

## FCC Part 15B Compliance Test Report

|                                                         |                                                                                                                                                                                                                                                                               |                                   |                                                                                                               |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Test Report no.:</b>                                 | Cph_FCC_0538_06.doc                                                                                                                                                                                                                                                           | <b>Date of Report:</b>            | 27-09-2005                                                                                                    |
| <b>Number of pages:</b>                                 | 9                                                                                                                                                                                                                                                                             | <b>Customer's Contact person:</b> | Ernest Mayer                                                                                                  |
| <b>Testing laboratory:</b>                              | TCC Nokia Copenhagen Laboratory<br>Frederikskaj<br>1790 COPENHAGEN V<br>DENMARK<br>Tel. +45 33 292929<br>Fax. +45 33 292934                                                                                                                                                   | <b>Client:</b>                    | Nokia Corporation<br>Frederikskaj<br>1790 COPENHAGEN V<br>DENMARK<br>Tel. +45 33 292929<br>Fax. +45 33 292934 |
| <b>FCC listing no.:</b>                                 | 99059                                                                                                                                                                                                                                                                         |                                   |                                                                                                               |
| <b>IC recognition no.:</b>                              | 4820 and 4820-1                                                                                                                                                                                                                                                               |                                   |                                                                                                               |
| <b>Tested devices/ accessories:</b>                     | <b>Phone: RM-78 (HW 0407) &amp; Battery: BP-6M &amp; AC-Charger: AC-4E &amp; Headset: HS-23 &amp; MMC MU-16</b>                                                                                                                                                               |                                   |                                                                                                               |
| <b>FCC ID:</b>                                          | QTKRM-78                                                                                                                                                                                                                                                                      | <b>IC:</b>                        | 661AD-RM78                                                                                                    |
| <b>Supplement reports:</b>                              |                                                                                                                                                                                                                                                                               |                                   |                                                                                                               |
| <b>Testing has been carried out in accordance with:</b> | <b>CFR 47, FCC rules Part 15 Subpart B, ANSI C63.4 (2003), ICES-003, CISPR 22 and IC standards RSS-132, RSS-133 and RSS-210. Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".</b> |                                   |                                                                                                               |
| <b>Documentation:</b>                                   | The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.                          |                                   |                                                                                                               |
| <b>Test Results:</b>                                    | <b>The EUT complies with the requirements in respect of all parameters subject to the test.</b><br>The test results relate only to devices specified in this document.                                                                                                        |                                   |                                                                                                               |
| <b>Date and signature for the contents:</b>             |                                                                                                                                                                                                                                                                               |                                   |                                                                                                               |

Niels Christian Andersen, Engineer

## 1. Summary for FCC Part 15B Compliance Test Report

|                               |                     |
|-------------------------------|---------------------|
| Date of receipt               | 19-09-2005          |
| Testing completed             | 21-09-2005          |
| The customer's contact person | Ernest Mayer        |
| Test Plan referred to         | \\EMC\\TESTPLAN\\   |
| Notes                         | None                |
| Document name                 | Cph_FCC_0538_06.doc |

### 1.1. EUT and Accessory Information

The EUT is a quadri band (GSM900/1800/1900 and WCDMA2100) mobile phone with GPRS, EGPRS and Bluetooth. GSM band is tested in idle mode. Bluetooth is tested with maximum rated TX power.

| Product          | Type  | SN                          | HW   | MV  | SW        | DUT   |
|------------------|-------|-----------------------------|------|-----|-----------|-------|
| Phone            | RM-78 | 004400/74/160069/4          | 0407 | -   | Vp03.01.2 | 28379 |
| Battery          | BP-6M | 0670467393213M061120140976  | -    | -   | -         | 28378 |
| AC-Charger       | AC-4E | 3997915036031100023;0675384 | 1.1  | 1.0 | -         | 28999 |
| Headset          | HS-23 | 0025                        | 0.5  | 0.3 | 0.2       | 28941 |
| Multi Media Card | MU-16 | SDSDM64 ABO4251AJ           | -    | -   | -         | 28410 |

### 1.2. Summary of Test Results

#### GSM 1900:

| Section in CFR 47 | Section in ICES-003 (RSS-133) | Name of the test                 | Result |
|-------------------|-------------------------------|----------------------------------|--------|
| 15.107, a         | 5.3                           | AC powerline conducted emissions | NP     |
| 15.109, a         | 5.5 (9)                       | Radiated emissions               | Passed |

PASSED  
FAILED  
NP

The EUT complies with the essential requirements in the standard.  
The EUT does not comply with the essential requirements in the standard.  
The test was not performed by the TCC Nokia Copenhagen Laboratory.

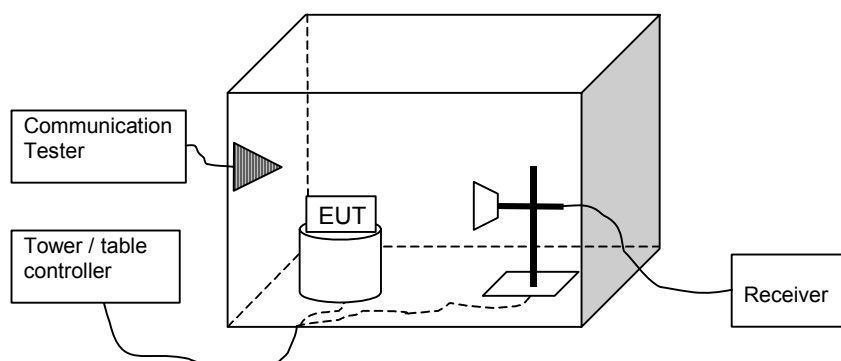
## CONTENTS

|           |                                                                                             |          |
|-----------|---------------------------------------------------------------------------------------------|----------|
| <b>1.</b> | <b>Summary for FCC Part 15B Compliance Test Report .....</b>                                | <b>2</b> |
| 1.1.      | EUT and Accessory Information .....                                                         | 2        |
| 1.2.      | Summary of Test Results .....                                                               | 2        |
| <b>2.</b> | <b>Radiated emissions (FCC §15.109, ICES-003 section 5.5, RSS-132 6.6, RSS-133 9) .....</b> | <b>4</b> |
| 2.1.      | Test setup .....                                                                            | 4        |
| 2.2.      | Test method and limit .....                                                                 | 4        |
| 2.3.      | GSM 1900 Test results .....                                                                 | 5        |
| 2.3.1     | Phone slide open .....                                                                      | 5        |
| 2.3.2     | Phone slide closed .....                                                                    | 6        |
| <b>3.</b> | <b>Test Equipment .....</b>                                                                 | <b>8</b> |
| 3.1.      | Conducted measurements .....                                                                | 8        |
| 3.2.      | Radiated measurements .....                                                                 | 8        |

## 2. Radiated emissions (FCC §15.109, ICES-003 section 5.5, RSS-132 6.6, RSS-133 9)

|                                                        |                                                                    |
|--------------------------------------------------------|--------------------------------------------------------------------|
| <b>EUT with DUT number</b>                             | RM-78 Dut#28379                                                    |
| <b>Accessories with DUT numbers</b>                    | BP-6M Dut#28378, AC-4E Dut#28999, HS-23 Dut#28941, MU-16 Dut#28410 |
| <b>Operation Voltage [V] / [Hz]</b>                    | 230 / 50                                                           |
| <b>Result</b>                                          | Passed                                                             |
| <b>Remarks</b>                                         | None                                                               |
| <b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b> | 22 / 55 / 1024                                                     |
| <b>Date of measurements</b>                            | 21-09-2005                                                         |
| <b>Measured by</b>                                     | Christian Andersen                                                 |

### 2.1. Test setup



### 2.2. Test method and limit

The measurement is made according to ANSI C63.4-2003as follows:

The measurement is performed in the Semi-Anechoic Chamber with conducting metal floor.

The measurement distance is 3 m below 3 GHz and 1.6 m above that.

The EUT is placed on a nonconductive plate at 80 cm height.

For each suspected frequency, the turntable is rotated 360 degrees and antenna is scanned from 1 to 4 m. This is repeated for both horizontal and vertical receive antenna polarizations.

The emissions less than 20 dB below the permissible value are reported.

The measurement results are obtained as described below:

$$E [\mu V/m] = U_{RX} + A_{TOT}$$

Where  $U_{RX}$  is receiver reading and  $A_{TOT}$  is total correction factor including cable loss, antenna factor and preamplifier gain ( $A_{TOT} = L_{CABLES} + AF - G_{PREAMP}$ ).

CISPR 22 and FCC Part 15 Class B limits (3 m measurement distance)

| Frequency range [MHz] | Quasi peak limit [dBμV/m] | Average limit [dBμV/m] | Peak limit [dBμV/m] |
|-----------------------|---------------------------|------------------------|---------------------|
| 30 - 230              | 40                        | -                      | -                   |
| 230 - 1000            | 47                        | -                      | -                   |
| Above 1000            | -                         | 54                     | 74                  |

## 2.3. GSM 1900 Test results

### 2.3.1 Phone slide open

**RX mode, channel 512**

Peak (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | $U_{RX}$ [dBμV] | $A_{TOT}$ [dB] | Polarisation | Result |
|-----------------|------------|----------|-----------------|----------------|--------------|--------|
| 3860.000000     | 41.04      | 112.72   | 33.34           | 7.70           | HORIZONTAL   | Passed |
| 7720.000000     | 44.34      | 164.82   | 31.64           | 12.70          | HORIZONTAL   | Passed |

Average (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | $U_{RX}$ [dBμV] | $A_{TOT}$ [dB] | Polarisation | Result |
|-----------------|------------|----------|-----------------|----------------|--------------|--------|
| 3860.000000     | 27.94      | 24.95    | 20.24           | 7.70           | VERTICAL     | Passed |
| 7720.000000     | 31.44      | 37.33    | 18.74           | 12.70          | VERTICAL     | Passed |

**RX mode, channel 661**

Quasi peak (RBW: 120 kHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | $U_{RX}$ [dBμV] | $A_{TOT}$ [dB] | Polarisation | Result |
|-----------------|------------|----------|-----------------|----------------|--------------|--------|
| 36.433467       | 25.30      | 18.41    | 34.20           | -8.90          | VERTICAL     | Passed |
| 45.209820       | 31.00      | 35.48    | 45.40           | -14.40         | VERTICAL     | Passed |
| 72.905611       | 21.60      | 12.02    | 39.70           | -18.10         | VERTICAL     | Passed |
| 87.474950       | 61.30      | 1161.45  | 78.40           | -17.10         | HORIZONTAL   | Passed |
| 109.058717      | 21.70      | 12.16    | 37.90           | -16.20         | VERTICAL     | Passed |

\*87.5 MHz frequency is coming from FM Radio tester and thus ignored.

Peak (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | $U_{RX}$ [dBμV] | $A_{TOT}$ [dB] | Polarisation | Result |
|-----------------|------------|----------|-----------------|----------------|--------------|--------|
| 1959.919840     | 65.30      | 1840.77  | 54.80           | 10.50          | VERTICAL     | Passed |
| 1959.921844     | 65.00      | 1778.28  | 54.50           | 10.50          | VERTICAL     | Passed |
| 2908.809619     | 58.00      | 794.33   | 40.10           | 17.90          | VERTICAL     | Passed |
| 3919.841683     | 43.34      | 146.89   | 35.54           | 7.80           | VERTICAL     | Passed |
| 7840.179359     | 46.94      | 222.33   | 33.74           | 13.20          | VERTICAL     | Passed |

\*1960 MHz frequency is coming from communication tester and thus ignored.

Average (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 1959.919840     | 63.20      | 1445.44  | 52.70                  | 10.50                 | VERTICAL     | Passed |
| 1959.921844     | 63.60      | 1513.56  | 53.10                  | 10.50                 | VERTICAL     | Passed |
| 2491.989980     | 42.20      | 128.82   | 27.20                  | 15.00                 | VERTICAL     | Passed |
| 2904.309619     | 45.10      | 179.89   | 27.00                  | 18.10                 | VERTICAL     | Passed |
| 3919.841683     | 28.94      | 27.99    | 21.14                  | 7.80                  | VERTICAL     | Passed |
| 6704.412826     | 37.64      | 76.21    | 26.24                  | 11.40                 | VERTICAL     | Passed |
| 6998.000000     | 38.34      | 82.60    | 27.14                  | 11.20                 | HORIZONTAL   | Passed |
| 7423.351703     | 31.54      | 37.76    | 18.64                  | 12.90                 | VERTICAL     | Passed |
| 7839.679359     | 32.94      | 44.36    | 19.74                  | 13.20                 | VERTICAL     | Passed |

\*1960 MHz frequency is coming from communication tester and thus ignored.

### RX mode, channel 810

Peak (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 3980.000000     | 42.54      | 133.97   | 34.74                  | 7.80                  | VERTICAL     | Passed |
| 7960.000000     | 46.54      | 212.32   | 33.34                  | 13.20                 | VERTICAL     | Passed |

Average (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 3980.000000     | 28.24      | 25.82    | 20.44                  | 7.80                  | VERTICAL     | Passed |
| 7960.000000     | 32.24      | 40.93    | 19.04                  | 13.20                 | VERTICAL     | Passed |

## 2.3.2 Phone slide closed

### RX mode, channel 512

Peak (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 3860.000000     | 42.04      | 126.47   | 34.34                  | 7.70                  | VERTICAL     | Passed |
| 7720.000000     | 44.54      | 168.66   | 31.84                  | 12.70                 | HORIZONTAL   | Passed |

Average (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 3860.000000     | 28.24      | 25.82    | 20.54                  | 7.70                  | VERTICAL     | Passed |
| 7720.000000     | 31.44      | 37.33    | 18.74                  | 12.70                 | VERTICAL     | Passed |

### RX mode, channel 661

Quasi peak (RBW: 120 kHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 36.492986       | 25.70      | 19.28    | 34.70                  | -9.00                 | VERTICAL     | Passed |
| 45.750301       | 27.50      | 23.71    | 42.30                  | -14.80                | VERTICAL     | Passed |
| 73.246092       | 22.50      | 13.34    | 40.60                  | -18.10                | VERTICAL     | Passed |
| 87.474950       | 61.30      | 1161.45  | 78.40                  | -17.10                | HORIZONTAL   | Passed |
| 107.756313      | 21.20      | 11.48    | 37.50                  | -16.30                | VERTICAL     | Passed |
| 906.113627      | 24.20      | 16.22    | 25.40                  | -1.20                 | HORIZONTAL   | Passed |

\*87.5 MHz frequency is coming from FM Radio tester and thus ignored.

Peak (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 1959.921844     | 64.30      | 1640.59  | 53.80                  | 10.50                 | VERTICAL     | Passed |
| 2906.813627     | 58.00      | 794.33   | 39.90                  | 18.10                 | HORIZONTAL   | Passed |
| 3919.841683     | 43.84      | 155.60   | 36.04                  | 7.80                  | VERTICAL     | Passed |
| 7839.681363     | 45.74      | 193.64   | 32.54                  | 13.20                 | VERTICAL     | Passed |

\*1960 MHz frequency is coming from communication tester and thus ignored.

Average (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 1959.921844     | 62.30      | 1303.17  | 51.80                  | 10.50                 | VERTICAL     | Passed |
| 2494.983968     | 42.20      | 128.82   | 27.20                  | 15.00                 | HORIZONTAL   | Passed |
| 2910.313627     | 44.90      | 175.79   | 27.00                  | 17.90                 | HORIZONTAL   | Passed |
| 3919.841683     | 29.44      | 29.65    | 21.64                  | 7.80                  | VERTICAL     | Passed |
| 6701.410822     | 37.54      | 75.34    | 26.04                  | 11.50                 | HORIZONTAL   | Passed |
| 6919.845691     | 40.74      | 108.89   | 29.34                  | 11.40                 | VERTICAL     | Passed |
| 7429.351703     | 31.44      | 37.33    | 18.54                  | 12.90                 | VERTICAL     | Passed |
| 7840.181363     | 33.14      | 45.39    | 19.94                  | 13.20                 | VERTICAL     | Passed |

\*1960 MHz frequency is coming from communication tester and thus ignored.

### RX mode, channel 810

Peak (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 3980.000000     | 43.14      | 143.55   | 35.34                  | 7.80                  | VERTICAL     | Passed |
| 7960.000000     | 47.54      | 238.23   | 34.34                  | 13.20                 | VERTICAL     | Passed |

Average (RBW: 1 MHz)

| Frequency [MHz] | E [dBμV/m] | E [μV/m] | U <sub>RX</sub> [dBμV] | A <sub>TOT</sub> [dB] | Polarisation | Result |
|-----------------|------------|----------|------------------------|-----------------------|--------------|--------|
| 3980.000000     | 28.64      | 27.04    | 20.84                  | 7.80                  | VERTICAL     | Passed |
| 7960.000000     | 32.34      | 41.40    | 19.14                  | 13.20                 | VERTICAL     | Passed |

### 3. Test Equipment

#### 3.1. Conducted measurements

| Eq. No | Equipment                                      | Type      | Manufacturer         | Used in |
|--------|------------------------------------------------|-----------|----------------------|---------|
| 13037  | Power Supply 0-15V 10A                         | EA3012    | LP Instruments       | 15B,15C |
| 13513  | Pulse Limiter 9KHz-30MHz                       | ESH3Z2    | Rohde&Schwarz        | 15B,15C |
| 13666  | EMI Test Reciever 9KHz-2,5GHz                  | ESPC      | Rohde&Schwarz        | 15B,15C |
| 13935  | Two Lines Artificial Mains Network             | ESH3-Z5   | Rohde&Schwarz        | 15B,15C |
| 16995  | Directional Coupler 20dB 0,5-2,0 GHz SMA Conn. | 1538RA-20 | Weinschel            | 15B,15C |
| 18772  | Shielded Chamber                               | RFD-100   | ETS-Lindgren         | 15B,15C |
| 19171  | Universal Radio Communication Tester           | CMU200    | Rohde&Schwarz        | 15B,15C |
| 11386  | System DC Power Supply                         | HP6632A   | Hewlett Packard      | 22.24   |
| 11487  | Network analyzer 300KHz-3,0GHz                 | HP8753A   | Hewlett Packard      | 22.24   |
| 11584  | Spectrum analyzer 50Hz-6,5GHz                  | HP8561B   | Hewlett Packard      | 22.24   |
| 13134  | Tracking generator                             | HP85645A  | Hewlett Packard      | 22.24   |
| 13302  | Spectrum Analyzer 9KHz-12.8GHz                 | HP8596E   | Hewlett Packard      | 22.24   |
| 13371  | Temperature Chamber                            | S-1,2C    | Thermotron           | 22.24   |
| 13524  | Digital Radiocomm. Tester                      | CMD55     | Rohde&Schwarz        | 22.24   |
| 14807  | S - Parameter Test Set 300KHz-6GHz             | HP85047A  | Hewlett Packard      | 22.24   |
| 15859  | Digital Radio Communication Test Set           | 4201S     | Wavetek              | 22.24   |
| 17277  | Multimeter Digital 6 1/2 Digit                 | AT34401A  | Agilent Technologies | 22.24   |
| 17796  | Radio Communication Test Set                   | 4400M     | Wavetek              | 22.24   |
| 19374  | Resonant Dipole Antenna 850MHz SMA m Conn.     | -         | NMP Cph              | 22.24   |
| 19375  | Resonant Dipole Antenna 1900MHz SMA m Conn.    | -         | NMP Cph              | 22.24   |
| 13037  | Power Supply 0-15V 10A                         | EA3012    | LP Instruments       | 15B,15C |

#### 3.2. Radiated measurements

| Eq. No | Equipment                                   | Type           | Manufacturer  | Used in       |
|--------|---------------------------------------------|----------------|---------------|---------------|
| 14020  | Programmable Relay Switching System         | -              | Pickering     | 15B,15C,22,24 |
| 18792  | Multi Device Controller                     | 2090           | ETS-EMCO      | 15B,15C,22,24 |
| 13829  | Turntable Controller                        | 4630-100       | Comtest       | 15B,15C,22,24 |
| 14963  | RF Preamplifier 100MHz-4GHz (Metal Chassis) | AFS3-00100400  | Miteq/NMP Cph | 15B,15C,22,24 |
| 13668  | BiLog Antenna 30-2000MHz                    | BiLog-CBL6112A | Chase         | 15B,15C,22,24 |
| 18861  | EMI Test Receiver 20Hz-26,5GHz              | ESI            | Rohde&Schwarz | 15B,15C,22,24 |
| 12679  | Dual Log Periodic Antenna 1-18 GHz          | HL025          | Rohde&Schwarz | 15B,15C,22,24 |
| 18860  | Ultra Broadband Antenna                     | HL562          | Rohde&Schwarz | 15B,15C,22,24 |

| Eq. No | Equipment                                   | Type                           | Manufacturer           | Used in       |
|--------|---------------------------------------------|--------------------------------|------------------------|---------------|
|        | Ultralog 30-3000MHz                         |                                |                        |               |
| 18773  | Shielded Chamber                            | RFD-100                        | ETS-Lindgren           | 15B,15C,22,24 |
| 18774  | Shielded Chamber                            | RFSD-F/A-100                   | ETS-Lindgren           | 15B,15C,22,24 |
| 18324  | High Pass Filter 3GHz SMA f Conn            | WHJS3000-10SS                  | Wainwright             | 15B,15C,22,24 |
| 14114  | Highpass Filter 1000MHz-4500MHz             | WHK1000-12SS                   | Wainwright             | 15B,15C,22,24 |
| 13918  | Highpass Filter 2000-4000MHz 50OHM SMA Conn | WHKS2000-10SS                  | Wainwright Instruments | 15B,15C,22,24 |
| 13937  | Ultra Stable Notch Filter 902,4MHz          | WRCA902.4-0.2/40-6SS           | Wainwright Instruments | 15B,15C,22,24 |
| 13936  | Ultra Stable Notch Filter 1747,5MHz         | WRCD1747.5-0.2/40-10SS         | Wainwright Instruments | 15B,15C,22,24 |
| 13917  | Highpass Filter 1000-3000MHz 50OHM SMA Conn | WHKS1000-10SS                  | Wainwright Instruments | 15B,15C,22,24 |
| 14188  | Ultra Stable Notch Filter 902,4MHz          | WRCA902.4-0.2/40-6SS           | Wainwright             | 15B,15C,22,24 |
| 14187  | Ultra Stable Notch Filter 1747,5MHz         | WRCD1747.5-0.2/40-10SS         | Wainwright             | 15B,15C,22,24 |
| 16633  | Ultra Stable Notch Filter 1880,0MHz         | WRCD1880.0-0.2/40-10SS         | Wainwright             | 15B,15C,22,24 |
| 18323  | Band reject filter 1947-1953MHz 40dB        | WRCG1947/1953-1940/1960-40/6SS | Wainwright             | 15B,15C,22,24 |
| 15190  | Infra Red Remote Control Unit               | 4630                           | Emco                   | 22,24,15B,15C |
| 14993  | EMI Test Receiver 9KHz-2750MHz              | ESCS30                         | Rohde&Schwarz          | 22,24,15B,15C |
| 15191  | Turntable Contoller Unit                    | G-800SDX                       | YAESU                  | 22,24,15B,15C |
| 14900  | Antenna Controller                          | HD100                          | HD GmbH                | 22,24,15B,15C |