

### **Radiated Emissions Test Data**

|                   |                              |                   |                |    |
|-------------------|------------------------------|-------------------|----------------|----|
| <b>Company:</b>   | <b>Symbol</b>                | <b>Model #:</b>   | LA-3021-500-US |    |
| <b>EUT:</b>       | Antenna 11 on 500 mw C-radio | <b>S/N #:</b>     |                | 11 |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 24 1999    | 3  |
| <b>Test Mode:</b> | xmit 2440 500mw              | <b>Engineer:</b>  | Barry S.       | 0  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.: Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C.  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.



## Intertek Testing Services

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                       |                       |
|-------------------|------------------------------|-------------------|----------------|-----------------------|-----------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>      | ICC 3-13-287<br>(7-8) |
| <b>EUT:</b>       | Antenna 11 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Units:</b>         | 11                    |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 24 1999    | <b>Test Distance:</b> | 3                     |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Test Time:</b>     | 0                     |

|         | Attorney Used |             |              | Pro AMP Used |              |              | Case Used    |              |              | Trademark Used |
|---------|---------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Number: | 8             | 7           | 17           | 8            | 12           | 10           | 12           | 0            | 0            | 0              |
| Model:  | 15000<br>315  | 15000<br>25 | 15000<br>315 | 15000<br>315 | 15000<br>200 | 15000<br>200 | 15000<br>315 | 15000<br>315 | 15000<br>315 | 15000<br>315   |

[illegible]

\* Noise Floor with RBW 300KHz

**a) D.C.F.: Distance Correction Factor**

**b) Insert. Loss (dB) = Cable A + Cable B + Cable C.**

c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).

d) Negative signs (-) in Margin column signify levels below the limits.

e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

## Radiated Emissions

### Test Data

|                   |                              |                                |                       |           |
|-------------------|------------------------------|--------------------------------|-----------------------|-----------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b> LA-3021-500-US | <b>Standard:</b>      | FCR 15-10 |
| <b>EUT:</b>       | Antenna 12 on 500 mw C-radio | <b>S/N #:</b>                  | <b>Unit #:</b>        | 11        |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> May 25 1999  | <b>Test Distance:</b> | 3         |
| <b>Test Mode:</b> | xmit 2402 500mw              | <b>Engineer:</b> Barry S.      | <b>Qty Released:</b>  | 0         |

|        | Asymptotic |       |     | Pre-Asymptotic |     |        | Observed |      | Randomized Control |      |
|--------|------------|-------|-----|----------------|-----|--------|----------|------|--------------------|------|
| Number | 8          | 7     | 17  | 8              | 12  | 10     | 12       | 0    | 0                  | 0    |
| Model  | GR0        | GR1RA | GR0 | GR1RA          | GR0 | GR1RA  | GR1RA    | None | None               | None |
|        | 316        | 25    | 310 | 0              | 40  | 311325 | GR1RA    | None | None               | None |

[illegible]

|        |                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|
| Notes: | a) D.C.F.: Distance Correction Factor                                                                                    |
|        | b) Insert. Loss (dB) = Cable A + Cable B + Cable C.                                                                      |
|        | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|        | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|        | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |

### **Radiated Emissions Test Data**

|                   |                              |                                |                         |                                 |
|-------------------|------------------------------|--------------------------------|-------------------------|---------------------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b> LA-3021-500-US | <b>Standard:</b>        | <b>FCR: A-15-247</b><br>(3.8.1) |
| <b>EUT:</b>       | Antenna 12 on 500 mw C-radio | <b>S/N #:</b>                  | <b>Units:</b>           | 11                              |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> May 25 1999  | <b>Test Distance:</b>   | 3                               |
| <b>Test Mode:</b> | xmit 2440 500mw              | <b>Engineer:</b> Barry S.      | <b>Days Since Test:</b> | 0                               |

|        | Antenna 1 (m) |        |        | Pre-Amp 1 (dB) |     |         | Antenna 2 (m) |      |      | Transducer Used |
|--------|---------------|--------|--------|----------------|-----|---------|---------------|------|------|-----------------|
| Number | 8             | 7      | 17     | 8              | 12  | 10      | 12            | 0    | 0    | 0               |
| Model  | EM-300        | EM-300 | EM-300 | ODS-100        | 700 | AP-1000 | ODS-100       | None | None | None            |

[illegible]

2000

- a) D.C.F.:Distance Correction Factor
- b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
- c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
- d) Negative signs (-) in Margin column signify levels below the limits.
- e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                         |                     |
|-------------------|------------------------------|-------------------|----------------|-------------------------|---------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Sampling Rate:</b>   | 1000 S/s (200 MS/s) |
| <b>EUT:</b>       | Antenna 12 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Time:</b>            | 11                  |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test Distance:</b>   | 3                   |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Dist. Reduction:</b> | 0                   |

|        | Alkanes Used |         |           | PFA-Alkyl Used |          |          | C20-30 Used |      |      | Indicator Used |
|--------|--------------|---------|-----------|----------------|----------|----------|-------------|------|------|----------------|
| Number | 8            | 7       | 17        | 8              | 12       | 10       | 12          | 0    | 0    | 0              |
| Model  | 2000-315     | 2000-22 | 2000-3150 | 2000-100       | 2000-100 | 2000-100 | 2000-100    | None | None | None           |

[illegible]

100

- a) D.C.F.:Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C .  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.



## Intertek Testing Services

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                       |                      |
|-------------------|------------------------------|-------------------|----------------|-----------------------|----------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>      | IEEE 11227<br>(T-95) |
| <b>EUT:</b>       | Antenna 13 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Tests:</b>         | 11                   |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test Duration:</b> | 3                    |
| <b>Test Mode:</b> | xmit 2402 500mw              | <b>Engineer:</b>  | Barry S.       | <b>OK?</b>            | 0                    |

|         | Antenna Used |        |          | Pre-Amp Used |         |       | Cable Used |     |     | Transceiver Used |
|---------|--------------|--------|----------|--------------|---------|-------|------------|-----|-----|------------------|
| Number: | 8            | 7      | 17       | 8            | 12      | 10    | 12         | 0   | 0   | 0                |
| Model:  | MB-310       | MB-100 | Dash 100 | GP-100       | 110-600 | A-100 | GP-100     | 100 | 100 | N/A              |

[illegible]

**a) D.C.F.:Distance Correction Factor**

**b) Insert. Loss (dB) = Cable A + Cable B + Cable C .**

c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).

d) Negative signs (-) in Margin column signify levels below the limits.

e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

**Radiated Emissions  
Test Data**

|                                   |                         |                               |
|-----------------------------------|-------------------------|-------------------------------|
| Company: Symbol                   | Model #: LA-3021-500-US | Standard: FCC 5 15.247 (R.B.) |
| EUT: Antenna 13 on 500 mw C-radio | S/N #:                  | 11                            |
| Project #: J99013298              | Test Date: May 25 1999  | 3                             |
| Test Mode: xmit 2440 500mw        | Engineer: Barry S.      | 0 dB                          |

| Antenna Used            | Pre-Amp Used                         | Cable Used                           | Transducer Used                      |
|-------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 8 7 17                  | 8 12 10 12 0 0                       | 0                                    | 0                                    |
| Model: 310 25 310 0 400 | Model: 1600 1600 1600 1600 1600 1600 | Model: 1600 1600 1600 1600 1600 1600 | Model: 1600 1600 1600 1600 1600 1600 |

| Frequency | Reading | Detector | Ant. Amp. | Ant. Pol. | Ant. Factor | Pre-Amp | Insert. Loss | D.C. F. | Net      | Limit @3m | Margin |       |
|-----------|---------|----------|-----------|-----------|-------------|---------|--------------|---------|----------|-----------|--------|-------|
| MHz       | dB(μV)  | Peak/Ave | #         | #         | dB          | dB      | dB           | dB      | dB(μV/m) | dB(μV/m)  | dB     |       |
| 4880      | 47.2    | Peak     | 8         | 8         | V           | 33.5    | 28.1         | 3.2     | 0.0      | 55.8      | 74.0   | -18.2 |
| 4880      | 45.1    | Ave.     | 8         | 8         | V           | 33.5    | 28.1         | 3.2     | 0.0      | 53.7      | 54.0   | -0.3  |
| 7320      | 41.5    | Peak     | 8         | 8         | V           | 38.0    | 28.0         | 4.3     | 0.0      | 55.8      | 74.0   | -18.2 |
| 7320      | 36.0    | Ave.     | 8         | 8         | V           | 38.0    | 28.0         | 4.3     | 0.0      | 50.3      | 54.0   | -3.7  |
| 12200     | 43.6    | Peak     | 8         | 10        | V           | 42.5    | 39.1         | 5.9     | 0.0      | 52.9      | 74.0   | -21.1 |
| 12200     | 34.4    | Ave.     | 8         | 10        | V           | 42.5    | 39.1         | 5.9     | 0.0      | 43.6      | 54.0   | -10.4 |
| 19520     | 41.8*   | Peak     | 17        | 12        | V           | 40.2    | 23.3         | 7.1     | -9.5     | 56.3      | 74.0   | -17.7 |
| 19520     | 31.1*   | Ave.     | 17        | 12        | V           | 40.2    | 23.3         | 7.1     | -9.5     | 45.6      | 54.0   | -8.4  |
| 21960     | 43.4*   | Peak     | 17        | 12        | V           | 40.3    | 24.0         | 7.5     | -9.5     | 57.7      | 74.0   | -16.3 |
| 21960     | 33.9*   | Ave.     | 17        | 12        | V           | 40.3    | 24.0         | 7.5     | -9.5     | 48.2      | 54.0   | -5.8  |

\* Noise Floor with RBW 300KHz

|               |                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Notes:</b> | a) D.C.F.: Distance Correction Factor                                                                                    |
|               | b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
|               | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|               | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|               | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                    |            |
|-------------------|------------------------------|-------------------|----------------|--------------------|------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>   | FCC 47 CFR |
| <b>EUT:</b>       | Antenna 13 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Part 15.247</b> | 11         |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Part 15.249</b> | 3          |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Part 15.245</b> | 0          |

|        | Circuit 1 (S1) |           |           | Circuit 2 (S2) |           |           | Circuit 3 (S3) |           |           | Circuit 4 (S4) |
|--------|----------------|-----------|-----------|----------------|-----------|-----------|----------------|-----------|-----------|----------------|
| Number | 8              | 7         | 17        | 8              | 12        | 10        | 12             | 0         | 0         | 0              |
| Model  | Model S1S      | Model S2S | Model S3S | Model S4S      | Model S5S | Model S6S | Model S7S      | Model S8S | Model S9S | Model S10S     |

[illegible]

\* Noise Floor with RBW 300KHz

**Notes:**

- a) D.C.F.: Distance Correction Factor
- b) Insert. Loss (dB) = Cable A + Cable B + Cable C.
- c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
- d) Negative signs (-) in Margin column signify levels below the limits.
- e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.



### **Radiated Emissions Test Data**

|                   |                              |                   |                |                   |                    |
|-------------------|------------------------------|-------------------|----------------|-------------------|--------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Signature:</b> | <b>PCB: 10-247</b> |
| <b>EUT:</b>       | Antenna 14 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Lot #:</b>     | <b>11</b>          |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test #:</b>    | <b>3</b>           |
| <b>Test Mode:</b> | xmit 2402 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Qty:</b>       | <b>0</b>           |

|        | Admission Used |       |       | Pre-Admission Used |       |         | Enrollment Used |      |      | Transfer-In Used |
|--------|----------------|-------|-------|--------------------|-------|---------|-----------------|------|------|------------------|
| Number | 8              | 7     | 17    | 8                  | 12    | 10      | 12              | 0    | 0    | 0                |
| Model  | None           | Small | Small | Small              | Small | 17-1800 | Small           | None | None | None             |

[illegible]

|        |                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|
| Notes: | a) D.C.F.:Distance Correction Factor                                                                                     |
|        | b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
|        | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|        | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|        | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |



## Intertek Testing Services

### ***Radiated Emissions***

### Test Data

|                   |                              |                   |                |               |        |
|-------------------|------------------------------|-------------------|----------------|---------------|--------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Random</b> | 18.247 |
| <b>EUT:</b>       | Antenna 14 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>11</b>     |        |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>3</b>      |        |
| <b>Test Mode:</b> | xmit 2440 500mw              | <b>Engineer:</b>  | Barry S.       | <b>0</b>      |        |

|         | Antenna Used |           |          | Pre-Amp Used |        |           | Cable Used |      |      | Handbook Used |
|---------|--------------|-----------|----------|--------------|--------|-----------|------------|------|------|---------------|
| Number: | 8            | 7         | 17       | 8            | 12     | 10        | 12         | 0    | 0    | 0             |
| Model:  | DMC-015      | DM-01A-25 | DMC-0160 | CDL-P100-0   | AKO-20 | AKS-16055 | cm-101     | None | None | None          |

[illegible]

\* Noise Floor with RBW 300KHz

|        |                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|
| Notes: | a) D.C.F.:Distance Correction Factor                                                                                     |
|        | b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
|        | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|        | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|        | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                          |                     |
|-------------------|------------------------------|-------------------|----------------|--------------------------|---------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>         | FCC 5.10.247 (R.B.) |
| <b>EUT:</b>       | Antenna 14 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Mode:</b>             | 11                  |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test Distance:</b>    | 3                   |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Pass/Fail/Status:</b> | 0                   |

|        | Amplifier Used |           |              | Pre-Amp Used |           |          | Cable Used |      |      | Transducer Used |
|--------|----------------|-----------|--------------|--------------|-----------|----------|------------|------|------|-----------------|
| Number | 8              | 7         | 17           | 8            | 12        | 10       | 12         | 0    | 0    | 0               |
| Model  | EMCO<br>3315   | EMCO<br>6 | EMCO<br>3315 | ODP-105<br>1 | HVO<br>40 | ADP10B55 | Gen-JWL    | None | None | None            |

[illegible]

|       |                                                                                                                          |
|-------|--------------------------------------------------------------------------------------------------------------------------|
| Notes | a) D.C.F.:Distance Correction Factor                                                                                     |
|       | b) Insert. Loss (dB) = Cable A + Cable B + Cable C.                                                                      |
|       | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|       | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|       | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |



## Intertek Testing Services

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                          |                     |
|-------------------|------------------------------|-------------------|----------------|--------------------------|---------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>         | EC Directive 90/269 |
| <b>EUT:</b>       | Antenna 15 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Limit:</b>            | 11                  |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test Duration:</b>    | 3                   |
| <b>Test Mode:</b> | xmit 2402 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Only Calibration:</b> | 0                   |

|         | Antennas Used |         |           | Pre-Amp Used |           |         | Cable Used |      |      | Transducer Used |
|---------|---------------|---------|-----------|--------------|-----------|---------|------------|------|------|-----------------|
| Number: | 8             | 7       | 17        | 8            | 12        | 10      | 12         | 0    | 0    | 0               |
| Model:  | DA00-3115     | DA10-25 | DA00-3115 | DA00-3115    | DA00-3115 | DA10-25 | DA00-3115  | None | None | None            |

[illegible]

|        |                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|
| Notes: | a) D.C.F.:Distance Correction Factor                                                                                     |
|        | b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
|        | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|        | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
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## Intertek Testing Services

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                       |                  |
|-------------------|------------------------------|-------------------|----------------|-----------------------|------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>      | FCR 11-227 (R-2) |
| <b>EUT:</b>       | Antenna 15 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Items:</b>         | 11               |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test Duration:</b> | 3                |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Test Location:</b> | 0                |

|         | Antenna Used |          |           | Pre-Amp Used |        |         | Cable Used |      |      | Transistor Used |
|---------|--------------|----------|-----------|--------------|--------|---------|------------|------|------|-----------------|
| Number: | 8            | 7        | 17        | 8            | 12     | 10      | 12         | 0    | 0    | 0               |
| Model:  | EPCC-3115    | EMTPA-25 | EMCC-3150 | CDP100-0     | BSO-20 | AT1150K | Gen. 44    | None | None | None            |

[illegible]

|               |                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Notes:</b> | a) D.C.F.:Distance Correction Factor                                                                                     |
|               | b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
|               | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|               | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|               | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |
|               |                                                                                                                          |

### ***Radiated Emissions Test Data***

|                   |                              |                   |                |                  |             |
|-------------------|------------------------------|-------------------|----------------|------------------|-------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b> | IEEE 13.227 |
| <b>EUT:</b>       | Antenna 16 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Time:</b>     | 11          |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test ID:</b>  | 3           |
| <b>Test Mode:</b> | xmit 2402 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Days:</b>     | 0           |

[illegible][illegible]

\* Noise Floor with RBW 300KHz

- a) D.C.F.:Distance Correction Factor
- b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
- c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
- d) Negative signs (-) in Margin column signify levels below the limits.
- e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                       |                 |
|-------------------|------------------------------|-------------------|----------------|-----------------------|-----------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>      | ANSI X3.11-1977 |
| <b>EUT:</b>       | Antenna 16 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Units:</b>         | 11              |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1989    | <b>Test Duration:</b> | 3               |
| <b>Test Mode:</b> | xmit 2440 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Days Received:</b> | 0               |

|        | Antenna Used |       |       | Pre-Amp Used |       |       | Cable Used |      |      | Transducer Used |
|--------|--------------|-------|-------|--------------|-------|-------|------------|------|------|-----------------|
| Number | 8            | 7     | 17    | 8            | 12    | 10    | 12         | 0    | 0    | 0               |
| Model  | EM-10        | EM-10 | EM-10 | EM-10        | EM-10 | EM-10 | EM-10      | None | None | None            |

[illegible]

|        |                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|
| Notes: | a) D.C.F.:Distance Correction Factor                                                                                     |
|        | b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
|        | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|        | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|        | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |



### **Radiated Emissions Test Data**

|                   |                              |                   |                |                         |                         |
|-------------------|------------------------------|-------------------|----------------|-------------------------|-------------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>        | FCC 47 CFR 2.107 (R.F.) |
| <b>EUT:</b>       | Antenna 16 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Items:</b>           | 11                      |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test Distance:</b>   | 3 meters                |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       | <b>DUTS Relaxation:</b> | 0 dB                    |

|        | Amplifier Used |            |               | Pre-Amp Used |              |                 | Cable Used    |      |      | Transition Used |
|--------|----------------|------------|---------------|--------------|--------------|-----------------|---------------|------|------|-----------------|
| Number | 8              | 7          | 17            | 8            | 12           | 10              | 12            | 0    | 0    | 0               |
| Model  | Black<br>3115  | Black<br>2 | Black<br>2110 | Black<br>2   | Black<br>200 | Black<br>211000 | Black<br>2110 | None | None | None            |

[illegible]

100

- a) D.C.F.:Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C .  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

### **Radiated Emissions Test Data**

|                   |                              |                   |                |                  |        |
|-------------------|------------------------------|-------------------|----------------|------------------|--------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b> | 10.247 |
| <b>EUT:</b>       | Antenna 17 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>11</b>        |        |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 24 1999    | <b>3</b>         |        |
| <b>Test Mode:</b> | xmit 2402 500mw              | <b>Engineer:</b>  | Barry S.       | <b>0</b>         |        |

|         | Amplifier Used |             |             | Pre-Amp Used |            |              | Cable Used  |      |      | Transducer Used |
|---------|----------------|-------------|-------------|--------------|------------|--------------|-------------|------|------|-----------------|
| Number: | 8              | 7           | 17          | 8            | 12         | 10           | 12          | 0    | 0    | 0               |
| Model:  | EMCO<br>SIS    | EMCO<br>SIS | EMCO<br>SIS | ED-100<br>1  | AKO<br>200 | AMP-100<br>1 | ED-100<br>1 | None | None | None            |

[illegible]

|        |                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|
| Notes: | a) D.C.F.:Distance Correction Factor                                                                                     |
|        | b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
|        | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|        | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|        | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |



### **Radiated Emissions Test Data**

|                   |                              |                   |                |                       |                        |
|-------------------|------------------------------|-------------------|----------------|-----------------------|------------------------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b>      | FCC Part 15.247 (B.F.) |
| <b>EUT:</b>       | Antenna 17 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Limit:</b>         | 11                     |
| <b>Project #:</b> | J98013298                    | <b>Test Date:</b> | May 24 1999    | <b>Test Distance:</b> | 3 meters               |
| <b>Test Mode:</b> | xmit 2440 500mw              | <b>Engineer:</b>  | Barry S.       | <b> Duty Factor:</b>  | 0 dB                   |

|                    | APRIL 1993 |      |      | MAY 1993 |      |      | JUNE 1993 |      |      | THIRTY DAY AVERAGE |
|--------------------|------------|------|------|----------|------|------|-----------|------|------|--------------------|
| Number of<br>Males | 8          | 7    | 17   | 8        | 12   | 10   | 12        | 0    | 0    | 0                  |
|                    | None       | None | None | None     | None | None | None      | None | None | None               |
|                    | 315        | 22   | 160  | 315      | 22   | 160  | 315       | 22   | 160  | 315                |

[illegible]

|       |                                                                                                                          |
|-------|--------------------------------------------------------------------------------------------------------------------------|
| Notes | a) D.C.F.:Distance Correction Factor                                                                                     |
|       | b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
|       | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|       | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|       | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |
|       |                                                                                                                          |



### ***Radiated Emissions Test Data***

|                   |                              |                   |                |                  |           |
|-------------------|------------------------------|-------------------|----------------|------------------|-----------|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US | <b>Standard:</b> | IEEE 1327 |
| <b>EUT:</b>       | Antenna 18 on 500 mw C-radio | <b>S/N #:</b>     |                | <b>Test #:</b>   | 11        |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | <b>Test #:</b>   | 3         |
| <b>Test Mode:</b> | xmit 2402 500mw              | <b>Engineer:</b>  | Barry S.       | <b>Test #:</b>   | 0         |

|        | Front End |      |      | Engine Room |      |      | Cabin |      |      | Generator Room |
|--------|-----------|------|------|-------------|------|------|-------|------|------|----------------|
| Number | 8         | 7    | 17   | 8           | 12   | 10   | 12    | 0    | 0    | 0              |
| Model  | 1000      | 1000 | 1000 | 1000        | 1000 | 1000 | 1000  | None | None | None           |
| Size   | 100       | 100  | 100  | 100         | 100  | 100  | 100   | None | None | None           |

[illegible]

|        |                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|
| Notes: | a) D.C.F.:Distance Correction Factor                                                                                     |
|        | b) Insert Loss (dB) = Cable A + Cable B + Cable C .                                                                      |
|        | c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
|        | d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
|        | e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |
|        |                                                                                                                          |

### **Radiated Emissions**

|            |                              |            |                |  |
|------------|------------------------------|------------|----------------|--|
| Company:   | Symbol                       | Model #:   | LA-3021-500-US |  |
| EUT:       | Antenna 18 on 500 mw C-radio | S/N #:     |                |  |
| Project #: | J99013298                    | Test Date: | May 25 1999    |  |
| Test Mode: | xmit 2440 500mw              | Engineer:  | Barry S.       |  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.:Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C .  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.



## Intertek Testing Services

### **Radiated Emissions Test Data**

|                   |                              |                   |                |    |
|-------------------|------------------------------|-------------------|----------------|----|
| <b>Company:</b>   | Symbol                       | <b>Model #:</b>   | LA-3021-500-US |    |
| <b>EUT:</b>       | Antenna 18 on 500 mw C-radio | <b>S/N #:</b>     |                | 11 |
| <b>Project #:</b> | J98013298                    | <b>Test Date:</b> | May 25 1999    | 3  |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       | 0  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.:Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C .  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

## Intertek Testing Services

### **Radiated Emissions Test Data**

|            |                              |            |                |  |    |
|------------|------------------------------|------------|----------------|--|----|
| Company:   | Symbol                       | Model #:   | LA-3021-500-US |  |    |
| EUT:       | Antenna 19 on 500 mw C-radio | S/N #:     |                |  | 11 |
| Project #: | J99013298                    | Test Date: | May 25 1999    |  | 3  |
| Test Mode: | xmit 2402 500mw              | Engineer:  | Barry S.       |  | 0  |

[illegible][illegible]

- a) D.C.F.:Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C.  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.



### **Radiated Emissions Test Data**

|                   |                                     |                                |           |
|-------------------|-------------------------------------|--------------------------------|-----------|
| <b>Company:</b>   | <b>Symbol</b>                       | <b>Model #:</b> LA-3021-500-US |           |
| <b>EUT:</b>       | <b>Antenna 19 on 500 mw C-radio</b> | <b>S/N #:</b>                  | <b>11</b> |
| <b>Project #:</b> | <b>J99013298</b>                    | <b>Test Date:</b> May 25 1999  | <b>3</b>  |
| <b>Test Mode:</b> | <b>xmit 2440 500mw</b>              | <b>Engineer:</b> Barry S.      | <b>0</b>  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.: Distance Correction Factor
- b) Insert. Loss (dB) = Cable A + Cable B + Cable C.
- c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
- d) Negative signs (-) in Margin column signify levels below the limits.
- e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

## Intertek Testing Services

### **Radiated Emissions Test Data**

|                   |                              |                   |                |    |
|-------------------|------------------------------|-------------------|----------------|----|
| <b>Company:</b>   | <b>Symbol</b>                | <b>Model #:</b>   | LA-3021-500-US |    |
| <b>EUT:</b>       | Antenna 19 on 500 mw C-radio | <b>S/N #:</b>     |                | 11 |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 25 1999    | 3  |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       | 0  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.:Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C .  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

### **Radiated Emissions Test Data**

|                   |                              |                   |                |    |
|-------------------|------------------------------|-------------------|----------------|----|
| <b>Company:</b>   | <b>Symbol</b>                | <b>Model #:</b>   | LA-3021-500-US |    |
| <b>EUT:</b>       | Antenna 20 on 500 mw C-radio | <b>S/N #:</b>     |                | 11 |
| <b>Project #:</b> | J89013298                    | <b>Test Date:</b> | May 24 1999    | 3  |
| <b>Test Mode:</b> | xmit 2402 500mw              | <b>Engineer:</b>  | Barry S.       | 0  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.: Distance Correction Factor
- b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
- c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
- d) Negative signs (-) in Margin column signify levels below the limits.
- e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

### Test Data

|                   |                                     |                                |           |
|-------------------|-------------------------------------|--------------------------------|-----------|
| <b>Company:</b>   | <b>Symbol</b>                       | <b>Model #:</b> LA-3021-500-US |           |
| <b>EUT:</b>       | <b>Antenna 20 on 500 mw C-radio</b> | <b>S/N #:</b>                  | <b>11</b> |
| <b>Project #:</b> | <b>J99013298</b>                    | <b>Test Date:</b> May 24 1999  | <b>3</b>  |
| <b>Test Mode:</b> | <b>xmit 2440 500mw</b>              | <b>Engineer:</b> Barry S.      | <b>0</b>  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

a) D.C.F.:Distance Correction Factor

b) Insert. Loss (dB) = Cable A + Cable B + Cable C .

c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).

d) Negative signs (-) in Margin column signify levels below the limits.

e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.



### **Radiated Emissions Test Data**

|                   |                              |                   |                |
|-------------------|------------------------------|-------------------|----------------|
| <b>Company:</b>   | <b>Symbol</b>                | <b>Model #:</b>   | LA-3021-500-US |
| <b>EUT:</b>       | Antenna 20 on 500 mw C-radio | <b>S/N #:</b>     | 11             |
| <b>Project #:</b> | J99013298                    | <b>Test Date:</b> | May 24 1999    |
| <b>Test Mode:</b> | xmit 2480 500mw              | <b>Engineer:</b>  | Barry S.       |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- |                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------|
| a) D.C.F.:Distance Correction Factor                                                                                     |
| b) Insert. Loss (dB) = Cable A + Cable B + Cable C .                                                                     |
| c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only). |
| d) Negative signs (-) in Margin column signify levels below the limits.                                                  |
| e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.        |

## Radiated Emissions

|                                   |                         |
|-----------------------------------|-------------------------|
| Company: Symbol                   | Model #: LA-3021-500-US |
| EUT: Antenna 21 on 500 mw C-radio | S/N #:                  |
| Project #: J99013298              | Test Date: May 25 1999  |
| Test Mode: xmit 2402 500mw        | Engineer: Barry S.      |

|    |   |   |    |   |    |    |    |   |   |   |
|----|---|---|----|---|----|----|----|---|---|---|
| 11 | 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|----|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.:Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C .  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.



### Radiated Emissions Test Data

|                   |                              |                   |                |    |
|-------------------|------------------------------|-------------------|----------------|----|
| <b>Company:</b>   | <b>Symbol</b>                | <b>Model #:</b>   | LA-3021-500-US |    |
| <b>EUT:</b>       | Antenna 21 on 500 mw C-radio | <b>S/N #:</b>     |                | 11 |
| <b>Project #:</b> | J99013208                    | <b>Test Date:</b> | May 25 1999    | 3  |
| <b>Test Mode:</b> | xmit 2440 500mw              | <b>Engineer:</b>  | Barry S.       | 0  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.: Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C .  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

|            |                              |            |                |    |
|------------|------------------------------|------------|----------------|----|
| Company:   | Symbol                       | Model #:   | LA-3021-500-US |    |
| EUT:       | Antenna 21 on 500 mw C-radio | S/N #:     |                | 11 |
| Project #: | J99013298                    | Test Date: | May 25 1999    | 3  |
| Test Mode: | xmit 2480 500mw              | Engineer:  | Barry S.       | 0  |

|   |   |    |   |    |    |    |   |   |   |
|---|---|----|---|----|----|----|---|---|---|
| 8 | 7 | 17 | 8 | 12 | 10 | 12 | 0 | 0 | 0 |
|---|---|----|---|----|----|----|---|---|---|

[illegible]

- a) D.C.F.: Distance Correction Factor  
b) Insert. Loss (dB) = Cable A + Cable B + Cable C.  
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).  
d) Negative signs (-) in Margin column signify levels below the limits.  
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.