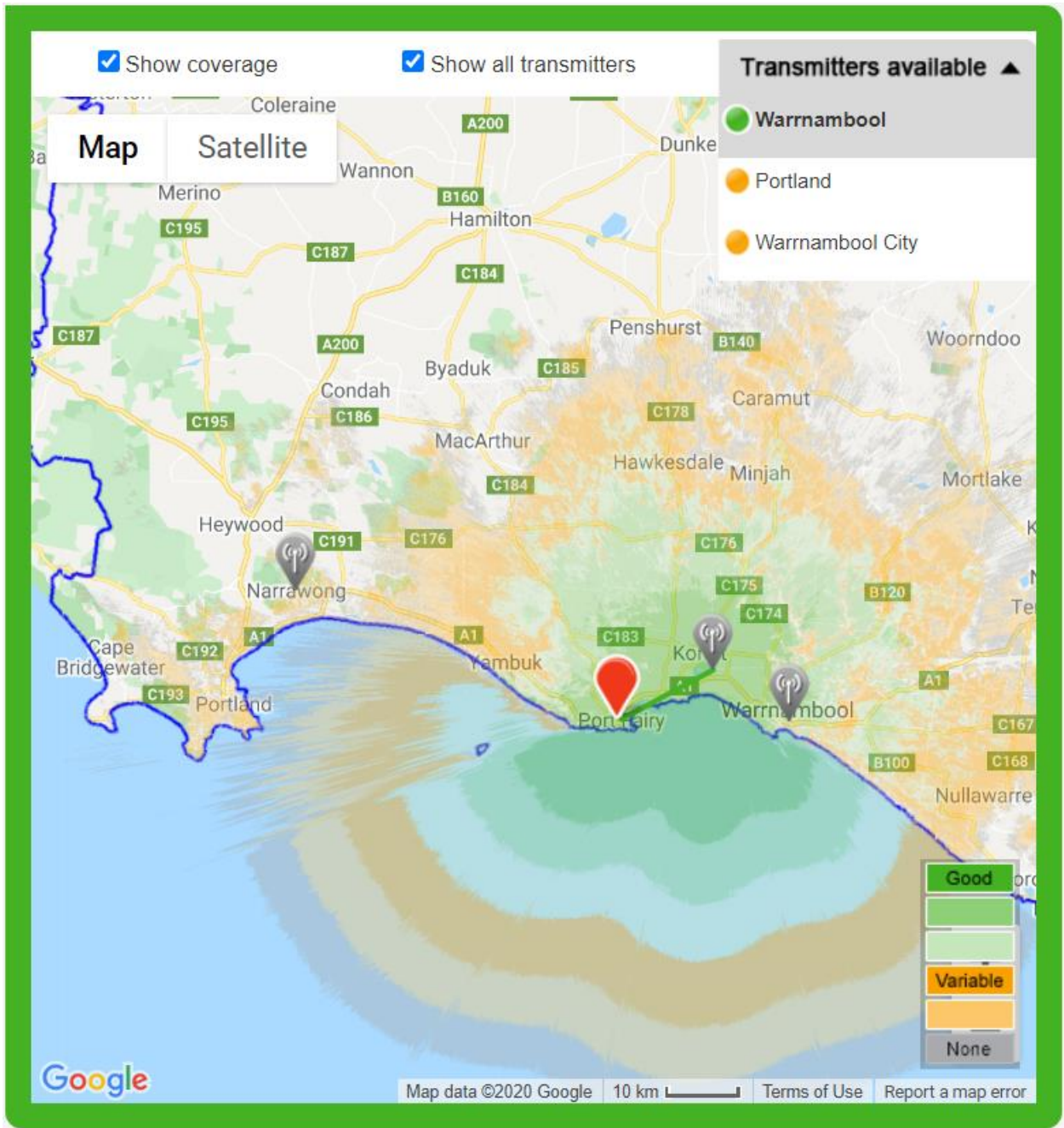
- Coastline; State Borders
- Licence Area
- Principal Roads; Cities (Medium, Large)
- Secondary Roads; Towns, Cities (Small)
- Minor Roads; Localities



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21/12/2018 1:33:48 pm




## APPENDIX D IDENTIFIED TELEVISION TRANSMITTERS AND AREA SERVED



## APPENDIX E CALIBRATION CERTIFICATES

Accredited for compliance with ISO/IEC 17025 - Calibration

NATA Accredited  
Laboratory Number: 116  
Site Number: 109



**Calibration Report** Report 21.1017871

---

**Instrument Details**

Description:	Spectrum Analyser	Customer:	TR PTY LTD - MELBOURNE
Manufacturer:	Anritsu		18 JOSEPH STREET
Model:	MS2712E		BLACKBURN NORTH VIC 3130
Serial Number:	1532006		AUSTRALIA
Asset Number:	202459		
Cal ID Number:	0002016783	Customer Reference:	PO076753

---

**Test Details and Results**

Calibration Date:	18 February 2021	Test Location:	Sydney
Calibration Due Date:	18 February 2022	Temperature:	23.2 °C
Issue Date:	19 February 2021	Relative Humidity:	60 %

Calibration Procedure: CP980628

Specification: Manufacturer's Specification

As Found Condition: All measurements fall within the tolerance limits specified in the above specification reference. Please refer to Attachment A: Test Results for details.

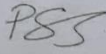
As Left Condition: All measurements fall within the tolerance limits specified in the above specification reference. Please refer to Attachment A: Test Results for details.


Traceability: The results of the tests, calibrations and / or measurements included in this document are traceable to Australian / National Standards, or a physical constant.

Confidence Limit: The reported uncertainties in this report have been calculated in accordance with principles in the ISO Guide to the Expression of Uncertainty in Measurement and are given as an interval estimate at approximately 95% confidence level. If not otherwise stated, a coverage factor k=2 was used to calculate these uncertainties with a corresponding 30 degrees of freedom. The uncertainties stated in this report apply at time of measurement only and take no account of any drift or other effects that may apply afterwards.

Attachment A: Test results (4 pages)

Testing Officer:   
Phillip Jiang

Approved Signatory:   
Denis Thomas

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TR Calibration Phone 1300 790 480 ABN: 29 118 022 549  
41 Enterprise Cct, Prestons, NSW 2170 info@trcalibration.com.au  
Adelaide | Brisbane | Darwin | Melbourne | Newcastle | Perth | Sydney | Townsville

Accredited for compliance with ISO/IEC 17025 - Calibration

NATA Accredited  
Laboratory Number: 116  
Site Number: 109



## Calibration Report

Report 21.1017871

### Notes

This document shall not be reproduced except in full, the results only relate to the instrument identified in this report.  
It is the user's responsibility to determine if the instrument identified in this report satisfies their requirements.

### Reference Standards

Description	Cal ID	Due Date	Report
Termination	450039	8 February 2022	20.1015583
Radio Frequency Power Divider	1039727	1 December 2021	20.1012006
Waveform Generator	1037035	1 September 2021	20.1006543
Attenuator Set	1039728	18 February 2021	20.30817PR
Power Sensor	1039714	19 January 2022	20.1015574
GPS Controlled Frequency Standard	1040263	1 January 2022	20.1015566
Signal Generator	1042680	24 September 2022	20.1001467

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NATA Accredited  
Laboratory Number: 116  
Site Number: 109



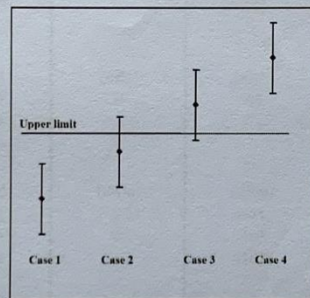
## Calibration Report

Report 21.1017871

### Conformance Decision Rule

Where the uncertainty of measurement makes compliance indeterminate, four 'Cases', as represented in Figure 1 below, describe the possible measurement outcomes in relation to the upper specification limit that may exist. Similar treatment is applied to the lower specification limit. With reference to these cases, the following Indeterminate Decision Rules (IDR) has been applied:

- Case 1:** Where the specification limit of the instrument is not breached by the measurement result plus the expanded uncertainty, a statement of compliance can be reported.
- Case 2:** Where the measurement result plus the expanded uncertainty overlaps the specification limit of the instrument, a statement of compliance can be reported.
- Case 3:** Where the measurement result minus the expanded uncertainty overlaps the specification limit, a statement of non-compliance must be reported.
- Case 4:** Where the specification limit is exceeded by the measurement result minus the expanded uncertainty, a statement of non-compliance must be reported.



Page 3 of 3

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41 Enterprise Cct, Prestons, NSW 2170

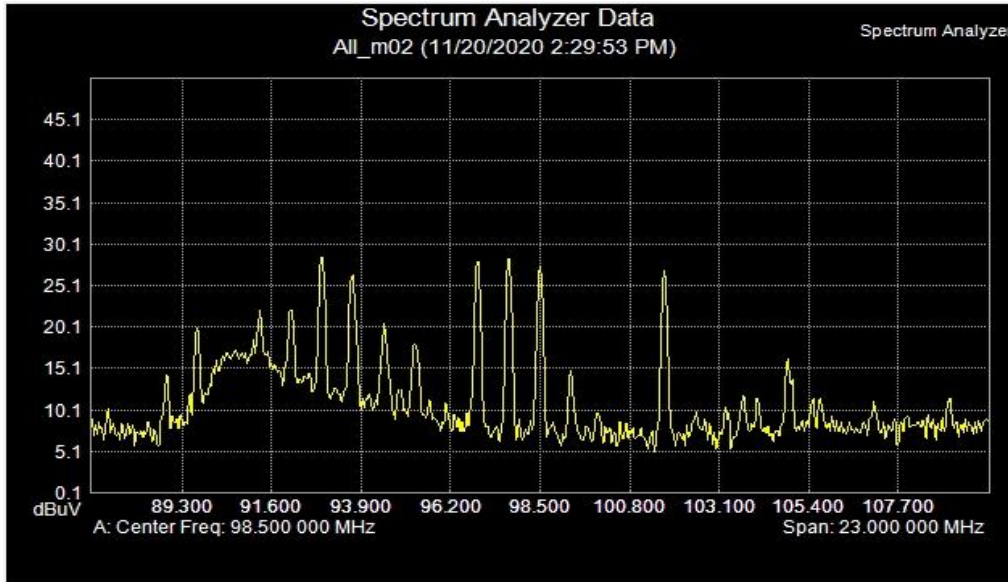
Phone 1300 790 480

ABN: 29 118 022 549  
info@trcalibration.com.au

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## APPENDIX F RADIO STRENGTH SIGNAL SURVEY RESULTS

### M02

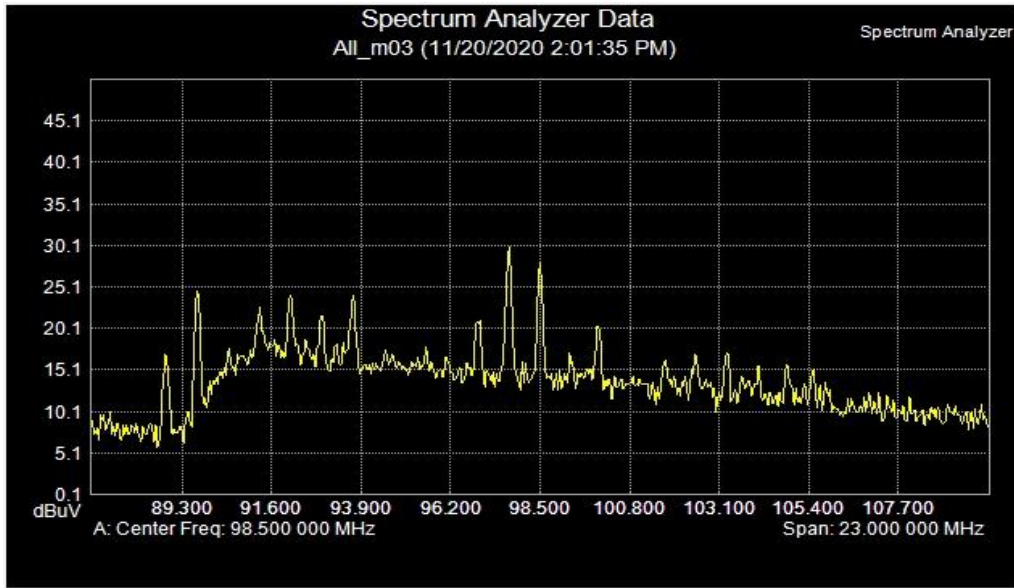


Measurement Parameters

Trace A data: Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 13
VBW	30.0 kHz	GPS Latitude	S 38 20 0
Detection	RMS	GPS Fix Time	11 20 2020 04 34 26

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.75	0.011
1	89.7	20.72	0.011
2	91.3	23.58	0.011
3	92.1	22.03	0.009
4	92.9	27.55	0.007
5	93.7	26.91	0.007
6	94.5	20.23	0.009
7	95.3	17.36	0.011
8	96.9	29.19	0.011
9	97.7	29.76	0.009
10	98.5	28.54	0.007
11	99.3	15.22	0.007
12	101.7	27.72	0.013
13	103.7	12.27	0.016
14	107.9	7.07	0.011

## M03

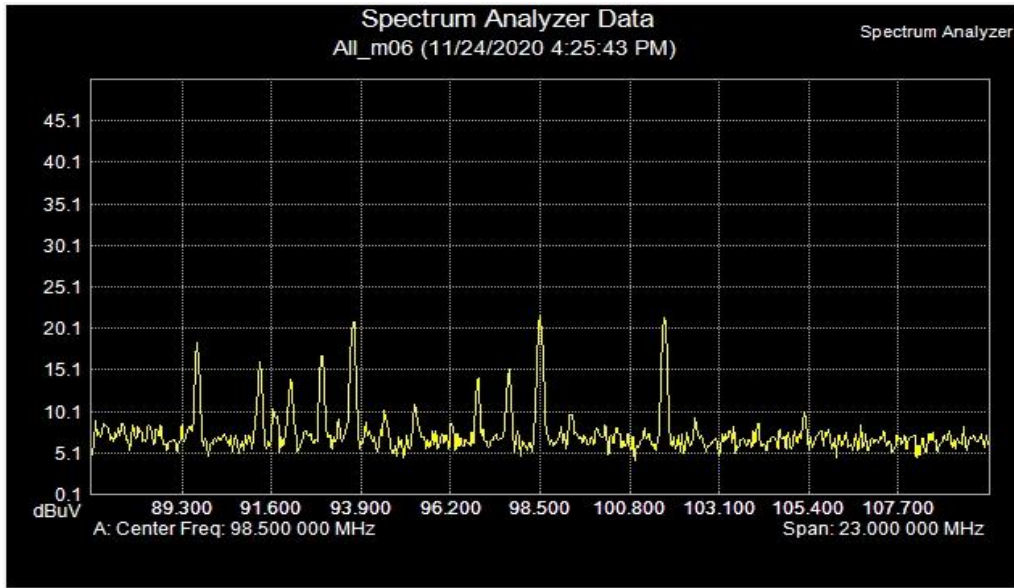


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 2
VBW	30.0 kHz	GPS Latitude	S 38 19 43
Detection	RMS	GPS Fix Time	11 20 2020 04 06 09

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.05	0.011
1	89.7	24.35	0.011
2	91.3	22.61	0.011
3	92.1	22.95	0.009
4	92.9	24.27	0.007
5	93.7	25.35	0.007
6	94.5	17.45	0.009
7	95.3	18.42	0.011
8	96.9	26.58	0.011
9	97.7	31.74	0.009
10	98.5	29.23	0.007
11	99.3	17.85	0.007
12	101.7	11.29	0.013
13	103.7	7.52	0.016
14	107.9	8.99	0.011

## M06



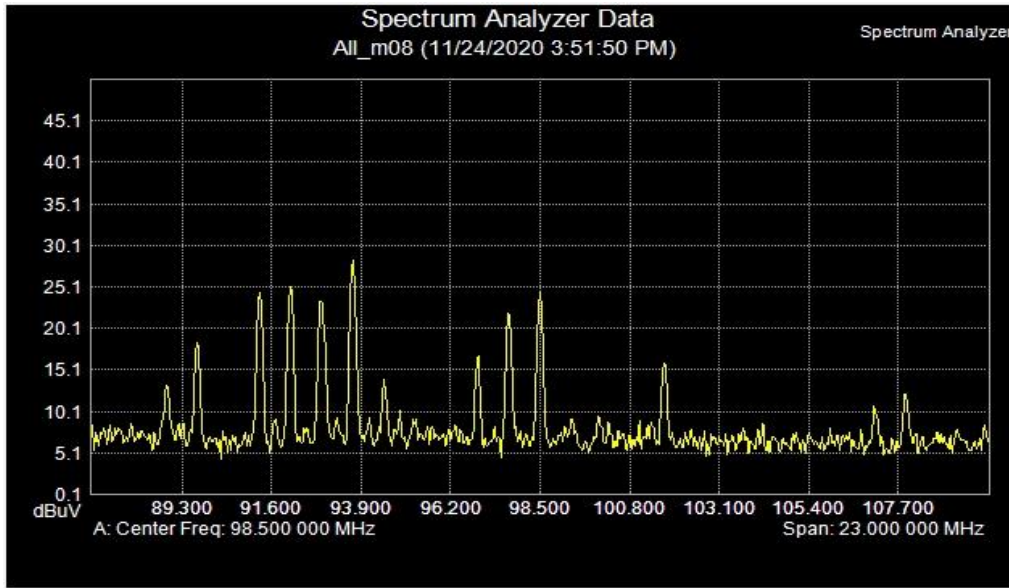
Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 6 56
VBW	30.0 kHz	GPS Latitude	S 38 19 34
Detection	RMS	GPS Fix Time	11 24 2020 05 26 03

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.44	0.011
1	89.7	22.26	0.011
2	91.3	21.43	0.011
3	92.1	20.63	0.009
4	92.9	17.08	0.007
5	93.7	22.28	0.007
6	94.5	14.72	0.009
7	95.3	16.78	0.011
8	96.9	17.73	0.011
9	97.7	11.9	0.009
10	98.5	20.09	0.007
11	99.3	13.05	0.007
12	101.7	16.06	0.013
13	103.7	8.52	0.016
14	107.9	7.53	0.011



# M08

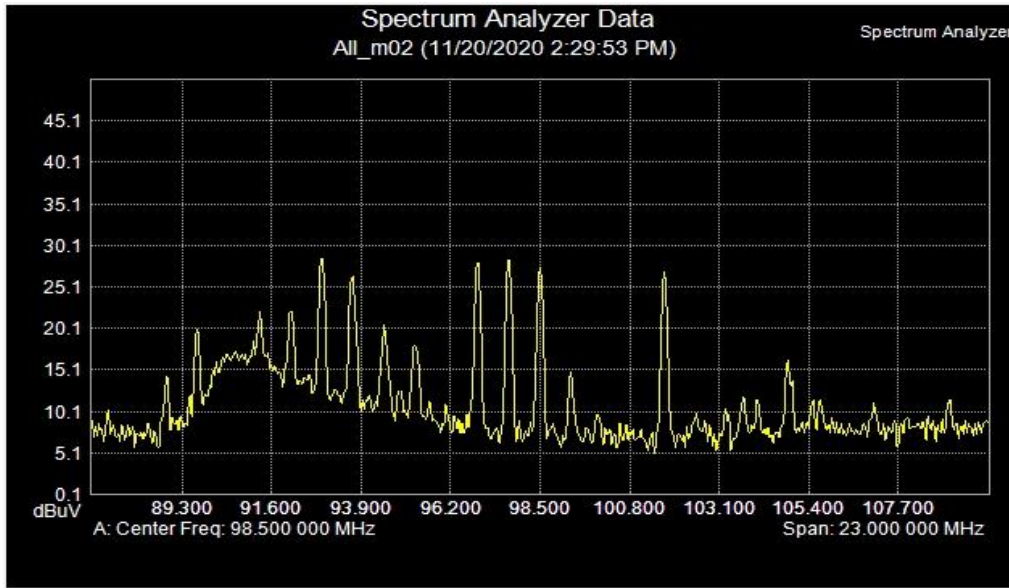


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 6 32
VBW	30.0 kHz	GPS Latitude	S 38 19 1
Detection	RMS	GPS Fix Time	11 24 2020 04 52 10

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	8.76	0.011
1	89.7	18.41	0.011
2	91.3	24.78	0.011
3	92.1	25.34	0.009
4	92.9	23.91	0.007
5	93.7	27.66	0.007
6	94.5	12.76	0.009
7	95.3	6.65	0.011
8	96.9	17.11	0.011
9	97.7	20.05	0.009
10	98.5	21.99	0.007
11	99.3	11.33	0.007
12	101.7	6.96	0.013
13	103.7	7.46	0.016
14	107.9	12.64	0.011

# M09

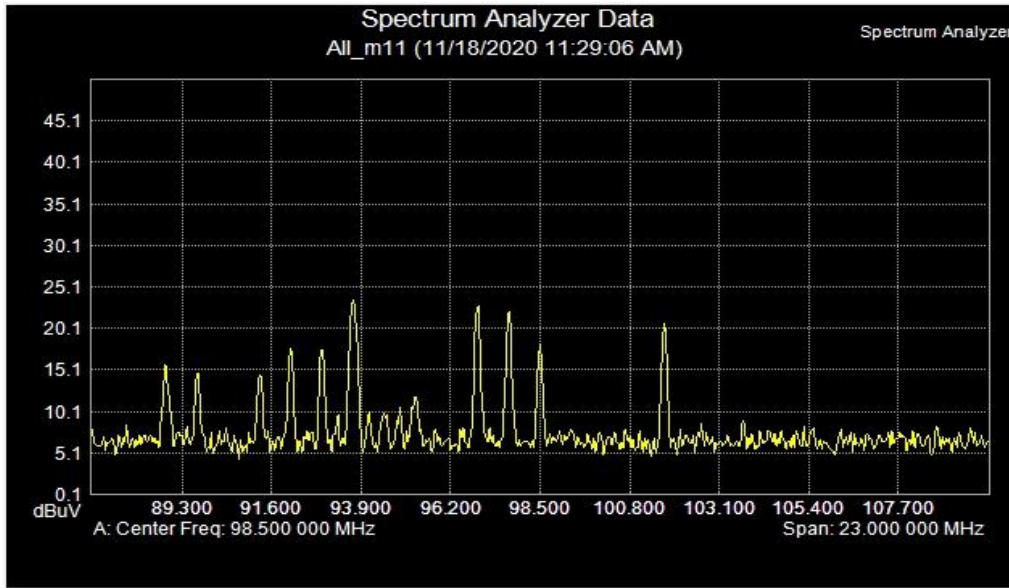


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 13
VBW	30.0 kHz	GPS Latitude	S 38 20 0
Detection	RMS	GPS Fix Time	11 20 2020 04 34 26

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.75	0.011
1	89.7	20.72	0.011
2	91.3	23.58	0.011
3	92.1	22.03	0.009
4	92.9	27.55	0.007
5	93.7	26.91	0.007
6	94.5	20.23	0.009
7	95.3	17.36	0.011
8	96.9	29.19	0.011
9	97.7	29.76	0.009
10	98.5	28.54	0.007
11	99.3	15.22	0.007
12	101.7	27.72	0.013
13	103.7	12.27	0.016
14	107.9	7.07	0.011

# M11

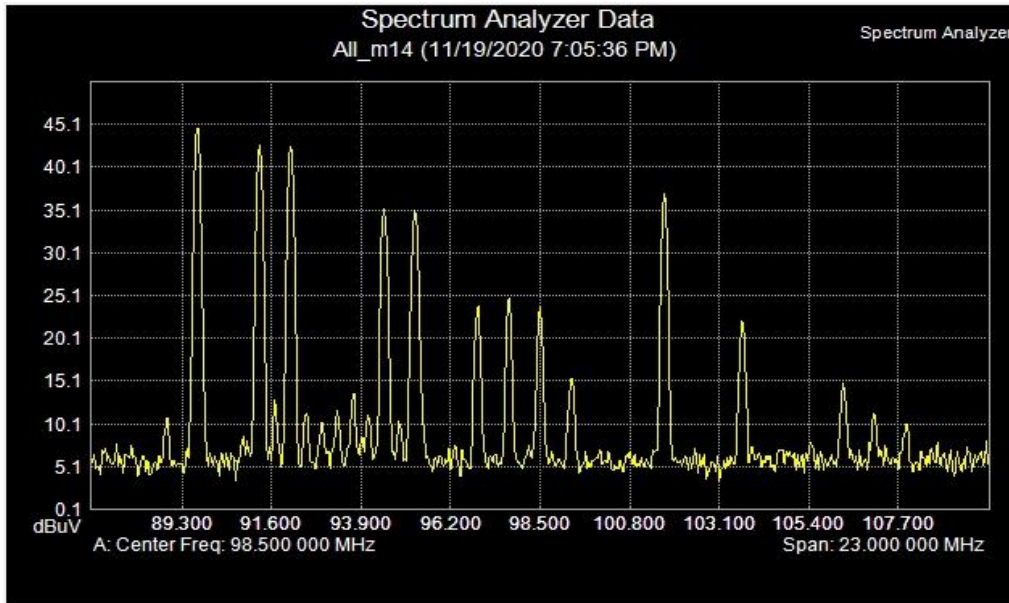


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 44
VBW	30.0 kHz	GPS Latitude	S 38 14 59
Detection	RMS	GPS Fix Time	11 18 2020 01 33 36

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	NaN	NaN
1	89.7	NaN	NaN
2	91.3	NaN	NaN
3	92.1	NaN	NaN
4	92.9	NaN	NaN
5	93.7	NaN	NaN
6	94.5	12.27	0.009
7	95.3	11.28	0.011
8	96.9	22.6	0.011
9	97.7	22.53	0.009
10	98.5	18.32	0.007
11	99.3	8.1	0.007
12	101.7	21.4	0.013
13	103.7	6.65	0.016
14	107.9	7.16	0.011

# M14

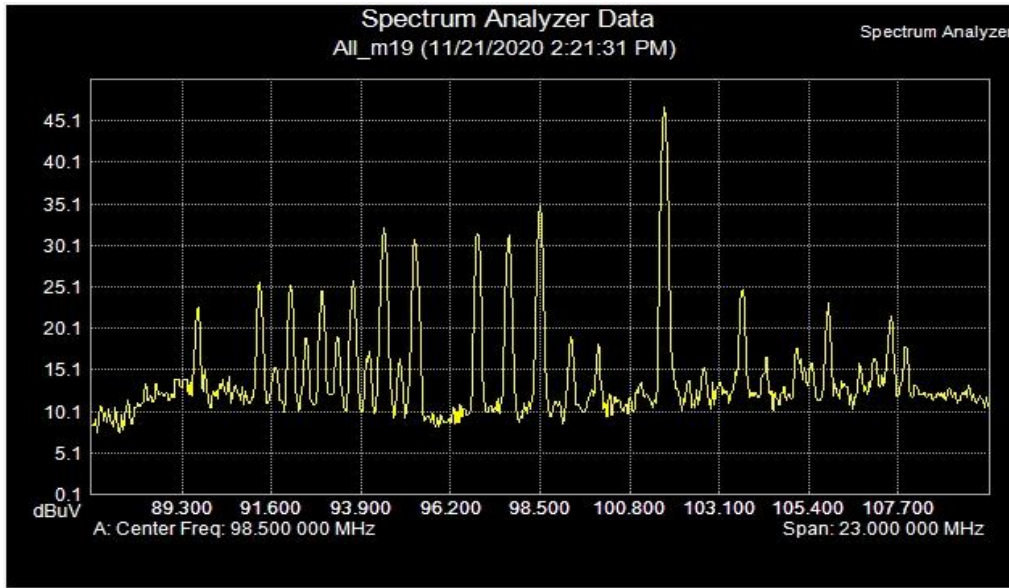


Measurement Parameters

Trace A data: Trace Average		Detection	
Trace Mode	2	Center Frequency	RMS
Preamp	Average	Start Frequency	98.500 000 MHz
Min Sweep Time	OFF	Stop Frequency	87.000 000 MHz
Reference Level Offset	0.149 S	Frequency Span	110.000 000 MHz
Input Attenuation	0 dB	Reference Level	23.000 000 MHz
RBW	100.0 kHz	Scale	50.101 dBuV
VBW	30.0 kHz		5.0 dBuV/div

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.96	0.011
1	89.7	45.47	0.011
2	91.3	44.04	0.011
3	92.1	43.74	0.009
4	92.9	6.33	0.007
5	93.7	13.97	0.007
6	94.5	38.93	0.009
7	95.3	36.93	0.011
8	96.9	20.77	0.011
9	97.7	20.14	0.009
10	98.5	22.37	0.007
11	99.3	13.01	0.007
12	101.7	40.04	0.013
13	103.7	24.24	0.016
14	107.9	11.93	0.011

# M19

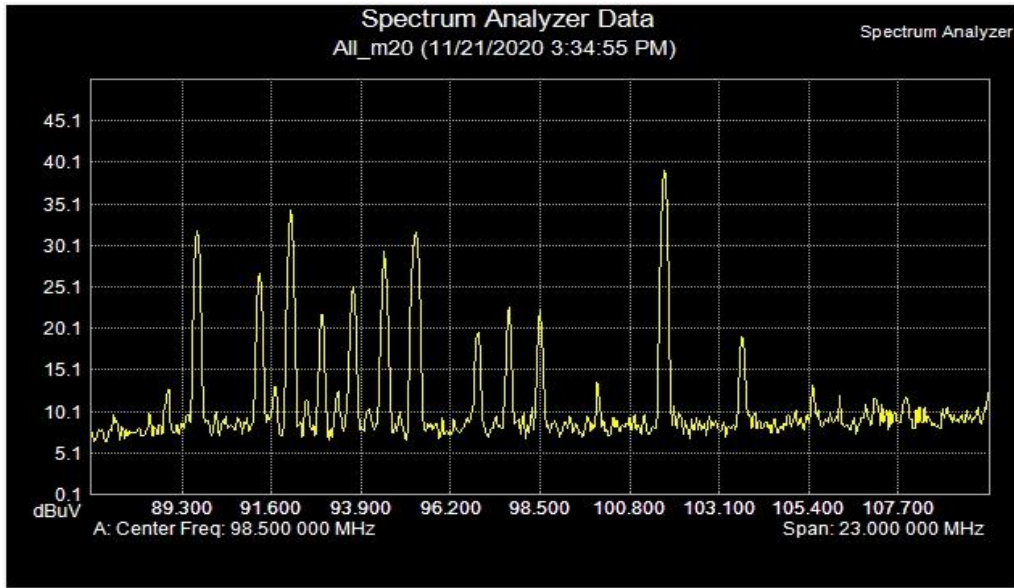


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 11 15
VBW	30.0 kHz	GPS Latitude	S 38 20 9
Detection	RMS	GPS Fix Time	11 21 2020 03 21 48

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.74	0.011
1	89.7	14.49	0.011
2	91.3	25.31	0.011
3	92.1	26.6	0.009
4	92.9	23.72	0.007
5	93.7	22.05	0.007
6	94.5	30.64	0.009
7	95.3	29.86	0.011
8	96.9	31.36	0.011
9	97.7	30.75	0.009
10	98.5	34.83	0.007
11	99.3	17.13	0.007
12	101.7	47.1	0.013
13	103.7	25.05	0.016
14	107.9	16.86	0.011

## M20

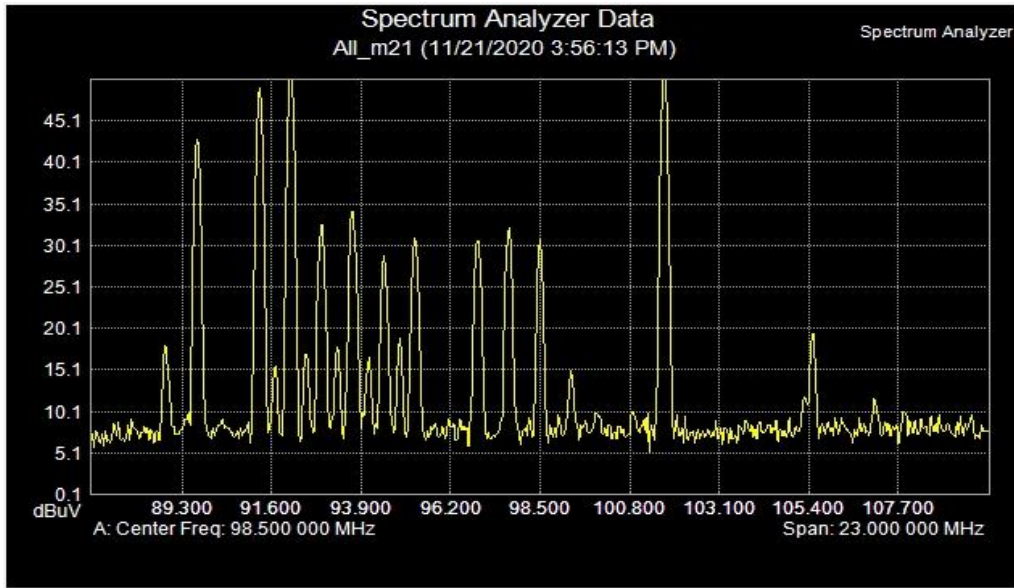


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 11 3
VBW	30.0 kHz	GPS Latitude	S 38 18 49
Detection	RMS	GPS Fix Time	11 21 2020 04 35 12

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	8.82	0.011
1	89.7	33.82	0.011
2	91.3	31.97	0.011
3	92.1	36.44	0.009
4	92.9	22.82	0.007
5	93.7	26.7	0.007
6	94.5	30.8	0.009
7	95.3	31.69	0.011
8	96.9	19.91	0.011
9	97.7	23.11	0.009
10	98.5	24.14	0.007
11	99.3	8.87	0.007
12	101.7	40.09	0.013
13	103.7	18.56	0.016
14	107.9	11.26	0.011

## M21

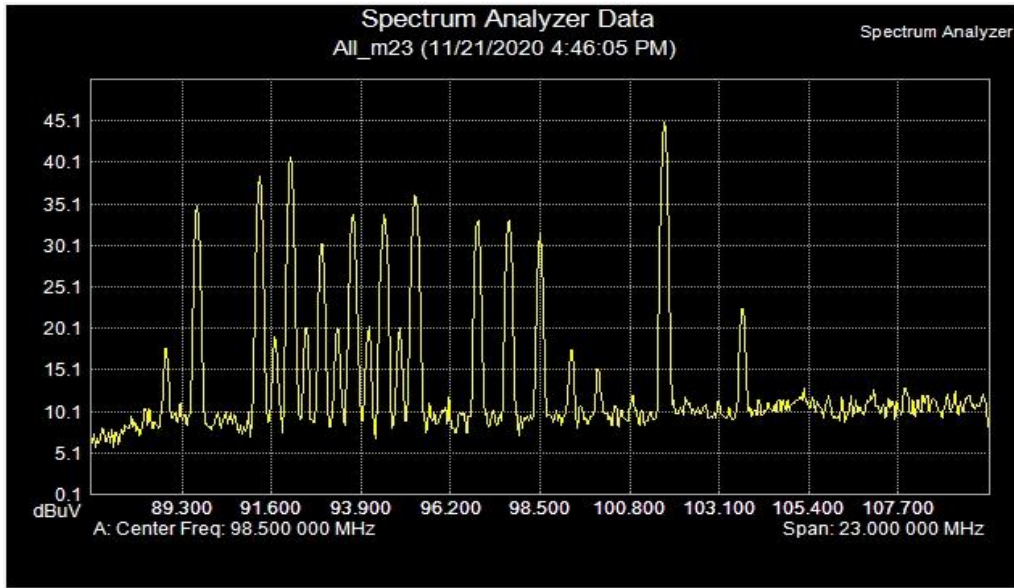


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 10 38
VBW	30.0 kHz	GPS Latitude	S 38 18 7
Detection	RMS	GPS Fix Time	11 21 2020 04 56 30

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.17	0.011
1	89.7	42.78	0.011
2	91.3	48.82	0.011
3	92.1	50.77	0.009
4	92.9	33.33	0.007
5	93.7	35.16	0.007
6	94.5	28.4	0.009
7	95.3	31.91	0.011
8	96.9	30.86	0.011
9	97.7	31.67	0.009
10	98.5	30.43	0.007
11	99.3	14.37	0.007
12	101.7	52.49	0.013
13	103.7	7.81	0.016
14	107.9	9.15	0.011

## M23



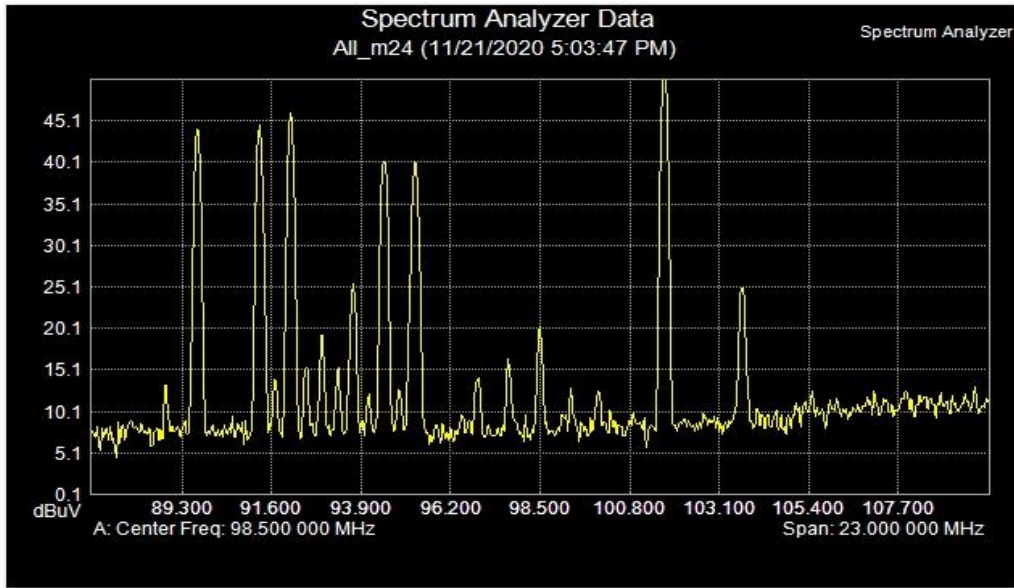
Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 10 10
VBW	30.0 kHz	GPS Latitude	S 38 17 48
Detection	RMS	GPS Fix Time	11 21 2020 05 46 22

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.43	0.011
1	89.7	34.94	0.011
2	91.3	38.38	0.011
3	92.1	40.54	0.009
4	92.9	29.92	0.007
5	93.7	33.36	0.007
6	94.5	32.7	0.009
7	95.3	34.73	0.011
8	96.9	33.18	0.011
9	97.7	32.4	0.009
10	98.5	30.89	0.007
11	99.3	17.65	0.007
12	101.7	44.16	0.013
13	103.7	20.18	0.016
14	107.9	11.06	0.011



## M24

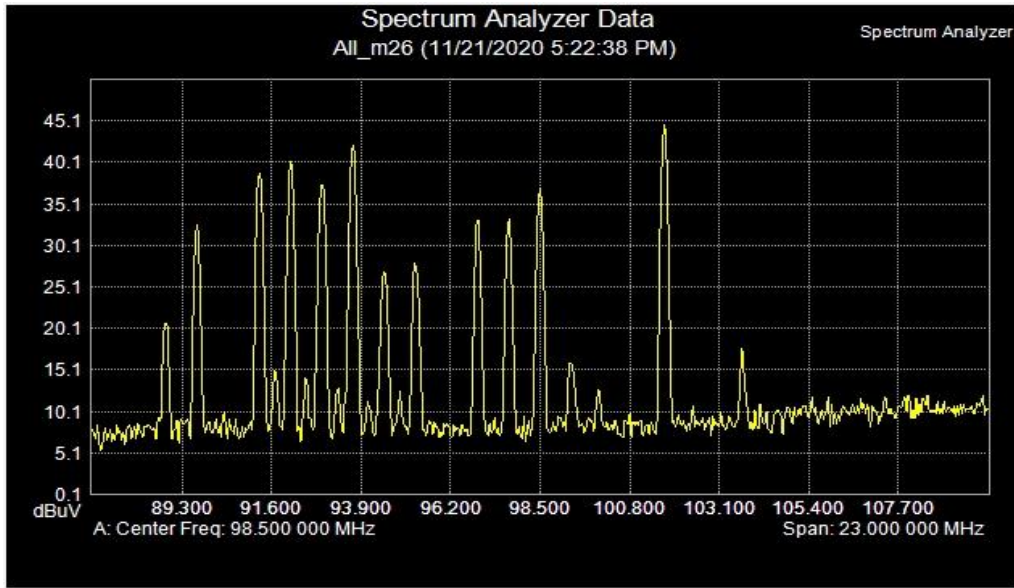


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 9 43
VBW	30.0 kHz	GPS Latitude	S 38 17 28
Detection	RMS	GPS Fix Time	11 21 2020 06 04 03

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.88	0.011
1	89.7	44.45	0.011
2	91.3	44.65	0.011
3	92.1	46.25	0.009
4	92.9	20.26	0.007
5	93.7	25.63	0.007
6	94.5	40.61	0.009
7	95.3	39.71	0.011
8	96.9	15.39	0.011
9	97.7	17.36	0.009
10	98.5	20.13	0.007
11	99.3	11.28	0.007
12	101.7	52.17	0.013
13	103.7	24.62	0.016
14	107.9	13.67	0.011

## M26

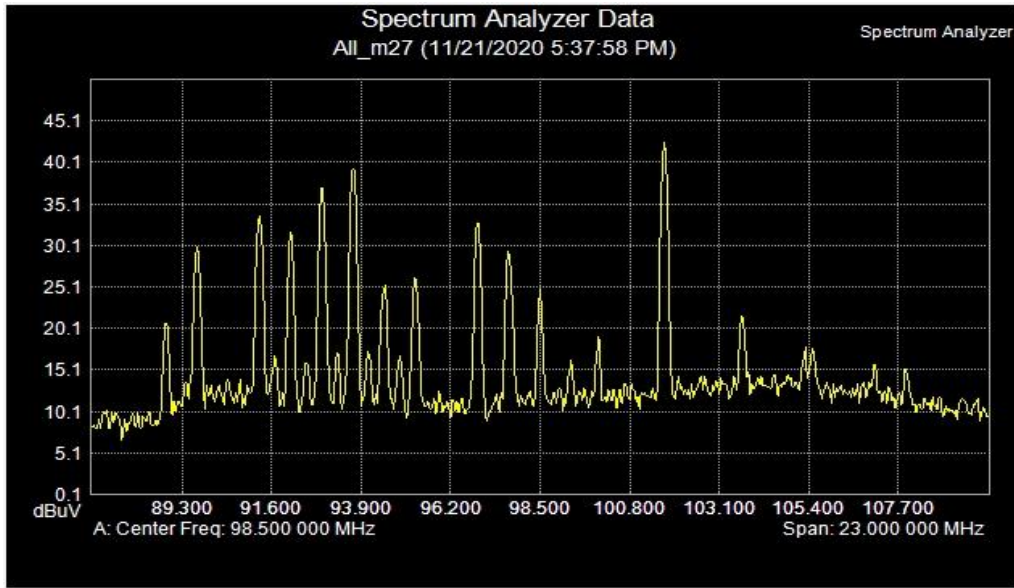


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 9.4
VBW	30.0 kHz	GPS Latitude	S 38 16 51
Detection	RMS	GPS Fix Time	11 21 2020 06 22 54

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	8.02	0.011
1	89.7	32.45	0.011
2	91.3	38.8	0.011
3	92.1	40.41	0.009
4	92.9	37.67	0.007
5	93.7	41.91	0.007
6	94.5	27.41	0.009
7	95.3	28.18	0.011
8	96.9	33.07	0.011
9	97.7	33.22	0.009
10	98.5	37.19	0.007
11	99.3	16.71	0.007
12	101.7	44.75	0.013
13	103.7	16.1	0.016
14	107.9	11.73	0.011

## M27

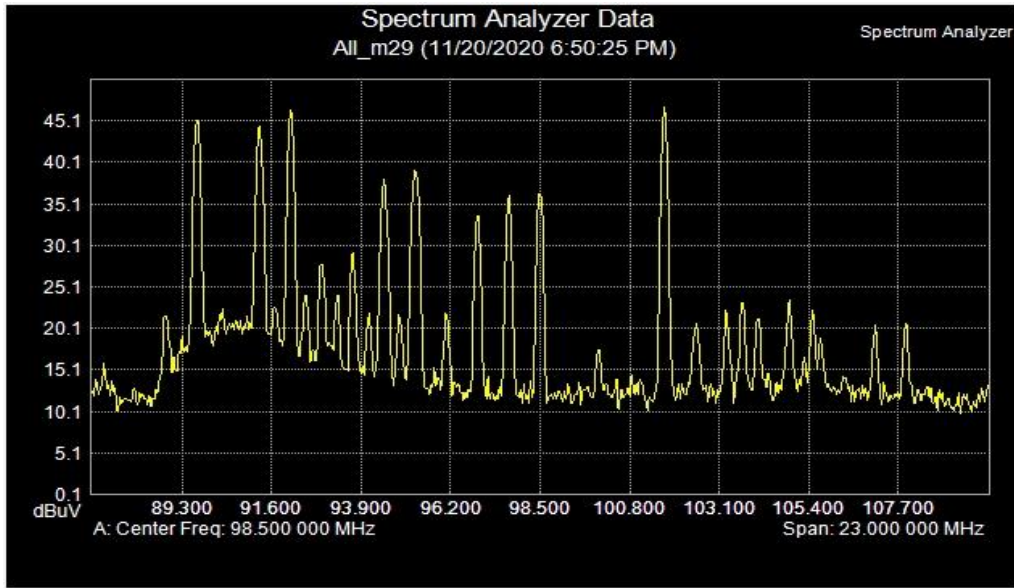


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 8 47
VBW	30.0 kHz	GPS Latitude	S 38 16 27
Detection	RMS	GPS Fix Time	11 21 2020 06 38 14

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.15	0.011
1	89.7	30.91	0.011
2	91.3	34.24	0.011
3	92.1	32.55	0.009
4	92.9	37	0.007
5	93.7	39.76	0.007
6	94.5	25.72	0.009
7	95.3	26.31	0.011
8	96.9	32.92	0.011
9	97.7	28.96	0.009
10	98.5	23.8	0.007
11	99.3	14.72	0.007
12	101.7	42.69	0.013
13	103.7	21.25	0.016
14	107.9	15.79	0.011

## M29

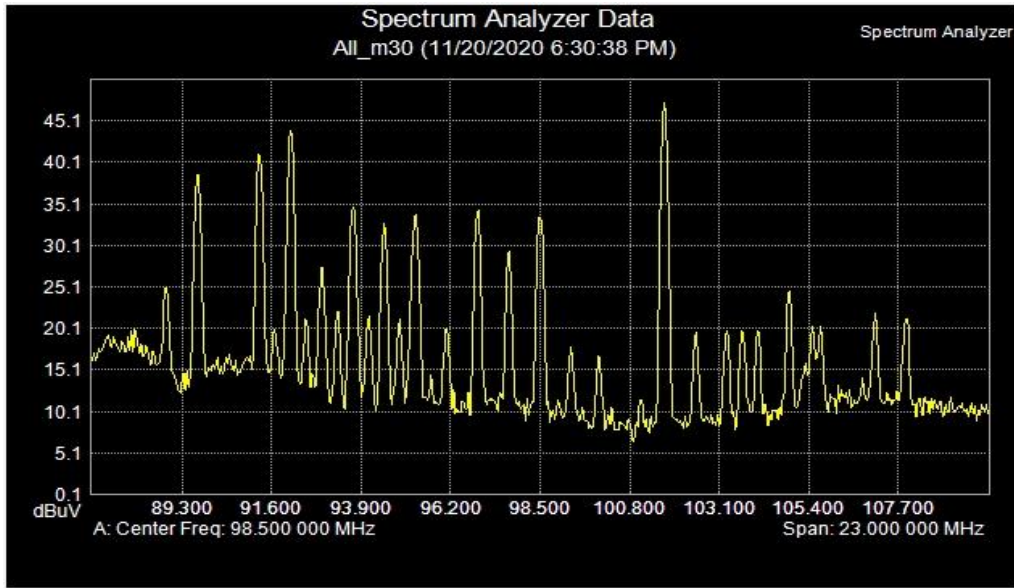


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 8 28
VBW	30.0 kHz	GPS Latitude	S 38 15 54
Detection	RMS	GPS Fix Time	11 20 2020 08 54 58

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	12.26	0.011
1	89.7	45.47	0.011
2	91.3	45.22	0.011
3	92.1	46.52	0.009
4	92.9	27.78	0.007
5	93.7	29.18	0.007
6	94.5	39.15	0.009
7	95.3	38.99	0.011
8	96.9	32.51	0.011
9	97.7	35.84	0.009
10	98.5	36.41	0.007
11	99.3	12.55	0.007
12	101.7	46.77	0.013
13	103.7	23.32	0.016
14	107.9	18.62	0.011

## M30

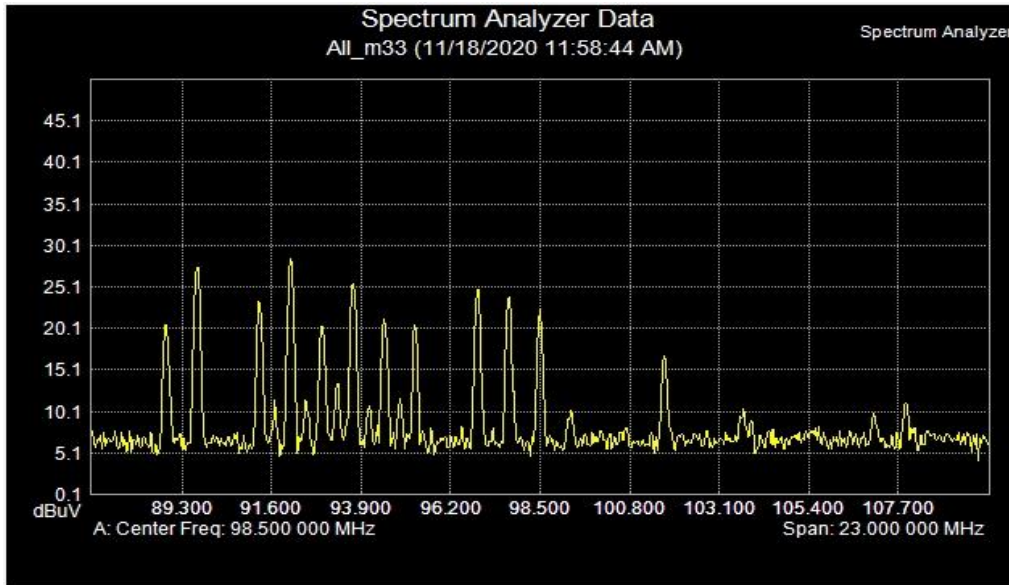


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 8 29
VBW	30.0 kHz	GPS Latitude	S 38 15 34
Detection	RMS	GPS Fix Time	11 20 2020 08 35 11

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	11.47	0.011
1	89.7	38.31	0.011
2	91.3	42.16	0.011
3	92.1	44.51	0.009
4	92.9	27.89	0.007
5	93.7	33.57	0.007
6	94.5	32.66	0.009
7	95.3	33.72	0.011
8	96.9	34.41	0.011
9	97.7	30.38	0.009
10	98.5	34.3	0.007
11	99.3	19.44	0.007
12	101.7	47.99	0.013
13	103.7	19.77	0.016
14	107.9	17.21	0.011

### M33

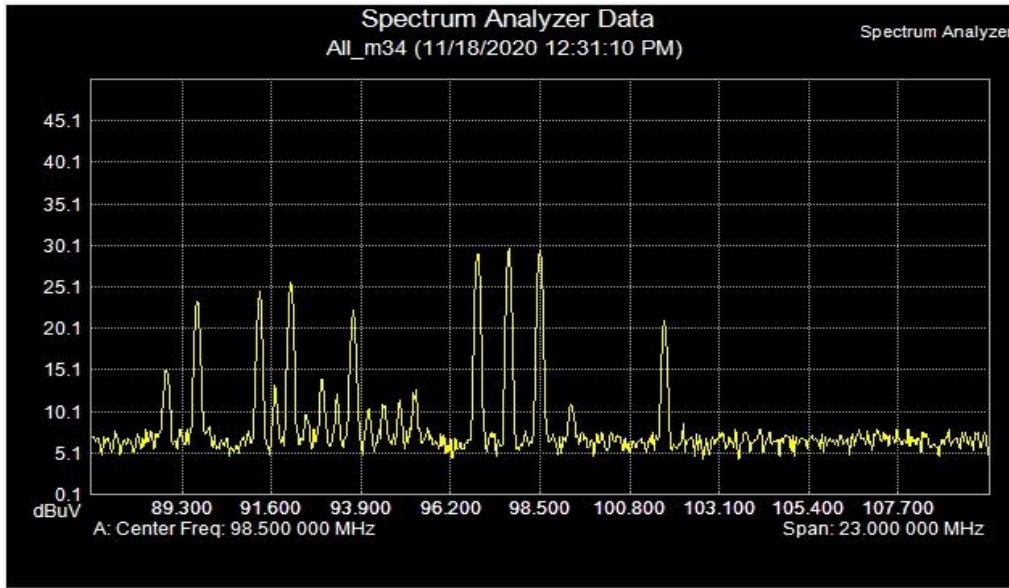


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 42
VBW	30.0 kHz	GPS Latitude	S 38 14 42
Detection	RMS	GPS Fix Time	11 18 2020 02 03 14

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	8.53	0.011
1	89.7	28.45	0.011
2	91.3	22.78	0.011
3	92.1	28.94	0.009
4	92.9	20.64	0.007
5	93.7	24.8	0.007
6	94.5	20.26	0.009
7	95.3	18.4	0.011
8	96.9	24.6	0.011
9	97.7	24.15	0.009
10	98.5	21.83	0.007
11	99.3	10.56	0.007
12	101.7	15.01	0.013
13	103.7	9.75	0.016
14	107.9	9.26	0.011

# M34

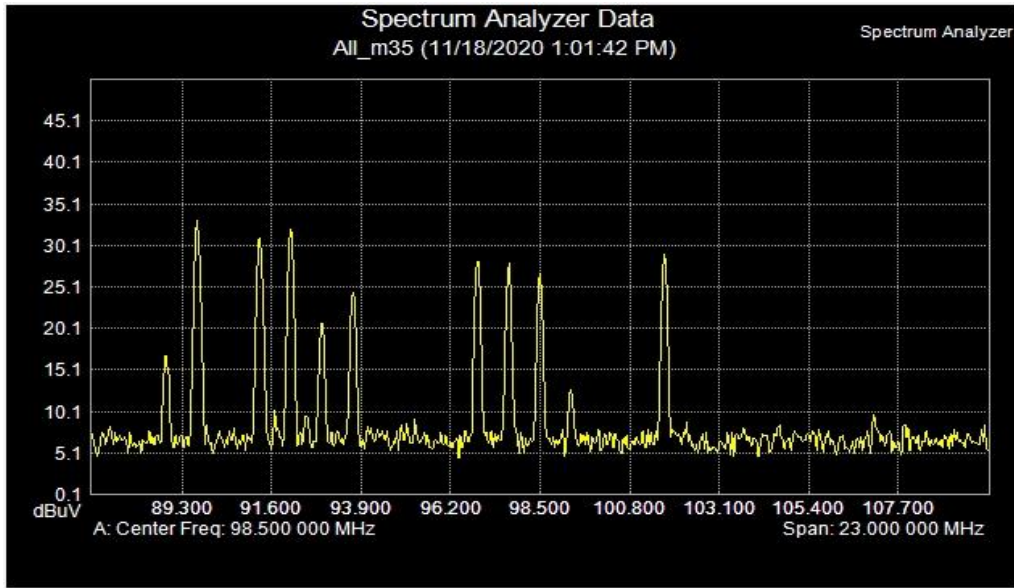


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 35
VBW	30.0 kHz	GPS Latitude	S 38 13 53
Detection	RMS	GPS Fix Time	11 18 2020 02 35 40

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.78	0.011
1	89.7	24.47	0.011
2	91.3	25.75	0.011
3	92.1	26.86	0.009
4	92.9	11.93	0.007
5	93.7	22.25	0.007
6	94.5	11.97	0.009
7	95.3	12.14	0.011
8	96.9	29.45	0.011
9	97.7	29.23	0.009
10	98.5	29.08	0.007
11	99.3	12.46	0.007
12	101.7	21.96	0.013
13	103.7	6.72	0.016
14	107.9	7.27	0.011

## M35



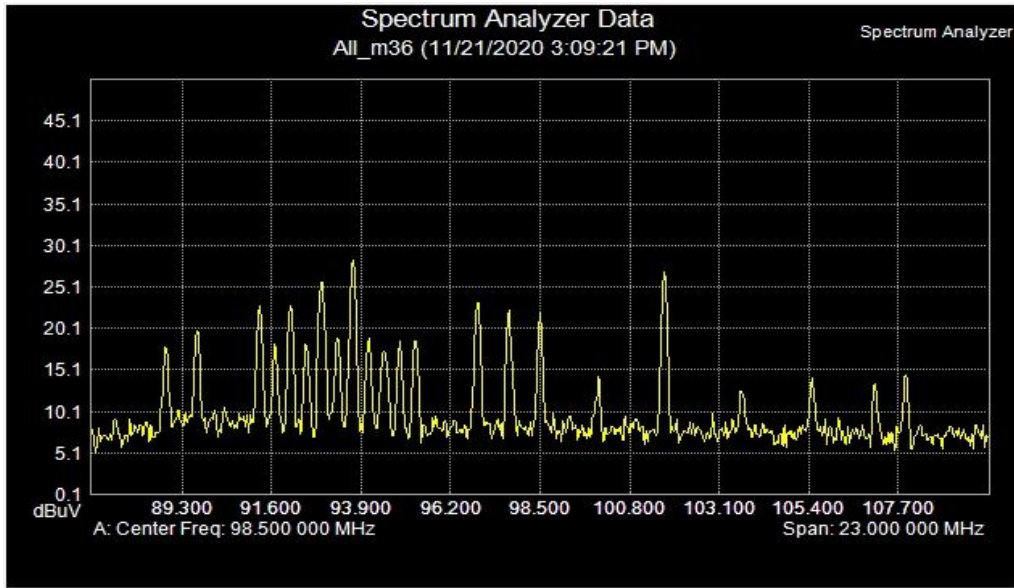
Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 28
VBW	30.0 kHz	GPS Latitude	S 38 13 38
Detection	RMS	GPS Fix Time	11 18 2020 03 06 12

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.22	0.011
1	89.7	32.74	0.011
2	91.3	32.21	0.011
3	92.1	32.12	0.009
4	92.9	21.03	0.007
5	93.7	24.07	0.007
6	94.5	8.58	0.009
7	95.3	6.34	0.011
8	96.9	28.34	0.011
9	97.7	28.01	0.009
10	98.5	26.96	0.007
11	99.3	12.48	0.007
12	101.7	29.1	0.013
13	103.7	6.67	0.016
14	107.9	7.38	0.011



## M36

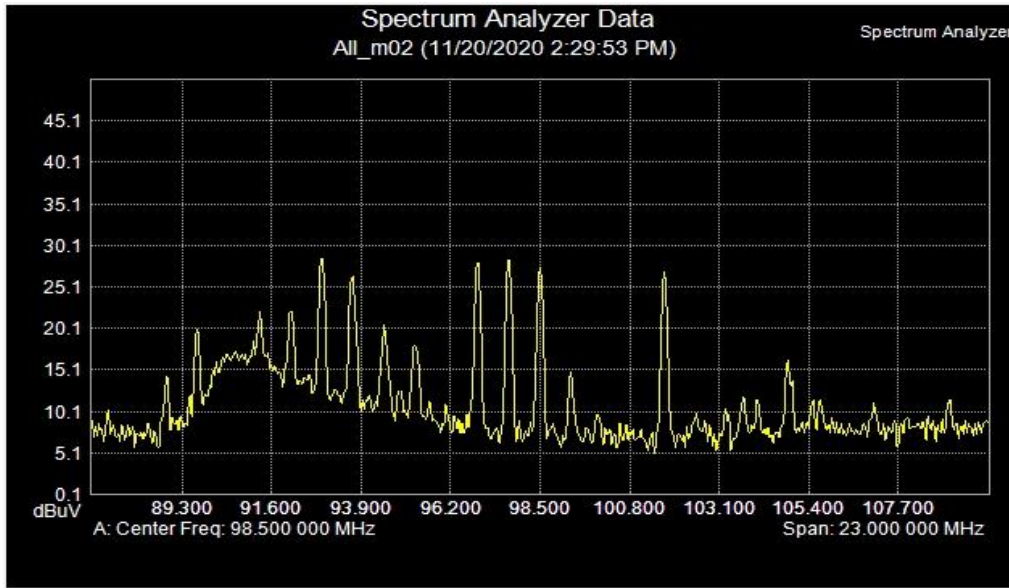


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 11 11
VBW	30.0 kHz	GPS Latitude	S 38 19 39
Detection	RMS	GPS Fix Time	11 21 2020 04 09 38

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.07	0.011
1	89.7	21.36	0.011
2	91.3	22.29	0.011
3	92.1	23.32	0.009
4	92.9	25.72	0.007
5	93.7	28.66	0.007
6	94.5	17.9	0.009
7	95.3	18.54	0.011
8	96.9	23.67	0.011
9	97.7	22.12	0.009
10	98.5	21.38	0.007
11	99.3	9.41	0.007
12	101.7	26.55	0.013
13	103.7	13.73	0.016
14	107.9	15.94	0.011

# M38

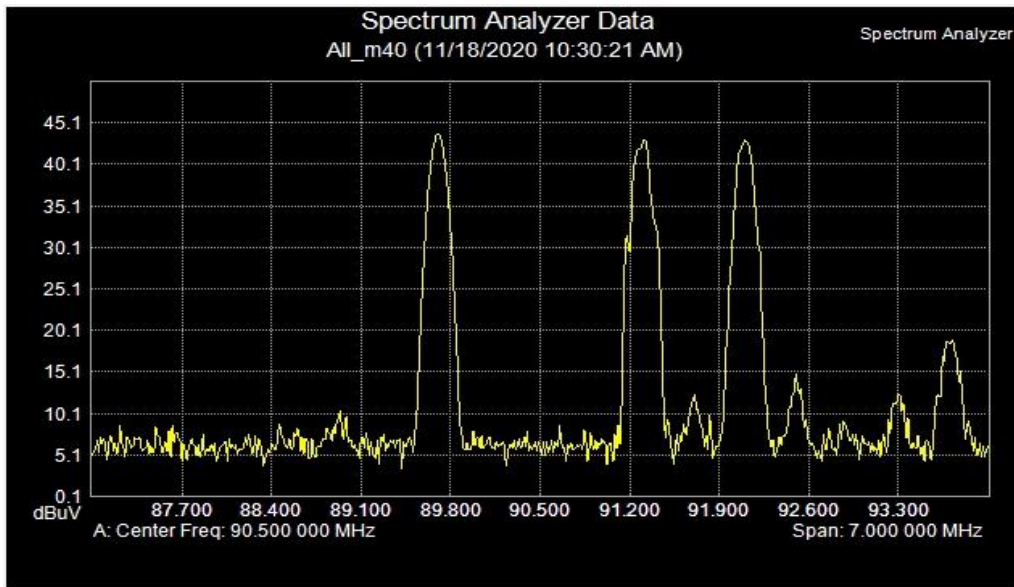


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 13
VBW	30.0 kHz	GPS Latitude	S 38 20 0
Detection	RMS	GPS Fix Time	11 20 2020 04 34 26

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.75	0.011
1	89.7	20.72	0.011
2	91.3	23.58	0.011
3	92.1	22.03	0.009
4	92.9	27.55	0.007
5	93.7	26.91	0.007
6	94.5	20.23	0.009
7	95.3	17.36	0.011
8	96.9	29.19	0.011
9	97.7	29.76	0.009
10	98.5	28.54	0.007
11	99.3	15.22	0.007
12	101.7	27.72	0.013
13	103.7	12.27	0.016
14	107.9	7.07	0.011

## M40

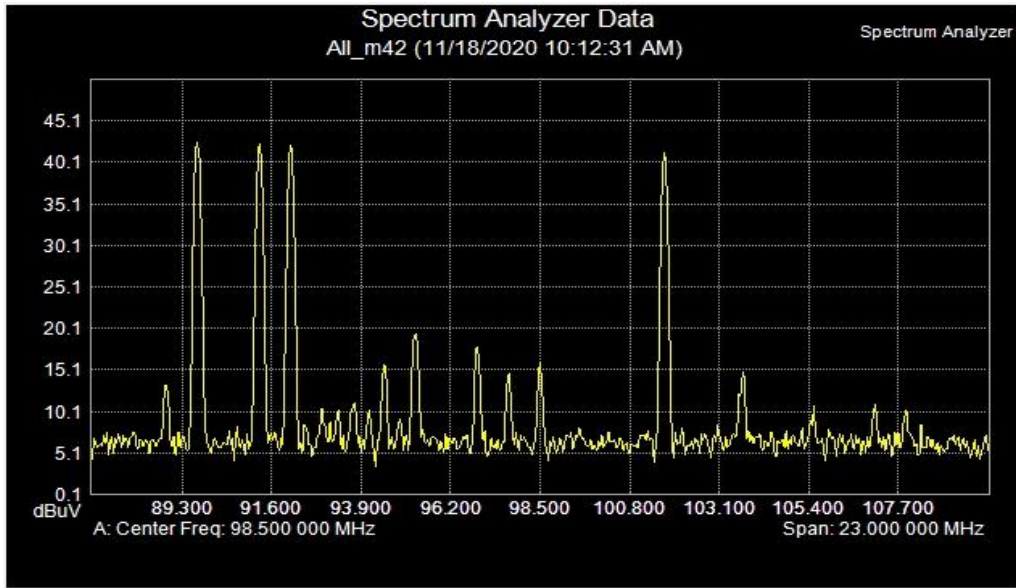


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	90.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	94.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	7.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 9 49
VBW	30.0 kHz	GPS Latitude	S 38 15 3
Detection	RMS	GPS Fix Time	11 18 2020 00 34 52

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.3	0.011
1	89.7	41.83	0.011
2	91.3	40.89	0.011
3	92.1	40.75	0.009
4	92.9	5.35	0.007
5	93.7	17.39	0.007
6	94.5	19.98	0.009
7	95.3	18.85	0.011
8	96.9	22.04	0.011
9	97.7	15.12	0.009
10	98.5	14.77	0.007
11	99.3	8.48	0.007
12	101.7	23.66	0.013
13	103.7	13.82	0.016
14	107.9	5.76	0.011

## M42

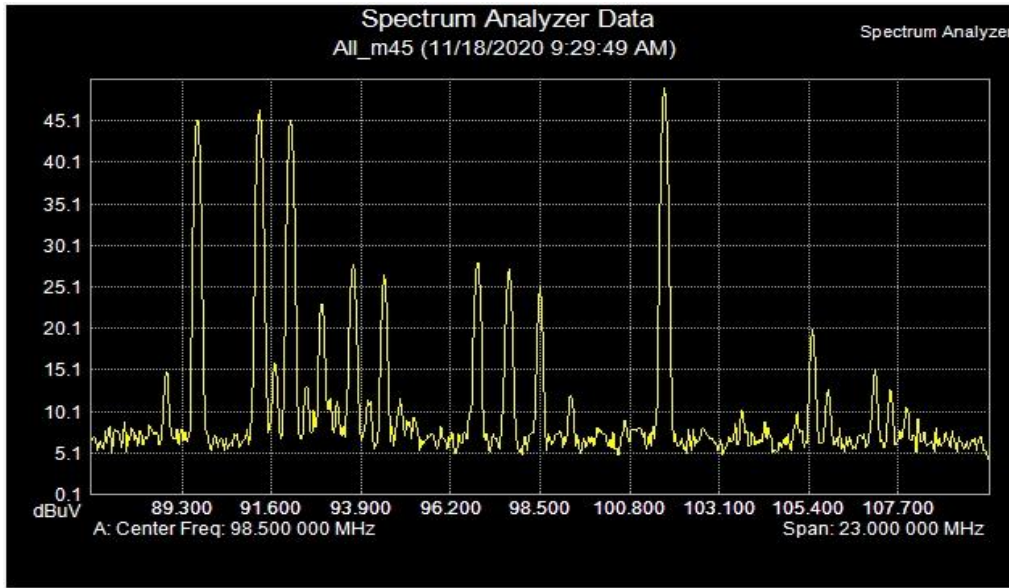


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 10 43
VBW	30.0 kHz	GPS Latitude	S 38 14 39
Detection	RMS	GPS Fix Time	11 18 2020 00 17 01

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.14	0.011
1	89.7	41.8	0.011
2	91.3	40.56	0.011
3	92.1	40.74	0.009
4	92.9	10.68	0.007
5	93.7	10.17	0.007
6	94.5	17.36	0.009
7	95.3	20.54	0.011
8	96.9	18.95	0.011
9	97.7	17.05	0.009
10	98.5	18.25	0.007
11	99.3	6.87	0.007
12	101.7	41.16	0.013
13	103.7	13.44	0.016
14	107.9	6.9	0.011

# M45

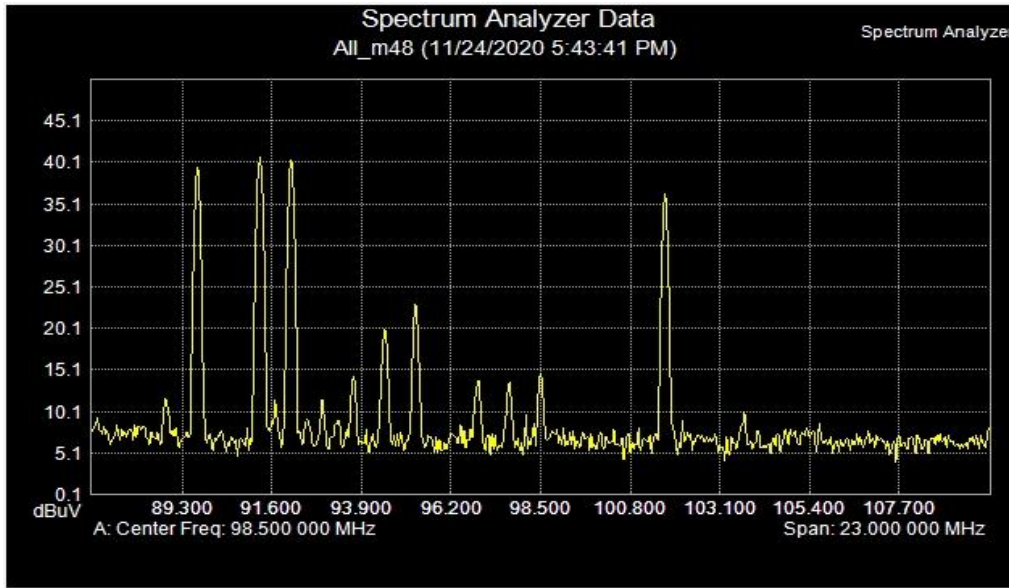


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 11 31
VBW	30.0 kHz	GPS Latitude	S 38 14 35
Detection	RMS	GPS Fix Time	11 17 2020 23 34 19

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.42	0.011
1	89.7	45.31	0.011
2	91.3	46.88	0.011
3	92.1	46.07	0.009
4	92.9	23.36	0.007
5	93.7	28.12	0.007
6	94.5	27.18	0.009
7	95.3	13.72	0.011
8	96.9	28.13	0.011
9	97.7	27.07	0.009
10	98.5	24.66	0.007
11	99.3	11.68	0.007
12	101.7	49.45	0.013
13	103.7	11.98	0.016
14	107.9	14.76	0.011

# M48

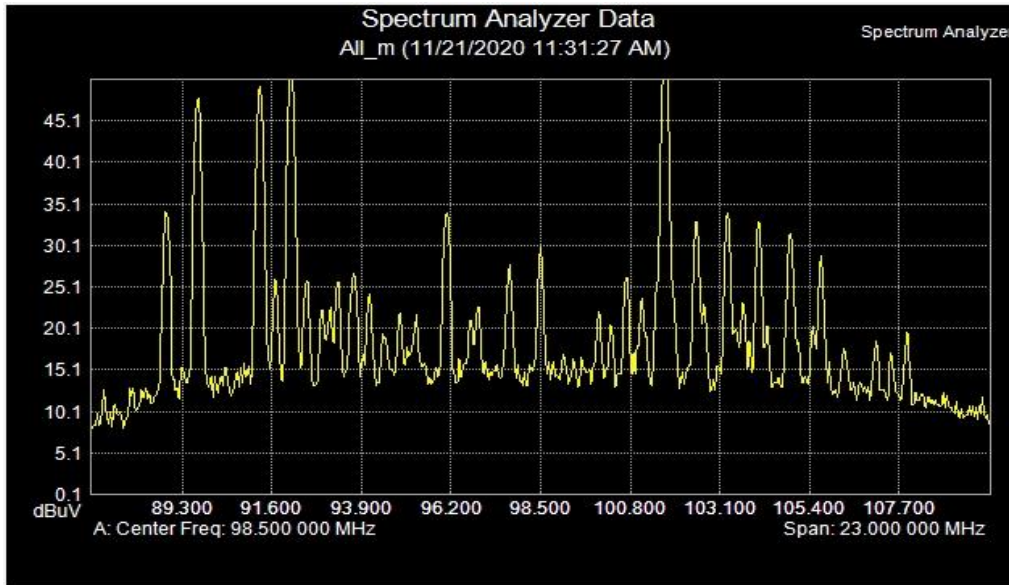


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 11 35
VBW	30.0 kHz	GPS Latitude	S 38 16 11
Detection	RMS	GPS Fix Time	11 24 2020 06 44 00

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	8.36	0.011
1	89.7	43.22	0.011
2	91.3	43.13	0.011
3	92.1	43.54	0.009
4	92.9	10.13	0.007
5	93.7	13.91	0.007
6	94.5	22.29	0.009
7	95.3	23.81	0.011
8	96.9	13.46	0.011
9	97.7	13.58	0.009
10	98.5	14.66	0.007
11	99.3	5.18	0.007
12	101.7	39.34	0.013
13	103.7	10.28	0.016
14	107.9	7.05	0.011

# M49

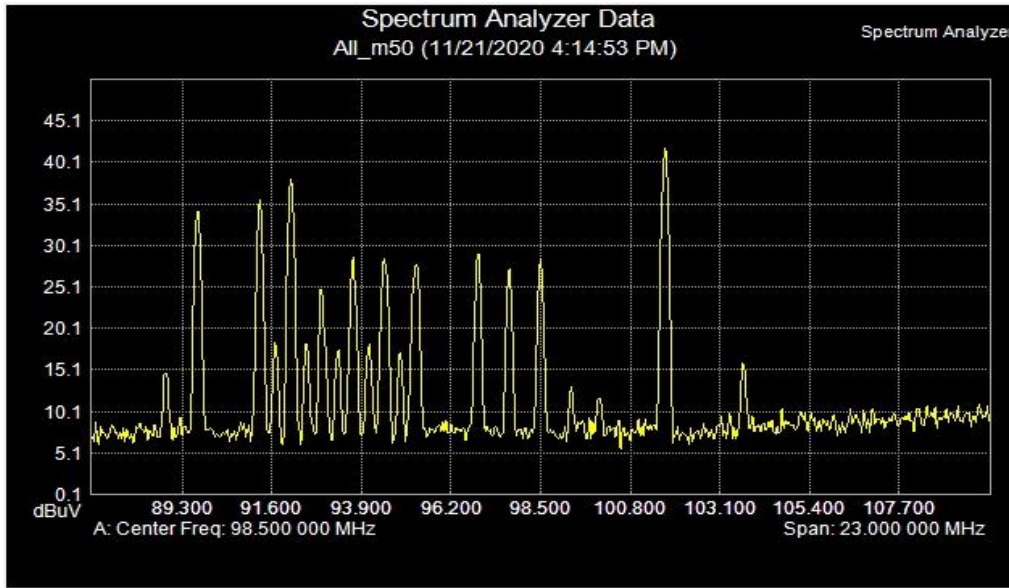


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 12 3
VBW	30.0 kHz	GPS Latitude	S 38 17 35
Detection	RMS	GPS Fix Time	11 21 2020 00 31 44

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.54	0.011
1	89.7	31.66	0.011
2	91.3	30.22	0.011
3	92.1	32.39	0.009
4	92.9	6.09	0.007
5	93.7	14.46	0.007
6	94.5	5.29	0.009
7	95.3	6.25	0.011
8	96.9	5.03	0.011
9	97.7	6.08	0.009
10	98.5	5.6	0.007
11	99.3	5.61	0.007
12	101.7	10.29	0.013
13	103.7	7.32	0.016
14	107.9	4.34	0.011

# M50



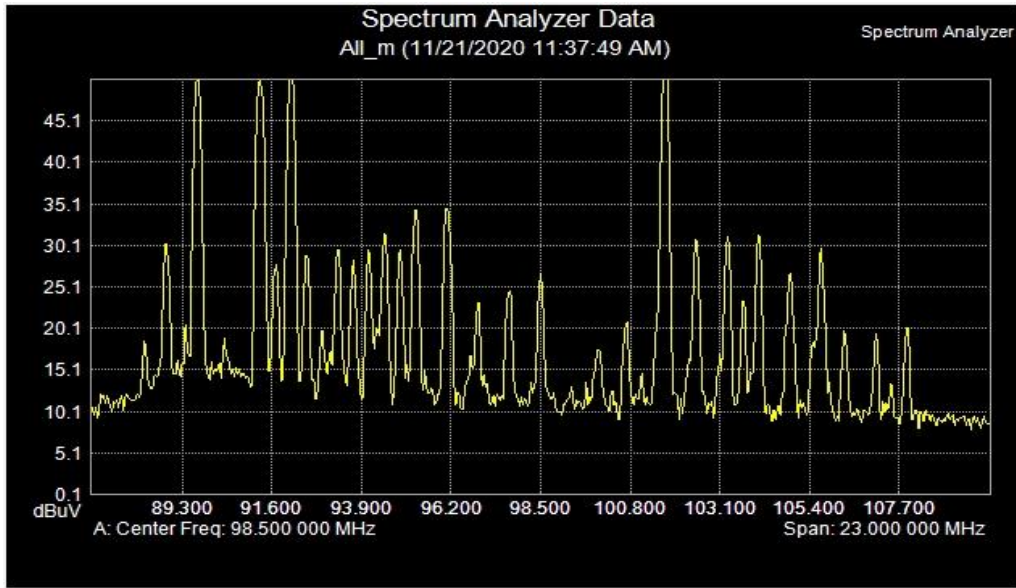
Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 11 14
VBW	30.0 kHz	GPS Latitude	S 38 18 12
Detection	RMS	GPS Fix Time	11 21 2020 05 15 10

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.23	0.011
1	89.7	34.65	0.011
2	91.3	36.1	0.011
3	92.1	38.62	0.009
4	92.9	26.24	0.007
5	93.7	30.02	0.007
6	94.5	26.3	0.009
7	95.3	26.99	0.011
8	96.9	32.03	0.011
9	97.7	29.88	0.009
10	98.5	30.83	0.007
11	99.3	14.46	0.007
12	101.7	43.48	0.013
13	103.7	16.6	0.016
14	107.9	8.76	0.011



## M52

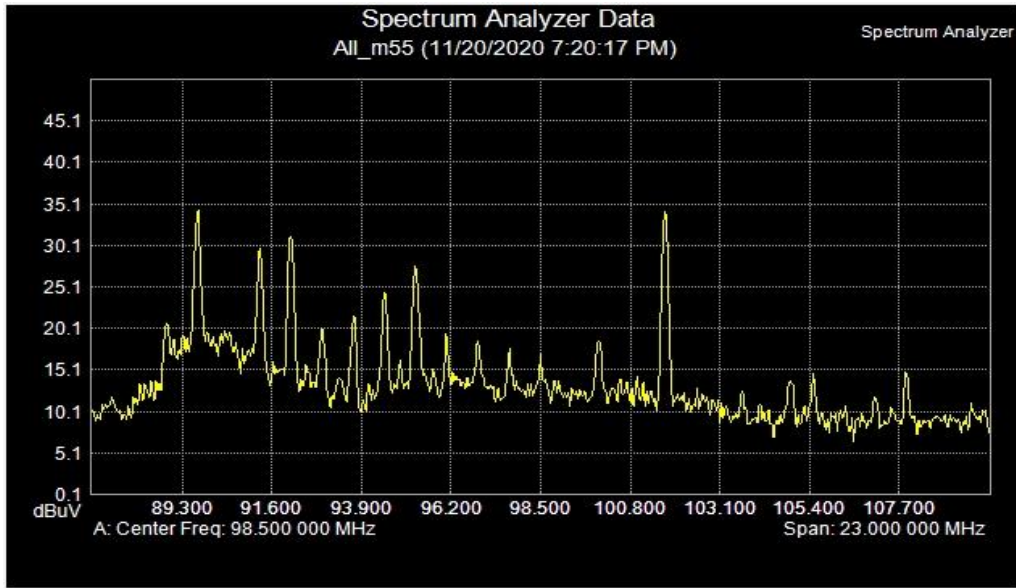


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 12 3
VBW	30.0 kHz	GPS Latitude	S 38 17 34
Detection	RMS	GPS Fix Time	11 21 2020 00 38 06

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	11.24	0.011
1	89.7	52.32	0.011
2	91.3	51.26	0.011
3	92.1	54.16	0.009
4	92.9	19.46	0.007
5	93.7	28.02	0.007
6	94.5	33.1	0.009
7	95.3	36.07	0.011
8	96.9	23.56	0.011
9	97.7	25.05	0.009
10	98.5	26.89	0.007
11	99.3	13.59	0.007
12	101.7	54.81	0.013
13	103.7	24.26	0.016
14	107.9	21.14	0.011

## M55

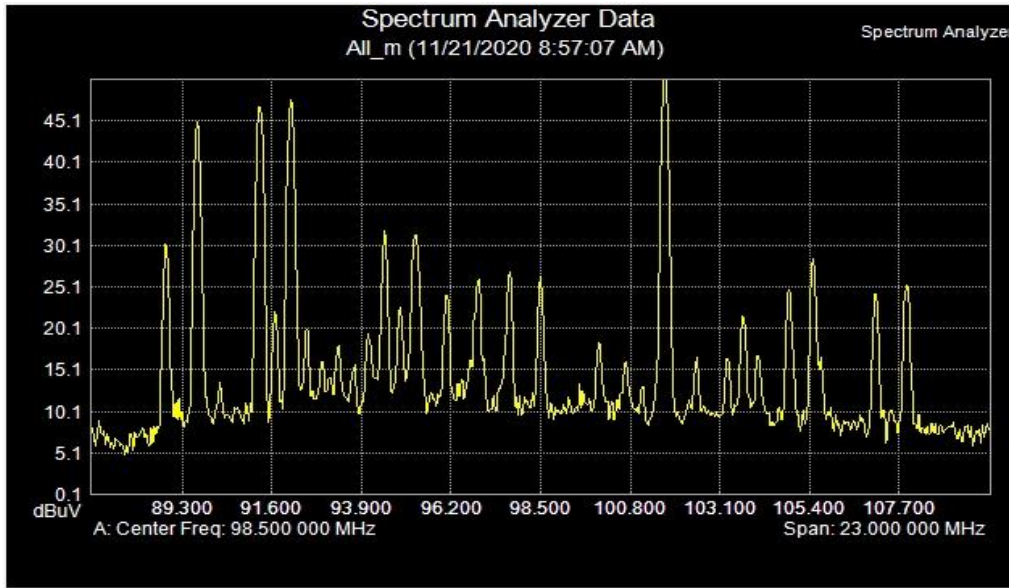


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 9 55
VBW	30.0 kHz	GPS Latitude	S 38 16 29
Detection	RMS	GPS Fix Time	11 20 2020 09 24 49

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.84	0.011
1	89.7	21.94	0.011
2	91.3	23.53	0.011
3	92.1	27.92	0.009
4	92.9	14.22	0.007
5	93.7	18.86	0.007
6	94.5	30.44	0.009
7	95.3	31.64	0.011
8	96.9	23.26	0.011
9	97.7	21.68	0.009
10	98.5	21.29	0.007
11	99.3	11.28	0.007
12	101.7	39.17	0.013
13	103.7	17.79	0.016
14	107.9	12.62	0.011

# M58

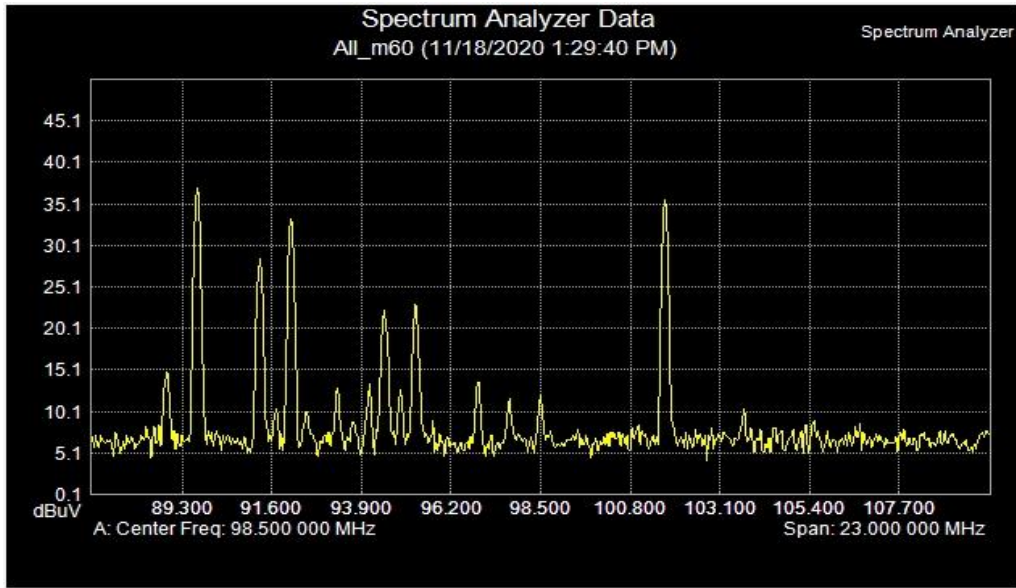


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 12 38
VBW	30.0 kHz	GPS Latitude	S 38 16 41
Detection	RMS	GPS Fix Time	11 20 2020 23 01 40

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	4.76	0.011
1	89.7	45.4	0.011
2	91.3	47.03	0.011
3	92.1	48.34	0.009
4	92.9	15.81	0.007
5	93.7	15.78	0.007
6	94.5	31.05	0.009
7	95.3	31.03	0.011
8	96.9	27.01	0.011
9	97.7	27.39	0.009
10	98.5	26.01	0.007
11	99.3	11.12	0.007
12	101.7	51.9	0.013
13	103.7	21.64	0.016
14	107.9	25.22	0.011

## M60

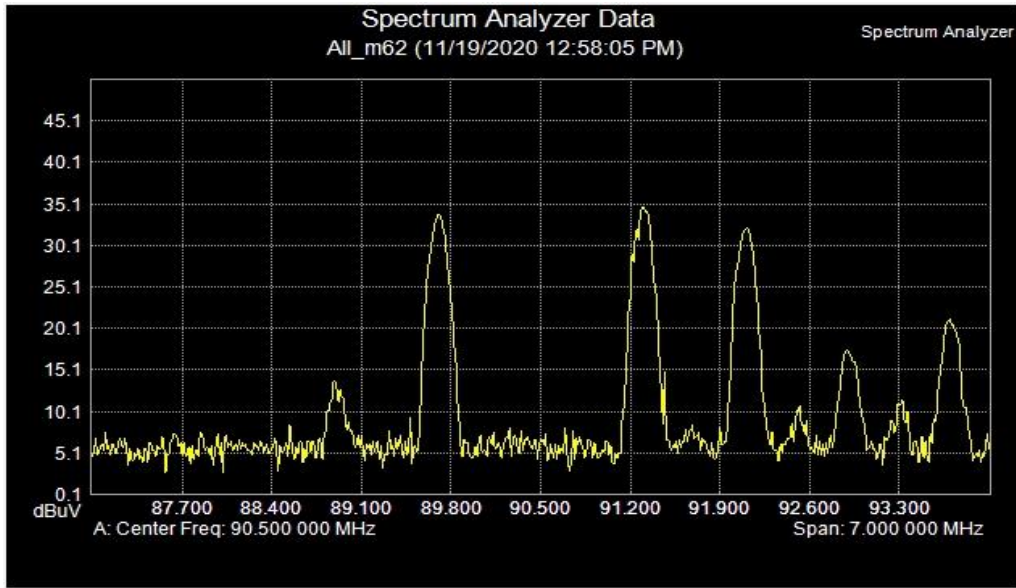


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 6 41
VBW	30.0 kHz	GPS Latitude	S 38 13 37
Detection	RMS	GPS Fix Time	11 18 2020 03 34 10

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.95	0.011
1	89.7	37.55	0.011
2	91.3	29.22	0.011
3	92.1	33.72	0.009
4	92.9	5.95	0.007
5	93.7	8.81	0.007
6	94.5	22.58	0.009
7	95.3	23.26	0.011
8	96.9	12.11	0.011
9	97.7	11.8	0.009
10	98.5	11.56	0.007
11	99.3	4.35	0.007
12	101.7	35.9	0.013
13	103.7	10.38	0.016
14	107.9	7.43	0.011

## M62

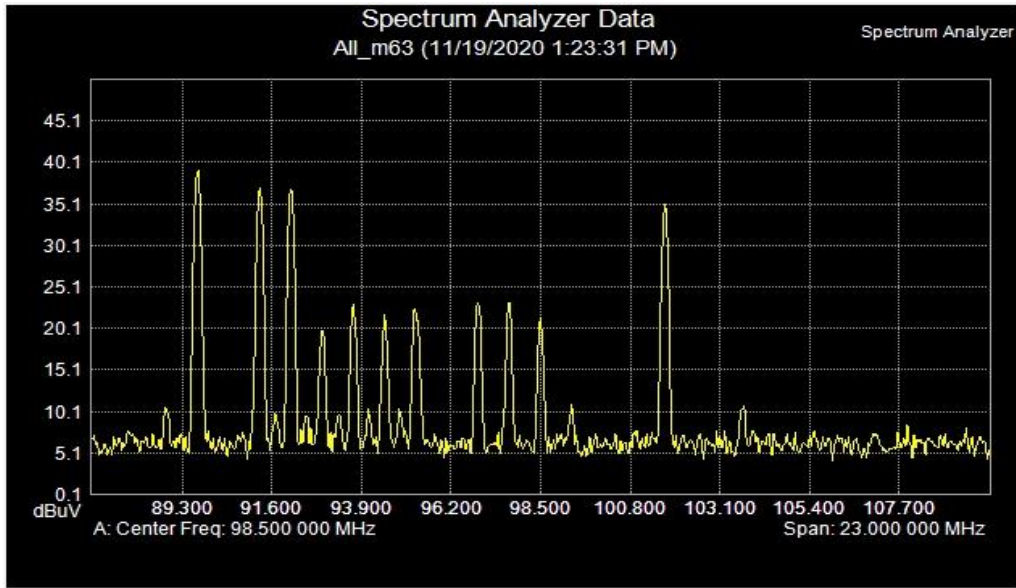


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	90.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	94.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	7.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 6 21
VBW	30.0 kHz	GPS Latitude	S 38 13 59
Detection	RMS	GPS Fix Time	11 19 2020 03 02 37

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	NaN	NaN
1	89.7	NaN	NaN
2	91.3	NaN	NaN
3	92.1	NaN	NaN
4	92.9	NaN	NaN
5	93.7	NaN	NaN
6	94.5	15.35	0.009
7	95.3	16	0.011
8	96.9	25.38	0.011
9	97.7	25.75	0.009
10	98.5	25.21	0.007
11	99.3	7.94	0.007
12	101.7	34.42	0.013
13	103.7	10.27	0.016
14	107.9	6.66	0.011

## M63

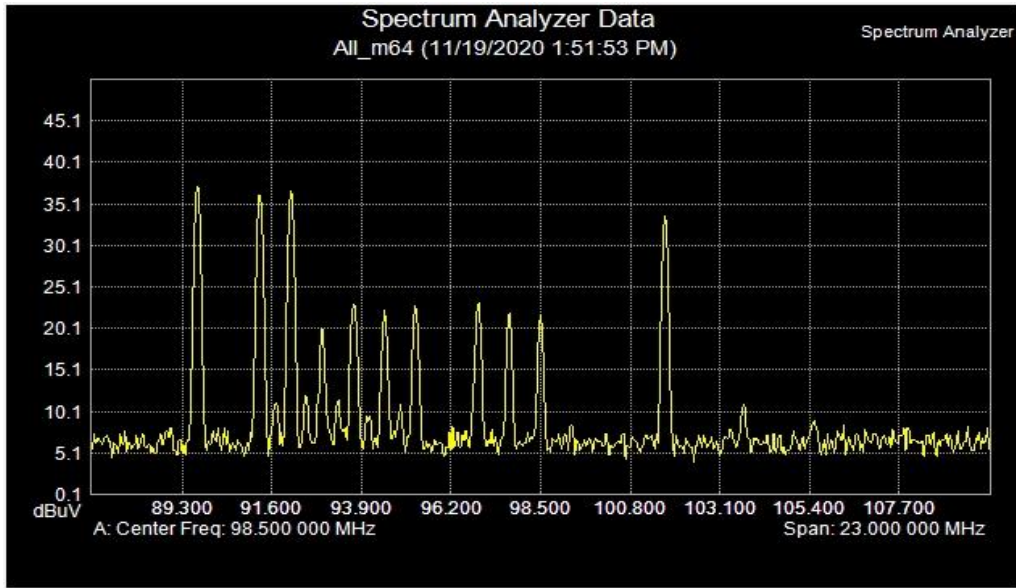


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 6 21
VBW	30.0 kHz	GPS Latitude	S 38 14 17
Detection	RMS	GPS Fix Time	11 19 2020 03 28 03

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.69	0.011
1	89.7	39.35	0.011
2	91.3	37.4	0.011
3	92.1	37.04	0.009
4	92.9	19.7	0.007
5	93.7	22.81	0.007
6	94.5	22.1	0.009
7	95.3	22.13	0.011
8	96.9	23.22	0.011
9	97.7	23.82	0.009
10	98.5	22.46	0.007
11	99.3	11.06	0.007
12	101.7	34.89	0.013
13	103.7	11.81	0.016
14	107.9	5.39	0.011

## M64

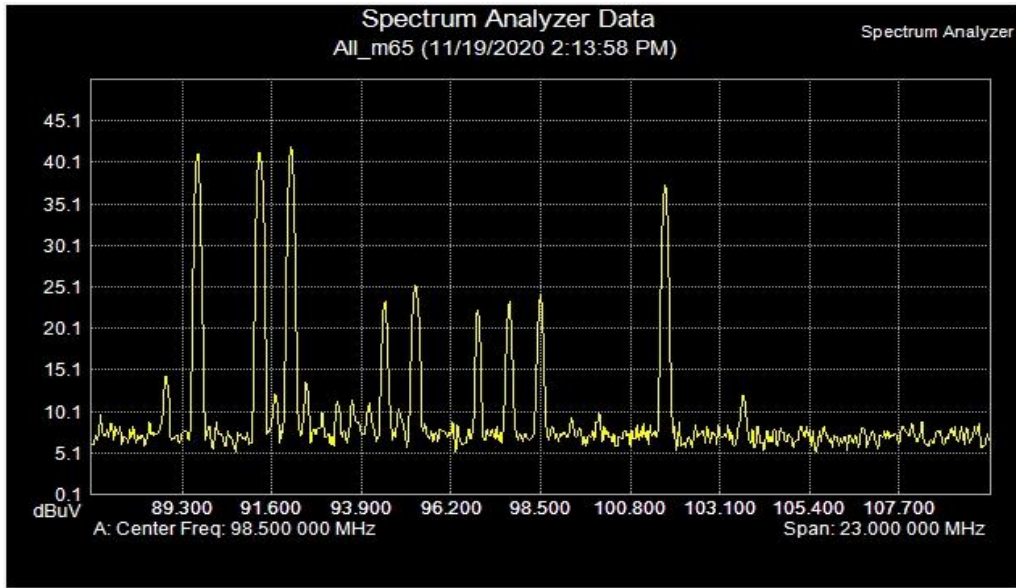


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 5 14
VBW	30.0 kHz	GPS Latitude	S 38 14 34
Detection	RMS	GPS Fix Time	11 19 2020 03 56 24

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	3.64	0.011
1	89.7	37.31	0.011
2	91.3	36.9	0.011
3	92.1	36.75	0.009
4	92.9	20.39	0.007
5	93.7	22.72	0.007
6	94.5	22.21	0.009
7	95.3	22.38	0.011
8	96.9	23.8	0.011
9	97.7	21.93	0.009
10	98.5	21.9	0.007
11	99.3	7.15	0.007
12	101.7	33.94	0.013
13	103.7	12.5	0.016
14	107.9	6.08	0.011

## M65



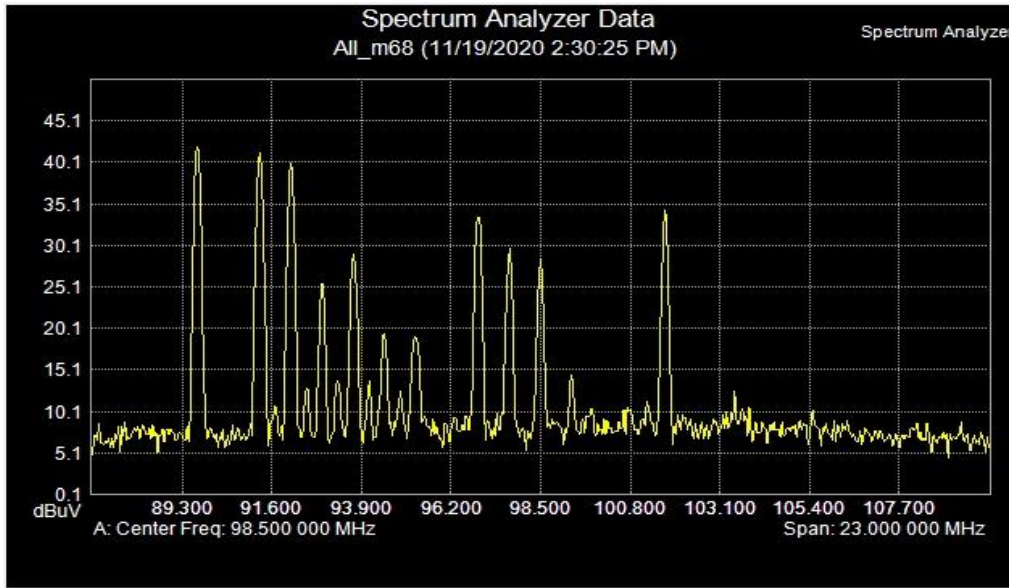
Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 40
VBW	30.0 kHz	GPS Latitude	S 38 15 24
Detection	RMS	GPS Fix Time	11 19 2020 04 18 29

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	NaN	NaN
1	89.7	NaN	NaN
2	91.3	NaN	NaN
3	92.1	NaN	NaN
4	92.9	NaN	NaN
5	93.7	NaN	NaN
6	94.5	25.1	0.009
7	95.3	25.81	0.011
8	96.9	22.3	0.011
9	97.7	24.21	0.009
10	98.5	24.46	0.007
11	99.3	10.21	0.007
12	101.7	36.51	0.013
13	103.7	10.27	0.016
14	107.9	7.14	0.011



# M68

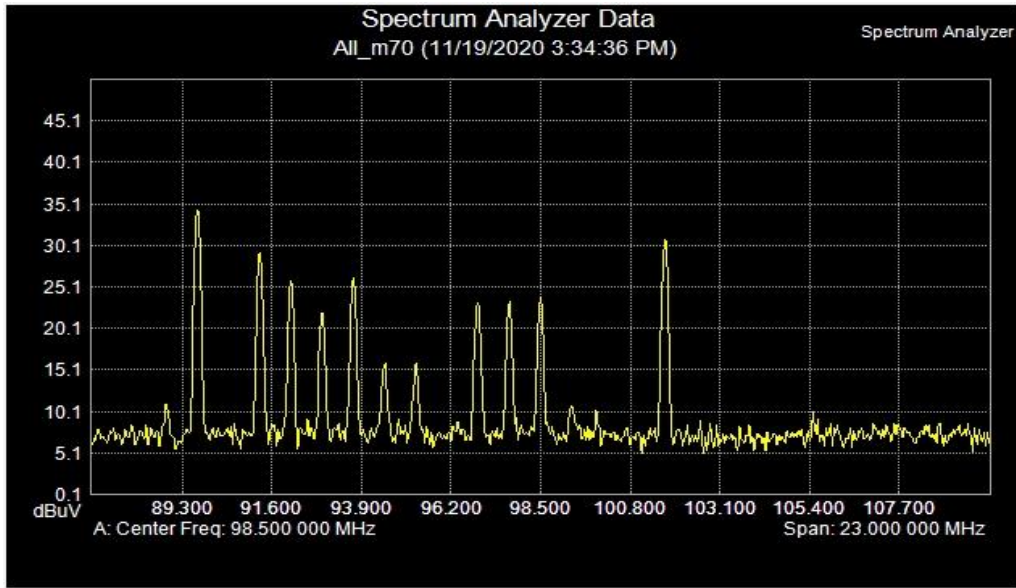


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 15
VBW	30.0 kHz	GPS Latitude	S 38 15 24
Detection	RMS	GPS Fix Time	11 19 2020 04 34 56

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.52	0.011
1	89.7	42.39	0.011
2	91.3	41.11	0.011
3	92.1	40.85	0.009
4	92.9	25.6	0.007
5	93.7	27.68	0.007
6	94.5	18.74	0.009
7	95.3	18.87	0.011
8	96.9	33.39	0.011
9	97.7	29.91	0.009
10	98.5	27.72	0.007
11	99.3	14.76	0.007
12	101.7	35.16	0.013
13	103.7	11.29	0.016
14	107.9	5.46	0.011

## M70

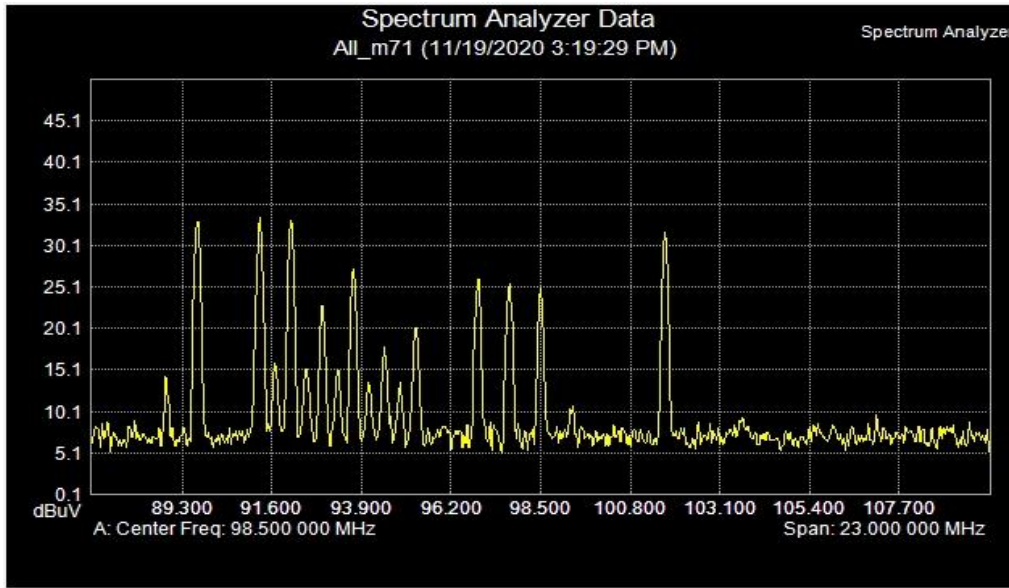


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 29
VBW	30.0 kHz	GPS Latitude	S 38 15 25
Detection	RMS	GPS Fix Time	11 19 2020 05 39 08

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.92	0.011
1	89.7	34.92	0.011
2	91.3	29.82	0.011
3	92.1	25.8	0.009
4	92.9	22.24	0.007
5	93.7	26.52	0.007
6	94.5	16.04	0.009
7	95.3	15.81	0.011
8	96.9	24.75	0.011
9	97.7	24.46	0.009
10	98.5	24.26	0.007
11	99.3	10.39	0.007
12	101.7	31.25	0.013
13	103.7	6.81	0.016
14	107.9	7.54	0.011

# M71

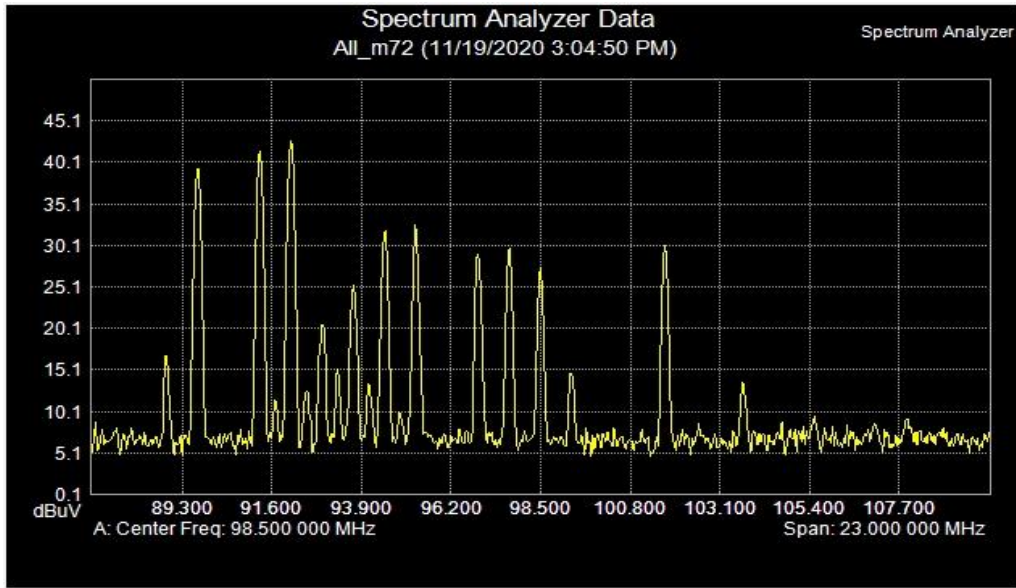


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 6
VBW	30.0 kHz	GPS Latitude	S 38 14 25
Detection	RMS	GPS Fix Time	11 19 2020 05 24 01

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.54	0.011
1	89.7	33.54	0.011
2	91.3	33.96	0.011
3	92.1	33.7	0.009
4	92.9	22.94	0.007
5	93.7	27.09	0.007
6	94.5	17.82	0.009
7	95.3	20.01	0.011
8	96.9	26.81	0.011
9	97.7	24.24	0.009
10	98.5	24.91	0.007
11	99.3	12.68	0.007
12	101.7	32.22	0.013
13	103.7	9.22	0.016
14	107.9	9.17	0.011

## M72

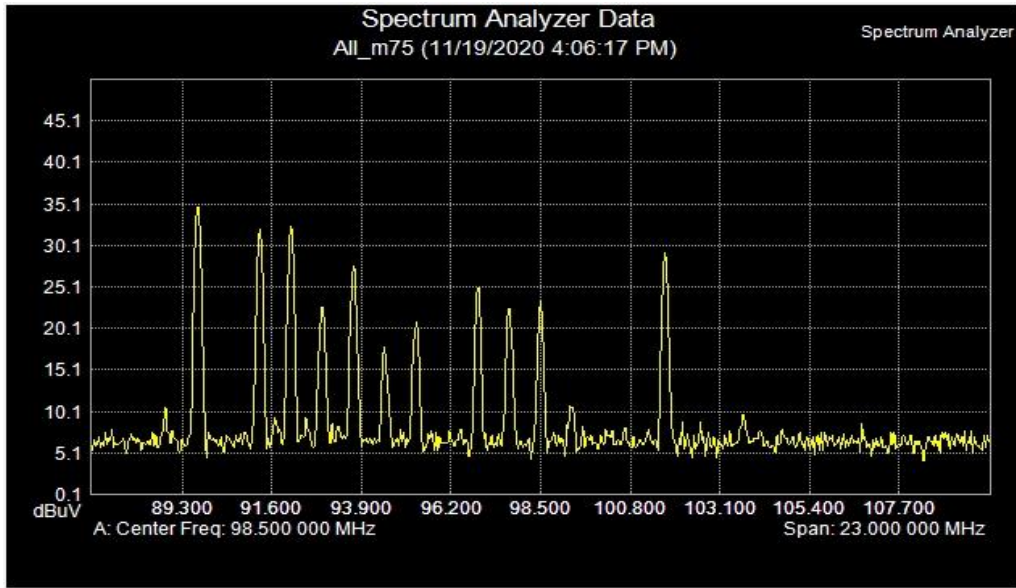


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 7
VBW	30.0 kHz	GPS Latitude	S 38 14 56
Detection	RMS	GPS Fix Time	11 19 2020 05 09 22

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.41	0.011
1	89.7	39.27	0.011
2	91.3	41.66	0.011
3	92.1	42.73	0.009
4	92.9	22.25	0.007
5	93.7	26.72	0.007
6	94.5	30.94	0.009
7	95.3	31.91	0.011
8	96.9	29.07	0.011
9	97.7	28.92	0.009
10	98.5	27.87	0.007
11	99.3	17.19	0.007
12	101.7	31.22	0.013
13	103.7	11.67	0.016
14	107.9	8.02	0.011

## M75

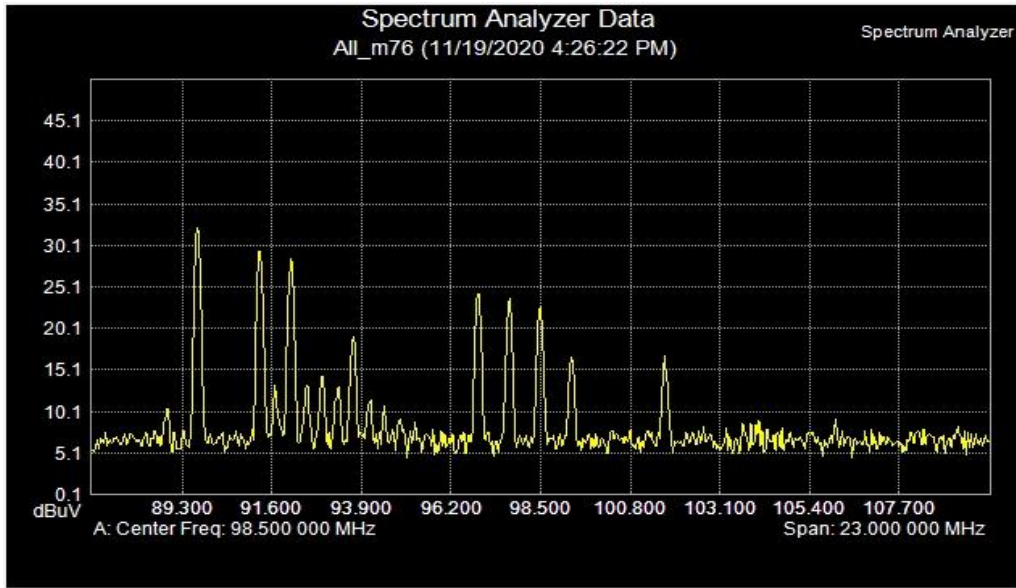


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 8
VBW	30.0 kHz	GPS Latitude	S 38 16 23
Detection	RMS	GPS Fix Time	11 19 2020 06 10 49

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.62	0.011
1	89.7	34.82	0.011
2	91.3	32.28	0.011
3	92.1	32.73	0.009
4	92.9	22.3	0.007
5	93.7	27.65	0.007
6	94.5	18.96	0.009
7	95.3	20.21	0.011
8	96.9	26.01	0.011
9	97.7	23.04	0.009
10	98.5	23.78	0.007
11	99.3	10.15	0.007
12	101.7	30.7	0.013
13	103.7	9.81	0.016
14	107.9	6.02	0.011

## M76

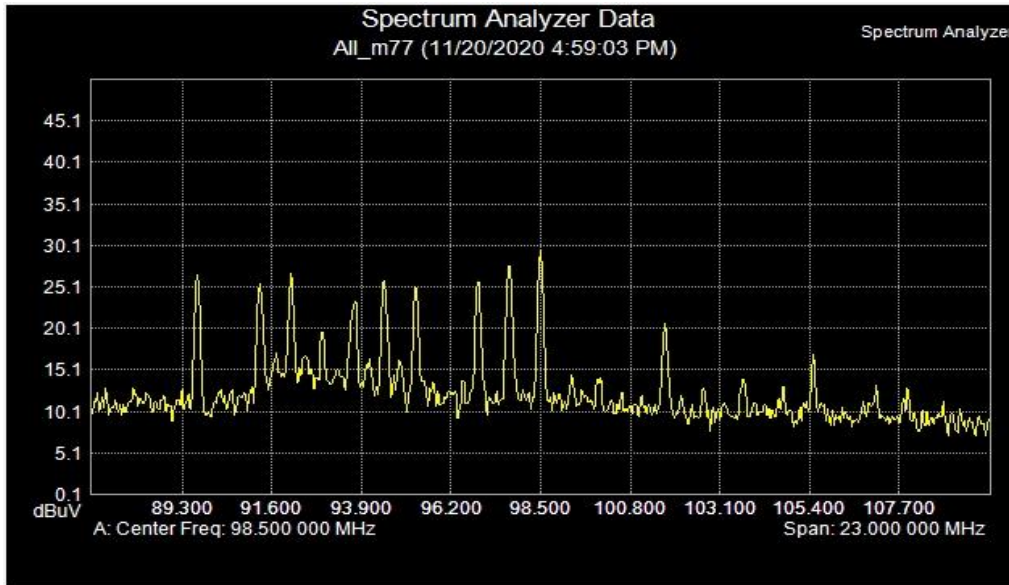


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 9
VBW	30.0 kHz	GPS Latitude	S 38 17 30
Detection	RMS	GPS Fix Time	11 19 2020 06 30 54

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	4.95	0.011
1	89.7	33.07	0.011
2	91.3	30.45	0.011
3	92.1	29.46	0.009
4	92.9	24.09	0.007
5	93.7	24.03	0.007
6	94.5	9.1	0.009
7	95.3	10.12	0.011
8	96.9	25.67	0.011
9	97.7	22.63	0.009
10	98.5	27.33	0.007
11	99.3	17.69	0.007
12	101.7	15.29	0.013
13	103.7	7.46	0.016
14	107.9	6.7	0.011

# M77

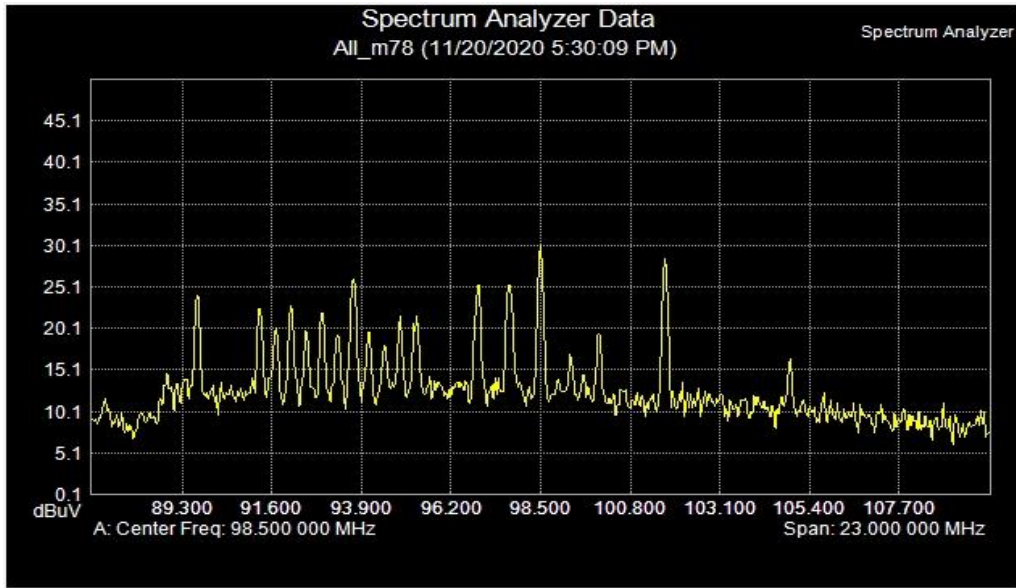


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 41
VBW	30.0 kHz	GPS Latitude	S 38 17 54
Detection	RMS	GPS Fix Time	11 20 2020 07 03 36

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	12.24	0.011
1	89.7	25.92	0.011
2	91.3	25.31	0.011
3	92.1	25.71	0.009
4	92.9	20.71	0.007
5	93.7	23.76	0.007
6	94.5	27.16	0.009
7	95.3	26.18	0.011
8	96.9	26.69	0.011
9	97.7	27.83	0.009
10	98.5	29.42	0.007
11	99.3	15	0.007
12	101.7	19.62	0.013
13	103.7	12.87	0.016
14	107.9	8.79	0.011

## M78



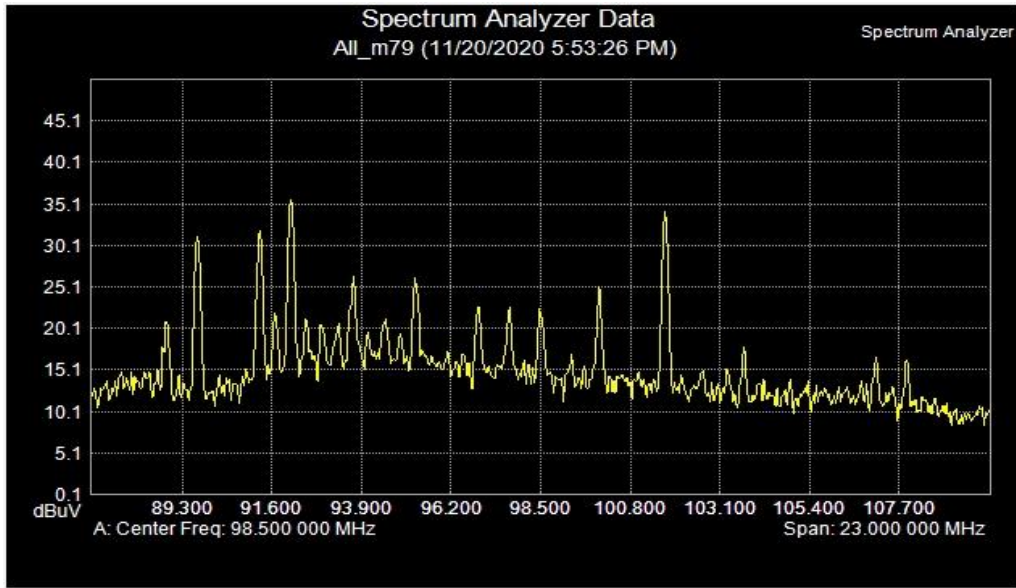
Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 5 27
VBW	30.0 kHz	GPS Latitude	S 38 17 32
Detection	RMS	GPS Fix Time	11 20 2020 07 34 42

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	10.55	0.011
1	89.7	24.36	0.011
2	91.3	24.58	0.011
3	92.1	24.57	0.009
4	92.9	25.54	0.007
5	93.7	29.79	0.007
6	94.5	20.06	0.009
7	95.3	21.66	0.011
8	96.9	29.34	0.011
9	97.7	27.52	0.009
10	98.5	31.5	0.007
11	99.3	18.16	0.007
12	101.7	29.49	0.013
13	103.7	10.06	0.016
14	107.9	8.69	0.011



## M79

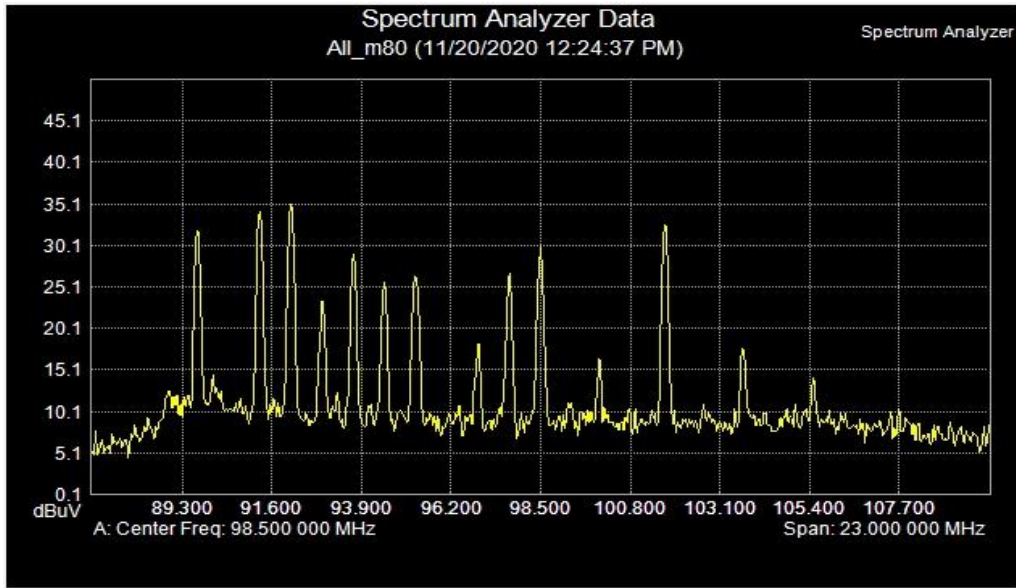


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 5 30
VBW	30.0 kHz	GPS Latitude	S 38 17 4
Detection	RMS	GPS Fix Time	11 20 2020 07 57 59

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	11.38	0.011
1	89.7	31.6	0.011
2	91.3	30.1	0.011
3	92.1	35.81	0.009
4	92.9	20.09	0.007
5	93.7	28.03	0.007
6	94.5	19.92	0.009
7	95.3	23.54	0.011
8	96.9	21.15	0.011
9	97.7	22.16	0.009
10	98.5	23.63	0.007
11	99.3	15.79	0.007
12	101.7	35.15	0.013
13	103.7	20.08	0.016
14	107.9	11.15	0.011

## M80

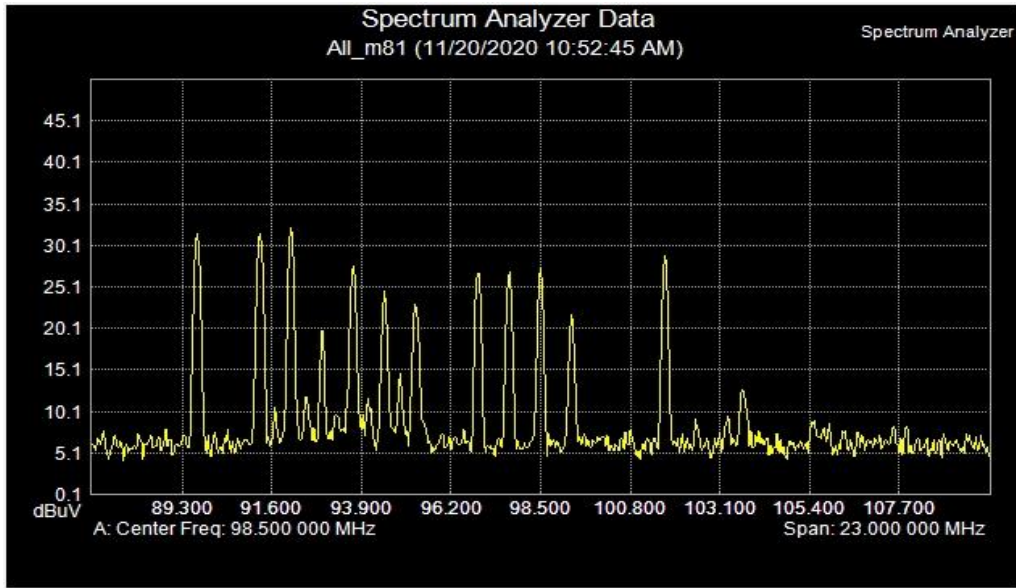


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 5 11
VBW	30.0 kHz	GPS Latitude	S 38 18 57
Detection	RMS	GPS Fix Time	11 20 2020 02 29 10

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.35	0.011
1	89.7	33.49	0.011
2	91.3	34.96	0.011
3	92.1	36.53	0.009
4	92.9	24.62	0.007
5	93.7	29.85	0.007
6	94.5	25.33	0.009
7	95.3	25.4	0.011
8	96.9	18.22	0.011
9	97.7	27.33	0.009
10	98.5	31.06	0.007
11	99.3	10.49	0.007
12	101.7	33.14	0.013
13	103.7	17.93	0.016
14	107.9	14.41	0.011

## M81

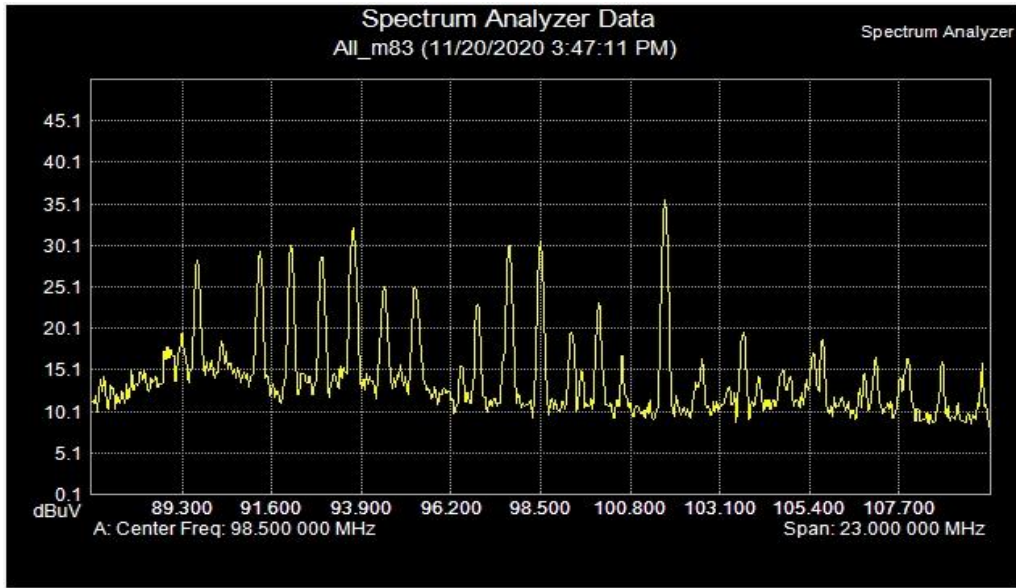


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 5 5
VBW	30.0 kHz	GPS Latitude	S 38 19 26
Detection	RMS	GPS Fix Time	11 20 2020 00 57 18

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	4.24	0.011
1	89.7	31.68	0.011
2	91.3	32.19	0.011
3	92.1	32.1	0.009
4	92.9	22.23	0.007
5	93.7	29.19	0.007
6	94.5	22.82	0.009
7	95.3	23.02	0.011
8	96.9	26.68	0.011
9	97.7	26.78	0.009
10	98.5	27.87	0.007
11	99.3	22.27	0.007
12	101.7	29.02	0.013
13	103.7	15.03	0.016
14	107.9	7.61	0.011

## M83

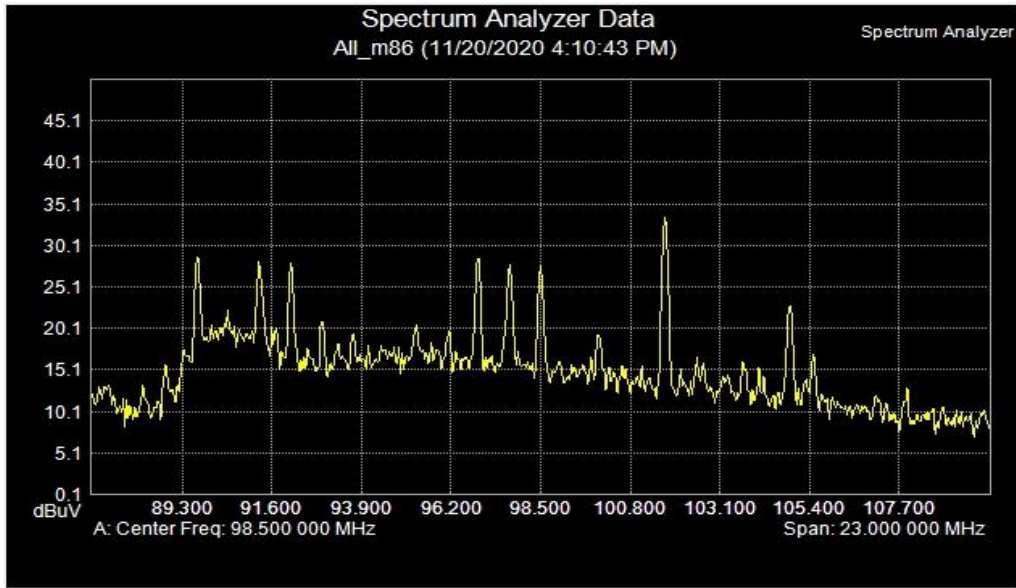


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 19
VBW	30.0 kHz	GPS Latitude	S 38 19 7
Detection	RMS	GPS Fix Time	11 20 2020 05 51 45

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.88	0.011
1	89.7	29.14	0.011
2	91.3	30.08	0.011
3	92.1	31.65	0.009
4	92.9	30.52	0.007
5	93.7	32.37	0.007
6	94.5	23.33	0.009
7	95.3	22.9	0.011
8	96.9	22.53	0.011
9	97.7	29.56	0.009
10	98.5	29.94	0.007
11	99.3	18.93	0.007
12	101.7	35.95	0.013
13	103.7	19.82	0.016
14	107.9	22.44	0.011

## M86

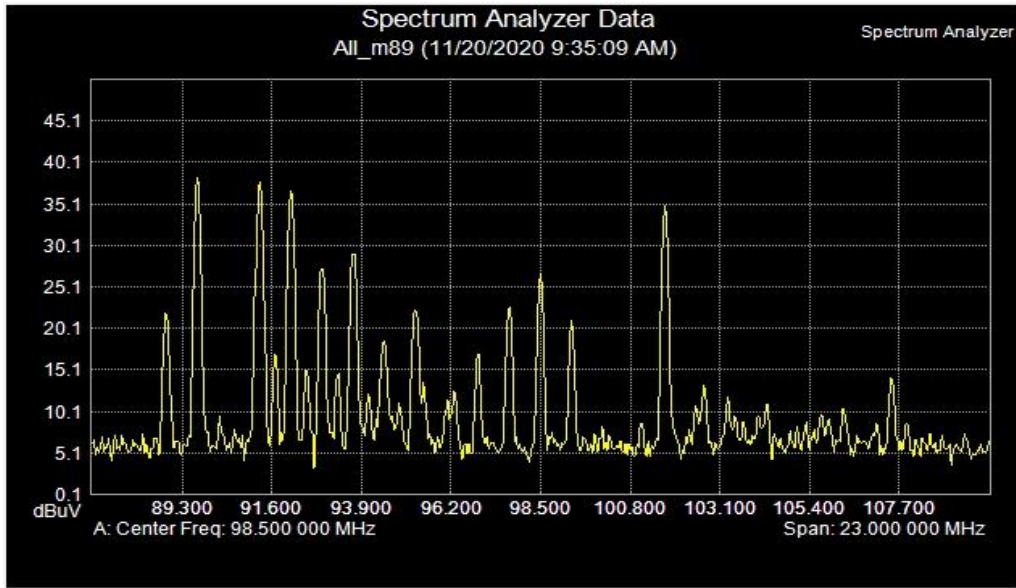


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 40
VBW	30.0 kHz	GPS Latitude	S 38 19 23
Detection	RMS	GPS Fix Time	11 20 2020 06 15 17

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	12.39	0.011
1	89.7	29.14	0.011
2	91.3	26.46	0.011
3	92.1	26.35	0.009
4	92.9	21.82	0.007
5	93.7	18.54	0.007
6	94.5	16.84	0.009
7	95.3	21.31	0.011
8	96.9	28.74	0.011
9	97.7	28.69	0.009
10	98.5	27.34	0.007
11	99.3	14.11	0.007
12	101.7	33.46	0.013
13	103.7	17.11	0.016
14	107.9	13.03	0.011

## M89

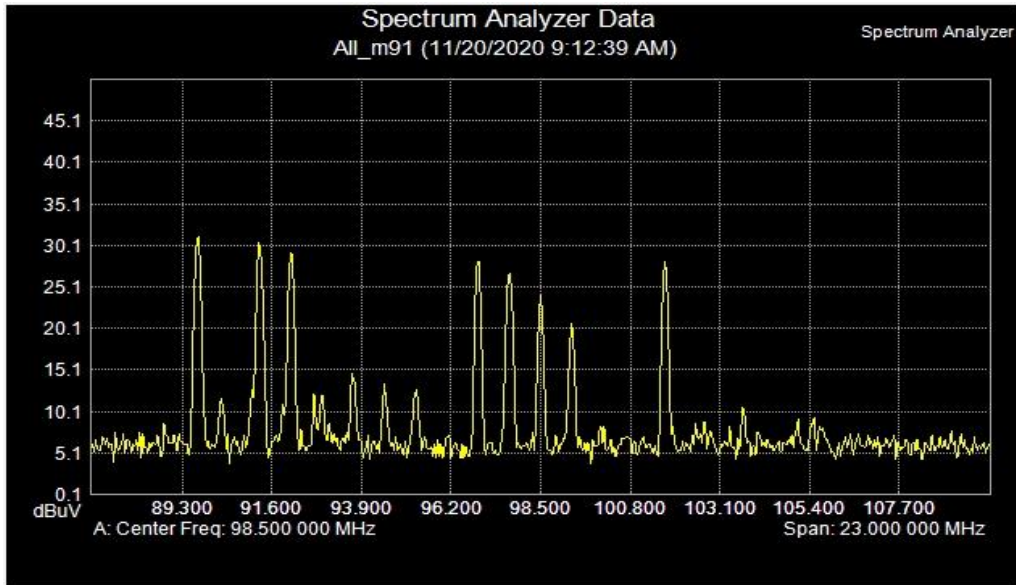


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 5 37
VBW	30.0 kHz	GPS Latitude	S 38 20 6
Detection	RMS	GPS Fix Time	11 19 2020 23 39 41

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.28	0.011
1	89.7	38.43	0.011
2	91.3	37.53	0.011
3	92.1	36.75	0.009
4	92.9	26.9	0.007
5	93.7	30.35	0.007
6	94.5	19.29	0.009
7	95.3	23.4	0.011
8	96.9	19.43	0.011
9	97.7	24.39	0.009
10	98.5	27.76	0.007
11	99.3	21.06	0.007
12	101.7	35.11	0.013
13	103.7	9.09	0.016
14	107.9	9.54	0.011

## M91

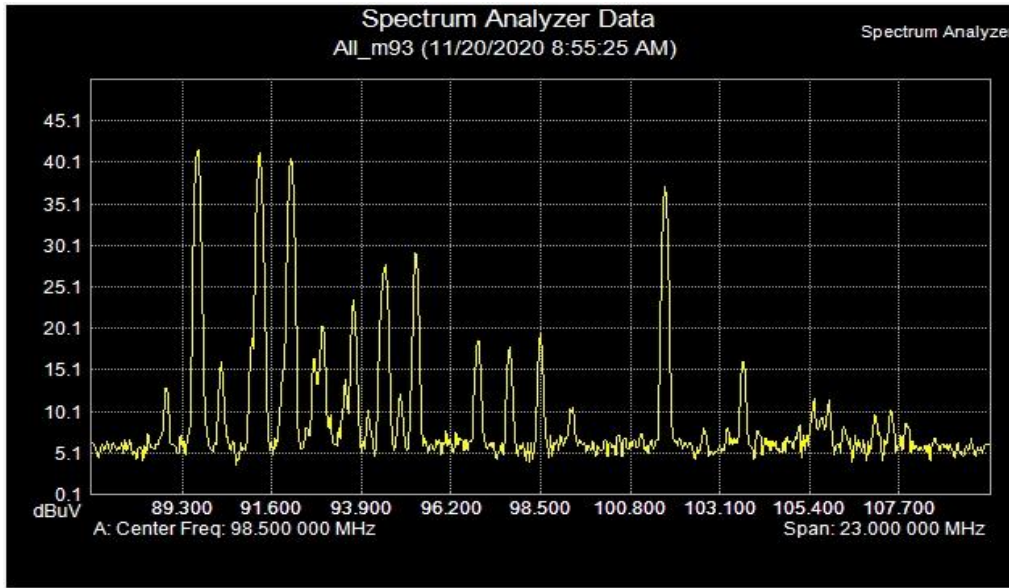


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 5 59
VBW	30.0 kHz	GPS Latitude	S 38 20 19
Detection	RMS	GPS Fix Time	11 19 2020 23 17 11

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.21	0.011
1	89.7	31.92	0.011
2	91.3	29.8	0.011
3	92.1	28.78	0.009
4	92.9	21.88	0.007
5	93.7	22.2	0.007
6	94.5	14.64	0.009
7	95.3	13.87	0.011
8	96.9	27.56	0.011
9	97.7	25.55	0.009
10	98.5	20.89	0.007
11	99.3	19.33	0.007
12	101.7	28.18	0.013
13	103.7	12.12	0.016
14	107.9	7.56	0.011

# M93



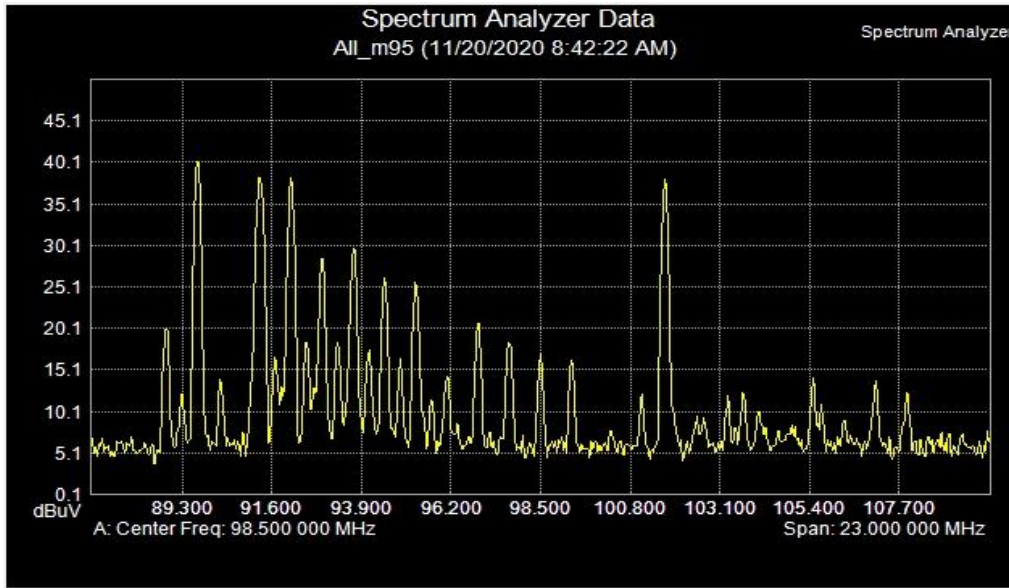
Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 6 30
VBW	30.0 kHz	GPS Latitude	S 38 20 44
Detection	RMS	GPS Fix Time	11 19 2020 22 59 58

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.18	0.011
1	89.7	41.98	0.011
2	91.3	41.88	0.011
3	92.1	40.98	0.009
4	92.9	20.26	0.007
5	93.7	23.85	0.007
6	94.5	28.4	0.009
7	95.3	29.28	0.011
8	96.9	18.04	0.011
9	97.7	18.72	0.009
10	98.5	21.33	0.007
11	99.3	10.51	0.007
12	101.7	37.72	0.013
13	103.7	17.02	0.016
14	107.9	7.27	0.011



# M95

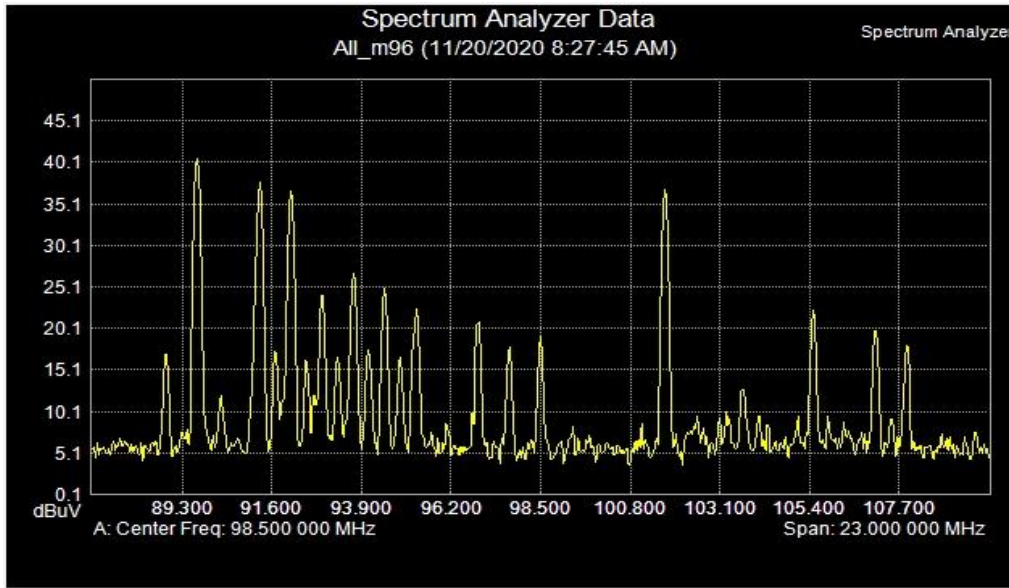


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 6 53
VBW	30.0 kHz	GPS Latitude	S 38 20 55
Detection	RMS	GPS Fix Time	11 19 2020 22 46 55

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.45	0.011
1	89.7	40.54	0.011
2	91.3	38.89	0.011
3	92.1	38.51	0.009
4	92.9	28.95	0.007
5	93.7	29.38	0.007
6	94.5	24.94	0.009
7	95.3	24.97	0.011
8	96.9	18.76	0.011
9	97.7	16.72	0.009
10	98.5	8.41	0.007
11	99.3	17.99	0.007
12	101.7	38.59	0.013
13	103.7	11.42	0.016
14	107.9	8.31	0.011

# M96

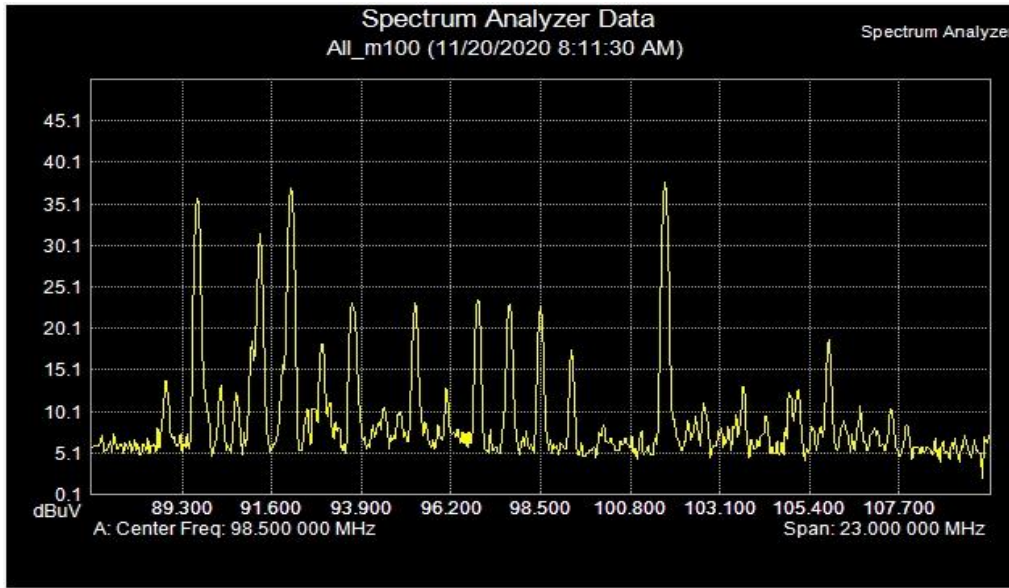


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 58
VBW	30.0 kHz	GPS Latitude	S 38 21 10
Detection	RMS	GPS Fix Time	11 19 2020 22 32 18

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.68	0.011
1	89.7	40.96	0.011
2	91.3	38.54	0.011
3	92.1	37.78	0.009
4	92.9	24.01	0.007
5	93.7	26.72	0.007
6	94.5	24.2	0.009
7	95.3	22.57	0.011
8	96.9	20.14	0.011
9	97.7	17.11	0.009
10	98.5	18.5	0.007
11	99.3	7.78	0.007
12	101.7	39.39	0.013
13	103.7	15.88	0.016
14	107.9	16.84	0.011

# M100

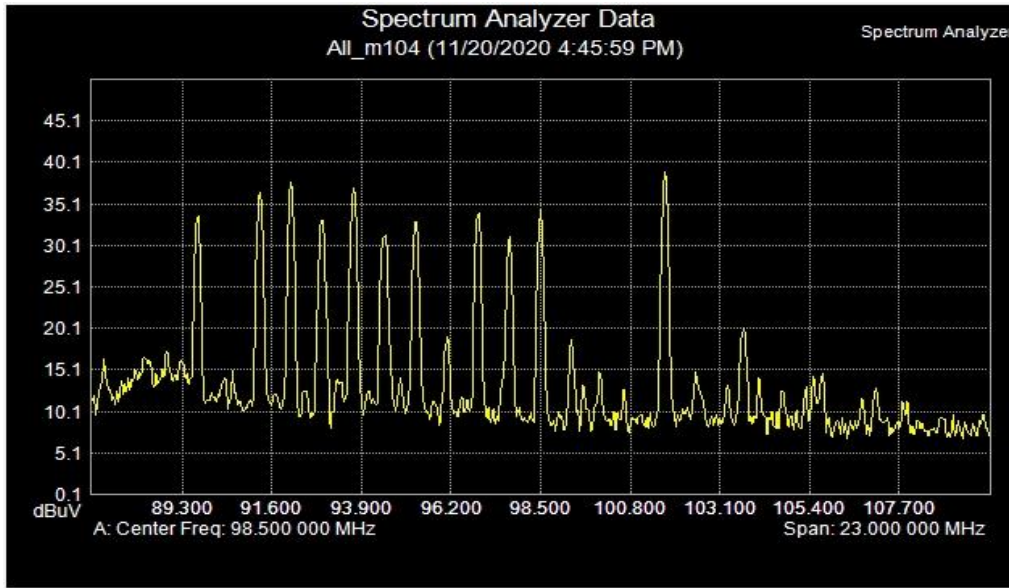


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 8 57
VBW	30.0 kHz	GPS Latitude	S 38 21 46
Detection	RMS	GPS Fix Time	11 19 2020 22 16 03

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.25	0.011
1	89.7	34.16	0.011
2	91.3	34.02	0.011
3	92.1	38.97	0.009
4	92.9	19.09	0.007
5	93.7	21.14	0.007
6	94.5	10.96	0.009
7	95.3	21.34	0.011
8	96.9	24.56	0.011
9	97.7	23.26	0.009
10	98.5	22.77	0.007
11	99.3	16.27	0.007
12	101.7	37.43	0.013
13	103.7	8.86	0.016
14	107.9	7.67	0.011

# M104

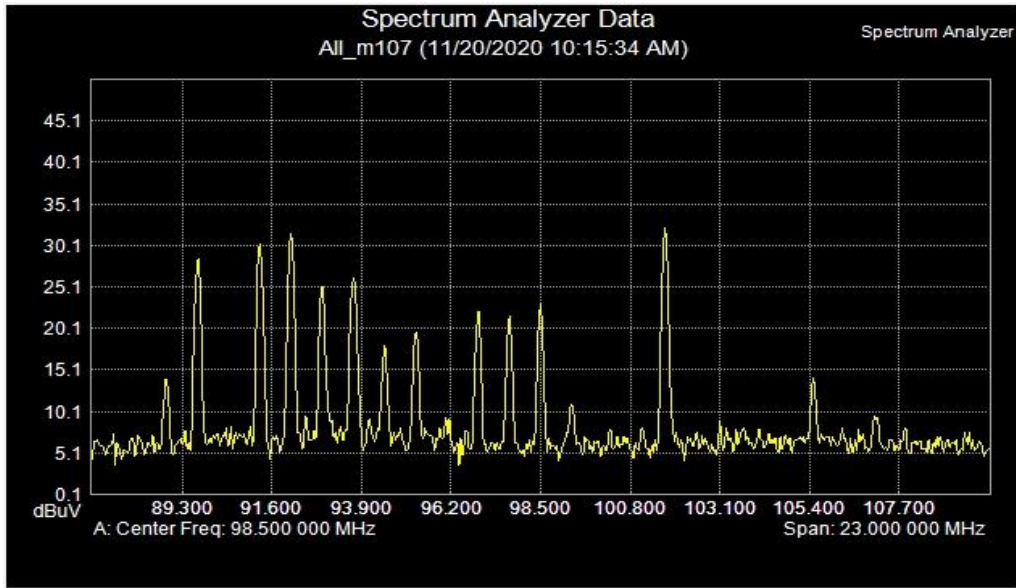


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 27
VBW	30.0 kHz	GPS Latitude	S 38 18 25
Detection	RMS	GPS Fix Time	11 20 2020 06 50 32

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	8.1	0.011
1	89.7	36.1	0.011
2	91.3	36.02	0.011
3	92.1	37.26	0.009
4	92.9	31.23	0.007
5	93.7	34.81	0.007
6	94.5	31.89	0.009
7	95.3	33.24	0.011
8	96.9	33.39	0.011
9	97.7	30.18	0.009
10	98.5	34.34	0.007
11	99.3	17.88	0.007
12	101.7	39.4	0.013
13	103.7	21.23	0.016
14	107.9	11.63	0.011

## M107

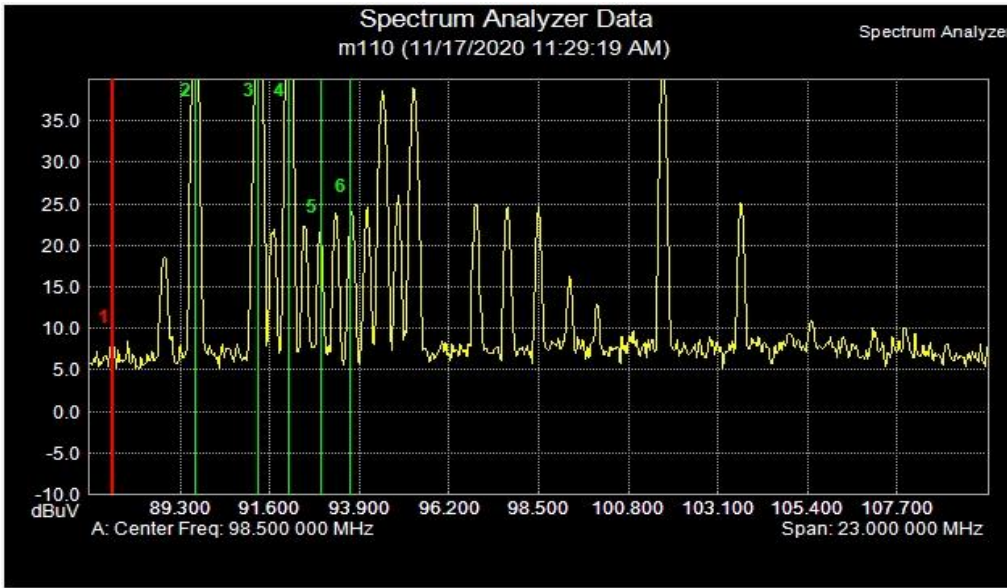


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 5 0
VBW	30.0 kHz	GPS Latitude	S 38 19 58
Detection	RMS	GPS Fix Time	11 20 2020 00 20 08

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.6	0.011
1	89.7	29.16	0.011
2	91.3	31	0.011
3	92.1	32.29	0.009
4	92.9	23.95	0.007
5	93.7	27.08	0.007
6	94.5	17.45	0.009
7	95.3	18.73	0.011
8	96.9	21.71	0.011
9	97.7	21.21	0.009
10	98.5	22.01	0.007
11	99.3	12.41	0.007
12	101.7	32.55	0.013
13	103.7	9.13	0.016
14	107.9	7.48	0.011

# M110

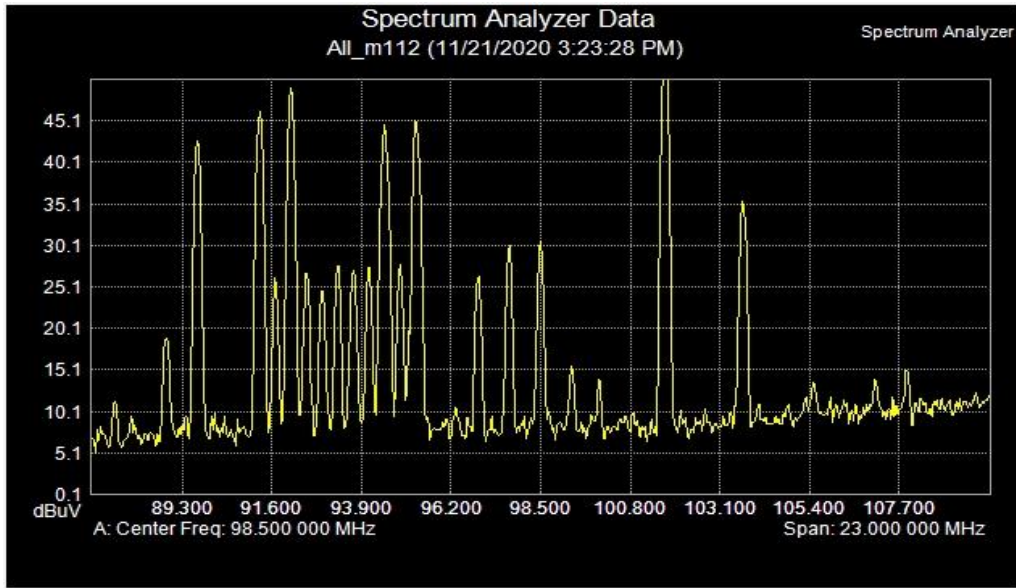


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	40.001 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 12 12
VBW	30.0 kHz	GPS Latitude	S 38 19 19
Detection	RMS	GPS Fix Time	11 17 2020 01 33 49

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	8.2	0.027
1	89.7	48.58	0.024
2	91.3	49.55	0.035
3	92.1	50.4	0.04
4	92.9	21.64	0.038
5	93.7	24.06	0.033
6	94.5	38.56	0.027
7	95.3	38.98	0.022
8	96.9	24.82	0.031
9	97.7	24.66	0.036
10	98.5	24.55	0.042
11	99.3	16.26	0.036
12	101.7	41.05	0.022
13	103.7	25.11	0.027
14	107.9	9.98	0.033

## M112

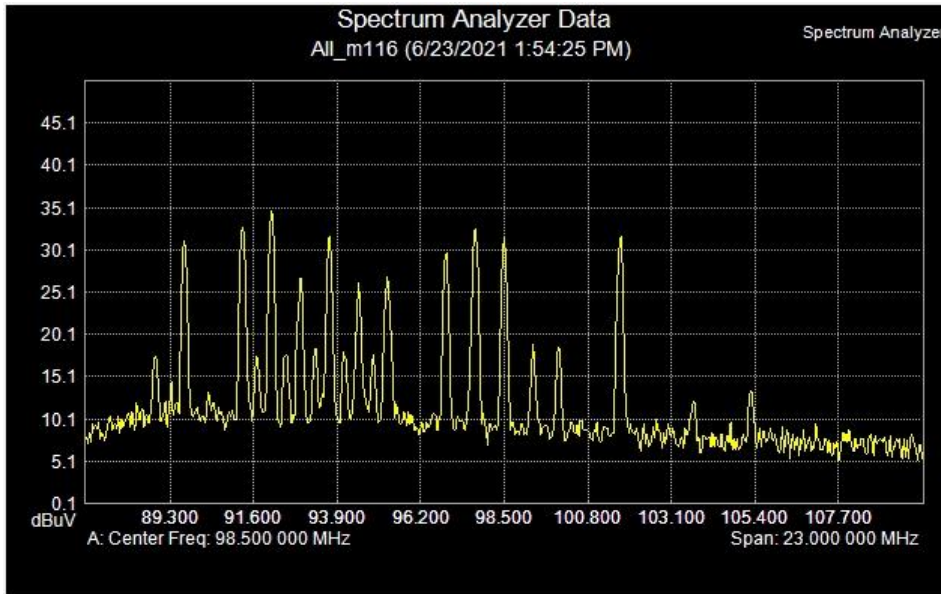


Measurement Parameters

Trace A data:Trace Average#	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 12 21
VBW	30.0 kHz	GPS Latitude	S 38 19 20
Detection	RMS	GPS Fix Time	11 21 2020 04 23 44

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.8	0.011
1	89.7	38.48	0.011
2	91.3	41.06	0.011
3	92.1	44.29	0.009
4	92.9	22.88	0.007
5	93.7	26.65	0.007
6	94.5	43.29	0.009
7	95.3	44.39	0.011
8	96.9	27.4	0.011
9	97.7	29.94	0.009
10	98.5	31.15	0.007
11	99.3	15.69	0.007
12	101.7	54.91	0.013
13	103.7	35.25	0.016
14	107.9	15	0.011

## M116



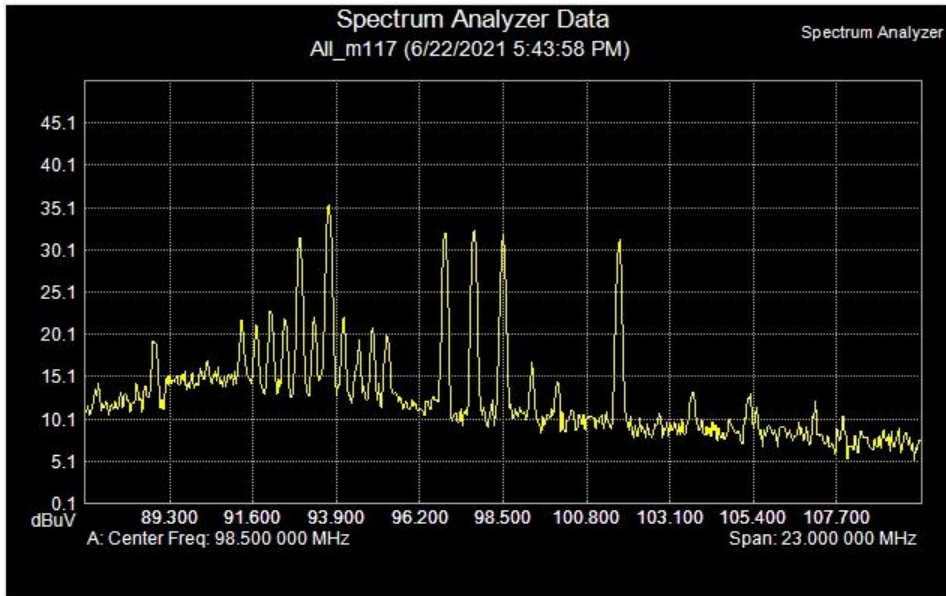
Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 35
VBW	30.0 kHz	GPS Latitude	S 38 17 38
Detection	RMS	GPS Fix Time	06 23 2021 03 26 40

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.91	0.011
1	89.7	31.18	0.011
2	91.3	32.42	0.011
3	92.1	34.52	0.009
4	92.9	24.36	0.007
5	93.7	30.36	0.007
6	94.5	27.32	0.009
7	95.3	27.83	0.011
8	96.9	31.15	0.011
9	97.7	34.52	0.009
10	98.5	32.82	0.007
11	99.3	18.36	0.007
12	101.7	34.2	0.013
13	103.7	16.02	0.016
14	107.9	8.64	0.011



# M117

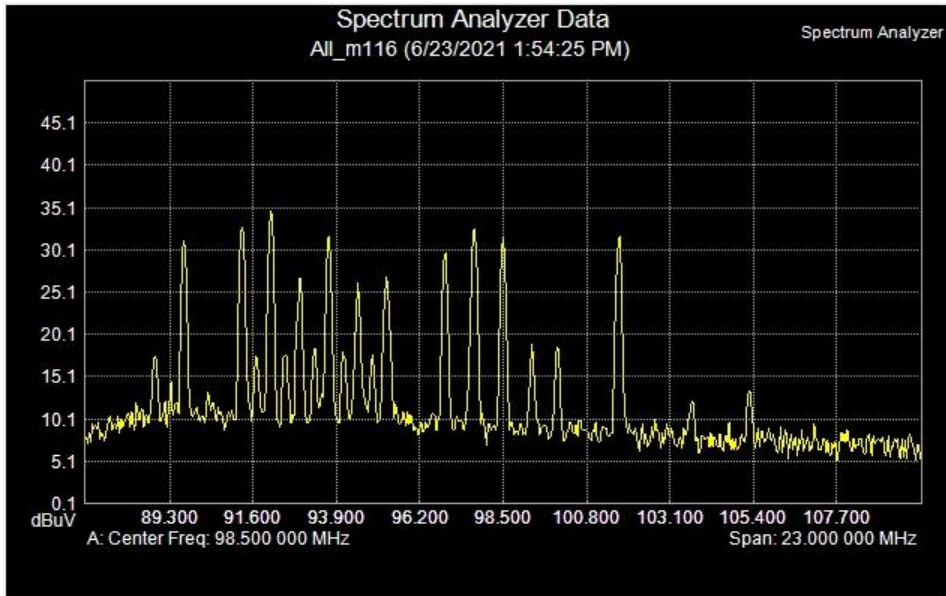


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 2 49
VBW	30.0 kHz	GPS Latitude	S 38 17 36
Detection	RMS	GPS Fix Time	06 22 2021 07 16 13

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	13	0.011
1	89.7	23.38	0.011
2	91.3	27.88	0.011
3	92.1	30.13	0.009
4	92.9	31.44	0.007
5	93.7	35.71	0.007
6	94.5	19.84	0.009
7	95.3	20.7	0.011
8	96.9	33.67	0.011
9	97.7	32.9	0.009
10	98.5	32.1	0.007
11	99.3	15.04	0.007
12	101.7	31.23	0.013
13	103.7	13.61	0.016
14	107.9	9.94	0.011

# M120

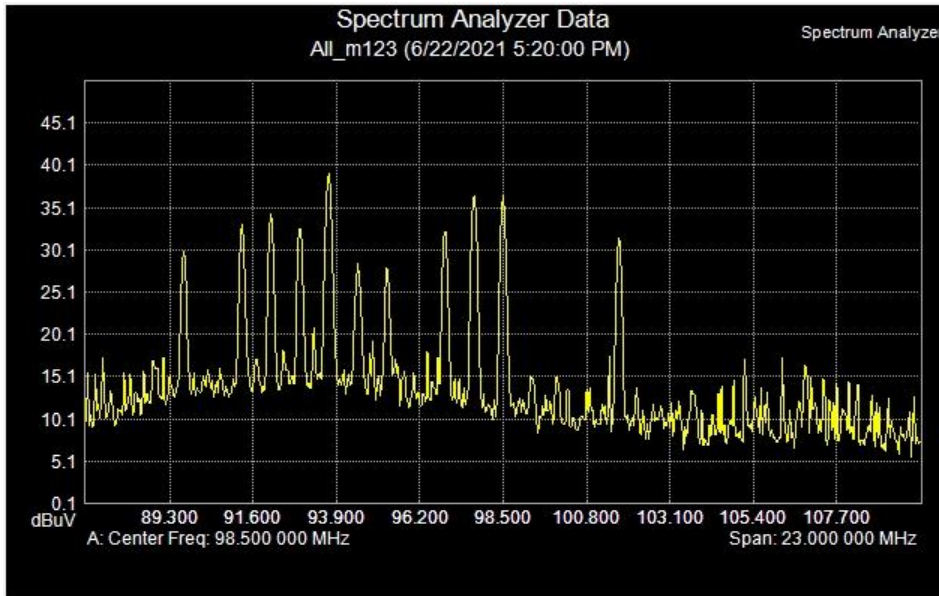


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 35
VBW	30.0 kHz	GPS Latitude	S 38 17 38
Detection	RMS	GPS Fix Time	06 23 2021 03 26 40

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.03	0.011
1	89.7	27.79	0.011
2	91.3	28.84	0.011
3	92.1	30.22	0.009
4	92.9	37.07	0.007
5	93.7	41.32	0.007
6	94.5	23.79	0.009
7	95.3	25.07	0.011
8	96.9	37.32	0.011
9	97.7	37.25	0.009
10	98.5	42.04	0.007
11	99.3	22.13	0.007
12	101.7	29.03	0.013
13	103.7	14.2	0.016
14	107.9	11.82	0.011

## M123

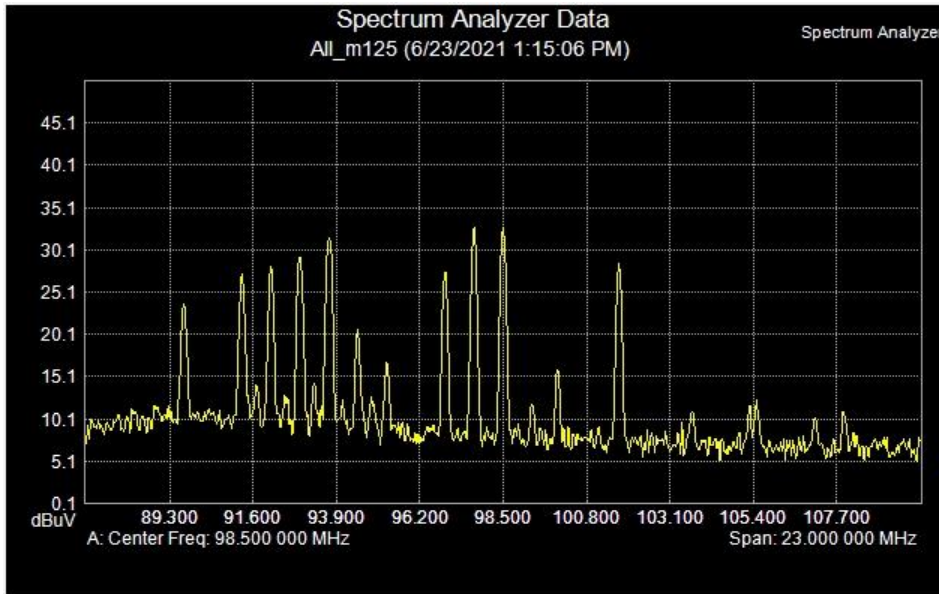


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 2 36
VBW	30.0 kHz	GPS Latitude	S 38 18 26
Detection	RMS	GPS Fix Time	06 22 2021 06 52 15

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	16.73	0.011
1	89.7	30.3	0.011
2	91.3	32.08	0.011
3	92.1	33.92	0.009
4	92.9	33.4	0.007
5	93.7	39.16	0.007
6	94.5	28.52	0.009
7	95.3	28	0.011
8	96.9	33.39	0.011
9	97.7	37.32	0.009
10	98.5	37.45	0.007
11	99.3	17.47	0.007
12	101.7	32.64	0.013
13	103.7	14.25	0.016
14	107.9	9.89	0.011

## M125

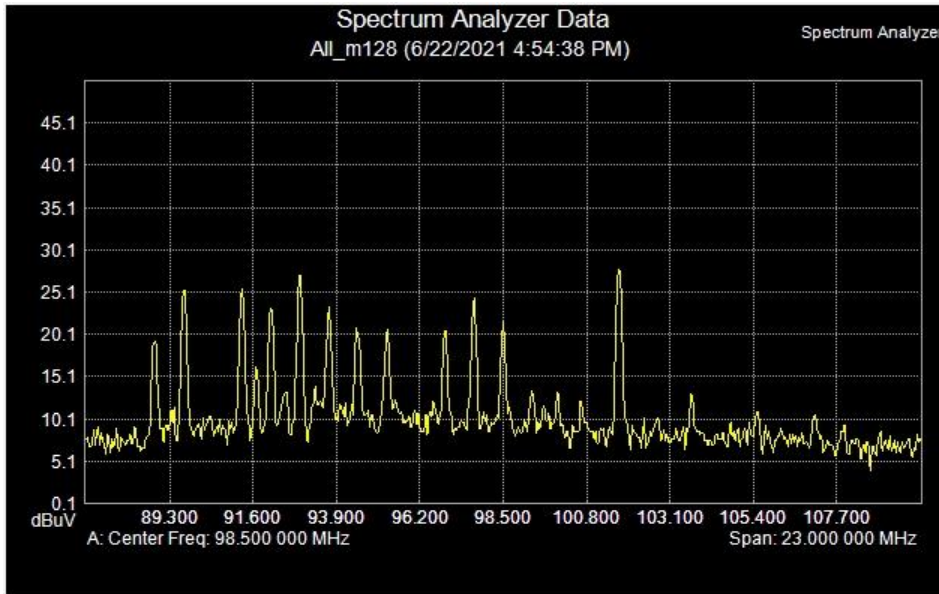


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 6
VBW	30.0 kHz	GPS Latitude	S 38 18 29
Detection	RMS	GPS Fix Time	06 23 2021 02 47 21

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.1	0.011
1	89.7	23.61	0.011
2	91.3	27.27	0.011
3	92.1	28.25	0.009
4	92.9	29.21	0.007
5	93.7	31.67	0.007
6	94.5	19.17	0.009
7	95.3	16.97	0.011
8	96.9	28.24	0.011
9	97.7	32.62	0.009
10	98.5	32.78	0.007
11	99.3	13.19	0.007
12	101.7	27.89	0.013
13	103.7	9.72	0.016
14	107.9	11.73	0.011

## M128

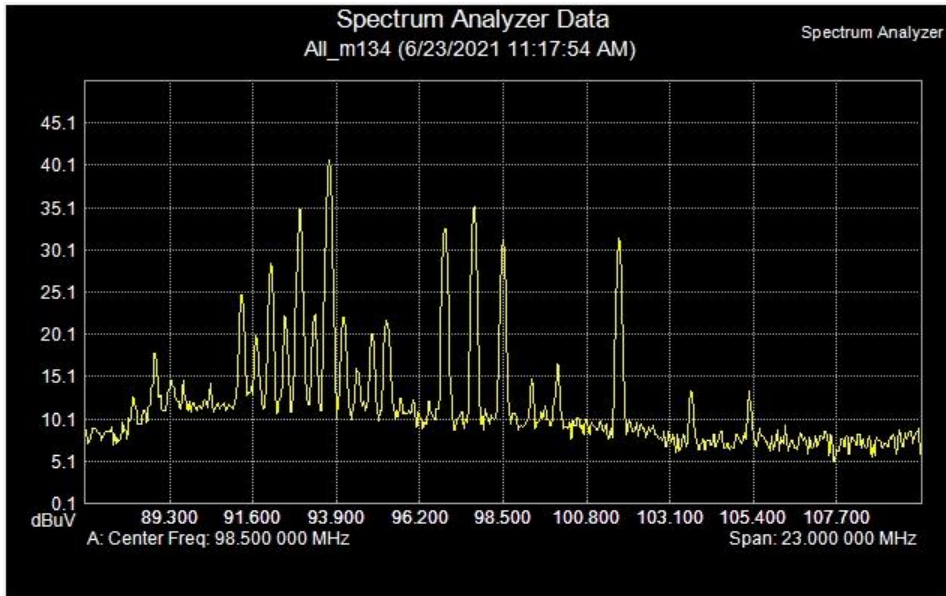


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 8
VBW	30.0 kHz	GPS Latitude	S 38 18 48
Detection	RMS	GPS Fix Time	06 22 2021 06 26 53

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.75	0.011
1	89.7	26.06	0.011
2	91.3	25.84	0.011
3	92.1	23.98	0.009
4	92.9	26.87	0.007
5	93.7	22.96	0.007
6	94.5	21.43	0.009
7	95.3	21.04	0.011
8	96.9	19.27	0.011
9	97.7	26.81	0.009
10	98.5	22.11	0.007
11	99.3	11.48	0.007
12	101.7	28.7	0.013
13	103.7	11.84	0.016
14	107.9	9.22	0.011

# M134

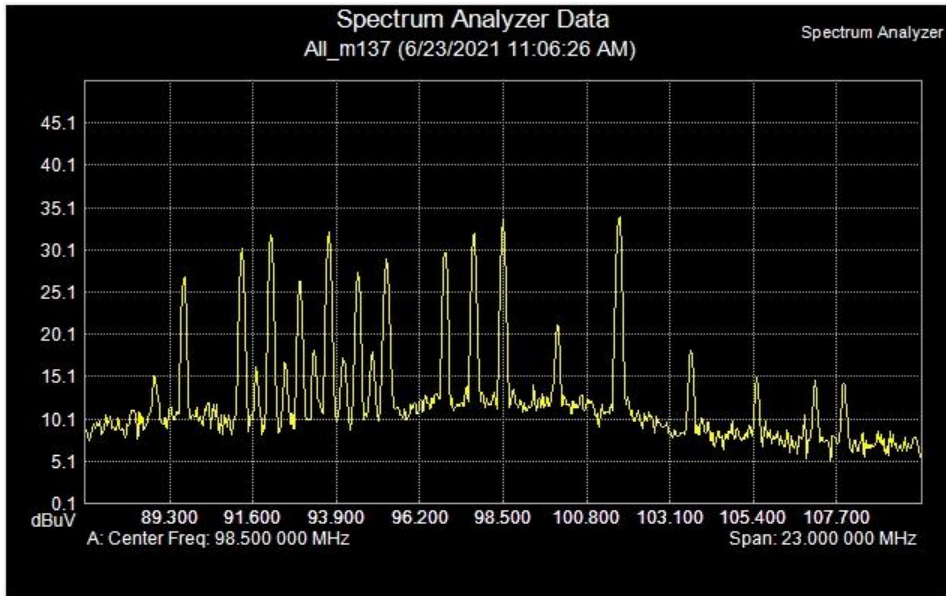


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 40
VBW	30.0 kHz	GPS Latitude	S 38 18 59
Detection	RMS	GPS Fix Time	06 23 2021 00 50 10

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.96	0.011
1	89.7	12.36	0.011
2	91.3	23.45	0.011
3	92.1	28.79	0.009
4	92.9	35.84	0.007
5	93.7	41.1	0.007
6	94.5	15.88	0.009
7	95.3	23.36	0.011
8	96.9	34.82	0.011
9	97.7	35.38	0.009
10	98.5	32.85	0.007
11	99.3	16.43	0.007
12	101.7	31.87	0.013
13	103.7	14.2	0.016
14	107.9	7.95	0.011

# M137

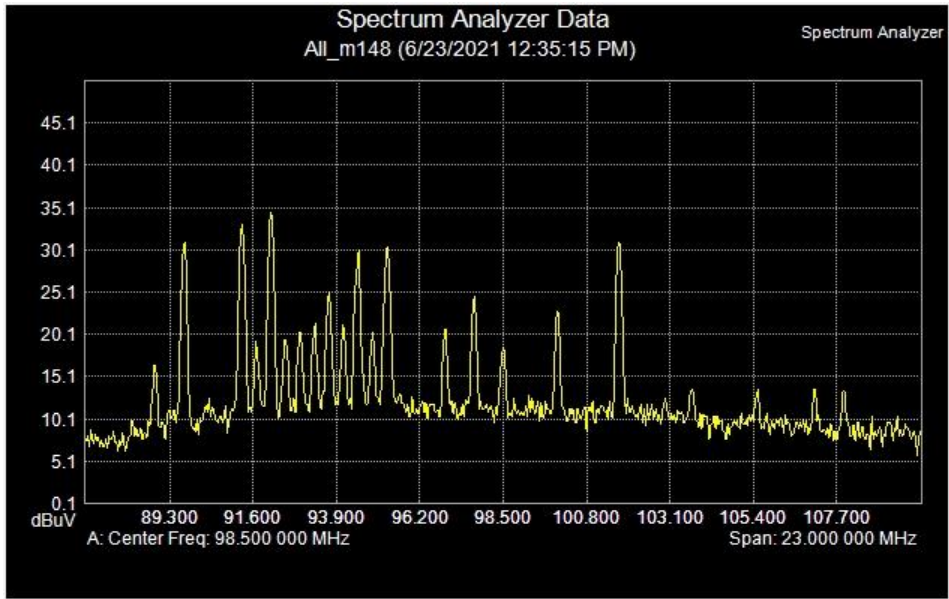


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 49
VBW	30.0 kHz	GPS Latitude	S 38 18 59
Detection	RMS	GPS Fix Time	06 23 2021 00 38 41

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.98	0.011
1	89.7	27.2	0.011
2	91.3	30.4	0.011
3	92.1	32.28	0.009
4	92.9	26.1	0.007
5	93.7	32.41	0.007
6	94.5	29.35	0.009
7	95.3	29.81	0.011
8	96.9	29.52	0.011
9	97.7	30.04	0.009
10	98.5	32.42	0.007
11	99.3	11.01	0.007
12	101.7	35.36	0.013
13	103.7	19.92	0.016
14	107.9	15.08	0.011

# M148



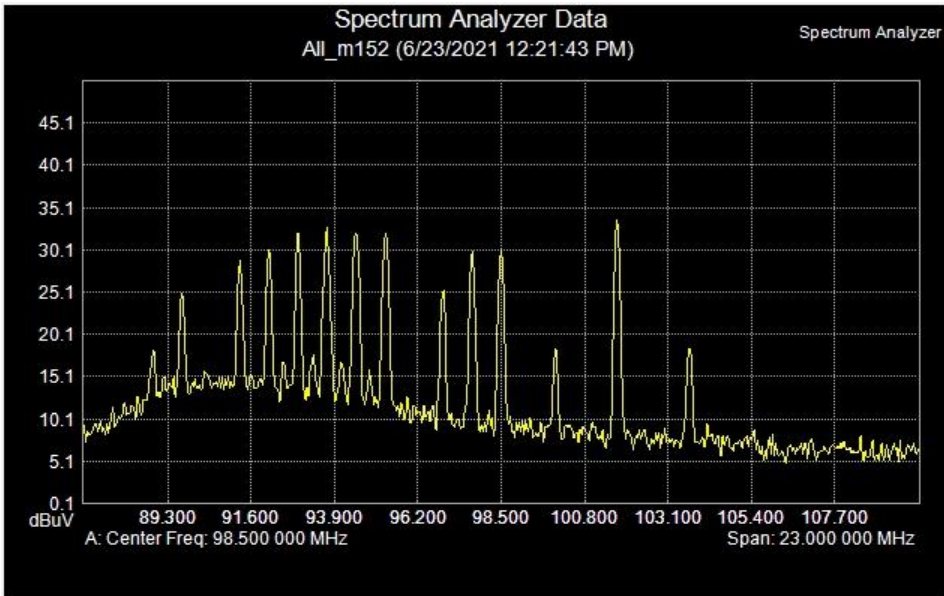
Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 59
VBW	30.0 kHz	GPS Latitude	S 38 18 56
Detection	RMS	GPS Fix Time	06 23 2021 02 07 30

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	7.57	0.011
1	89.7	30.27	0.011
2	91.3	31.96	0.011
3	92.1	34.06	0.009
4	92.9	18.57	0.007
5	93.7	22.69	0.007
6	94.5	26.99	0.009
7	95.3	26.37	0.011
8	96.9	12.47	0.011
9	97.7	14.04	0.009
10	98.5	8.47	0.007
11	99.3	7.89	0.007
12	101.7	30.54	0.013
13	103.7	14.2	0.016
14	107.9	11.18	0.011



# M152

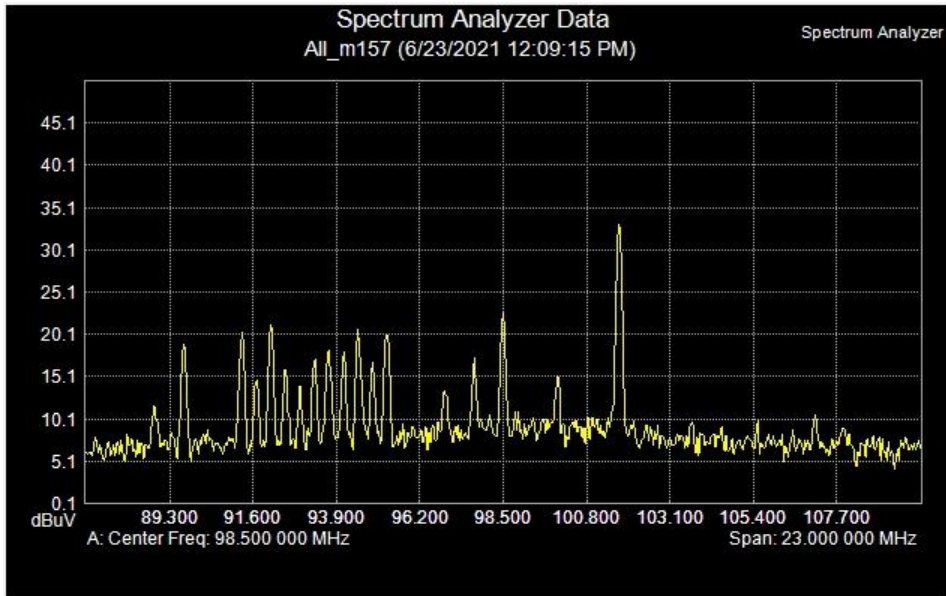


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 53
VBW	30.0 kHz	GPS Latitude	S 38 18 52
Detection	RMS	GPS Fix Time	06 23 2021 01 53 58

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.18	0.011
1	89.7	24.5	0.011
2	91.3	29.1	0.011
3	92.1	29.45	0.009
4	92.9	32.13	0.007
5	93.7	33.01	0.007
6	94.5	32.97	0.009
7	95.3	32.45	0.011
8	96.9	26.3	0.011
9	97.7	29.38	0.009
10	98.5	30.62	0.007
11	99.3	10.24	0.007
12	101.7	33.76	0.013
13	103.7	18.89	0.016
14	107.9	5.06	0.011

# M157

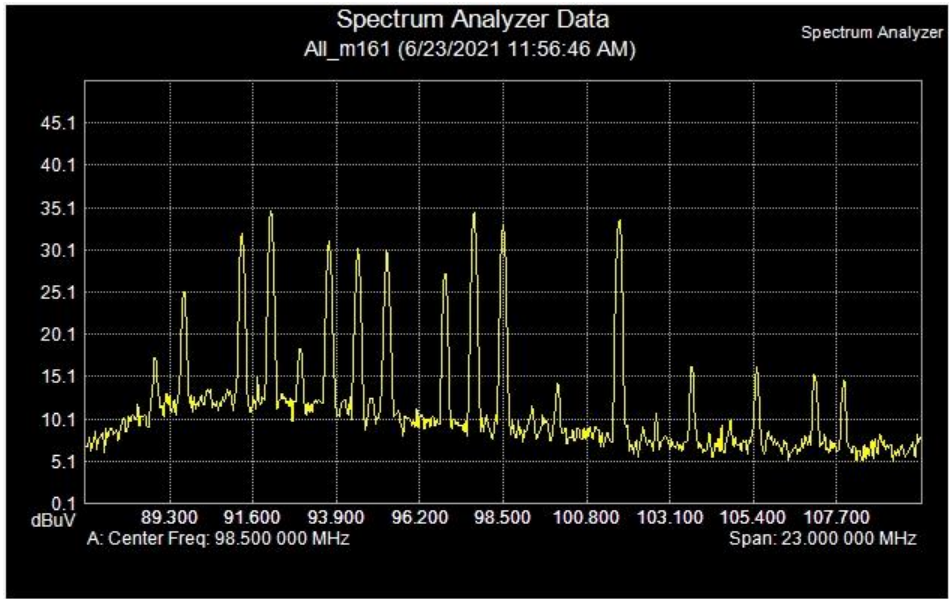


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 1
VBW	30.0 kHz	GPS Latitude	S 38 18 50
Detection	RMS	GPS Fix Time	06 23 2021 01 41 30

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.2	0.011
1	89.7	20.22	0.011
2	91.3	18.86	0.011
3	92.1	17.74	0.009
4	92.9	16.03	0.007
5	93.7	19.05	0.007
6	94.5	21.77	0.009
7	95.3	22.2	0.011
8	96.9	23.29	0.011
9	97.7	22.66	0.009
10	98.5	14.63	0.007
11	99.3	13.24	0.007
12	101.7	30.64	0.013
13	103.7	11.54	0.016
14	107.9	8.53	0.011

# M161

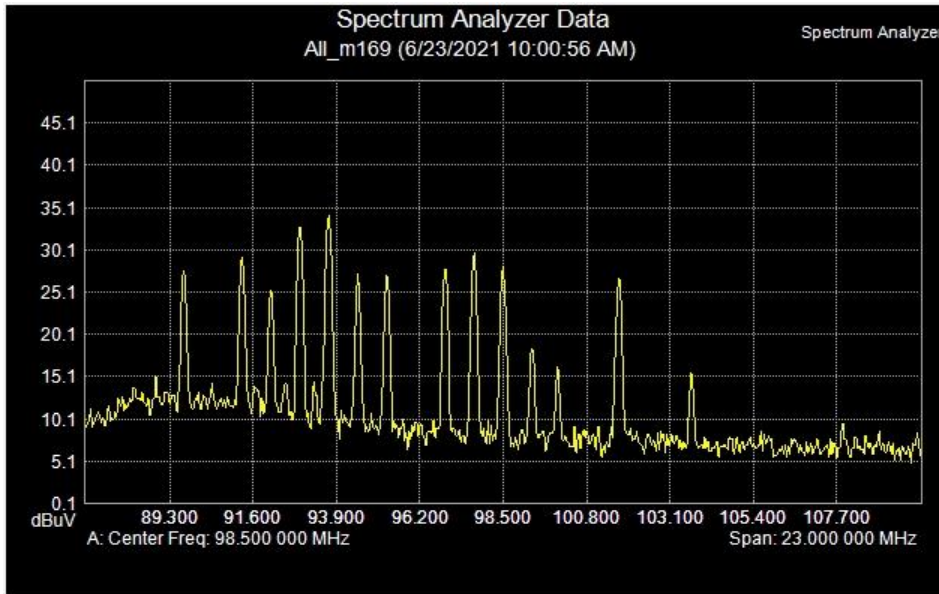


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 7
VBW	30.0 kHz	GPS Latitude	S 38 18 44
Detection	RMS	GPS Fix Time	06 23 2021 01 29 01

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.69	0.011
1	89.7	25.46	0.011
2	91.3	31.2	0.011
3	92.1	34.45	0.009
4	92.9	17.1	0.007
5	93.7	31.81	0.007
6	94.5	31.48	0.009
7	95.3	29.96	0.011
8	96.9	26.6	0.011
9	97.7	34.26	0.009
10	98.5	33.26	0.007
11	99.3	11.76	0.007
12	101.7	33.77	0.013
13	103.7	16.53	0.016
14	107.9	14.42	0.011

## M169

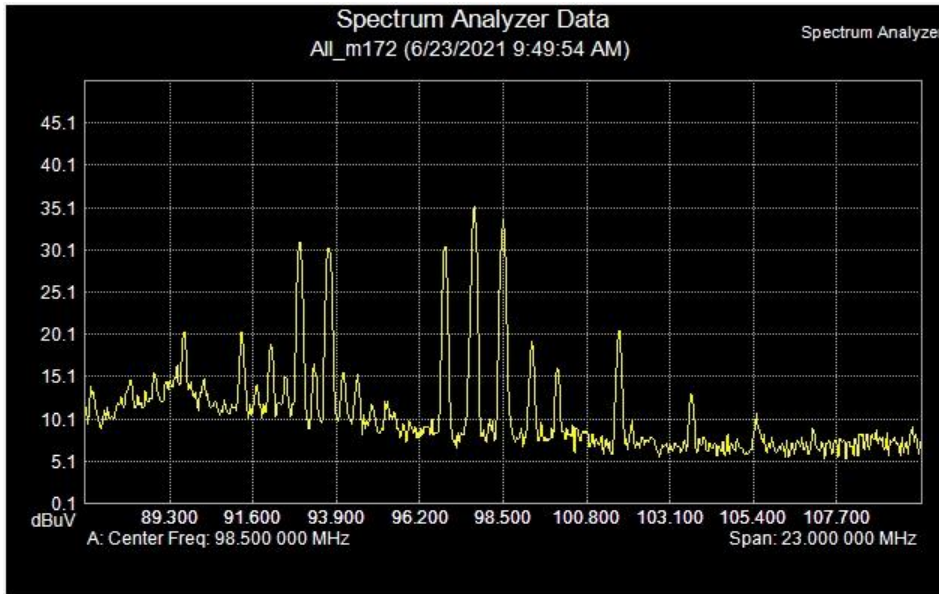


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 5
VBW	30.0 kHz	GPS Latitude	S 38 18 59
Detection	RMS	GPS Fix Time	06 22 2021 23 33 12

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.91	0.011
1	89.7	29	0.011
2	91.3	30.71	0.011
3	92.1	26.77	0.009
4	92.9	33.02	0.007
5	93.7	33.86	0.007
6	94.5	27.27	0.009
7	95.3	27.65	0.011
8	96.9	28.58	0.011
9	97.7	29.59	0.009
10	98.5	27.85	0.007
11	99.3	18.64	0.007
12	101.7	27.74	0.013
13	103.7	13.42	0.016
14	107.9	7.1	0.011

## M172

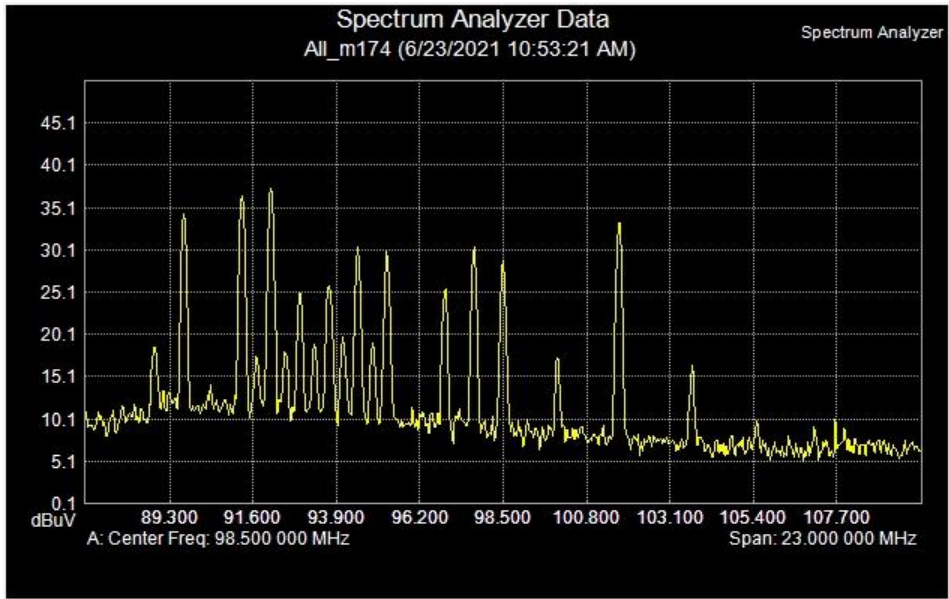


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 33
VBW	30.0 kHz	GPS Latitude	S 38 19 17
Detection	RMS	GPS Fix Time	06 22 2021 23 22 10

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.62	0.011
1	89.7	21.5	0.011
2	91.3	21.41	0.011
3	92.1	19.93	0.009
4	92.9	30.94	0.007
5	93.7	30.17	0.007
6	94.5	14.99	0.009
7	95.3	8.54	0.011
8	96.9	30.84	0.011
9	97.7	35.44	0.009
10	98.5	34.01	0.007
11	99.3	20.04	0.007
12	101.7	19.76	0.013
13	103.7	12.32	0.016
14	107.9	10.04	0.011

# M174

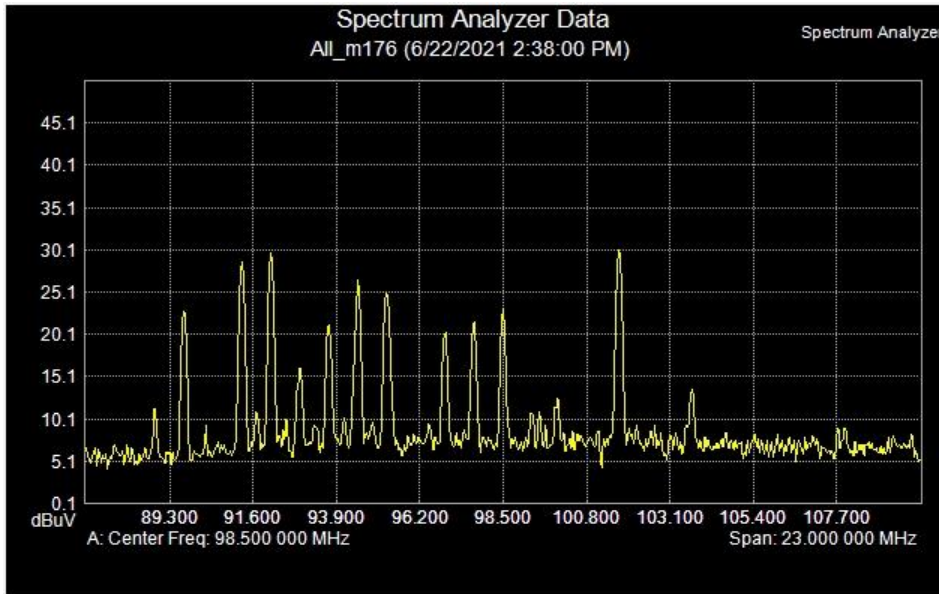


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 53
VBW	30.0 kHz	GPS Latitude	S 38 19 58
Detection	RMS	GPS Fix Time	06 23 2021 00 25 37

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	9.74	0.011
1	89.7	34.56	0.011
2	91.3	36.84	0.011
3	92.1	38.18	0.009
4	92.9	25.65	0.007
5	93.7	27.96	0.007
6	94.5	30.01	0.009
7	95.3	31.04	0.011
8	96.9	20.69	0.011
9	97.7	26.95	0.009
10	98.5	25.62	0.007
11	99.3	8.7	0.007
12	101.7	33.07	0.013
13	103.7	13.47	0.016
14	107.9	9.48	0.011

## M176

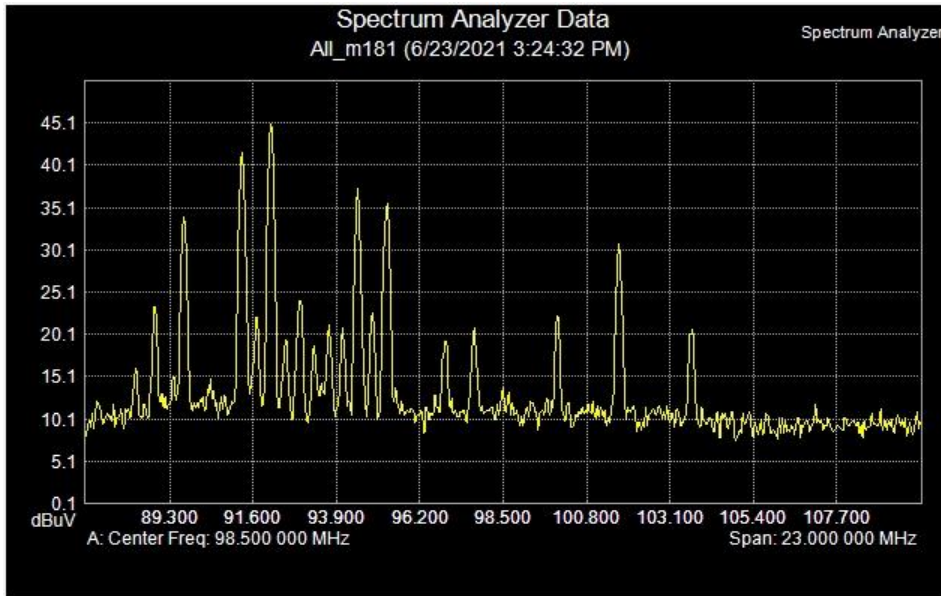


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 39
VBW	30.0 kHz	GPS Latitude	S 38 20 4
Detection	RMS	GPS Fix Time	06 22 2021 04 10 16

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	5.53	0.011
1	89.7	24.51	0.011
2	91.3	28.87	0.011
3	92.1	29.64	0.009
4	92.9	17.42	0.007
5	93.7	21.96	0.007
6	94.5	26.67	0.5
7	95.3	25.29	1.3
8	96.9	21.73	2.9
9	97.7	23.22	3.7
10	98.5	23.32	4.5
11	99.3	10.44	5.3
12	101.7	30.59	7.7
13	103.7	14.31	9.7
14	107.9	8.75	13.9

# M181



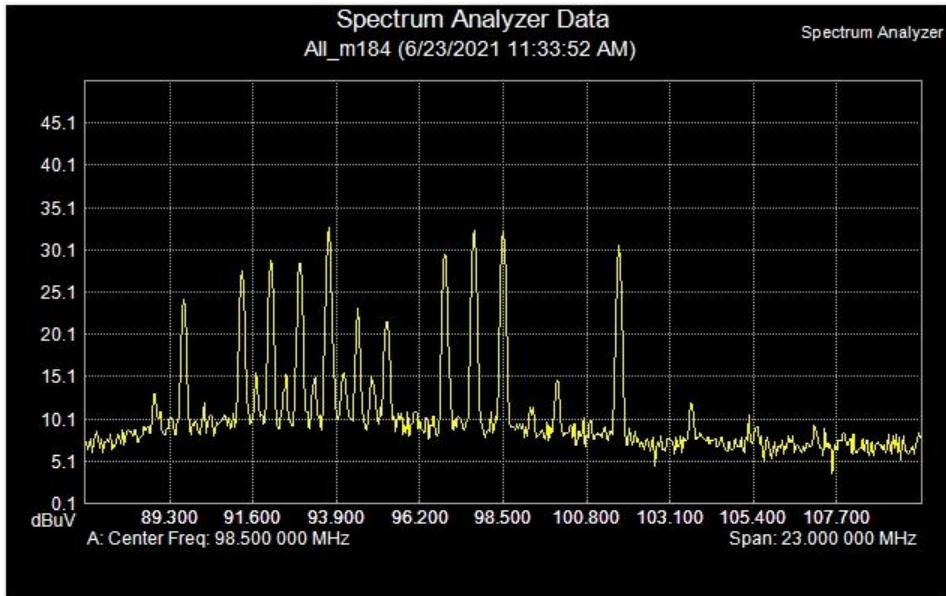
Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 7 3
VBW	30.0 kHz	GPS Latitude	S 38 12 56
Detection	RMS	GPS Fix Time	06 23 2021 04 56 49

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	12.64	0.011
1	89.7	34.76	0.011
2	91.3	41.12	0.011
3	92.1	43.88	0.009
4	92.9	24.49	0.007
5	93.7	19.01	0.007
6	94.5	37.92	0.009
7	95.3	35.61	0.011
8	96.9	19.2	0.011
9	97.7	19.92	0.009
10	98.5	18.27	0.007
11	99.3	12.17	0.007
12	101.7	31.86	0.013
13	103.7	22.19	0.016
14	107.9	12.23	0.011



# M184

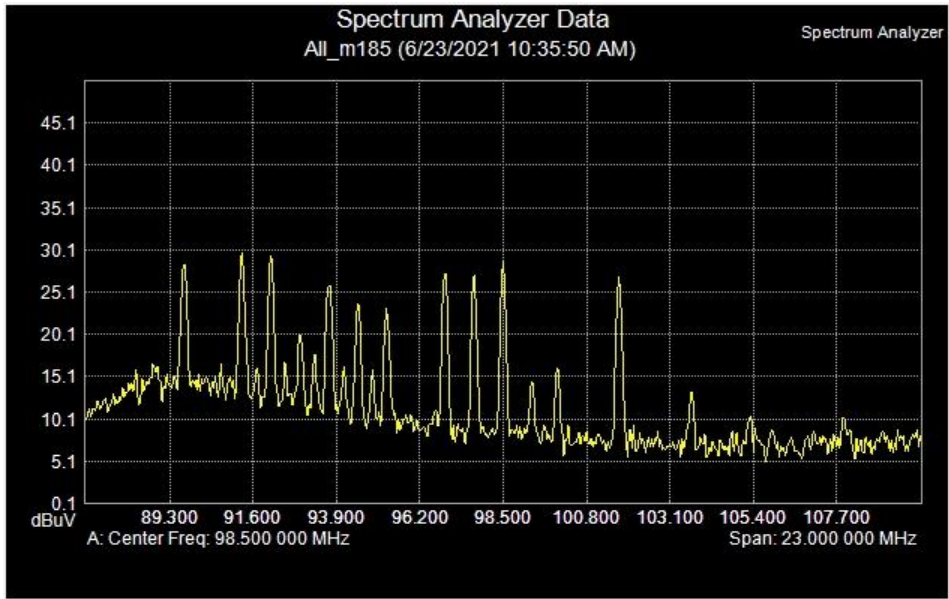


Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 3 55
VBW	30.0 kHz	GPS Latitude	S 38 18 42
Detection	RMS	GPS Fix Time	06 23 2021 01 06 07

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	6.98	0.011
1	89.7	23.96	0.011
2	91.3	27.36	0.011
3	92.1	27.11	0.009
4	92.9	28.96	0.007
5	93.7	32.86	0.007
6	94.5	21.77	0.009
7	95.3	20.95	0.011
8	96.9	29.94	0.011
9	97.7	32.16	0.009
10	98.5	32.39	0.007
11	99.3	9.72	0.007
12	101.7	31.11	0.013
13	103.7	11.87	0.016
14	107.9	8.08	0.011

# M185



Measurement Parameters

Trace A data:Trace Average	2	Center Frequency	98.500 000 MHz
Trace Mode	Average	Start Frequency	87.000 000 MHz
Preamp	OFF	Stop Frequency	110.000 000 MHz
Min Sweep Time	0.149 S	Frequency Span	23.000 000 MHz
Reference Level Offset	0 dB	Reference Level	50.101 dBuV
Input Attenuation	0.0 dB	Scale	5.0 dBuV/div
RBW	100.0 kHz	GPS Longitude	E 142 4 2
VBW	30.0 kHz	GPS Latitude	S 38 19 12
Detection	RMS	GPS Fix Time	06 23 2021 00 08 06

	Frequency (Mhz)	Power(udBV)	Frequency_Uncertainty (Mhz)
0	87.6	12.63	0.011
1	89.7	27.74	0.011
2	91.3	27.92	0.011
3	92.1	26.16	0.009
4	92.9	27.46	0.007
5	93.7	26.07	0.007
6	94.5	24.24	0.009
7	95.3	22.98	0.011
8	96.9	18	0.011
9	97.7	12.12	0.009
10	98.5	23.38	0.007
11	99.3	14.35	0.007
12	101.7	27.64	0.013
13	103.7	11.82	0.016
14	107.9	8.75	0.011

# APPENDIX G TELEVISION STRENGTH SIGNAL SURVEY RESULTS

## M02

Figure G-1 Channel 47



Figure G-4 Channel 50



Figure G-2 Channel 48



Figure G-5 Channel 51

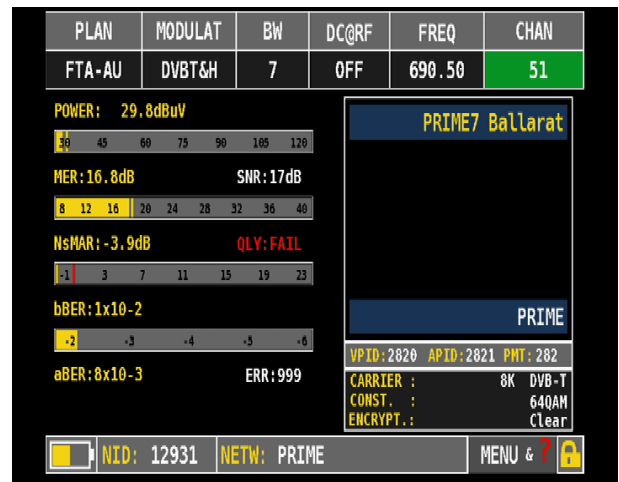


Figure G-3 Channel 49

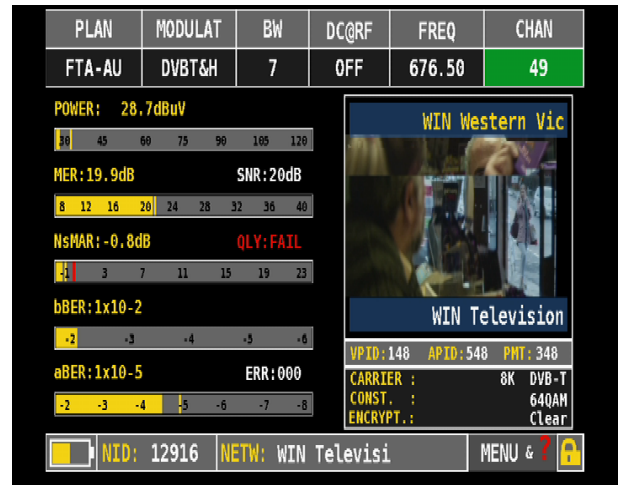


# M03

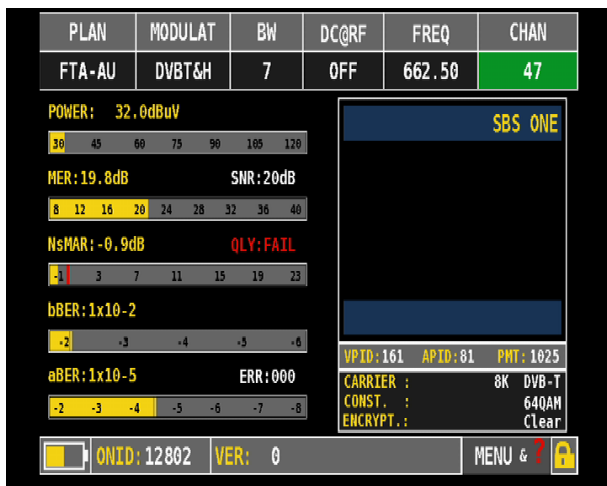
**Figure G-6 Antenna Aiming**



**Figure G-9 Channel 49**



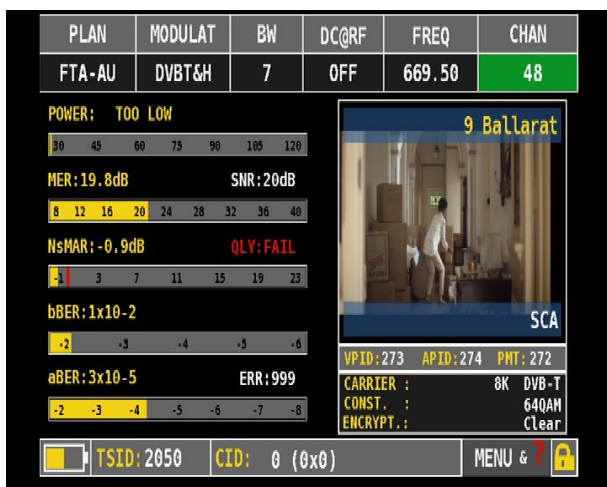
**Figure G-7 Channel 47**



**Figure G-10 Channel 50**



**Figure G-8 Channel 48**



**Figure G-11 Channel 51**



# M06

Figure G-12 Antenna Aiming



Figure G-13 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: TOO LOW

MER: 17.5dB SNR: 17dB

NSMAR: -3.2dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 2x10<sup>-3</sup> ERR: 999

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC MENU & ?

Figure G-14 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 30.4dBuV

MER: 17.7dB SNR: 18dB

NSMAR: -3.0dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 6x10<sup>-4</sup> ERR: 000

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

NID: 12955 NETW: SCA MENU & ?

Figure G-15 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 25.2dBuV

MER: 18.1dB SNR: 18dB

NSMAR: -2.6dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 2x10<sup>-3</sup> ERR: 999

TSID: 12922 CID: 0 (0x0) MENU & ?

WIN Western Vic

WIN Television

VPID: 148 APID: 548 PMT: 348

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

Figure G-16 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 30.7dBuV

MER: 20.3dB SNR: 20dB

NSMAR: -0.4dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 5x10<sup>-6</sup> ERR: 000

ONID: 4112 VER: 29 MENU & ?

ABC NEWS

ABC Victoria

VPID: 516 APID: 654 PMT: 258

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

Figure G-17 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 26.0dBuV

MER: 19.2dB SNR: 19dB

NSMAR: -1.5dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 1x10<sup>-4</sup> ERR: 999

TSID: 2461 CID: 0 (0x0) MENU & ?

PRIME7 Ballarat

PRIME

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

# M08

Figure G-18 Antenna Aiming



Figure G-21 Channel 49



Figure G-19 Channel 47

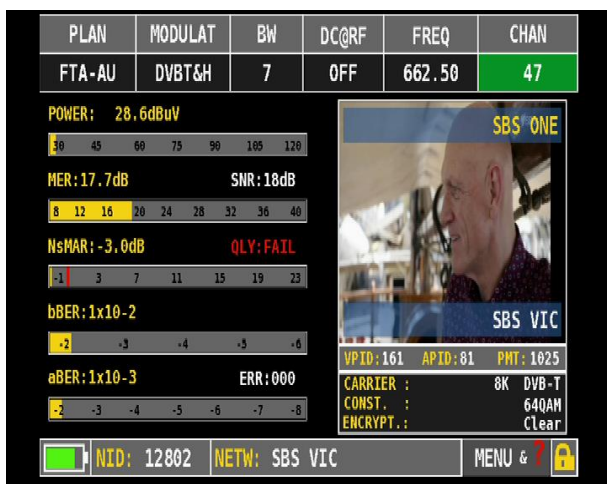


Figure G-22 Channel 50



Figure G-20 Channel 48

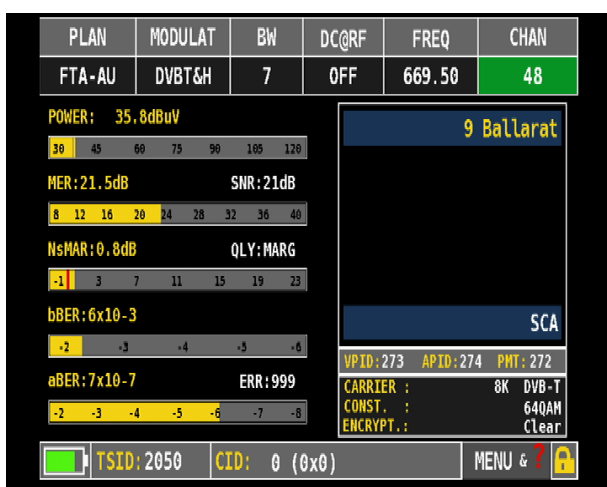
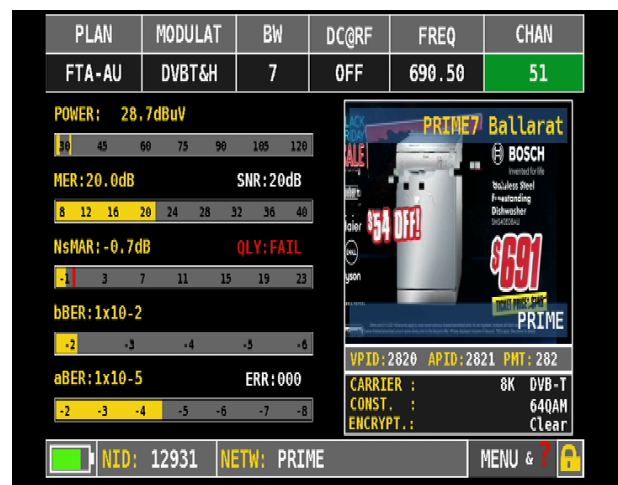
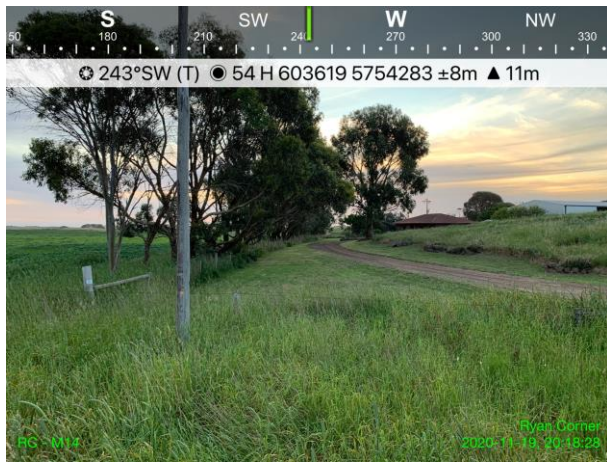


Figure G-23 Channel 51



# M14

**Figure G-24 Antenna Aiming**



**Figure G-25 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 40.2dBuV

MER: 24.2dB SNR: 24dB

NsMAR: 3.5dB QLY: MARG

bBER: 2x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 000

TSID: 880 CID: 0 (0x0)

SBS ONE

SBS VIC

VPID: 161 APID: 81 PMT: 1025

CARRIER: 640AM

CONST.: Clear

ENCRYPT.: Clear

**Figure G-26 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: TOO LOW

MER: 23.2dB SNR: 23dB

NsMAR: 2.5dB QLY: MARG

bBER: 8x10<sup>-3</sup>

aBER: 4x10<sup>-6</sup> ERR: 999

TSID: 2050 CID: 0 (0x0)

9 Ballarat

SCA

VPID: 273 APID: 274 PMT: 272

CARRIER: 640AM

CONST.: Clear

ENCRYPT.: Clear

**Figure G-27 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 36.0dBuV

MER: 23.3dB SNR: 23dB

NsMAR: 2.6dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 6x10<sup>-4</sup> ERR: 999

TSID: 12922 CID: 0 (0x0)

BOLD Western Vic

WIN Television

VPID: 149 APID: 549 PMT: 349

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

**Figure G-28 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 35.4dBuV

MER: 22.3dB SNR: 22dB

NsMAR: 1.6dB QLY: MARG

bBER: 7x10<sup>-3</sup>

aBER: 9x10<sup>-6</sup> ERR: 999

NID: 12883 NETW: ABC Victoria

(UNTITLED)

Data Service

ABC Victoria

VPID: 516 APID: 654 PMT: 258

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

**Figure G-29 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 32.1dBuV

MER: 23.0dB SNR: 23dB

NsMAR: 2.3dB QLY: MARG

bBER: 1x10<sup>-2</sup>

aBER: 3x10<sup>-5</sup> ERR: 999

NID: 12931 NETW: PRIME

PRIME7 Ballarat

PRIME

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

# M19

Figure G-30 Channel 47



Figure G-33 Channel 50



Figure G-31 Channel 48



Figure G-34 Channel 51

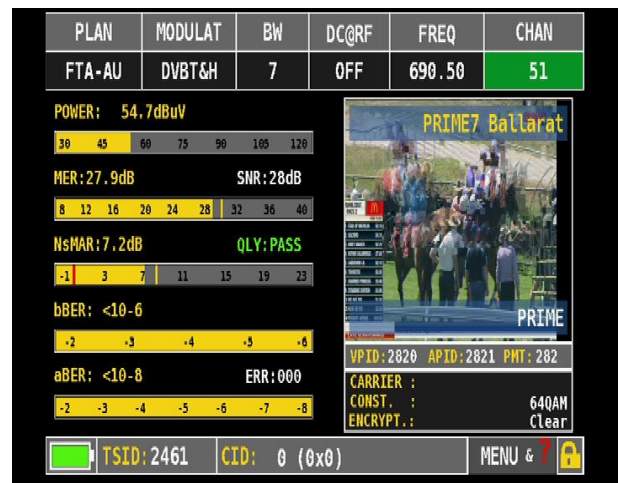


Figure G-32 Channel 49





## M20

Figure G-35 Channel 47

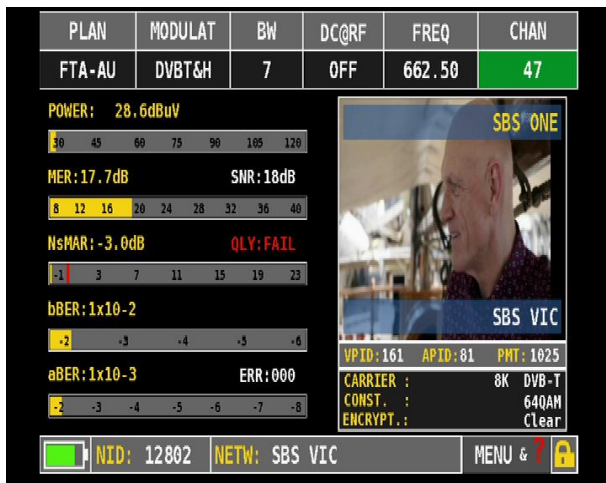


Figure G-38 Channel 50



Figure G-36 Channel 48



Figure G-39 Channel 51

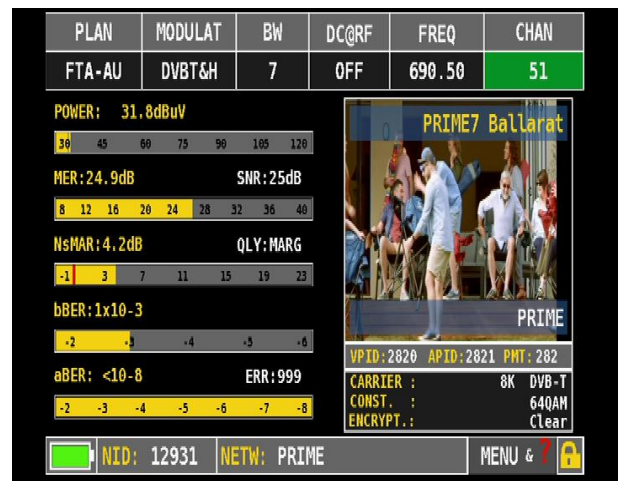


Figure G-37 Channel 49



## M21

Figure G-40 Channel 47



Figure G-43 Channel 50



Figure G-41 Channel 48

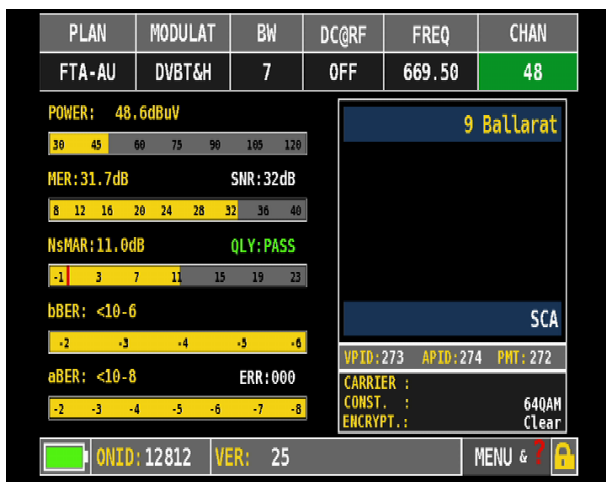
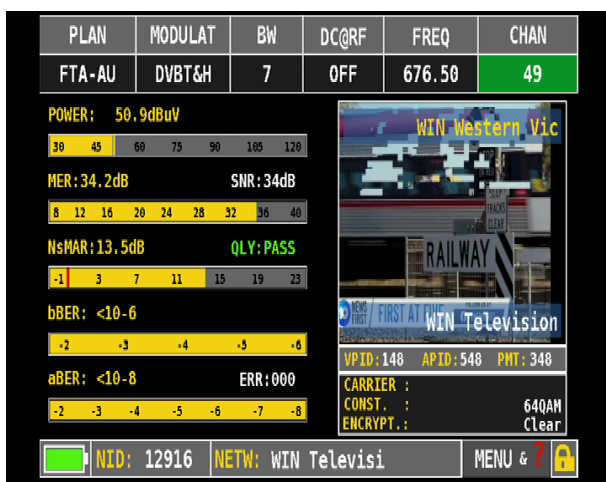


Figure G-44 Channel 51



Figure G-42 Channel 49



## M23

Figure G-45 Antenna Aiming



Figure G-48 Channel 49



Figure G-46 Channel 47

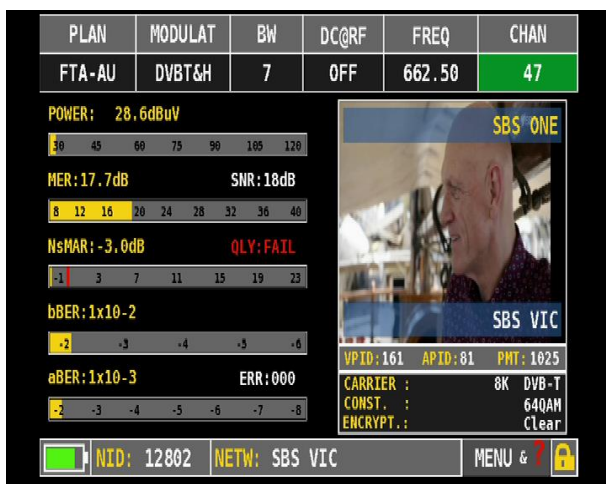


Figure G-49 Channel 50



Figure G-47 Channel 48



Figure G-50 Channel 51



# M24

**Figure G-51 Antenna Aiming**



**Figure G-52 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 38.5dBuV

MER: 23.8dB SNR: 24dB

NsMAR: 3.1dB QLY: MARG

bBER: 9x10<sup>-4</sup>

aBER: <10<sup>-8</sup> ERR: 000

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

TSID: 880 CID: 0 (0x0) MENU & ?

**Figure G-53 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 40.3dBuV

MER: 25.9dB SNR: 26dB

NsMAR: 5.2dB QLY: MARG

bBER: 6x10<sup>-5</sup>

aBER: <10<sup>-8</sup> ERR: 000

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0) MENU & ?

**Figure G-54 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 39.2dBuV

MER: 24.4dB SNR: 24dB

NsMAR: 3.7dB QLY: MARG

bBER: 1x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 000

VPID: 148 APID: 548 PMT: 348

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

TSID: 12922 CID: 0 (0x0) MENU & ?

**Figure G-55 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 28.4dBuV

MER: 18.0dB SNR: 18dB

NsMAR: -2.7dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 1x10<sup>-3</sup> ERR: 999

VPID: 516 APID: 654 PMT: 258

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

ONID: 4112 VER: 29 MENU & ?

**Figure G-56 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 33.9dBuV

MER: 20.5dB SNR: 20dB

NsMAR: -0.2dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 6x10<sup>-6</sup> ERR: 000

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

## M26

Figure G-57 Antenna Aiming



Figure G-60 Channel 49

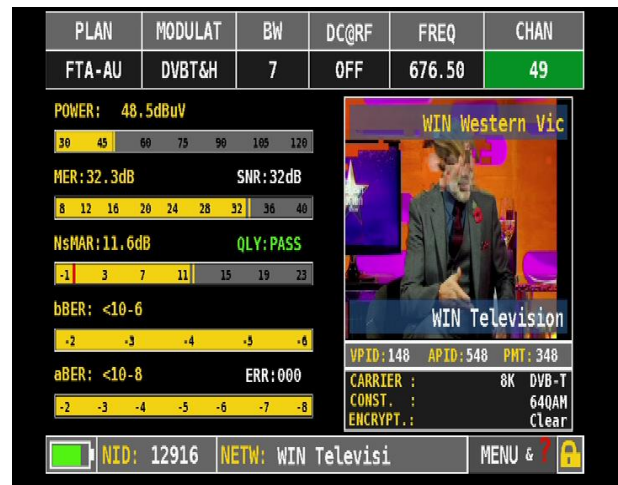


Figure G-58 Channel 47

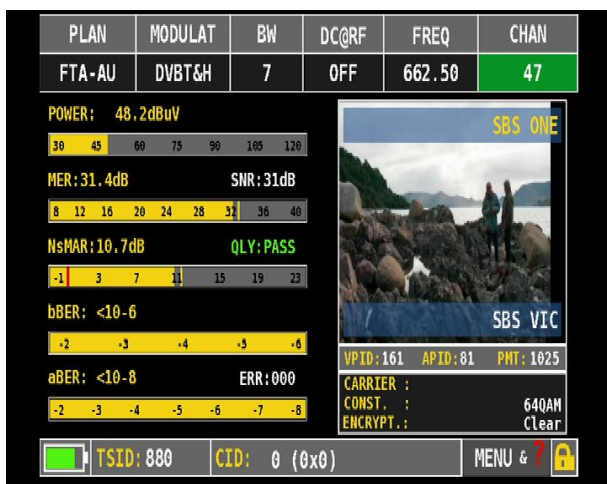


Figure G-61 Channel 50



Figure G-59 Channel 48

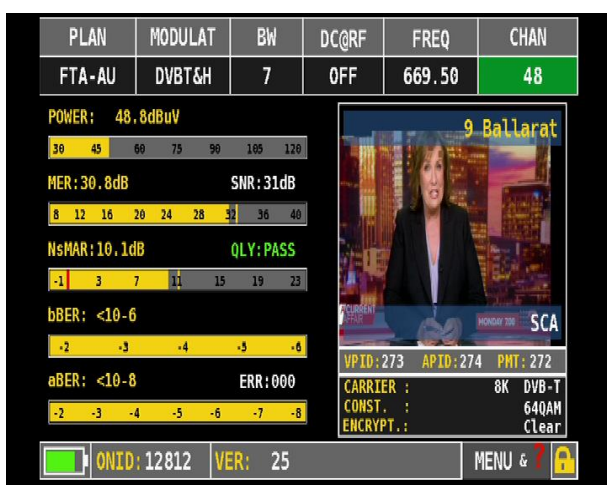
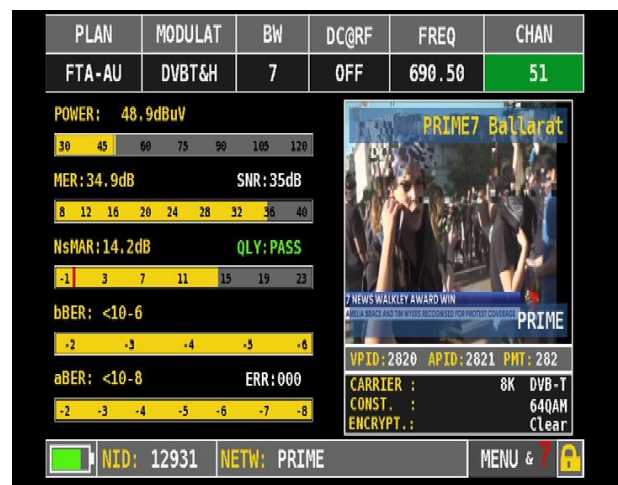


Figure G-62 Channel 51



## M27

Figure G-63 Antenna Aiming



Figure G-64 Channel 47



Figure G-65 Channel 48

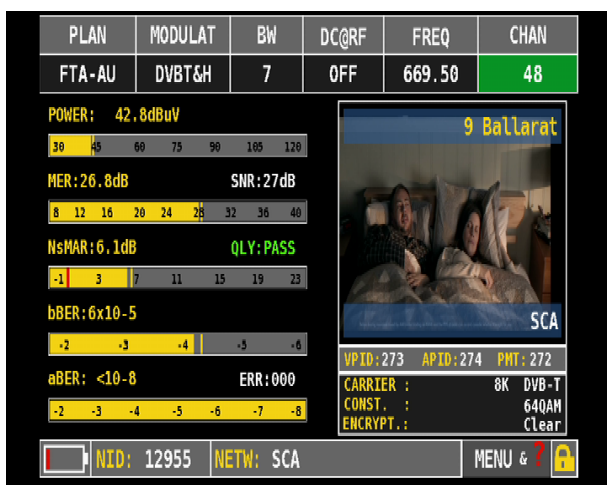


Figure G-66 Channel 49

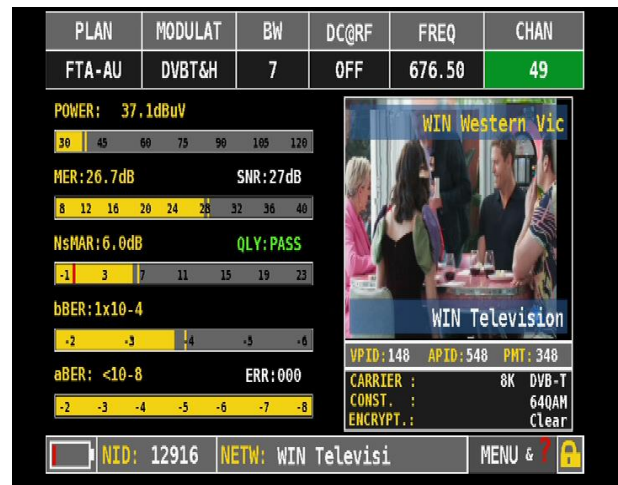


Figure G-67 Channel 50



Figure G-68 Channel 51



## M29

Figure G-69 Antenna Aiming



Figure G-72 Channel 49



Figure G-70 Channel 47

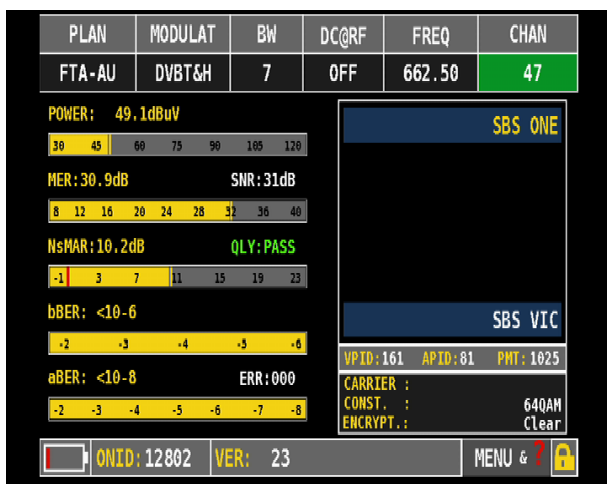


Figure G-73 Channel 50



Figure G-71 Channel 48

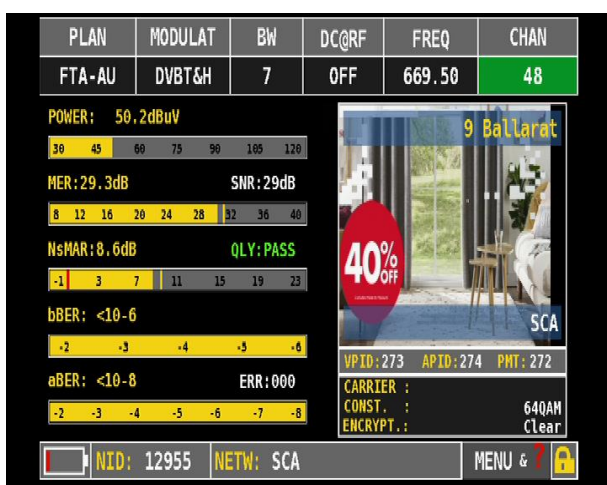


Figure G-74 Channel 51



## M30 - Vertical

Figure G-75 Antenna Aiming



Figure G-78 Channel 49

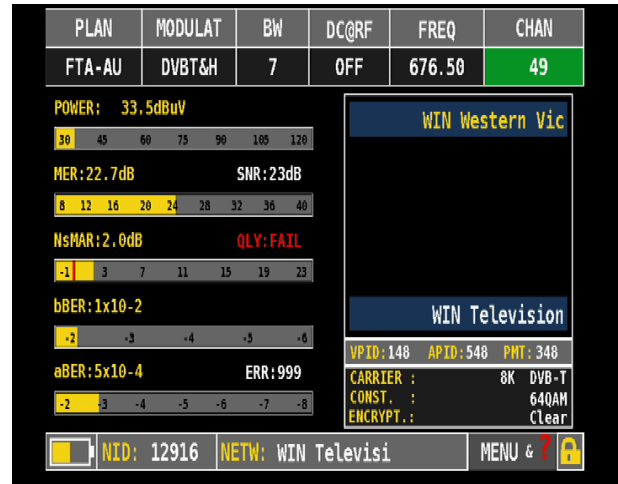


Figure G-76 Channel 47



Figure G-79 Channel 50



Figure G-77 Channel 48

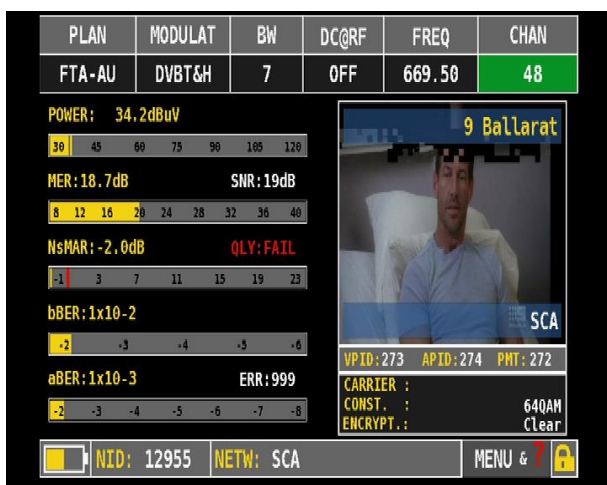


Figure G-80 Channel 51





## M30 – Horizontal

Figure G-81 Antenna Aiming



Figure G-84 Channel 49

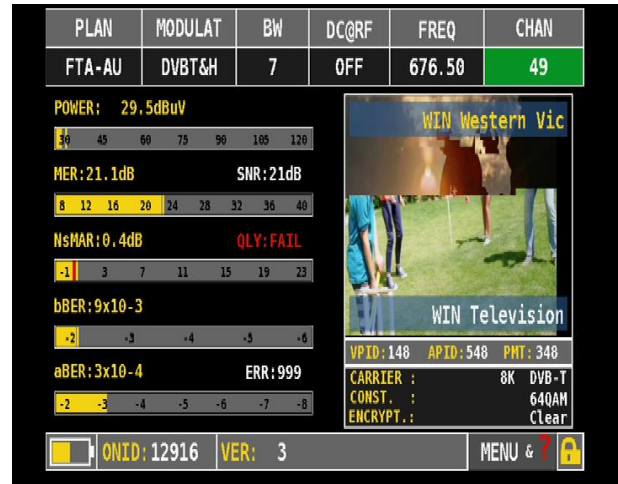


Figure G-82 Channel 47

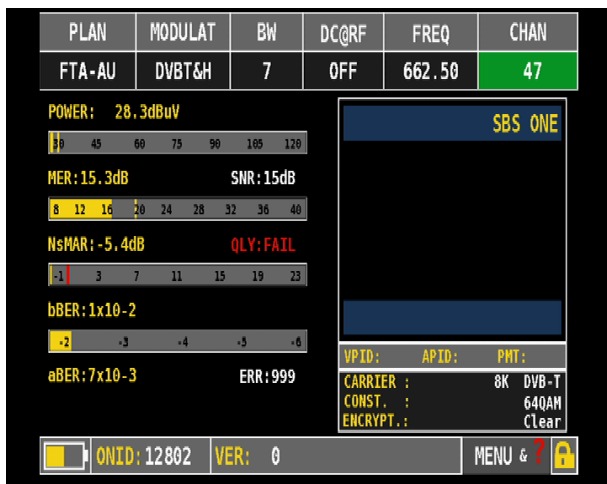


Figure G-85 Channel 50



Figure G-83 Channel 48

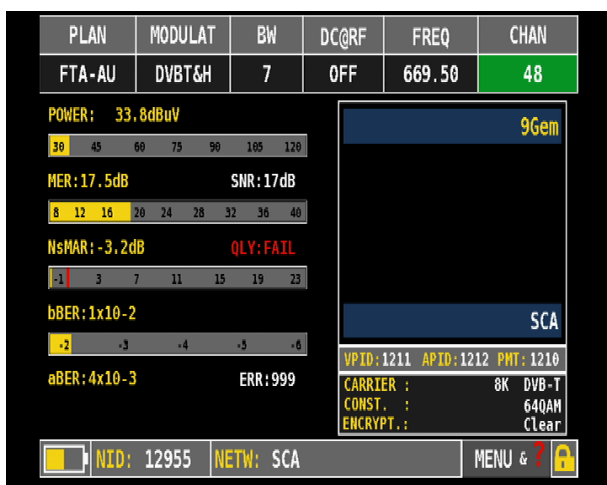


Figure G-86 Channel 51



## M33

Figure G-87 Antenna Aiming



Figure G-90 Channel 49



Figure G-88 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 28.6dBuV

MER: 17.7dB SNR: 18dB

NsMAR: -3.0dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 1x10<sup>-3</sup> ERR: 000

NID: 12802 NETW: SBS VIC

VPID: 161 APID: 81 PNT: 1025  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

SBS ONE  
SBS VIC

Figure G-91 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 27.5dBuV

MER: 18.7dB SNR: 19dB

NsMAR: -2.0dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 2x10<sup>-4</sup> ERR: 999

NID: 12883 NETW: ABC Victoria

VPID: 516 APID: 654 PNT: 250  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ABC NEWS  
ABC Victoria

Figure G-89 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 28.3dBuV

MER: 17.5dB SNR: 17dB

NsMAR: -3.2dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 2x10<sup>-3</sup> ERR: 003

NID: 12955 NETW: SCA

VPID: 273 APID: 274 PNT: 272  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

9 Ballarat  
SCA

Figure G-92 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: TOO LOW

MER: 21.0dB SNR: 21dB

NsMAR: 0.3dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 3x10<sup>-3</sup> ERR: 999

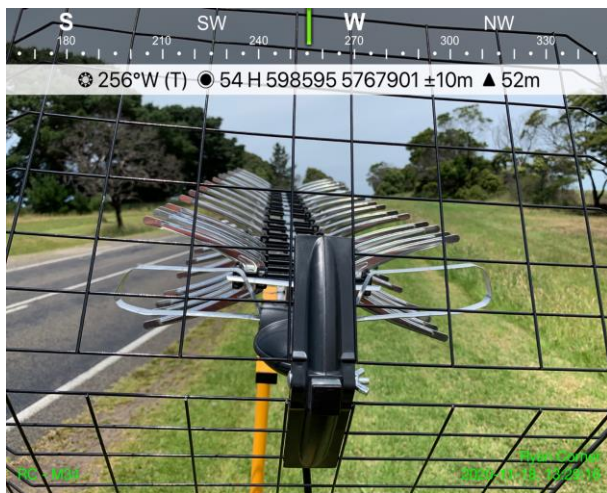
NID: 12931 NETW: PRIME

VPID: 2820 APID: 2821 PNT: 282  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

PRIME7 Ballarat  
PRIME

# M34

**Figure G-93 Antenna Aiming**



**Figure G-96 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 36.3dBuV

MER: 23.0dB SNR: 23dB

NsMAR: 2.3dB QLY: MARG

bBER: 2x10-3

aBER: <10-8 ERR: 000

ONID: 12916 VER: 3

WIN Western Vic  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

**Figure G-94 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 31.6dBuV

MER: 20.9dB SNR: 21dB

NsMAR: 0.2dB QLY: FAIL

bBER: 1x10-2

aBER: 5x10-3 ERR: 999

NID: 12802 NETW: SBS VIC

SBS ONE  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

**Figure G-97 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 35.4dBuV

MER: 22.3dB SNR: 22dB

NsMAR: 1.6dB QLY: MARG

bBER: 4x10-3

aBER: <10-8 ERR: 000

TSID: 563 CID: 0 (0x0)

(UNTITLED)  
Data Service  
ABC Victoria  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

**Figure G-95 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 36.3dBuV

MER: 21.0dB SNR: 21dB

NsMAR: 0.3dB QLY: MARG

bBER: 7x10-3

aBER: <10-8 ERR: 999

TSID: 2050 CID: 0 (0x0)

9 Ballarat  
SCA  
VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

**Figure G-98 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 27.5dBuV

MER: 18.9dB SNR: 19dB

NsMAR: -1.8dB QLY: FAIL

bBER: 1x10-2

aBER: 8x10-5 ERR: 000

NID: 12931 NETW: PRIME

PRIME7 Ballarat  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

# M35

Figure G-99 Antenna Aiming



Figure G-100 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 33.4dBuV

MER: 19.0dB SNR: 19dB

NsMAR: -1.7dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 7x10<sup>-5</sup> ERR: 000

ONID: 12802 VER: 23

SBS ONE

SBS VIC

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

Figure G-101 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 31.9dBuV

MER: 18.1dB SNR: 18dB

NsMAR: -2.6dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 5x10<sup>-4</sup> ERR: 000

ONID: 12812 VER: 25

9 Ballarat

SCA

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

Figure G-102 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 30.5dBuV

MER: 19.0dB SNR: 19dB

NsMAR: -1.7dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 1x10<sup>-4</sup> ERR: 000

NID: 12916 NETW: WIN Televisi

WIN Western Vic

WIN Television

VPID: 148 APID: 548 PMT: 348

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

Figure G-103 Channel 50

Figure G-104 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 30.1dBuV

MER: 18.5dB SNR: 18dB

NsMAR: -2.2dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 2x10<sup>-4</sup> ERR: 000

NID: 12931 NETW: PRIME

PRIME7 Ballarat

PRIME

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

# M36

**Figure G-105 Antenna Aiming**



**Figure G-106 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 59.7dBuV  
 MER: 31.3dB SNR: 31dB  
 NsMAR: 10.6dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12802 VER: 23 MENU & ?

**Figure G-107 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 59.6dBuV  
 MER: 30.9dB SNR: 31dB  
 NsMAR: 10.2dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

9 Ballarat  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12955 NETW: SCA MENU & ?

**Figure G-108 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 57.7dBuV  
 MER: >36dB SNR: >36dB  
 NsMAR: 18.0dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12916 NETW: WIN Televisi MENU & ?

**Figure G-109 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 57.3dBuV  
 MER: 34.9dB SNR: 35dB  
 NsMAR: 14.2dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 563 CID: 0 (0x0) MENU & ?

**Figure G-110 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 54.3dBuV  
 MER: 27.3dB SNR: 27dB  
 NsMAR: 6.6dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 2461 CID: 0 (0x0) MENU & ?

## M38

Figure G-111 Channel 47

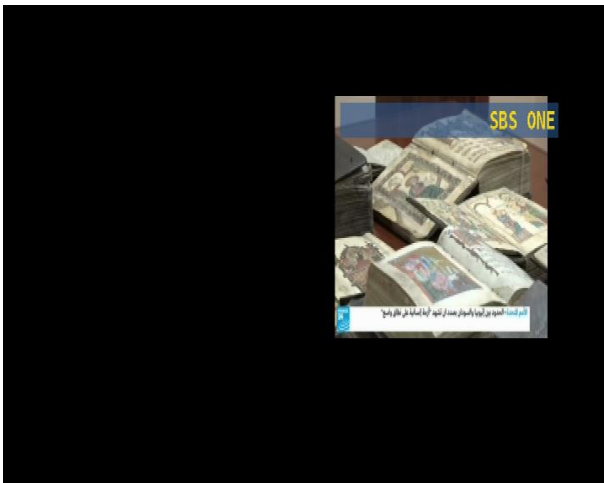


Figure G-114 Channel 50

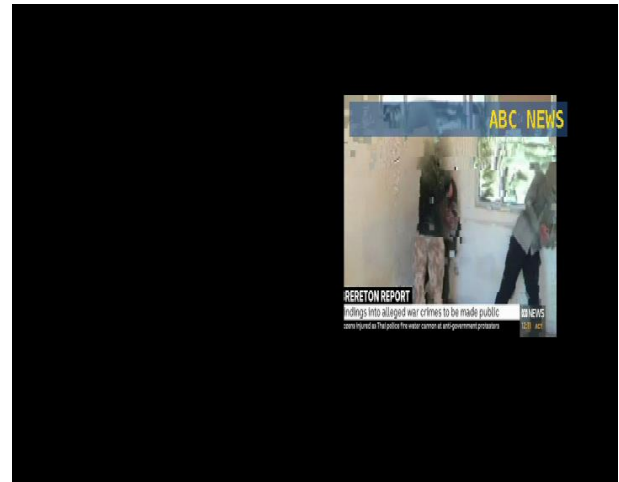


Figure G-112 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 32.0dBuV

MER: 20.9dB SNR: 21dB

NSMAR: 0.2dB QLY: MARG

bBER: 1x10<sup>-2</sup>

aBER: 1x10<sup>-7</sup> ERR: 000

NID: 12955 NETW: SCA MENU & ?

9 Ballarat

SCA

VPID: 273 APID: 274 PMT: 272

CARRIER : 8K DVB-T

CONST. : 64QAM

ENCRYPT. : Clear

Figure G-115 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 34.2dBuV

MER: 21.7dB SNR: 22dB

NSMAR: 1.0dB QLY: MARG

bBER: 1x10<sup>-2</sup>

aBER: 1x10<sup>-8</sup> ERR: 000

ONID: 12931 VER: 18 MENU & ?

PRIME7 Ballarat

PRIME

VPID: 2820 APID: 2821 PMT: 282

CARRIER : 8K DVB-T

CONST. : 64QAM

ENCRYPT. : Clear

Figure G-113 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 35.5dBuV

MER: 22.4dB SNR: 22dB

NSMAR: 1.7dB QLY: MARG

bBER: 2x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 000

TSID: 12922 CID: 0 (0x0) MENU & ?

WIN Western Vic

WIN Television

VPID: 148 APID: 548 PMT: 348

CARRIER : 8K DVB-T

CONST. : 64QAM

ENCRYPT. : Clear

## M39

Figure G-116 Channel 47



Figure G-119 Channel 50



Figure G-117 Channel 48

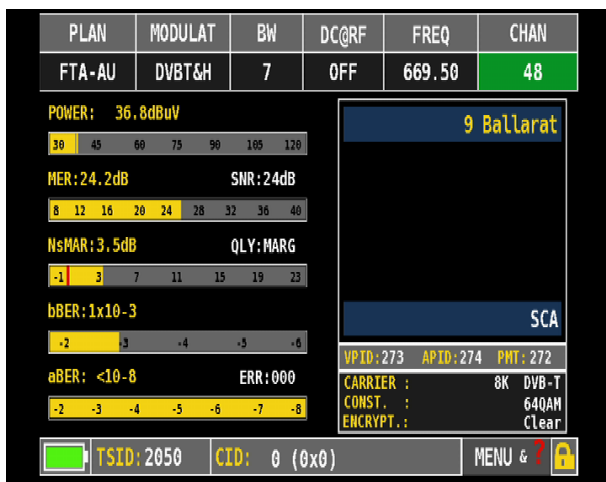


Figure G-120 Channel 51

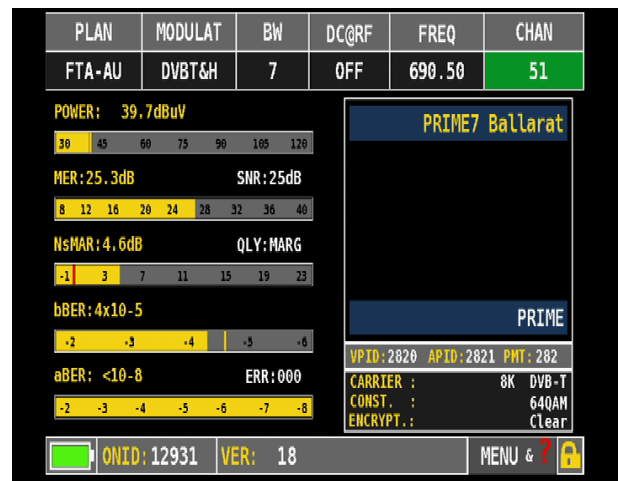


Figure G-118 Channel 49



# M40

**Figure G-121 Antenna Aiming**



**Figure G-124 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 31.0dBuV

MER: 19.2dB SNR: 19dB

NsMAR: -1.5dB QLY: FAIL

bBER: 1x10-2

aBER: 5x10-5 ERR: 000

ONID: 12916 VER: 3

WIN Western Vic  
CALL 139 429  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

**Figure G-122 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 30.1dBuV

MER: 18.3dB SNR: 18dB

NsMAR: -2.4dB QLY: FAIL

bBER: 1x10-2

aBER: 3x10-4 ERR: 000

TSID: 880 CID: 0 (0x0)

SBS ONE  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

**Figure G-125 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 36.0dBuV

MER: 22.8dB SNR: 23dB

NsMAR: 2.1dB QLY: MARG

bBER: 2x10-3

aBER: <10-8 ERR: 000

NID: 12883 NETW: ABC Victoria

ABC NEWS  
ABC Victoria  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

**Figure G-123 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 34.4dBuV

MER: 19.8dB SNR: 20dB

NsMAR: -0.9dB QLY: FAIL

bBER: 1x10-2

aBER: 1x10-5 ERR: 000

NID: 12955 NETW: SCA

9 Ballarat  
SCA  
VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

**Figure G-126 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 39.1dBuV

MER: 24.5dB SNR: 24dB

NsMAR: 3.8dB QLY: MARG

bBER: 8x10-4

aBER: <10-8 ERR: 000

NID: 12931 NETW: PRIME

PRIME7 Ballarat  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear



# M42

**Figure G-127 Antenna Aiming**



**Figure G-130 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 43.9dBuV  
 MER: 29.2dB SNR: 29dB  
 NsMAR: 8.5dB QLY: PASS  
 bBER: 7x10<sup>-6</sup>  
 aBER: <10<sup>-8</sup> ERR: 000

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12916 NETW: WIN Televisi MENU & ?

**Figure G-128 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 44.1dBuV  
 MER: 29.2dB SNR: 29dB  
 NsMAR: 8.5dB QLY: PASS  
 bBER: 2x10<sup>-6</sup>  
 aBER: <10<sup>-8</sup> ERR: 000

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12802 VER: 23 MENU & ?

**Figure G-131 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 41.5dBuV  
 MER: 27.2dB SNR: 27dB  
 NsMAR: 6.5dB QLY: PASS  
 bBER: 7x10<sup>-6</sup>  
 aBER: <10<sup>-8</sup> ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 4112 VER: 29 MENU & ?

**Figure G-129 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 42.9dBuV  
 MER: 27.5dB SNR: 27dB  
 NsMAR: 6.8dB QLY: PASS  
 bBER: 4x10<sup>-6</sup>  
 aBER: <10<sup>-8</sup> ERR: 000

9 Ballarat  
 MOODY COMFY PERIOD UNDIES  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12955 NETW: SCA MENU & ?

**Figure G-132 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 41.7dBuV  
 MER: 27.4dB SNR: 27dB  
 NsMAR: 6.7dB QLY: PASS  
 bBER: <10<sup>-6</sup>  
 aBER: <10<sup>-8</sup> ERR: 000

PRIME7 Ballarat  
 TOUGHT TALK  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

# M45

Figure G-133 Antenna Aiming



Figure G-136 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 36.8dBuV  
MER: 25.1dB SNR: 25dB  
NsMAR: 4.4dB QLY: MARG  
bBER: 8x10-4  
aBER: <10-8 ERR: 410

WIN Western Vic  
NEW NCIS  
8.00 Tuesday  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

TSID: 12922 CID: 0 (0x0) MENU & ?

Figure G-134 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 38.7dBuV  
MER: 25.3dB SNR: 25dB  
NsMAR: 4.6dB QLY: MARG  
bBER: 3x10-3  
aBER: 1x10-7 ERR: 000

SBS ONE  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ONID: 12802 VER: 23 MENU & ?

Figure G-137 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 35.1dBuV  
MER: 27.5dB SNR: 27dB  
NsMAR: 6.8dB QLY: PASS  
bBER: 1x10-2  
aBER: 1x10-6 ERR: 000

ABC NEWS  
ABC Victoria  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ONID: 4112 VER: 29 MENU & ?

Figure G-135 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 28.4dBuV  
MER: 27.7dB SNR: 26dB  
NsMAR: 7.0dB QLY: PASS  
bBER: 9x10-3  
aBER: 1x10-7 ERR: 999

9Gem  
SCA  
VPID: 1211 APID: 1212 PMT: 1210  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0) MENU & ?

Figure G-138 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 35.7dBuV  
MER: 29.9dB SNR: 30dB  
NsMAR: 9.2dB QLY: PASS  
bBER: 9x10-4  
aBER: <10-8 ERR: 000

PRIME7 Ballarat  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

# M48

Figure G-139 Antenna Aiming



Figure G-142 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 36.3dBuV

MER: 17.9dB SNR: 18dB

NsMAR: -2.8dB QLY: FAIL

bBER: 1x10-2

aBER: 1x10-4 ERR: 000

TSID: 12922 CID: 0 (0x0)

WIN Western Vic  
WIN Television  
VPIID: 148 APIID: 548 PMT: 348  
CARRIER: 640AM  
CONST.: Clear  
ENCRYPT.: Clear

Figure G-140 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 39.7dBuV

MER: 22.6dB SNR: 23dB

NsMAR: 1.9dB QLY: MARG

bBER: 6x10-3

aBER: 1x10-7 ERR: 000

ONID: 12802 VER: 23

SBS ONE  
SBS VIC  
VPIID: 161 APIID: 81 PMT: 1025  
CARRIER: 640AM  
CONST.: Clear  
ENCRYPT.: Clear

Figure G-143 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 35.3dBuV

MER: 24.5dB SNR: 24dB

NsMAR: 3.8dB QLY: MARG

bBER: 7x10-3

aBER: 1x10-8 ERR: 000

TSID: 563 CID: 0 (0x0)

ABC NEWS  
ABC Victoria  
VPIID: 516 APIID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

Figure G-141 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 36.0dBuV

MER: 21.5dB SNR: 21dB

NsMAR: 0.8dB QLY: MARG

bBER: 1x10-2

aBER: 2x10-7 ERR: 000

NID: 12955 NETW: SCA

9 Ballarat  
SCA  
VPIID: 273 APIID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

Figure G-144 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 37.5dBuV

MER: 21.3dB SNR: 21dB

NsMAR: 0.6dB QLY: MARG

bBER: 1x10-2

aBER: 3x10-7 ERR: 000

TSID: 2461 CID: 0 (0x0)

PRIME7 Ballarat  
PRIME  
VPIID: 2820 APIID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

# M49

**Figure G-145 Antenna Aiming**



**Figure G-148 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 40.2dBuV

MER: 26.5dB SNR: 26dB

NSMAR: 5.8dB QLY: MARG

bBER: 2x10-3

aBER: 1x10-7 ERR: 052

WIN Western Vic  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

NID: 12916 NETW: WIN Televisi MENU & ?

**Figure G-146 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 50.3dBuV

MER: 31.3dB SNR: 31dB

NSMAR: 10.6dB QLY: PASS

bBER: <10-6

aBER: <10-8 ERR: 000

SBS ONE  
Lufthansa Cargo  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

ONID: 12802 VER: 23 MENU & ?

**Figure G-149 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 37.2dBuV

MER: 14.7dB SNR: 15dB

NSMAR: -6.0dB QLY: FAIL

bBER: 1x10-2

aBER: 3x10-3 ERR: 999

(UNTITLED)  
Data Service  
REMAINING SA CORONAVIRUS  
20 cases, 201 detectives to follow up  
ABC Victoria  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

ONID: VER: 29 MENU & ?

**Figure G-147 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 37.7dBuV

MER: 34.2dB SNR: 34dB

NSMAR: 13.5dB QLY: PASS

bBER: 2x10-5

aBER: <10-8 ERR: 297

9 Ballarat  
SCA  
VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

NID: 12955 NETW: SCA MENU & ?

**Figure G-150 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 35.0dBuV

MER: 25.4dB SNR: 25dB

NSMAR: 4.7dB QLY: MARG

bBER: 1x10-3

aBER: <10-8 ERR: 061

PRIME7 Ballarat  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

# M50

**Figure G-151 Antenna Aiming**



**Figure G-154 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 42.4dBuV

MER: 27.4dB SNR: 27dB

NsMAR: 6.7dB QLY: PASS

bBER: 6x10<sup>-5</sup>

aBER: <10<sup>-8</sup> ERR: 000

TSID: 12922 CID: 0 (0x0)

WIN Western Vic  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 640AM  
CONST.: Clear  
ENCRYPT.: Clear

**Figure G-152 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 46.4dBuV

MER: 30.0dB SNR: 30dB

NsMAR: 9.3dB QLY: PASS

bBER: <10<sup>-6</sup>

aBER: <10<sup>-8</sup> ERR: 000

ONID: 12802 VER: 23

SBS ONE  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

**Figure G-155 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 44.6dBuV

MER: 30.3dB SNR: 30dB

NsMAR: 9.6dB QLY: PASS

bBER: <10<sup>-6</sup>

aBER: <10<sup>-8</sup> ERR: 000

NID: 12883 NETW: ABC Victoria

(UNTITLED)  
Data Service  
ABC Victoria  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

**Figure G-153 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 40.1dBuV

MER: 25.1dB SNR: 25dB

NsMAR: 4.4dB QLY: MARG

bBER: 1x10<sup>-3</sup>

aBER: 2x10<sup>-8</sup> ERR: 000

NID: 12955 NETW: SCA

9 Ballarat  
SCA  
VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

**Figure G-156 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 47.2dBuV

MER: 31.9dB SNR: 32dB

NsMAR: 11.2dB QLY: PASS

bBER: <10<sup>-6</sup>

aBER: 1x10<sup>-8</sup> ERR: 000

ONID: 12931 VER: 18

PRIME7 Ballarat  
BEAT THE CHASERS  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

## M52

Figure G-157 Antenna Aiming



Figure G-158 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 42.2dBuV  
MER: 30.6dB SNR: 31dB  
NsMAR: 9.9dB QLY: PASS  
bBER: 1x10<sup>-4</sup>  
aBER: <10<sup>-8</sup> ERR: 000

SBS ONE  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC MENU & ?

Figure G-159 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 45.8dBuV  
MER: 28.6dB SNR: 29dB  
NsMAR: 7.9dB QLY: PASS  
bBER: 2x10<sup>-4</sup>  
aBER: <10<sup>-8</sup> ERR: 000

9 Ballarat  
SCA  
VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ONID: 12812 VER: 25 MENU & ?

Figure G-160 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 43.4dBuV  
MER: 30.2dB SNR: 30dB  
NsMAR: 9.5dB QLY: PASS  
bBER: 1x10<sup>-5</sup>  
aBER: <10<sup>-8</sup> ERR: 000

WIN Western Vic  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ONID: 12916 VER: 3 MENU & ?

Figure G-161 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 51.5dBuV  
MER: 28.8dB SNR: 29dB  
NsMAR: 8.1dB QLY: PASS  
bBER: 8x10<sup>-5</sup>  
aBER: 3x10<sup>-7</sup> ERR: 000

ABC NEWS  
ABC Victoria  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

TSID: 563 CID: 0 (0x0) MENU & ?

Figure G-162 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 54.9dBuV  
MER: 29.1dB SNR: 29dB  
NsMAR: 8.4dB QLY: PASS  
bBER: 6x10<sup>-4</sup>  
aBER: 1x10<sup>-8</sup> ERR: 000

PRIME7 Ballarat  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

# M55

**Figure G-163 Antenna Aiming**



**Figure G-166 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 49.3dBuV

MER: 35.5dB SNR: 35dB

NSMAR: 14.8dB QLY: PASS

bBER: <10-6

aBER: <10-8 ERR: 000

TSID: 12922 CID: 0 (0x0)

WIN Western Vic  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

**Figure G-164 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 51.3dBuV

MER: >36dB SNR: >36dB

NSMAR: 16.3dB QLY: PASS

bBER: <10-6

aBER: <10-8 ERR: 000

TSID: 880 CID: 0 (0x0)

SBS ONE  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

**Figure G-167 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 48.7dBuV

MER: 32.0dB SNR: 32dB

NSMAR: 11.3dB QLY: PASS

bBER: 3x10-6

aBER: <10-8 ERR: 000

NID: 12883 NETW: ABC Victoria

ABC NEWS  
ABC Victoria  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

**Figure G-165 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 49.4dBuV

MER: 32.9dB SNR: 33dB

NSMAR: 12.2dB QLY: PASS

bBER: <10-6

aBER: <10-8 ERR: 000

NID: 12955 NETW: SCA

9 Ballarat  
SCA  
VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

**Figure G-168 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 46.5dBuV

MER: 30.8dB SNR: 31dB

NSMAR: 10.1dB QLY: PASS

bBER: <10-6

aBER: <10-8 ERR: 000

ONID: 12931 VER: 18

PRIME7 Ballarat  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST: 64QAM  
ENCRYPT.: Clear

## M58 - Vertical

Figure G-169 Antenna Aiming



Figure G-172 Channel 49



Figure G-170 Channel 47

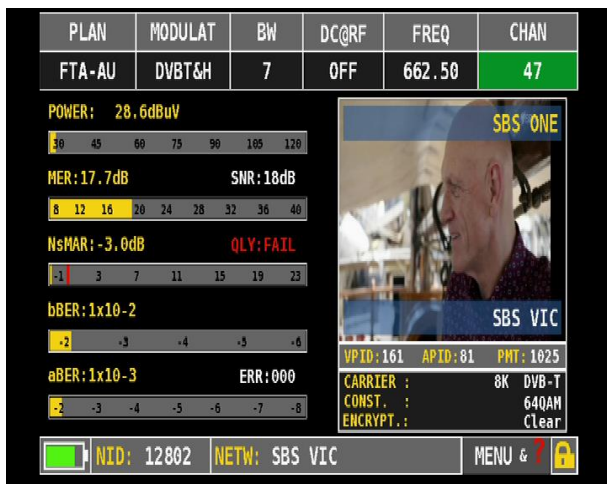


Figure G-173 Channel 50



Figure G-171 Channel 48

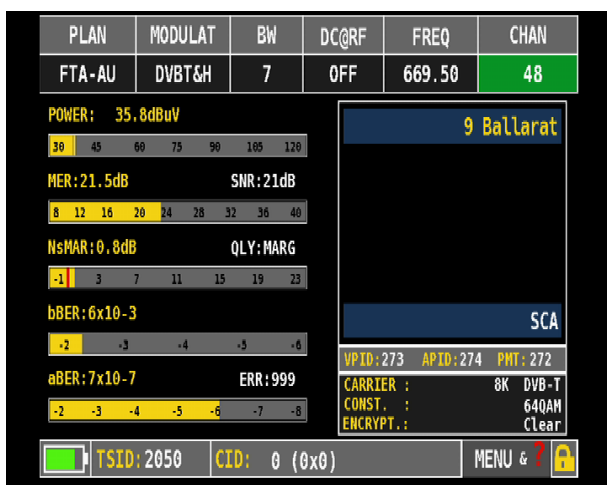
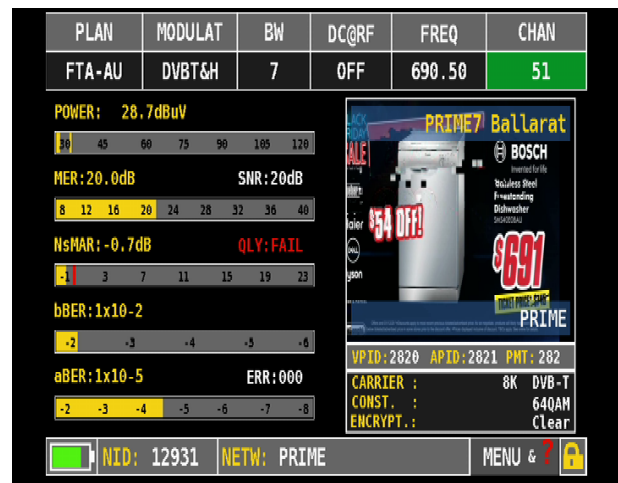


Figure G-174 Channel 51





## M58 - Horizontal

Figure G-175 Antenna Aiming



Figure G-176 Channel 47

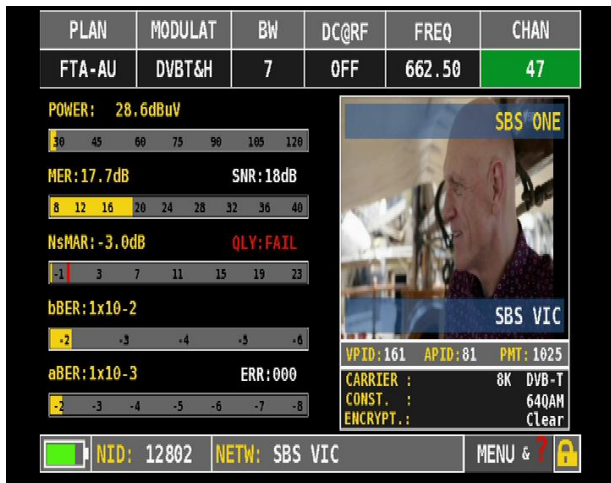


Figure G-178 Channel 49



Figure G-179 Channel 50



Figure G-177 Channel 48

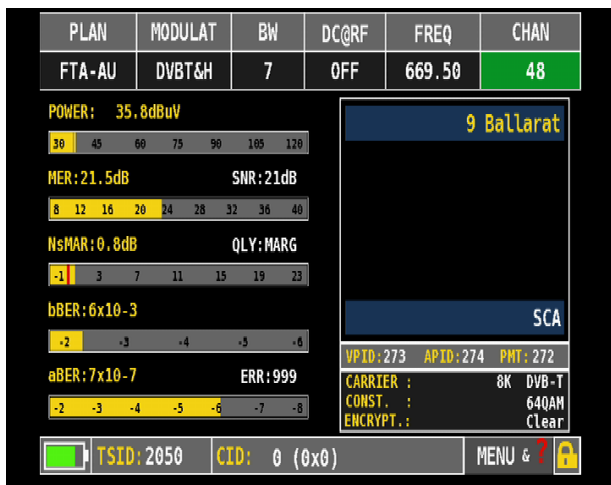


Figure G-180 Channel 51

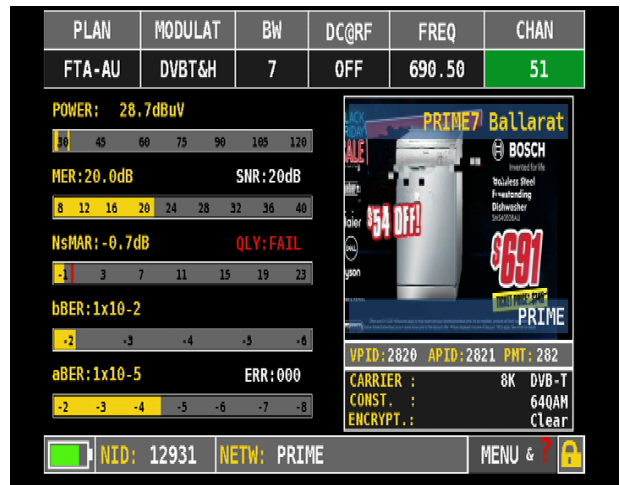


Figure G-181 Antenna Aiming



Figure G-182 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 28.0dBuV  
 MER: 17.7dB SNR: 18dB  
 NsMAR: -3.0dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 2x10<sup>-3</sup> ERR: 999

SBS World Movies

VPID: 162 APID: 83 PMT: 1026  
 CARRIER : 640AM  
 CONST. : Clear  
 ENCRYPT. :

ONID: 12802 VER: 0 MENU & ?

Figure G-183 Channel 48

9 Ballarat

M60

Figure G-184 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 32.1dBuV  
 MER: 19.5dB SNR: 19dB  
 NsMAR: -1.2dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 4x10<sup>-5</sup> ERR: 000

WIN Western Vic  
 WIN Television

VPID: 148 APID: 548 PMT: 348  
 CARRIER : 8K DVB-T  
 CONST. : 640AM  
 ENCRYPT. : Clear

NID: 12916 NETW: WIN Televisi MENU & ?

Figure G-185 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 35.3dBuV  
 MER: 21.5dB SNR: 21dB  
 NsMAR: 0.0dB QLY: MARG  
 bBER: 5x10<sup>-3</sup>  
 aBER: 5x10<sup>-8</sup> ERR: 000

ABC NEWS  
 ABC Victoria

VPID: 516 APID: 654 PMT: 258  
 CARRIER : 8K DVB-T  
 CONST. : 640AM  
 ENCRYPT. : Clear

NID: 12883 NETW: ABC Victoria MENU & ?

Figure G-186 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 29.7dBuV  
 MER: 18.4dB SNR: 18dB  
 NsMAR: -2.3dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 4x10<sup>-4</sup> ERR: 000

PRIME7 Ballarat  
 PRIME

VPID: 2820 APID: 2821 PMT: 282  
 CARRIER : 640AM  
 CONST. : Clear  
 ENCRYPT. :

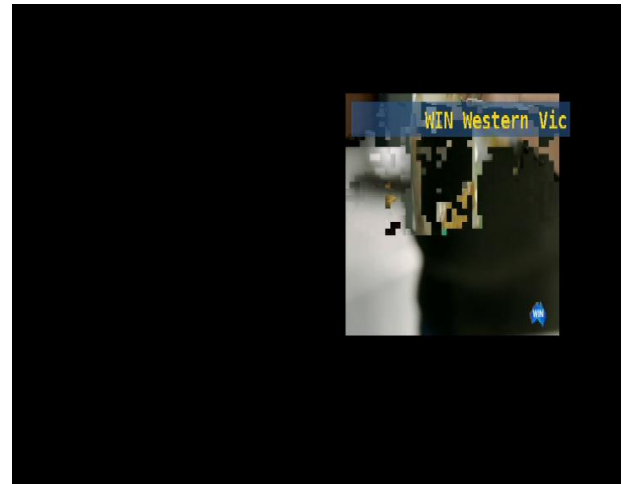
NID: 12931 NETW: PRIME MENU & ?

# M62

**Figure G-187 Antenna Aiming**



**Figure G-190 Channel 49**



**Figure G-188 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 32.2dBuV  
 MER: 23.0dB SNR: 23dB  
 NsMAR: 2.3dB QLY: MARG  
 bBER: 3x10<sup>-3</sup>  
 aBER: <10<sup>-8</sup> ERR: 999

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 880 CID: 0 (0x0) MENU & ?

**Figure G-191 Channel 50**

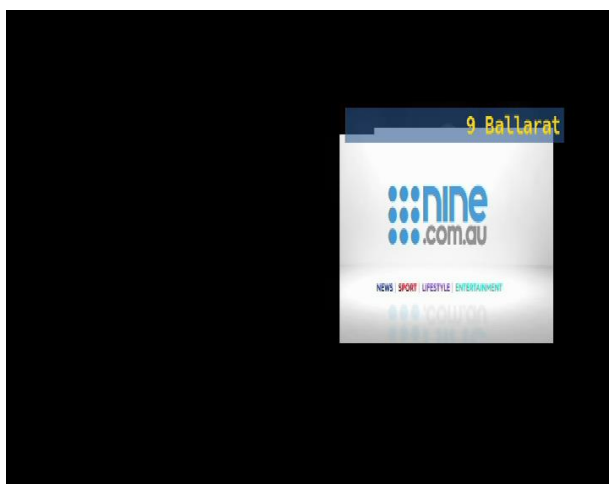
PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 36.0dBuV  
 MER: 23.0dB SNR: 23dB  
 NsMAR: 2.3dB QLY: MARG  
 bBER: 2x10<sup>-3</sup>  
 aBER: 2x10<sup>-8</sup> ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 563 CID: 0 (0x0) MENU & ?

**Figure G-189 Channel 48**



**Figure G-192 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 36.0dBuV  
 MER: 22.5dB SNR: 22dB  
 NsMAR: 1.8dB QLY: MARG  
 bBER: 3x10<sup>-3</sup>  
 aBER: <10<sup>-8</sup> ERR: 000

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

# M63

**Figure G-193 Antenna Aiming**



**Figure G-196 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 28.8dBuV  
 MER: 17.3dB SNR: 17dB  
 NsMAR: -3.4dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 3x10-3 ERR: 999

WIN Western Vic  
 NEWS FIRST  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER : 640AM  
 CONST. : Clear  
 ENCRYPT. :

TSID: 12922 CID: 0 (0x0) MENU & ?

**Figure G-194 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 33.8dBuV  
 MER: 19.2dB SNR: 19dB  
 NsMAR: -1.5dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 3x10-5 ERR: 000

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER : 640AM  
 CONST. : Clear  
 ENCRYPT. :

TSID: 880 CID: 0 (0x0) MENU & ?

**Figure G-197 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 28.2dBuV  
 MER: 17.3dB SNR: 17dB  
 NsMAR: -3.4dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 2x10-3 ERR: 999

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER : 8K DVB-T  
 CONST. : 640AM  
 ENCRYPT. : Clear

TSID: 563 CID: 0 (0x0) MENU & ?

**Figure G-195 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 30.9dBuV  
 MER: 17.2dB SNR: 17dB  
 NsMAR: -3.5dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 2x10-3 ERR: 999

9 Ballarat  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER : 8K DVB-T  
 CONST. : 640AM  
 ENCRYPT. : Clear

TSID: 2050 CID: 0 (0x0) MENU & ?

**Figure G-198 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 30.4dBuV  
 MER: 18.5dB SNR: 18dB  
 NsMAR: -2.2dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 3x10-4 ERR: 000

PRIME7 Ballarat  
 BAY OF FIRES  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER : 8K DVB-T  
 CONST. : 640AM  
 ENCRYPT. : Clear

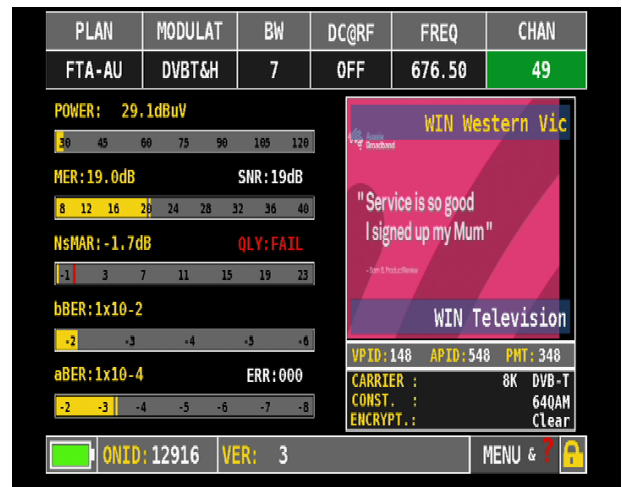
ONID: 12931 VER: 18 MENU & ?

# M64

**Figure G-199 Antenna Aiming**



**Figure G-202 Channel 49**



**Figure G-200 Channel 47**



**Figure G-203 Channel 50**



**Figure G-201 Channel 48**



**Figure G-204 Channel 51**



# M65

Figure G-205 Antenna Aiming



Figure G-208 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 35.7dBuV  
 MER: 19.9dB SNR: 20dB  
 NsMAR: -0.8dB QLY: FAIL  
 bBER: 9x10-3  
 aBER: 1x10-4 ERR: 000

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 640AM  
 CONST.: Clear  
 ENCRYPT.: Clear

TSID: 12922 CID: 0 (0x0) MENU & ?

Figure G-206 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 31.3dBuV  
 MER: 19.1dB SNR: 19dB  
 NsMAR: -1.6dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 5x10-5 ERR: 000

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 640AM  
 CONST.: Clear  
 ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC MENU & ?

Figure G-209 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 32.7dBuV  
 MER: 19.7dB SNR: 20dB  
 NsMAR: -1.0dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 3x10-5 ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 640AM  
 ENCRYPT.: Clear

TSID: 563 CID: 0 (0x0) MENU & ?

Figure G-207 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 32.1dBuV  
 MER: 18.4dB SNR: 18dB  
 NsMAR: -2.3dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 1x10-4 ERR: 000

9 Ballarat  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 640AM  
 ENCRYPT.: Clear

NID: 12955 NETW: SCA MENU & ?

Figure G-210 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 33.9dBuV  
 MER: 21.4dB SNR: 21dB  
 NsMAR: 0.7dB QLY: MARG  
 bBER: 1x10-2  
 aBER: 5x10-7 ERR: 000

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 640AM  
 ENCRYPT.: Clear

NID: 12931 NETW: PRIME MENU & ?

# M68

**Figure G-211 Antenna Aiming**



**Figure G-214 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 36.5dBuV  
 MER: 20.4dB SNR: 20dB  
 NsMAR: -0.3dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 1x10-6 ERR: 000

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PNT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 12922 CID: 0 (0x0) MENU & ?

**Figure G-212 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 30.2dBuV  
 MER: 18.8dB SNR: 19dB  
 NsMAR: -1.9dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 1x10-4 ERR: 000

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PNT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC MENU & ?

**Figure G-215 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 27.4dBuV  
 MER: 20.2dB SNR: 20dB  
 NsMAR: -0.5dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 2x10-5 ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PNT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12883 NETW: ABC Victoria MENU & ?

**Figure G-213 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 31.1dBuV  
 MER: 20.1dB SNR: 20dB  
 NsMAR: -0.6dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 9x10-6 ERR: 000

9 Ballarat  
 SCA  
 VPID: 273 APID: 274 PNT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0) MENU & ?

**Figure G-216 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 27.1dBuV  
 MER: 18.0dB SNR: 18dB  
 NsMAR: -2.7dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 8x10-4 ERR: 999

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PNT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

# M70

Figure G-217 Antenna Aiming



Figure G-220 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 28.4dBuV  
 MER: 18.5dB SNR: 18dB  
 NsMAR: -2.2dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 6x10<sup>-4</sup> ERR: 999

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12916 VER: 3

Figure G-218 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 31.1dBuV  
 MER: 19.1dB SNR: 19dB  
 NsMAR: -1.6dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 6x10<sup>-5</sup> ERR: 000

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 64QAM  
 CONST.: Clear  
 ENCRYPT.: Clear

TSID: 880 CID: 0 (0x0)

Figure G-221 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 28.5dBuV  
 MER: 18.0dB SNR: 18dB  
 NsMAR: -2.7dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 7x10<sup>-4</sup> ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 64QAM  
 CONST.: Clear  
 ENCRYPT.: Clear

ONID: 4112 VER: 29

Figure G-219 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 31.0dBuV  
 MER: 19.0dB SNR: 19dB  
 NsMAR: -1.7dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 7x10<sup>-5</sup> ERR: 020

9 Ballarat  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0)

Figure G-222 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 29.6dBuV  
 MER: 18.5dB SNR: 18dB  
 NsMAR: -2.2dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 2x10<sup>-4</sup> ERR: 000

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12931 VER: 18



# M73

**Figure G-223 Antenna Aiming**



**Figure G-226 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 28.8dBuV  
 MER: 19.5dB SNR: 19dB  
 NsMAR: -1.2dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 1x10-4 ERR: 999

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 12922 CID: 0 (0x0) MENU & ?

**Figure G-224 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 28.3dBuV  
 MER: 17.7dB SNR: 18dB  
 NsMAR: -3.0dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 2x10-3 ERR: 999

SBS ONE  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12802 VER: 0 MENU & ?

**Figure G-227 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 33.9dBuV  
 MER: 21.6dB SNR: 22dB  
 NsMAR: 0.9dB QLY: MARG  
 bBER: 6x10-3  
 aBER: <10-8 ERR: 370

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12883 NETW: ABC Victoria MENU & ?

**Figure G-225 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 29.4dBuV  
 MER: 17.9dB SNR: 18dB  
 NsMAR: -2.8dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 9x10-4 ERR: 000

Ballarat  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12812 VER: 25 MENU & ?

**Figure G-228 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 33.0dBuV  
 MER: 20.3dB SNR: 20dB  
 NsMAR: -0.4dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 1x10-6 ERR: 000

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

## M76 & M77

Figure G-229 Antenna Aiming



Figure G-232 Channel 49

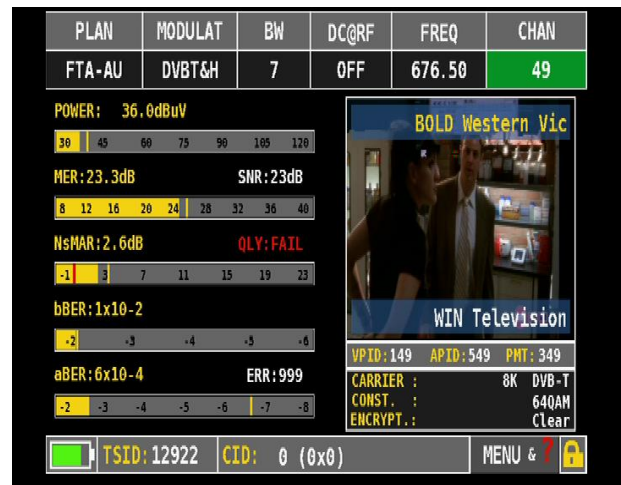


Figure G-230 Channel 47

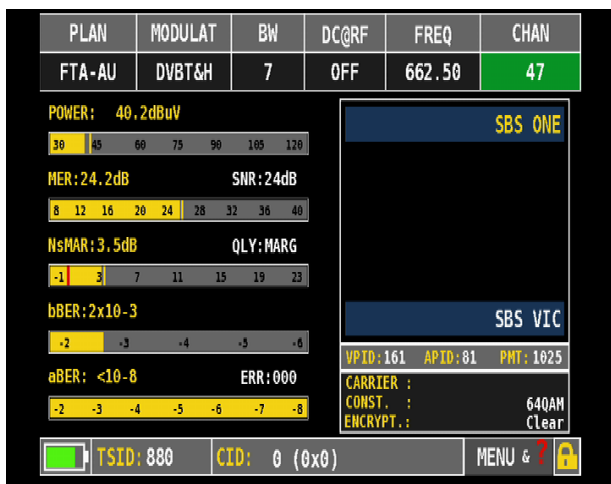


Figure G-233 Channel 50

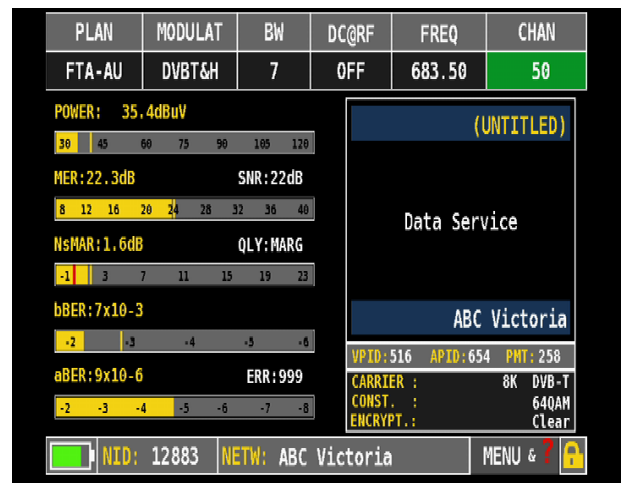


Figure G-231 Channel 48

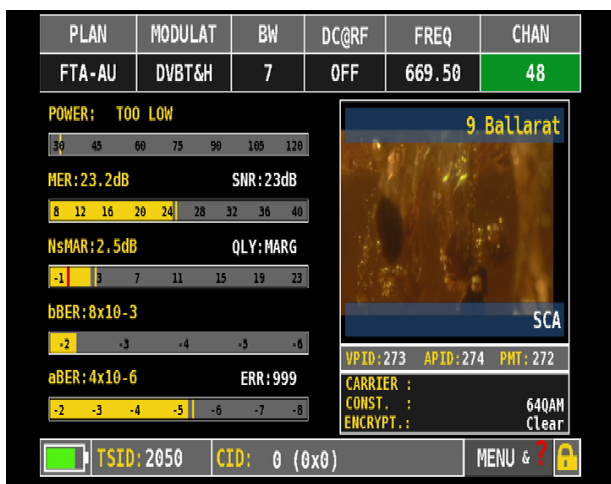
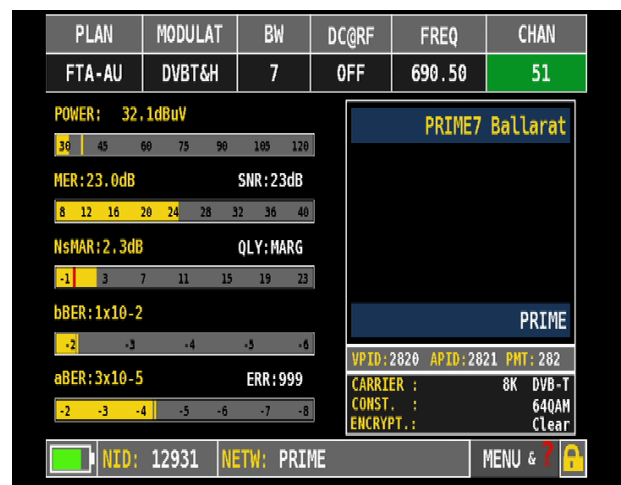


Figure G-234 Channel 51



# M78

**Figure G-235 Antenna Aiming**



**Figure G-238 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 29.5dBuV  
 MER: 20.1dB SNR: 20dB  
 NsMAR: -0.6dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 6x10-5 ERR: 000

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12916 VER: 3 MENU & ?

**Figure G-236 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 29.0dBuV  
 MER: 17.3dB SNR: 17dB  
 NsMAR: -3.4dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 2x10-3 ERR: 999

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC MENU & ?

**Figure G-239 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 33.4dBuV  
 MER: 20.5dB SNR: 20dB  
 NsMAR: -0.2dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 1x10-7 ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 563 CID: 0 (0x0) MENU & ?

**Figure G-237 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 28.0dBuV  
 MER: 18.1dB SNR: 18dB  
 NsMAR: -2.6dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 9x10-4 ERR: 000

9 Ballarat  
 OXFORD HOPE  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12955 NETW: SCA MENU & ?

**Figure G-240 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: TOO LOW  
 MER: 22.5dB SNR: 22dB  
 NsMAR: 1.8dB QLY: MARG  
 bBER: 4x10-3  
 aBER: 3x10-8 ERR: 999

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 2461 CID: 0 (0x0) MENU & ?

# M79

**Figure G-241 Antenna Aiming**



**Figure G-242 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: TOO LOW

MER: 20.7dB SNR: 21dB

NSMAR: 0.0dB QLY: MARG

bBER: 9x10<sup>-3</sup>

aBER: 5x10<sup>-7</sup> ERR: 999

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC

**Figure G-244 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 34.1dBuV

MER: 21.1dB SNR: 21dB

NSMAR: 0.4dB QLY: MARG

bBER: 9x10<sup>-3</sup>

aBER: 7x10<sup>-6</sup> ERR: 000

VPID: 148 APID: 548 PMT: 348

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

ONID: 12916 VER: 3

**Figure G-245 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 33.4dBuV

MER: 21.1dB SNR: 21dB

NSMAR: 0.4dB QLY: MARG

bBER: 7x10<sup>-3</sup>

aBER: 9x10<sup>-8</sup> ERR: 000

VPID: 516 APID: 654 PMT: 258

CARRIER: 64QAM

ENCRYPT.: Clear

NID: 12883 NETW: ABC Victoria

**Figure G-243 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 35.8dBuV

MER: 21.5dB SNR: 21dB

NSMAR: 0.8dB QLY: MARG

bBER: 6x10<sup>-3</sup>

aBER: 7x10<sup>-7</sup> ERR: 999

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0)

**Figure G-246 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 34.4dBuV

MER: 20.7dB SNR: 21dB

NSMAR: 0.0dB QLY: MARG

bBER: 1x10<sup>-2</sup>

aBER: 7x10<sup>-6</sup> ERR: 000

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

TSID: 2461 CID: 0 (0x0)

# M80

Figure G-247 Antenna Aiming



Figure G-248 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 28.6dBuV  
MER: 17.7dB SNR: 18dB  
NsMAR: -3.0dB QLY: FAIL  
bBER: 1x10<sup>-2</sup>  
aBER: 1x10<sup>-3</sup> ERR: 000

**SBS ONE**  
**SBS VIC**

VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC

Figure G-249 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 35.1dBuV  
MER: 23.3dB SNR: 23dB  
NsMAR: 2.6dB QLY: MARG  
bBER: 4x10<sup>-3</sup>  
aBER: 6x10<sup>-8</sup> ERR: 999

**9 Ballarat**  
**RACE ACROSS THE WORLD**  
COMING SOON  
SCA

VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

NID: 12955 NETW: SCA

Figure G-250 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 32.7dBuV  
MER: 20.8dB SNR: 21dB  
NsMAR: 0.1dB QLY: MARG  
bBER: 1x10<sup>-2</sup>  
aBER: 9x10<sup>-8</sup> ERR: 000

**WIN Western Vic**  
**WIN Television**

VPID: 148 APID: 548 PMT: 348  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ONID: 12916 VER: 3

Figure G-251 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 39.3dBuV  
MER: 24.5dB SNR: 24dB  
NsMAR: 3.8dB QLY: MARG  
bBER: 6x10<sup>-4</sup>  
aBER: <10<sup>-8</sup> ERR: 000

**(UNTITLED)**  
**Data Service**  
**ABC Victoria**

VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

ONID: VER: 29

Figure G-252 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 28.7dBuV  
MER: 20.0dB SNR: 20dB  
NsMAR: -0.7dB QLY: FAIL  
bBER: 1x10<sup>-2</sup>  
aBER: 1x10<sup>-5</sup> ERR: 000

**PRIME7 Ballarat**  
**BOSCH**  
**\$691**  
**PRIME**

VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

NID: 12931 NETW: PRIME

# M81

Figure G-253 Antenna Aiming



Figure G-256 Channel 49

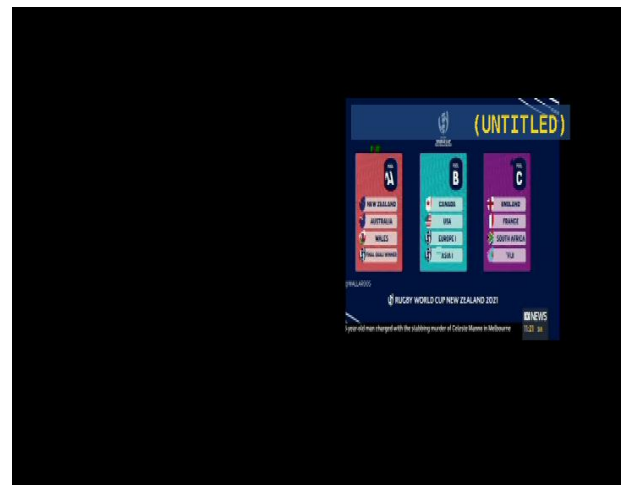


Figure G-254 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 32.4dBuV

MER: 20.3dB SNR: 20dB

NsMAR: -0.4dB QLY: FAIL

bBER: 9x10<sup>-3</sup>

aBER: 1x10<sup>-5</sup> ERR: 999

ONID: 12802 VER: 23

SBS ONE

SBS VIC

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

Figure G-257 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 35.3dBuV

MER: 21.5dB SNR: 21dB

NsMAR: 0.8dB QLY: MARG

bBER: 5x10<sup>-3</sup>

aBER: 5x10<sup>-8</sup> ERR: 000

NID: 12883 NETW: ABC Victoria

ABC NEWS

PGHAN REPORT

ABC Victoria

VPID: 516 APID: 654 PMT: 258

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

Figure G-255 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: TOO LOW

MER: 20.4dB SNR: 20dB

NsMAR: -0.3dB QLY: FAIL

bBER: 8x10<sup>-3</sup>

aBER: 2x10<sup>-7</sup> ERR: 999

ONID: 12812 VER: 25

9 Ballarat

SCA

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

Figure G-258 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 31.5dBuV

MER: 18.2dB SNR: 18dB

NsMAR: -2.5dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 4x10<sup>-4</sup> ERR: 000

NID: 12931 NETW: PRIME

PRIME7 Ballarat

PRIME

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

## M83

Figure G-259 Channel 47

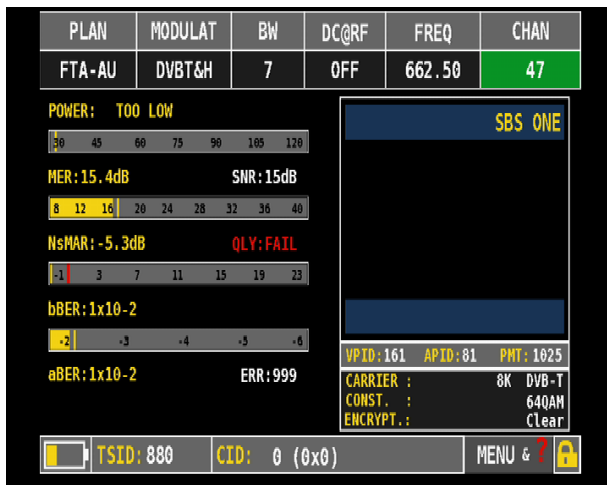


Figure G-262 Channel 50

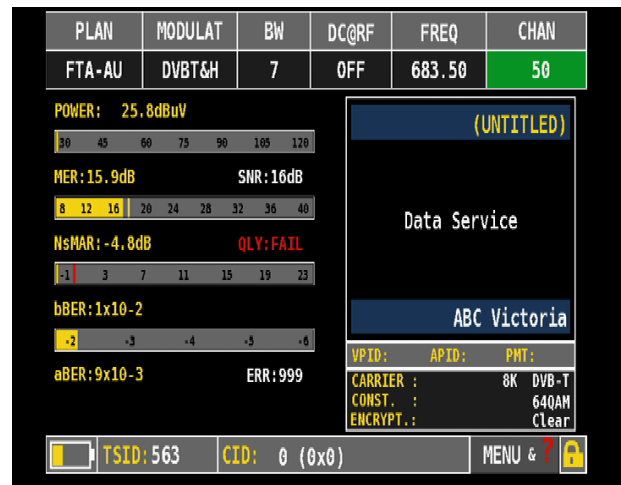


Figure G-260 Channel 48

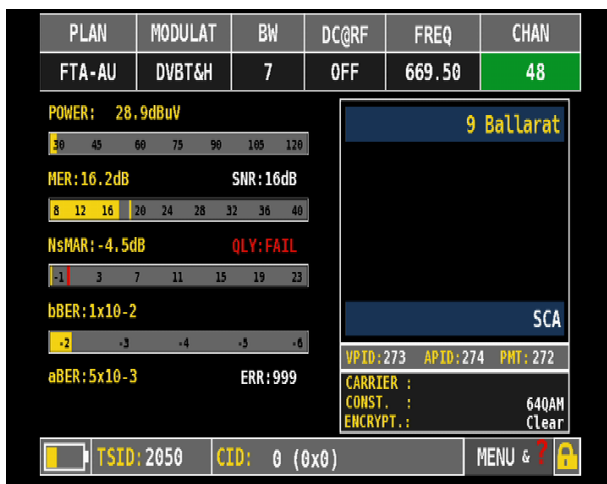


Figure G-263 Channel 51

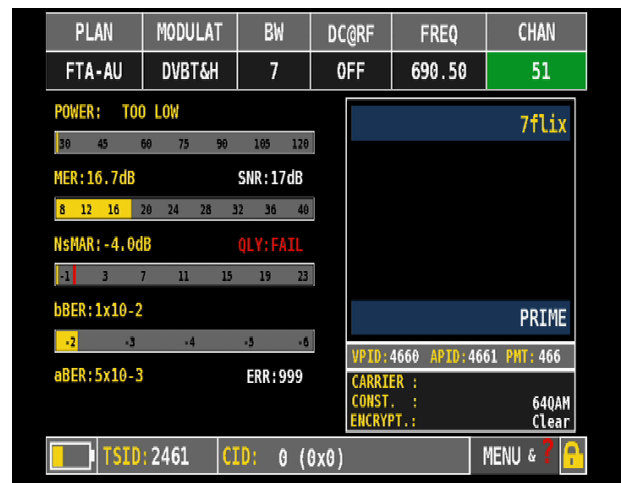
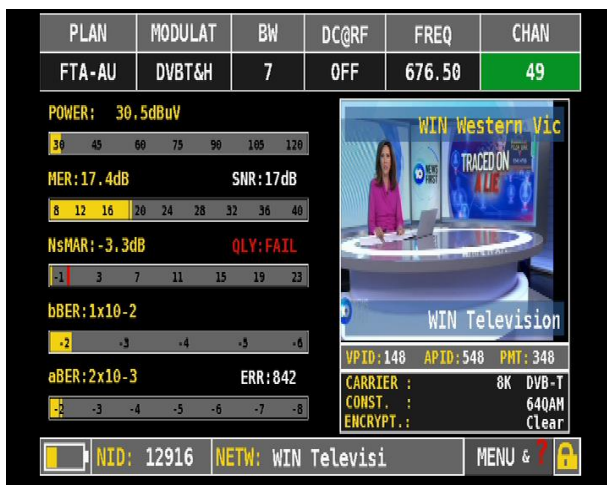


Figure G-261 Channel 49



# M86

**Figure G-264 Antenna Aiming**



**Figure G-265 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 30.6dBuV  
 MER: 20.5dB SNR: 20dB  
 NsMAR: -0.2dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 6x10<sup>-7</sup> ERR: 000

TSID: 880 CID: 0 (0x0)

VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

SBS ONE  
 SBS VIC

**Figure G-266 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 29.4dBuV  
 MER: 20.0dB SNR: 20dB  
 NsMAR: -0.7dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 1x10<sup>-4</sup> ERR: 999

NID: 12955 NETW: SCA

VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

9 Ballarat  
 ALERT SCA

**Figure G-267 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 31.1dBuV  
 MER: 17.6dB SNR: 18dB  
 NsMAR: -3.1dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 1x10<sup>-3</sup> ERR: 012

ONID: 12916 VER: 3

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

**Figure G-268 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 30.2dBuV  
 MER: 17.9dB SNR: 18dB  
 NsMAR: -2.8dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 6x10<sup>-4</sup> ERR: 000

TSID: 563 CID: 0 (0x0)

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

**Figure G-269 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: TOO LOW  
 MER: 17.8dB SNR: 18dB  
 NsMAR: -2.9dB QLY: FAIL  
 bBER: 1x10<sup>-2</sup>  
 aBER: 1x10<sup>-3</sup> ERR: 999

TSID: 2461 CID: 0 (0x0)

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear



# M89

Figure G-270 Antenna Aiming



Figure G-273 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 36.4dBuV  
 30 45 60 75 90 105 120  
 MER: 19.2dB SNR: 19dB  
 8 12 16 20 24 28 32 36 40  
 NsMAR: -1.5dB QLY: FAIL  
 -1 3 7 11 15 19 23  
 bBER: 1x10-2  
 -2 -3 -4 -5 -6  
 aBER: 8x10-5 ERR: 999  
 -2 -3 -4 -5 -6 -7 -8

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12916 VER: 3 MENU & ?

Figure G-271 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 30.9dBuV  
 30 45 60 75 90 105 120  
 MER: 19.2dB SNR: 19dB  
 8 12 16 20 24 28 32 36 40  
 NsMAR: -1.5dB QLY: FAIL  
 -1 3 7 11 15 19 23  
 bBER: 1x10-2  
 -2 -3 -4 -5 -6  
 aBER: 5x10-5 ERR: 999  
 -2 -3 -4 -5 -6 -7 -8

SBS ONE  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 880 CID: 0 (0x0) MENU & ?

Figure G-274 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 30.5dBuV  
 30 45 60 75 90 105 120  
 MER: 17.5dB SNR: 17dB  
 8 12 16 20 24 28 32 36 40  
 NsMAR: -3.2dB QLY: FAIL  
 -1 3 7 11 15 19 23  
 bBER: 1x10-2  
 -2 -3 -4 -5 -6  
 aBER: 5x10-3 ERR: 999

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 4112 VER: 29 MENU & ?

Figure G-272 Channel 48

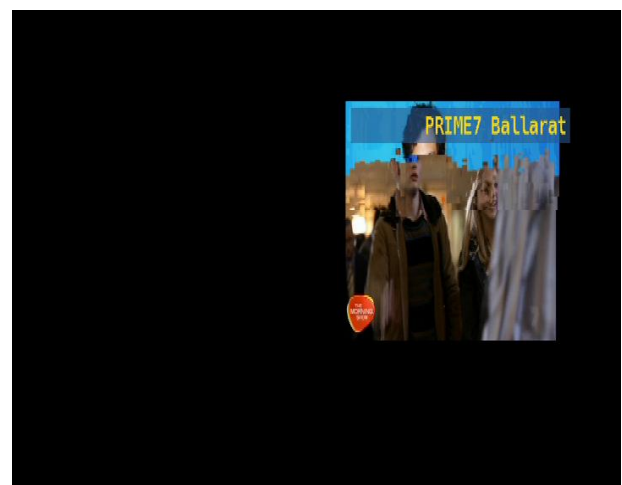
PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 30.4dBuV  
 30 45 60 75 90 105 120  
 MER: 19.2dB SNR: 19dB  
 8 12 16 20 24 28 32 36 40  
 NsMAR: -1.5dB QLY: FAIL  
 -1 3 7 11 15 19 23  
 bBER: 1x10-2  
 -2 -3 -4 -5 -6  
 aBER: 3x10-4 ERR: 999  
 -2 -3 -4 -5 -6 -7 -8

9 Ballarat  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12812 VER: 25 MENU & ?

Figure G-275 Channel 51



# M91

Figure G-276 Antenna Aiming



Figure G-279 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 31.8dBuV

36 45 60 75 90 105 120

MER: 19.1dB SNR: 19dB

8 12 16 20 24 28 32 36 40

NsMAR: -1.6dB QLY: FAIL

-1 3 7 11 15 19 23

bBER: 1x10-2

-2 -3 -4 -5 -6

aBER: 8x10-5 ERR: 000

-2 -3 -4 -5 -6 -7 -8

WIN Western Vic

WIN Television

VPID: 148 APID: 548 PMT: 348

CARRIER: 640AM

CONST.: Clear

ENCRYPT.: Clear

TSID: 12922 CID: 0 (0x0) MENU & ?

Figure G-277 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 32.0dBuV

36 45 60 75 90 105 120

MER: 19.6dB SNR: 20dB

8 12 16 20 24 28 32 36 40

NsMAR: -1.1dB QLY: FAIL

-1 3 7 11 15 19 23

bBER: 1x10-2

-2 -3 -4 -5 -6

aBER: 3x10-5 ERR: 658

-2 -3 -4 -5 -6 -7 -8

SBS ONE

SBS VIC

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

TSID: 880 CID: 0 (0x0) MENU & ?

Figure G-280 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 34.0dBuV

36 45 60 75 90 105 120

MER: 21.0dB SNR: 21dB

8 12 16 20 24 28 32 36 40

NsMAR: 0.3dB QLY: MARG

-1 3 7 11 15 19 23

bBER: 9x10-3

-2 -3 -4 -5 -6

aBER: 8x10-8 ERR: 000

-2 -3 -4 -5 -6 -7 -8

ABC NEWS

ABC Victoria

VPID: 516 APID: 654 PMT: 258

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

TSID: 563 CID: 0 (0x0) MENU & ?

Figure G-278 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 30.1dBuV

36 45 60 75 90 105 120

MER: 20.9dB SNR: 21dB

8 12 16 20 24 28 32 36 40

NsMAR: 0.2dB QLY: FAIL

-1 3 7 11 15 19 23

bBER: 1x10-2

-2 -3 -4 -5 -6

aBER: 5x10-4 ERR: 999

-2 -3 -4 -5 -6 -7 -8

9 Ballarat

SCA

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0) MENU & ?

Figure G-281 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 33.9dBuV

36 45 60 75 90 105 120

MER: 20.7dB SNR: 21dB

8 12 16 20 24 28 32 36 40

NsMAR: 0.0dB QLY: MARG

-1 3 7 11 15 19 23

bBER: 1x10-2

-2 -3 -4 -5 -6

aBER: 8x10-8 ERR: 053

-2 -3 -4 -5 -6 -7 -8

PRIME7 Ballarat

PRIME

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

ONID: 12931 VER: 18 MENU & ?

# M93

**Figure G-282 Antenna Aiming**



**Figure G-285 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 26.7dBuV  
 MER: 17.7dB SNR: 18dB  
 NsMAR: -3.0dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 1x10-3 ERR: 999

WIN Western Vic  
 WIN Television  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12916 VER: 3 MENU & ?

**Figure G-283 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 31.7dBuV  
 MER: 19.0dB SNR: 19dB  
 NsMAR: -1.7dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 3x10-4 ERR: 000

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC MENU & ?

**Figure G-286 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 31.4dBuV  
 MER: 19.3dB SNR: 19dB  
 NsMAR: -1.4dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 5x10-5 ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 4112 VER: 29 MENU & ?

**Figure G-284 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 29.3dBuV  
 MER: 18.2dB SNR: 18dB  
 NsMAR: -2.5dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 5x10-4 ERR: 002

9 Ballarat  
 SCA  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0) MENU & ?

**Figure G-287 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 30.8dBuV  
 MER: 19.0dB SNR: 19dB  
 NsMAR: -1.7dB QLY: FAIL  
 bBER: 1x10-2  
 aBER: 9x10-5 ERR: 000

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PMT: 282  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12931 NETW: PRIME MENU & ?

# M95

Figure G-288 Channel 47

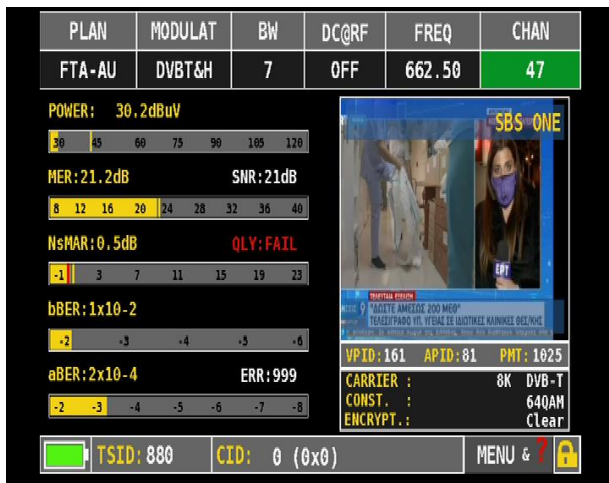


Figure G-291 Channel 50



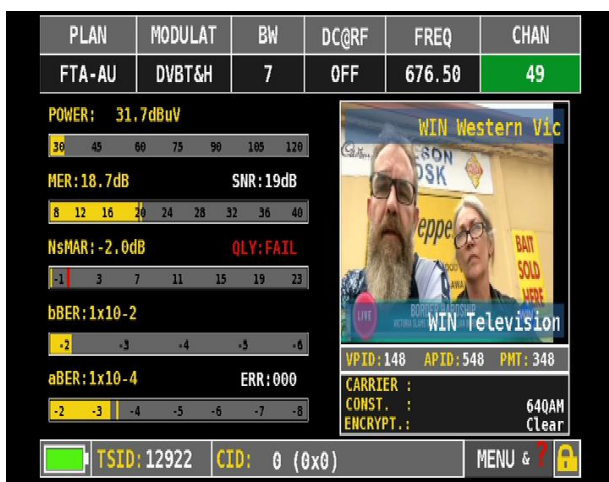
Figure G-289 Channel 48



Figure G-292 Channel 51



Figure G-290 Channel 49



## M96

Figure G-293 Channel 47

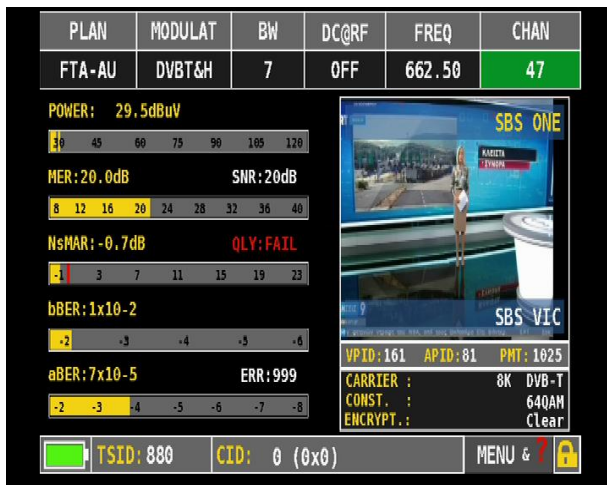


Figure G-296 Channel 50



Figure G-294 Channel 48

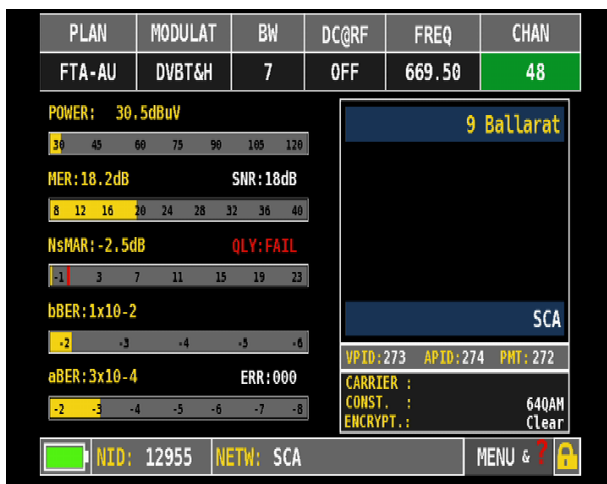
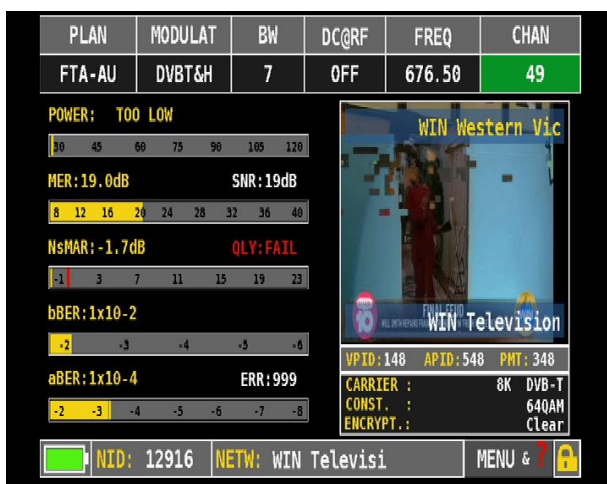


Figure G-297 Channel 51



Figure G-295 Channel 49



# M100

Figure G-298 Antenna Aiming



Figure G-299 Channel 47

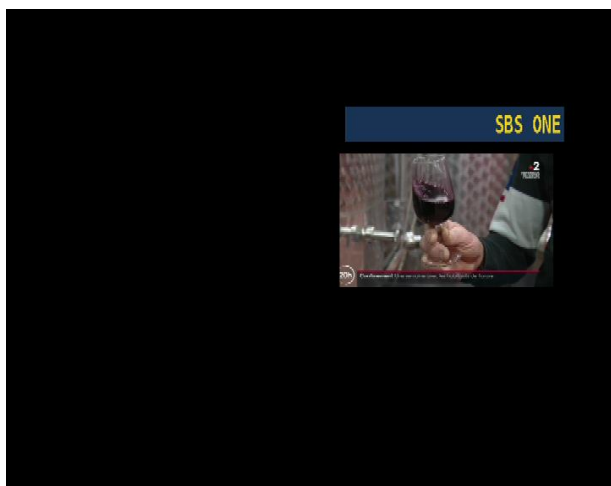


Figure G-300 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 39.1dBuV

MER: 19.1dB SNR: 19dB

NsMAR: -1.6dB QLY: FAIL

bBER: 1x10-2

aBER: 5x10-5 ERR: 999

ONID: 12812 VER: 25

9 Ballarat

SCA

VPID: 273 APID: 274 PNT: 272

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

Figure G-301 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 31.8dBuV

MER: 19.2dB SNR: 19dB

NsMAR: -1.5dB QLY: FAIL

bBER: 1x10-2

aBER: 1x10-3 ERR: 999

NID: 12916 NETW: WIN Televisi

WIN Western Vic

WIN Television

VPID: 148 APID: 548 PNT: 348

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

Figure G-302 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 34.0dBuV

MER: 17.7dB SNR: 18dB

NsMAR: -3.0dB QLY: FAIL

bBER: 1x10-2

aBER: 1x10-3 ERR: 999

ONID: 4112 VER: 29

ABC NEWS

ABC Victoria

VPID: 516 APID: 654 PNT: 258

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

Figure G-303 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 34.1dBuV

MER: 17.8dB SNR: 18dB

NsMAR: -2.9dB QLY: FAIL

bBER: 1x10-2

aBER: 3x10-4 ERR: 721

NID: 12931 NETW: PRIME

PRIME7 Ballarat

PRIME

VPID: 2820 APID: 2821 PNT: 282

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

# M104

Figure G-304 Channel 47

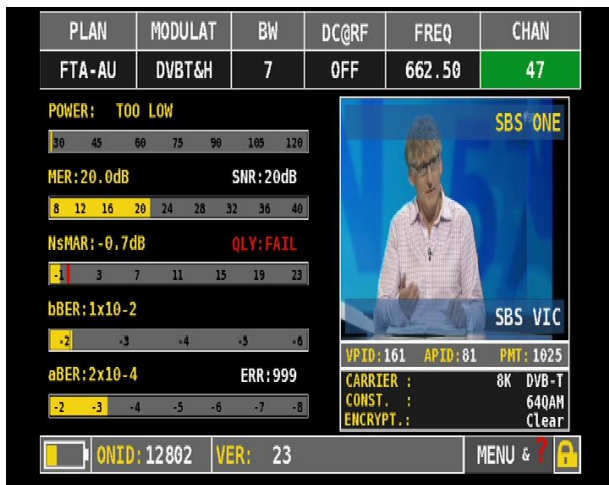


Figure G-307 Channel 50



Figure G-305 Channel 48

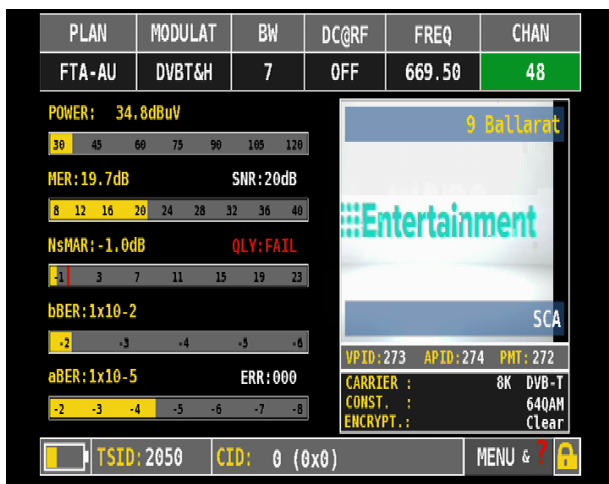


Figure G-308 Channel 51

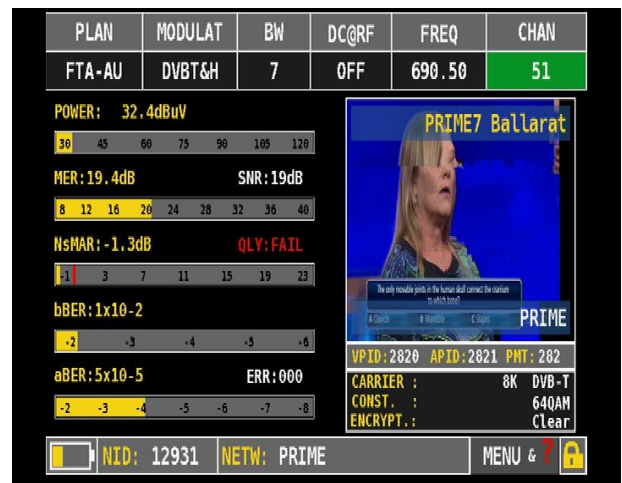
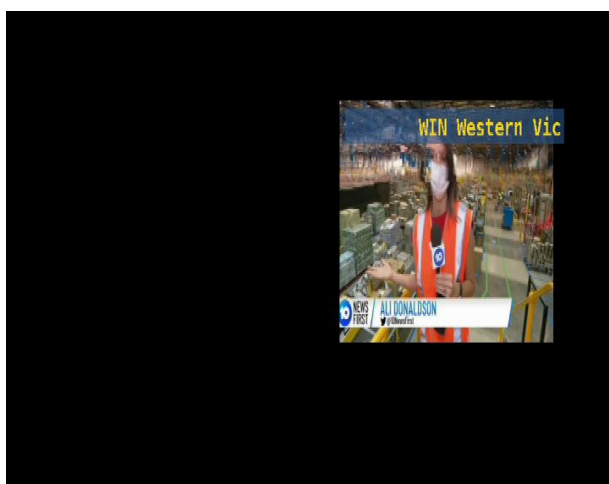


Figure G-306 Channel 49



# M107

Figure G-309 Antenna Aiming



Figure G-310 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 31.8dBuV  
MER: 19.9dB SNR: 20dB  
NsMAR: -0.8dB QLY: FAIL  
bBER: 1x10<sup>-2</sup>  
aBER: 1x10<sup>-5</sup> ERR: 000

VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC

Figure G-312 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 34.3dBuV  
MER: 20.7dB SNR: 21dB  
NsMAR: 0.0dB QLY: MARG  
bBER: 1x10<sup>-2</sup>  
aBER: 3x10<sup>-6</sup> ERR: 000

VPID: 148 APID: 548 PMT: 348  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

TSID: 12922 CID: 0 (0x0)

Figure G-313 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 29.4dBuV  
MER: 19.9dB SNR: 20dB  
NsMAR: -0.8dB QLY: FAIL  
bBER: 1x10<sup>-2</sup>  
aBER: 1x10<sup>-5</sup> ERR: 000

VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

TSID: 563 CID: 0 (0x0)

Figure G-311 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 30.2dBuV  
MER: 19.9dB SNR: 20dB  
NsMAR: -0.8dB QLY: FAIL  
bBER: 1x10<sup>-2</sup>  
aBER: 1x10<sup>-5</sup> ERR: 000

VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

NID: 12955 NETW: SCA

Figure G-314 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 28.8dBuV  
MER: 16.9dB SNR: 17dB  
NsMAR: -3.8dB QLY: FAIL  
bBER: 1x10<sup>-2</sup>  
aBER: 4x10<sup>-3</sup> ERR: 999

VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 64QAM  
ENCRYPT.: Clear

TSID: 2461 CID: 0 (0x0)



# M110

Figure G-315 Antenna Aiming



Figure G-318 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 61.9dBuV  
 MER: >36dB SNR: >36dB  
 NsMAR: 17.1dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

VPID: APID: PNT:  
 CARRIER :  
 CONST. : 640AM  
 ENCRYPT. :

TSID: 12922 CID: 0 (0x0) MENU & ?

Figure G-316 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 62.6dBuV  
 MER: 34.4dB SNR: 34dB  
 NsMAR: 13.7dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

SBS ONE  
 SBS VIC  
 VPID: 161 APID: 81 PNT: 1025  
 CARRIER :  
 CONST. : 640AM  
 ENCRYPT. : Clear

TSID: 880 CID: 0 (0x0) MENU & ?

Figure G-319 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 62.4dBuV  
 MER: 34.1dB SNR: 34dB  
 NsMAR: 13.4dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

ABC NEWS  
 ABC Victoria  
 VPID: 516 APID: 654 PNT: 258  
 CARRIER :  
 CONST. : 640AM  
 ENCRYPT. : Clear

NID: 12883 NETW: ABC Victoria MENU & ?

Figure G-317 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 62.6dBuV  
 MER: 31.4dB SNR: 31dB  
 NsMAR: 10.7dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 000

9 Ballarat  
 SCA  
 VPID: 273 APID: 274 PNT: 272  
 CARRIER :  
 CONST. : 640AM  
 ENCRYPT. : Clear

TSID: 2050 CID: 0 (0x0) MENU & ?

Figure G-320 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 62.0dBuV  
 MER: >36dB SNR: >36dB  
 NsMAR: 15.4dB QLY: PASS  
 bBER: <10-6  
 aBER: <10-8 ERR: 008

PRIME7 Ballarat  
 PRIME  
 VPID: 2820 APID: 2821 PNT: 282  
 CARRIER :  
 CONST. : 640AM  
 ENCRYPT. : Clear

ONID: 12931 VER: 18 MENU & ?

# M112

Figure G-321 Antenna Aiming



Figure G-322 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 36.9dBuV

MER: 28.0dB SNR: 20dB

NsMAR: 7.3dB QLY: PASS

bBER: 3x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 999

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC

Figure G-323 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 31.4dBuV

MER: 21.8dB SNR: 22dB

NsMAR: 1.1dB QLY: MARG

bBER: 1x10<sup>-2</sup>

aBER: 1x10<sup>-4</sup> ERR: 101

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0)

Figure G-324 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 32.1dBuV

MER: 20.1dB SNR: 20dB

NsMAR: -0.6dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 3x10<sup>-5</sup> ERR: 999

ONID: 12916 VER: 3

WIN Western Vic

WIN Television

VPID: 148 APID: 548 PMT: 348

CARRIER: 640AM

CONST.: Clear

ENCRYPT.: Clear

Figure G-325 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 37.5dBuV

MER: 20.2dB SNR: 20dB

NsMAR: -0.5dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 3x10<sup>-3</sup> ERR: 999

NID: 12883 NETW: ABC Victoria

news.abc.net.au

ABC Victoria

VPID: 516 APID: 654 PMT: 258

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

Figure G-326 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 38.6dBuV

MER: 25.9dB SNR: 26dB

NsMAR: 5.2dB QLY: MARG

bBER: 1x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 000

ONID: 12931 VER: 18

PRIME7 Ballarat

SUBARU

PRIME

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

# M116

Figure G-327 Antenna Aiming



Figure G-328 Channel 47



Figure G-329 Channel 48



Figure G-330 Channel 49



Figure G-331 Channel 50

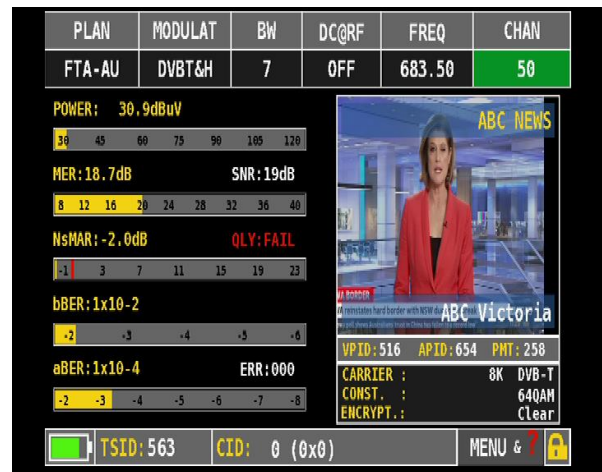


Figure G-332 Channel 51



# M117

**Figure G-333 Antenna Aiming**



**Figure G-334 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 36.9dBuV

MER: 22.3dB SNR: 22dB

NsMAR: 1.6dB QLY: MARG

bBER: 3x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 000

SBS ONE

BALLOT BATTLE

SBS VIC

VPID: 161 APID: 81 PMT: 1025

CARRIER : 8K DVB-T

CONST. : 640AM

ENCRYPT. : Clear

NID: 12802 NETW: SBS VIC

**Figure G-335 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 35.4dBuV

MER: 21.4dB SNR: 21dB

NsMAR: 0.7dB QLY: MARG

bBER: 6x10<sup>-3</sup>

aBER: 1x10<sup>-6</sup> ERR: 097

9 Ballarat

SCA

VPID: 273 APID: 274 PMT: 272

CARRIER : 8K DVB-T

CONST. : 640AM

ENCRYPT. : Clear

TSID: 2050 CID: 0 (0x0)

**Figure G-336 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 34.7dBuV

MER: 21.4dB SNR: 21dB

NsMAR: 0.7dB QLY: MARG

bBER: 6x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 000

WIN Western Vic

WIN Television

VPID: 148 APID: 548 PMT: 348

CARRIER : 8K DVB-T

CONST. : 640AM

ENCRYPT. : Clear

TSID: 12922 CID: 0 (0x0)

**Figure G-337 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 33.0dBuV

MER: 21.0dB SNR: 21dB

NsMAR: 0.3dB QLY: MARG

bBER: 9x10<sup>-3</sup>

aBER: 3x10<sup>-6</sup> ERR: 195

(UNTITLED)

Data Service

ABC Victoria

VPID: 516 APID: 654 PMT: 258

CARRIER : 640AM

ENCRYPT. : Clear

NID: 12883 NETW: ABC Victoria

**Figure G-338 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 31.6dBuV

MER: 20.3dB SNR: 20dB

NsMAR: -0.4dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 2x10<sup>-6</sup> ERR: 970

PRIME7 Ballarat

LAURA HEATH

LISA CARMICHAEL

PRIME

VPID: 2020 APID: 2021 PMT: 202

CARRIER : 8K DVB-T

CONST. : 640AM

ENCRYPT. : Clear

ONID: 12931 VER: 19

# M120

Figure G-339 Antenna Aiming

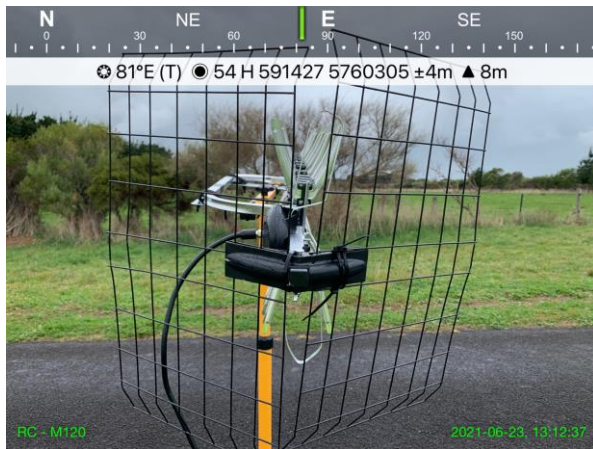


Figure G-340 Channel 47

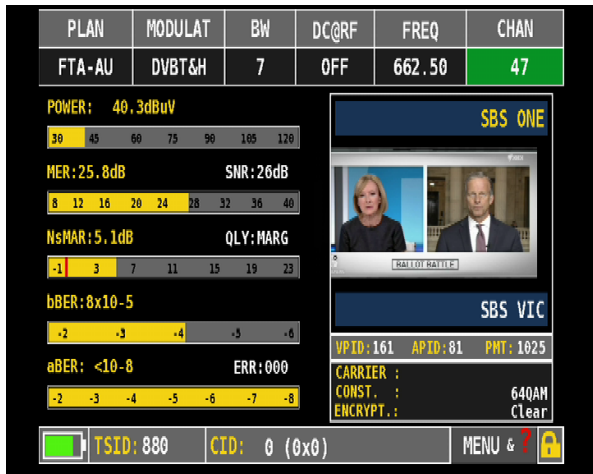


Figure G-341 Channel 48

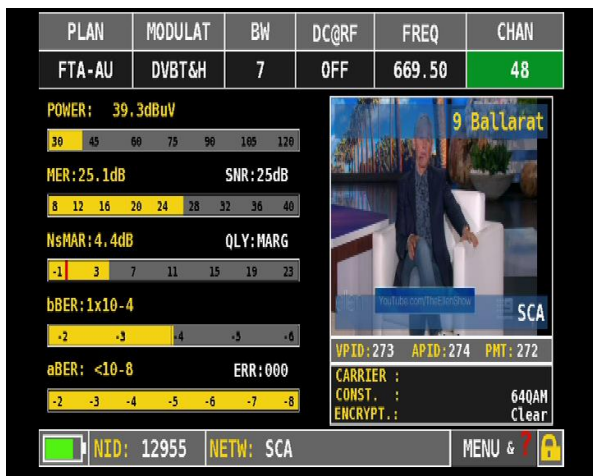


Figure G-342 Channel 49

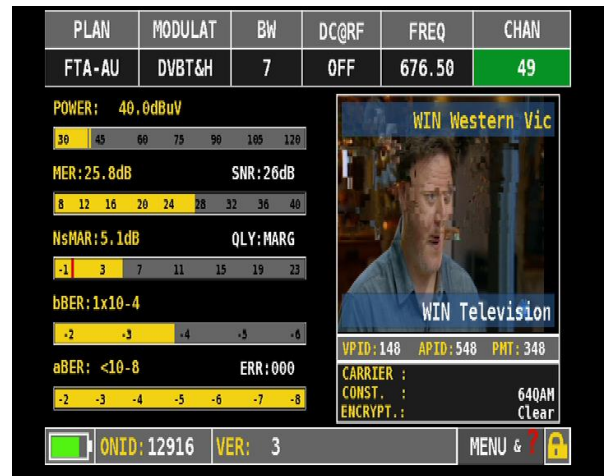


Figure G-343 Channel 50

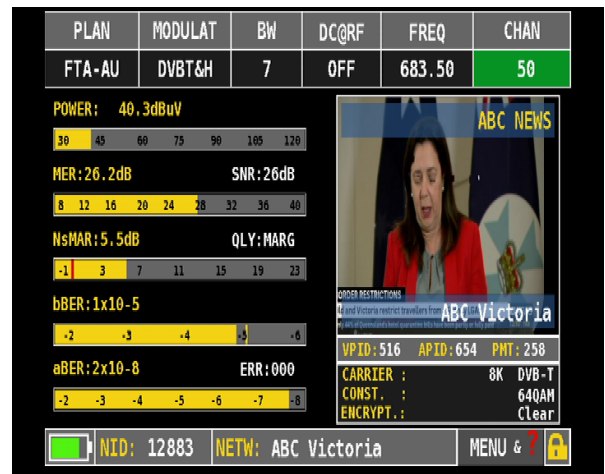


Figure G-344 Channel 51



# M123

**Figure G-345 Antenna Aiming**



**Figure G-346 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 41.5dBuV  
 MER: 25.3dB SNR: 25dB  
 NsMAR: 4.6dB QLY: MARG  
 bBER: 3x10-4  
 aBER: 1x10-8 ERR: 000

**SBS ONE**  
**SBS VIC**  
 VPID: 161 APID: 81 PMT: 1025  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12802 NETW: SBS VIC MENU & ?

**Figure G-347 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 41.6dBuV  
 MER: 25.2dB SNR: 25dB  
 NsMAR: 4.5dB QLY: MARG  
 bBER: 5x10-4  
 aBER: <10-8 ERR: 042

**9 Ballarat**  
**SCA**  
 VPID: 273 APID: 274 PMT: 272  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0) MENU & ?

**Figure G-348 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 39.6dBuV  
 MER: 24.9dB SNR: 25dB  
 NsMAR: 4.2dB QLY: MARG  
 bBER: 6x10-4  
 aBER: 4x10-6 ERR: 000

**WIN Western Vic**  
**WIN Television**  
 VPID: 148 APID: 548 PMT: 348  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

ONID: 12916 VER: 3 MENU & ?

**Figure G-349 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 37.8dBuV  
 MER: 25.6dB SNR: 26dB  
 NsMAR: 4.9dB QLY: MARG  
 bBER: 1x10-3  
 aBER: 6x10-8 ERR: 000

**ABC NEWS**  
**ABC Victoria**  
 VPID: 516 APID: 654 PMT: 258  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

NID: 12883 NETW: ABC Victoria MENU & ?

**Figure G-350 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 37.0dBuV  
 MER: 23.6dB SNR: 24dB  
 NsMAR: 2.9dB QLY: MARG  
 bBER: 1x10-3  
 aBER: <10-8 ERR: 000

**PRIME7 Ballarat**  
**PRIME**  
 VPID: 2020 APID: 2021 PMT: 202  
 CARRIER: 8K DVB-T  
 CONST.: 64QAM  
 ENCRYPT.: Clear

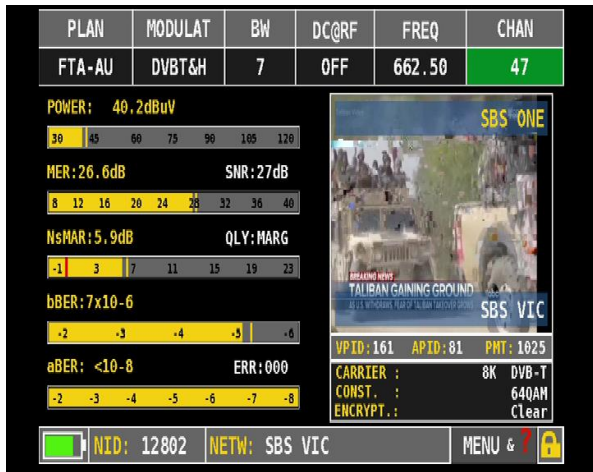
TSID: 2461 CID: 0 (0x0) MENU & ?

# M125

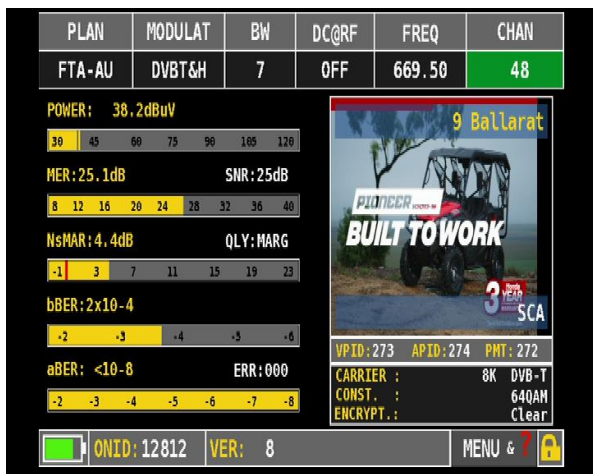
**Figure G-351 Antenna Aiming**



**Figure G-352 Channel 47**



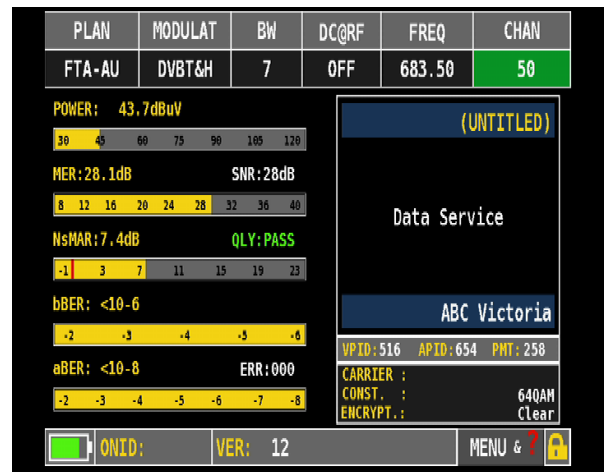
**Figure G-353 Channel 48**



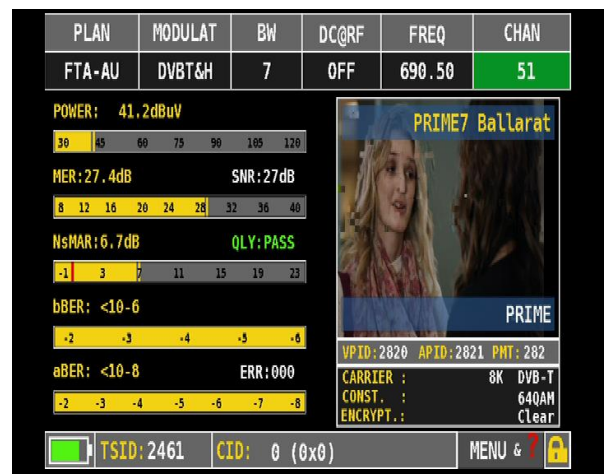
**Figure G-354 Channel 49**



**Figure G-355 Channel 50**



**Figure G-356 Channel 51**



# M128

Figure G-357 Antenna Aiming

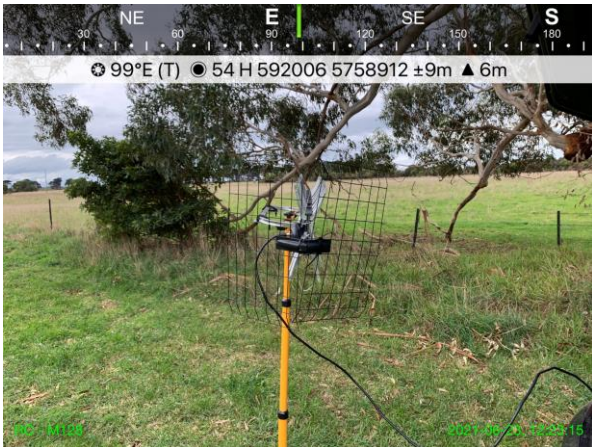


Figure G-358 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 36.9dBuV

MER: 20.7dB SNR: 21dB

NSMAR: 0.0dB QLY: MARG

bBER: 9x10<sup>-3</sup>

aBER: 9x10<sup>-7</sup> ERR: 999

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

NID: NETW: MENU & 🔒

Figure G-359 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 36.5dBuV

MER: 21.6dB SNR: 22dB

NSMAR: 0.9dB QLY: MARG

bBER: 4x10<sup>-3</sup>

aBER: 4x10<sup>-6</sup> ERR: 000

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

TSID: 2050 CID: 0 (0x0) MENU & 🔒

Figure G-360 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 29.9dBuV

MER: 19.8dB SNR: 20dB

NSMAR: -0.9dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 6x10<sup>-6</sup> ERR: 000

VPID: 148 APID: 548 PMT: 348

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

TSID: 12922 CID: 0 (0x0) MENU & 🔒

Figure G-361 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 36.0dBuV

MER: 20.7dB SNR: 21dB

NSMAR: 0.0dB QLY: MARG

bBER: 1x10<sup>-2</sup>

aBER: 8x10<sup>-6</sup> ERR: 000

VPID: 516 APID: 654 PMT: 258

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

NID: 12883 NETW: ABC Victoria MENU & 🔒

Figure G-362 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 35.4dBuV

MER: 21.2dB SNR: 21dB

NSMAR: 0.5dB QLY: MARG

bBER: 7x10<sup>-3</sup>

aBER: 6x10<sup>-6</sup> ERR: 218

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 640AM

ENCRYPT.: Clear

TSID: 2461 CID: 0 (0x0) MENU & 🔒

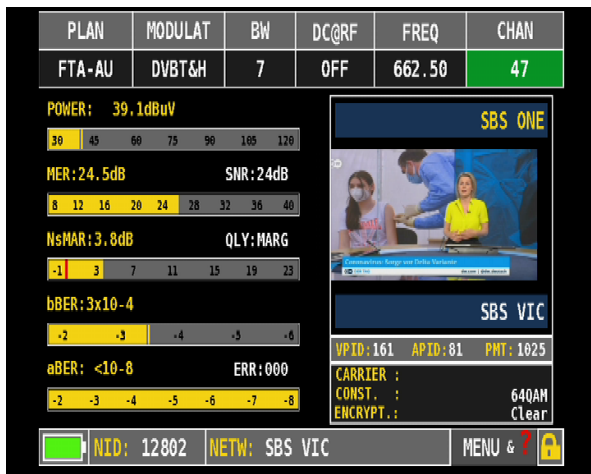


# M134

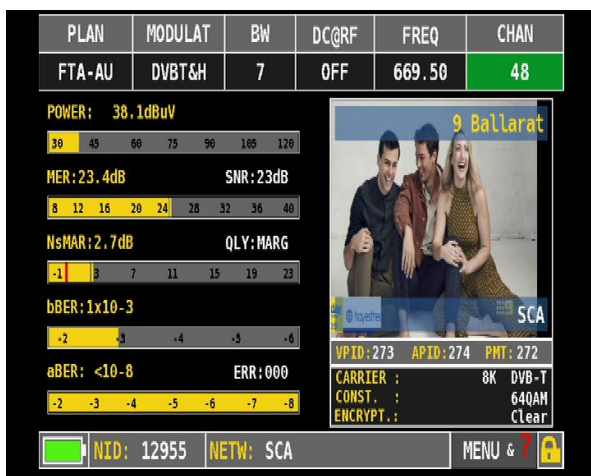
**Figure G-363 Antenna Aiming**



**Figure G-364 Channel 47**



**Figure G-365 Channel 48**



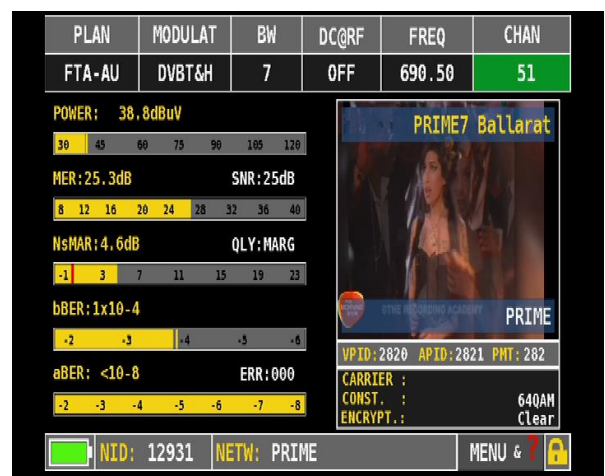
**Figure G-366 Channel 49**



**Figure G-367 Channel 50**



**Figure G-368 Channel 51**



# M137

**Figure G-369 Antenna Aiming**



**Figure G-370 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 33.9dBuV

MER: 21.0dB SNR: 21dB

NsMAR: 0.3dB QLY: MARG

bBER: 9x10-3

aBER: 6x10-8 ERR: 000

TSID: 880 CID: 0 (0x0)

VPID: 161 APID: 81 PMT: 1025

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

SBS ONE

SBS VIC

**Figure G-371 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 32.6dBuV

MER: 19.9dB SNR: 20dB

NsMAR: -0.8dB QLY: FAIL

bBER: 1x10-2

aBER: 1x10-5 ERR: 000

ONID: 12812 VER: 8

VPID: 273 APID: 274 PMT: 272

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

9 Ballarat

SCA

**Figure G-372 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 32.5dBuV

MER: 18.5dB SNR: 18dB

NsMAR: -2.2dB QLY: FAIL

bBER: 1x10-2

aBER: 2x10-4 ERR: 905

NID: 12916 NETW: WIN Televisi

VPID: 148 APID: 548 PMT: 348

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

WIN Western Vic

WIN Television

**Figure G-373 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 32.5dBuV

MER: 18.9dB SNR: 19dB

NsMAR: -1.8dB QLY: FAIL

bBER: 1x10-2

aBER: 1x10-4 ERR: 000

ONID: 4112 VER: 12

VPID: 516 APID: 654 PMT: 258

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

ABC NEWS

ABC Victoria

**Figure G-374 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 31.5dBuV

MER: 18.3dB SNR: 18dB

NsMAR: -2.4dB QLY: FAIL

bBER: 1x10-2

aBER: 7x10-4 ERR: 041

TSID: 2461 CID: 0 (0x0)

VPID: 2820 APID: 2821 PMT: 282

CARRIER: 8K DVB-T

CONST.: 64QAM

ENCRYPT.: Clear

PRIME7 Ballarat

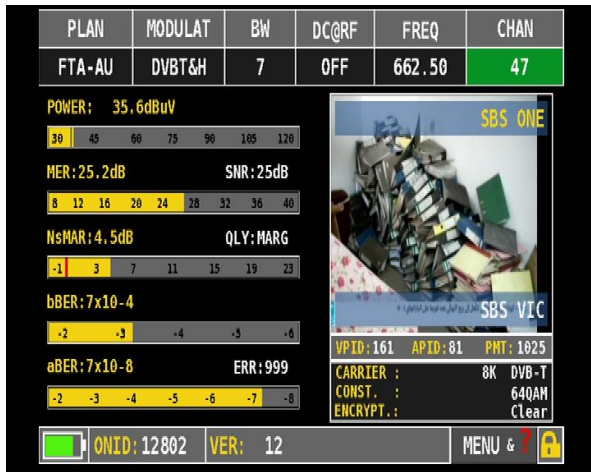
PRIME

# M148

**Figure G-375 Antenna Aiming**



**Figure G-376 Channel 47**



**Figure G-377 Channel 48**



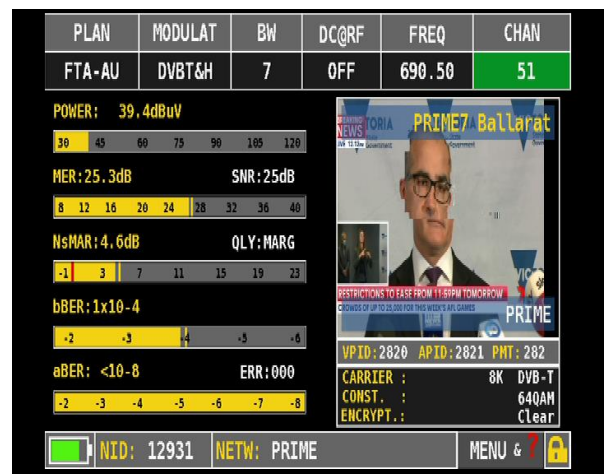
**Figure G-378 Channel 49**



**Figure G-379 Channel 50**



**Figure G-380 Channel 51**



# M152

Figure G-381 Antenna Aiming



Figure G-382 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 31.5dBuV

MER: 19.4dB SNR: 19dB

NSMAR: -1.3dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 6x10<sup>-5</sup> ERR: 000

ONID: 12802 VER: 12

Figure G-383 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 30.7dBuV

MER: 18.5dB SNR: 18dB

NSMAR: -2.2dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 2x10<sup>-4</sup> ERR: 000

NID: 12955 NETW: SCA

Figure G-384 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 30.2dBuV

MER: 18.3dB SNR: 18dB

NSMAR: -2.4dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 7x10<sup>-4</sup> ERR: 999

TSID: 12922 CID: 0 (0x0)

Figure G-385 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 36.1dBuV

MER: 23.1dB SNR: 23dB

NSMAR: 2.4dB QLY: MARG

bBER: 1x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 000

TSID: 563 CID: 0 (0x0)

Figure G-386 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 35.0dBuV

MER: 21.7dB SNR: 22dB

NSMAR: 1.0dB QLY: MARG

bBER: 6x10<sup>-3</sup>

aBER: 2x10<sup>-7</sup> ERR: 000

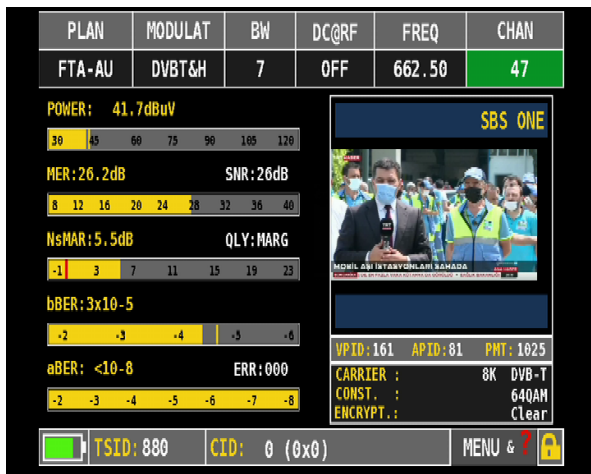
ONID: 12931 VER: 19

# M157

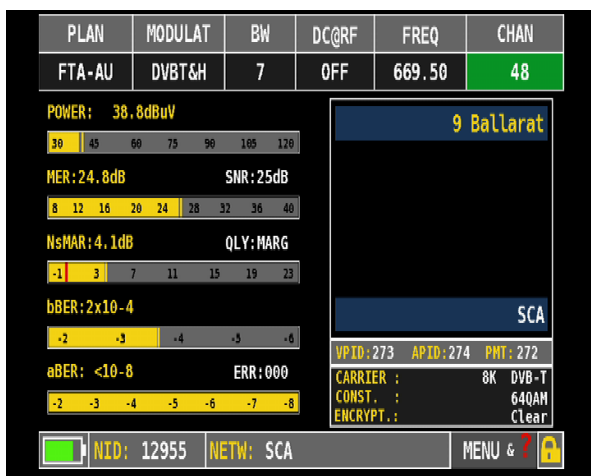
**Figure G-387 Antenna Aiming**



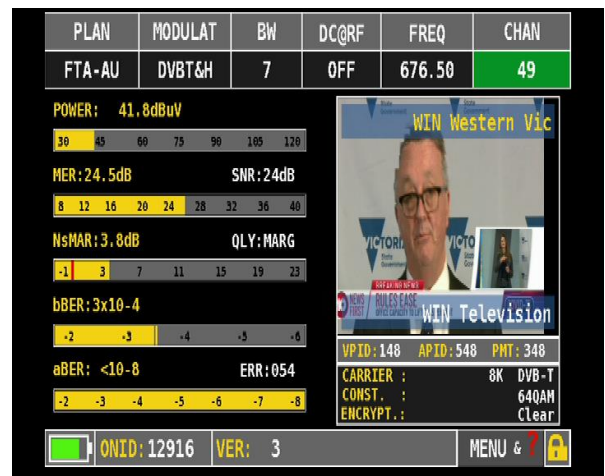
**Figure G-388 Channel 47**



**Figure G-389 Channel 48**



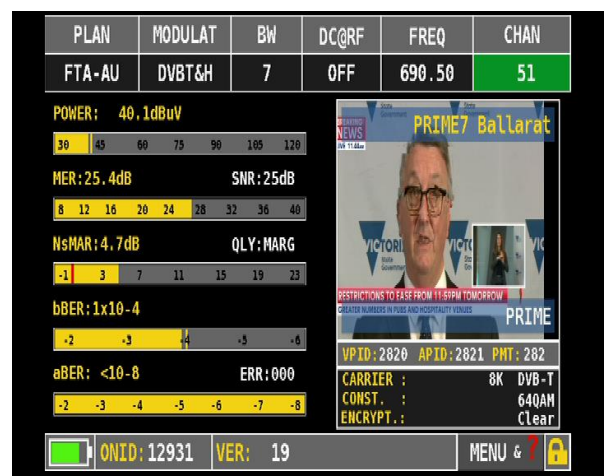
**Figure G-390 Channel 49**



**Figure G-391 Channel 50**



**Figure G-392 Channel 51**

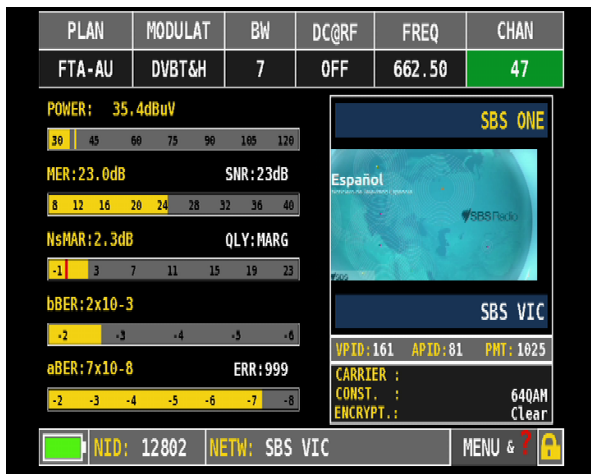


# M161

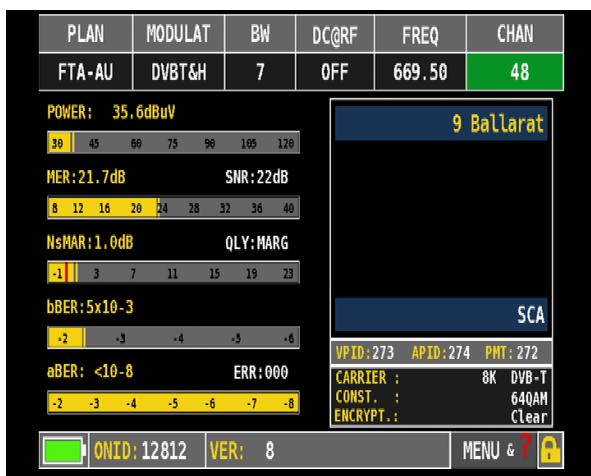
**Figure G-393 Antenna Aiming**



**Figure G-394 Channel 47**



**Figure G-395 Channel 48**



**Figure G-396 Channel 49**



**Figure G-397 Channel 50**



**Figure G-398 Channel 51**



# M169

**Figure G-399 Antenna Aiming**



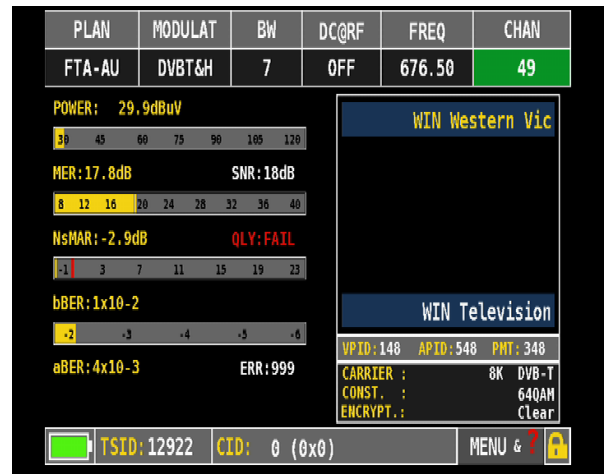
**Figure G-400 Channel 47**



**Figure G-401 Channel 48**



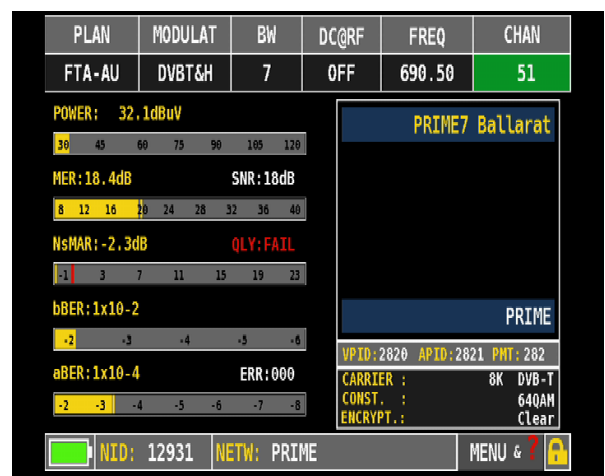
**Figure G-402 Channel 49**



**Figure G-403 Channel 50**



**Figure G-404 Channel 51**



# M172

Figure G-405 Antenna Aiming



Figure G-406 Channel 47

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 40.6dBuV

MER: 25.4dB SNR: 25dB

NsMAR: 4.7dB QLY: MARG

bBER: 1x10<sup>-4</sup>

aBER: <10<sup>-8</sup> ERR: 000

ONID: 12802 VER: 12

SBS ONE  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

Figure G-407 Channel 48

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 39.1dBuV

MER: 24.5dB SNR: 24dB

NsMAR: 3.8dB QLY: MARG

bBER: 6x10<sup>-4</sup>

aBER: <10<sup>-8</sup> ERR: 000

ONID: 12955 NETW: SCA

9 Ballarat  
SCA  
VPID: 273 APID: 274 PMT: 272  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

Figure G-408 Channel 49

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 36.3dBuV

MER: 24.1dB SNR: 24dB

NsMAR: 3.4dB QLY: MARG

bBER: 9x10<sup>-4</sup>

aBER: <10<sup>-8</sup> ERR: 000

ONID: 12916 VER: 3

WIN Western Vic  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 640AM  
CONST.: Clear  
ENCRYPT.: Clear

Figure G-409 Channel 50

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 35.1dBuV

MER: 22.0dB SNR: 22dB

NsMAR: 1.3dB QLY: MARG

bBER: 5x10<sup>-3</sup>

aBER: <10<sup>-8</sup> ERR: 000

TSID: 563 CID: 0 (0x0)

(UNTITLED)  
Data Service  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 640AM  
CONST.: Clear  
ENCRYPT.: Clear

Figure G-410 Channel 51

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 29.6dBuV

MER: 18.7dB SNR: 19dB

NsMAR: -2.0dB QLY: FAIL

bBER: 1x10<sup>-2</sup>

aBER: 2x10<sup>-4</sup> ERR: 037

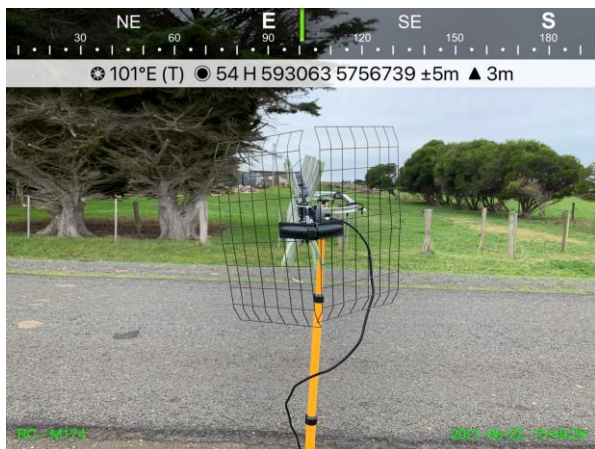
ONID: 12931 VER: 19

PRIME7 Ballarat  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

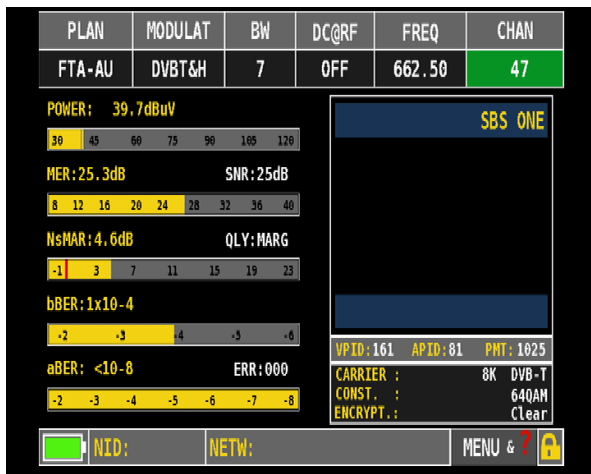


# M174

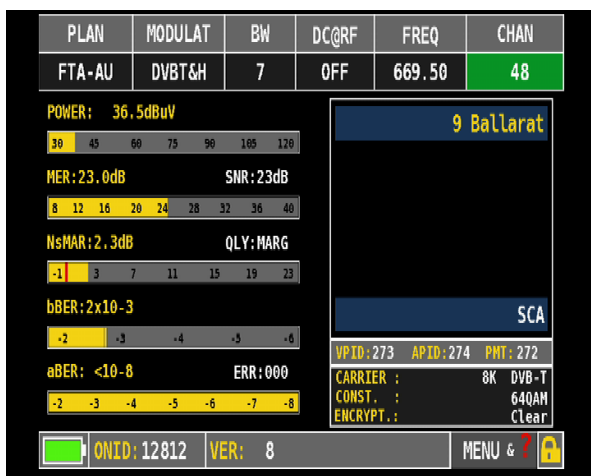
**Figure G-411 Antenna Aiming**



**Figure G-412 Channel 47**



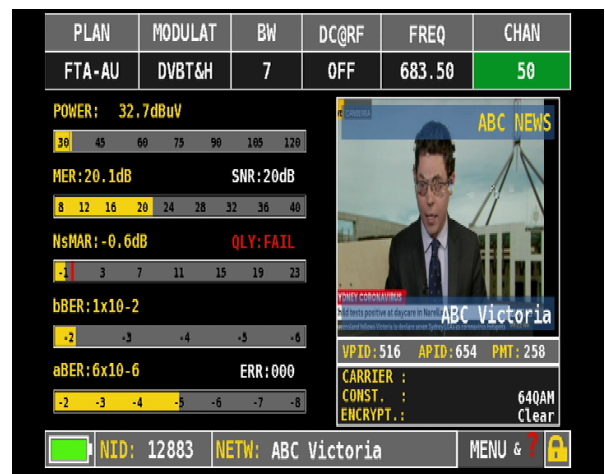
**Figure G-413 Channel 48**



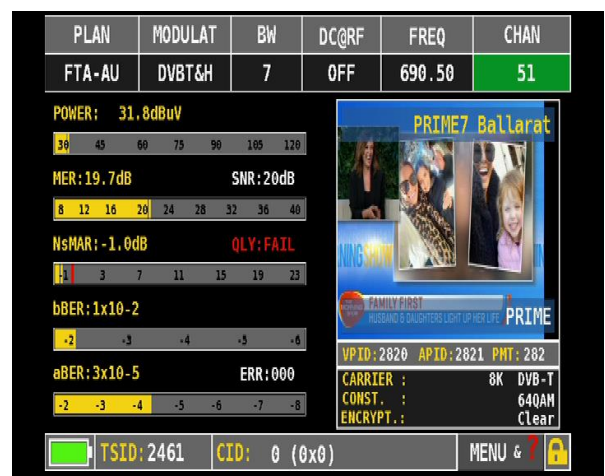
**Figure G-414 Channel 49**



**Figure G-415 Channel 50**



**Figure G-416 Channel 51**



# M181

**Figure G-417 Antenna Aiming**



**Figure G-418 Channel 47**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	662.50	47

POWER: 41.6dBuV

MER: 26.0dB SNR: 26dB

NSMAR: 5.3dB QLY: MARG

bBER: 6x10-4

aBER: <10-8 ERR: 000

ONID: 12802 VER: 12

SBS ONE  
SBS VIC  
VPID: 161 APID: 81 PMT: 1025  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

**Figure G-419 Channel 48**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	669.50	48

POWER: 38.9dBuV

MER: 22.1dB SNR: 22dB

NSMAR: 1.4dB QLY: MARG

bBER: 1x10-2

aBER: 1x10-4 ERR: 000

NID: 12955 NETW: SCA

9 Ballarat  
SCA  
VPID: 273 APID: 274 PMT: 272  
CARRIER: 640AM  
ENCRYPT.: Clear

**Figure G-420 Channel 49**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	676.50	49

POWER: 37.5dBuV

MER: 23.8dB SNR: 24dB

NSMAR: 3.1dB QLY: MARG

bBER: 1x10-2

aBER: 3x10-7 ERR: 000

TSID: 12922 CID: 0 (0x0)

WIN Western Vic  
WIN Television  
VPID: 148 APID: 548 PMT: 348  
CARRIER: 640AM  
CONST.: Clear  
ENCRYPT.: Clear

**Figure G-421 Channel 50**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	683.50	50

POWER: 34.8dBuV

MER: 26.7dB SNR: 27dB

NSMAR: 6.0dB QLY: PASS

bBER: 4x10-4

aBER: <10-8 ERR: 000

TSID: 563 CID: 0 (0x0)

ABC NEWS  
ABC Victoria  
VPID: 516 APID: 654 PMT: 258  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

**Figure G-422 Channel 51**

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
FTA-AU	DVBT&H	7	OFF	690.50	51

POWER: 44.6dBuV

MER: 28.2dB SNR: 28dB

NSMAR: 7.5dB QLY: PASS

bBER: <10-6

aBER: <10-8 ERR: 000

NID: 12931 NETW: PRIME

PRIME7 Ballarat  
PRIME  
VPID: 2820 APID: 2821 PMT: 282  
CARRIER: 8K DVB-T  
CONST.: 640AM  
ENCRYPT.: Clear

# M184

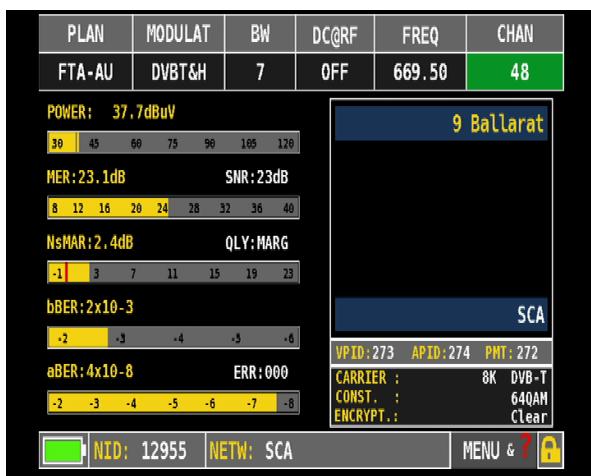
**Figure G-423 Antenna Aiming**



**Figure G-424 Channel 47**



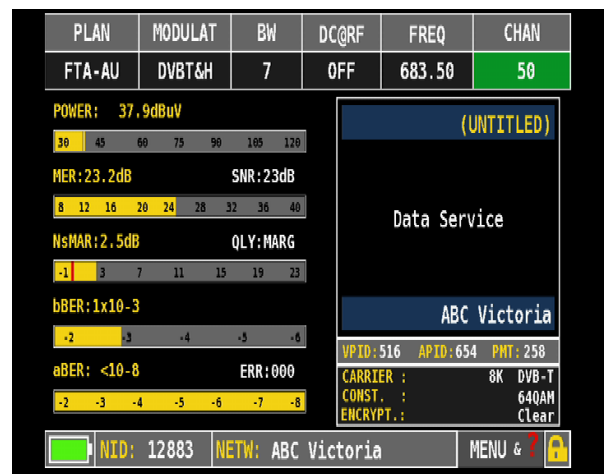
**Figure G-425 Channel 48**



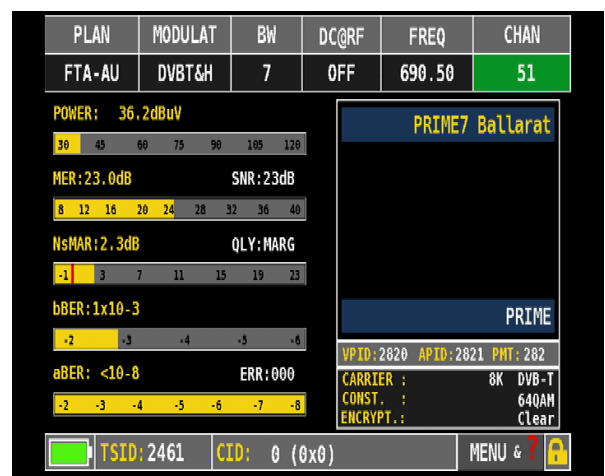
**Figure G-426 Channel 49**



**Figure G-427 Channel 50**



**Figure G-428 Channel 51**



# M185

Figure G-429 Antenna Aiming



Figure G-430 Channel 47

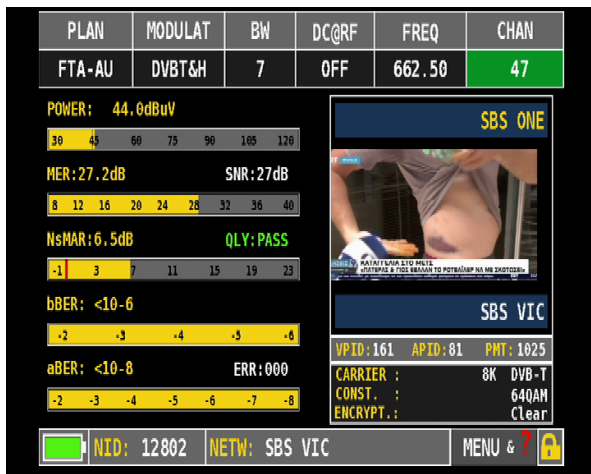


Figure G-431 Channel 48

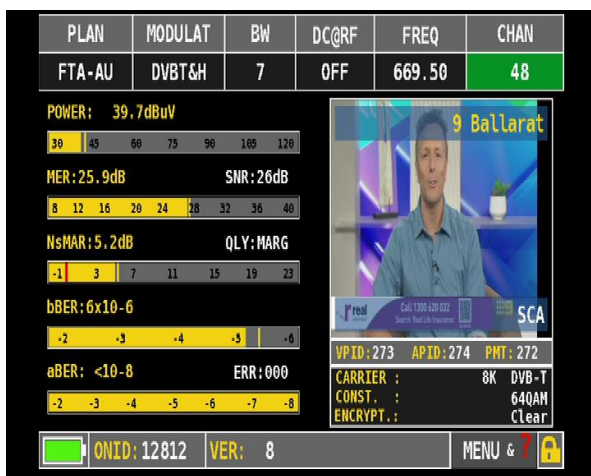


Figure G-432 Channel 49



Figure G-433 Channel 50

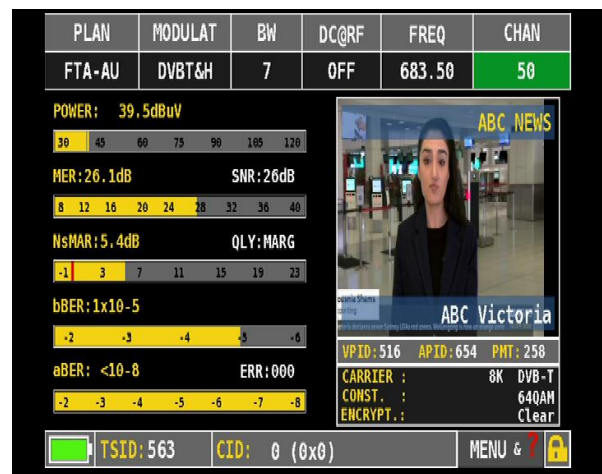


Figure G-434 Channel 51





## **ABOUT DNV**

Driven by our purpose of safeguarding life, property and the environment, DNV enables organizations to advance the safety and sustainability of their business. We provide classification and technical assurance along with software and independent expert advisory services to the maritime, oil and gas, and energy industries. We also provide certification services to customers across a wide range of industries. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping our customers make the world safer, smarter and greener.