

Manual for TRX1012

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Revision log

Current revision

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| | Revision log | 8 |
| Chapter 1 | Technical specifications and introduction | 1 |
| Chapter 2 | General user instructions | 0 |
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Chapter 16 is changes to revision 1. New PC. Board version. D1, D2 and D5 is changed.

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Chapter 12 is changes to revision 1. Update diagram.

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New Chapter 20. PA-modul TRX10012D.

Revision 8 30-09-2005

Chapter 1 is changes to revision 1. Update General specification.

Chapter 11 is changes to revision 2. Changes to TRX1001B Radioboard.

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1. Technical specifications and introduction

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1.1 NIROS TRX1012 - Technical specifications

1.1.1 General

| | |
|--------------------------------|---|
| Frequency range: | 68 - 88 MHz, 4 m 146 - 174 MHz, 2 m 403 - 470 MHz, 0,7 m |
| Bandwidth: | VHF 4 m - 20 MHz VHF 2 m - 28 MHz UHF 0,7 m - 20 MHz (Frequency for transmitter and receiver mutually independent) |
| Modulation: | FM/PM |
| Power source: | NiCd battery 1000 mAh, NiMH battery 1500 mAh or Li-ion battery 1350 mAh |
| Number of channels: | 16 / 100 simplex, semi-duplex, reverse frequency |
| Channel spacing: | 12,5 / 20 / 25 kHz |
| Channel selection: | By keyboard or rotary switch |
| Channel selectivity: | Better than 70 dB |
| Spurious and Harmonics: | Less than 0.25 microwatt |
| RF power output: | 1 - 4/5 Watt Individually programmable per channel |
| Receiver Sensitivity: | Better than -114 dBm (0,7 m), -116 dBm (2m/4m), 0,45microV ½EMK 12 dB SINAD, (Typically -117 dBm, 0,32 microV ½ EMK) |
| AF Power output: | 0.6 Watt peak, 0.35 W nominal, 0.3 Watt for external loudspeaker |
| Tone system: | CCIR and ZVEI sequence tone with individual, group and general call - CTSS. Individually programmable per channel. Other tone systems as option. |
| Display: | LCD with backlight. 1 line of 8 alphanumeric characters and 5 numeric with fixed symbols showing chosen function and bargraph. |
| Keyboard: | Foil keyboard with tactile keys and backlight. 4 large quick select function keys on front and 4 function keys on top incl. emergency key on top.. |
| Weight: | 460/580 g incl. 1000 mAh battery and antenna. |
| Dimensions: | H: 157 mm, W: 67 mm, D: 32 mm. |
| Temperature range: | -25 to +55 (C |
| Housing Category: | Die-cast metal cabinet better than IP54 dust and spray waterproof |
| R&TTE: | EN 300 086-2, EN 301 489-5, EN 60 950 |
| EMC: | EN 50082-2 (industrial environment). |

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1.2 NIROS TRX1012B 125 - Specifications

1.2.1 General

| | |
|---|---|
| Type designation | TRX 1012B 125 |
| Frequency band | 68 - 88 MHz |
| Channel spacing | 12,5 KHz |
| Number of channels | 100 |
| RF bandwidth | 20 MHz |
| Mode of operation | Simplex or semiduplex |
| Antenna impedance | 50 ohms |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh |
| Ambient temperature | Operates from -25°C to +55°C |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm |
| Weight with battery | 480 g with 1000 mAh battery |
| Operating time (battery full charged, 1000 mAh) | 10,4 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) |
| Frequency stability across voltage and temperature ranges | +/-1,0 KHz |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.2.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012B 125 |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -60 dBc |
| Modulation | Phase modulation (PM), G3E |
| Max. freq. Deviation | 2,5 KHz |
| AF response | 300 to 2500 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 1,5 KHz deviation |
| Hum and noise | Better than -40 dB |

1.2.3 Receiver

| | |
|----------------------------------|--|
| Type designation | TRX 1012B 125 |
| EMF sensivity 20 dB SINAD (CEPT) | 0,7 µVemf, typ. 0,6 µVemf (-116 dBm) (-118 dBm) |
| Adjacent channel rejection | Better than -60 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 2500 Hz, deemphasis 750 µsec, 6 dB/ octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and I-ETS 300 219.

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1.3 NIROS TRX1012B 200 - Specifications

1.3.1 General

| | |
|---|---|
| Type designation | TRX 1012B 200 |
| Frequency band | 68 - 88 MHz |
| Channel spacing | 20 KHz |
| Number of channels | 100 |
| RF bandwidth | 20 MHz |
| Mode of operation | Simplex or semiduplex |
| Antenna impedance | 50 ohms |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh |
| Ambient temperature | Operates from -25°C to +55°C |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm |
| Weight with battery | 480 g with 1000 mAh battery |
| Operating time (battery full charged, 1000 mAh) | 10,4 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) |
| Frequency stability across voltage and temperature ranges | +/-1,35 KHz |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.3.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012B 200 |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -70 dBc |
| Modulation | Phase modulation (PM), G3E |
| Max. freq. Deviation | 4,0 KHz |
| AF response | 300 to 3000 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 2,4 KHz deviation |
| Hum and noise | Better than -40 dB |

1.3.3 Receiver

| | |
|----------------------------------|--|
| Type designation | TRX 1012B 200 |
| EMF sensivity 20 dB SINAD (CEPT) | 0,7 µVemf, typ. 0,6 µVemf (-116 dBm) (-118 dBm) |
| Adjacent channel rejection | Better than -70 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 3000 Hz, deemphasis 750 µsec, 6 dB/ octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and I-ETS 300 219.

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1.4 NIROS TRX1012B - Specifications

1.4.1 General

| | |
|--|---|
| Type designation | TRX 1012B |
| Frequency band | 68 - 88 MHz |
| Channel spacing | 25 KHz |
| Number of channels | 100 |
| RF bandwidth | 20 MHz |
| Mode of operation | Simplex or semiduplex |
| Antenna impedance | 50 ohms |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh |
| Ambient temperature | Operates from -25°C to +55°C |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm |
| Weight with battery | 480 g with 1000 mAh battery |
| Operating time (battery full charged, 1000 mAh) | 10,4 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) |
| Frequency stability across voltage and temperature ranges | +/-1,35 KHz |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.4.2 Transmitter

| | |
|-------------------------------|--|
| Type designation | TRX 1012B |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -70 dBc |
| Modulation | Phase modulation (PM) |
| Max. Freq. Deviation | 5,0 KHz |
| AF response | 300 to 3000 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 3,0 KHz deviation |
| Hum and noise | Better than -40 dB |

1.4.3 Receiver

| | |
|---|--|
| Type designation | TRX 1012B |
| EMF sensivity 20 dB SINAD (CEPT) | 0,7 µVemf, 0,6 µVemf (-116 dBm) (-118 dBm) |
| Adjacent channel rejection | Better than -70 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 3000 Hz, deemphasis 750 µsec, 6 dB/ octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and I-ETS 300 219.

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1.5 NIROS TRX1012C 125 - Specifications

1.5.1 General

| | |
|---|---|
| Type designation | TRX 1012C 125 |
| Frequency band | 146 - 174 MHz |
| Channel spacing | 12,5 KHz |
| Number of channels | 16 |
| RF bandwidth | 28 MHz |
| Mode of operation | Simplex or semiduplex |
| Antenna impedance | 50 ohms |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh |
| Ambient temperature | Operates from -25°C to +55°C |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm |
| Weight with battery | 480 g with 1000 mAh battery |
| Operating time (battery full charged, 800 mAh) | 10,4 hours 5% TX (1 W), 5% RX (0,2 W), 90% STBY hours 5% TX (5 W), 5% RX (0,2 W), 90% STBY |
| Frequency stability across voltage and temperature ranges | +/-1,5 KHz |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.5.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012C 125 |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -60 dBc |
| Modulation | Phase modulation (PM), G3E |
| Max. freq. Deviation | 2,5 KHz |
| AF response | 300 to 2500 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 1,5 KHz deviation |
| Hum and noise | Better than -40 dB |

1.5.3 Receiver

| | |
|----------------------------------|--|
| Type designation | TRX 1012C 125 |
| EMF sensivity 20 dB SINAD (CEPT) | 0,7 µVemf, typ. 0,6 µVemf (-116 dBm) (-118 dBm) |
| Adjacent channel rejection | Better than -60 dB |
| Spurious and image rejection | Better than -74 dB |
| Intermodulation rejection | Better than -70 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 2500 Hz, +/- 3 dB, deemphasis 750 µsec, 6 dB/ octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

1.6 NIROS TRX1012C 200 - Specifications

1.6.1 General

| | |
|---|---|
| Type designation | TRX 1012C 200 |
| Frequency band | 146 - 174 MHz |
| Channel spacing | 20 KHz |
| Number of channels | 16 |
| RF bandwidth | 28 MHz |
| Mode of operation | Simplex or semiduplex |
| Antenna impedance | 50 ohms |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh |
| Ambient temperature | Operates from -25°C to +55°C |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm |
| Weight with battery | 480 g with 1000 mAh battery |
| Operating time (battery full charged, 800 mAh) | 10,4 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) |
| Frequency stability across voltage and temperature ranges | +/-2,0 KHz |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.6.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012C 200 |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -70 dBc |
| Modulation | Phase modulation (PM), G3E |
| Max. Freq. Deviation | 4,0 KHz |
| AF response | 300 to 3000 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 2,4 KHz deviation |
| Hum and noise | Better than -40 dB |

1.6.3 Receiver

| | |
|----------------------------------|---|
| Type designation | TRX 1012C 200 |
| EMF sensivity 20 dB SINAD (CEPT) | 0,7 µVemf, 0,6 µVemf (-116 dBm) (-118 dBm) |
| Adjacent channel rejection | Better than -70 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than - 65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 3000 Hz, +1/ -3 dB, deemphasis 750 µsec, 6 dB/ octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

1.7 NIROS TRX1012C - Specifications

1.7.1 General

| | |
|---|---|
| Type designation | TRX 1012C |
| Frequency band | 146 - 174 MHz |
| Channel spacing | 25 KHz |
| Number of channels | 16 |
| RF bandwidth | 28 MHz |
| Mode of operation | Simplex or semiduplex |
| Antenna impedance | 50 ohms |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh |
| Ambient temperature | Operates from -25°C to +55°C |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm |
| Weight with battery | 480 g with 1000 mAh battery |
| Operating time (battery full charged, 1000 mAh) | 10,4 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) (5% TX (5 W), 5% RX (0,2 W), 90% STBY) 6,1 hours |
| Frequency stability across voltage and temperature ranges | +/-2,0 KHz |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP64 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.7.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012C |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -70 dBc |
| Modulation | Phase modulation (PM) |
| Max. freq. Deviation | 5,0 KHz |
| AF response | 300 to 3000 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 3,0 KHz deviation |
| Hum and noise | Better than -40 dB |

1.7.3 Receiver

| | |
|----------------------------------|---|
| Type designation | TRX 1012C |
| EMF sensivity 20 dB SINAD (CEPT) | 0,7 µVemf, typ. 0,6 µVemf (-116 dBm) (-118 dBm) |
| Adjacent channel rejection | Better than -70 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 3000 Hz, +1/ -3 dB, deemphasis 750 µsec, 6 dB/ octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and I-ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

1.8 NIROS TRX1012DL 125 - Specifications

1.8.1 General

| | | |
|---|---|-----|
| Type designation | TRX 1012DL 125 | |
| Frequency band | 403 - 445 MHz | |
| Channel spacing | 12,5 KHz | |
| Number of channels | 16 | |
| RF bandwidth | 20 MHz | |
| Mode of operation | Simplex or semiduplex | |
| Antenna impedance | 50 ohms | |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh | |
| Ambient temperature | Operates from -25°C to +55°C | |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm | |
| Weight with battery | 480 g with 1000 mAh battery | |
| Operating time (battery full charged, 1000 mAh) | 10,1 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,5 W), 90% STBY) | 6,5 |
| Frequency stability across voltage and temperature ranges | +/-1,5 KHz | |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.8.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012DL 125 |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -60 dBc |
| Modulation | Phase modulation (PM) |
| Max. freq. Deviation | 2,5 KHz |
| AF response | 300 to 2500 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 1,5 KHz deviation |
| Hum and noise | Better than -40 dB |

1.8.3 Receiver

| | |
|----------------------------------|---|
| Type designation | TRX 1012DL 125 |
| EMF sensivity 20 dB SINAD (CEPT) | 0,9 µVemf, typ. 0,7 µVemf (-114 dBm) (-116 dBm) |
| Adjacent channel rejection | Better than -60 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 2500 Hz, +/- 3 dB, deemphasis 750 µsec, 6 dB/octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and I-ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

1.9 NIROS TRX1012DL 200 - Specifications

1.9.1 General

| | |
|---|---|
| Type designation | TRX 1012DL 200 |
| Frequency band | 403 - 445 MHz |
| Channel spacing | 20 KHz |
| Number of channels | 16 |
| RF bandwidth | 20 MHz |
| Mode of operation | Simplex or semiduplex |
| Antenna impedance | 50 ohms |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh |
| Ambient temperature | Operates from -25°C to +55°C |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm |
| Weight with battery | 480 g with 1000 mAh battery |
| Operating time (battery full charged, 800 mAh) | 10,1 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) |
| Frequency stability across voltage and temperature ranges | +/-2,0 KHz |

NOTE! All values are guaranteed specifications. Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.9.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012DL 200 |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -70 dBc |
| Modulation | Phase modulation (PM), G3E |
| Max. freq. Deviation | 4,0 KHz |
| AF response | 300 to 3000 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 2,4 KHz deviation |
| Hum and noise | Better than -40 dB |

1.9.3 Receiver

| | |
|----------------------------------|---|
| Type designation | TRX 1012DL 200 |
| EMF sensivity 20 dB SINAD (CEPT) | 0,9 µVemf, 0,7 µVemf (-114 dBm) (-116 dBm) |
| Adjacent channel rejection | Better than -70 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 3000 Hz, +1/-3 dB, deemphasis 750 µsec, 6 dB/octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

1.10 NIROS TRX1012DL - Specifications

1.10.1 General

| | | |
|---|---|-----|
| Type designation | TRX 1012DL | |
| Frequency band | 403 - 445 MHz | |
| Channel spacing | 25 KHz | |
| Number of channels | 16 | |
| RF bandwidth | 20 MHz | |
| Mode of operation | Simplex or semiduplex | |
| Antenna impedance | 50 ohms | |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh | |
| Ambient temperature | Operates from -25°C to +55°C | |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm | |
| Weight with battery | 480 g with 1000 mAh battery | |
| Operating time (battery full charged, 1000 mAh) | 10,1 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) | 6,5 |
| Frequency stability across voltage and temperature ranges | +/-2,0 KHz | |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.10.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012DL |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -70 dBc |
| Modulation | Phase modulation (PM) |
| Max. freq. Deviation | 5,0 KHz |
| AF response | 300 to 3000 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 3,0 KHz deviation |
| Hum and noise | Better than -40 dB |

1.10.3 Receiver

| | |
|----------------------------------|---|
| Type designation | TRX 1012DL |
| EMF sensivity 20 dB SINAD (CEPT) | 0,9 µVemf, typ. 0,7 µVemf (-114 dBm) (-116 dBm) |
| Adjacent channel rejection | Better than -70 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 3000 Hz, +/- 3 dB, deemphasis 750 µsec, 6 dB/octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and I-ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

1.11 NIROS TRX1012DH 125 - Specifications

1.11.1 General

| | | |
|---|---|-----|
| Type designation | TRX 1012DH 125 | |
| Frequency band | 430 - 470 MHz | |
| Channel spacing | 12,5 KHz | |
| Number of channels | 16 | |
| RF bandwidth | 20 MHz | |
| Mode of operation | Simplex or semiduplex | |
| Antenna impedance | 50 ohms | |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh | |
| Ambient temperature | Operates from -25°C to +55°C | |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm | |
| Weight with battery | 480 g with 1000 mAh battery | |
| Operating time (battery full charged, 1000 mAh) | 10,1 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) | 6,5 |
| Frequency stability across voltage and temperature ranges | +/-1,5 KHz | |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.11.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012DH 125 |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -60 dBc |
| Modulation | Phase modulation (PM) |
| Max. freq. Deviation | 2,5 KHz |
| AF response | 300 to 2500 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 1,5 KHz deviation |
| Hum and noise | Better than -40 dB |

1.11.3 Receiver

| | |
|----------------------------------|---|
| Type designation | TRX 1012DH 125 |
| EMF sensivity 20 dB SINAD (CEPT) | 0,9 µVemf, typ. 0,7 µVemf (-114 dBm) (-116 dBm) |
| Adjacent channel rejection | Better than -60 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 2500 Hz, +1/-3 dB, deemphasis 750 µsec, 6 dB/octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and I-ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

1.12 NIROS TRX1012DH 200 - Specifications

1.12.1 General

| | | |
|---|---|-----|
| Type designation | TRX 1012DH 200 | |
| Frequency band | 430 - 470 MHz | |
| Channel spacing | 20 KHz | |
| Number of channels | 16 | |
| RF bandwidth | 20 MHz | |
| Mode of operation | Simplex or semiduplex | |
| Antenna impedance | 50 ohms | |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh | |
| Ambient temperature | Operates from -25°C to +55°C | |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm | |
| Weight with battery | 480 g with 1000 mAh battery | |
| Operating time (battery full charged, 800 mAh) | 10,1 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) | 6,5 |
| Frequency stability across voltage and temperature ranges | +/-2,0 KHz | |

NOTE! All values are guaranteed specifications.

Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.12.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012DH 200 |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -70 dBc |
| Modulation | Phase modulation (PM), G3E |
| Max. freq. Deviation | 4,0 KHz |
| AF response | 300 to 3000 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 2,4 KHz deviation |
| Hum and noise | Better than -40 dB |

1.12.3 Receiver

| | |
|----------------------------------|---|
| Type designation | TRX 1012DH 200 |
| EMF sensivity 20 dB SINAD (CEPT) | 0,9 µVemf, typ. 0,7 µVemf (-114 dBm) (-116 dBm) |
| Adjacent channel rejection | Better than -70 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -65 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 3000 Hz, +/- 3 dB, deemphasis 750 µsec, 6 dB/octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

1.13 NIROS TRX1012DH - Specifications

1.13.1 General

| | |
|---|---|
| Type designation | TRX 1012DH |
| Frequency band | 430 - 470 MHz |
| Channel spacing | 25 KHz |
| Number of channels | 16 |
| RF bandwidth | 20 MHz |
| Mode of operation | Simplex or semiduplex |
| Antenna impedance | 50 ohms |
| Power supply | NiCd battery, 7,2 V/ 1000 mAh |
| Ambient temperature | Operates from -25°C to +55°C |
| Dimensions | H: 157 mm, B: 67 mm, D: 32 mm |
| Weight with battery | 480 g with 1000 mAh battery |
| Operating time (battery full charged, 1000 mAh) | 10,1 hours (5% TX (1 W), 5% RX (0,2 W), 90% STBY) hours (5% TX (5 W), 5% RX (0,2 W), 90% STBY) |
| Frequency stability across voltage and temperature ranges | +/-2,0 KHz |

NOTE! All values are guaranteed specifications. Typical values are more favourable in most cases.

| | |
|--|--|
| Environmental | Meets IP54 specifications according to IEC 529 |
| The serial number may be found on the rear side of the radio | |

1.13.2 Transmitter

| | |
|------------------------|--|
| Type designation | TRX 1012DH |
| RF output power | 5 W, programmable between 1 and 5 W |
| Spurious and harmonic | Less than -36 dBm |
| Adjacent channel power | Less than -70 dBc |
| Modulation | Phase modulation (PM) |
| Max. freq. Deviation | 5,0 KHz |
| AF response | 300 to 3000 Hz |
| AF distortion | Less than 7% at 1 KHz modulation freq. and 3,0 KHz deviation |
| Hum and noise | Better than -40 dB |

1.13.3 Receiver

| | |
|----------------------------------|--|
| Type designation | TRX 1012DH |
| EMF sensivity 20 dB SINAD (CEPT) | 0,9 µVemf, typ. 0,7 µVemf (-114 dBm) (-116 dBm) |
| Adjacent channel rejection | Better than -70 dB |
| Spurious and image rejection | Better than -70 dB |
| Intermodulation rejection | Better than -68 dB |
| AF output power | 0,6 W to built-in loudspeaker |
| AF distortion | Less than 10 % at 1000 Hz |
| AF response | 300 - 3000 Hz, +/- 3 dB, deemphasis 750 µsec, 6 dB/ octave |
| Hum and noise | Better than -40 dB |
| Sound pressure | Minimum 86 dBA, 1 KHz at 50 cm distance |

All measurements according to ETSI standards ETS 300 086 and I-ETS 300 219.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 1 | PA |

2. General user instructions

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 11-06-98 | 0 | PA |

2.1 Handling instruction.

During radio use without external handmicrophone and/or autocassette the rubber plug NIROS no. 97898 have to be mounted in the connector well.

2.1.1 Connecting handmicrophone or autocassette to radio.

1. Remove the rubber plug.
2. Connect the accessory equipment to the external connector.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 11-06-98 | 0 | PA |

3. Theory of hardware operation

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 12-06-98 | 0 | PA |

3.1 Technical description.

If two component values/test points are mentioned, the values/points marked () refer to 0.7 m version

3.1.1 PA Circuit.

**Schematics no. 0-97xx-03, page 1 of 4, B (4 M),
schematics no. 0-9709-03, page 1 of 4, C (2 M) and
schematics no. 0-9700-03, page 1 of 4, D (0,7 M).**

When the transmitter is to be started, "TX mod" switches the VCO to TX and "PA enable" goes to "H". T107 (T106) starts current generators T106 and T108 (T105 and T107) and switches T104 (T103) on. IC101A controls T103 (T102) and supply the hybrid amplifier, IC102. IC102 amplifies the TX VCO signal from 1 mW to 5 W output power. Output power can be regulated in 32 steps between 1 W (30 dBm) and 5 W (37 dBm). Output power from the hybrid amplifier is controlled by the DC current to last PA-transistor at pin 5, VS2 (pin 6, VS4). The current is measured with resistors, R102-R105. At 5 W output power the resistor voltage is approx. 0,1 V. IC101A and T103 (T102) adjust the driver level, until the current drawn by the last PA transistor corresponds to the value given by the "PA/SQ" level and P101 adjustment. Transmission power is coarsely adjusted on P101. Fine adjustment of low/medium/high level is software controlled and performed via "PA/SQ" input. Switch IC103 is closed in TX mode.

To reduce output power the "PA/SQ level" is reduced. The reduced voltage across R101 makes IC101A and T103 (T102) reduce the driver level and the output power to low or medium output power depending on users' requirements.

3.1.2 Antenna switching, 2m and 4m.

D104 and D105 switch the antenna between receiver input and transmitter output. When "PA enable" is "H" the receiver input is isolated from the transmitter output by D105.

When "PA Int." is "H" output power is conducted to "Int. antenna" via D104 and D107. The signal is filtered by a 5th order elliptical LP-filter consisting of L105 and L109. When "PA Ext." is "H" output power is conducted through D104 and D106 to the external antenna terminal in the external plug. Signal is filtered by a 5th order elliptical LP filter consisting of L105 and L107.

3.1.3 Antenna switching, 0,7 m.

When "Int/Ext" is "L" is "Int. antenna" selected. The signal is filtered in a 9. order LP-filter containing L106, L107, L108 and L111.

When "Int/Ext" is "H", T107 closes and "Ext. antenna" is selected. D108 shorts and I/4 wave circuit L108 and C135 isolates "Int. antenna" from the transmission output. D107 conducts and the output signal is supplied to "Ext. antenna" via 7th order LP filter consisting of L106, L107 and L110.

3.1.4 IF unit.

**Schematics no. 0-96xx-03, page 2 of 4, B (4 M),
schematics no. 0-9709-03, page 2 of 4, C (2 M) and
schematics no. 0-9700-03, page 2 of 4, D (0,7 M).**

The output signal from the RF-stage, pin AA3 is mixed down to 45 MHz in a single balanced diode mixer, D201 (D202). 1. LO signal is approx. +2 dBm. A diode mixer gives high intermodulation attenuation.

1. LO frequency is 45 MHz higher than reception frequency in 4 M and 2 M versions and 45 MHz lower in 0,7 m versions. LP filter consisting of L203, C203 and C225 (L202, C203 and C207) prevents 1. LO signal in reaching 1st IF stage. Input sensitivity for the IF amplifier is typically -115 dBm at 12 dB SINAD, 3 kHz deviation and 1000 Hz tone. T202 amplifies the IF-signal and matches the mixer output to a 4th pole X-tal filter. T203 has a high input impedance and a low capacitive load for the filter. The emitter follower, T204 has low output impedance to feed the IF-circuit, IC201.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
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The IF-IC contains mixer, limiter, amplifier stages, RSSI, demodulator, AF filter amplifier and AF amplifier. The IF-IC mixer mixes the 45 MHz signal down to 450 KHz using a 2. LO signal at 44,55 MHz from the reference oscillator. IC201 amplifies and limits the 450 KHz signal. A 450 KHz ceramic filter, F203 filters the signal.

R218, R219, C218, R219, C220 and C221 constitutes a 6 KHz HP-filter towards T205 which rectifies the noise signal. The voltage at TP206 (TP204) depends on the noise level. The rectified signal is compared with a signal from the software controlled D/A converter which adjusts the squelch level and hysteresis.

Example.

1. The radio is in standby mode without signal. The squelch is closed. The voltage on TP208 is for example 1 V.
2. When the radio receives a signal, the voltage at TP206 (TP204) decreases below 1 V.
3. The comparator, IC202B switches the voltage to the master computer, signal /CARR.
4. The master computer readjusts the D/A converter to for example 0,8 V to establish hysteresis.
5. The master computer opens the loudspeaker.

The logarithmic output from the RSSI circuit is used in some systems to measure the signal level from different transmitters so the radio can select the transmitter which gives the best signal/noise level.

3.1.5 Synthesiser.

Schematics no. 0-97xx-03, page 3 of 4, B (4 M),
schematics no. 0-9709-03, page 3 of 4, C (2 M) and
schematics no. 0-9700-03, page 3 of 4, D (0,7 M).

The output signal from the VCO at pin AB2 is lead to the buffer stages, T302 and T301. T302 performs impedance match and isolates the VCO and the synthesiser circuits from each other.

IC301 (IC302) divides the VCO frequency with 64/65 controlled from the dual modulus synthesiser IC302 (IC303). The synthesiser IC is programmed serially through "SDA" and "SCL" from the master computer to define the correct division ratios for the wanted VCO frequencies. The phase detector output, IC302 (IC303), pin 12 is connected to a loop filter around IC305A (IC306A) with two time constants. IC303 and IC304 (IC304A, IC305A) are closed in TX mode and open in RX mode. The output from IC305A goes to a 8 KHz LP-filter, L303. The reference frequency is 12,5 KHz for 12,5 KHz and 25 KHz channel separation and 10 KHz for 20 KHz channel separation. The output voltage is supplied to the VCO DC input to keep the loop in locked position. The "LOCK" output is controlled by IC302 (IC303), T303 and T304 and is "H", when the synthesiser is in locked mode.

B- (4 M) and C-version (2 M) have an output "VCO DC" for tuning the RF stage.

The reference oscillator operates at 14,85 MHz. The reference frequency can be adjusted at trimming capacitor, C327 (C329). The oscillator is compensated with a temperature compensation circuit (TCVCXO) using (IC307) and the NTC resistors, (R351, R345) in 0,7m radio. The circuit is active when the temperature is below -10°C and above +45°C. When the temperature drops the resistance of (R345) increases. The output voltage in IC306A increases. The voltage at IC306, pin 7 then falls to maintain the output voltage of IC306A. The voltage is 0 V at IC306, pin 7 at approx. -10°C and the voltage can not be reduced further. The voltage at IC306A, pin 1 begins to increase. It results that the capacitance in the varactor diode, D301 decreases and the frequency of the reference oscillator increases. Without compensation the frequency will be decreased. When the temperature increases the resistance of R352 (R351) decreases which will lead the voltage at IC306, pin 5 and TP310 (TP312) to decrease. The capacitance of the varactor diode, D301 increases and the frequency of the reference oscillator decreases. Without compensation the frequency will increase. The temperature coefficient of the reference oscillator from -25°C to +60°C is shown in the table below.

| Band | B (4 M) | C (2 M) | D (0,7 M) |
|------|----------|----------|-----------|
| ppm | < +/-8,5 | < +/-8,5 | < +/-4,2 |

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3.1.6 Power supply.

**Schematics no. 0-97xx-03, page 4 of 4, B (4 M),
 schematics no. 0-9709-03, page 4 of 4, C (2 M) and
 schematics no. 0-9700-03, page 4 of 4, D (0,7 M).**

The radio circuits must be supplied with +4,3 V, +5,5 V and 15 V (10,5 V).

The power supply switches ON/OFF via "R power" pin J1-10 from the master computer. "H" results that the radio is switched on. T401 and IC305B opens and the oscillator containing IC401, starts to multiply the voltage by three (two) for voltage supply to IC305. The oscillator oscillates at approx. 7 kHz. T404 (T403) regulates the output voltage to the correct value. The output voltage is stabilized by a 1,25 V reference diode, D403. The ripple attenuation is better than 60 dB which is important for a high VCO spectral purity. When J1-10 goes to 0 V, T402 closes IC305 down and +5,5 V supply goes to 0 V. IC404 is a 1 Kbit CMOS EEPROM which is used to store calibration data to establish transmitter power levels, modulation level, squelch level and squelch hysteresis. The store function is controlled serially from the master computer. The outputs from the EEPROM are used for a 5 bit D/A converter via an R2R network with 32 steps and an output for controlling the transmitter.

3.1.7 Receiver, B-version (4 M).

Schematics no. 0-97xx-03, B (4 M).

The receiver input signal passes through L1, L2, T1, L3 and L4. The input- and output circuits are capacitively coupled. It gives a steep RF filter forlank and max. attenuation of 45 MHz signals. The filter has a tune bandwith of 20 MHz. The varactor diodes, D1, D2, D3 and D4 tune the filter with a tune voltage from the synthesizer circuit between 1,75 and 12 V. Typically the image rejection is 88 dB and the amplification 10 dB.

3.1.8 Receiver, C-version (2 M).

The receiver input signal passes through L1, L2, T1, L3 and L5. The input filter, L1 and L2 is induction coupled. In that way a steep upwards filteredge can be realized. It gives optimum image rejection. The output filter, L3 and L5 is capacitively coupled. In that way critical coupling is maintained over the whole band. The filter has a tuning bandwith of 28 MHz. It is tuned by the varactor diodes, D1, D2, D3, D4 and D5 with a tuning voltage from the synthesizer circuit between 1,75 and 12 V. Typically the image rejection is 88 dB and the amplification 9 dB.

3.1.9 Receiver, D-version (0,7 M).

Schematics no. 0-9602-03, D-version (0,7 M).

The receiver input signal goes through L1, T1, L2 and L3. Helix coils are used to obtain max. image signal rejection at UHF frequencies. Typically the image rejection is 88 dB. The bandwith given by the helix coils is 20 MHz. Typically the amplification is 8 dB.

3.1.10 VCO.

**Schematics no. 0-9xxx-03, B (4 M),
 schematics no. 0-9710-03, C (2 M) and
 schematics no. 0-9603-03, D (0,7 M).**

The VCO contains a separate TX and RX oscillator, T1 and T4 and buffers, T2 and T3. The buffer stages amplify the VCO signal and attenuate noise and ripple in the supply voltage to the oscillator stages. The oscillator amplitude is regulated by the diodes, D3 and D4 (ALC). The diodes rectify the gate voltage. It

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gives a negative gate source voltage, VGS. If the rectified voltage falls the negative VGS decrease. The amplification and the output signal increase and the signal level is regulated. The tuning range is adjusted at L1 and L5. See table below.

| Frequency range | Bandwidth | Tune voltage |
|-----------------|-----------|-----------------------|
| 68 - 88 MHz | 20 MHz | 1,75 - 12 V +/-0,5 V |
| 146 - 174 MHz | 28 MHz | 1,75 - 12 V +/-0,5 V |
| 403 - 445 MHz | 20 MHz | min. 1,7 - max. 8,6 V |
| 430 - 470 MHz | 20 MHz | min. 1,7 - max. 8,6 V |

TX mode is selected by supplying approx. 2,2 V to pin J2 together with the modulation signal. The master computer adjusts the TX VCO modulation level as a function of the frequency. In this way the modulation level is the same for all channels.

3.1.11 Programming with user program.

NIROS TRX 1012 is programmed via a CH100 charger supplied with PC interface. Dismount the rubber plug from the external connector of the radio. The external connector from the charger shall be mounted in the radio.

Switch on the radio and the programming is carried out from the PC.

Data are transferred serially via "S in inv.", J3-2 and "S out inv.", J3-6.

More information about PC programming are in chapter 4.

3.1.12 Computer circuit.

Schematics no. 0-9702-03, page 1 of 2.

The computer system contains a 8 bit one time programmable (OTP) computer COP87L88RGV-XE. When the radio is switched off, the current consumption is app 20mA. If the ON/OFF switch is touched it will switch on the master computer and +5V(SW), +5V are always present.

The user program with determines the radiofunction and transmit- and receiver frequencies, together with calibration data EEPROM's, IC3 and IC4.

3.1.13 External control.

"E alarm", J3-3 in the external connector is used as a alarm output with connected vehicle adaptor, CH105. The output is "H" in alarm mode. The output is used to control a horn relay circuit in the autocassette. More about the vehicle adaptor in chapter 23.

The output is also used to set up the radio to the users requirements about internal/external antenna, microphone, loudspeaker and so on.

The master computer makes one measurement per second. A 8 msec. pulse are transmitted to J3-3 via 47 Kohm. 47 Kohm and a unknown resistor into the external equipment make a voltage divider. The master computer makes an A/D conversion of the input voltage from the unknown resistor. The digital value from the A/D conversion is compared. The master computer adjust the settings of internal/external microphone, loudspeaker and antenna according to the measured and converted data. In the table below are shown 11 set ups.

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INT./EXT. AUTO CONTROL

| POS. | R VAL. | E.PWR | E.PTT | E.TONE | ANT. | LS | MIC. |
|------|--------|-------|-------|--------|------|-----|------|
| OPEN | >560K | Off | No | No | Int | Int | Int |
| 10 | 470K | On | Yes | Yes | Int | Int | Int |
| 9 | 180K | On | Yes | Yes | Int | Int | Ext |
| 8 | 100K | On | Yes | Yes | Int | Ext | Int |
| 7 | 68K | On | Yes | Yes | Int | Ext | Ext |
| 6 | 47K | On | Yes | Yes | Ext | Int | Int |
| 5 | 33K | On | Yes | Yes | Ext | Int | Ext |
| 4 | 22K | On | Yes | Yes | Ext | Ext | Int |
| 3 | 12K | On | Yes | Yes | Ext | Ext | Ext |
| 2 | 5K6 | SW | SW | SW | SW | SW | SW |

Explanation to abbreviations:

| | | |
|--------|---|--|
| R | = | Resistor code. |
| R VAL. | = | Resistor value in ohms. |
| E.PWR | = | External power supply to accessories. |
| E.PTT | = | External "push to talk" switch. |
| E.TONE | = | External tone switch. |
| ANT. | = | Antenna, internal or external antenna. |
| LS | = | Loudspeaker, internal or external loudspeaker. |
| MIC. | = | Microphone, internal or external microphone |
| Int. | = | Internal. |
| Ext. | = | External. |
| SW. | = | Software. |

3.1.14 AF-output amplifier.**Schematics no. 0-9702-03, page 2 of 2.**

The discriminator signal from the radioboard is supplied to the systemboard via connector, J2-7. The AF signal is processed in the AF processor FX806, IC101. The signal passes a -6 dB/octave deemphasis circuit. The signal is bandlimited in a 300 Hz HP- and a 3 KHz LP-filter. The level of the AF output from the audioprocessor is controlled serially from the computer. The output level can be regulated 48 dB.

The AF output amplifier is selected and switched on via the port circuit, IC105 controlled from the computer. The output amplifier, IC103 supplies the internal 25 ohms loudspeaker with max. 0,6 W via a balanced output. The output amplifier, IC107 supplies an external loudspeaker with max. 0,4 W via an unbalanced output. The external loudspeaker impedance must be at least 8 ohms. A 100 mF/10 V capacitor is needed in the leads to the external loudspeaker.

3.1.15 Modulation amplifier.**Schematics no. 0-9702-03, page 2 of 2.**

An internal electret microphone or an external microphone via the external connector delivers an AF signal to modulate the transmitter. A supplied 5 mVrms AF signal gives standard deviation.

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Standard modulation.

| Channel separation | Deviation | Mod. frequency |
|--------------------|-----------|----------------|
| 12,5 kHz | 1,5 KHz | 1 KHz |
| 20 KHz | 2,4 KHz | 1 KHz |
| 25 KHz | 3,0 KHz | 1 KHz |

The microphone signal is supplied to the microphone amplifiers, T108 for internal microphone via J3-1 and T109 for external microphone via J4-5 in the external connector. The microphone signal is processed in the audioprocessor FX806, IC101 where the signal is processed in a VOGAD circuit. The circuit is a voltage controlled amplifier with the purpose of reducing the gain when the microphone receives large audio signals. In this way clipping is avoided with accompanying distortion while keeping modulation deviation in the allowed range. Frequencies above 3 KHz are removed in a LP-filter.

The microphone sensitivity is controlled by the computer in a following adjustable amplifier stage. The signal passes a selectable +6 dB/octave preemphasis circuit and a HP-filter and a frequency deviation limiter. The preemphasis circuit is only used for PM, but not for FM. If the user use the tonesystem facility the transmit tonesignal is supplied to the input of the frequency deviation limiter.

The TX VCO has highest modulation sensitivity in the high end of the frequency range. The computer controls the output amplifier in the audio processor so that the gain is maximum at lowest VCO frequency and smallest at highest VCO frequency. If CTCSS subtone is used, the subtone is supplied to the input of the output amplifier. The frequency deviation is the same over all the frequency range within +/-0,2 KHz. Data to control the output amplifier is stored in a EEPROM, IC404 on the radioboard.

3.1.16 Tonesystem (Optional).

Schematics no. 0-9702-03, page 2 of 2.

The main clock of 8 MHz, divided by two, supplies the clock signal to the tonesystem.

Subtones (CTCSS) are processed in tone IC FX805, IC102 both during transmission and reception. During transmission the computer transmits serial data to the circuit to define which tone to be send. During reception the IC makes measurements on the discriminator signal. If the incoming signal has a constant frequency the IC approves and measures it and the computer can read and determine whether the frequency value is correct. The IC also contains some filters to separate the subtones (65-250 Hz) from the speaking range (300-3000 Hz).

ZVEI, CCIR etc. tones are processed by the tone IC type FX803, IC106. During transmission the computer transmits serial data concerning which tones to be sent and the duration of the tones. The IC also functions as a tonegenerator. During reception the IC approves the tone if the received frequency is constant and measures the tone frequency. The tone IC informs the computer via "IRQ inv." and sends data serially via "Data" to update the computer. The computer compares the received tone data with data from the user program. Tonesystem data as tonesystem, tone lengths and tone numbers are placed in the user program for instance CCIR 27910, tonelength 100 msec.

When a received tonecode is detected as being correct, the user program alerts the user with for instance sound information in the loudspeaker or symbols in the display.

The IC, IC106 or IC1 in radio's with tone systems, gives sound information to the loudspeaker during operation of the keyboards.

3.1.17 Interface.

Schematics no. 0-9702-03, page 1 of 2.

External connected equipment can be powered via the "E PWR" terminal, J4-9 in the external connector. The output voltage depends on the battery voltage. It is between 6,5 to 7,5 V. Max. external current consumption is 200 mA.

External alarm, "E alarm", J3-3. The terminal goes "H", when an alarm call is received. The pin is also used to measure on the connected equipment. The computer can read the users requirements about

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The radioboard is switched ON/OFF by the computer via "R Power", J2-10.

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The computer controls a serial/parallel port, IC105. The port controls following functions:

1. Display-light and keyboard-light via "D light", J1-3 and "K light", J3-9.
2. Red "TX" LED is lit during transmission via "TX led", J3-15.
3. Int/Ext microphone and Int/Ext speaker.
4. Green "CALL" LED is lit, when a correct tone call is received. Signal is "Call led", J3-16.

3.1.18 Operation facilities.

Schematics no. 0-9702-03, page 1 of 2.

Left side switches:

| | |
|-------------------------|----------|
| SW1, PTT switch, | "ROW 0". |
| SW2, tone switch no. 1, | "ROW 1". |
| SW3, tone switch no. 2, | "ROW 2". |

Schematics no. 0-9607-03.

| | | |
|-----------------------|----------|-------|
| SW1, On/off switch, | "KB R3", | J1-1. |
| SW2, Alarm switch, | "KB R2", | J1-2. |
| SW3, Option 1 switch, | "KB R1", | J1-3. |
| SW4, Option 2 switch, | "KB R0", | J1-4. |

The top is supplied with a rotary encoder switch. Its function is programmable and is typically used to switch channel and change volume level.

Schematics no. 0-9704-03.

Front keyboard:

SW1-SW4.

1 row connection, "KB R0", J1-7 and 4 pieces column connections, "KB C0-C3", J1-1 to J1-4 connects the keyboard to the computer.

3.1.19 Connectors.

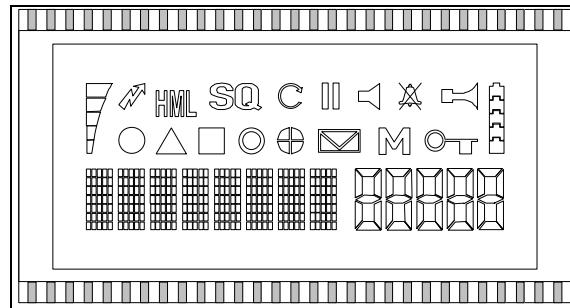
| | | |
|-----|----------|--|
| J1: | 9 poles | Display unit connection |
| J2: | 12 poles | Radioboard connections |
| J3: | 20 poles | Operating facilities connection via flexboard such as switches, rotary encoder switch, light indicating, keyboards, loudspeaker and microphone |
| J4: | 10 poles | External connector to connection of programming equipment and external equipment such as handmicrophone or vehicle adaptor |

3.1.20 Display unit.

Schematics no. 0-9703-03.

Display data are transmitted serially from the computer to the display driver IC2. The display driver receives a 400 KHz clock signal from IC1. The display consists of 15 rows, 84 columns of numbers and symbols. The driver multiplexes the display 1:16 so that one row at a time is on. The columns are supplied with one of the 5 voltage levels between approx. -1 V and 5 V. It depends on the wanted display pattern. The voltage levels are generated by the resistor network R11 to R15.

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TRX 1012 display.

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4. Basic software programming

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5. Maintenance/adjustment

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NOTE!

THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO AVOID DETERIORATION OF VITAL SPECIFICATIONS E.G. SPURIOUS RADIATION BEYOND ETSI SPECIFICATIONS, DO NOT PERFORM ANY SERVICING ON THE RADIO CIRCUITS UNLESS YOU ARE QUALIFIED TO DO SO.

5.1 Introduction.

This section of the manual contains maintenance and adjustment information for the **NIROS TRX 1012** transceiver.

NOTE!

A visual inspection should always precede alignment or repair. Always switch off power or remove battery pack before disassembly or replacement of parts.

5.2 Mechanical inspection and repair.

The mechanical parts can be damaged, if the user drops the radio on a hard surface. Following parts have to be checked:

5.2.1 Battery.

| | |
|----------------------------|------------------|
| 600 mA, black, | NIROS NO. 5672 |
| 1000 mA, black, | NIROS NO. 5670. |
| Round plastic piece, black | NIROS NO. 97906. |

The holders, which connect the battery to the radio cabinet. The gold plated screws in the top of the battery have to be free of corrosion. Remove the round plastic piece at the battery top with a screwdriver. Check the fuse link. It has to connect the two tinned areas, if not replace with a new one.

5.2.2 Volume/ channel control.

| | |
|---------------------------|------------------|
| Rotary button, | NIROS NO. 97862. |
| Rotary encoder switch | NIROS NO. 81186. |
| Nut for switch | NIROS NO. 97756. |
| O-ring, 3X1,5 for switch, | NIROS NO. 85235. |

The volume/ channel control can be destroyed, if the radiotop hits a hard surface. The shaft can loose the connection with the switch. It is necessary to get access to the inside of the radio to change the switch. See chapter 6. Use some LOCKTITE 220 (RED) at the switch thread to lock the nut.

5.2.3 Front and top keyboard.

| | |
|----------------------------|------------------|
| Front keyboard, black | NIROS NO. 98126. |
| Top keyboard no. 1, black, | NIROS NO. 98007. |
| Top keyboard no. 2, black | NIROS NO. 98006. |

The keyboards are designed for long life. It is seldom necessary to change them. Use visual inspection. The surface foils can be removed, if only the surface is damaged. Ask the factory for a new surface foil for front and top keyboards.

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5.2.4 Side keys.

| | |
|---------------------------------|------------------|
| PTT key | NIROS NO. 97854. |
| Tone key no. 1, with one point | NIROS NO. 97855. |
| Tone key no. 2, with two points | NIROS NO. 97856. |
| Rubber key pads | NIROS NO. 97857. |

Visual inspection.

Three rubber key pads are placed between the side keys and the switches on the PCB board. Access to the inside is necessary to change the keys and the key pads. See section 6.

5.2.5 Antenna connector.

| | |
|---------------------------|------------------|
| TNC antenna connector, | NIROS NO. 83321. |
| O-ring, 10 X 1 mm, | NIROS NO. 85174. |
| Nut for antenna connector | NIROS NO. 97526. |

Visual inspection.

It is necessary with access to the inside of the radio to change the connector. See section 6. Use some LOCTITE 270 (BLUE) at the antenna connector thread to lock the nut.

5.2.6 Display.

| | |
|---|--------------------------------------|
| Display, with NIROS print, LCD display | NIROS NO. 98095. NIROS NO. 46333. |
|---|--------------------------------------|

Visual inspection.

The display window can be smashed or scratched. The LCD display has to be controlled for cracks.

5.2.7 Flexboard.

| | |
|-----------|------------------|
| Flexboard | NIROS NO. 95708. |
|-----------|------------------|

See section 6 for access to the flexboard inside the radio housing. Check the flexboard for broken connections. If any repair or soldering are to take place on the flexboard use extreme care not to impair PCB. Max. soldering temperature is 270°C. Check the flexboard tail, where it is connected to the radio module. Pull up brown lock on plug to flexboard 1,5 mm, and remove flexboard tail. Mount the flexboard into the connector again. Push down the brown locks.

It is important, that the flexboard tail is pushed to the bottom of the systemboard connector, J2.

5.3 Battery check.

1. Zero voltage at radio terminals:
Check fuse.
2. Low voltage:
Apply charge.
3. Normal voltage (6 - 8V):
If normal voltage is present after resting the battery for 24 hours it may be assumed to be OK.
4. Low capacity:
Voltage is quickly reduced due to self discharge. Discard battery.

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5. Low capacity:

No self discharge but greatly reduced service time. Apply two or three charge/ discharge cycles and test capacity. It is only allowed to discharge the battery to 6,0 V. NIROS can deliver a CH100 charger supplied with a discharge section.

No increase! Battery life exhausted. Replace with a new one. NIROS have new batteries in stock for immediate delivery.

5.4 Battery handling.

NiCd rechargeable batteries are very reliable in operation and take a large number of discharge cycles, provided they receive proper care. The trouble with NiCd cells is that it is impossible to get a positive indication of the state of charge. At the end of the charging period the voltage does not rise suddenly as is the case with other types of batteries.

The discharge characteristic is very flat after a short initial period. When the battery is fully discharged the voltage falls abruptly.

The NiCd battery should preferably be discharged in service and then fully charged, which is of course not always possible. NiCd cells suffer from a memory effect, which reduces capacity of the cells if full capacity is never used or if the battery is left in a charger, even at trickle charge, for many weeks without being used.

Full capacity is normally restored after a few deep discharges and full recharges. So in order to judge the capabilities of a certain battery, capacity should be measured after at least 2 to 3 full cycles of discharge and charge.

Consult accessory chapter for information on NIROS battery chargers.

5.5 Service equipment.

The following service equipment is recommended for alignment and troubleshooting the NIROS TRX 1012 transceiver.

| | |
|--|-------------------------------------|
| 1. Hexagon ball driver, 2 mm | NIROS NO. 84013. |
| 2. Battery adaptor, type | NIROS NO. 5903. |
| 3. Test box, type TP 1091 | NIROS NO. 5900. |
| 4. DC power supply | 7,2 V/ 3 A. |
| 5. DC mA meter | FLUKE 8000A or equivalent. |
| 6. DC voltmeter | - |
| 7. RF dummy load | 5 W, 50 ohms, Bird model 80M or eq. |
| 8. RF power meter | Bird, model 43 or eq. |
| 9. Modulation meter | Farnell, model 257 or eq. |
| 10. Distortion meter | Radiometer, model BKF 6 or eq. |
| 11. AF voltmeter | FLUKE 8000A or eq. |
| 12. Oscilloscope | HAMEG, HM 204-2 or eq. |
| 13. AF oscillator | Heathkit, model IG 18 or eq. |
| 14. Signal generator | Hewlett Packard 8657A or eq. |
| 15. Frequency counter | CFC 80 - A or eq. |
| 16. Power divider | Mini Circuits, model ZFSC2-2 or eq. |
| 17. RF coupler | Marconi Instr. 54452-011E or eq. |
| 18. Diode probe | FLUKE, model 82 RF or eq. |
| 19. Antenna adaptor | NIROS NO. 5904. |
| 20. Extension cable, radio- to systemboard | NIROS NO. 5901. |
| 21. Test leads, coaxial cable, connector TNC male. | |

Alternatively a radio communication analyzer can be used, e.g. **Schlumberger Stabilock type 4032** or equivalent. It can replace many single instruments. NIROS can deliver a testjig and software for automatic testing of the radio.

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5.6 Radio adjustments.

TRX 1012 is a radio with few manual adjustments. Most adjustments are controlled by the computer inside the radio. Other adjustments can be made from the top- and front keyboard. The display is used as a monitor. A selection of menus lead the user through the adjustment procedure. See details later in this section. **Take care of ESD to circuit boards!**

It is necessary with access to the radio circuits to do the following manual adjustments:

1. Coarse adjustment of TX output power (R101).
2. Adjustment of IF coil, L201 to best sensitivity.
3. Adjustment of discriminator coil to lowest distortion and max. AF signaloutput.
4. Adjustment of reference oscillator (C330).

Access to circuits are gained by removing the radio module from the diecast housing. See chapter 6 of this manual, **DISASSEMBLY OF TRX 1012**. Access to radio circuits are gained by removing the curved metal screen box lid reverse to display side.

5.7 Transmitter power amplifier.

**Schematics no. 0-9625-03, page 1 of 4, B (4 M),
schematics no. 0-9613-03, page 1 of 4, C (2 M) or
schematics no. 0-9600-03, page 1 of 4, D (0,7 M).**

1. Adjust "PA/SQ" level to step 31 (hex 1E) (see chapter 5.18).
2. Select "H" output power (see chapter 5.18).
3. Battery voltage shall be 7,2 V.
4. Adjust P101 until transmitter output power is 5 W. "H" output.

5.8 MF-unit.

**Schematics no. 0-9625-03, page 2 of 4, B (4 M),
schematics no. 0-9613-03, page 2 of 4, C (2 M) or
schematics no. 0-9600-03, page 2 of 4, D (0,7 M).**

1. Check the 12 dB SINAD RF sensitivity.

| | |
|--------------|--|
| Sensitivity: | TRX 1012B, typ. -118 dBm, min. -116 dBm. |
| | TRX 1012C, typ. -118 dBm, min. -116 dBm. |
| | TRX 1012D, typ. -116 dBm, min. -114 dBm. |

If not OK proceed.

2. Connect -50 dBm RF input signal to antenna connector from signal generator. Standard modulation. Be sure that RF frequency and radio frequency are exactly right.

| Channel separation | Deviation | Tone |
|--------------------|-----------|-------|
| 12,5 KHz | 1,5 KHz | 1 KHz |
| 20 KHz | 2,4 KHz | 1 KHz |
| 25 KHz | 3,0 KHz | 1 KHz |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
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3. Check the mixer diode, D201 (D202). Measure the DC voltage at pin no. 1 and 3 of TR201. These voltages are equal to the DC voltage at pin 2 if the diode is OK.
4. Measure the 44,55 MHz RF level at IC201, pin 1 with a diode probe. The level shall be approx. 300 mV.
5. Adjust detector coil, L204 to max. AF signal and min. distortion.
6. Adjust L201 to min. distortion.
7. Repeat point 4. and 5.

5.9 Reference and 2. local oscillator.

**Schematics no. 0-9625-03, page 3 of 4, B (4 M),
 schematics no. 0-9613-03, page 3 of 4, C (2 M) or
 schematics no. 0-9600-03, page 3 of 4, D (0,7 M).**

1. Measure the 44,55 MHz RF level at IC201, pin 1 with a diode probe. The level shall be approx. 300 mV.
2. Check TX frequency at approximately 20 °C.

| Version | Frequency error |
|---------|-----------------|
| B | +/- 200 Hz |
| C | +/- 200 Hz |
| D | +/- 400 Hz |

3. Capacitors with N750 temperature coefficient are used for some capacitors in D radio version. Change only to exact the same type during service.

D-versions:

| No. Code | Value | TC (ppm) | NIROS NO. |
|----------|-----------|----------|-----------|
| C323 | 150 pF | N750 | 20819 |
| C324 | 150 pF | N750 | 20819 |
| C327 | 18 pF | N750 | 20815 |
| C328 | 6,8 pF | N750 | 20814 |
| C330 | 5,6 pF x) | N750 | 20813 |
| Others | X | NP0 | XXXXX |

- x) Selected in final test.

5.10 Loop filter.

1. Some of the capacitors in the loop filter and power supply is special low noise versions to avoid microfoni in the radio. Change only to exact the same version during service.

B- and C-versions:

| No. code | Value | Type | NIROS NO. |
|----------|--------|-----------|-----------|
| C335 | 22 nF | low noise | 20804 |
| C336 | 1,5 nF | low noise | 20802 |
| C337 | 47 nF | low noise | 20805 |
| C338 | 47 nF | low noise | 20805 |
| C339 | 4,7 nF | low noise | 20803 |
| C342 | 47 nF | low noise | 20805 |
| C404 | 22 nF | low noise | 20804 |
| C405 | 22 nF | low noise | 20804 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
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D-versions:

| No. Code | Value | Type | NIROS NO. |
|----------|--------|-----------|-----------|
| C336 | 22 nF | low noise | 20804 |
| C337 | 1,5 nF | low noise | 20802 |
| C338 | 47 nF | low noise | 20805 |
| C339 | 47 nF | low noise | 20805 |
| C340 | 4,7 nF | low noise | 20803 |
| C342 | 47 nF | low noise | 20805 |
| C344 | 1,5 nF | low noise | 20802 |
| C404 | 22 nF | low noise | 20804 |
| C405 | 22 nF | low noise | 20804 |

5.11 Receiver.

The receiver unit is factory adjusted. Do not adjust the receiver unit, because it needs special equipment.

The **B-version (4 M)** covers 68 - 88 MHz.

Unit no. 5623.

The **C-version (2 M)** covers 146 - 174 MHz.

Unit no. 5622.

The **D-versions (0,7 M)** covers a 20 MHz segment in the range from 403 - 470 MHz.

DL-version, **unit no. 5620.**
DH-version, **unit no. 5621.**

If the unit is defect or needs adjustment to another frequency segment contact factory.

5.12 VCO.

| | | | |
|--------------------|------------------------|-----------------|--------------|
| B-version, | 25 KHz (4 M): | Unit no. | 5643. |
| C-version, | 25 KHz (2 M): | - - | 5642. |
| DL-version, | 25 KHz (0,7 M): | - - | 5640. |
| DH-version, | 25 KHz (-): | - - | 5641. |

5.12.1 VCO check in transmitter mode:

1. Measure DC voltage on "TX MOD", J1-6 , 2,3 V +/-0,3 V.
2. Check RF input to PA hybrid module at 50 ohms level (0 dBm +3 dB/-1 dB).
3. Measure the tune voltage at the lead of L303.
 B- and C-versions: 1,75 V - 11,75 V +/-0,75 V at band edges.
 D-versions: Min. 1,7 V - max. 8,6 V at band edges.

5.12.2 VCO check in receiver mode:

1. Measure DC voltage on "TX MOD", J1-6 (approx. 0 V).
2. Put RF diode probe on "north east" terminal of transformer, TR201. Measure the RF level app. 250 mV +/-50 mV (2 dBm).
3. Measure the tune voltage at the lead of L303.
 B- and C-versions: 1,75 V - 12,0 +/-0,5 V at band edges.
 D-versions: Min. 1,7 V - max. 8,6 V at band edges.

If the VCO is defect NIROS recommend to order a new one. Specify unit no., frequency segment and channel separation. The VCO needs special tools for disassembly and assembly and contains special capacitors to avoid microfoni.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
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5.12.3 VCO adjustment:

The tune range can be moved by adjusting L1 (TX) and L5 (RX). Normally it is only necessary to adjust the coil to move the frequency range. In a DL- version VCO it may be necessary to change some capacitors inside the VCO housing especially if the frequency range is changed more than 10 MHz. The brass core must not be adjusted above VCO top surface or more than approx. 2 turns below coil form top.

If a VCO can not be adjusted at the coils. Order a new VCO from NIROS.

5.13 Display.

B-version (4 M): Unit no. 5912, the unit have a metal screen at the back.

C-version (2 M): Unit no. 5910.

D-version (0,7 M): Unit no. 5910.

NIROS recommends to avoid disassembling the display unit. Please send the display modul to NIROS, if the display is crashed. Do not store the display unit in a dusty area.

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-06-98 | 0 | PA |

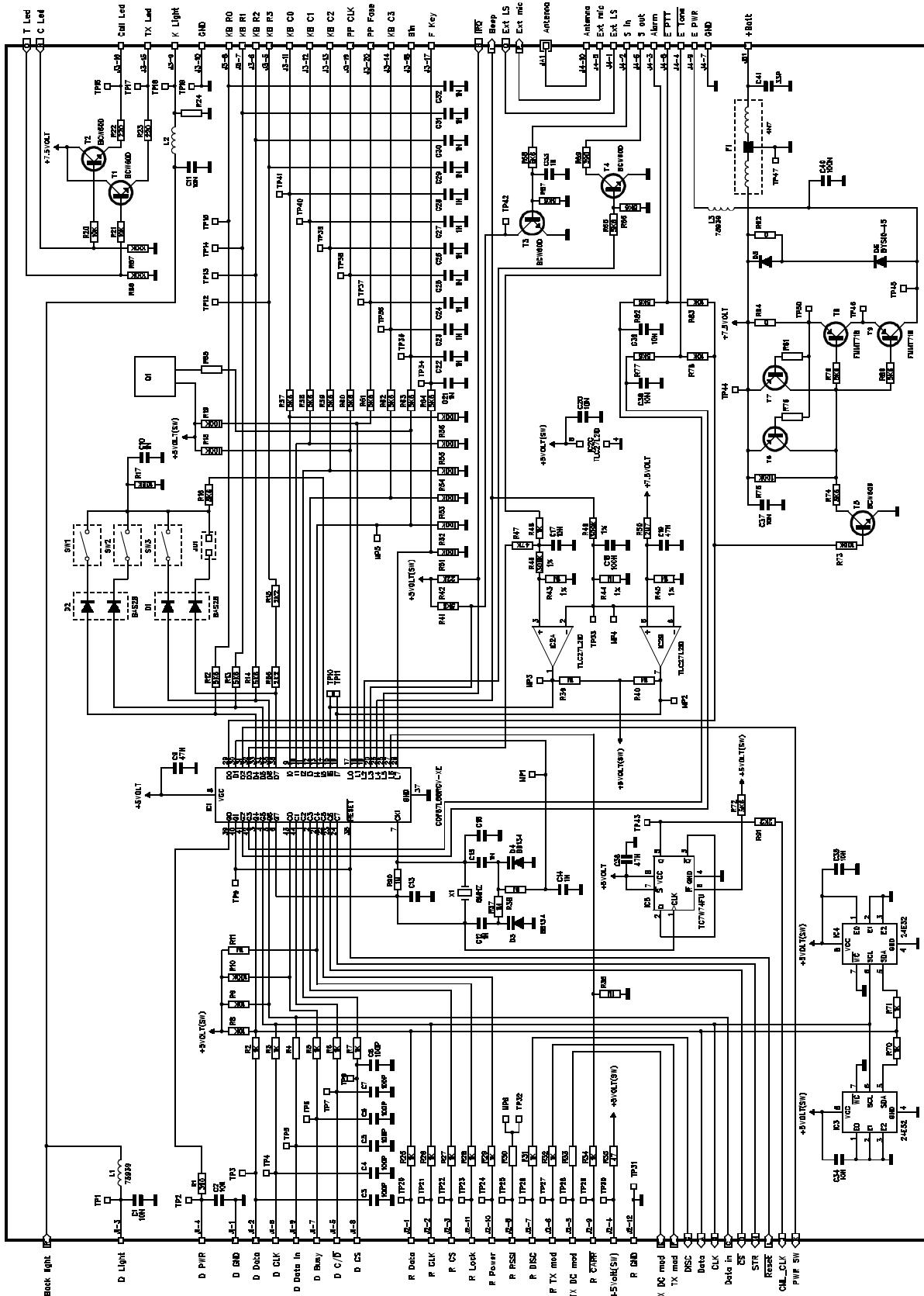
6. Mechanics

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 09-06-98 | 0 | PA |

7. Systemboard TRX1012

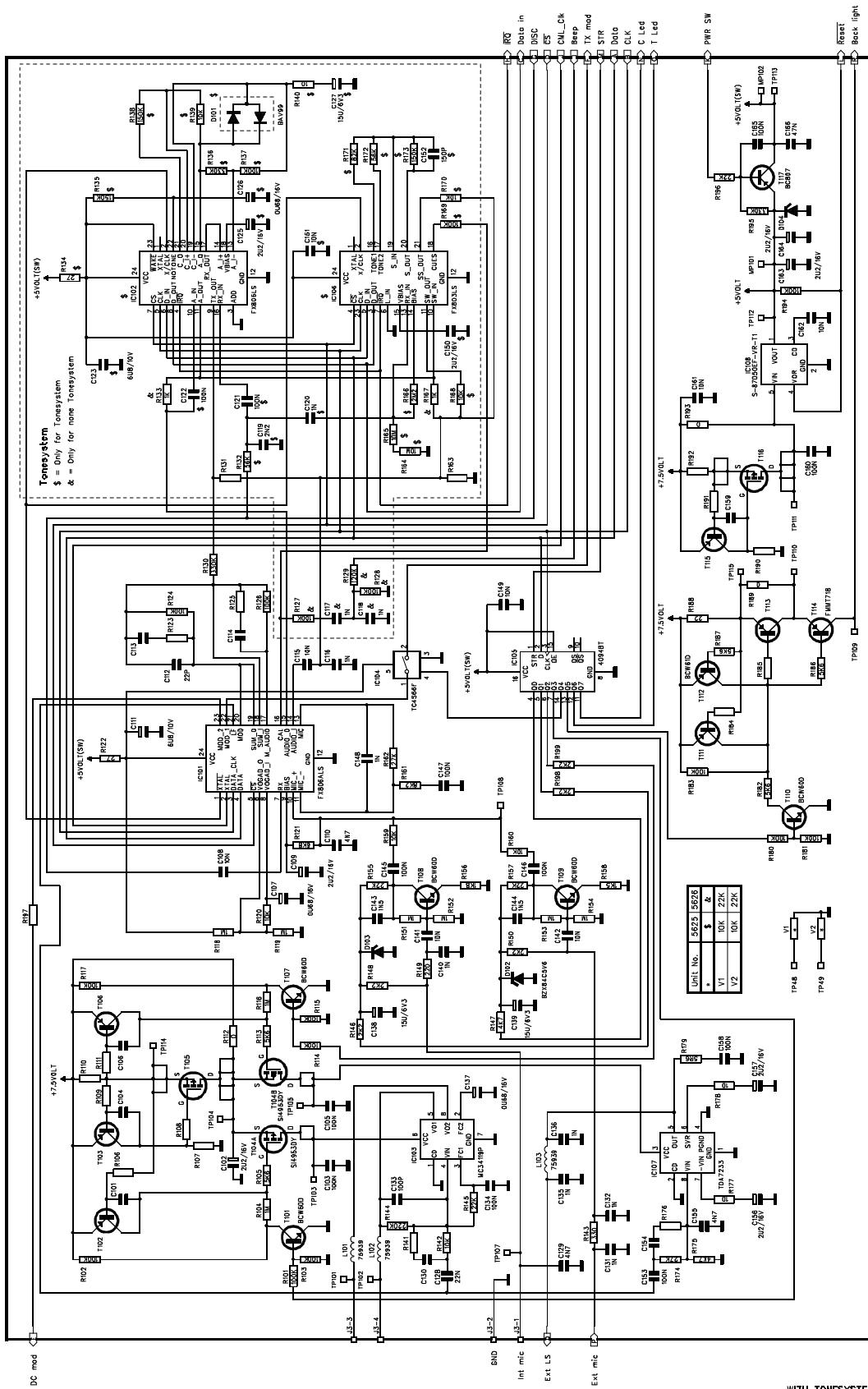
| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

7.1 Diagram



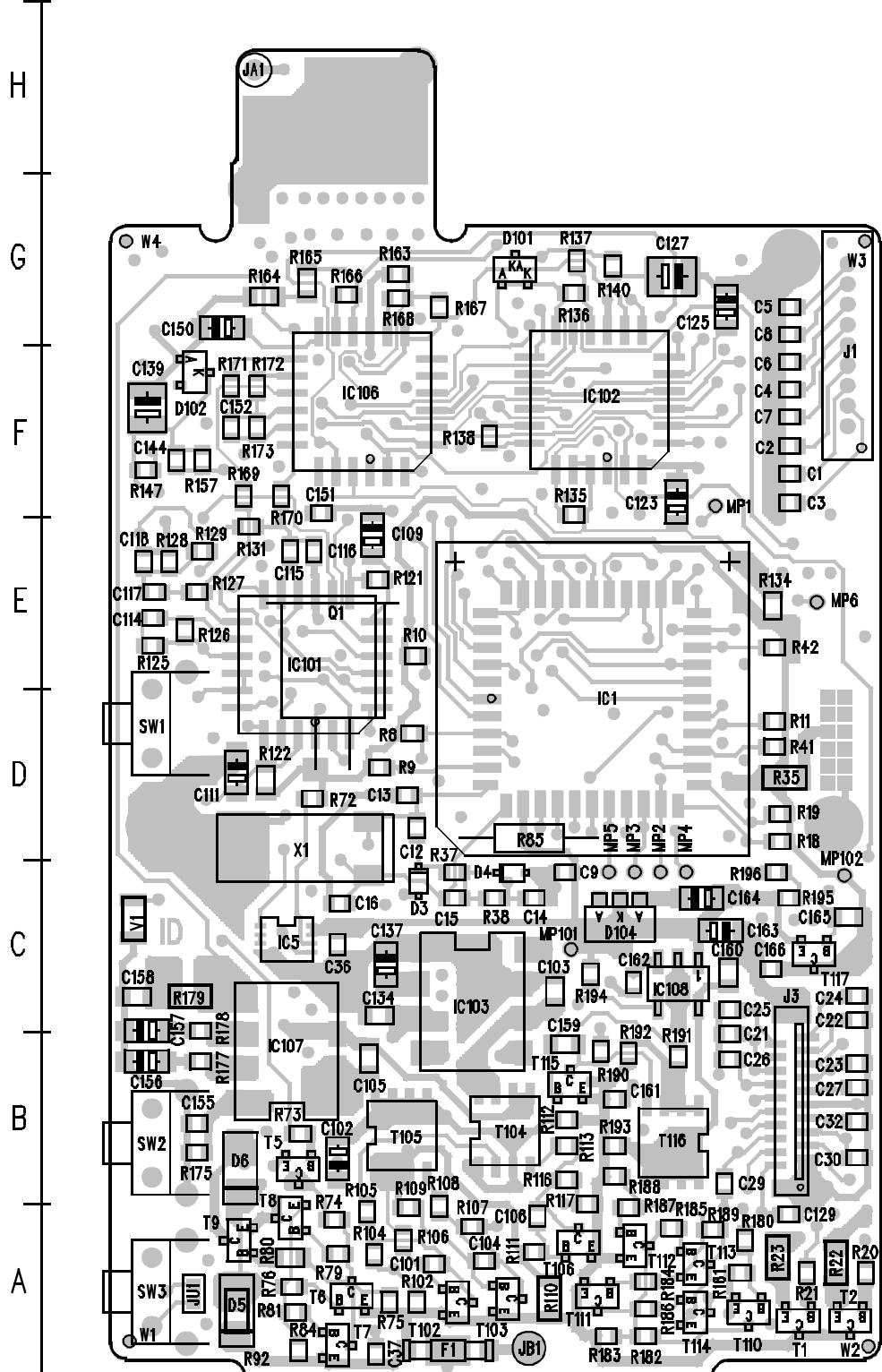
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|---------------------------------------|--|----------------------------------|--|
| SUBJECT TO CHANGE WITHOUT NOTICE | | UNIT NO: 5925 | |
| DATE: 6-3-97 SIGN: PH O | | WITHOUT TONESYSTEM UNIT NO: 5926 | |
| DATE: 3-11-99 SIGN: PH 1 | | NIROS TELECOMMUNICATION A/S | |
| DATE: SIGN: HIRSEMARKEN 5, 3520 FARUM | | | |
| DATE: SIGN: System board TRX1012 | | | |
| DATE: SIGN: PCB No: 786-2 | | | |
| DRAWING NO: O-9708-03-1 p 1 of 2 | | | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |



| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

7.2 Componentside

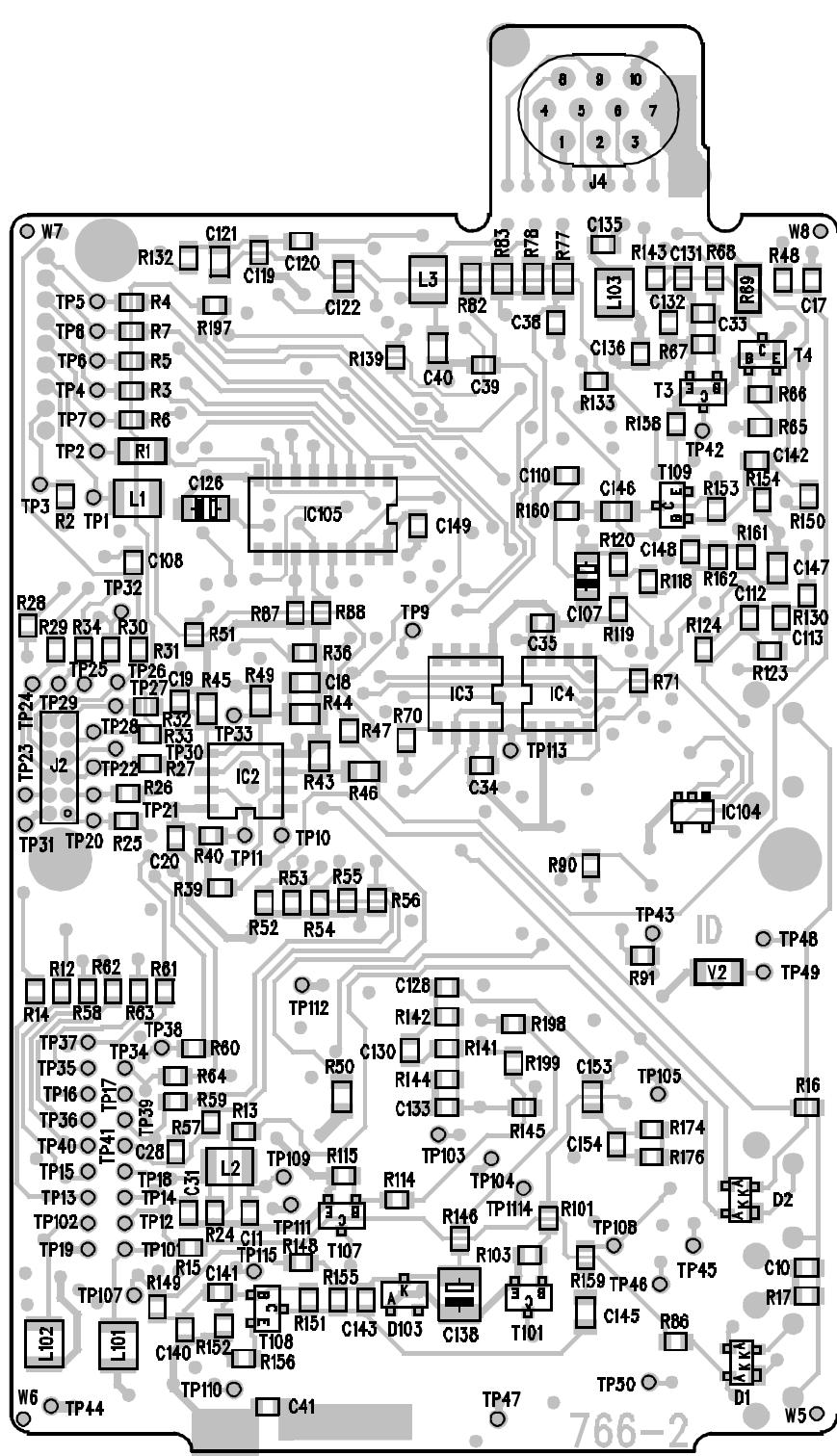


Componentside 766-2

| SUBJECT TO CHANGE WITHOUT NOTICE | | WITH TONESYSTEM UNIT NO: 5925 | | WITHOUT TONESYSTEM UNIT NO: 5926 | |
|----------------------------------|----------|-------------------------------|---|----------------------------------|---------------------------|
| DATE: 6-3-97 | SIGN: PH | 0 | 1 | NIROS TELECOMMUNICATION A/S | HØRSEMARKEN 5, 3520 FARUM |
| DATE: 3-11-99 | SIGN: PH | | | | |
| DATE: | SIGN: | | | | |
| DATE: | SIGN: | | | | System board TRX1012 |
| DATE: | SIGN: | | | | |
| DRAWING NO: O-9708-05-1 | | PCB NO: 766-2 | | | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

7.3 Wiringside



5 4 3 2 1
| | | | |
Wiringside 766-2

| SUBJECT TO CHANGE WITHOUT NOTICE | | WITH TONESYSTEM | UNIT NO: 5925 |
|----------------------------------|----------|--------------------|-----------------------------|
| | | WITHOUT TONESYSTEM | UNIT NO: 5926 |
| DATE: 6-3-97 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 3-11-99 | SIGN: PH | 1 | HØRSEMARKEN 5, 3520 FARUM |
| DATE: | SIGN: | | |
| DATE: | SIGN: | | System board TRX1012 |
| DATE: | SIGN: | | |
| DATE: | SIGN: | | |
| DRAWING NO: O-9708-04-1 | | PCB NO: 766-2 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

7.4 Fieldlist

| TEXT Systemboard TRX1012 DRAWING NO. 0-9708-03-1 | | | | | DATE 3-11-99 UNIT NO. 5925 | | |
|---|------|--------|------|-----------|-------------------------------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| R1 | SMT | BOTTOM | F4 | R54 | SMT | BOTTOM | C3 |
| R2 | SMT | BOTTOM | F5 | R55 | SMT | BOTTOM | C3 |
| R3 | SMT | BOTTOM | F4 | R56 | SMT | BOTTOM | C3 |
| R4 | SMT | BOTTOM | G4 | R57 | SMT | BOTTOM | B4 |
| R5 | SMT | BOTTOM | F4 | R58 | SMT | BOTTOM | C5 |
| R6 | SMT | BOTTOM | F4 | R59 | SMT | BOTTOM | B4 |
| R7 | SMT | BOTTOM | G4 | R60 | SMT | BOTTOM | C4 |
| R8 | SMT | TOP | D2 | R61 | SMT | BOTTOM | C4 |
| R9 | SMT | TOP | D2 | R62 | SMT | BOTTOM | C4 |
| R10 | SMT | TOP | E2 | R63 | SMT | BOTTOM | C4 |
| R11 | SMT | TOP | D4 | R64 | SMT | BOTTOM | C4 |
| R12 | SMT | BOTTOM | C5 | R65 | SMT | BOTTOM | F1 |
| R13 | SMT | BOTTOM | B4 | R66 | SMT | BOTTOM | F1 |
| R14 | SMT | BOTTOM | C5 | R67 | SMT | BOTTOM | F1 |
| R15 | SMT | BOTTOM | B4 | R68 | SMT | BOTTOM | G1 |
| R16 | SMT | BOTTOM | B1 | R69 | SMT | BOTTOM | G1 |
| R17 | SMT | BOTTOM | A1 | R70 | SMT | BOTTOM | D3 |
| R18 | SMT | TOP | D4 | R71 | SMT | BOTTOM | E2 |
| R19 | SMT | TOP | D4 | R72 | SMT | TOP | D2 |
| R20 | SMT | TOP | A5 | R73 | SMT | TOP | B2 |
| R21 | SMT | TOP | A5 | R74 | SMT | TOP | A2 |
| R22 | SMT | TOP | A5 | R75 | SMT | TOP | A2 |
| R23 | SMT | TOP | A4 | R76 | SMT | TOP | A2 |
| R24 | SMT | BOTTOM | B4 | R77 | SMT | BOTTOM | G2 |
| R25 | SMT | BOTTOM | D4 | R78 | SMT | BOTTOM | G2 |
| R26 | SMT | BOTTOM | D4 | R79 | SMT | TOP | A2 |
| R27 | SMT | BOTTOM | D4 | R80 | SMT | TOP | A2 |
| R28 | SMT | BOTTOM | E5 | R81 | SMT | TOP | A2 |
| R29 | SMT | BOTTOM | E5 | R82 | SMT | BOTTOM | G2 |
| R30 | SMT | BOTTOM | E4 | R83 | SMT | BOTTOM | G2 |
| R31 | SMT | BOTTOM | E4 | R84 | SMT | TOP | A2 |
| R32 | SMT | BOTTOM | E4 | R85 | SMT | TOP | D3 |
| R33 | SMT | BOTTOM | D4 | R86 | SMT | BOTTOM | A1 |
| R34 | SMT | BOTTOM | E5 | R87 | SMT | BOTTOM | E3 |
| R35 | SMT | TOP | D4 | R88 | SMT | BOTTOM | E3 |
| R36 | SMT | BOTTOM | E3 | R90 | SMT | BOTTOM | D2 |
| R37 | SMT | TOP | C3 | R91 | SMT | BOTTOM | C2 |
| R38 | SMT | TOP | C3 | R92 | SMT | TOP | A1 |
| R39 | SMT | BOTTOM | D4 | R101 | SMT | BOTTOM | B2 |
| R40 | SMT | BOTTOM | D4 | R102 | SMT | TOP | A2 |
| R41 | SMT | TOP | D4 | R103 | SMT | BOTTOM | B2 |
| R42 | SMT | TOP | E4 | R104 | SMT | TOP | A2 |
| R43 | SMT | BOTTOM | D3 | R105 | SMT | TOP | A2 |
| R44 | SMT | BOTTOM | D3 | R106 | SMT | TOP | A2 |
| R45 | SMT | BOTTOM | E4 | R107 | SMT | TOP | A3 |
| R46 | SMT | BOTTOM | D3 | R108 | SMT | TOP | A2 |
| R47 | SMT | BOTTOM | D3 | R109 | SMT | TOP | A2 |
| R48 | SMT | BOTTOM | G1 | R110 | SMT | TOP | A3 |
| R49 | SMT | BOTTOM | E4 | R111 | SMT | TOP | A3 |
| R50 | SMT | BOTTOM | B3 | R112 | SMT | TOP | B3 |
| R51 | SMT | BOTTOM | E4 | R113 | SMT | TOP | B3 |
| R52 | SMT | BOTTOM | C4 | R114 | SMT | BOTTOM | B3 |
| R53 | SMT | BOTTOM | C3 | R115 | SMT | BOTTOM | B3 |

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PC. Board No. 766-2

TEXT Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 3-11-99
UNIT NO. 5925

| Component | Type | Side | Cord | Component | Type | Side | Cord |
|-----------|------|--------|------|-----------|------|--------|------|
| R116 | SMT | TOP | B3 | R169 | SMT | TOP | F1 |
| R117 | SMT | TOP | B3 | R170 | SMT | TOP | F1 |
| R118 | SMT | BOTTOM | E2 | R171 | SMT | TOP | F1 |
| R119 | SMT | BOTTOM | E2 | R172 | SMT | TOP | F1 |
| R120 | SMT | BOTTOM | E2 | R173 | SMT | TOP | F1 |
| R121 | SMT | TOP | E2 | R174 | SMT | BOTTOM | B2 |
| R122 | SMT | TOP | D1 | R175 | SMT | TOP | B1 |
| R123 | SMT | BOTTOM | E1 | R176 | SMT | BOTTOM | B2 |
| R124 | SMT | BOTTOM | E1 | R177 | SMT | TOP | B1 |
| R125 | SMT | TOP | E1 | R178 | SMT | TOP | C1 |
| R126 | SMT | TOP | E1 | R179 | SMT | TOP | C1 |
| R127 | SMT | TOP | E1 | R180 | SMT | TOP | A4 |
| R128 | SMT | TOP | E1 | R181 | SMT | TOP | A4 |
| R129 | SMT | TOP | E1 | R182 | SMT | TOP | A4 |
| R130 | SMT | BOTTOM | E1 | R183 | SMT | TOP | A3 |
| R131 | SMT | TOP | E1 | R184 | SMT | TOP | A4 |
| R132 | SMT | BOTTOM | G4 | R185 | SMT | TOP | A4 |
| R133 | SMT | BOTTOM | F2 | R186 | SMT | TOP | A4 |
| R134 | SMT | TOP | E4 | R187 | SMT | TOP | A4 |
| R135 | SMT | TOP | F3 | R188 | SMT | TOP | B3 |
| R136 | SMT | TOP | G3 | R189 | SMT | TOP | A4 |
| R137 | SMT | TOP | G3 | R190 | SMT | TOP | B3 |
| R138 | SMT | TOP | F3 | R191 | SMT | TOP | B4 |
| R139 | SMT | BOTTOM | F3 | R192 | SMT | TOP | B4 |
| R140 | SMT | TOP | G3 | R193 | SMT | TOP | B3 |
| R141 | SMT | BOTTOM | C3 | R194 | SMT | TOP | C3 |
| R142 | SMT | BOTTOM | C3 | R195 | SMT | TOP | C4 |
| R143 | SMT | BOTTOM | G1 | R196 | SMT | TOP | C4 |
| R144 | SMT | BOTTOM | C3 | R197 | SMT | BOTTOM | G4 |
| R145 | SMT | BOTTOM | B2 | R198 | SMT | BOTTOM | C2 |
| R146 | SMT | BOTTOM | B3 | R199 | SMT | BOTTOM | C2 |
| R147 | SMT | TOP | F1 | C1 | SMT | TOP | F4 |
| R148 | SMT | BOTTOM | B3 | C2 | SMT | TOP | F4 |
| R149 | SMT | BOTTOM | A4 | C3 | SMT | TOP | F4 |
| R150 | SMT | BOTTOM | F1 | C4 | SMT | TOP | F4 |
| R151 | SMT | BOTTOM | A3 | C5 | SMT | TOP | G4 |
| R152 | SMT | BOTTOM | A4 | C6 | SMT | TOP | F4 |
| R153 | SMT | BOTTOM | F1 | C7 | SMT | TOP | F4 |
| R154 | SMT | BOTTOM | F1 | C8 | SMT | TOP | G4 |
| R155 | SMT | BOTTOM | A3 | C9 | SMT | TOP | C3 |
| R156 | SMT | BOTTOM | A4 | C10 | SMT | BOTTOM | A1 |
| R157 | SMT | TOP | F1 | C11 | SMT | BOTTOM | B4 |
| R158 | SMT | BOTTOM | F1 | C12 | SMT | TOP | D2 |
| R159 | SMT | BOTTOM | B2 | C13 | SMT | TOP | D2 |
| R160 | SMT | BOTTOM | F2 | C14 | SMT | TOP | C3 |
| R161 | SMT | BOTTOM | E1 | C15 | SMT | TOP | C3 |
| R162 | SMT | BOTTOM | E1 | C16 | SMT | TOP | C2 |
| R163 | SMT | TOP | G2 | C17 | SMT | BOTTOM | G1 |
| R164 | SMT | TOP | G1 | C18 | SMT | BOTTOM | E3 |
| R165 | SMT | TOP | G2 | C19 | SMT | BOTTOM | E4 |
| R166 | SMT | TOP | G2 | C20 | SMT | BOTTOM | D4 |
| R167 | SMT | TOP | G2 | C21 | SMT | TOP | B4 |
| R168 | SMT | TOP | G2 | C22 | SMT | TOP | C5 |

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PC. Board No. 766-2

TEXT Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 3-11-99
UNIT NO. 5925

| Component | Type | Side | Cord | Component | Type | Side | Cord |
|-----------|------|--------|------|-----------|------|--------|------|
| C23 | SMT | TOP | B5 | C136 | SMT | BOTTOM | F2 |
| C24 | SMT | TOP | C5 | C137 | SMT | TOP | C2 |
| C25 | SMT | TOP | C4 | C138 | SMT | BOTTOM | A3 |
| C26 | SMT | TOP | B4 | C139 | SMT | TOP | F1 |
| C27 | SMT | TOP | B5 | C140 | SMT | BOTTOM | A4 |
| C28 | SMT | BOTTOM | B4 | C141 | SMT | BOTTOM | A4 |
| C29 | SMT | TOP | B4 | C142 | SMT | BOTTOM | F1 |
| C30 | SMT | TOP | B5 | C143 | SMT | BOTTOM | A3 |
| C31 | SMT | BOTTOM | B4 | C144 | SMT | TOP | F1 |
| C32 | SMT | TOP | B5 | C145 | SMT | BOTTOM | A2 |
| C33 | SMT | BOTTOM | G1 | C146 | SMT | BOTTOM | F2 |
| C34 | SMT | BOTTOM | D2 | C147 | SMT | BOTTOM | E1 |
| C35 | SMT | BOTTOM | E2 | C148 | SMT | BOTTOM | E1 |
| C36 | SMT | TOP | C2 | C149 | SMT | BOTTOM | F3 |
| C37 | SMT | TOP | A2 | C150 | SMT | TOP | G1 |
| C38 | SMT | BOTTOM | G2 | C151 | SMT | TOP | F2 |
| C39 | SMT | BOTTOM | F2 | C152 | SMT | TOP | F1 |
| C40 | SMT | BOTTOM | F3 | C153 | SMT | BOTTOM | B2 |
| C41 | SMT | BOTTOM | A4 | C154 | SMT | BOTTOM | B2 |
| C101 | SMT | TOP | A2 | C155 | SMT | TOP | B1 |
| C102 | SMT | TOP | B2 | C156 | SMT | TOP | B1 |
| C103 | SMT | TOP | C3 | C157 | SMT | TOP | C1 |
| C104 | SMT | TOP | A3 | C158 | SMT | TOP | C1 |
| C105 | SMT | TOP | B2 | C159 | SMT | TOP | B3 |
| C106 | SMT | TOP | A3 | C160 | SMT | TOP | C4 |
| C107 | SMT | BOTTOM | E2 | C161 | SMT | TOP | B3 |
| C108 | SMT | BOTTOM | E4 | C162 | SMT | TOP | C4 |
| C109 | SMT | TOP | E2 | C163 | SMT | TOP | C4 |
| C110 | SMT | BOTTOM | F2 | C164 | SMT | TOP | C4 |
| C111 | SMT | TOP | D1 | C165 | SMT | TOP | C5 |
| C112 | SMT | BOTTOM | E1 | C166 | SMT | TOP | C4 |
| C113 | SMT | BOTTOM | E1 | F1 | SMT | TOP | A2 |
| C114 | SMT | TOP | E1 | X1 | SMT | TOP | D2 |
| C115 | SMT | TOP | E2 | T1 | SMT | TOP | A5 |
| C116 | SMT | TOP | E2 | T2 | SMT | TOP | A5 |
| C117 | SMT | TOP | E1 | T3 | SMT | BOTTOM | F1 |
| C118 | SMT | TOP | E1 | T4 | SMT | BOTTOM | F1 |
| C119 | SMT | BOTTOM | G4 | T5 | SMT | TOP | B2 |
| C120 | SMT | BOTTOM | G3 | T6 | SMT | TOP | A2 |
| C121 | SMT | BOTTOM | G4 | T7 | SMT | TOP | A2 |
| C122 | SMT | BOTTOM | G3 | T8 | SMT | TOP | A2 |
| C123 | SMT | TOP | F4 | T9 | SMT | TOP | A1 |
| C125 | SMT | TOP | G4 | T101 | SMT | BOTTOM | A2 |
| C126 | SMT | BOTTOM | F4 | T102 | SMT | TOP | A3 |
| C127 | SMT | TOP | G4 | T103 | SMT | TOP | A3 |
| C128 | SMT | BOTTOM | C3 | T104 | SMT | TOP | B3 |
| C129 | SMT | TOP | A4 | T105 | SMT | TOP | B2 |
| C130 | SMT | BOTTOM | C3 | T106 | SMT | TOP | A3 |
| C131 | SMT | BOTTOM | G1 | T107 | SMT | BOTTOM | B3 |
| C132 | SMT | BOTTOM | G1 | T108 | SMT | BOTTOM | A4 |
| C133 | SMT | BOTTOM | B3 | T109 | SMT | BOTTOM | F1 |
| C134 | SMT | TOP | C2 | T110 | SMT | TOP | A4 |
| C135 | SMT | BOTTOM | G2 | T111 | SMT | TOP | A3 |

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PC. Board No. 766-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

TEXT Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 3-11-99
UNIT NO. 5925

| Component | Type | Side | Cord | Component | Type | Side | Cord |
|-----------|------|--------|------|-----------|------|--------|------|
| T112 | SMT | TOP | A4 | TP16 | SMT | BOTTOM | B5 |
| T113 | SMT | TOP | A4 | TP17 | SMT | BOTTOM | B4 |
| T114 | SMT | TOP | A4 | TP18 | SMT | BOTTOM | B4 |
| T115 | SMT | TOP | B3 | TP19 | SMT | BOTTOM | B5 |
| T116 | SMT | TOP | B4 | TP20 | SMT | BOTTOM | D5 |
| T117 | SMT | TOP | C5 | TP21 | SMT | BOTTOM | D5 |
| D1 | SMT | BOTTOM | A1 | TP22 | SMT | BOTTOM | D5 |
| D2 | SMT | BOTTOM | B1 | TP23 | SMT | BOTTOM | D5 |
| D3 | SMT | TOP | C2 | TP24 | SMT | BOTTOM | E5 |
| D4 | SMT | TOP | C3 | TP25 | SMT | BOTTOM | E5 |
| D5 | SMT | TOP | A1 | TP26 | SMT | BOTTOM | E4 |
| D6 | SMT | TOP | B1 | TP27 | SMT | BOTTOM | E4 |
| D101 | SMT | TOP | G3 | TP28 | SMT | BOTTOM | D5 |
| D102 | SMT | TOP | F1 | TP29 | SMT | BOTTOM | E5 |
| D103 | SMT | BOTTOM | A3 | TP30 | SMT | BOTTOM | D4 |
| D104 | SMT | TOP | C3 | TP31 | SMT | BOTTOM | D5 |
| IC1 | SMT | TOP | D3 | TP32 | SMT | BOTTOM | E4 |
| IC2 | SMT | BOTTOM | D4 | TP33 | SMT | BOTTOM | D4 |
| IC3 | SMT | BOTTOM | E3 | TP34 | SMT | BOTTOM | C4 |
| IC4 | SMT | BOTTOM | E2 | TP35 | SMT | BOTTOM | C5 |
| IC5 | SMT | TOP | C2 | TP36 | SMT | BOTTOM | B5 |
| IC101 | SMT | TOP | E2 | TP37 | SMT | BOTTOM | C5 |
| IC102 | SMT | TOP | F3 | TP38 | SMT | BOTTOM | C4 |
| IC103 | SMT | TOP | C3 | TP39 | SMT | BOTTOM | B4 |
| IC104 | SMT | BOTTOM | D1 | TP40 | SMT | BOTTOM | B5 |
| IC105 | SMT | BOTTOM | F3 | TP41 | SMT | BOTTOM | B4 |
| IC106 | SMT | TOP | F2 | TP42 | SMT | BOTTOM | F1 |
| IC107 | SMT | TOP | B2 | TP43 | SMT | BOTTOM | C2 |
| IC108 | SMT | TOP | C4 | TP44 | SMT | BOTTOM | A5 |
| L1 | SMT | BOTTOM | F4 | TP45 | SMT | BOTTOM | B1 |
| L2 | SMT | BOTTOM | B4 | TP46 | SMT | BOTTOM | A1 |
| L3 | SMT | BOTTOM | G3 | TP47 | SMT | BOTTOM | A2 |
| L101 | SMT | BOTTOM | A4 | TP48 | SMT | BOTTOM | C1 |
| L102 | SMT | BOTTOM | A5 | TP49 | SMT | BOTTOM | C1 |
| L103 | SMT | BOTTOM | G2 | TP50 | SMT | BOTTOM | A2 |
| SW1 | LEAD | TOP | D1 | TP101 | SMT | BOTTOM | B4 |
| SW2 | LEAD | TOP | B1 | TP102 | SMT | BOTTOM | B5 |
| SW3 | LEAD | TOP | A1 | TP103 | SMT | BOTTOM | B3 |
| TP1 | SMT | BOTTOM | F5 | TP104 | SMT | BOTTOM | B2 |
| TP2 | SMT | BOTTOM | F5 | TP105 | SMT | BOTTOM | B1 |
| TP3 | SMT | BOTTOM | F5 | TP107 | SMT | BOTTOM | A4 |
| TP4 | SMT | BOTTOM | F5 | TP108 | SMT | BOTTOM | B2 |
| TP5 | SMT | BOTTOM | G5 | TP109 | SMT | BOTTOM | B4 |
| TP6 | SMT | BOTTOM | F5 | TP110 | SMT | BOTTOM | A4 |
| TP7 | SMT | BOTTOM | F5 | TP111 | SMT | BOTTOM | B3 |
| TP8 | SMT | BOTTOM | G5 | TP112 | SMT | BOTTOM | C3 |
| TP9 | SMT | BOTTOM | E3 | TP113 | SMT | BOTTOM | D2 |
| TP10 | SMT | BOTTOM | D4 | TP115 | SMT | BOTTOM | A4 |
| TP11 | SMT | BOTTOM | D4 | TP1114 | SMT | BOTTOM | B2 |
| TP12 | SMT | BOTTOM | B4 | MP1 | SMT | TOP | F4 |
| TP13 | SMT | BOTTOM | B5 | MP2 | SMT | TOP | C4 |
| TP14 | SMT | BOTTOM | B4 | MP3 | SMT | TOP | C4 |
| TP15 | SMT | BOTTOM | B5 | MP4 | SMT | TOP | C4 |

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PC. Board No. 766-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

TEXT Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 3-11-99
UNIT NO. 5925

| Component | Type | Side | Cord | Component | Type | Side | Cord |
|-----------|------|--------|------|-----------|------|------|------|
| MP5 | SMT | TOP | C3 | | | | |
| MP6 | SMT | TOP | E5 | | | | |
| MP101 | SMT | TOP | C3 | | | | |
| MP102 | SMT | TOP | C5 | | | | |
| JU1 | SMT | TOP | A1 | | | | |
| J1 | LEAD | TOP | F5 | | | | |
| J2 | LEAD | BOTTOM | D5 | | | | |
| J3 | SMT | TOP | B4 | | | | |
| J4 | SMT | BOTTOM | H2 | | | | |
| JA1 | LEAD | TOP | H1 | | | | |
| JB1 | LEAD | TOP | A3 | | | | |
| W1 | LEAD | TOP | A1 | | | | |
| Q1 | SMT | TOP | D2 | | | | |
| W2 | SMT | TOP | A5 | | | | |
| W3 | SMT | TOP | G5 | | | | |
| W4 | SMT | TOP | G1 | | | | |
| W5 | SMT | BOTTOM | A1 | | | | |
| W6 | SMT | BOTTOM | A5 | | | | |
| W7 | SMT | BOTTOM | G5 | | | | |
| W8 | SMT | BOTTOM | G1 | | | | |
| V1 | SMT | TOP | C1 | | | | |
| V2 | SMT | BOTTOM | C1 | | | | |

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PC. Board No. 766-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

7.5 Partlist

| PARTLIST FOR Systemboard TRX1012 DRAWING NO. 0-9708-03-1 | | | DATE 2-11-99 UNIT NO. 5925 |
|---|--------------------|----------|-------------------------------|
| Component | Description | Value | Niros No. |
| | With Tonesystem | \$ | 5925 |
| | Without Tonesystem | & | 5926 |
| R1 | Resistor, chip1206 | 390 Ohm | 12391 |
| R2 | Resistor, chip603 | 1 Kohm | 14102 |
| R3 | Resistor, chip603 | 1 Kohm | 14102 |
| R4 | Resistor, chip603 | Not used | |
| R5 | Resistor, chip603 | 1 Kohm | 14102 |
| R6 | Resistor, chip603 | 1 Kohm | 14102 |
| R7 | Resistor, chip603 | 1 Kohm | 14102 |
| R8 | Resistor, chip603 | 10 Kohm | 14103 |
| R9 | Resistor, chip603 | 10 Kohm | 14103 |
| R10 | Resistor, chip603 | 100 Kohm | 14104 |
| R11 | Resistor, chip603 | 1 Mohm | 14105 |
| R12 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R13 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R14 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R15 | Resistor, chip603 | 2,2 Kohm | 14222 |
| R16 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R17 | Resistor, chip603 | 100 Kohm | 14104 |
| R18 | Resistor, chip603 | 100 Kohm | 14104 |
| R19 | Resistor, chip603 | 100 Kohm | 14104 |
| R20 | Resistor, chip603 | 10 Kohm | 14103 |
| R21 | Resistor, chip603 | 10 Kohm | 14103 |
| R22 | Resistor, chip1206 | 220 Ohm | 12221 |
| R23 | Resistor, chip1206 | 220 Ohm | 12221 |
| R24 | Resistor, chip603 | Not used | |
| R25 | Resistor, chip603 | 1 Kohm | 14102 |
| R26 | Resistor, chip603 | 1 Kohm | 14102 |
| R27 | Resistor, chip603 | 1 Kohm | 14102 |
| R28 | Resistor, chip603 | 1 Kohm | 14102 |
| R29 | Resistor, chip603 | 1 Kohm | 14102 |
| R30 | Resistor, chip603 | Not used | |
| R31 | Resistor, chip603 | 1 Kohm | 14102 |
| R32 | Resistor, chip603 | 1 Kohm | 14102 |
| R33 | Resistor, chip603 | Not used | |
| R34 | Resistor, chip603 | 1 Kohm | 14102 |
| R35 | Resistor, chip1206 | 47 Ohm | 12470 |
| R36 | Resistor, chip603 | 1 Mohm | 14105 |
| R37 | Resistor, chip603 | 1 Mohm | 14105 |
| R38 | Resistor, chip603 | 1 Mohm | 14105 |
| R39 | Resistor, chip603 | 1 Mohm | 14105 |
| R40 | Resistor, chip603 | 1 Mohm | 14105 |
| R41 | Resistor, chip603 | 5,6 Kohm | 14562 |

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PC. Board No. 766-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | Value | Niros No. |
|-----------|---------------------|----------|-----------|
| R42 | Resistor,chip603 | 22 Kohm | 14223 |
| R43 | Resistor,chip805_1% | 1 Mohm | 10908 |
| R44 | Resistor,chip805_1% | 1 Mohm | 10908 |
| R45 | Resistor,chip805_1% | 1 Mohm | 10908 |
| R46 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R47 | Resistor,chip603 | 47 Kohm | 14473 |
| R48 | Resistor,chip603 | 1 Kohm | 14102 |
| R49 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R50 | Resistor,chip805 | 2,7 Mohm | 13275 |
| R51 | Resistor,chip603 | 100 Kohm | 14104 |
| R52 | Resistor,chip603 | 100 Kohm | 14104 |
| R53 | Resistor,chip603 | 100 Kohm | 14104 |
| R54 | Resistor,chip603 | 100 Kohm | 14104 |
| R55 | Resistor,chip603 | 100 Kohm | 14104 |
| R56 | Resistor,chip603 | 100 Kohm | 14104 |
| R57 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R58 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R59 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R60 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R61 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R62 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R63 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R64 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R65 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R66 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R67 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R68 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R69 | Resistor,chip1206 | 390 Ohm | 12391 |
| R70 | Resistor,chip603 | 1 Kohm | 14102 |
| R71 | Resistor,chip603 | 1 Kohm | 14102 |
| R72 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R73 | Resistor,chip603 | 100 Kohm | 14104 |
| R74 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R75 | Resistor,chip603 | 100 Kohm | 14104 |
| R76 | Resistor,chip603 | Not used | |
| R77 | Resistor,chip805 | 5,6 Kohm | 13562 |
| R78 | Resistor,chip805 | 10 Kohm | 13103 |
| R79 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R80 | Resistor,chip805 | 5,6 Kohm | 13562 |
| R81 | Resistor,chip603 | Not used | |
| R82 | Resistor,chip805 | 5,6 Kohm | 13562 |
| R83 | Resistor,chip805 | 10 Kohm | 13103 |
| R84 | Resistor,chip603 | 0 Ohm | 14000 |
| R85 | Resistor,sfr16 | Not used | |
| R86 | Resistor,chip603 | 2,2 Kohm | 14222 |

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| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | Value | Niros No. |
|-----------|--------------------|----------|-----------|
| R87 | Resistor, chip603 | 100 Kohm | 14104 |
| R88 | Resistor, chip603 | 100 Kohm | 14104 |
| R90 | Resistor, chip603 | 1 Mohm | 14105 |
| R91 | Resistor, chip603 | 2,2 Kohm | 14222 |
| R92 | Resistor, chip1206 | 0 Ohm | 12000 |
| R101 | Resistor, chip603 | 100 Kohm | 14104 |
| R102 | Resistor, chip603 | 100 Kohm | 14104 |
| R103 | Resistor, chip603 | 100 Kohm | 14104 |
| R104 | Resistor, chip603 | 1 Mohm | 14105 |
| R105 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R106 | Resistor, chip603 | Not used | |
| R107 | Resistor, chip603 | Not used | |
| R108 | Resistor, chip603 | Not used | |
| R109 | Resistor, chip603 | Not used | |
| R110 | Resistor, chip1206 | Not used | |
| R111 | Resistor, chip603 | Not used | |
| R112 | Resistor, chip603 | 0 Ohm | 14000 |
| R113 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R114 | Resistor, chip603 | 100 Kohm | 14104 |
| R115 | Resistor, chip603 | 100 Kohm | 14104 |
| R116 | Resistor, chip603 | 1 Mohm | 14105 |
| R117 | Resistor, chip603 | 100 Kohm | 14104 |
| R118 | Resistor, chip603 | 1 Mohm | 14105 |
| R119 | Resistor, chip603 | 1 Mohm | 14105 |
| R120 | Resistor, chip603 | 10 Kohm | 14103 |
| R121 | Resistor, chip603 | 6,8 Kohm | 14682 |
| R122 | Resistor, chip805 | 27 Ohm | 13270 |
| R123 | Resistor, chip603 | Not used | |
| R124 | Resistor, chip603 | 100 Kohm | 14104 |
| R125 | Resistor, chip603 | Not used | |
| R126 | Resistor, chip603 | 100 Kohm | 14104 |
| R127 | Resistor, chip603 | \$ | Not used |
| R128 | Resistor, chip603 | & | 100 Kohm |
| R129 | Resistor, chip603 | \$ | Not used |
| R130 | Resistor, chip603 | & | 120 Kohm |
| R131 | Resistor, chip603 | | 330 Kohm |
| R132 | Resistor, chip603 | \$ | Not used |
| R133 | Resistor, chip603 | & | 56 Kohm |
| R134 | Resistor, chip603 | \$ | Not used |
| R135 | Resistor, chip805 | & | |
| R136 | Resistor, chip805 | \$ | Not used |

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PC. Board No. 766-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | | Value | Niros No. |
|-----------|------------------|----|----------|-----------|
| R135 | Resistor,chip603 | \$ | 150 Kohm | 14154 |
| | Resistor,chip603 | & | Not used | |
| R136 | Resistor,chip603 | \$ | 330 Kohm | 14334 |
| | Resistor,chip603 | & | Not used | |
| R137 | Resistor,chip603 | \$ | 100 Kohm | 14104 |
| | Resistor,chip603 | & | Not used | |
| R138 | Resistor,chip603 | \$ | 150 Kohm | 14154 |
| | Resistor,chip603 | & | Not used | |
| R139 | Resistor,chip603 | \$ | 10 Kohm | 14103 |
| | Resistor,chip603 | & | Not used | |
| R140 | Resistor,chip603 | \$ | 10 Ohm | 14100 |
| | Resistor,chip603 | & | Not used | |
| R141 | Resistor,chip603 | | Not used | |
| R142 | Resistor,chip603 | | 10 Kohm | 14103 |
| R143 | Resistor,chip603 | | 330 Ohm | 14331 |
| R144 | Resistor,chip603 | | 220 Kohm | 14224 |
| R145 | Resistor,chip603 | | 22 Kohm | 14223 |
| R146 | Resistor,chip603 | | 2,2 Kohm | 14222 |
| R147 | Resistor,chip603 | | 4,7 Kohm | 14472 |
| R148 | Resistor,chip603 | | 2,2 Kohm | 14222 |
| R149 | Resistor,chip603 | | 220 Ohm | 14221 |
| R150 | Resistor,chip603 | | 2,2 Kohm | 14222 |
| R151 | Resistor,chip603 | | 1 Mohm | 14105 |
| R152 | Resistor,chip603 | | 1 Mohm | 14105 |
| R153 | Resistor,chip603 | | 1 Mohm | 14105 |
| R154 | Resistor,chip603 | | 1 Mohm | 14105 |
| R155 | Resistor,chip603 | | 22 Kohm | 14223 |
| R156 | Resistor,chip603 | | 1,8 Kohm | 14182 |
| R157 | Resistor,chip603 | | 22 Kohm | 14223 |
| R158 | Resistor,chip603 | | 1,5 Kohm | 14152 |
| R159 | Resistor,chip603 | | 10 Kohm | 14103 |
| R160 | Resistor,chip603 | | 10 Kohm | 14103 |
| R161 | Resistor,chip603 | | 8,2 Kohm | 14822 |
| R162 | Resistor,chip603 | | 27 Kohm | 14273 |
| R163 | Resistor,chip603 | | Not used | |
| R164 | Resistor,chip805 | \$ | 10 Mohm | 13106 |
| | Resistor,chip805 | & | Not used | |
| R165 | Resistor,chip805 | \$ | 10 Mohm | 13106 |
| | Resistor,chip805 | & | Not used | |
| R166 | Resistor,chip603 | \$ | 2,2 Mohm | 14225 |
| | Resistor,chip603 | & | Not used | |
| R167 | Resistor,chip603 | \$ | Not used | |
| | Resistor,chip603 | & | 1 Kohm | 14102 |
| R168 | Resistor,chip603 | \$ | 10 Kohm | 14103 |
| | Resistor,chip603 | & | Not used | |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | Value | Niros No. |
|-----------|--------------------|-------------|-----------|
| R169 | Resistor, chip603 | \$ 100 Kohm | 14104 |
| | Resistor, chip603 | & Not used | |
| R170 | Resistor, chip603 | \$ 10 Kohm | 14103 |
| | Resistor, chip603 | & Not used | |
| R171 | Resistor, chip603 | \$ 82 Kohm | 14823 |
| | Resistor, chip603 | & Not used | |
| R172 | Resistor, chip603 | \$ 56 Kohm | 14563 |
| | Resistor, chip603 | & Not used | |
| R173 | Resistor, chip603 | \$ 150 Kohm | 14154 |
| | Resistor, chip603 | & Not used | |
| R174 | Resistor, chip603 | 27 Kohm | 14273 |
| R175 | Resistor, chip603 | 4,7 Kohm | 14472 |
| R176 | Resistor, chip603 | Not used | |
| R177 | Resistor, chip603 | 10 Ohm | 14100 |
| R178 | Resistor, chip603 | 10 Ohm | 14100 |
| R179 | Resistor, chip1206 | 5,6 Ohm | 12569 |
| R180 | Resistor, chip603 | 100 Kohm | 14104 |
| R181 | Resistor, chip603 | 100 Kohm | 14104 |
| R182 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R183 | Resistor, chip603 | 100 Kohm | 14104 |
| R184 | Resistor, chip603 | Not used | |
| R185 | Resistor, chip603 | Not used | |
| R186 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R187 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R188 | Resistor, chip603 | 22 Ohm | 14220 |
| R189 | Resistor, chip603 | 0 Ohm | 14000 |
| R190 | Resistor, chip603 | Not used | |
| R191 | Resistor, chip603 | Not used | |
| R192 | Resistor, chip603 | Not used | |
| R193 | Resistor, chip603 | 0 Ohm | 14000 |
| R194 | Resistor, chip603 | 100 Kohm | 14104 |
| R195 | Resistor, chip603 | 330 Kohm | 14334 |
| R196 | Resistor, chip603 | 22 Kohm | 14223 |
| R197 | Resistor, chip603 | Not used | |
| R198 | Resistor, chip603 | 2,2 Kohm | 14222 |
| R199 | Resistor, chip603 | 2,2 Kohm | 14222 |
| C1 | Capacitor, chip603 | 10 nF | 21103 |
| C2 | Capacitor, chip603 | 10 nF | 21103 |
| C3 | Capacitor, chip603 | 100 pF | 21101 |
| C4 | Capacitor, chip603 | 100 pF | 21101 |
| C5 | Capacitor, chip603 | 100 pF | 21101 |
| C6 | Capacitor, chip603 | 100 pF | 21101 |
| C7 | Capacitor, chip603 | 100 pF | 21101 |
| C8 | Capacitor, chip603 | 100 pF | 21101 |

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| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | Value | Niros No. |
|-----------|-------------------|-------------|-----------|
| C9 | Capacitor,chip603 | 47 nF | 21473 |
| C10 | Capacitor,chip603 | 1 nF | 21102 |
| C11 | Capacitor,chip603 | 10 nF | 21103 |
| C12 | Capacitor,chip603 | 1 nF | 21102 |
| C13 | Capacitor,chip603 | Not used | |
| C14 | Capacitor,chip603 | 1 nF | 21102 |
| C15 | Capacitor,chip603 | 1 nF | 21102 |
| C16 | Capacitor,chip603 | Not used | |
| C17 | Capacitor,chip603 | 10 nF | 21103 |
| C18 | Capacitor,chip805 | 100 nF | 20654 |
| C19 | Capacitor,chip603 | 47 nF | 21473 |
| C20 | Capacitor,chip603 | 10 nF | 21103 |
| C21 | Capacitor,chip603 | 1 nF | 21102 |
| C22 | Capacitor,chip603 | 1 nF | 21102 |
| C23 | Capacitor,chip603 | 1 nF | 21102 |
| C24 | Capacitor,chip603 | 1 nF | 21102 |
| C25 | Capacitor,chip603 | 1 nF | 21102 |
| C26 | Capacitor,chip603 | 1 nF | 21102 |
| C27 | Capacitor,chip603 | 1 nF | 21102 |
| C28 | Capacitor,chip603 | 1 nF | 21102 |
| C29 | Capacitor,chip603 | 1 nF | 21102 |
| C30 | Capacitor,chip603 | 1 nF | 21102 |
| C31 | Capacitor,chip603 | 1 nF | 21102 |
| C32 | Capacitor,chip603 | 1 nF | 21102 |
| C33 | Capacitor,chip603 | 1 nF | 21102 |
| C34 | Capacitor,chip603 | 10 nF | 21103 |
| C35 | Capacitor,chip603 | 10 nF | 21103 |
| C36 | Capacitor,chip603 | 47 nF | 21473 |
| C37 | Capacitor,chip603 | 10 nF | 21103 |
| C38 | Capacitor,chip603 | 10 nF | 21103 |
| C39 | Capacitor,chip603 | 10 nF | 21103 |
| C40 | Capacitor,chip805 | 100 nF | 20654 |
| C41 | Capacitor,chip603 | 33 pF | 21330 |
| C101 | Capacitor,chip603 | Not used | |
| C102 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C103 | Capacitor,chip805 | 100 nF | 20654 |
| C104 | Capacitor,chip603 | Not used | |
| C105 | Capacitor,chip805 | 100 nF | 20654 |
| C106 | Capacitor,chip603 | Not used | |
| C107 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C108 | Capacitor,chip603 | 10 nF | 21103 |
| C109 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C110 | Capacitor,chip603 | 4,7 nF | 21472 |
| C111 | Capacitor,ctan_a | 6,8 uF/10V | 25619 |
| C112 | Capacitor,chip603 | 22 pF | 21220 |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | Value | Niros No. |
|-----------|----------------------|----------------|-----------|
| C113 | Capacitor,chip603 | Not used | |
| C114 | Capacitor,chip603 | Not used | |
| C115 | Capacitor,chip603 | 10 nF | 21103 |
| C116 | Capacitor,chip603 | 1 nF | 21102 |
| C117 | Capacitor,chip603 | \$ Not used | |
| | Capacitor,chip603 | & 1 nF | 21102 |
| C118 | Capacitor,chip603 | \$ Not used | |
| | Capacitor,chip603 | & 1 nF | 21102 |
| C119 | Capacitor,chip603 | \$ 2,2 nF | 21222 |
| C120 | Capacitor,chip603 | & Not used | |
| | Capacitor,chip603 | \$ 1 nF | 21102 |
| | Capacitor,chip603 | & Not used | |
| C121 | Capacitor,chip805 | \$ 100 nF | 20654 |
| | Capacitor,chip805 | & Not used | |
| C122 | Capacitor,chip805 | \$ 100 nF | 20654 |
| | Capacitor,chip805 | & Not used | |
| C123 | Capacitor,ctan_a | \$ 6,8 uF/10V | 25619 |
| | Capacitor,chip_a | & Not used | |
| C125 | Capacitor,ctan_a | \$ 2,2 uF/16V | 25613 |
| | Capacitor,chip_a | & Not used | |
| C126 | Capacitor,ctan_a | \$ 0,68 uF/16V | 25611 |
| | Capacitor,chip_a | & Not used | |
| C127 | Capacitor,ctan_b | \$ 15 uF/6V3 | 25606 |
| | Capacitor,chip_b | & Not used | |
| C128 | Capacitor,chip603 | 22 nF | 21223 |
| C129 | Capacitor,chip603 | 4,7 nF | 21472 |
| C130 | Capacitor,chip603 | Not used | |
| C131 | Capacitor,chip603 | 1 nF | 21102 |
| C132 | Capacitor,chip603 | 1 nF | 21102 |
| C133 | Capacitor,chip603 | 100 pF | 21101 |
| C134 | Capacitor,chip805 | 100 nF | 20654 |
| C135 | Capacitor,chip603 | 1 nF | 21102 |
| C136 | Capacitor,chip603 | 1 nF | 21102 |
| C137 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C138 | Capacitor,ctan_b | 15 uF/6V3 | 25606 |
| C139 | Capacitor,ctan_b | 15 uF/6V3 | 25606 |
| C140 | Capacitor,chip603 | 1 nF | 21102 |
| C141 | Capacitor,chip603 | 10 nF | 21103 |
| C142 | Capacitor,chip603 | 10 nF | 21103 |
| C143 | Capacitor,chip603_ln | 1,5 nF | 20802 |
| C144 | Capacitor,chip603_ln | 1,5 nF | 20802 |
| C145 | Capacitor,chip805 | 100 nF | 20654 |
| C146 | Capacitor,chip805 | 100 nF | 20654 |
| C147 | Capacitor,chip805 | 100 nF | 20654 |
| C148 | Capacitor,chip603 | 1 nF | 21102 |

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PC. Board No. 766-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | Value | Niros No. |
|-----------|-------------------|---------------|-----------|
| C149 | Capacitor,chip603 | 10 nF | 21103 |
| C150 | Capacitor,ctan_a | \$ 2,2 uF/16V | 25613 |
| | Capacitor,chip_a | & Not used | |
| C151 | Capacitor,chip603 | \$ 10 nF | 21103 |
| | Capacitor,chip603 | & Not used | |
| C152 | Capacitor,chip603 | \$ 150 pF | 21151 |
| | Capacitor,chip603 | & Not used | |
| C153 | Capacitor,chip805 | 100 nF | 20654 |
| C154 | Capacitor,chip603 | Not used | |
| C155 | Capacitor,chip603 | 4,7 nF | 21472 |
| C156 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C157 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C158 | Capacitor,chip805 | 100 nF | 20654 |
| C159 | Capacitor,chip805 | Not used | |
| C160 | Capacitor,chip805 | 100 nF | 20654 |
| C161 | Capacitor,chip603 | 10 nF | 21103 |
| C162 | Capacitor,chip603 | 10 nF | 21103 |
| C163 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C164 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C165 | Capacitor,chip805 | 100 nF | 20654 |
| C166 | Capacitor,chip603 | 47 nF | 21473 |
| F1 | Filter | 4N7 | 75906 |
| X1 | Crystal | 8 MHz | 31198 |
| T1 | Transistor | BCW60D | 40156 |
| T2 | Transistor | BCW60D | 40156 |
| T3 | Transistor | BCW60D | 40156 |
| T4 | Transistor | BCW60D | 40156 |
| T5 | Transistor | BCW60D | 40156 |
| T6 | Transistor | Not used | |
| T7 | Transistor | Not used | |
| T8 | Transistor | FMMT718 | 40200 |
| T9 | Transistor | FMMT718 | 40200 |
| T101 | Transistor | BCW60D | 40156 |
| T102 | Transistor | Not used | |
| T103 | Transistor | Not used | |
| T104 | Transistor | SI4953DY | 40202 |
| T105 | Transistor | Not used | |
| T106 | Transistor | Not used | |
| T107 | Transistor | BCW60D | 40156 |
| T108 | Transistor | BCW60D | 40156 |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | Value | Niros No. |
|-----------|--------------------|-----------------|-----------|
| T109 | Transistor | BCW60D | 40156 |
| T110 | Transistor | BCW60D | 40156 |
| T111 | Transistor | Not used | |
| T112 | Transistor | BCW61D | 40157 |
| T113 | Transistor | Not used | |
| T114 | Transistor | FMMT718 | 40200 |
| T115 | Transistor | Not used | |
| T116 | Transistor | Not used | |
| T117 | Transistor | BC807 | 40186 |
| D1 | Diode | BAS28 | 45174 |
| D2 | Diode | BAS28 | 45174 |
| D3 | Diode, kap | BB134 | 45196 |
| D4 | Diode, kap | BB134 | 45196 |
| D5 | Diode | Not used | |
| D6 | Diode | BYS10-45 | 45186 |
| D101 | Diode | BAV99 | 45148 |
| | Diode | & | Not used |
| D102 | Diode, zener | BZX84C5V6 | 41241 |
| D103 | Diode, zener | Not used | |
| D104 | Diode, zener | Not used | |
| IC1 | Integrated_circuit | COP87L88RGV-XE | 46560 |
| IC2 | Integrated_circuit | TLC27L2ID | 46222 |
| IC3 | Integrated_circuit | 24E32 | 46518 |
| IC4 | Integrated_circuit | 24E32 | 46518 |
| IC5 | Integrated_circuit | TC7W74FU | 46502 |
| IC101 | Integrated_circuit | FX806ALS | 46516 |
| IC102 | Integrated_circuit | FX805LS | 46265 |
| | Integrated_circuit | & | Not used |
| IC103 | Integrated_circuit | MC34119P | 46267 |
| IC104 | Integrated_circuit | TC4S66F | 46250 |
| IC105 | Integrated_circuit | 4094BT | 46177 |
| IC106 | Integrated_circuit | FX803LS | 46263 |
| | Integrated_circuit | & | Not used |
| IC107 | Integrated_circuit | TDA7233 | 46268 |
| IC108 | Integrated_circuit | S-87050EF-VR-T1 | 46507 |
| L1 | Coil, chip | 75939 | 75939 |
| L2 | Coil, chip | Not used | |
| L3 | Coil, chip | 75939 | 75939 |
| L101 | Coil, chip | 75939 | 75939 |
| L102 | Coil, chip | 75939 | 75939 |
| L103 | Coil, chip | 75939 | 75939 |

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PC. Board No. 766-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

PARTLIST FOR Systemboard TRX1012
DRAWING NO. 0-9708-03-1

DATE 2-11-99
UNIT NO. 5925

| Component | Description | Value | Niros No. |
|-----------|----------------------|------------|-----------|
| SW1 | Switch | KSAV | 81204 |
| SW2 | Switch | KSAV | 81204 |
| SW3 | Switch | KSAV | 81204 |
| J1 | Connector_9pol | | 83313 |
| J2 | Connector_12pol | | 83316 |
| J3 | Flex_connector_20pol | | 83318 |
| Q1 | Sensor | Not used | |
| V1 | Resistor,chip1206 | \$ 10 Kohm | 12103 |
| | Resistor,chip1206 | & 22 Kohm | 12223 |
| V2 | Resistor,chip1206 | \$ 10 Kohm | 12103 |
| | Resistor,chip1206 | & 22 Kohm | 12223 |
| | Ic_socket_44pin | 1 pcs | 83352 |
| | Pc._board_no. 766-2 | 1 pcs | 95766 |

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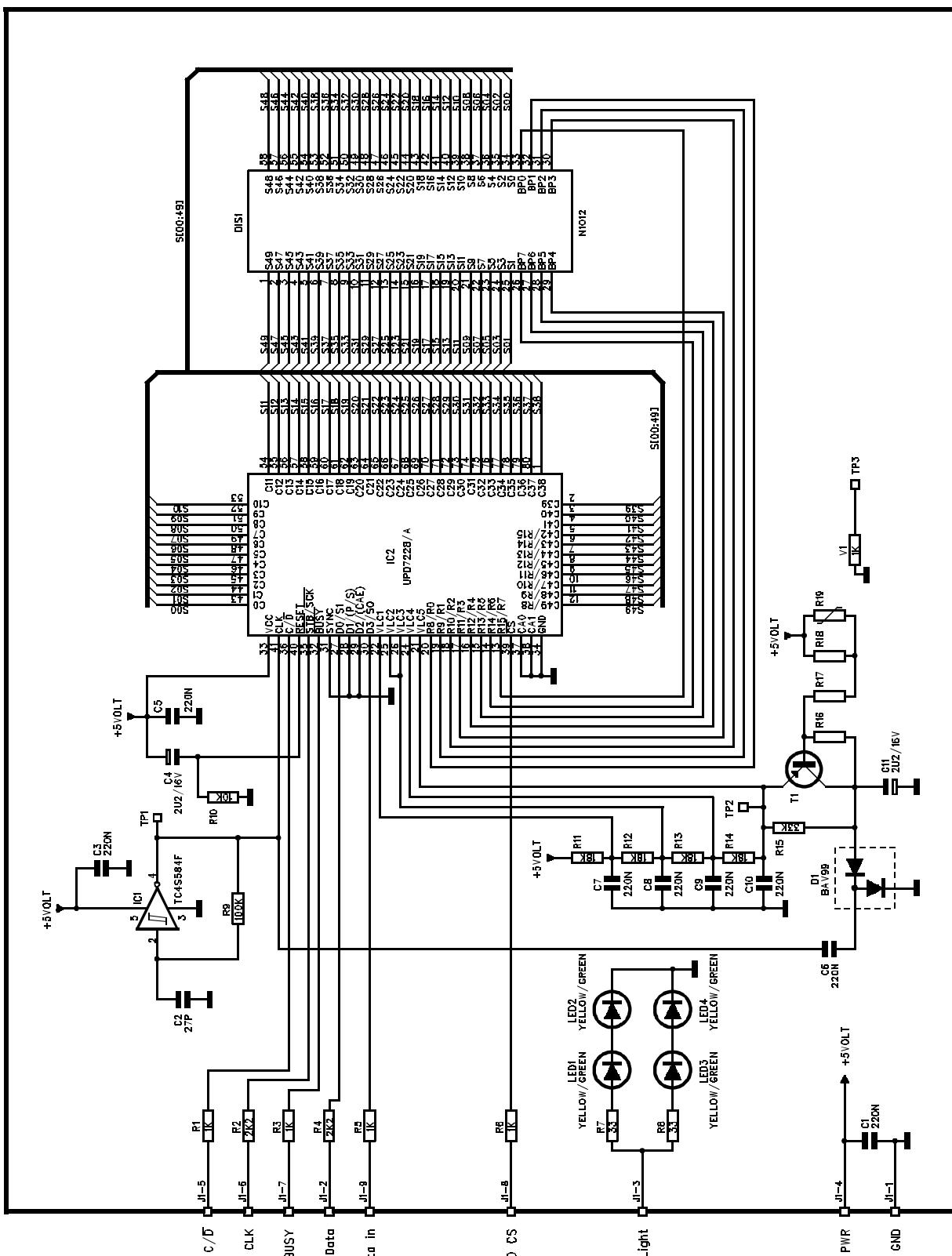
PC. Board No. 766-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 04-11-99 | 1 | PA |

8. Display unit TRX1012

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-07-98 | 0 | PA |

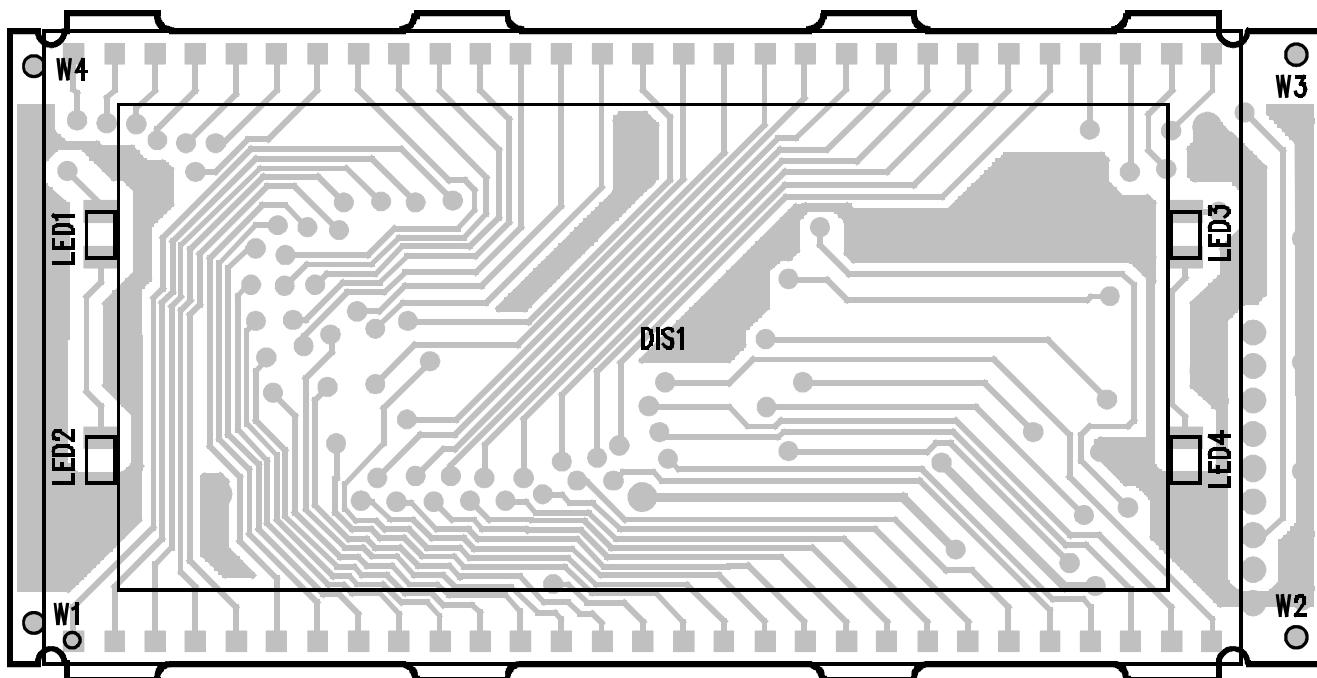
8.1 Diagram



| SUBJECT TO CHANGE WITHOUT NOTICE | | TRX1012C/0 | UNIT NO: 5910 |
|----------------------------------|-------------|------------|---------------|
| | | TRX1012B | UNIT NO: 5912 |
| DATE: | SIGNE | PH | 1 |
| DATE: | SIGNE | | |
| DRAWING NO: | 0-9703-03-1 | PCB NO: | 788-1 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-07-98 | 0 | PA |

8.2 Componentside

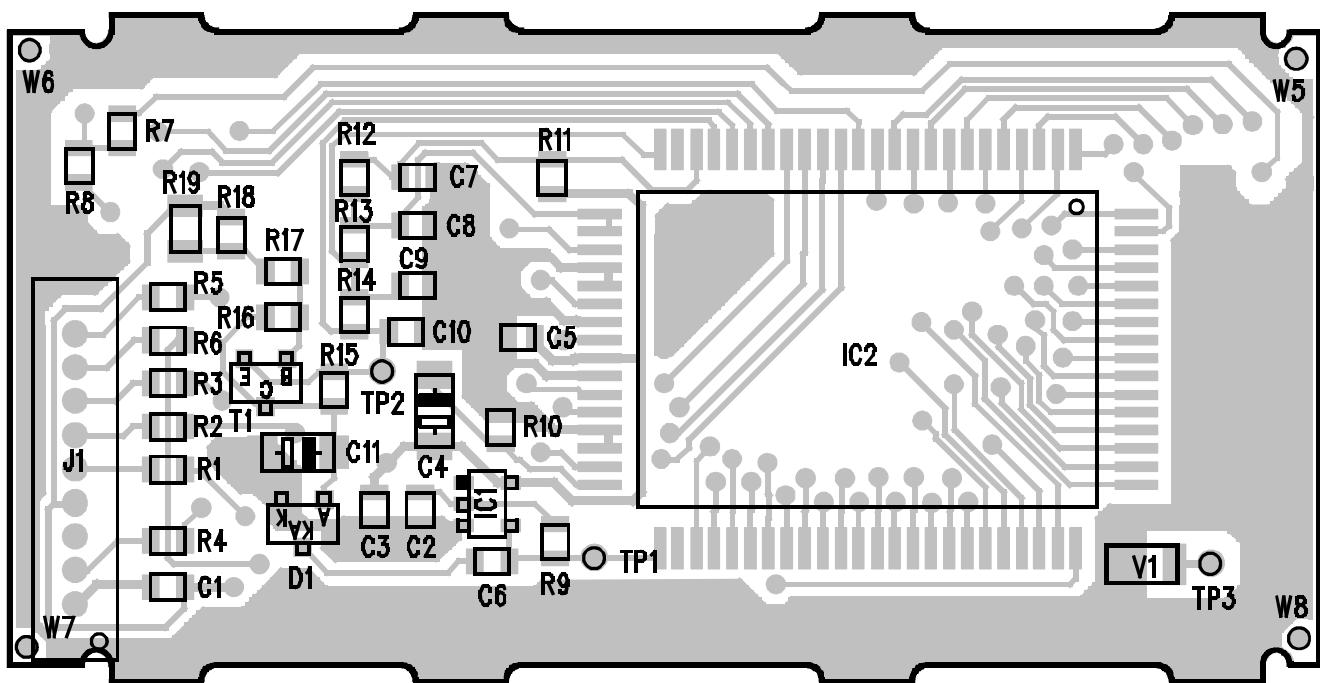


Componentside 768-1

| SUBJECT TO CHANGE WITHOUT NOTICE | | TRX1012C/D | UNIT NO: 5910 |
|----------------------------------|----------|---------------|---|
| | | TRX1012B | UNIT NO: 5912 |
| DATE: | SIGN: PH | I | NIROS TELECOMMUNICATION A/S HØSEMARKEN 5, 3520 FARUM |
| DATE: | SIGN: | | |
| DRAWING NO: 0-9703-05-1 | | PCB NO: 768-1 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-07-98 | 0 | PA |

8.3 Wiringside



Wiringside 768-1

| SUBJECT TO CHANGE WITHOUT NOTICE | | | TRX1012C/D UNIT NO: 5910 | TRX1012B UNIT NO: 5912 |
|----------------------------------|----------|---|-----------------------------|------------------------|
| DATE: | SIGN: PH | 1 | NIROS TELECOMMUNICATION A/S | |
| DATE: | SIGN: | | HØJSEMARKEN 5, 3320 FARUM | |
| DATE: | SIGN: | | | |
| DATE: | SIGN: | | Display board TRX1012 | |
| DATE: | SIGN: | | | |
| DRAWING NO: 0-9703-04-1 | | | PCB NO: 768-1 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-07-98 | 0 | PA |

8.4 Partlist unit No.5912

| PARTLIST FOR Display unit TRX1012B DRAWING NO. 0-9703-03-1 | | DATE 27-11-96 UNIT NO. 5912 | |
|---|---|--------------------------------|---------------------|
| Component | Description | Value | Niros No. |
| | Display unit TRX1012 Shield f Display TRX1012B | | 5910 5911 |
| p. 1 of 1 | | | PC. Board No. 768-1 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-07-98 | 0 | PA |

8.5 Partlist unit No. 5910

| PARTLIST FOR Display unit TRX1012 DRAWING NO. 0-9703-03-1 | | | DATE 27-11-96 | UNIT NO. 5910 |
|--|-----------------------|--------------|---------------|---------------|
| Component | Description | Value | Niros No. | |
| R1 | Resistor, chip603 | 1 Kohm | 14102 | |
| R2 | Resistor, chip603 | 2,2 Kohm | 14222 | |
| R3 | Resistor, chip603 | 1 Kohm | 14102 | |
| R4 | Resistor, chip603 | 2,2 Kohm | 14222 | |
| R5 | Resistor, chip603 | 1 Kohm | 14102 | |
| R6 | Resistor, chip603 | 1 Kohm | 14102 | |
| R7 | Resistor, chip603 | 33 Ohm | 14330 | |
| R8 | Resistor, chip603 | 33 Ohm | 14330 | |
| R9 | Resistor, chip603 | 100 Kohm | 14104 | |
| R10 | Resistor, chip603 | 10 Kohm | 14103 | |
| R11 | Resistor, chip603 | 18 Kohm | 14183 | |
| R12 | Resistor, chip603 | 18 Kohm | 14183 | |
| R13 | Resistor, chip603 | 18 Kohm | 14183 | |
| R14 | Resistor, chip603 | 18 Kohm | 14183 | |
| R15 | Resistor, chip603 | 33 Kohm | 14333 | |
| R16 | Resistor, chip603 | Not used | | |
| R17 | Resistor, chip603 | Not used | | |
| R18 | Resistor, chip603 | Not used | | |
| R19 | Resistor, ntc | Not used | | |
| C1 | Capacitor, chip603 | 220 nF | 21224 | |
| C2 | Capacitor, chip603 | 27 pF | 21270 | |
| C3 | Capacitor, chip603 | 220 nF | 21224 | |
| C4 | Capacitor, chiptantal | 2,2 uF/16V | 25613 | |
| C5 | Capacitor, chip603 | 220 nF | 21224 | |
| C6 | Capacitor, chip603 | 220 nF | 21224 | |
| C7 | Capacitor, chip603 | 220 nF | 21224 | |
| C8 | Capacitor, chip603 | 220 nF | 21224 | |
| C9 | Capacitor, chip603 | 220 nF | 21224 | |
| C10 | Capacitor, chip603 | 220 nF | 21224 | |
| C11 | Capacitor, chiptantal | 2,2 uF/16V | 25613 | |
| T1 | Transistor | Not used | | |
| D1 | Diode | BAV99 | 45148 | |
| LED1 | Light diode | YELLOW/GREEN | 45187 | |
| LED2 | Light diode | YELLOW/GREEN | 45187 | |
| LED3 | Light diode | YELLOW/GREEN | 45187 | |
| LED4 | Light diode | YELLOW/GREEN | 45187 | |
| IC1 | Integrated circuit | TC4S584F | 46207 | |
| IC2 | Integrated circuit | UPD7228/A | 46266 | |

p. 1 of 2

PC. Board No. 768-1

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-07-98 | 0 | PA |

| PARTLIST FOR Display unit TRX1012 DRAWING NO. 0-9703-03-1 | | DATE 27-11-96 UNIT NO. 5910 | |
|--|-----------------------|--------------------------------|-----------|
| Component | Description | Value | Niros No. |
| DIS1 | Display | N1012 | 46333 |
| J1 | Connector 9 pol | | 83314 |
| V1 | Resistor, chip1206 | 1 Kohm | 12102 |
| | Rubber connector | 2 pcs | 46327 |
| | Pc. board no. 768-1 | 1 pcs | 95768 |
| | Frame for display | 1 pcs | 97519 |
| | Label for light guide | 1 pcs | 97562 |
| | Light guide | 1 pcs | 97848 |
| p. 2 of 2 | | PC. Board No. 768-1 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-07-98 | 0 | PA |

8.6 Partlist unit No. 5911

| PARTLIST FOR Shield for Display unit TRX1012B DRAWING NO. 0-9703-03-1 | | DATE 27-11-96 UNIT NO. 5911 | |
|--|-------------|--------------------------------|-----------|
| Component | Description | Value | Niros No. |
| | Shield | | 98043 |
| | Shield | | 98044 |
| | Shield | | 98045 |

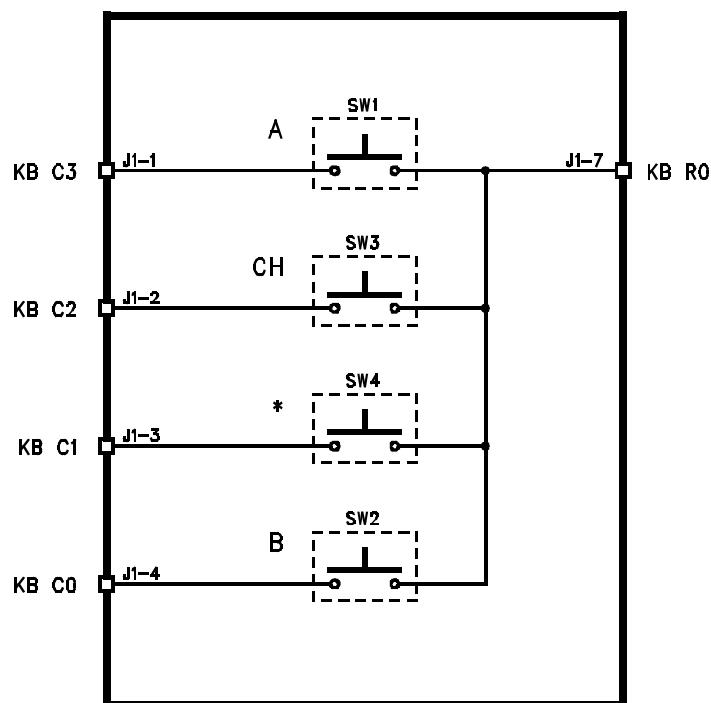
p. 1 of 1 PC. Board No. 768-1

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-07-98 | 0 | PA |

9. Keyboards TRX1012

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 09-07-98 | 0 | PA |

9.1 Diagram

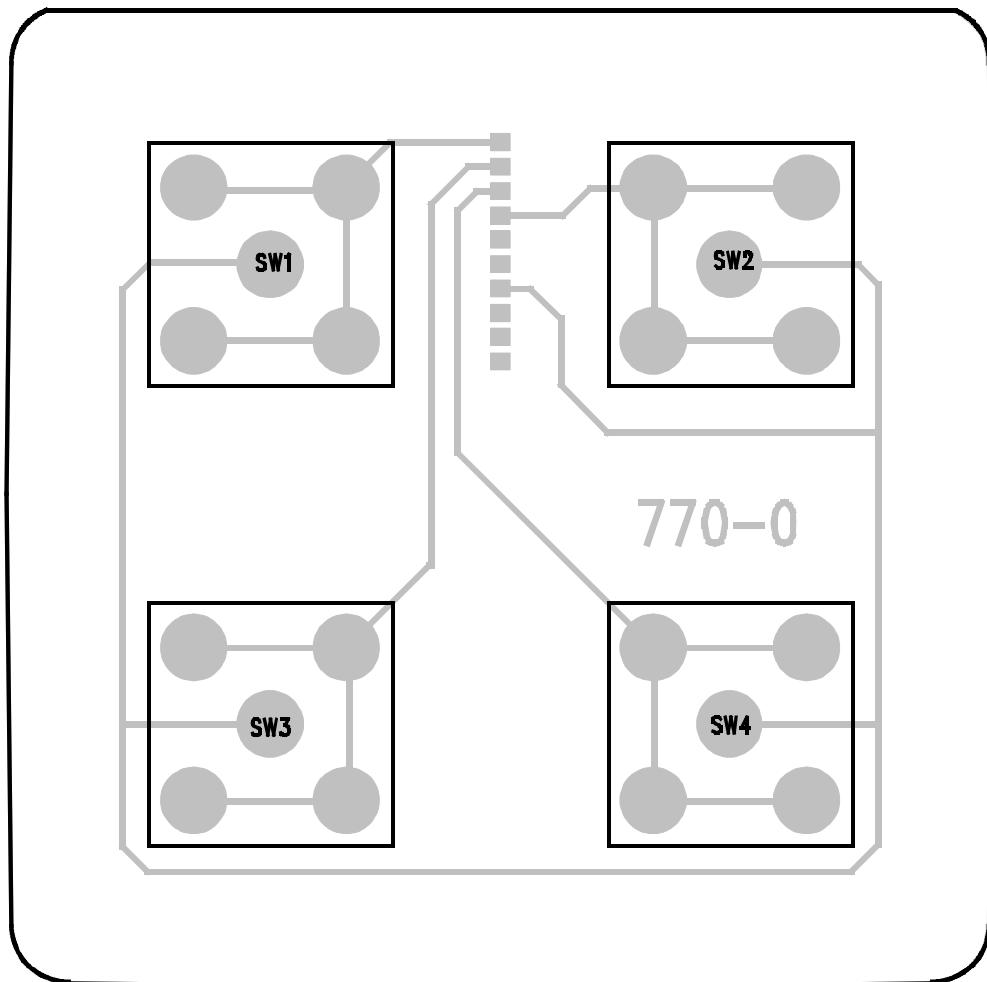


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|-------------------------|----------|---|------------------------------|
| DATE: 2-12-98 | SIGN: PH | O | NIROS TELECOMMUNICATION A/S |
| DATE: | SIGN: | | HØRSEMARKEN 5, 3520 FARUM |
| DATE: | SIGN: | | |
| DATE: | SIGN: | | Front keyboard |
| DATE: | SIGN: | | TRX1012 |
| DATE: | SIGN: | | |
| DRAWING NO: 0-0704-03-0 | | | PCB NO: 770-Q UNIT NO: 98119 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 09-07-98 | 0 | PA |

9.2 Componentside



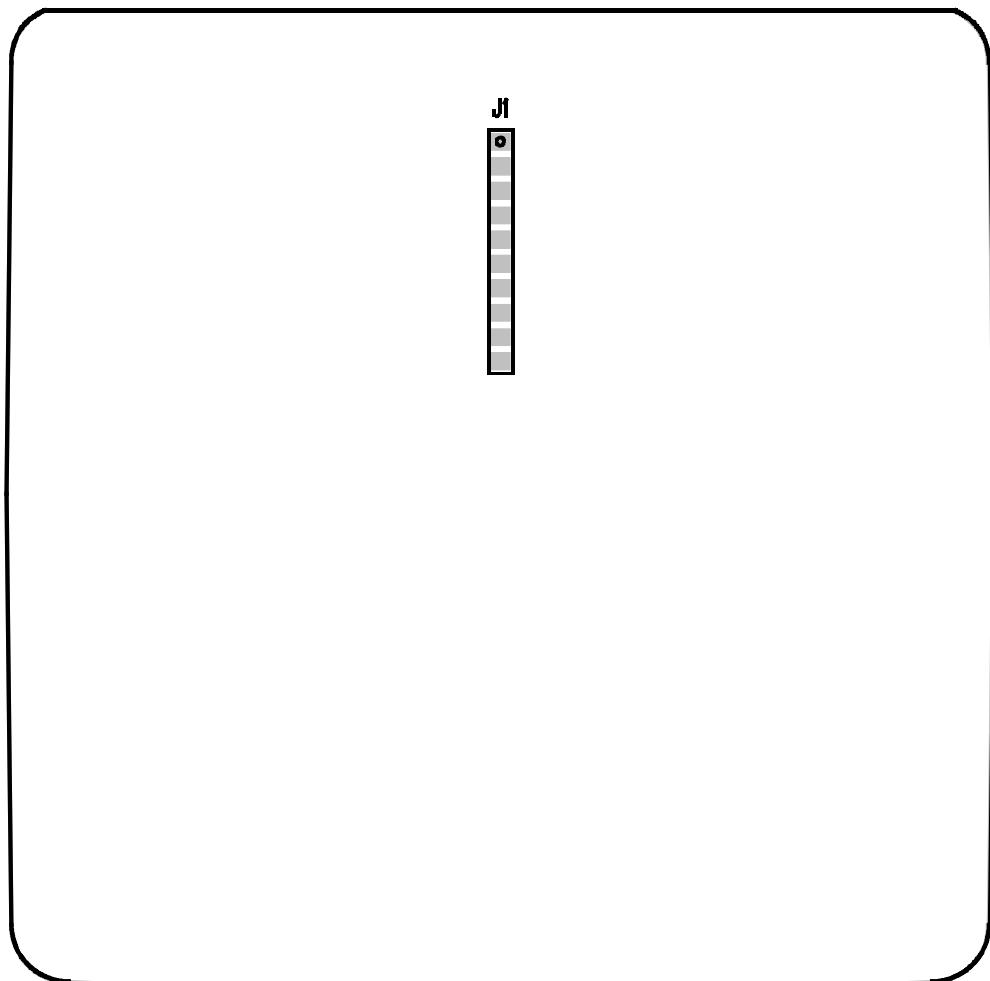
Componentside 770-0

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| | | | |
|-------------------------|----------|---------------|--|
| DATE: 2-12-96 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S HØRSEMARKEN 5, 3520 FARUM |
| DATE: | SIGN: | | |
| DRAWING NO: 0-9704-05-D | | PCB NO: 770-0 | UNIT NO: 9810 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 09-07-98 | 0 | PA |

9.3 Wiringside



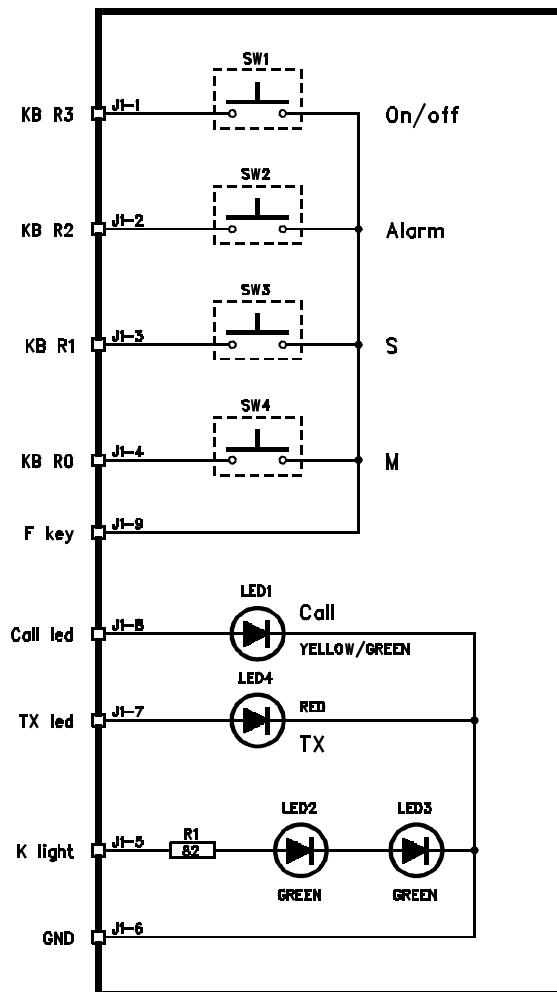
Wiringside 770-0

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|-------------------------|----------|---|--|
| DATE: 2-12-96 | SIGNE PH | 0 | NIROS TELECOMMUNICATION A/S HØRSEMARKEN 5, 3520 FARUM |
| DATE: | SIGNE | | |
| DRAWING NO: 0-0704-04-0 | | | PCB NO: 770-0 UNIT NO: 08119 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 09-07-98 | 0 | PA |

9.4 Diagram

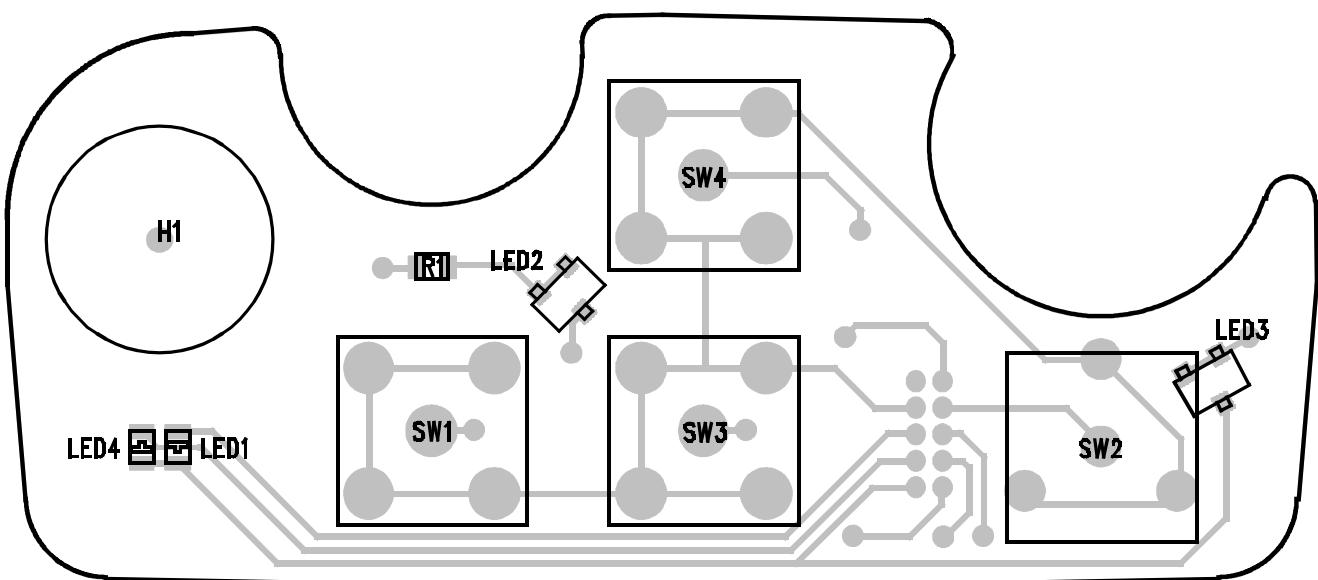


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| | | | |
|-------------------------|---------------|-----------------|-----------------------------|
| DATE: 22-7-92 | SIGN: PA | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 24-2-93 | SIGN: EK | 0 | HØSEMARKEN 5, 3520 FARUM |
| DATE: 17-6-93 | SIGN: EK | 0 | |
| DATE: 2-12-96 | SIGN: PH | 1 | Top keyboard I unit |
| DATE: 19-12-96 | SIGN: PH | 1 | TRX1001/TRX1012 |
| DATE: 5-2-97 | SIGN: PH | 1 | |
| DRAWING NO: 0-9607-03-1 | PCB NO: 707-5 | UNIT NO: 980070 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 09-07-98 | 0 | PA |

9.5 Componentside



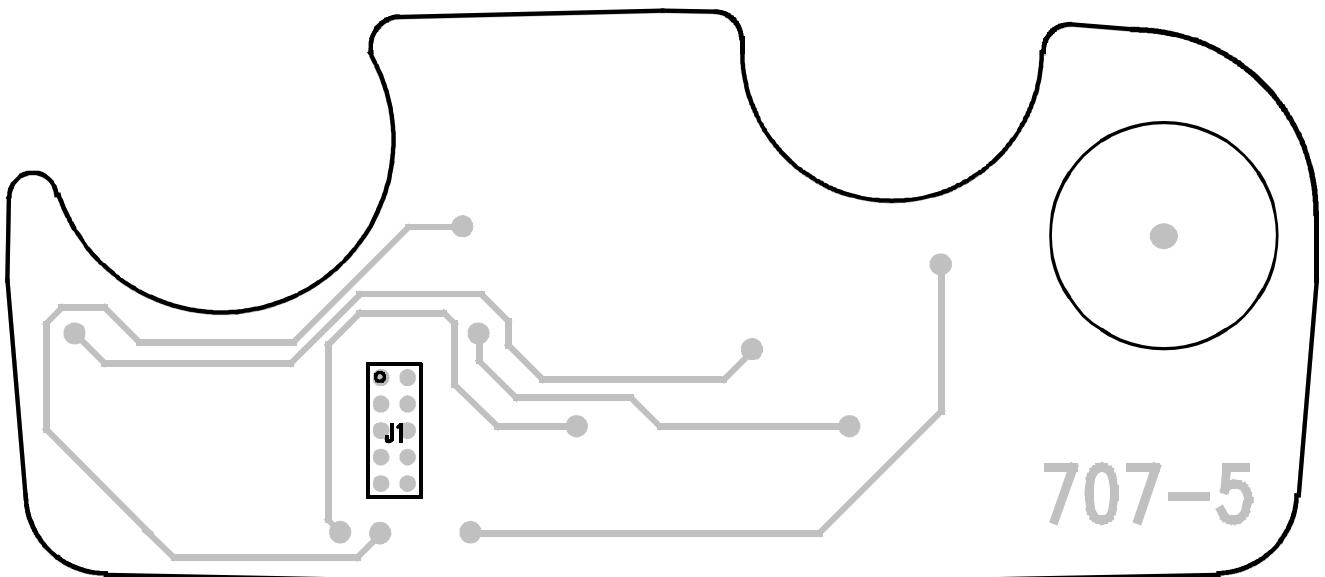
Componentside 707-5

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| | | | |
|-------------------------|----------|---|-------------------------------|
| DATE: 22-7-92 | SIGN: PA | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 24-2-93 | SIGN: EK | 0 | HØJSEMARKEN 5, 3520 FARUM |
| DATE: 17-6-93 | SIGN: EK | 0 | |
| DATE: 2-12-96 | SIGN: PH | 1 | |
| DATE: 19-12-96 | SIGN: PH | 1 | |
| DATE: 5-2-97 | SIGN: PH | 1 | |
| DRAWING NO: 0-9507-05-1 | | | PCB NO: 707-5 UNIT NO: 980070 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 09-07-98 | 0 | PA |

9.6 Wiringside



Wiringside 707-5

SUBJECT TO CHANGE WITHOUT NOTICE

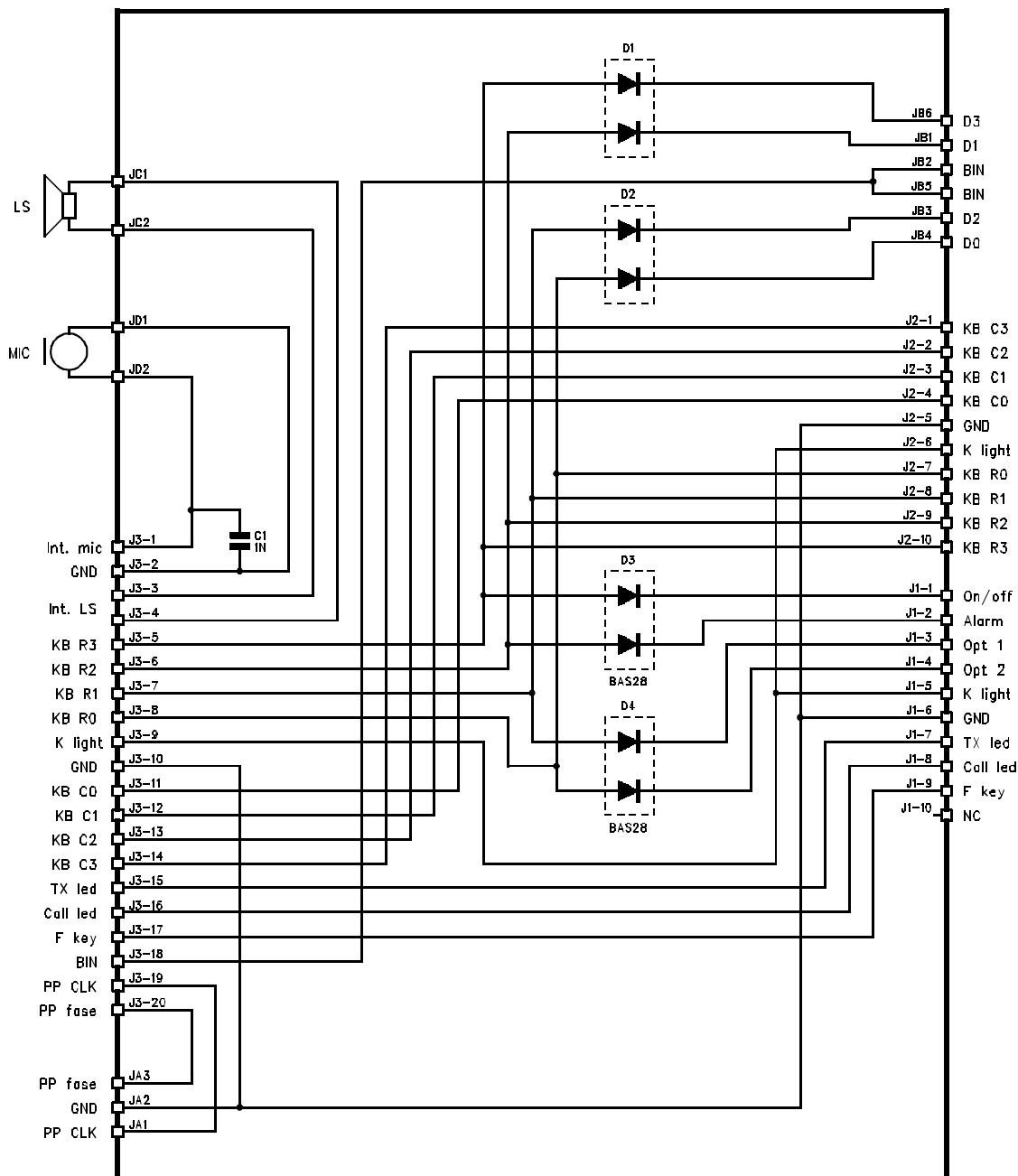
| | | | |
|-------------------------|----------|---------------|-----------------------------|
| DATE: 22-7-92 | SIGN: PA | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 24-2-93 | SIGN: EK | 0 | HIRSEMARKEN 5, 3520 FARUM |
| DATE: 17-6-93 | SIGN: EK | 0 | |
| DATE: 2-12-96 | SIGN: PH | 1 | Top keyboard I unit |
| DATE: 19-12-98 | SIGN: PH | 1 | TRX1001/TRX1012 |
| DATE: 5-2-97 | SIGN: PH | 1 | |
| DRAWING NO: 0-9807-04-1 | | PCB NO: 707-5 | UNIT NO: 980070 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 09-07-98 | 0 | PA |

10. Flexboard TRX1012

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 10-07-98 | 0 | PA |

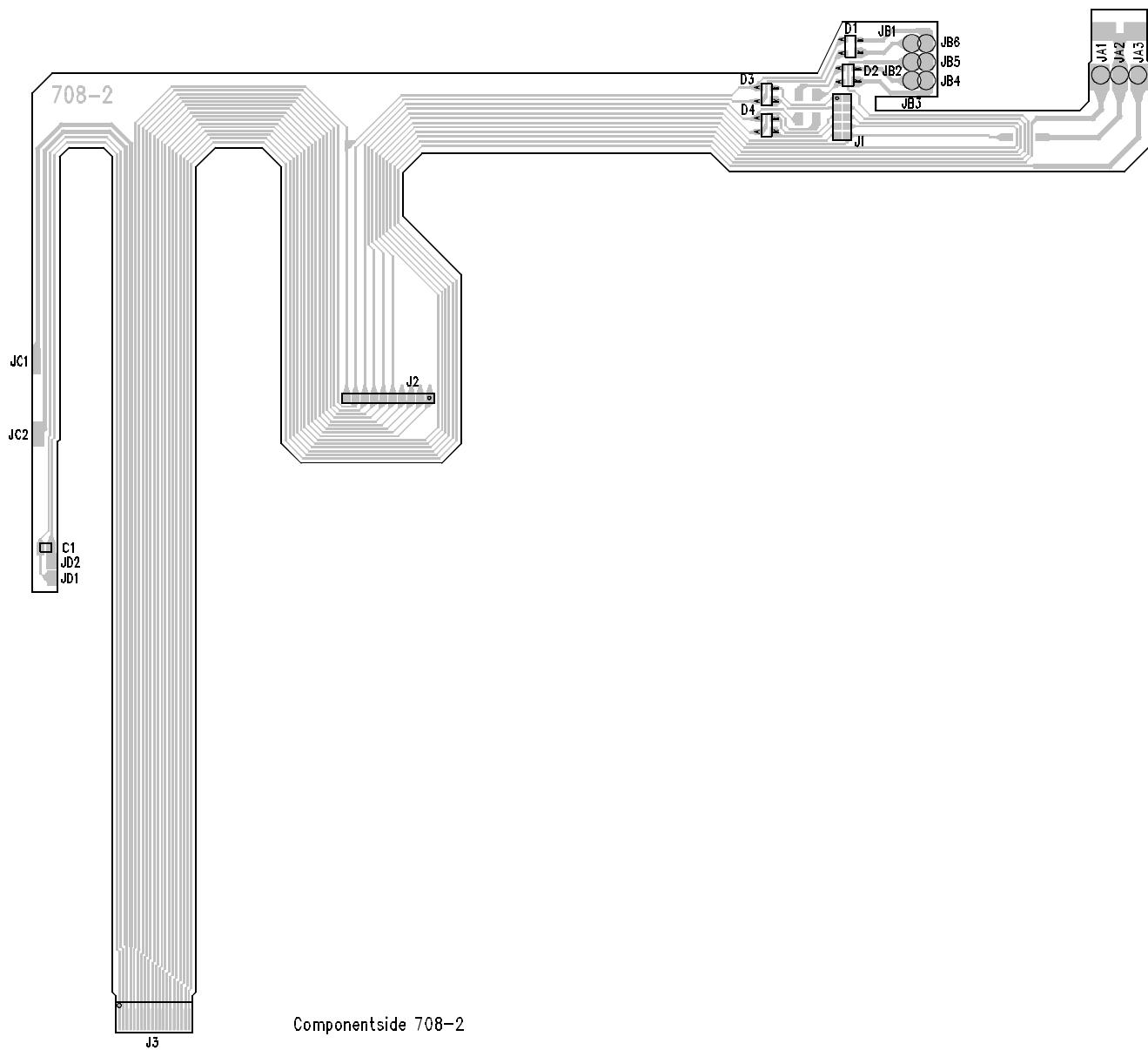
10.1 Diagram



| | |
|--|-------------------------------------|
| Without 16 pol switch UNIT NO: 5740 | With 16 pol switch UNIT NO: 5742 |
| SUBJECT TO CHANGE WITHOUT NOTICE | |
| DATE: 22-8-92 SIGN: EK 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 11-1-94 SIGN: EK 0 | HØJSEMARKEN 5, 3520 FARUM |
| DATE: 2-12-96 SIGN: PH 0 | |
| DATE: 5-2-97 SIGN: PH 0 | |
| DATE: 8-7-98 SIGN: PH 0 | |
| DATE: SIGN: 0 | Flex board TRX1001/TRX1012 |
| DRAWING NO: 0-950B-03-0 | PCB NO: 70B-2 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 10-07-98 | 0 | PA |

10.2 Componentside



Without 16 pol switch
UNIT NO: 5740

With 16 pol switch
UNIT NO: 5742

SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|-------------------------|----------|---|-----------------------------|
| DATE: 22-6-92 | SIGN: EK | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 11-1-94 | SIGN: EK | 0 | HØSEMARKEN 5, 3320 FARUM |
| DATE: 2-12-96 | SIGN: PH | 0 | |
| DATE: 5-2-97 | SIGN: PH | 0 | |
| DATE: 8-7-98 | SIGN: PH | 0 | Flex board TRX1001/TRX1012 |
| DATE: | SIGN: | | |
| DRAWING NO: 0-9608-05-0 | | | PCB NO: 708-2 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 10-07-98 | 0 | PA |

10.3 Partlist

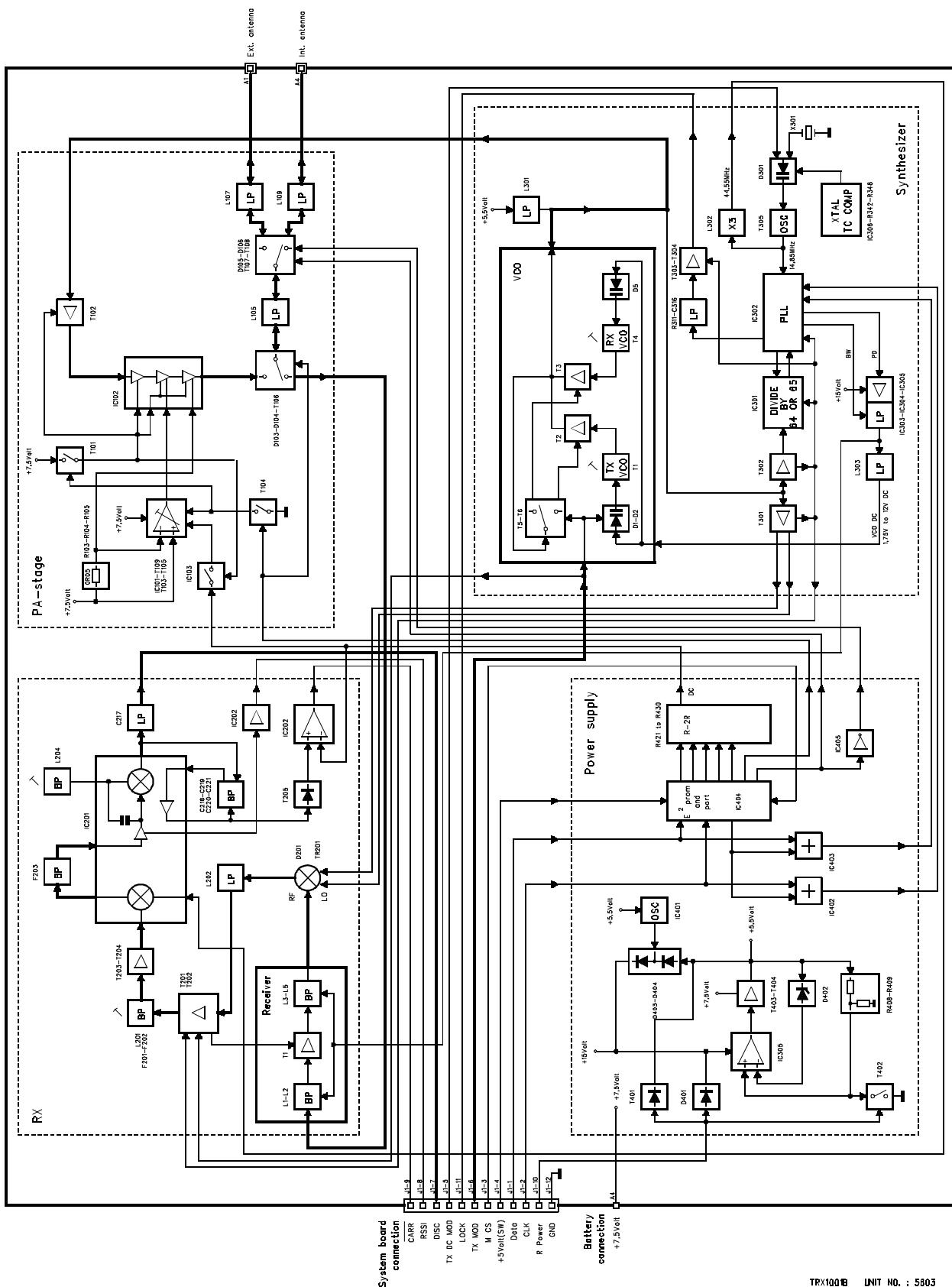
| PARTLIST FOR Flex board TRX1001/TRX1012 DRAWING NO. 0-9608-03-0 | | | DATE 28-11-96 | UNIT NO. 5740 |
|--|---|-------|---------------|---------------|
| Component | Description | Value | Niros No. | |
| | Flex board without 16 pol Flex board with 16 pol | | 5740 5742 | |
| C1 | Capacitor, chip603 | 1 nF | 21102 | |
| D1 | Diode | 5740 | Not used | |
| | Diode | 5742 | BAS28 | 45174 |
| D2 | Diode | 5740 | Not used | |
| | Diode | 5742 | BAS28 | 45174 |
| D3 | Diode | | BAS28 | 45174 |
| D4 | Diode | | BAS28 | 45174 |
| | 1 jumper | 5740 | | |
| | 3 jumper | 5742 | | |
| p. 1 of 1 | | | | |
| PC. Board No. 708-1 | | | | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 10-07-98 | 0 | PA |

11. Radioboard TRX1012B

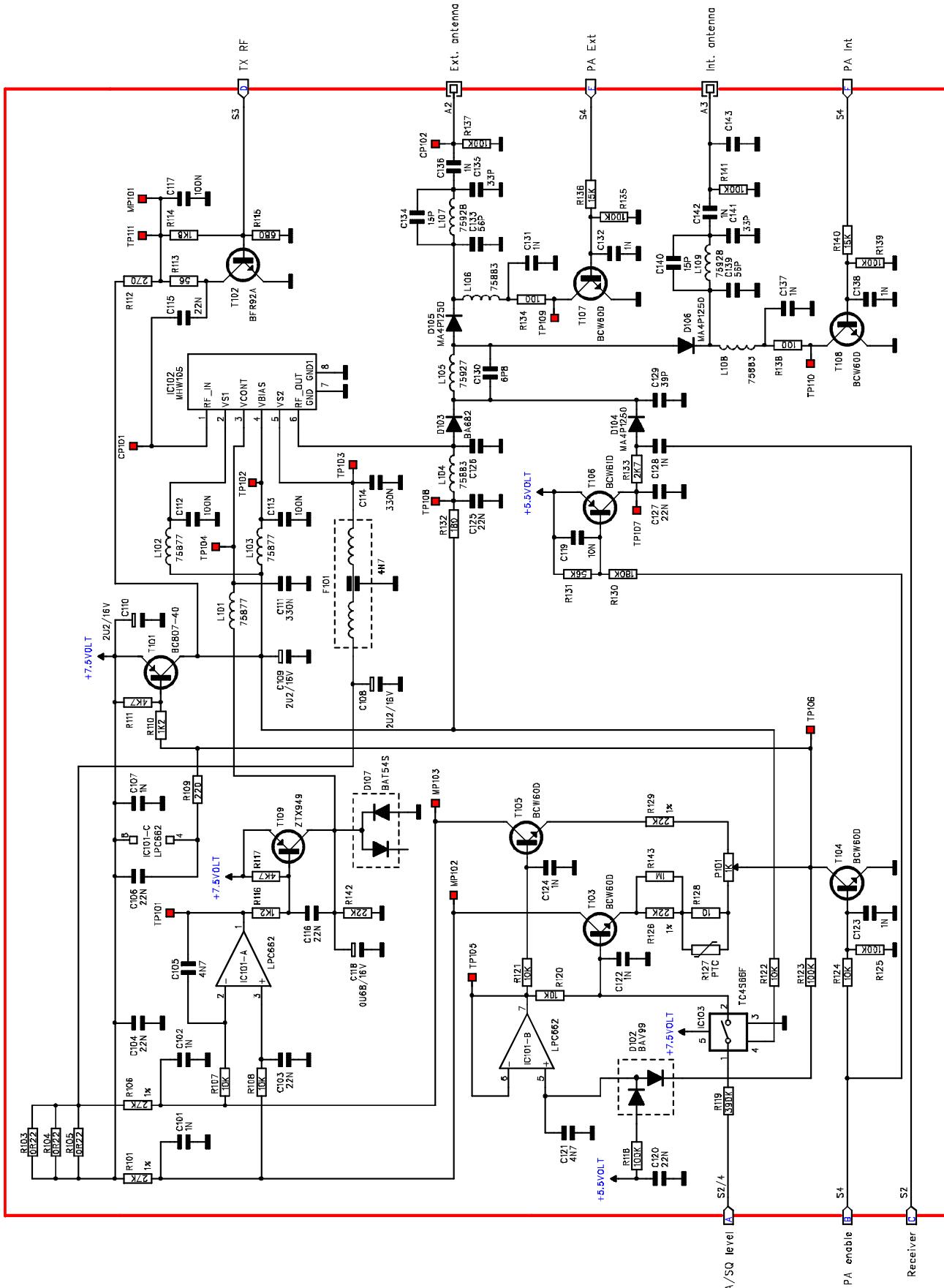
| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

11.1 Diagram



| | |
|--|---------------|
| TRX1001B UNIT NO. : 5503 | |
| SUBJECT TO CHANGE WITHOUT NOTICE | |
| TRX1001C UNIT NO. : 5502 | |
| DATE: 30-8-93 | SIGN: PH |
| DATE: 10-1-94 | SIGN: PH |
| DATE: | SIGN: |
| DRAWING NO: 0-9620-03-0 | PCB NO: 722-X |
| NIROS TELECOMMUNICATION A/S HØJSEMARKEN 5, 3520 FARUM | |
| Block diagram Radioboard TRX1001B/C | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |



SUBJECT TO CHANGE WITHOUT NOTICE

25 KHz Unit No. : 5603
 12,5 KHz Unit No. : 5613
 20 KHz Unit No. : 5618

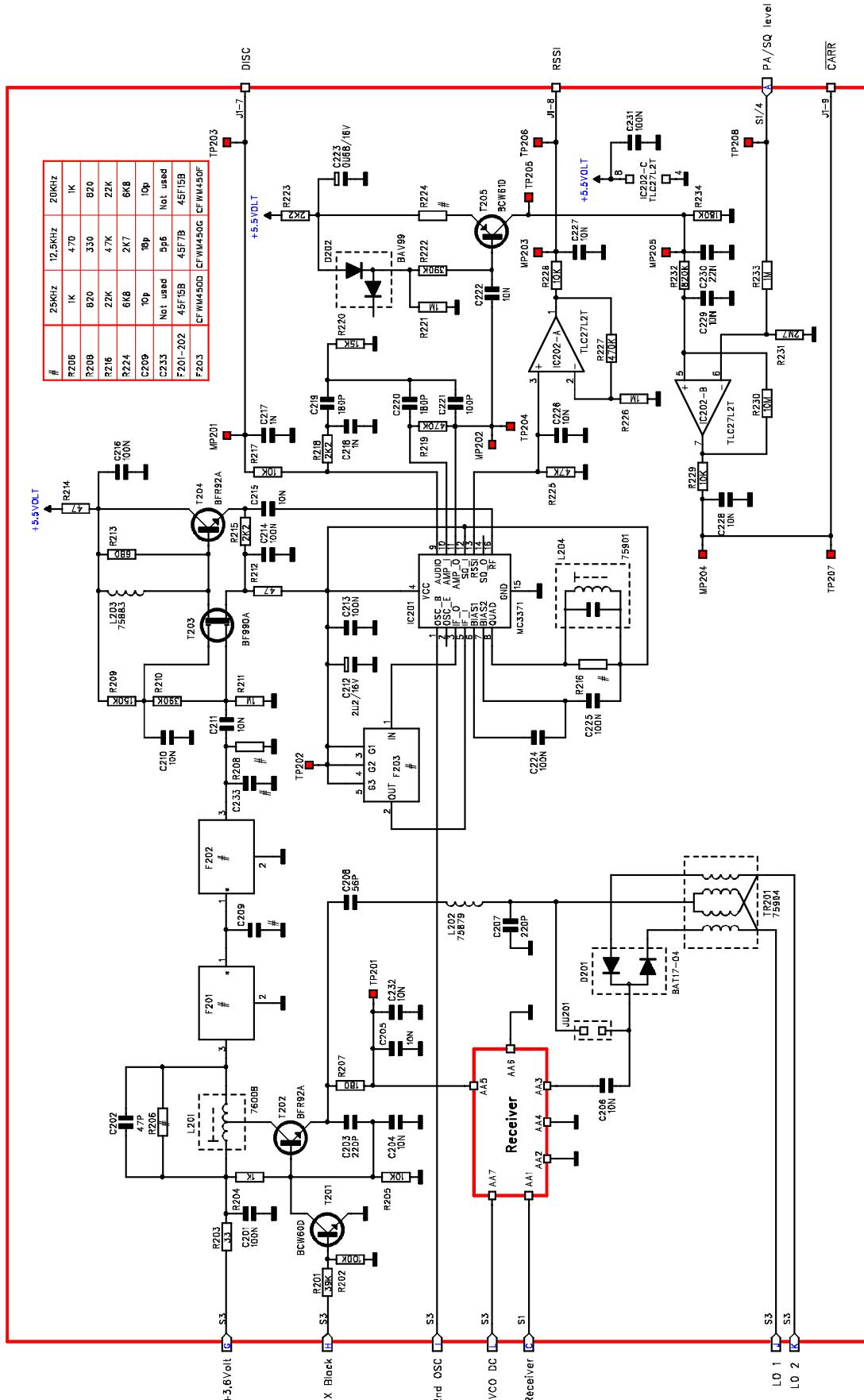
Date: 21-10-2002 Sign: PH 3

Date: 31-08-2004 Sign: PH 4

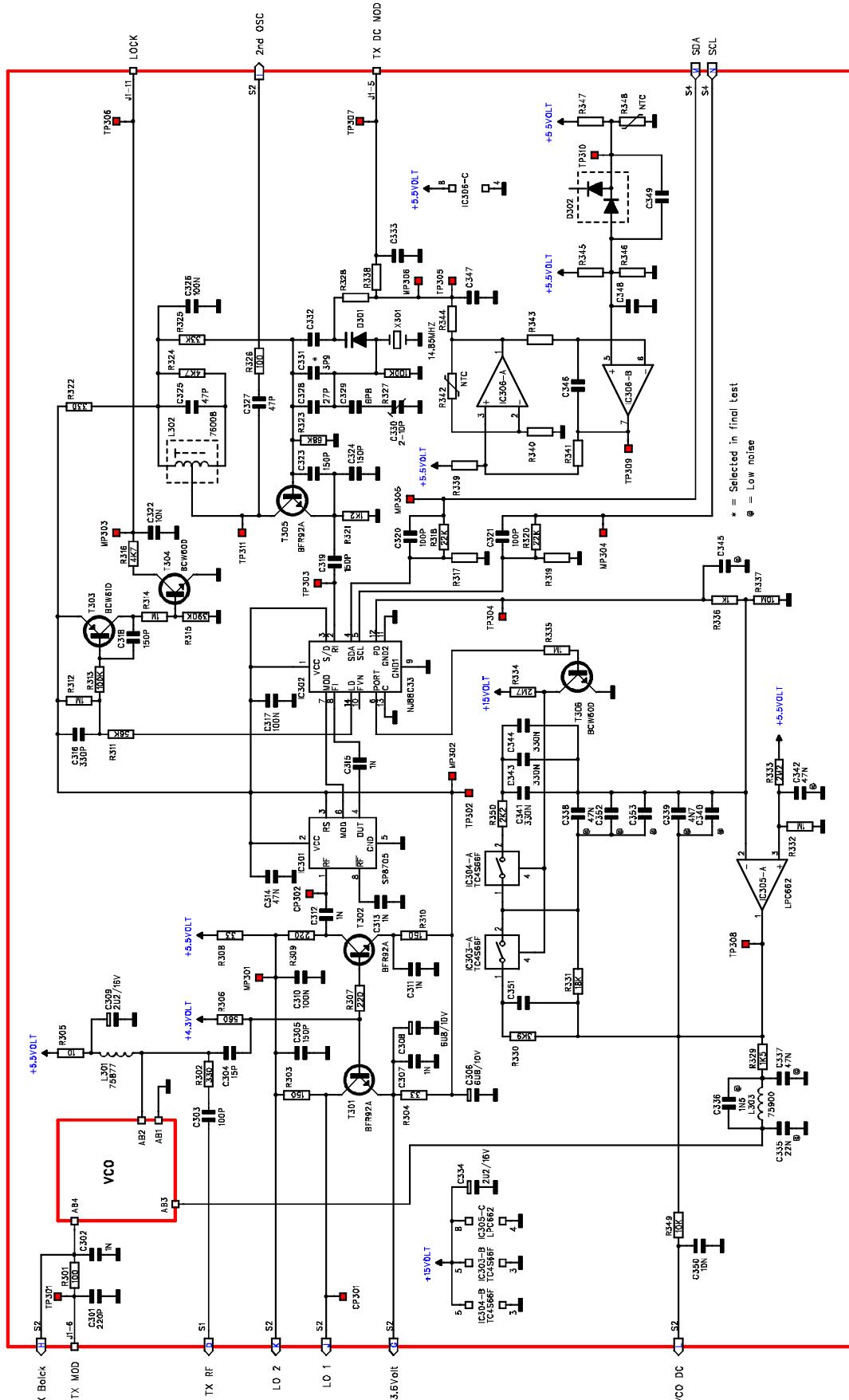
Drawing No.: 0-9625-03-4 p 1 of 4

NIROS COMMUNICATIONS A/S
 Hirsemarken 5, 3520 Forum
 PC. Board No.: 722-3
Radioboard TRX1001B

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |



| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |



SUBJECT TO CHANGE WITHOUT NOTICE

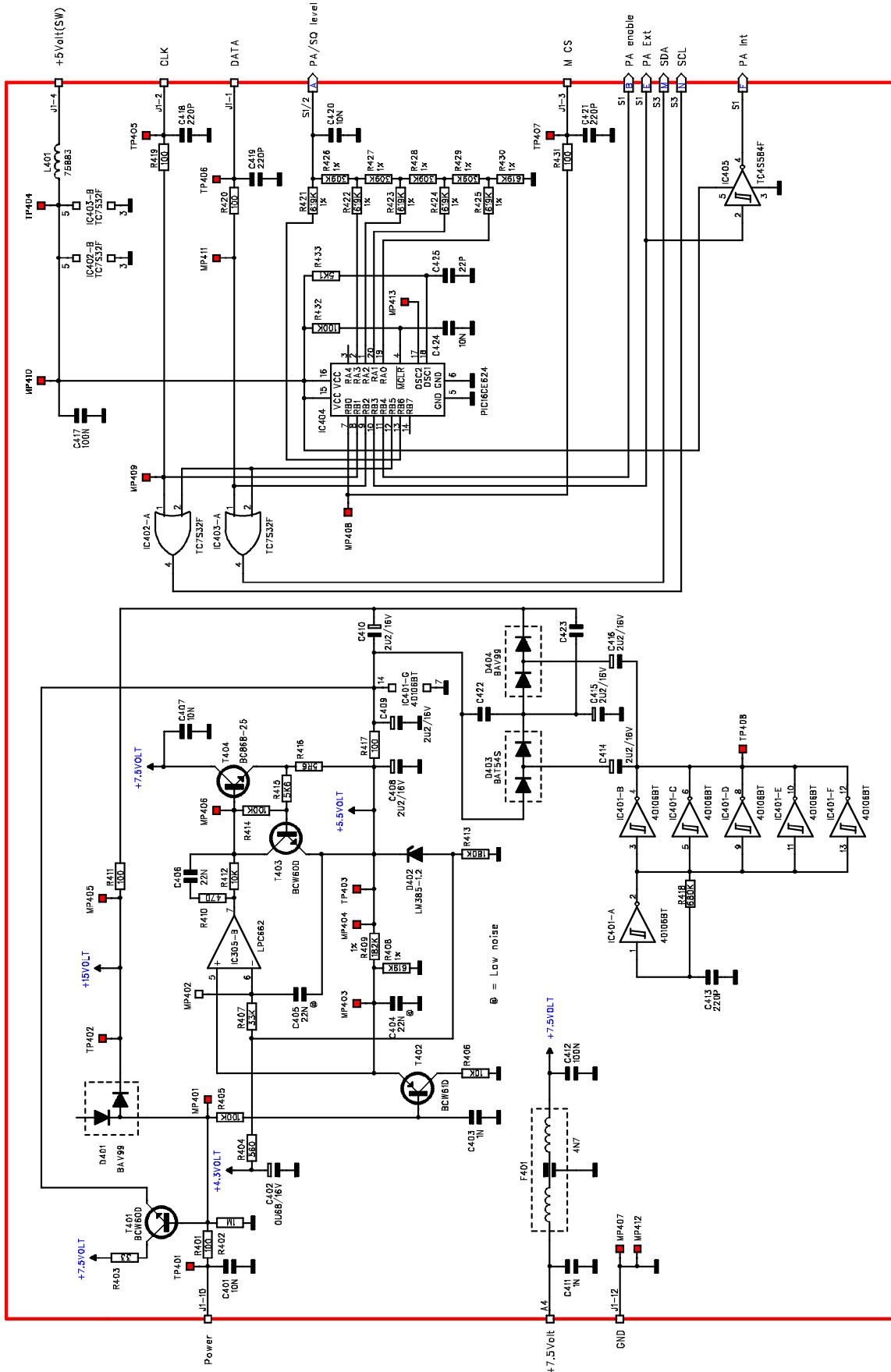
25 KHz Unit No. : 5803
 12.5 KHz Unit No. : 5813
 20 KHz Unit No. : 5818

Date: 21-10-2002 Sign: PH 3
 Date: 31-08-2004 Sign: PH 4
 Drawing No.: 0-9625-03-4 p 3 of 4

NIROS COMMUNICATIONS A/S
 Hirschmarken 5, 3520 Forum

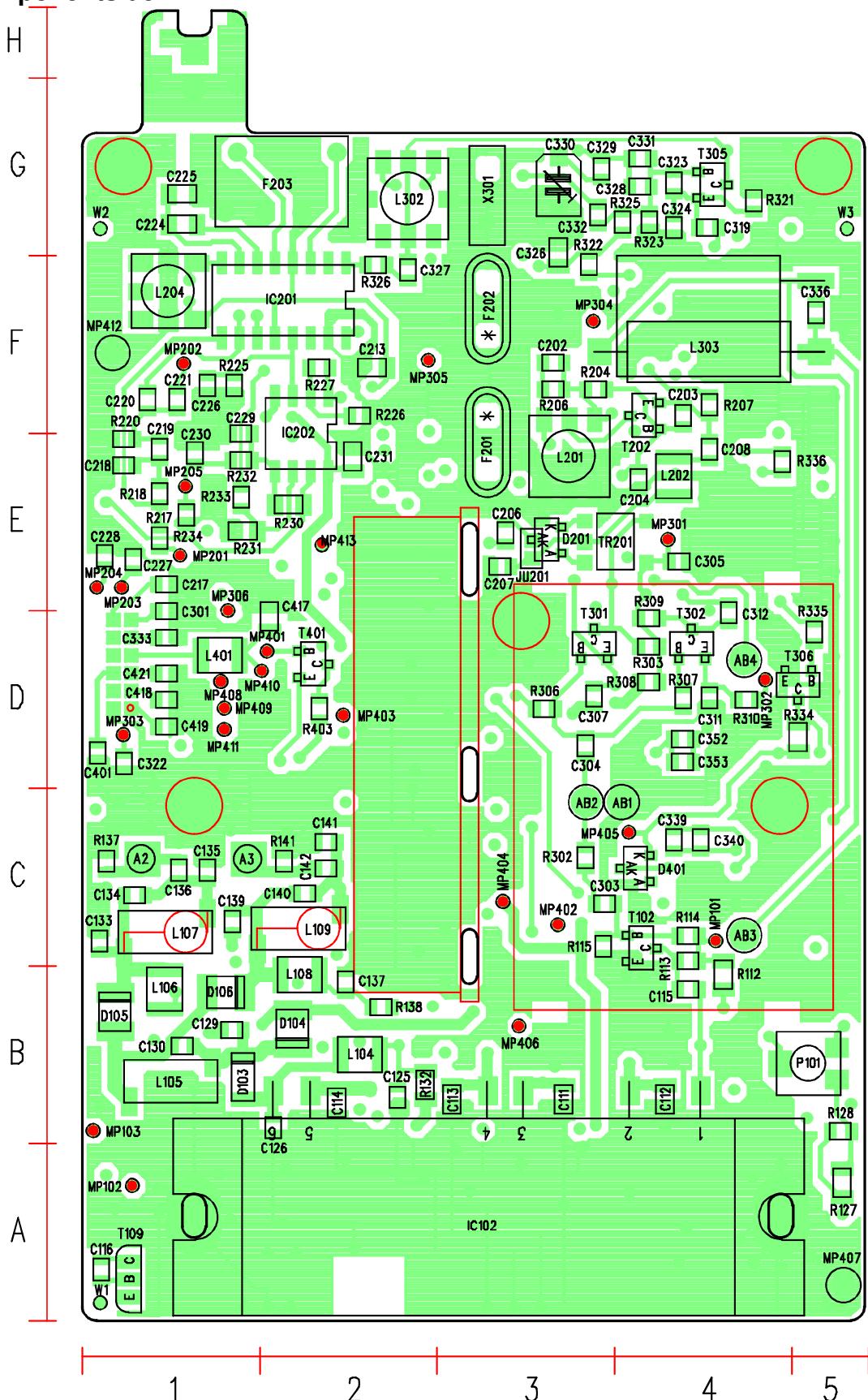
Radioboard TRX1001B

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |



| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

11.2 Componentside



Componentside 722-3

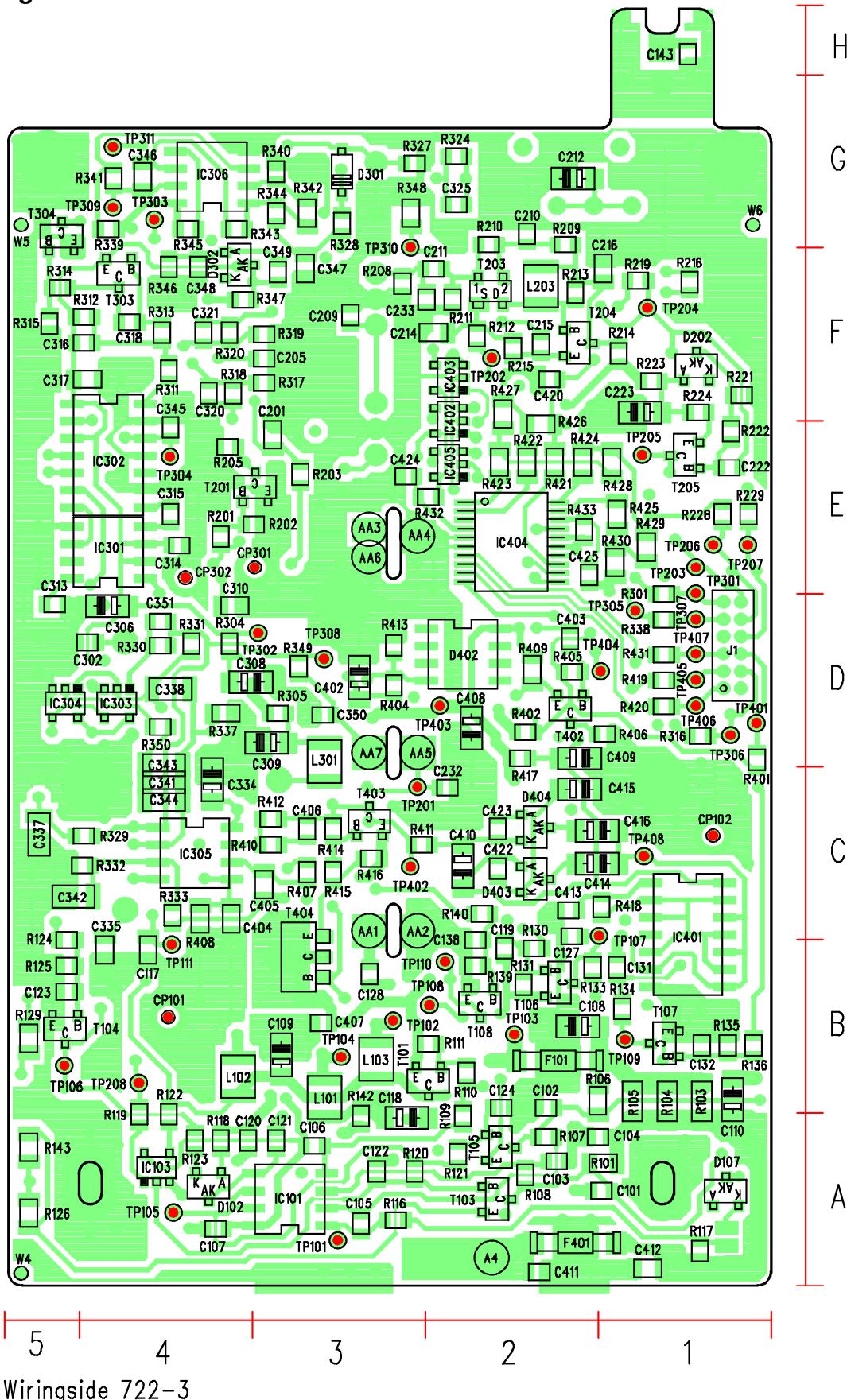
SUBJECT TO CHANGE WITHOUT NOTICE

| | | | | |
|----------|-----------------|--------------------------|----------|---|
| 25 KHz | Unit No. : 5603 | Date: 21-10-2002 | Sign: PH | 3 |
| 12,5 KHz | Unit No. : 5613 | Date: 31-08-2004 | Sign: PH | 4 |
| 20 KHz | Unit No. : 5618 | Drawing No.: 0-9625-05-4 | | |

| | |
|---|---------------------|
| NIROS COMMUNICATIONS A/S Hirsemarken 5, 3520 Forum | Radioboard TRX1001B |
| PC. Board No.: 722-3 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

11.3 Wiringside



SUBJECT TO CHANGE WITHOUT NOTICE

| | | |
|----------|------------|------|
| 25 KHz | Unit No. : | 5603 |
| 12,5 KHz | Unit No. : | 5613 |
| 20 KHz | Unit No. : | 5618 |

| | | | |
|---------------------------|---|---|---------------------|
| Date: 21-10-2002 Sign: PH | 3 | NIROS COMMUNICATIONS A/S Hirsemarken 5, 3520 Forum | Radioboard TRX1001B |
| Date: 31-08-2004 Sign: PH | 4 | | |
| Drawing No.: 0-9625-04-4 | | PC. Board No.: 722-3 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

11.4 Fieldlist

| Name Radioboard TRX1001B Drawing No. 0-9625-03-4 | | | | | Date 31-08-2004 Unit No. 5603 | | |
|---|------|--------|------|-----------|----------------------------------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| R101 | SMT | BOTTOM | A1 | R212 | SMT | BOTTOM | F2 |
| R103 | SMT | BOTTOM | B1 | R213 | SMT | BOTTOM | F2 |
| R104 | SMT | BOTTOM | B1 | R214 | SMT | BOTTOM | F1 |
| R105 | SMT | BOTTOM | B1 | R215 | SMT | BOTTOM | F2 |
| R106 | SMT | BOTTOM | B2 | R216 | SMT | BOTTOM | F1 |
| R107 | SMT | BOTTOM | A2 | R217 | SMT | TOP | E1 |
| R108 | SMT | BOTTOM | A2 | R218 | SMT | TOP | E1 |
| R109 | SMT | BOTTOM | A2 | R219 | SMT | BOTTOM | F1 |
| R110 | SMT | BOTTOM | B2 | R220 | SMT | TOP | E1 |
| R111 | SMT | BOTTOM | B2 | R221 | SMT | BOTTOM | F1 |
| R112 | SMT | TOP | B4 | R222 | SMT | BOTTOM | E1 |
| R113 | SMT | TOP | C4 | R223 | SMT | BOTTOM | F1 |
| R114 | SMT | TOP | C4 | R224 | SMT | BOTTOM | F1 |
| R115 | SMT | TOP | C3 | R225 | SMT | TOP | F1 |
| R116 | SMT | BOTTOM | A3 | R226 | SMT | TOP | F2 |
| R117 | SMT | BOTTOM | A1 | R227 | SMT | TOP | F2 |
| R118 | SMT | BOTTOM | A4 | R228 | SMT | BOTTOM | E1 |
| R119 | SMT | BOTTOM | A4 | R229 | SMT | BOTTOM | E1 |
| R120 | SMT | BOTTOM | A3 | R230 | SMT | TOP | E2 |
| R121 | SMT | BOTTOM | A2 | R231 | SMT | TOP | E1 |
| R122 | SMT | BOTTOM | A4 | R232 | SMT | TOP | E1 |
| R123 | SMT | BOTTOM | A4 | R233 | SMT | TOP | E1 |
| R124 | SMT | BOTTOM | C5 | R234 | SMT | TOP | E1 |
| R125 | SMT | BOTTOM | B5 | R301 | SMT | BOTTOM | E1 |
| R126 | SMT | BOTTOM | A5 | R302 | SMT | TOP | C3 |
| R127 | SMT | TOP | A5 | R303 | SMT | TOP | D4 |
| R128 | SMT | TOP | B5 | R304 | SMT | BOTTOM | D4 |
| R129 | SMT | BOTTOM | B5 | R305 | SMT | BOTTOM | D3 |
| R130 | SMT | BOTTOM | B2 | R306 | SMT | TOP | D3 |
| R131 | SMT | BOTTOM | B2 | R307 | SMT | TOP | D4 |
| R132 | SMT | TOP | B2 | R308 | SMT | TOP | D4 |
| R133 | SMT | BOTTOM | B2 | R309 | SMT | TOP | D4 |
| R134 | SMT | BOTTOM | B1 | R310 | SMT | TOP | D4 |
| R135 | SMT | BOTTOM | B1 | R311 | SMT | BOTTOM | F4 |
| R136 | SMT | BOTTOM | B1 | R312 | SMT | BOTTOM | F4 |
| R137 | SMT | TOP | C1 | R313 | SMT | BOTTOM | F4 |
| R138 | SMT | TOP | B2 | R314 | SMT | BOTTOM | F5 |
| R139 | SMT | BOTTOM | B2 | R315 | SMT | BOTTOM | F5 |
| R140 | SMT | BOTTOM | C2 | R316 | SMT | BOTTOM | D1 |
| R141 | SMT | TOP | C2 | R317 | SMT | BOTTOM | F3 |
| R142 | SMT | BOTTOM | A3 | R318 | SMT | BOTTOM | F4 |
| R143 | SMT | BOTTOM | A5 | R319 | SMT | BOTTOM | F3 |
| R201 | SMT | BOTTOM | E4 | R320 | SMT | BOTTOM | F4 |
| R202 | SMT | BOTTOM | E3 | R321 | SMT | TOP | G4 |
| R203 | SMT | BOTTOM | E3 | R322 | SMT | TOP | F3 |
| R204 | SMT | TOP | F3 | R323 | SMT | TOP | G4 |
| R205 | SMT | BOTTOM | E4 | R324 | SMT | BOTTOM | G2 |
| R206 | SMT | TOP | F3 | R325 | SMT | TOP | G4 |
| R207 | SMT | TOP | F4 | R326 | SMT | TOP | F2 |
| R208 | SMT | BOTTOM | F3 | R327 | SMT | BOTTOM | G3 |
| R209 | SMT | BOTTOM | G2 | R328 | SMT | BOTTOM | G3 |
| R210 | SMT | BOTTOM | G2 | R329 | SMT | BOTTOM | C4 |
| R211 | SMT | BOTTOM | F2 | R330 | SMT | BOTTOM | D4 |

p. 1 of 5

PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Name Radioboard TRX1001B Drawing No. 0-9625-03-4 | | | | Date 31-08-2004 Unit No. 5603 | | | |
|---|------|--------|------|----------------------------------|------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| R331 | SMT | BOTTOM | D4 | P101 | SMT | TOP | B5 |
| R332 | SMT | BOTTOM | C4 | C101 | SMT | BOTTOM | A1 |
| R333 | SMT | BOTTOM | C4 | C102 | SMT | BOTTOM | B2 |
| R334 | SMT | TOP | D5 | C103 | SMT | BOTTOM | A2 |
| R335 | SMT | TOP | D5 | C104 | SMT | BOTTOM | A2 |
| R336 | SMT | TOP | E4 | C105 | SMT | BOTTOM | A3 |
| R337 | SMT | BOTTOM | D4 | C106 | SMT | BOTTOM | A3 |
| R338 | SMT | BOTTOM | D1 | C107 | SMT | BOTTOM | A4 |
| R339 | SMT | BOTTOM | G4 | C108 | SMT | BOTTOM | B2 |
| R340 | SMT | BOTTOM | G3 | C109 | SMT | BOTTOM | B3 |
| R341 | SMT | BOTTOM | G4 | C110 | SMT | BOTTOM | B1 |
| R342 | SMT | BOTTOM | G3 | C111 | SMT | TOP | B3 |
| R343 | SMT | BOTTOM | G4 | C112 | SMT | TOP | B4 |
| R344 | SMT | BOTTOM | G3 | C113 | SMT | TOP | B3 |
| R345 | SMT | BOTTOM | G4 | C114 | SMT | TOP | B2 |
| R346 | SMT | BOTTOM | F4 | C115 | SMT | TOP | B4 |
| R347 | SMT | BOTTOM | F4 | C116 | SMT | TOP | A1 |
| R348 | SMT | BOTTOM | G3 | C117 | SMT | BOTTOM | B4 |
| R349 | SMT | BOTTOM | D3 | C118 | SMT | BOTTOM | A3 |
| R350 | SMT | BOTTOM | D4 | C119 | SMT | BOTTOM | B2 |
| R401 | SMT | BOTTOM | D1 | C120 | SMT | BOTTOM | A4 |
| R402 | SMT | BOTTOM | D2 | C121 | SMT | BOTTOM | A3 |
| R403 | SMT | TOP | D2 | C122 | SMT | BOTTOM | A3 |
| R404 | SMT | BOTTOM | D3 | C123 | SMT | BOTTOM | B5 |
| R405 | SMT | BOTTOM | D2 | C124 | SMT | BOTTOM | B2 |
| R406 | SMT | BOTTOM | D1 | C125 | SMT | TOP | B2 |
| R407 | SMT | BOTTOM | C3 | C126 | SMT | TOP | B2 |
| R408 | SMT | BOTTOM | C4 | C127 | SMT | BOTTOM | C2 |
| R409 | SMT | BOTTOM | D2 | C128 | SMT | BOTTOM | B3 |
| R410 | SMT | BOTTOM | C3 | C129 | SMT | TOP | B1 |
| R411 | SMT | BOTTOM | C3 | C130 | SMT | TOP | B1 |
| R412 | SMT | BOTTOM | C3 | C131 | SMT | BOTTOM | B1 |
| R413 | SMT | BOTTOM | D3 | C132 | SMT | BOTTOM | B1 |
| R414 | SMT | BOTTOM | C3 | C133 | SMT | TOP | C1 |
| R415 | SMT | BOTTOM | C3 | C134 | SMT | TOP | C1 |
| R416 | SMT | BOTTOM | C3 | C135 | SMT | TOP | C1 |
| R417 | SMT | BOTTOM | D2 | C136 | SMT | TOP | C1 |
| R418 | SMT | BOTTOM | C1 | C137 | SMT | TOP | B2 |
| R419 | SMT | BOTTOM | D1 | C138 | SMT | BOTTOM | C2 |
| R420 | SMT | BOTTOM | D1 | C139 | SMT | TOP | C1 |
| R421 | SMT | BOTTOM | E2 | C140 | SMT | TOP | C2 |
| R422 | SMT | BOTTOM | E2 | C141 | SMT | TOP | C2 |
| R423 | SMT | BOTTOM | E2 | C142 | SMT | TOP | C2 |
| R424 | SMT | BOTTOM | E2 | C143 | SMT | BOTTOM | H1 |
| R425 | SMT | BOTTOM | E1 | C201 | SMT | BOTTOM | E3 |
| R426 | SMT | BOTTOM | E2 | C202 | SMT | TOP | F3 |
| R427 | SMT | BOTTOM | F2 | C203 | SMT | TOP | F4 |
| R428 | SMT | BOTTOM | E1 | C204 | SMT | TOP | E4 |
| R429 | SMT | BOTTOM | E1 | C205 | SMT | BOTTOM | F3 |
| R430 | SMT | BOTTOM | E1 | C206 | SMT | TOP | E3 |
| R431 | SMT | BOTTOM | D1 | C207 | SMT | TOP | E3 |
| R432 | SMT | BOTTOM | E2 | C208 | SMT | TOP | E4 |
| R433 | SMT | BOTTOM | E2 | C209 | SMT | BOTTOM | F3 |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

Name Radioboard TRX1001B
 Drawing No. 0-9625-03-4

Date 31-08-2004
 Unit No. 5603

| Component | Type | Side | Cord | Component | Type | Side | Cord |
|-----------|------|--------|------|-----------|------|--------|------|
| C210 | SMT | BOTTOM | G2 | C330 | SMT | TOP | G3 |
| C211 | SMT | BOTTOM | F2 | C331 | SMT | TOP | G4 |
| C212 | SMT | BOTTOM | G2 | C332 | SMT | TOP | G3 |
| C213 | SMT | TOP | F2 | C333 | SMT | TOP | D1 |
| C214 | SMT | BOTTOM | F2 | C334 | SMT | BOTTOM | C4 |
| C215 | SMT | BOTTOM | F2 | C335 | SMT | BOTTOM | B4 |
| C216 | SMT | BOTTOM | F1 | C336 | SMT | TOP | F5 |
| C217 | SMT | TOP | E1 | C337 | SMT | BOTTOM | C5 |
| C218 | SMT | TOP | E1 | C338 | SMT | BOTTOM | D4 |
| C219 | SMT | TOP | E1 | C339 | SMT | TOP | C4 |
| C220 | SMT | TOP | F1 | C340 | SMT | TOP | C4 |
| C221 | SMT | TOP | F1 | C341 | SMT | BOTTOM | C4 |
| C222 | SMT | BOTTOM | E1 | C342 | SMT | BOTTOM | C5 |
| C223 | SMT | BOTTOM | F1 | C343 | SMT | BOTTOM | D4 |
| C224 | SMT | TOP | G1 | C344 | SMT | BOTTOM | C4 |
| C225 | SMT | TOP | G1 | C345 | SMT | BOTTOM | E4 |
| C226 | SMT | TOP | F1 | C346 | SMT | BOTTOM | G4 |
| C227 | SMT | TOP | E1 | C347 | SMT | BOTTOM | F3 |
| C228 | SMT | TOP | E1 | C348 | SMT | BOTTOM | F4 |
| C229 | SMT | TOP | F1 | C349 | SMT | BOTTOM | F3 |
| C230 | SMT | TOP | E1 | C350 | SMT | BOTTOM | D3 |
| C231 | SMT | TOP | E2 | C351 | SMT | BOTTOM | D4 |
| C232 | SMT | BOTTOM | C2 | C352 | SMT | TOP | D4 |
| C233 | SMT | BOTTOM | F2 | C353 | SMT | TOP | D4 |
| C301 | SMT | TOP | E1 | C401 | SMT | TOP | D1 |
| C302 | SMT | BOTTOM | D4 | C402 | SMT | BOTTOM | D3 |
| C303 | SMT | TOP | C3 | C403 | SMT | BOTTOM | D2 |
| C304 | SMT | TOP | D3 | C404 | SMT | BOTTOM | C4 |
| C305 | SMT | TOP | E4 | C405 | SMT | BOTTOM | C3 |
| C306 | SMT | BOTTOM | D4 | C406 | SMT | BOTTOM | C3 |
| C307 | SMT | TOP | D3 | C407 | SMT | BOTTOM | B3 |
| C308 | SMT | BOTTOM | D4 | C408 | SMT | BOTTOM | D2 |
| C309 | SMT | BOTTOM | D3 | C409 | SMT | BOTTOM | D2 |
| C310 | SMT | BOTTOM | D4 | C410 | SMT | BOTTOM | C2 |
| C311 | SMT | TOP | D4 | C411 | SMT | BOTTOM | A2 |
| C312 | SMT | TOP | D4 | C412 | SMT | BOTTOM | A1 |
| C313 | SMT | BOTTOM | D5 | C413 | SMT | BOTTOM | C2 |
| C314 | SMT | BOTTOM | E4 | C414 | SMT | BOTTOM | C2 |
| C315 | SMT | BOTTOM | E4 | C415 | SMT | BOTTOM | C2 |
| C316 | SMT | BOTTOM | F4 | C416 | SMT | BOTTOM | C2 |
| C317 | SMT | BOTTOM | F4 | C417 | SMT | TOP | D2 |
| C318 | SMT | BOTTOM | F4 | C418 | SMT | TOP | D1 |
| C319 | SMT | TOP | G4 | C419 | SMT | TOP | D1 |
| C320 | SMT | BOTTOM | F4 | C420 | SMT | BOTTOM | F2 |
| C321 | SMT | BOTTOM | F4 | C421 | SMT | TOP | D1 |
| C322 | SMT | TOP | D1 | C422 | SMT | BOTTOM | C2 |
| C323 | SMT | TOP | G4 | C423 | SMT | BOTTOM | C2 |
| C324 | SMT | TOP | G4 | C424 | SMT | BOTTOM | E3 |
| C325 | SMT | BOTTOM | G2 | C425 | SMT | BOTTOM | E2 |
| C326 | SMT | TOP | G3 | F101 | SMT | BOTTOM | B2 |
| C327 | SMT | TOP | F2 | F201 | LEAD | TOP | E3 |
| C328 | SMT | TOP | G4 | F202 | LEAD | TOP | F3 |
| C329 | SMT | TOP | G3 | F203 | LEAD | TOP | G2 |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Name Radioboard TRX1001B Drawing No. 0-9625-03-4 | | | | Date 31-08-2004 Unit No. 5603 | | | |
|---|------|--------|------|----------------------------------|------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| F401 | SMT | BOTTOM | A2 | IC403 | SMT | BOTTOM | F2 |
| X301 | LEAD | TOP | G3 | IC404 | SMT | BOTTOM | E2 |
| T101 | SMT | BOTTOM | B2 | IC405 | SMT | BOTTOM | E2 |
| T102 | SMT | TOP | C4 | TR201 | SMT | TOP | E4 |
| T103 | SMT | BOTTOM | A2 | L101 | SMT | BOTTOM | B3 |
| T104 | SMT | BOTTOM | B5 | L102 | SMT | BOTTOM | B4 |
| T105 | SMT | BOTTOM | A2 | L103 | SMT | BOTTOM | B3 |
| T106 | SMT | BOTTOM | B2 | L104 | SMT | TOP | B2 |
| T107 | SMT | BOTTOM | B1 | L105 | SMT | TOP | B1 |
| T108 | SMT | BOTTOM | B2 | L106 | SMT | TOP | B1 |
| T109 | LEAD | TOP | A1 | L107 | SMT | TOP | C1 |
| T201 | SMT | BOTTOM | E3 | L108 | SMT | TOP | B2 |
| T202 | SMT | TOP | F4 | L109 | SMT | TOP | C2 |
| T203 | SMT | BOTTOM | F2 | L201 | SMT | TOP | E3 |
| T204 | SMT | BOTTOM | F2 | L202 | SMT | TOP | E4 |
| T205 | SMT | BOTTOM | E1 | L203 | SMT | BOTTOM | F2 |
| T301 | SMT | TOP | D3 | L204 | SMT | TOP | F1 |
| T302 | SMT | TOP | D4 | L301 | SMT | BOTTOM | D3 |
| T303 | SMT | BOTTOM | F4 | L302 | SMT | TOP | G2 |
| T304 | SMT | BOTTOM | G5 | L303 | SMT | TOP | F4 |
| T305 | SMT | TOP | G4 | L401 | SMT | TOP | D1 |
| T306 | SMT | TOP | D5 | TP101 | SMT | BOTTOM | A3 |
| T401 | SMT | TOP | D2 | TP102 | SMT | BOTTOM | B3 |
| T402 | SMT | BOTTOM | D2 | TP103 | SMT | BOTTOM | B2 |
| T403 | SMT | BOTTOM | C3 | TP104 | SMT | BOTTOM | B3 |
| T404 | SMT | BOTTOM | B3 | TP105 | SMT | BOTTOM | A4 |
| D102 | SMT | BOTTOM | A4 | TP106 | SMT | BOTTOM | B5 |
| D103 | SMT | TOP | B1 | TP107 | SMT | BOTTOM | C1 |
| D104 | SMT | TOP | B2 | TP108 | SMT | BOTTOM | B2 |
| D105 | SMT | TOP | B1 | TP109 | SMT | BOTTOM | B1 |
| D106 | SMT | TOP | B1 | TP110 | SMT | BOTTOM | B2 |
| D107 | SMT | BOTTOM | A1 | TP111 | SMT | BOTTOM | B4 |
| D201 | SMT | TOP | E3 | TP201 | SMT | BOTTOM | C3 |
| D202 | SMT | BOTTOM | F1 | TP202 | SMT | BOTTOM | F2 |
| D301 | SMT | BOTTOM | G3 | TP203 | SMT | BOTTOM | E1 |
| D302 | SMT | BOTTOM | F4 | TP204 | SMT | BOTTOM | F1 |
| D401 | SMT | TOP | C4 | TP205 | SMT | BOTTOM | E1 |
| D402 | SMT | BOTTOM | D2 | TP206 | SMT | BOTTOM | E1 |
| D403 | SMT | BOTTOM | C2 | TP207 | SMT | BOTTOM | E1 |
| D404 | SMT | BOTTOM | C2 | TP208 | SMT | BOTTOM | B4 |
| IC101 | SMT | BOTTOM | A3 | TP301 | SMT | BOTTOM | E1 |
| IC102 | SMT | TOP | A3 | TP302 | SMT | BOTTOM | D3 |
| IC103 | SMT | BOTTOM | A4 | TP303 | SMT | BOTTOM | G4 |
| IC201 | SMT | TOP | F2 | TP304 | SMT | BOTTOM | E4 |
| IC202 | SMT | TOP | F2 | TP305 | SMT | BOTTOM | D1 |
| IC301 | SMT | BOTTOM | E4 | TP306 | SMT | BOTTOM | D1 |
| IC302 | SMT | BOTTOM | E4 | TP307 | SMT | BOTTOM | D1 |
| IC303 | SMT | BOTTOM | D4 | TP308 | SMT | BOTTOM | D3 |
| IC304 | SMT | BOTTOM | D5 | TP309 | SMT | BOTTOM | G4 |
| IC305 | SMT | BOTTOM | C4 | TP310 | SMT | BOTTOM | G3 |
| IC306 | SMT | BOTTOM | G4 | TP311 | SMT | BOTTOM | G4 |
| IC401 | SMT | BOTTOM | C1 | TP401 | SMT | BOTTOM | D1 |
| IC402 | SMT | BOTTOM | F2 | TP402 | SMT | BOTTOM | C3 |

| Name Radioboard TRX1001B Drawing No. 0-9625-03-4 | | | | Date 31-08-2004 Unit No. 5603 | | | |
|---|------|--------|------|----------------------------------|------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| TP403 | SMT | BOTTOM | D2 | W4 | SMT | BOTTOM | A5 |
| TP404 | SMT | BOTTOM | D1 | AA5 | SMT | BOTTOM | D3 |
| TP405 | SMT | BOTTOM | D1 | W5 | SMT | BOTTOM | G5 |
| TP406 | SMT | BOTTOM | D1 | AA6 | SMT | BOTTOM | E3 |
| TP407 | SMT | BOTTOM | D1 | W6 | SMT | BOTTOM | G1 |
| TP408 | SMT | BOTTOM | C1 | AA7 | SMT | BOTTOM | D3 |
| CP101 | LEAD | BOTTOM | B4 | | | | |
| CP102 | LEAD | BOTTOM | C1 | | | | |
| CP301 | LEAD | BOTTOM | E3 | | | | |
| CP302 | LEAD | BOTTOM | E4 | | | | |
| MP101 | LEAD | TOP | C4 | | | | |
| MP102 | LEAD | TOP | A1 | | | | |
| MP103 | LEAD | TOP | B1 | | | | |
| MP201 | LEAD | TOP | E1 | | | | |
| MP202 | LEAD | TOP | F1 | | | | |
| MP203 | LEAD | TOP | E1 | | | | |
| MP204 | LEAD | TOP | E1 | | | | |
| MP205 | LEAD | TOP | E1 | | | | |
| MP301 | SMT | TOP | E4 | | | | |
| MP302 | LEAD | TOP | D4 | | | | |
| MP303 | LEAD | TOP | D1 | | | | |
| MP304 | LEAD | TOP | F3 | | | | |
| MP305 | LEAD | TOP | F2 | | | | |
| MP306 | LEAD | TOP | E1 | | | | |
| MP401 | LEAD | TOP | D2 | | | | |
| MP402 | LEAD | TOP | C3 | | | | |
| MP403 | LEAD | TOP | D2 | | | | |
| MP404 | LEAD | TOP | C3 | | | | |
| MP405 | LEAD | TOP | C4 | | | | |
| MP406 | LEAD | TOP | B3 | | | | |
| MP407 | LEAD | TOP | A5 | | | | |
| MP408 | LEAD | TOP | D1 | | | | |
| MP409 | LEAD | TOP | D1 | | | | |
| MP410 | LEAD | TOP | D2 | | | | |
| MP411 | LEAD | TOP | D1 | | | | |
| MP412 | LEAD | TOP | F1 | | | | |
| MP413 | LEAD | TOP | E2 | | | | |
| JU201 | SMT | TOP | E3 | | | | |
| J1 | LEAD | BOTTOM | D1 | | | | |
| AA1 | SMT | BOTTOM | C3 | | | | |
| AB1 | LEAD | TOP | C4 | | | | |
| W1 | SMT | TOP | A1 | | | | |
| A2 | SMT | TOP | C1 | | | | |
| AA2 | SMT | BOTTOM | C3 | | | | |
| AB2 | LEAD | TOP | C3 | | | | |
| W2 | SMT | TOP | G1 | | | | |
| A3 | SMT | TOP | C1 | | | | |
| AA3 | SMT | BOTTOM | E3 | | | | |
| AB3 | LEAD | TOP | C4 | | | | |
| W3 | SMT | TOP | G5 | | | | |
| AA4 | SMT | BOTTOM | E3 | | | | |
| AB4 | LEAD | TOP | D4 | | | | |
| A4 | LEAD | BOTTOM | A2 | | | | |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

11.5 Partlist

| Partlist for Radioboard TRX1001B Drawing No. 0-9625-03-4 | | Date 31-08-2004 Unit No. 5603 | |
|---|---------------------|----------------------------------|-----------|
| Component | Description | Value | Niros No. |
| | Radioboard TRX1001B | 25 KHz | 5603 |
| | Radioboard TRX1001B | 12,5 KHz | 5613 |
| | Radioboard TRX1001B | 20 KHz | 5618 |
| R101 | Resistor,chip805_1% | 27 Kohm | 10906 |
| R103 | Resistor,melf | 0,22 Ohm | 10900 |
| R104 | Resistor,melf | 0,22 Ohm | 10900 |
| R105 | Resistor,melf | 0,22 Ohm | 10900 |
| R106 | Resistor,chip805_1% | 27 Kohm | 10906 |
| R107 | Resistor,chip603 | 10 Kohm | 14103 |
| R108 | Resistor,chip603 | 10 Kohm | 14103 |
| R109 | Resistor,chip603 | 220 Ohm | 14221 |
| R110 | Resistor,chip603 | 1,2 Kohm | 14122 |
| R111 | Resistor,chip603 | 4,7 Kohm | 14472 |
| R112 | Resistor,chip805 | 270 Ohm | 13271 |
| R113 | Resistor,chip603 | 56 Ohm | 14560 |
| R114 | Resistor,chip603 | 1,8 Kohm | 14182 |
| R115 | Resistor,chip603 | 680 Ohm | 14681 |
| R116 | Resistor,chip603 | 1,2 Kohm | 14122 |
| R117 | Resistor,chip603 | 4,7 Kohm | 14472 |
| R118 | Resistor,chip603 | 100 Kohm | 14104 |
| R119 | Resistor,chip603 | 390 Kohm | 14394 |
| R120 | Resistor,chip603 | 10 Kohm | 14103 |
| R121 | Resistor,chip603 | 10 Kohm | 14103 |
| R122 | Resistor,chip603 | 10 Kohm | 14103 |
| R123 | Resistor,chip603 | 100 Kohm | 14104 |
| R124 | Resistor,chip603 | 10 Kohm | 14103 |
| R125 | Resistor,chip603 | 100 Kohm | 14104 |
| R126 | Resistor,chip805_1% | 22 Kohm | 10905 |
| R127 | Resistor,ptc | Not used | |
| R128 | Resistor,chip603 | 10 Ohm | 14100 |
| R129 | Resistor,chip805_1% | 22 Kohm | 10905 |
| R130 | Resistor,chip603 | 180 Kohm | 14184 |
| R131 | Resistor,chip603 | 56 Kohm | 14563 |
| R132 | Resistor,chip805 | 180 Ohm | 13181 |
| R133 | Resistor,chip603 | 2,7 Kohm | 14272 |
| R134 | Resistor,chip603 | 100 Ohm | 14101 |
| R135 | Resistor,chip603 | 100 Kohm | 14104 |
| R136 | Resistor,chip603 | 15 Kohm | 14153 |
| R137 | Resistor,chip603 | 100 Kohm | 14104 |
| R138 | Resistor,chip603 | 100 Ohm | 14101 |
| R139 | Resistor,chip603 | 100 Kohm | 14104 |
| R140 | Resistor,chip603 | 15 Kohm | 14153 |
| R141 | Resistor,chip603 | 100 Kohm | 14104 |

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| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Partlist for Radioboard TRX1001B Drawing No. 0-9625-03-4 | | Date 31-08-2004 | Unit No. 5603 |
|---|------------------|------------------|---------------|
| Component | Description | Value | Niros No. |
| R142 | Resistor,chip603 | 22 Kohm | 14223 |
| R143 | Resistor,chip805 | 1 Mohm | 13105 |
| R201 | Resistor,chip603 | 39 Kohm | 14393 |
| R202 | Resistor,chip603 | 100 Kohm | 14104 |
| R203 | Resistor,chip603 | 33 Ohm | 14330 |
| R204 | Resistor,chip603 | 1 Kohm | 14102 |
| R205 | Resistor,chip603 | 10 Kohm | 14103 |
| R206 | Resistor,chip603 | 25KHZ 1 Kohm | 14102 |
| | Resistor,chip603 | 12,5KHZ 470 Ohm | 14471 |
| | Resistor,chip603 | 20KHZ 1 Kohm | 14102 |
| R207 | Resistor,chip603 | 180 Ohm | 14181 |
| R208 | Resistor,chip603 | 25KHZ 820 Ohm | 14821 |
| | Resistor,chip603 | 12,5KHZ 330 Ohm | 14331 |
| | Resistor,chip603 | 20KHZ 820 Ohm | 14821 |
| R209 | Resistor,chip603 | 150 Kohm | 14154 |
| R210 | Resistor,chip603 | 390 Kohm | 14394 |
| R211 | Resistor,chip603 | 1 Mohm | 14105 |
| R212 | Resistor,chip603 | 47 Ohm | 14470 |
| R213 | Resistor,chip603 | 680 Ohm | 14681 |
| R214 | Resistor,chip603 | 47 Ohm | 14470 |
| R215 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R216 | Resistor,chip603 | 25KHZ 22 Kohm | 14223 |
| | Resistor,chip603 | 12,5KHZ 47 Kohm | 14473 |
| | Resistor,chip603 | 20KHZ 22 Kohm | 14223 |
| R217 | Resistor,chip603 | 10 Kohm | 14103 |
| R218 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R219 | Resistor,chip603 | 470 Kohm | 14474 |
| R220 | Resistor,chip603 | 15 Kohm | 14153 |
| R221 | Resistor,chip603 | 1 Mohm | 14105 |
| R222 | Resistor,chip603 | 390 Kohm | 14394 |
| R223 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R224 | Resistor,chip603 | 25KHZ 6,8 Kohm | 14682 |
| | Resistor,chip603 | 12,5KHZ 2,7 Kohm | 14272 |
| | Resistor,chip603 | 20KHZ 6,8 Kohm | 14682 |
| R225 | Resistor,chip603 | 47 Kohm | 14473 |
| R226 | Resistor,chip603 | 1 Mohm | 14105 |
| R227 | Resistor,chip603 | 470 Kohm | 14474 |
| R228 | Resistor,chip603 | 10 Kohm | 14103 |
| R229 | Resistor,chip603 | 10 Kohm | 14103 |
| R230 | Resistor,chip805 | 10 Mohm | 13106 |
| R231 | Resistor,chip805 | 2,7 Mohm | 13275 |
| R232 | Resistor,chip603 | 820 Kohm | 14824 |
| R233 | Resistor,chip603 | 1 Mohm | 14105 |
| R234 | Resistor,chip603 | 180 Kohm | 14184 |
| R301 | Resistor,chip603 | 100 Ohm | 14101 |

Partlist for Radioboard TRX1001B
Drawing No. 0-9625-03-4

Date 31-08-2004
Unit No. 5603

| Component | Description | Value | Niros No. |
|-----------|-------------------|----------|-----------|
| R302 | Resistor, chip603 | 330 Ohm | 14331 |
| R303 | Resistor, chip603 | 150 Ohm | 14151 |
| R304 | Resistor, chip603 | 33 Ohm | 14330 |
| R305 | Resistor, chip603 | 10 Ohm | 14100 |
| R306 | Resistor, chip603 | 560 Ohm | 14561 |
| R307 | Resistor, chip603 | 220 Ohm | 14221 |
| R308 | Resistor, chip603 | 33 Ohm | 14330 |
| R309 | Resistor, chip603 | 220 Ohm | 14221 |
| R310 | Resistor, chip603 | 150 Ohm | 14151 |
| R311 | Resistor, chip603 | 56 Kohm | 14563 |
| R312 | Resistor, chip603 | 1 Mohm | 14105 |
| R313 | Resistor, chip603 | 100 Kohm | 14104 |
| R314 | Resistor, chip603 | 1 Mohm | 14105 |
| R315 | Resistor, chip603 | 390 Kohm | 14394 |
| R316 | Resistor, chip603 | 4,7 Kohm | 14472 |
| R317 | Resistor, chip603 | Not used | |
| R318 | Resistor, chip603 | 22 Kohm | 14223 |
| R319 | Resistor, chip603 | Not used | |
| R320 | Resistor, chip603 | 22 Kohm | 14223 |
| R321 | Resistor, chip603 | 1,2 Kohm | 14122 |
| R322 | Resistor, chip603 | 330 Ohm | 14331 |
| R323 | Resistor, chip603 | 68 Kohm | 14683 |
| R324 | Resistor, chip603 | 4,7 Kohm | 14472 |
| R325 | Resistor, chip603 | 33 Kohm | 14333 |
| R326 | Resistor, chip603 | 100 Ohm | 14101 |
| R327 | Resistor, chip603 | 100 Kohm | 14104 |
| R328 | Resistor, chip603 | Not used | |
| R329 | Resistor, chip603 | 1,5 Kohm | 14152 |
| R330 | Resistor, chip603 | 3,9 Kohm | 14392 |
| R331 | Resistor, chip603 | 18 Kohm | 14183 |
| R332 | Resistor, chip603 | 1 Mohm | 14105 |
| R333 | Resistor, chip603 | 2,2 Mohm | 14225 |
| R334 | Resistor, chip805 | 2,7 Mohm | 13275 |
| R335 | Resistor, chip603 | 1 Mohm | 14105 |
| R336 | Resistor, chip603 | 1 Kohm | 14102 |
| R337 | Resistor, chip805 | 10 Mohm | 13106 |
| R338 | Resistor, chip603 | Not used | |
| R339 | Resistor, chip603 | Not used | |
| R340 | Resistor, chip603 | Not used | |
| R341 | Resistor, chip603 | Not used | |
| R342 | Resistor, ntc | Not used | |
| R343 | Resistor, chip603 | Not used | |
| R344 | Resistor, chip603 | Not used | |
| R345 | Resistor, chip603 | Not used | |
| R346 | Resistor, chip603 | Not used | |

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| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Partlist for Radioboard TRX1001B Drawing No. 0-9625-03-4 | | Date 31-08-2004 | Unit No. 5603 |
|---|---------------------|-----------------|---------------|
| Component | Description | Value | Niros No. |
| R347 | Resistor,chip603 | Not used | |
| R348 | Resistor,ntc | Not used | |
| R349 | Resistor,chip603 | 10 Kohm | 14103 |
| R350 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R401 | Resistor,chip603 | 100 Ohm | 14101 |
| R402 | Resistor,chip603 | 1 Mohm | 14105 |
| R403 | Resistor,chip603 | 33 Ohm | 14330 |
| R404 | Resistor,chip603 | 560 Ohm | 14561 |
| R405 | Resistor,chip603 | 100 Kohm | 14104 |
| R406 | Resistor,chip603 | 10 Kohm | 14103 |
| R407 | Resistor,chip603 | 33 Kohm | 14333 |
| R408 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R409 | Resistor,chip805_1% | 182 Kohm | 10901 |
| R410 | Resistor,chip603 | 470 Ohm | 14471 |
| R411 | Resistor,chip603 | 100 Ohm | 14101 |
| R412 | Resistor,chip603 | 10 Kohm | 14103 |
| R413 | Resistor,chip603 | 180 Kohm | 14184 |
| R414 | Resistor,chip603 | 100 Kohm | 14104 |
| R415 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R416 | Resistor,chip603 | 5,6 Ohm | 14569 |
| R417 | Resistor,chip603 | 100 Ohm | 14101 |
| R418 | Resistor,chip603 | 680 Kohm | 14684 |
| R419 | Resistor,chip603 | 100 Ohm | 14101 |
| R420 | Resistor,chip603 | 100 Ohm | 14101 |
| R421 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R422 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R423 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R424 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R425 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R426 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R427 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R428 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R429 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R430 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R431 | Resistor,chip603 | 100 Ohm | 14101 |
| R432 | Resistor,chip603 | 100 Kohm | 14104 |
| R433 | Resistor,chip603 | 5,1 Kohm | 14512 |
| P101 | Resistor,pre_set | 1 Kohm | 19034 |
| C101 | Capacitor,chip603 | 1 nF | 21102 |
| C102 | Capacitor,chip603 | 1 nF | 21102 |
| C103 | Capacitor,chip603 | 22 nF | 21223 |
| C104 | Capacitor,chip603 | 22 nF | 21223 |

Partlist for Radioboard TRX1001B
Drawing No. 0-9625-03-4

Date 31-08-2004
Unit No. 5603

| Component | Description | Value | Niros No. |
|-----------|----------------------|-------------|-----------|
| C105 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C106 | Capacitor,chip603 | 22 nF | 21223 |
| C107 | Capacitor,chip603 | 1 nF | 21102 |
| C108 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C109 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C110 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C111 | Capacitor,chip805 | 330 nF | 20662 |
| C112 | Capacitor,chip805 | 100 nF | 20654 |
| C113 | Capacitor,chip805 | 100 nF | 20654 |
| C114 | Capacitor,chip805 | 330 nF | 20662 |
| C115 | Capacitor,chip603 | 22 nF | 21223 |
| C116 | Capacitor,chip603 | 22 nF | 21223 |
| C117 | Capacitor,chip805 | 100 nF | 20654 |
| C118 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C119 | Capacitor,chip603 | 10 nF | 21103 |
| C120 | Capacitor,chip603 | 22 nF | 21223 |
| C121 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C122 | Capacitor,chip603 | 1 nF | 21102 |
| C123 | Capacitor,chip603 | 1 nF | 21102 |
| C124 | Capacitor,chip603 | 1 nF | 21102 |
| C125 | Capacitor,chip603 | 22 nF | 21223 |
| C126 | Capacitor,chip603 | Not used | |
| C127 | Capacitor,chip603 | 22 nF | 21223 |
| C128 | Capacitor,chip603 | 1 nF | 21102 |
| C129 | Capacitor,chip603 | 39 pF | 21390 |
| C130 | Capacitor,chip603 | 6,8 pF | 21689 |
| C131 | Capacitor,chip603 | 1 nF | 21102 |
| C132 | Capacitor,chip603 | 1 nF | 21102 |
| C133 | Capacitor,chip603 | 56 pF | 21560 |
| C134 | Capacitor,chip603 | 15 pF | 21150 |
| C135 | Capacitor,chip603 | 33 pF | 21330 |
| C136 | Capacitor,chip603 | 1 nF | 21102 |
| C137 | Capacitor,chip603 | 1 nF | 21102 |
| C138 | Capacitor,chip603 | 1 nF | 21102 |
| C139 | Capacitor,chip603 | 56 pF | 21560 |
| C140 | Capacitor,chip603 | 15 pF | 21150 |
| C141 | Capacitor,chip603 | 33 pF | 21330 |
| C142 | Capacitor,chip603 | 1 nF | 21102 |
| C143 | Capacitor,chip603 | Not used | |
| C201 | Capacitor,chip805 | 100 nF | 20654 |
| C202 | Capacitor,chip603 | 47 pF | 21470 |
| C203 | Capacitor,chip603 | 220 pF | 21221 |
| C204 | Capacitor,chip603 | 10 nF | 21103 |
| C205 | Capacitor,chip603 | 10 nF | 21103 |
| C206 | Capacitor,chip603 | 10 nF | 21103 |

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| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

Partlist for Radioboard TRX1001B
Drawing No. 0-9625-03-4

Date 31-08-2004
Unit No. 5603

| Component | Description | Value | Niros No. |
|-----------|---------------------------|-------------|-----------|
| C207 | Capacitor,chip603 | 220 pF | 21221 |
| C208 | Capacitor,chip603 | 56 pF | 21560 |
| C209 | Capacitor,chip603 25KHZ | 10 pF | 21100 |
| | Capacitor,chip603 12,5KHZ | 18 pF | 21180 |
| | Capacitor,chip603 20KHZ | 10 pF | 21100 |
| C210 | Capacitor,chip603 | 10 nF | 21103 |
| C211 | Capacitor,chip603 | 10 nF | 21103 |
| C212 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C213 | Capacitor,chip805 | 100 nF | 20654 |
| C214 | Capacitor,chip805 | 100 nF | 20654 |
| C215 | Capacitor,chip603 | 10 nF | 21103 |
| C216 | Capacitor,chip805 | 100 nF | 20654 |
| C217 | Capacitor,chip603 | 1 nF | 21102 |
| C218 | Capacitor,chip603 | 1 nF | 21102 |
| C219 | Capacitor,chip603 | 180 pF | 21181 |
| C220 | Capacitor,chip603 | 180 pF | 21181 |
| C221 | Capacitor,chip603 | 100 pF | 21101 |
| C222 | Capacitor,chip603 | 10 nF | 21103 |
| C223 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C224 | Capacitor,chip805 | 100 nF | 20654 |
| C225 | Capacitor,chip805 | 100 nF | 20654 |
| C226 | Capacitor,chip603 | 10 nF | 21103 |
| C227 | Capacitor,chip603 | 10 nF | 21103 |
| C228 | Capacitor,chip603 | 10 nF | 21103 |
| C229 | Capacitor,chip603 | 10 nF | 21103 |
| C230 | Capacitor,chip603 | 22 nF | 21223 |
| C231 | Capacitor,chip805 | 100 nF | 20654 |
| C232 | Capacitor,chip603 | 10 nF | 21103 |
| C233 | Capacitor,chip603 25KHZ | Not used | |
| | Capacitor,chip603 12,5KHZ | 5,6 pF | 21569 |
| | Capacitor,chip603 20KHZ | Not used | |
| C301 | Capacitor,chip603 | 220 pF | 21221 |
| C302 | Capacitor,chip603 | 1 nF | 21102 |
| C303 | Capacitor,chip603 | 100 pF | 21101 |
| C304 | Capacitor,chip603 | 15 pF | 21150 |
| C305 | Capacitor,chip603 | 150 pF | 21151 |
| C306 | Capacitor,ctan_a | 6,8 uF/10V | 25619 |
| C307 | Capacitor,chip603 | 1 nF | 21102 |
| C308 | Capacitor,ctan_a | 6,8 uF/10V | 25619 |
| C309 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C310 | Capacitor,chip805 | 100 nF | 20654 |
| C311 | Capacitor,chip603 | 1 nF | 21102 |
| C312 | Capacitor,chip603 | 1 nF | 21102 |
| C313 | Capacitor,chip603 | 1 nF | 21102 |
| C314 | Capacitor,chip603 | 47 nF | 21473 |

Partlist for Radioboard TRX1001B
Drawing No. 0-9625-03-4

Date 31-08-2004
Unit No. 5603

| Component | Description | Value | Niros No. |
|-----------|------------------------|-------------|-----------|
| C315 | Capacitor,chip603 | 1 nF | 21102 |
| C316 | Capacitor,chip603 | 330 pF | 21331 |
| C317 | Capacitor,chip805 | 100 nF | 20654 |
| C318 | Capacitor,chip603 | 150 pF | 21151 |
| C319 | Capacitor,chip603 | 150 pF | 21151 |
| C320 | Capacitor,chip603 | 100 pF | 21101 |
| C321 | Capacitor,chip603 | 100 pF | 21101 |
| C322 | Capacitor,chip603 | 10 nF | 21103 |
| C323 | Capacitor,chip603 | 150 pF | 21151 |
| C324 | Capacitor,chip603 | 150 pF | 21151 |
| C325 | Capacitor,chip603 | 47 pF | 21470 |
| C326 | Capacitor,chip805 | 100 nF | 20654 |
| C327 | Capacitor,chip603 | 47 pF | 21470 |
| C328 | Capacitor,chip603 | 27 pF | 21270 |
| C329 | Capacitor,chip603 | 6,8 pF | 21689 |
| C330 | Capacitor,var | 2-10 pF | 25116 |
| C331 | Capacitor,chip603 | 3,9 pF | 21399 |
| C332 | Capacitor,chip603_n750 | Not used | |
| C333 | Capacitor,chip603 | Not used | |
| C334 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C335 | Capacitor,chip805_ln | 22 nF | 20804 |
| C336 | Capacitor,chip603_ln | 1,5 nF | 20802 |
| C337 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C338 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C339 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C340 | Capacitor,chip603_ln | Not used | |
| C341 | Capacitor,chip1206 | 330 nF | 20652 |
| C342 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C343 | Capacitor,chip1206 | 330 nF | 20652 |
| C344 | Capacitor,chip1206 | 330 nF | 20652 |
| C345 | Capacitor,chip603_ln | Not used | |
| C346 | Capacitor,chip805 | Not used | |
| C347 | Capacitor,chip805 | Not used | |
| C348 | Capacitor,chip603 | Not used | |
| C349 | Capacitor,chip603 | Not used | |
| C350 | Capacitor,chip603 | 10 nF | 21103 |
| C351 | Capacitor,chip603 | Not used | |
| C352 | Capacitor,chip603 | Not used | |
| C353 | Capacitor,chip603 | Not used | |
| C401 | Capacitor,chip603 | 10 nF | 21103 |
| C402 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C403 | Capacitor,chip603 | 1 nF | 21102 |
| C404 | Capacitor,chip805_ln | 22 nF | 20804 |
| C405 | Capacitor,chip805_ln | 22 nF | 20804 |
| C406 | Capacitor,chip603 | 22 nF | 21223 |

p. 7 of 10

PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Partlist for Radioboard TRX1001B Drawing No. 0-9625-03-4 | | | Date 31-08-2004 | Unit No. 5603 |
|---|-------------------|------------|-----------------|---------------|
| Component | Description | Value | Niros No. | |
| C407 | Capacitor,chip603 | 10 nF | 21103 | |
| C408 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C409 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C410 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C411 | Capacitor,chip603 | 1 nF | 21102 | |
| C412 | Capacitor,chip805 | 100 nF | 20654 | |
| C413 | Capacitor,chip603 | 220 pF | 21221 | |
| C414 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C415 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C416 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C417 | Capacitor,chip805 | 100 nF | 20654 | |
| C418 | Capacitor,chip603 | 220 pF | 21221 | |
| C419 | Capacitor,chip603 | 220 pF | 21221 | |
| C420 | Capacitor,chip603 | 10 nF | 21103 | |
| C421 | Capacitor,chip603 | 220 pF | 21221 | |
| C422 | Capacitor,chip603 | Not used | | |
| C423 | Capacitor,chip603 | Not used | | |
| C424 | Capacitor,chip603 | 10 nF | 21103 | |
| C425 | Capacitor,chip603 | 22 pF | 21220 | |
| F101 | Filter | 4N7 | 75906 | |
| F201-202 | Crystal-filter | 25KHZ | 45F15B | 30021 |
| | Crystal-filter | 12,5KHZ | 45F7B | 30022 |
| | Crystal-filter | 20KHZ | 45F15B | 30021 |
| F203 | Ceramic-filter | 25KHZ | CFWM450D | 30061 |
| | Ceramic-filter | 12,5KHZ | CFWM450G | 30063 |
| | Ceramic-filter | 20KHZ | CFWM450F | 30064 |
| F401 | Filter | 4N7 | 75906 | |
| X301 | Crystal | 14.85 MHz | 31190 | |
| T101 | Transistor | BC807-40 | 40186 | |
| T102 | Transistor | BFR92A | 40150 | |
| T103 | Transistor | BCW60D | 40156 | |
| T104 | Transistor | BCW60D | 40156 | |
| T105 | Transistor | BCW60D | 40156 | |
| T106 | Transistor | BCW61D | 40157 | |
| T107 | Transistor | BCW60D | 40156 | |
| T108 | Transistor | BCW60D | 40156 | |
| T109 | Transistor | ZTX949 | 40190 | |
| T201 | Transistor | BCW60D | 40156 | |
| T202 | Transistor | BFR92A | 40150 | |
| T203 | Transistor | BF990A | 40187 | |
| T204 | Transistor | BFR92A | 40150 | |

Partlist for Radioboard TRX1001B
Drawing No. 0-9625-03-4

Date 31-08-2004
Unit No. 5603

| Component | Description | Value | Niros No. |
|-----------|--------------------|------------|-----------|
| T205 | Transistor | BCW61D | 40157 |
| T301 | Transistor | BFR92A | 40150 |
| T302 | Transistor | BFR92A | 40150 |
| T303 | Transistor | BCW61D | 40157 |
| T304 | Transistor | BCW60D | 40156 |
| T305 | Transistor | BFR92A | 40150 |
| T306 | Transistor | BCW60D | 40156 |
| T401 | Transistor | BCW60D | 40156 |
| T402 | Transistor | BCW61D | 40157 |
| T403 | Transistor | BCW60D | 40156 |
| T404 | Transistor | BC868-25 | 40188 |
| D102 | Diode | BAV99 | 45148 |
| D103 | Diode | BA682 | 45152 |
| D104 | Diode | MA4P1250 | 45171 |
| D105 | Diode | MA4P1250 | 45171 |
| D106 | Diode | MA4P1250 | 45171 |
| D107 | Diode | BAT54S | 45173 |
| D201 | Diode | BAT17-04 | 45172 |
| D202 | Diode | BAV99 | 45148 |
| D301 | Diode, kap | Not used | |
| D302 | Diode | Not used | |
| D401 | Diode | BAV99 | 45148 |
| D402 | Diode, zener | LM385-1.2 | 45166 |
| D403 | Diode | BAT54S | 45173 |
| D404 | Diode | BAV99 | 45148 |
| IC101 | Integrated_circuit | LPC662 | 46244 |
| IC102 | Integrated_circuit | MHW105 | 46291 |
| IC103 | Integrated_circuit | TC4S66F | 46250 |
| IC201 | Integrated_circuit | MC3371 | 46247 |
| IC202 | Integrated_circuit | TLC27L2T | 46222 |
| IC301 | Integrated_circuit | SP8705 | 46248 |
| IC302 | Integrated_circuit | NJ88C33 | 46249 |
| IC303 | Integrated_circuit | TC4S66F | 46250 |
| IC304 | Integrated_circuit | TC4S66F | 46250 |
| IC305 | Integrated_circuit | LPC662 | 46244 |
| IC306 | Integrated_circuit | Not used | |
| IC401 | Integrated_circuit | 40106BT | 46116 |
| IC402 | Integrated_circuit | TC7S32F | 46252 |
| IC403 | Integrated_circuit | TC7S32F | 46252 |
| IC404 | Integrated_circuit | PIC16CE624 | 46621 |
| IC405 | Integrated_circuit | TC4S584F | 46207 |

p. 9 of 10

PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

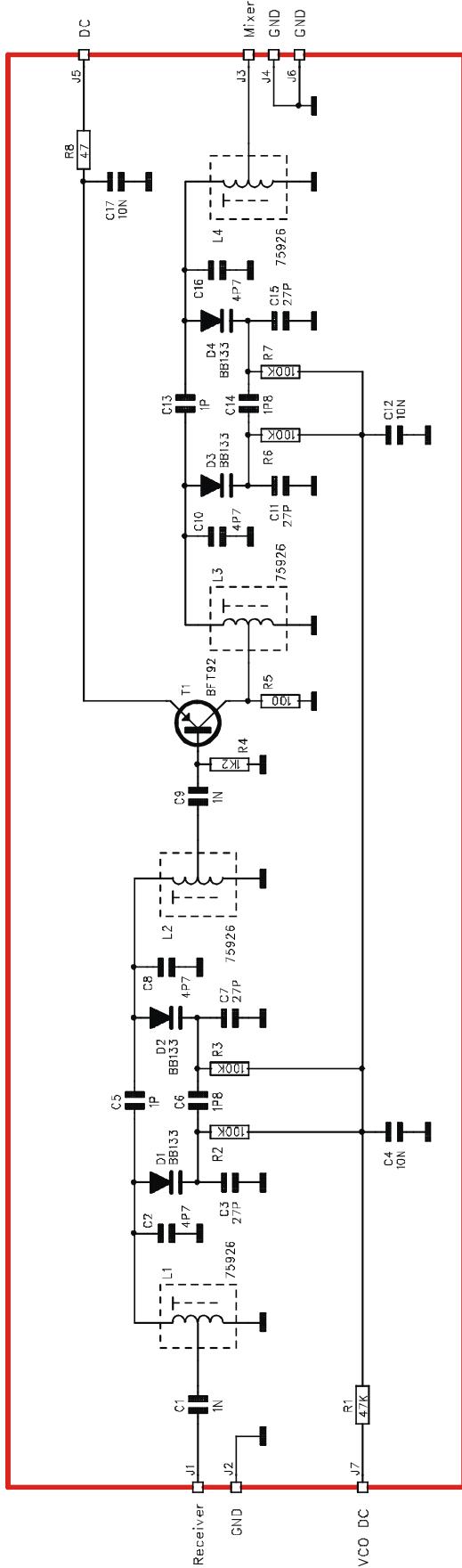
| Partlist for Radioboard TRX1001B Drawing No. 0-9625-03-4 | | Date 31-08-2004 Unit No. 5603 | |
|---|--------------------------|----------------------------------|-----------|
| Component | Description | Value | Niros No. |
| TR201 | Trafo | 75904 | 75904 |
| L101 | Coil,chip | 75877 | 75877 |
| L102 | Coil,chip | 75877 | 75877 |
| L103 | Coil,chip | 75877 | 75877 |
| L104 | Coil,chip | 75883 | 75883 |
| L105 | Coil | 75927 | 75927 |
| L106 | Coil,chip | 75883 | 75883 |
| L107 | Coil | 75928 | 75928 |
| L108 | Coil,chip | 75883 | 75883 |
| L109 | Coil | 75928 | 75928 |
| L201 | Coil_chip | 76008 | 76008 |
| L202 | Coil,chip | 75879 | 75879 |
| L203 | Coil,chip | 75883 | 75883 |
| L204 | Coil | 75901 | 75901 |
| L301 | Coil,chip | 75877 | 75877 |
| L302 | Coil_chip | 76008 | 76008 |
| L303 | Coil | 75900 | 75900 |
| L401 | Coil,chip | 75883 | 75883 |
| J1 | Connector_12pol | | 83315 |
| AB1 | Connector_pin | | 83245 |
| AB2 | Connector_pin | | 83245 |
| AB3 | Connector_pin | | 83245 |
| AB4 | Connector_pin | | 83245 |
| A4 | Power_input_terminal | | 97530 |
| | Acryl_tape 64X12 | 1 pcs | 85240 |
| | Washer CW1,6 | 2 pcs | 92024 |
| | Screw M1,6X6 | 2 pcs | 92027 |
| | Screw M1,6X4 | 1 pcs | 92022 |
| | Washer 1,7 | 2 pcs | 93203 |
| | Pc._board_no. 722-3 | 1 pcs | 95722 |
| | Antenna_center_connector | 1 pcs | 97521 |
| | Antenna_gnd_conektor | 1 pcs | 97522 |
| | Heat_sink_PA | 1 pcs | 97524 |
| | Spring_for_PA | 1 pcs | 97576 |
| | Magnetic_shield | 2 pcs | 97577 |
| | Heat_sink_PA | 1 pcs | 98015 |
| | Receiver_gnd_spring | 1 pcs | 98022 |
| | Coax_cable | 1 pcs | 182524 |
| p. 10 of 10 | | PC. Board No. 722-3 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

12. Receiver TRX1012B

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-12-04 | 1 | PA |

12.1 Diagram

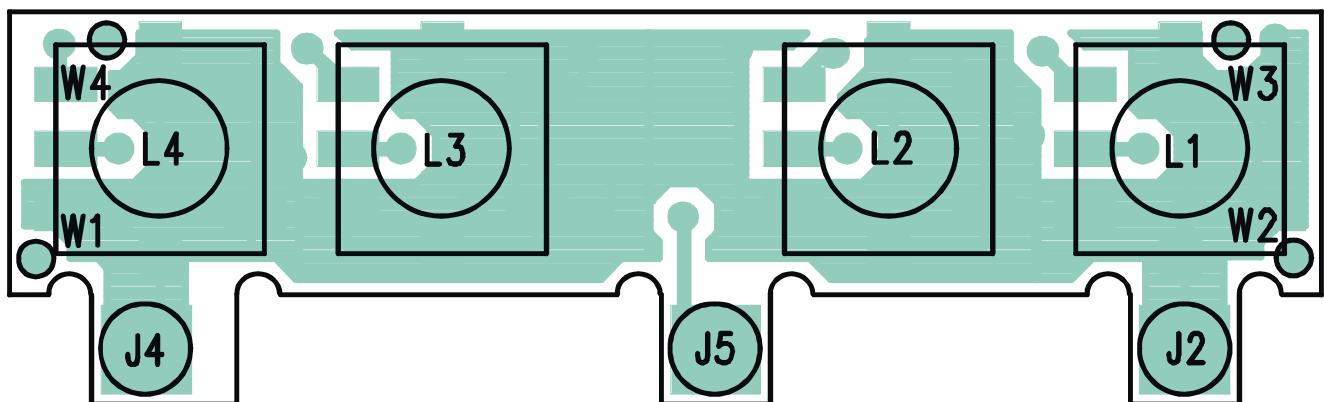


SUBJECT TO CHANGE WITHOUT NOTICE Unit No.: 5623

| | | | |
|---------------------------|---|---|---|
| Date: 14-02-2003 Sign: PH | 2 | NIROS COMMUNICATIONS A/S Hirsemarken 5, 3520 Forum | Receiver board TRX1001B/TRX1012B/TRX1012B-IS |
| Date: 30-03-2004 Sign: HK | 3 | PC. Board No.: 734-1 | Scheduled drawing |
| Drawing No.: 0-9623-03-3 | | | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-12-04 | 1 | PA |

12.2 Componentside



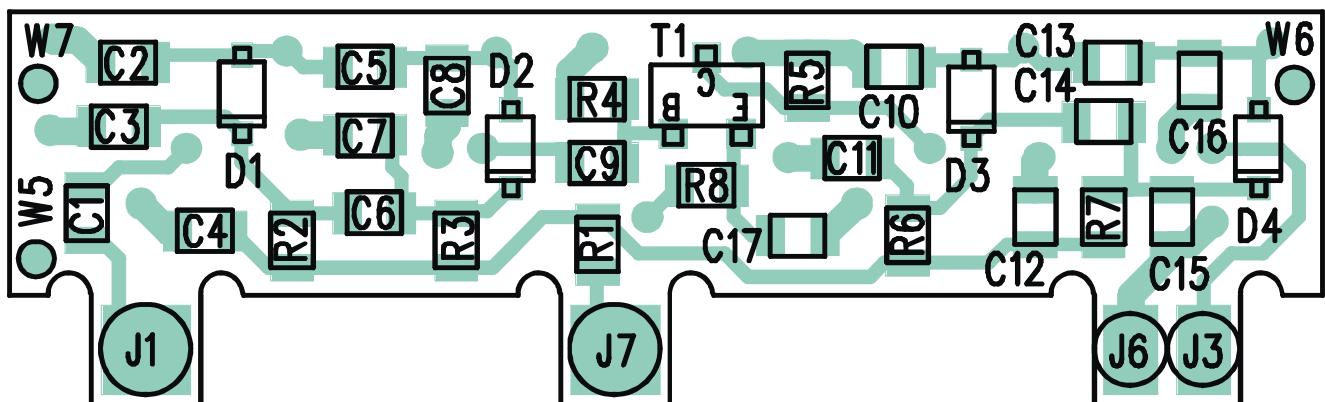
Componentside 734-1

SUBJECT TO CHANGE WITHOUT NOTICE Unit No.: 5623

| | | | |
|---------------------------|---|---|---|
| Date: 14-02-2003 Sign: PH | 2 | NIROS COMMUNICATIONS A/S Hirsemarken 5, 3520 Forum | Receiver board TRX1001B/TRX1012B/TRX1012B-IS |
| Date: 30-03-2004 Sign: HK | 3 | | |
| Drawing No.: D-9623-05-3 | | PC. Board No.: 734-1 | Scheduled drawing |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-12-04 | 1 | PA |

12.3 Wiringside



Wiringside 734-1

SUBJECT TO CHANGE WITHOUT NOTICE Unit No.: 5623

| | | | | |
|---------------------------|---|---|-------------------------------|--|
| Date: 14-02-2003 Sign: PH | 2 | NIROS COMMUNICATIONS A/S Hirsemarken 5, 3520 Forum | Receiver board | |
| Date: 30-03-2004 Sign: HK | 3 | | TRX1001B/TRX1012B/TRX1012B-IS | |
| Drawing No.: 0-9623-04-3 | | PC. Board No.: 734-1 | Scheduled drawing | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-12-04 | 1 | PA |

12.4 Partlist

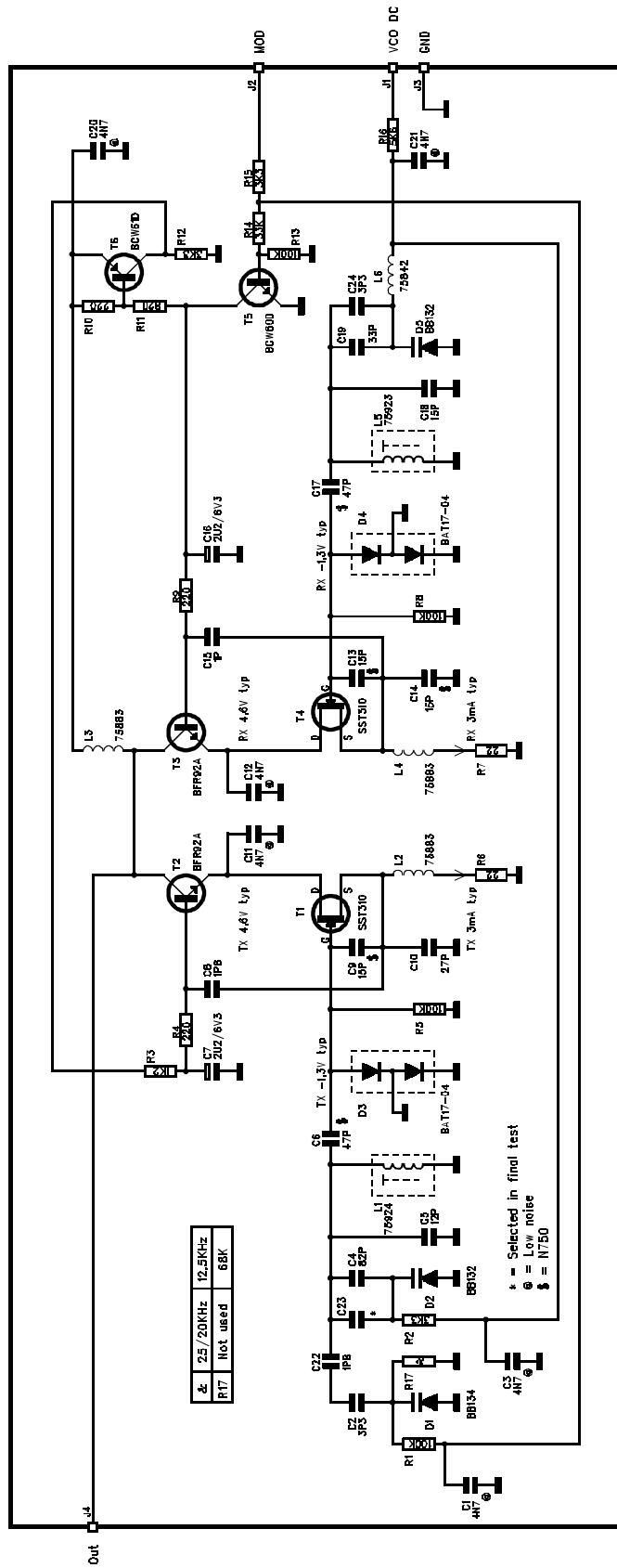
| Partlist for Receiver TRX1001B/1012B/1012B-IS Drawing No. 0-9623-03-3 | | Date 30-03-2004 Scheduled drawing | Unit No. 5623 |
|--|--------------------|--------------------------------------|---------------|
| Component | Description | Value | Niros No. |
| R1 | Resistor, chip603 | 47 Kohm | 14473 |
| R2 | Resistor, chip603 | 100 Kohm | 14104 |
| R3 | Resistor, chip603 | 100 Kohm | 14104 |
| R4 | Resistor, chip603 | 1,2 Kohm | 14122 |
| R5 | Resistor, chip603 | 100 Ohm | 14101 |
| R6 | Resistor, chip603 | 100 Kohm | 14104 |
| R7 | Resistor, chip603 | 100 Kohm | 14104 |
| R8 | Resistor, chip603 | 47 Ohm | 14470 |
| C1 | Capacitor, chip603 | 1 nF | 21102 |
| C2 | Capacitor, chip603 | 4,7 pF | 21479 |
| C3 | Capacitor, chip603 | 27 pF | 21270 |
| C4 | Capacitor, chip603 | 10 nF | 21103 |
| C5 | Capacitor, chip603 | 1 pF | 21109 |
| C6 | Capacitor, chip603 | 1,8 pF | 21189 |
| C7 | Capacitor, chip603 | 27 pF | 21270 |
| C8 | Capacitor, chip603 | 4,7 pF | 21479 |
| C9 | Capacitor, chip603 | 1 nF | 21102 |
| C10 | Capacitor, chip603 | 4,7 pF | 21479 |
| C11 | Capacitor, chip603 | 27 pF | 21270 |
| C12 | Capacitor, chip603 | 10 nF | 21103 |
| C13 | Capacitor, chip603 | 1 pF | 21109 |
| C14 | Capacitor, chip603 | 1,8 pF | 21189 |
| C15 | Capacitor, chip603 | 27 pF | 21270 |
| C16 | Capacitor, chip603 | 4,7 pF | 21479 |
| C17 | Capacitor, chip603 | 10 nF | 21103 |
| T1 | Transistor | BFT92 | 40189 |
| D1 | Diode, kap | BB133 | 45195 |
| D2 | Diode, kap | BB133 | 45195 |
| D3 | Diode, kap | BB133 | 45195 |
| D4 | Diode, kap | BB133 | 45195 |
| L1 | Coil | 75926 | 75926 |
| L2 | Coil | 75926 | 75926 |
| L3 | Coil | 75926 | 75926 |
| L4 | Coil | 75926 | 75926 |
| Pc._board_no. 734-1 | | 1 pcs | 95734 |
| p. 1 of 1 | | | |
| PC. Board No. 734-1 | | | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-12-04 | 1 | PA |

13. VCO-board TRX1012B

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 06-09-98 | 1 | PA |

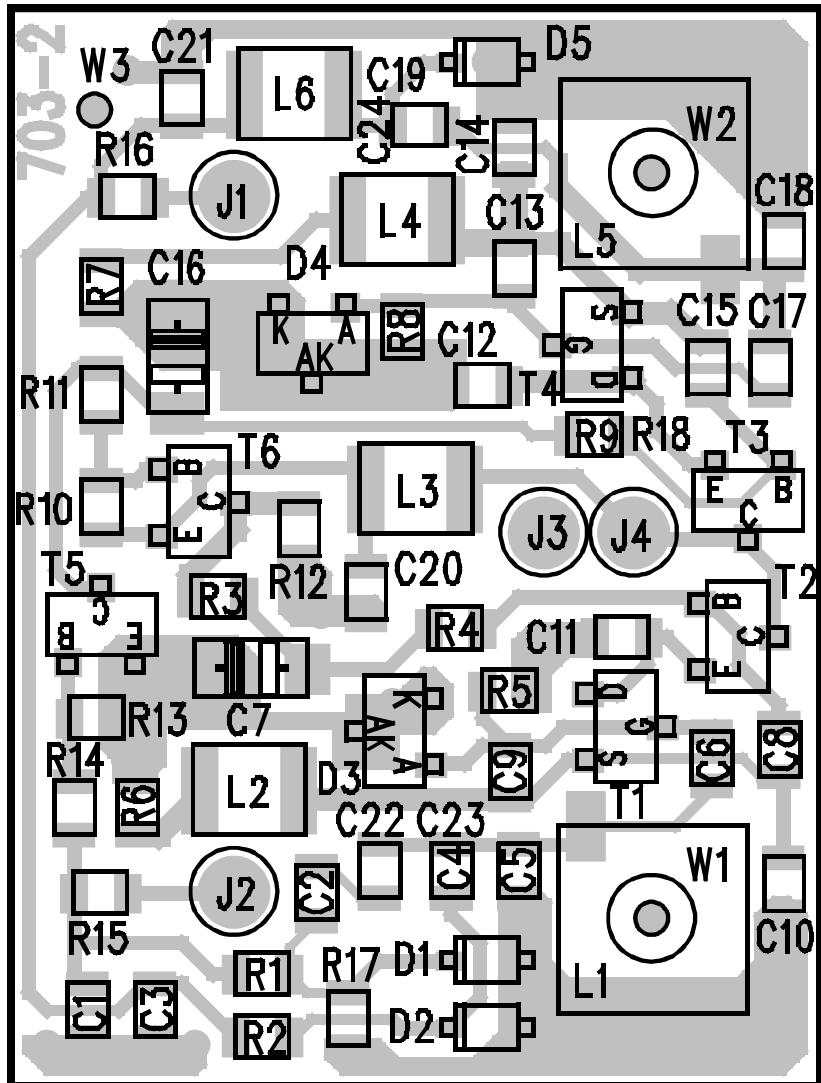
13.1 Diagram



| SUBJECT TO CHANGE WITHOUT NOTICE | | 25/20kHz | UNIT NO: 5843 |
|----------------------------------|----------|---------------|-----------------------------|
| | | 12.5kHz | UNIT NO: 5844 |
| DATE: 27-10-93 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 2-9-99 | SIGN: PH | 1 | HØSEMARKEN 5, 3520 FARUM |
| DATE: | SIGN: | | |
| DATE: | SIGN: | | VCO-board |
| DATE: | SIGN: | | TRX1001B/TRX1012B |
| DATE: | SIGN: | | |
| DRAWING NO: 0-9826-03-1 | | PCB NO: 703-2 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 06-09-98 | 1 | PA |

13.2 Componentside



Componentside 703-2

| | | |
|---|----------|--------------------------------|
| SUBJECT TO CHANGE WITHOUT NOTICE | | 25/20kHz UNIT NO: 5643 |
| DATE: | SIGN: PH | D |
| DATE: 2-9-99 | SIGN: PH | 1 |
| DATE: | SIGN: | |
| DRAWING NO: 0-9826-05-1 | | PCB NO: 703-2 |
| NIROS TELECOMMUNICATION A/S HØSEMARKEN 5, 3520 FARUM | | VCD-board TRX1001B/TRX1012B |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 06-09-98 | 1 | PA |

13.3 Partlist

| PARTLIST FOR VCO-board TRX1001B/TRX1012B DRAWING NO. 0-9626-03-1 | | | DATE 1-9-1999 | UNIT NO. 5643 |
|---|----------------------------|------------|---------------|---------------|
| Component | Description | Value | Niros No. | |
| | VCO-board 25/20KHZ | | 5643 | |
| | VCO-board 12,5KHZ | | 5644 | |
| R1 | Resistor, chip603 | 100 Kohm | 14104 | |
| R2 | Resistor, chip603 | 3,3 Kohm | 14332 | |
| R3 | Resistor, chip603 | 1,2 Kohm | 14122 | |
| R4 | Resistor, chip603 | 220 Ohm | 14221 | |
| R5 | Resistor, chip603 | 100 Kohm | 14104 | |
| R6 | Resistor, chip603 | 22 Ohm | 14220 | |
| R7 | Resistor, chip603 | 22 Ohm | 14220 | |
| R8 | Resistor, chip603 | 100 Kohm | 14104 | |
| R9 | Resistor, chip603 | 220 Ohm | 14221 | |
| R10 | Resistor, chip603 | 220 Ohm | 14221 | |
| R11 | Resistor, chip603 | 820 Ohm | 14821 | |
| R12 | Resistor, chip603 | 3,3 Kohm | 14332 | |
| R13 | Resistor, chip603 | 100 Kohm | 14104 | |
| R14 | Resistor, chip603 | 33 Kohm | 14333 | |
| R15 | Resistor, chip603 | 3,3 Kohm | 14332 | |
| R16 | Resistor, chip603 | 5,6 Kohm | 14562 | |
| R17 | Resistor, chip603 25/20KHZ | Not used | | |
| | Resistor, chip603 12,5KHZ | 68 Kohm | 14683 | |
| C1 | Capacitor, chip603_ln | 4,7 nF | 20803 | |
| C2 | Capacitor, chip603 | 3,3 pF | 21339 | |
| C3 | Capacitor, chip603_ln | 4,7 nF | 20803 | |
| C4 | Capacitor, chip603 | 82 pF | 21820 | |
| C5 | Capacitor, chip603 | 12 pF | 21120 | |
| C6 | Capacitor, chip603_n750 | 47 pF | 20816 | |
| C7 | Capacitor, ctan_a | 2,2 uF/6V3 | 25602 | |
| C8 | Capacitor, chip603 | 1,8 pF | 21189 | |
| C9 | Capacitor, chip603_n750 | 15 pF | 20808 | |
| C10 | Capacitor, chip603 | 27 pF | 21270 | |
| C11 | Capacitor, chip603_ln | 4,7 nF | 20803 | |
| C12 | Capacitor, chip603_ln | 4,7 nF | 20803 | |
| C13 | Capacitor, chip603_n750 | 15 pF | 20808 | |
| C14 | Capacitor, chip603_n750 | 15 pF | 20808 | |
| C15 | Capacitor, chip603 | 1 pF | 21109 | |
| C16 | Capacitor, ctan_a | 2,2 uF/6V3 | 25602 | |
| C17 | Capacitor, chip603_n750 | 47 pF | 20816 | |
| C18 | Capacitor, chip603 | 15 pF | 21150 | |
| C19 | Capacitor, chip603 | 33 pF | 21330 | |
| C20 | Capacitor, chip603_ln | 4,7 nF | 20803 | |
| C21 | Capacitor, chip603_ln | 4,7 nF | 20803 | |
| C22 | Capacitor, chip603 | 1,8 pF | 21189 | |

p. 1 of 2

PC. Board No. 703-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 06-09-98 | 1 | PA |

PARTLIST FOR VCO-board TRX1001B/TRX1012B
DRAWING NO. 0-9626-03-1

DATE 1-9-1999
UNIT NO. 5643

| Component | Description | Value | Niros No. |
|-----------|---------------------|----------|-----------|
| C23 | Capacitor,chip603 | Selected | |
| C24 | Capacitor,chip603 | 3,3 pF | 21339 |
| T1 | Transistor | SST310 | 40175 |
| T2 | Transistor | BFR92A | 40150 |
| T3 | Transistor | BFR92A | 40150 |
| T4 | Transistor | SST310 | 40175 |
| T5 | Transistor | BCW60D | 40156 |
| T6 | Transistor | BCW61D | 40157 |
| D1 | Diode,kap | BB134 | 45196 |
| D2 | Diode,kap | BB132 | 45194 |
| D3 | Diode | BAT17-04 | 45172 |
| D4 | Diode | BAT17-04 | 45172 |
| D5 | Diode,kap | BB132 | 45194 |
| L1 | Coil | 75924 | 75924 |
| L2 | Coil,chip | 75883 | 75883 |
| L3 | Coil,chip | 75883 | 75883 |
| L4 | Coil,chip | 75883 | 75883 |
| L5 | Coil | 75923 | 75923 |
| L6 | Coil,chip | 75842 | 75842 |
| J1 | Connector_pin | | 83251 |
| J2 | Connector_pin | | 83251 |
| J3 | Connector_pin | | 83251 |
| J4 | Connector_pin | | 83251 |
| | Mylar_for_shield | 1 pcs | 85415 |
| | Pc._board_no. 703-2 | 1 pcs | 95703 |
| | Shield | 1 pcs | 97523 |

p. 2 of 2

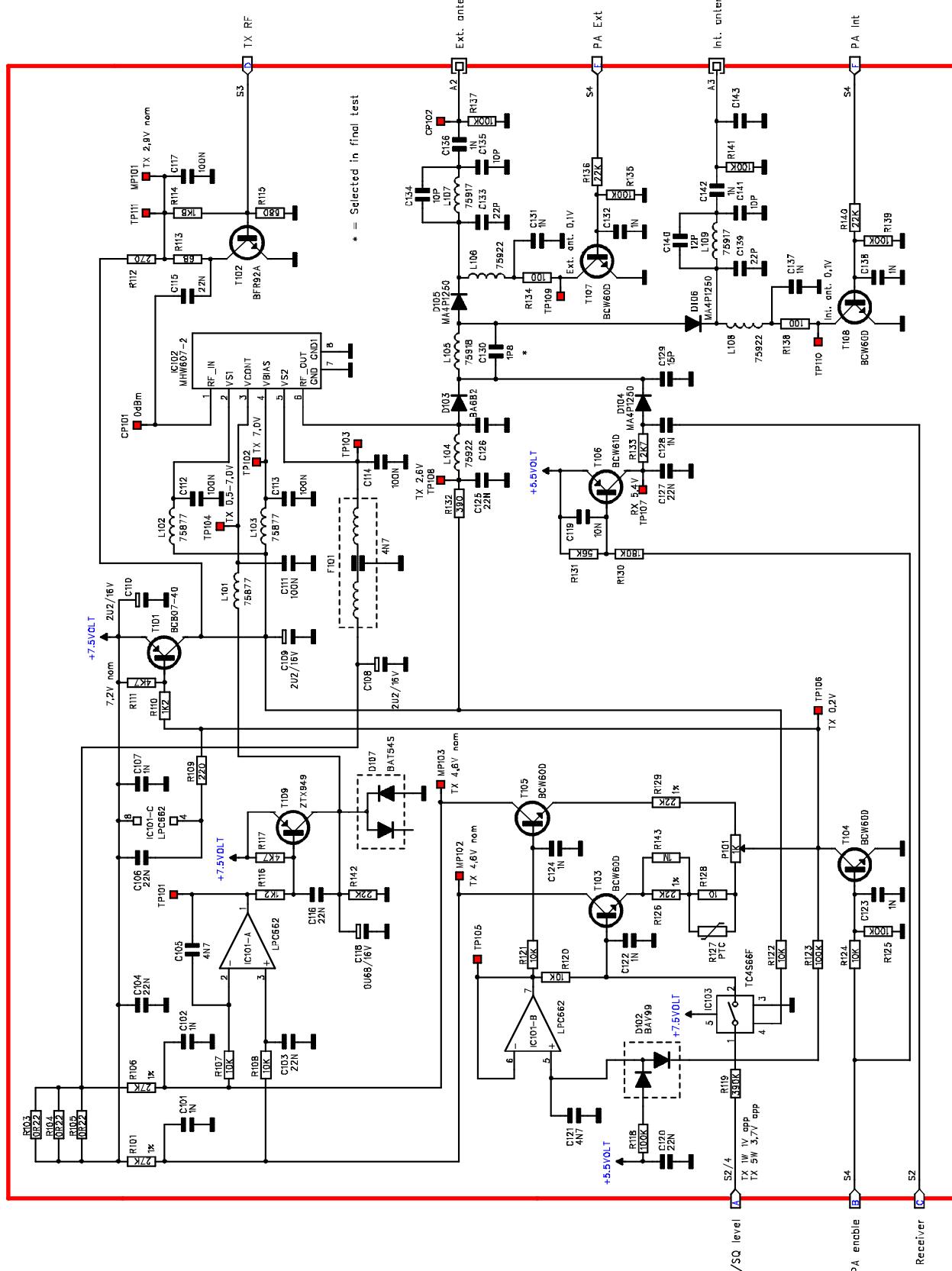
PC. Board No. 703-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 06-09-98 | 1 | PA |

14. Radioboard TRX1012C

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

14.1 Diagram



DC voltages are measured with 10Mohm instrument.

AC voltages

RX measurements are made with -50dBm RF

SUBJECT TO CHANGE WITHOUT NOTICE

25 KHz Unit No. : 5602
 12,5 KHz Unit No. : 5612
 20 KHz Unit No. : 5617

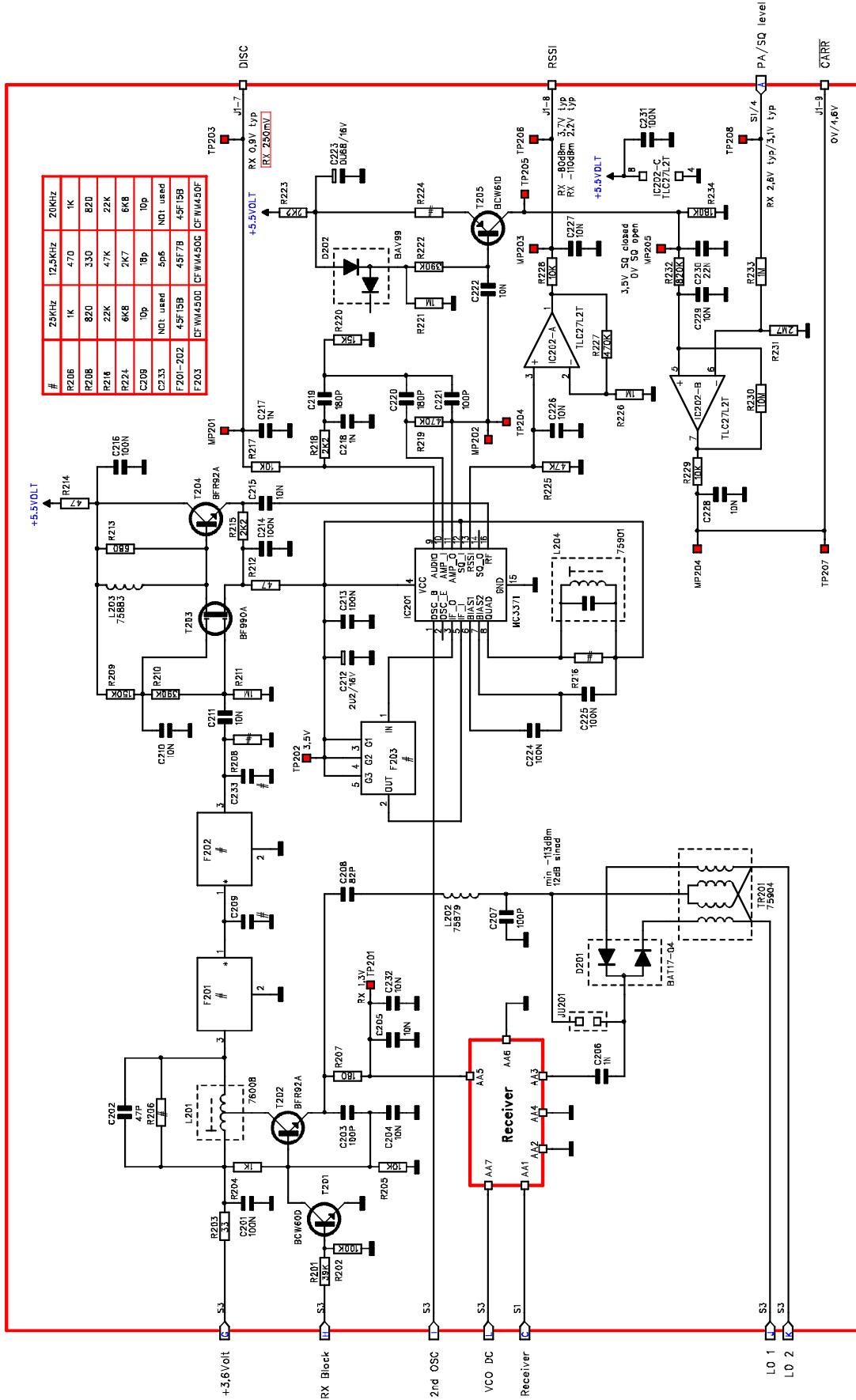
Date: 21-10-2002 Sign: PH 5
 Date: 30-08-2004 Sign: PH 6
 Drawing No.: 0-9613-03-6 p 1 of 4

NIROS COMMUNICATIONS A/S
 Hirsemarken 5, 3520 Forum

Radioboard TRX1001C

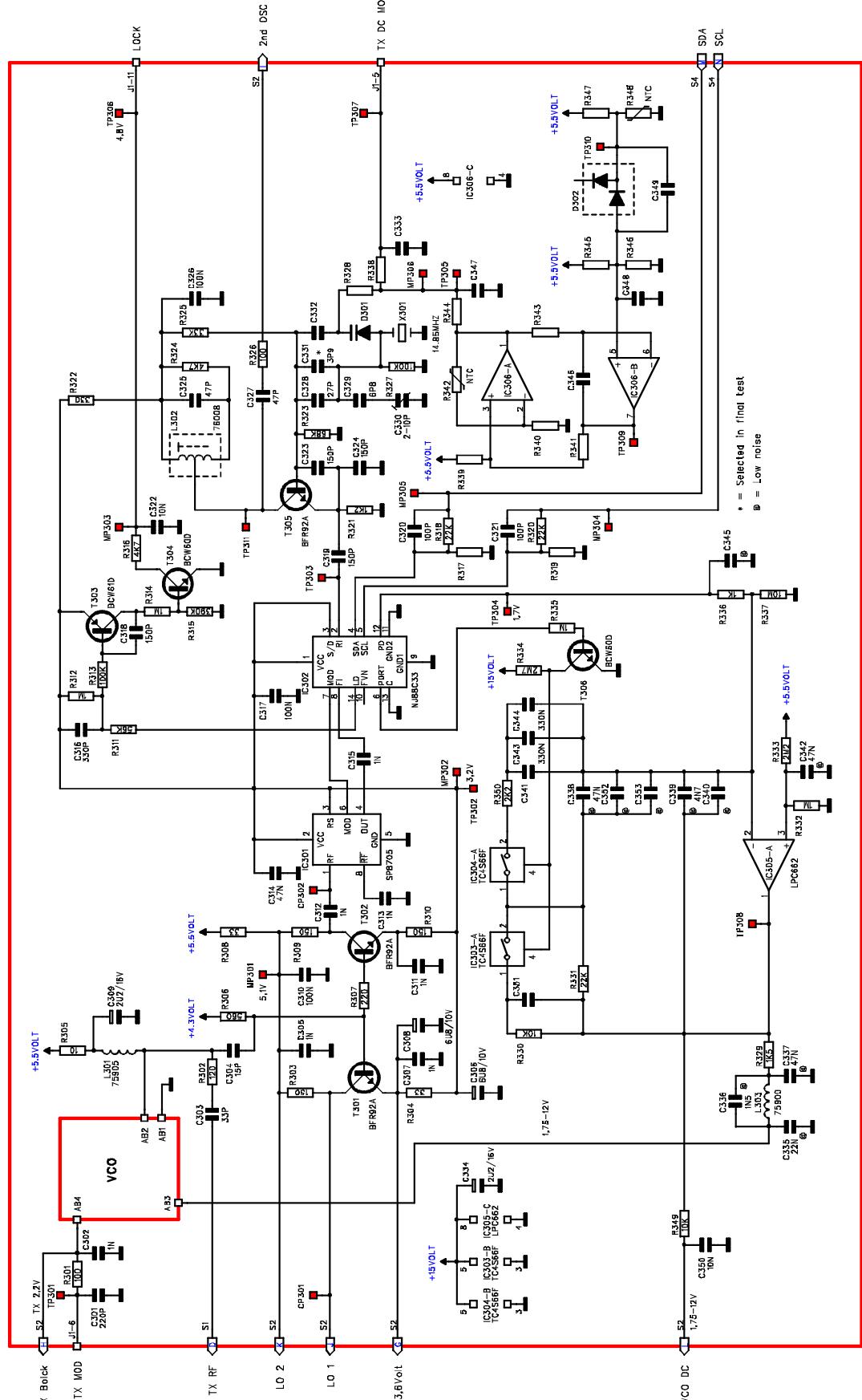
PC. Board No.: 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

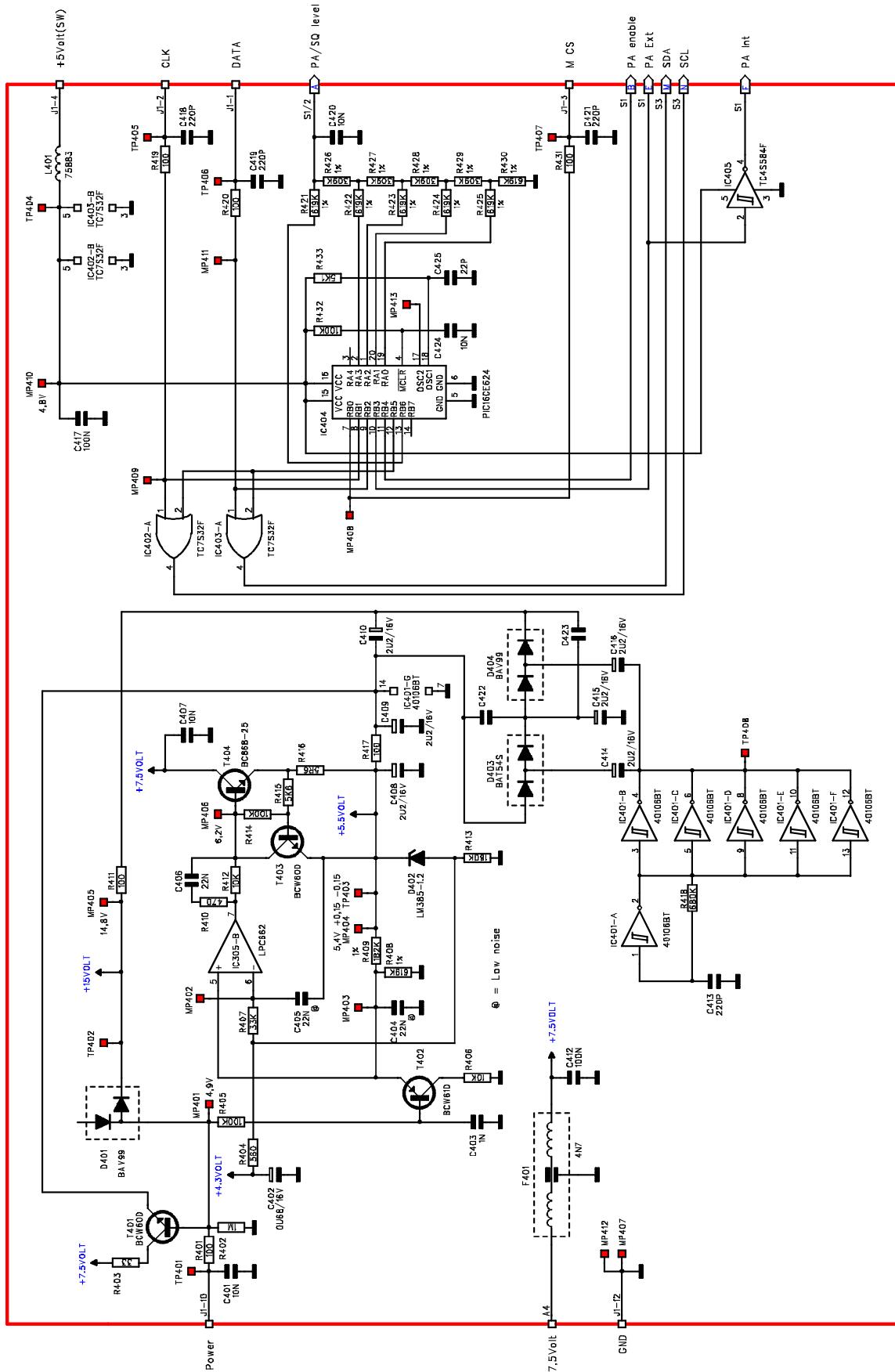


DC voltages are measured with 10kOhm instrument.
AC voltages
RX measurements are made with -50dBm RF

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |



| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |



SUBJECT TO CHANGE WITHOUT NOTICE

25 KHz Unit No. : 5602
 12,5 KHz Unit No. : 5612
 20 KHz Unit No. : 5617

Date: 21-10-2002 Sign: PH
 Date: 30-08-2004 Sign: PH
 Drawing No.: 0-9613-03-8 p 4 of 4

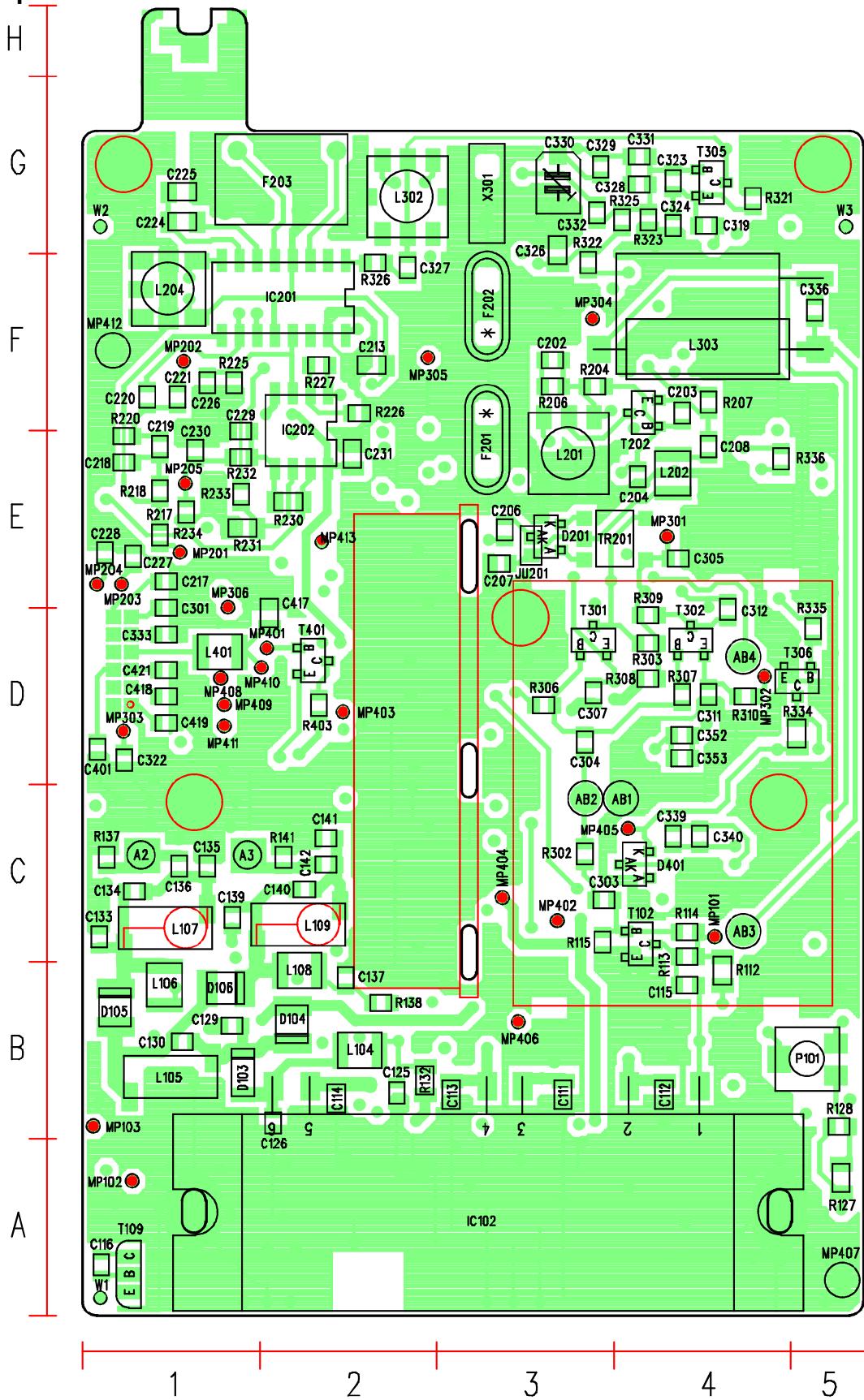
5
 6
 PC. Board No.: 722-3

NIROS COMMUNICATIONS A/S
 Hirsemarken 5, 352D Forum

Radioboard TRX1001C

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

14.2 Componentside



Componentside 722-3

SUBJECT TO CHANGE WITHOUT NOTICE

25 KHz Unit No. : 5602
 12,5 KHz Unit No. : 5612
 2D KHz Unit No. : 5617

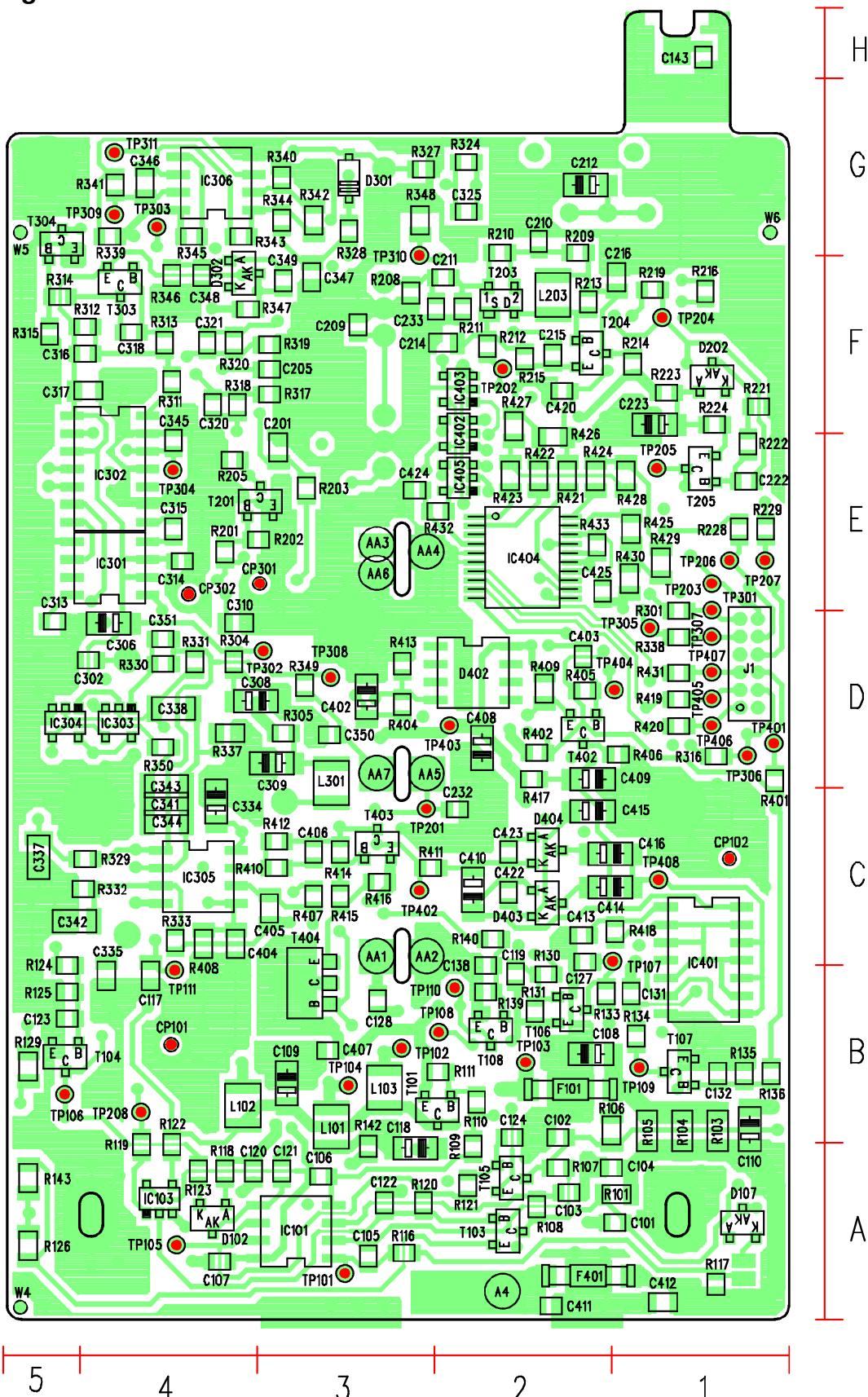
Date: 21-10-2002 Sign: PH 5
 Date: 30-08-2004 Sign: PH 6
 Drawing No.: 0-9613-05-6

NIROS COMMUNICATIONS A/S
 Hirsemarken 5, 3520 Forum
 PC. Board No.: 722-3

Radioboard TRX1001C

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

14.3 Wiringside



Wiringside 722-3

SUBJECT TO CHANGE WITHOUT NOTICE

25 KHz Unit No. : 5602
 12,5 KHz Unit No. : 5612
 20 KHz Unit No. : 5617

| | | | |
|---------------------------|----------------------|---|---------------------|
| Date: 21-10-2002 Sign: PH | 5 | NIROS COMMUNICATIONS A/S Hirsemarken 5, 3520 Forum | Radioboard TRX1001C |
| Date: 30-08-2004 Sign: PH | 6 | | |
| Drawing No.: 0-9613-04-6 | PC. Board No.: 722-3 | | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

14.4 Fieldlist

| Name Radioboard TRX1001C Drawing No. 0-9613-03-6 | | | | | Date 30-08-2004 Unit No. 5602 | | |
|---|------|--------|------|-----------|----------------------------------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| R101 | SMT | BOTTOM | A1 | R212 | SMT | BOTTOM | F2 |
| R103 | SMT | BOTTOM | B1 | R213 | SMT | BOTTOM | F2 |
| R104 | SMT | BOTTOM | B1 | R214 | SMT | BOTTOM | F1 |
| R105 | SMT | BOTTOM | B1 | R215 | SMT | BOTTOM | F2 |
| R106 | SMT | BOTTOM | B2 | R216 | SMT | BOTTOM | F1 |
| R107 | SMT | BOTTOM | A2 | R217 | SMT | TOP | E1 |
| R108 | SMT | BOTTOM | A2 | R218 | SMT | TOP | E1 |
| R109 | SMT | BOTTOM | A2 | R219 | SMT | BOTTOM | F1 |
| R110 | SMT | BOTTOM | B2 | R220 | SMT | TOP | E1 |
| R111 | SMT | BOTTOM | B2 | R221 | SMT | BOTTOM | F1 |
| R112 | SMT | TOP | B4 | R222 | SMT | BOTTOM | E1 |
| R113 | SMT | TOP | C4 | R223 | SMT | BOTTOM | F1 |
| R114 | SMT | TOP | C4 | R224 | SMT | BOTTOM | F1 |
| R115 | SMT | TOP | C3 | R225 | SMT | TOP | F1 |
| R116 | SMT | BOTTOM | A3 | R226 | SMT | TOP | F2 |
| R117 | SMT | BOTTOM | A1 | R227 | SMT | TOP | F2 |
| R118 | SMT | BOTTOM | A4 | R228 | SMT | BOTTOM | E1 |
| R119 | SMT | BOTTOM | A4 | R229 | SMT | BOTTOM | E1 |
| R120 | SMT | BOTTOM | A3 | R230 | SMT | TOP | E2 |
| R121 | SMT | BOTTOM | A2 | R231 | SMT | TOP | E1 |
| R122 | SMT | BOTTOM | A4 | R232 | SMT | TOP | E1 |
| R123 | SMT | BOTTOM | A4 | R233 | SMT | TOP | E1 |
| R124 | SMT | BOTTOM | C5 | R234 | SMT | TOP | E1 |
| R125 | SMT | BOTTOM | B5 | R301 | SMT | BOTTOM | E1 |
| R126 | SMT | BOTTOM | A5 | R302 | SMT | TOP | C3 |
| R127 | SMT | TOP | A5 | R303 | SMT | TOP | D4 |
| R128 | SMT | TOP | B5 | R304 | SMT | BOTTOM | D4 |
| R129 | SMT | BOTTOM | B5 | R305 | SMT | BOTTOM | D3 |
| R130 | SMT | BOTTOM | B2 | R306 | SMT | TOP | D3 |
| R131 | SMT | BOTTOM | B2 | R307 | SMT | TOP | D4 |
| R132 | SMT | TOP | B2 | R308 | SMT | TOP | D4 |
| R133 | SMT | BOTTOM | B2 | R309 | SMT | TOP | D4 |
| R134 | SMT | BOTTOM | B1 | R310 | SMT | TOP | D4 |
| R135 | SMT | BOTTOM | B1 | R311 | SMT | BOTTOM | F4 |
| R136 | SMT | BOTTOM | B1 | R312 | SMT | BOTTOM | F4 |
| R137 | SMT | TOP | C1 | R313 | SMT | BOTTOM | F4 |
| R138 | SMT | TOP | B2 | R314 | SMT | BOTTOM | F5 |
| R139 | SMT | BOTTOM | B2 | R315 | SMT | BOTTOM | F5 |
| R140 | SMT | BOTTOM | C2 | R316 | SMT | BOTTOM | D1 |
| R141 | SMT | TOP | C2 | R317 | SMT | BOTTOM | F3 |
| R142 | SMT | BOTTOM | A3 | R318 | SMT | BOTTOM | F4 |
| R143 | SMT | BOTTOM | A5 | R319 | SMT | BOTTOM | F3 |
| R201 | SMT | BOTTOM | E4 | R320 | SMT | BOTTOM | F4 |
| R202 | SMT | BOTTOM | E3 | R321 | SMT | TOP | G4 |
| R203 | SMT | BOTTOM | E3 | R322 | SMT | TOP | F3 |
| R204 | SMT | TOP | F3 | R323 | SMT | TOP | G4 |
| R205 | SMT | BOTTOM | E4 | R324 | SMT | BOTTOM | G2 |
| R206 | SMT | TOP | F3 | R325 | SMT | TOP | G4 |
| R207 | SMT | TOP | F4 | R326 | SMT | TOP | F2 |
| R208 | SMT | BOTTOM | F3 | R327 | SMT | BOTTOM | G3 |
| R209 | SMT | BOTTOM | G2 | R328 | SMT | BOTTOM | G3 |
| R210 | SMT | BOTTOM | G2 | R329 | SMT | BOTTOM | C4 |
| R211 | SMT | BOTTOM | F2 | R330 | SMT | BOTTOM | D4 |

p. 1 of 5

PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Name Radioboard TRX1001C Drawing No. 0-9613-03-6 | | | | Date 30-08-2004 Unit No. 5602 | | | |
|---|------|--------|------|----------------------------------|------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| R331 | SMT | BOTTOM | D4 | P101 | SMT | TOP | B5 |
| R332 | SMT | BOTTOM | C4 | C101 | SMT | BOTTOM | A1 |
| R333 | SMT | BOTTOM | C4 | C102 | SMT | BOTTOM | B2 |
| R334 | SMT | TOP | D5 | C103 | SMT | BOTTOM | A2 |
| R335 | SMT | TOP | D5 | C104 | SMT | BOTTOM | A2 |
| R336 | SMT | TOP | E4 | C105 | SMT | BOTTOM | A3 |
| R337 | SMT | BOTTOM | D4 | C106 | SMT | BOTTOM | A3 |
| R338 | SMT | BOTTOM | D1 | C107 | SMT | BOTTOM | A4 |
| R339 | SMT | BOTTOM | G4 | C108 | SMT | BOTTOM | B2 |
| R340 | SMT | BOTTOM | G3 | C109 | SMT | BOTTOM | B3 |
| R341 | SMT | BOTTOM | G4 | C110 | SMT | BOTTOM | B1 |
| R342 | SMT | BOTTOM | G3 | C111 | SMT | TOP | B3 |
| R343 | SMT | BOTTOM | G4 | C112 | SMT | TOP | B4 |
| R344 | SMT | BOTTOM | G3 | C113 | SMT | TOP | B3 |
| R345 | SMT | BOTTOM | G4 | C114 | SMT | TOP | B2 |
| R346 | SMT | BOTTOM | F4 | C115 | SMT | TOP | B4 |
| R347 | SMT | BOTTOM | F4 | C116 | SMT | TOP | A1 |
| R348 | SMT | BOTTOM | G3 | C117 | SMT | BOTTOM | B4 |
| R349 | SMT | BOTTOM | D3 | C118 | SMT | BOTTOM | A3 |
| R350 | SMT | BOTTOM | D4 | C119 | SMT | BOTTOM | B2 |
| R401 | SMT | BOTTOM | D1 | C120 | SMT | BOTTOM | A4 |
| R402 | SMT | BOTTOM | D2 | C121 | SMT | BOTTOM | A3 |
| R403 | SMT | TOP | D2 | C122 | SMT | BOTTOM | A3 |
| R404 | SMT | BOTTOM | D3 | C123 | SMT | BOTTOM | B5 |
| R405 | SMT | BOTTOM | D2 | C124 | SMT | BOTTOM | B2 |
| R406 | SMT | BOTTOM | D1 | C125 | SMT | TOP | B2 |
| R407 | SMT | BOTTOM | C3 | C126 | SMT | TOP | B2 |
| R408 | SMT | BOTTOM | C4 | C127 | SMT | BOTTOM | C2 |
| R409 | SMT | BOTTOM | D2 | C128 | SMT | BOTTOM | B3 |
| R410 | SMT | BOTTOM | C3 | C129 | SMT | TOP | B1 |
| R411 | SMT | BOTTOM | C3 | C130 | SMT | TOP | B1 |
| R412 | SMT | BOTTOM | C3 | C131 | SMT | BOTTOM | B1 |
| R413 | SMT | BOTTOM | D3 | C132 | SMT | BOTTOM | B1 |
| R414 | SMT | BOTTOM | C3 | C133 | SMT | TOP | C1 |
| R415 | SMT | BOTTOM | C3 | C134 | SMT | TOP | C1 |
| R416 | SMT | BOTTOM | C3 | C135 | SMT | TOP | C1 |
| R417 | SMT | BOTTOM | D2 | C136 | SMT | TOP | C1 |
| R418 | SMT | BOTTOM | C1 | C137 | SMT | TOP | B2 |
| R419 | SMT | BOTTOM | D1 | C138 | SMT | BOTTOM | C2 |
| R420 | SMT | BOTTOM | D1 | C139 | SMT | TOP | C1 |
| R421 | SMT | BOTTOM | E2 | C140 | SMT | TOP | C2 |
| R422 | SMT | BOTTOM | E2 | C141 | SMT | TOP | C2 |
| R423 | SMT | BOTTOM | E2 | C142 | SMT | TOP | C2 |
| R424 | SMT | BOTTOM | E2 | C143 | SMT | BOTTOM | H1 |
| R425 | SMT | BOTTOM | E1 | C201 | SMT | BOTTOM | E3 |
| R426 | SMT | BOTTOM | E2 | C202 | SMT | TOP | F3 |
| R427 | SMT | BOTTOM | F2 | C203 | SMT | TOP | F4 |
| R428 | SMT | BOTTOM | E1 | C204 | SMT | TOP | E4 |
| R429 | SMT | BOTTOM | E1 | C205 | SMT | BOTTOM | F3 |
| R430 | SMT | BOTTOM | E1 | C206 | SMT | TOP | E3 |
| R431 | SMT | BOTTOM | D1 | C207 | SMT | TOP | E3 |
| R432 | SMT | BOTTOM | E2 | C208 | SMT | TOP | E4 |
| R433 | SMT | BOTTOM | E2 | C209 | SMT | BOTTOM | F3 |

| Name Radioboard TRX1001C Drawing No. 0-9613-03-6 | | | | Date 30-08-2004 Unit No. 5602 | | | |
|---|------|--------|------|----------------------------------|------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| C210 | SMT | BOTTOM | G2 | C330 | SMT | TOP | G3 |
| C211 | SMT | BOTTOM | F2 | C331 | SMT | TOP | G4 |
| C212 | SMT | BOTTOM | G2 | C332 | SMT | TOP | G3 |
| C213 | SMT | TOP | F2 | C333 | SMT | TOP | D1 |
| C214 | SMT | BOTTOM | F2 | C334 | SMT | BOTTOM | C4 |
| C215 | SMT | BOTTOM | F2 | C335 | SMT | BOTTOM | B4 |
| C216 | SMT | BOTTOM | F1 | C336 | SMT | TOP | F5 |
| C217 | SMT | TOP | E1 | C337 | SMT | BOTTOM | C5 |
| C218 | SMT | TOP | E1 | C338 | SMT | BOTTOM | D4 |
| C219 | SMT | TOP | E1 | C339 | SMT | TOP | C4 |
| C220 | SMT | TOP | F1 | C340 | SMT | TOP | C4 |
| C221 | SMT | TOP | F1 | C341 | SMT | BOTTOM | C4 |
| C222 | SMT | BOTTOM | E1 | C342 | SMT | BOTTOM | C5 |
| C223 | SMT | BOTTOM | F1 | C343 | SMT | BOTTOM | D4 |
| C224 | SMT | TOP | G1 | C344 | SMT | BOTTOM | C4 |
| C225 | SMT | TOP | G1 | C345 | SMT | BOTTOM | E4 |
| C226 | SMT | TOP | F1 | C346 | SMT | BOTTOM | G4 |
| C227 | SMT | TOP | E1 | C347 | SMT | BOTTOM | F3 |
| C228 | SMT | TOP | E1 | C348 | SMT | BOTTOM | F4 |
| C229 | SMT | TOP | F1 | C349 | SMT | BOTTOM | F3 |
| C230 | SMT | TOP | E1 | C350 | SMT | BOTTOM | D3 |
| C231 | SMT | TOP | E2 | C351 | SMT | BOTTOM | D4 |
| C232 | SMT | BOTTOM | C2 | C352 | SMT | TOP | D4 |
| C233 | SMT | BOTTOM | F2 | C353 | SMT | TOP | D4 |
| C301 | SMT | TOP | E1 | C401 | SMT | TOP | D1 |
| C302 | SMT | BOTTOM | D4 | C402 | SMT | BOTTOM | D3 |
| C303 | SMT | TOP | C3 | C403 | SMT | BOTTOM | D2 |
| C304 | SMT | TOP | D3 | C404 | SMT | BOTTOM | C4 |
| C305 | SMT | TOP | E4 | C405 | SMT | BOTTOM | C3 |
| C306 | SMT | BOTTOM | D4 | C406 | SMT | BOTTOM | C3 |
| C307 | SMT | TOP | D3 | C407 | SMT | BOTTOM | B3 |
| C308 | SMT | BOTTOM | D4 | C408 | SMT | BOTTOM | D2 |
| C309 | SMT | BOTTOM | D3 | C409 | SMT | BOTTOM | D2 |
| C310 | SMT | BOTTOM | D4 | C410 | SMT | BOTTOM | C2 |
| C311 | SMT | TOP | D4 | C411 | SMT | BOTTOM | A2 |
| C312 | SMT | TOP | D4 | C412 | SMT | BOTTOM | A1 |
| C313 | SMT | BOTTOM | D5 | C413 | SMT | BOTTOM | C2 |
| C314 | SMT | BOTTOM | E4 | C414 | SMT | BOTTOM | C2 |
| C315 | SMT | BOTTOM | E4 | C415 | SMT | BOTTOM | C2 |
| C316 | SMT | BOTTOM | F4 | C416 | SMT | BOTTOM | C2 |
| C317 | SMT | BOTTOM | F4 | C417 | SMT | TOP | D2 |
| C318 | SMT | BOTTOM | F4 | C418 | SMT | TOP | D1 |
| C319 | SMT | TOP | G4 | C419 | SMT | TOP | D1 |
| C320 | SMT | BOTTOM | F4 | C420 | SMT | BOTTOM | F2 |
| C321 | SMT | BOTTOM | F4 | C421 | SMT | TOP | D1 |
| C322 | SMT | TOP | D1 | C422 | SMT | BOTTOM | C2 |
| C323 | SMT | TOP | G4 | C423 | SMT | BOTTOM | C2 |
| C324 | SMT | TOP | G4 | C424 | SMT | BOTTOM | E3 |
| C325 | SMT | BOTTOM | G2 | C425 | SMT | BOTTOM | E2 |
| C326 | SMT | TOP | G3 | F101 | SMT | BOTTOM | B2 |
| C327 | SMT | TOP | F2 | F201 | LEAD | TOP | E3 |
| C328 | SMT | TOP | G4 | F202 | LEAD | TOP | F3 |
| C329 | SMT | TOP | G3 | F203 | LEAD | TOP | G2 |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Name Radioboard TRX1001C Drawing No. 0-9613-03-6 | | | | Date 30-08-2004 Unit No. 5602 | | | |
|---|------|--------|------|----------------------------------|------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| F401 | SMT | BOTTOM | A2 | IC403 | SMT | BOTTOM | F2 |
| X301 | LEAD | TOP | G3 | IC404 | SMT | BOTTOM | E2 |
| T101 | SMT | BOTTOM | B2 | IC405 | SMT | BOTTOM | E2 |
| T102 | SMT | TOP | C4 | TR201 | SMT | TOP | E4 |
| T103 | SMT | BOTTOM | A2 | L101 | SMT | BOTTOM | B3 |
| T104 | SMT | BOTTOM | B5 | L102 | SMT | BOTTOM | B4 |
| T105 | SMT | BOTTOM | A2 | L103 | SMT | BOTTOM | B3 |
| T106 | SMT | BOTTOM | B2 | L104 | SMT | TOP | B2 |
| T107 | SMT | BOTTOM | B1 | L105 | SMT | TOP | B1 |
| T108 | SMT | BOTTOM | B2 | L106 | SMT | TOP | B1 |
| T109 | LEAD | TOP | A1 | L107 | SMT | TOP | C1 |
| T201 | SMT | BOTTOM | E3 | L108 | SMT | TOP | B2 |
| T202 | SMT | TOP | F4 | L109 | SMT | TOP | C2 |
| T203 | SMT | BOTTOM | F2 | L201 | SMT | TOP | E3 |
| T204 | SMT | BOTTOM | F2 | L202 | SMT | TOP | E4 |
| T205 | SMT | BOTTOM | E1 | L203 | SMT | BOTTOM | F2 |
| T301 | SMT | TOP | D3 | L204 | SMT | TOP | F1 |
| T302 | SMT | TOP | D4 | L301 | SMT | BOTTOM | D3 |
| T303 | SMT | BOTTOM | F4 | L302 | SMT | TOP | G2 |
| T304 | SMT | BOTTOM | G5 | L303 | SMT | TOP | F4 |
| T305 | SMT | TOP | G4 | L401 | SMT | TOP | D1 |
| T306 | SMT | TOP | D5 | TP101 | SMT | BOTTOM | A3 |
| T401 | SMT | TOP | D2 | TP102 | SMT | BOTTOM | B3 |
| T402 | SMT | BOTTOM | D2 | TP103 | SMT | BOTTOM | B2 |
| T403 | SMT | BOTTOM | C3 | TP104 | SMT | BOTTOM | B3 |
| T404 | SMT | BOTTOM | B3 | TP105 | SMT | BOTTOM | A4 |
| D102 | SMT | BOTTOM | A4 | TP106 | SMT | BOTTOM | B5 |
| D103 | SMT | TOP | B1 | TP107 | SMT | BOTTOM | C1 |
| D104 | SMT | TOP | B2 | TP108 | SMT | BOTTOM | B2 |
| D105 | SMT | TOP | B1 | TP109 | SMT | BOTTOM | B1 |
| D106 | SMT | TOP | B1 | TP110 | SMT | BOTTOM | B2 |
| D107 | SMT | BOTTOM | A1 | TP111 | SMT | BOTTOM | B4 |
| D201 | SMT | TOP | E3 | TP201 | SMT | BOTTOM | C3 |
| D202 | SMT | BOTTOM | F1 | TP202 | SMT | BOTTOM | F2 |
| D301 | SMT | BOTTOM | G3 | TP203 | SMT | BOTTOM | E1 |
| D302 | SMT | BOTTOM | F4 | TP204 | SMT | BOTTOM | F1 |
| D401 | SMT | TOP | C4 | TP205 | SMT | BOTTOM | E1 |
| D402 | SMT | BOTTOM | D2 | TP206 | SMT | BOTTOM | E1 |
| D403 | SMT | BOTTOM | C2 | TP207 | SMT | BOTTOM | E1 |
| D404 | SMT | BOTTOM | C2 | TP208 | SMT | BOTTOM | B4 |
| IC101 | SMT | BOTTOM | A3 | TP301 | SMT | BOTTOM | E1 |
| IC102 | SMT | TOP | A3 | TP302 | SMT | BOTTOM | D3 |
| IC103 | SMT | BOTTOM | A4 | TP303 | SMT | BOTTOM | G4 |
| IC201 | SMT | TOP | F2 | TP304 | SMT | BOTTOM | E4 |
| IC202 | SMT | TOP | F2 | TP305 | SMT | BOTTOM | D1 |
| IC301 | SMT | BOTTOM | E4 | TP306 | SMT | BOTTOM | D1 |
| IC302 | SMT | BOTTOM | E4 | TP307 | SMT | BOTTOM | D1 |
| IC303 | SMT | BOTTOM | D4 | TP308 | SMT | BOTTOM | D3 |
| IC304 | SMT | BOTTOM | D5 | TP309 | SMT | BOTTOM | G4 |
| IC305 | SMT | BOTTOM | C4 | TP310 | SMT | BOTTOM | G3 |
| IC306 | SMT | BOTTOM | G4 | TP311 | SMT | BOTTOM | G4 |
| IC401 | SMT | BOTTOM | C1 | TP401 | SMT | BOTTOM | D1 |
| IC402 | SMT | BOTTOM | F2 | TP402 | SMT | BOTTOM | C3 |

| Name Radioboard TRX1001C Drawing No. 0-9613-03-6 | | | | Date 30-08-2004 Unit No. 5602 | | | |
|---|------|--------|------|----------------------------------|------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| TP403 | SMT | BOTTOM | D2 | W4 | SMT | BOTTOM | A5 |
| TP404 | SMT | BOTTOM | D1 | AA5 | SMT | BOTTOM | D3 |
| TP405 | SMT | BOTTOM | D1 | W5 | SMT | BOTTOM | G5 |
| TP406 | SMT | BOTTOM | D1 | AA6 | SMT | BOTTOM | E3 |
| TP407 | SMT | BOTTOM | D1 | W6 | SMT | BOTTOM | G1 |
| TP408 | SMT | BOTTOM | C1 | AA7 | SMT | BOTTOM | D3 |
| CP101 | LEAD | BOTTOM | B4 | | | | |
| CP102 | LEAD | BOTTOM | C1 | | | | |
| CP301 | LEAD | BOTTOM | E3 | | | | |
| CP302 | LEAD | BOTTOM | E4 | | | | |
| MP101 | LEAD | TOP | C4 | | | | |
| MP102 | LEAD | TOP | A1 | | | | |
| MP103 | LEAD | TOP | B1 | | | | |
| MP201 | LEAD | TOP | E1 | | | | |
| MP202 | LEAD | TOP | F1 | | | | |
| MP203 | LEAD | TOP | E1 | | | | |
| MP204 | LEAD | TOP | E1 | | | | |
| MP205 | LEAD | TOP | E1 | | | | |
| MP301 | SMT | TOP | E4 | | | | |
| MP302 | LEAD | TOP | D4 | | | | |
| MP303 | LEAD | TOP | D1 | | | | |
| MP304 | LEAD | TOP | F3 | | | | |
| MP305 | LEAD | TOP | F2 | | | | |
| MP306 | LEAD | TOP | E1 | | | | |
| MP401 | LEAD | TOP | D2 | | | | |
| MP402 | LEAD | TOP | C3 | | | | |
| MP403 | LEAD | TOP | D2 | | | | |
| MP404 | LEAD | TOP | C3 | | | | |
| MP405 | LEAD | TOP | C4 | | | | |
| MP406 | LEAD | TOP | B3 | | | | |
| MP407 | LEAD | TOP | A5 | | | | |
| MP408 | LEAD | TOP | D1 | | | | |
| MP409 | LEAD | TOP | D1 | | | | |
| MP410 | LEAD | TOP | D2 | | | | |
| MP411 | LEAD | TOP | D1 | | | | |
| MP412 | LEAD | TOP | F1 | | | | |
| MP413 | LEAD | TOP | E2 | | | | |
| JU201 | SMT | TOP | E3 | | | | |
| J1 | LEAD | BOTTOM | D1 | | | | |
| AA1 | SMT | BOTTOM | C3 | | | | |
| AB1 | LEAD | TOP | C4 | | | | |
| W1 | SMT | TOP | A1 | | | | |
| A2 | SMT | TOP | C1 | | | | |
| AA2 | SMT | BOTTOM | C3 | | | | |
| AB2 | LEAD | TOP | C3 | | | | |
| W2 | SMT | TOP | G1 | | | | |
| A3 | SMT | TOP | C1 | | | | |
| AA3 | SMT | BOTTOM | E3 | | | | |
| AB3 | LEAD | TOP | C4 | | | | |
| W3 | SMT | TOP | G5 | | | | |
| AA4 | SMT | BOTTOM | E3 | | | | |
| AB4 | LEAD | TOP | D4 | | | | |
| A4 | LEAD | BOTTOM | A2 | | | | |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

14.5 Partlist

| Partlist for Radioboard TRX1001C Drawing No. 0-9613-03-6 | | Date 30-08-2004 Unit No. 5602 | |
|---|---------------------|----------------------------------|-----------|
| Component | Description | Value | Niros No. |
| | Radioboard TRX1001C | 25 KHz | 5602 |
| | Radioboard TRX1001C | 12,5 KHz | 5612 |
| | Radioboard TRX1001C | 20 KHz | 5617 |
| R101 | Resistor,chip805_1% | 27 Kohm | 10906 |
| R103 | Resistor,melf | 0,22 Ohm | 10900 |
| R104 | Resistor,melf | 0,22 Ohm | 10900 |
| R105 | Resistor,melf | 0,22 Ohm | 10900 |
| R106 | Resistor,chip805_1% | 27 Kohm | 10906 |
| R107 | Resistor,chip603 | 10 Kohm | 14103 |
| R108 | Resistor,chip603 | 10 Kohm | 14103 |
| R109 | Resistor,chip603 | 220 Ohm | 14221 |
| R110 | Resistor,chip603 | 1,2 Kohm | 14122 |
| R111 | Resistor,chip603 | 4,7 Kohm | 14472 |
| R112 | Resistor,chip805 | 270 Ohm | 13271 |
| R113 | Resistor,chip603 | 68 Ohm | 14680 |
| R114 | Resistor,chip603 | 1,8 Kohm | 14182 |
| R115 | Resistor,chip603 | 680 Ohm | 14681 |
| R116 | Resistor,chip603 | 1,2 Kohm | 14122 |
| R117 | Resistor,chip603 | 4,7 Kohm | 14472 |
| R118 | Resistor,chip603 | 100 Kohm | 14104 |
| R119 | Resistor,chip603 | 390 Kohm | 14394 |
| R120 | Resistor,chip603 | 10 Kohm | 14103 |
| R121 | Resistor,chip603 | 10 Kohm | 14103 |
| R122 | Resistor,chip603 | 10 Kohm | 14103 |
| R123 | Resistor,chip603 | 100 Kohm | 14104 |
| R124 | Resistor,chip603 | 10 Kohm | 14103 |
| R125 | Resistor,chip603 | 100 Kohm | 14104 |
| R126 | Resistor,chip805_1% | 22 Kohm | 10905 |
| R127 | Resistor,ptc | Not used | |
| R128 | Resistor,chip603 | 10 Ohm | 14100 |
| R129 | Resistor,chip805_1% | 22 Kohm | 10905 |
| R130 | Resistor,chip603 | 180 Kohm | 14184 |
| R131 | Resistor,chip603 | 56 Kohm | 14563 |
| R132 | Resistor,chip805 | 390 Ohm | 13391 |
| R133 | Resistor,chip603 | 2,7 Kohm | 14272 |
| R134 | Resistor,chip603 | 100 Ohm | 14101 |
| R135 | Resistor,chip603 | 100 Kohm | 14104 |
| R136 | Resistor,chip603 | 22 Kohm | 14223 |
| R137 | Resistor,chip603 | 100 Kohm | 14104 |
| R138 | Resistor,chip603 | 100 Ohm | 14101 |
| R139 | Resistor,chip603 | 100 Kohm | 14104 |
| R140 | Resistor,chip603 | 22 Kohm | 14223 |
| R141 | Resistor,chip603 | 100 Kohm | 14104 |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

Partlist for Radioboard TRX1001C
Drawing No. 0-9613-03-6

Date 30-08-2004
Unit No. 5602

| Component | Description | Value | Niros No. |
|-----------|------------------|------------------|-----------|
| R142 | Resistor,chip603 | 22 Kohm | 14223 |
| R143 | Resistor,chip805 | 1 Mohm | 13105 |
| R201 | Resistor,chip603 | 39 Kohm | 14393 |
| R202 | Resistor,chip603 | 100 Kohm | 14104 |
| R203 | Resistor,chip603 | 33 Ohm | 14330 |
| R204 | Resistor,chip603 | 1 Kohm | 14102 |
| R205 | Resistor,chip603 | 10 Kohm | 14103 |
| R206 | Resistor,chip603 | 25KHZ 1 Kohm | 14102 |
| | Resistor,chip603 | 12,5KHZ 470 Ohm | 14471 |
| | Resistor,chip603 | 20KHZ 1 Kohm | 14102 |
| R207 | Resistor,chip603 | 180 Ohm | 14181 |
| R208 | Resistor,chip603 | 25KHZ 820 Ohm | 14821 |
| | Resistor,chip603 | 12,5KHZ 330 Ohm | 14331 |
| | Resistor,chip603 | 20KHZ 820 Ohm | 14821 |
| R209 | Resistor,chip603 | 150 Kohm | 14154 |
| R210 | Resistor,chip603 | 390 Kohm | 14394 |
| R211 | Resistor,chip603 | 1 Mohm | 14105 |
| R212 | Resistor,chip603 | 47 Ohm | 14470 |
| R213 | Resistor,chip603 | 680 Ohm | 14681 |
| R214 | Resistor,chip603 | 47 Ohm | 14470 |
| R215 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R216 | Resistor,chip603 | 25KHZ 22 Kohm | 14223 |
| | Resistor,chip603 | 12,5KHZ 47 Kohm | 14473 |
| | Resistor,chip603 | 20KHZ 22 Kohm | 14223 |
| R217 | Resistor,chip603 | 10 Kohm | 14103 |
| R218 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R219 | Resistor,chip603 | 470 Kohm | 14474 |
| R220 | Resistor,chip603 | 15 Kohm | 14153 |
| R221 | Resistor,chip603 | 1 Mohm | 14105 |
| R222 | Resistor,chip603 | 390 Kohm | 14394 |
| R223 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R224 | Resistor,chip603 | 25KHZ 6,8 Kohm | 14682 |
| | Resistor,chip603 | 12,5KHZ 2,7 Kohm | 14272 |
| | Resistor,chip603 | 20KHZ 6,8 Kohm | 14682 |
| R225 | Resistor,chip603 | 47 Kohm | 14473 |
| R226 | Resistor,chip603 | 1 Mohm | 14105 |
| R227 | Resistor,chip603 | 470 Kohm | 14474 |
| R228 | Resistor,chip603 | 10 Kohm | 14103 |
| R229 | Resistor,chip603 | 10 Kohm | 14103 |
| R230 | Resistor,chip805 | 10 Mohm | 13106 |
| R231 | Resistor,chip805 | 2,7 Mohm | 13275 |
| R232 | Resistor,chip603 | 820 Kohm | 14824 |
| R233 | Resistor,chip603 | 1 Mohm | 14105 |
| R234 | Resistor,chip603 | 180 Kohm | 14184 |
| R301 | Resistor,chip603 | 100 Ohm | 14101 |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

Partlist for Radioboard TRX1001C
Drawing No. 0-9613-03-6

Date 30-08-2004
Unit No. 5602

| Component | Description | Value | Niros No. |
|-----------|-------------------|----------|-----------|
| R302 | Resistor, chip603 | 120 Ohm | 14121 |
| R303 | Resistor, chip603 | 150 Ohm | 14151 |
| R304 | Resistor, chip603 | 33 Ohm | 14330 |
| R305 | Resistor, chip603 | 10 Ohm | 14100 |
| R306 | Resistor, chip603 | 560 Ohm | 14561 |
| R307 | Resistor, chip603 | 220 Ohm | 14221 |
| R308 | Resistor, chip603 | 33 Ohm | 14330 |
| R309 | Resistor, chip603 | 150 Ohm | 14151 |
| R310 | Resistor, chip603 | 150 Ohm | 14151 |
| R311 | Resistor, chip603 | 56 Kohm | 14563 |
| R312 | Resistor, chip603 | 1 Mohm | 14105 |
| R313 | Resistor, chip603 | 100 Kohm | 14104 |
| R314 | Resistor, chip603 | 1 Mohm | 14105 |
| R315 | Resistor, chip603 | 390 Kohm | 14394 |
| R316 | Resistor, chip603 | 4,7 Kohm | 14472 |
| R317 | Resistor, chip603 | Not used | |
| R318 | Resistor, chip603 | 22 Kohm | 14223 |
| R319 | Resistor, chip603 | Not used | |
| R320 | Resistor, chip603 | 22 Kohm | 14223 |
| R321 | Resistor, chip603 | 1,2 Kohm | 14122 |
| R322 | Resistor, chip603 | 330 Ohm | 14331 |
| R323 | Resistor, chip603 | 68 Kohm | 14683 |
| R324 | Resistor, chip603 | 4,7 Kohm | 14472 |
| R325 | Resistor, chip603 | 33 Kohm | 14333 |
| R326 | Resistor, chip603 | 100 Ohm | 14101 |
| R327 | Resistor, chip603 | 100 Kohm | 14104 |
| R328 | Resistor, chip603 | Not used | |
| R329 | Resistor, chip603 | 1,5 Kohm | 14152 |
| R330 | Resistor, chip603 | 10 Kohm | 14103 |
| R331 | Resistor, chip603 | 22 Kohm | 14223 |
| R332 | Resistor, chip603 | 1 Mohm | 14105 |
| R333 | Resistor, chip603 | 2,2 Mohm | 14225 |
| R334 | Resistor, chip805 | 2,7 Mohm | 13275 |
| R335 | Resistor, chip603 | 1 Mohm | 14105 |
| R336 | Resistor, chip603 | 1 Kohm | 14102 |
| R337 | Resistor, chip805 | 10 Mohm | 13106 |
| R338 | Resistor, chip603 | Not used | |
| R339 | Resistor, chip603 | Not used | |
| R340 | Resistor, chip603 | Not used | |
| R341 | Resistor, chip603 | Not used | |
| R342 | Resistor, ntc | Not used | |
| R343 | Resistor, chip603 | Not used | |
| R344 | Resistor, chip603 | Not used | |
| R345 | Resistor, chip603 | Not used | |
| R346 | Resistor, chip603 | Not used | |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Partlist for Radioboard TRX1001C Drawing No. 0-9613-03-6 | | Date 30-08-2004 | Unit No. 5602 |
|---|---------------------|-----------------|---------------|
| Component | Description | Value | Niros No. |
| R347 | Resistor,chip603 | Not used | |
| R348 | Resistor,ntc | Not used | |
| R349 | Resistor,chip603 | 10 Kohm | 14103 |
| R350 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R401 | Resistor,chip603 | 100 Ohm | 14101 |
| R402 | Resistor,chip603 | 1 Mohm | 14105 |
| R403 | Resistor,chip603 | 33 Ohm | 14330 |
| R404 | Resistor,chip603 | 560 Ohm | 14561 |
| R405 | Resistor,chip603 | 100 Kohm | 14104 |
| R406 | Resistor,chip603 | 10 Kohm | 14103 |
| R407 | Resistor,chip603 | 33 Kohm | 14333 |
| R408 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R409 | Resistor,chip805_1% | 182 Kohm | 10901 |
| R410 | Resistor,chip603 | 470 Ohm | 14471 |
| R411 | Resistor,chip603 | 100 Ohm | 14101 |
| R412 | Resistor,chip603 | 10 Kohm | 14103 |
| R413 | Resistor,chip603 | 180 Kohm | 14184 |
| R414 | Resistor,chip603 | 100 Kohm | 14104 |
| R415 | Resistor,chip603 | 5,6 Kohm | 14562 |
| R416 | Resistor,chip603 | 5,6 Ohm | 14569 |
| R417 | Resistor,chip603 | 100 Ohm | 14101 |
| R418 | Resistor,chip603 | 680 Kohm | 14684 |
| R419 | Resistor,chip603 | 100 Ohm | 14101 |
| R420 | Resistor,chip603 | 100 Ohm | 14101 |
| R421 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R422 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R423 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R424 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R425 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R426 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R427 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R428 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R429 | Resistor,chip805_1% | 309 Kohm | 10902 |
| R430 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R431 | Resistor,chip603 | 100 Ohm | 14101 |
| R432 | Resistor,chip603 | 100 Kohm | 14104 |
| R433 | Resistor,chip603 | 5,1 Kohm | 14512 |
| P101 | Resistor,pre_set | 1 Kohm | 19034 |
| C101 | Capacitor,chip603 | 1 nF | 21102 |
| C102 | Capacitor,chip603 | 1 nF | 21102 |
| C103 | Capacitor,chip603 | 22 nF | 21223 |
| C104 | Capacitor,chip603 | 22 nF | 21223 |

Partlist for Radioboard TRX1001C
Drawing No. 0-9613-03-6

Date 30-08-2004
Unit No. 5602

| Component | Description | Value | Niros No. |
|-----------|----------------------|-------------|-----------|
| C105 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C106 | Capacitor,chip603 | 22 nF | 21223 |
| C107 | Capacitor,chip603 | 1 nF | 21102 |
| C108 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C109 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C110 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C111 | Capacitor,chip805 | 100 nF | 20654 |
| C112 | Capacitor,chip805 | 100 nF | 20654 |
| C113 | Capacitor,chip805 | 100 nF | 20654 |
| C114 | Capacitor,chip805 | 100 nF | 20654 |
| C115 | Capacitor,chip603 | 22 nF | 21223 |
| C116 | Capacitor,chip603 | 22 nF | 21223 |
| C117 | Capacitor,chip805 | 100 nF | 20654 |
| C118 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C119 | Capacitor,chip603 | 10 nF | 21103 |
| C120 | Capacitor,chip603 | 22 nF | 21223 |
| C121 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C122 | Capacitor,chip603 | 1 nF | 21102 |
| C123 | Capacitor,chip603 | 1 nF | 21102 |
| C124 | Capacitor,chip603 | 1 nF | 21102 |
| C125 | Capacitor,chip603 | 22 nF | 21223 |
| C126 | Capacitor,chip603 | Not used | |
| C127 | Capacitor,chip603 | 22 nF | 21223 |
| C128 | Capacitor,chip603 | 1 nF | 21102 |
| C129 | Capacitor,chip603 | 15 pF | 21150 |
| C130 | Capacitor,chip603 | 1,8 pF | 21189 |
| C131 | Capacitor,chip603 | 1 nF | 21102 |
| C132 | Capacitor,chip603 | 1 nF | 21102 |
| C133 | Capacitor,chip603 | 22 pF | 21220 |
| C134 | Capacitor,chip603 | 10 pF | 21100 |
| C135 | Capacitor,chip603 | 10 pF | 21100 |
| C136 | Capacitor,chip603 | 1 nF | 21102 |
| C137 | Capacitor,chip603 | 1 nF | 21102 |
| C138 | Capacitor,chip603 | 1 nF | 21102 |
| C139 | Capacitor,chip603 | 22 pF | 21220 |
| C140 | Capacitor,chip603 | 12 pF | 21120 |
| C141 | Capacitor,chip603 | 10 pF | 21100 |
| C142 | Capacitor,chip603 | 1 nF | 21102 |
| C143 | Capacitor,chip603 | Not used | |
| C201 | Capacitor,chip805 | 100 nF | 20654 |
| C202 | Capacitor,chip603 | 47 pF | 21470 |
| C203 | Capacitor,chip603 | 100 pF | 21101 |
| C204 | Capacitor,chip603 | 10 nF | 21103 |
| C205 | Capacitor,chip603 | 10 nF | 21103 |
| C206 | Capacitor,chip603 | 1 nF | 21102 |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

Partlist for Radioboard TRX1001C
Drawing No. 0-9613-03-6

Date 30-08-2004
Unit No. 5602

| Component | Description | Value | Niros No. |
|-----------|----------------------------|-------------|-----------|
| C207 | Capacitor, chip603 | 100 pF | 21101 |
| C208 | Capacitor, chip603 | 82 pF | 21820 |
| C209 | Capacitor, chip603 25KHZ | 10 pF | 21100 |
| | Capacitor, chip603 12,5KHZ | 18 pF | 21180 |
| | Capacitor, chip603 20KHZ | 10 pF | 21100 |
| C210 | Capacitor, chip603 | 10 nF | 21103 |
| C211 | Capacitor, chip603 | 10 nF | 21103 |
| C212 | Capacitor, ctan_a | 2,2 uF/16V | 25613 |
| C213 | Capacitor, chip805 | 100 nF | 20654 |
| C214 | Capacitor, chip805 | 100 nF | 20654 |
| C215 | Capacitor, chip603 | 10 nF | 21103 |
| C216 | Capacitor, chip805 | 100 nF | 20654 |
| C217 | Capacitor, chip603 | 1 nF | 21102 |
| C218 | Capacitor, chip603 | 1 nF | 21102 |
| C219 | Capacitor, chip603 | 180 pF | 21181 |
| C220 | Capacitor, chip603 | 180 pF | 21181 |
| C221 | Capacitor, chip603 | 100 pF | 21101 |
| C222 | Capacitor, chip603 | 10 nF | 21103 |
| C223 | Capacitor, ctan_a | 0,68 uF/16V | 25611 |
| C224 | Capacitor, chip805 | 100 nF | 20654 |
| C225 | Capacitor, chip805 | 100 nF | 20654 |
| C226 | Capacitor, chip603 | 10 nF | 21103 |
| C227 | Capacitor, chip603 | 10 nF | 21103 |
| C228 | Capacitor, chip603 | 10 nF | 21103 |
| C229 | Capacitor, chip603 | 10 nF | 21103 |
| C230 | Capacitor, chip603 | 22 nF | 21223 |
| C231 | Capacitor, chip805 | 100 nF | 20654 |
| C232 | Capacitor, chip603 | 10 nF | 21103 |
| C233 | Capacitor, chip603 25KHZ | Not used | |
| | Capacitor, chip603 12,5KHZ | 5,6 pF | 21569 |
| | Capacitor, chip603 20KHZ | Not used | |
| C301 | Capacitor, chip603 | 220 pF | 21221 |
| C302 | Capacitor, chip603 | 1 nF | 21102 |
| C303 | Capacitor, chip603 | 33 pF | 21330 |
| C304 | Capacitor, chip603 | 15 pF | 21150 |
| C305 | Capacitor, chip603 | 1 nF | 21102 |
| C306 | Capacitor, ctan_a | 6,8 uF/10V | 25619 |
| C307 | Capacitor, chip603 | 1 nF | 21102 |
| C308 | Capacitor, ctan_a | 6,8 uF/10V | 25619 |
| C309 | Capacitor, ctan_a | 2,2 uF/16V | 25613 |
| C310 | Capacitor, chip805 | 100 nF | 20654 |
| C311 | Capacitor, chip603 | 1 nF | 21102 |
| C312 | Capacitor, chip603 | 1 nF | 21102 |
| C313 | Capacitor, chip603 | 1 nF | 21102 |
| C314 | Capacitor, chip603 | 47 nF | 21473 |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

Partlist for Radioboard TRX1001C
Drawing No. 0-9613-03-6

Date 30-08-2004
Unit No. 5602

| Component | Description | Value | Niros No. |
|-----------|------------------------|-------------|-----------|
| C315 | Capacitor,chip603 | 1 nF | 21102 |
| C316 | Capacitor,chip603 | 330 pF | 21331 |
| C317 | Capacitor,chip805 | 100 nF | 20654 |
| C318 | Capacitor,chip603 | 150 pF | 21151 |
| C319 | Capacitor,chip603 | 150 pF | 21151 |
| C320 | Capacitor,chip603 | 100 pF | 21101 |
| C321 | Capacitor,chip603 | 100 pF | 21101 |
| C322 | Capacitor,chip603 | 10 nF | 21103 |
| C323 | Capacitor,chip603 | 150 pF | 21151 |
| C324 | Capacitor,chip603 | 150 pF | 21151 |
| C325 | Capacitor,chip603 | 47 pF | 21470 |
| C326 | Capacitor,chip805 | 100 nF | 20654 |
| C327 | Capacitor,chip603 | 47 pF | 21470 |
| C328 | Capacitor,chip603 | 27 pF | 21270 |
| C329 | Capacitor,chip603 | 6,8 pF | 21689 |
| C330 | Capacitor,var | 2-10 pF | 25116 |
| C331 | Capacitor,chip603 | 3,9 pF | 21399 |
| C332 | Capacitor,chip603_n750 | Not used | |
| C333 | Capacitor,chip603 | Not used | |
| C334 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C335 | Capacitor,chip805_ln | 22 nF | 20804 |
| C336 | Capacitor,chip603_ln | 1,5 nF | 20802 |
| C337 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C338 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C339 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C340 | Capacitor,chip603_ln | Not used | |
| C341 | Capacitor,chip1206 | Not used | |
| C342 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C343 | Capacitor,chip1206 | 330 nF | 20652 |
| C344 | Capacitor,chip1206 | 330 nF | 20652 |
| C345 | Capacitor,chip603_ln | Not used | |
| C346 | Capacitor,chip805 | Not used | |
| C347 | Capacitor,chip805 | Not used | |
| C348 | Capacitor,chip603 | Not used | |
| C349 | Capacitor,chip603 | Not used | |
| C350 | Capacitor,chip603 | 10 nF | 21103 |
| C351 | Capacitor,chip603 | Not used | |
| C352 | Capacitor,chip603 | Not used | |
| C353 | Capacitor,chip603 | Not used | |
| C401 | Capacitor,chip603 | 10 nF | 21103 |
| C402 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C403 | Capacitor,chip603 | 1 nF | 21102 |
| C404 | Capacitor,chip805_ln | 22 nF | 20804 |
| C405 | Capacitor,chip805_ln | 22 nF | 20804 |
| C406 | Capacitor,chip603 | 22 nF | 21223 |

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PC. Board No. 722-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

| Partlist for Radioboard TRX1001C Drawing No. 0-9613-03-6 | | | Date 30-08-2004 | Unit No. 5602 |
|---|-------------------|------------|-----------------|---------------|
| Component | Description | Value | Niros No. | |
| C407 | Capacitor,chip603 | 10 nF | 21103 | |
| C408 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C409 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C410 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C412 | Capacitor,chip805 | 100 nF | 20654 | |
| C413 | Capacitor,chip603 | 220 pF | 21221 | |
| C414 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C415 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C416 | Capacitor,ctan_a | 2,2 uF/16V | 25613 | |
| C417 | Capacitor,chip805 | 100 nF | 20654 | |
| C418 | Capacitor,chip603 | 220 pF | 21221 | |
| C419 | Capacitor,chip603 | 220 pF | 21221 | |
| C420 | Capacitor,chip603 | 10 nF | 21103 | |
| C421 | Capacitor,chip603 | 220 pF | 21221 | |
| C422 | Capacitor,chip603 | Not used | | |
| C423 | Capacitor,chip603 | Not used | | |
| C424 | Capacitor,chip603 | 10 nF | 21103 | |
| C425 | Capacitor,chip603 | 22 pF | 21220 | |
| F101 | Filter | 4N7 | 75906 | |
| F201-202 | Crystal-filter | 25KHZ | 45F15B | |
| | Crystal-filter | 12,5KHZ | 45F7B | |
| | Crystal-filter | 20KHZ | 45F15B | |
| F203 | Ceramic-filter | 25KHZ | CFWM450D | |
| | Ceramic-filter | 12,5KHZ | CFWM450G | |
| | Ceramic-filter | 20KHZ | CFWM450F | |
| F401 | Filter | 4N7 | 75906 | |
| X301 | Crystal | 14.85 MHz | 31190 | |
| T101 | Transistor | BC807-40 | 40186 | |
| T102 | Transistor | BFR92A | 40150 | |
| T103 | Transistor | BCW60D | 40156 | |
| T104 | Transistor | BCW60D | 40156 | |
| T105 | Transistor | BCW60D | 40156 | |
| T106 | Transistor | BCW61D | 40157 | |
| T107 | Transistor | BCW60D | 40156 | |
| T108 | Transistor | BCW60D | 40156 | |
| T109 | Transistor | ZTX949 | 40190 | |
| T201 | Transistor | BCW60D | 40156 | |
| T202 | Transistor | BFR92A | 40150 | |
| T203 | Transistor | BF990A | 40187 | |
| T204 | Transistor | BFR92A | 40150 | |
| T205 | Transistor | BCW61D | 40157 | |

Partlist for Radioboard TRX1001C
Drawing No. 0-9613-03-6

Date 30-08-2004
Unit No. 5602

| Component | Description | Value | Niros No. |
|-----------|--------------------|------------|-----------|
| T301 | Transistor | BFR92A | 40150 |
| T302 | Transistor | BFR92A | 40150 |
| T303 | Transistor | BCW61D | 40157 |
| T304 | Transistor | BCW60D | 40156 |
| T305 | Transistor | BFR92A | 40150 |
| T306 | Transistor | BCW60D | 40156 |
| T401 | Transistor | BCW60D | 40156 |
| T402 | Transistor | BCW61D | 40157 |
| T403 | Transistor | BCW60D | 40156 |
| T404 | Transistor | BC868-25 | 40188 |
| D102 | Diode | BAV99 | 45148 |
| D103 | Diode | BA682 | 45152 |
| D104 | Diode | MA4P1250 | 45171 |
| D105 | Diode | MA4P1250 | 45171 |
| D106 | Diode | MA4P1250 | 45171 |
| D107 | Diode | BAT54S | 45173 |
| D201 | Diode | BAT17-04 | 45172 |
| D202 | Diode | BAV99 | 45148 |
| D301 | Diode, kap | Not used | |
| D302 | Diode | Not used | |
| D401 | Diode | BAV99 | 45148 |
| D402 | Diode, zener | LM385-1.2 | 45166 |
| D403 | Diode | BAT54S | 45173 |
| D404 | Diode | BAV99 | 45148 |
| IC101 | Integrated_circuit | LPC662 | 46244 |
| IC102 | Integrated_circuit | MHW607-2 | 46284 |
| IC103 | Integrated_circuit | TC4S66F | 46250 |
| IC201 | Integrated_circuit | MC3371 | 46247 |
| IC202 | Integrated_circuit | TLC27L2T | 46222 |
| IC301 | Integrated_circuit | SP8705 | 46248 |
| IC302 | Integrated_circuit | NJ88C33 | 46249 |
| IC303 | Integrated_circuit | TC4S66F | 46250 |
| IC304 | Integrated_circuit | TC4S66F | 46250 |
| IC305 | Integrated_circuit | LPC662 | 46244 |
| IC306 | Integrated_circuit | Not used | |
| IC401 | Integrated_circuit | 40106BT | 46116 |
| IC402 | Integrated_circuit | TC7S32F | 46252 |
| IC403 | Integrated_circuit | TC7S32F | 46252 |
| IC404 | Integrated_circuit | PIC16CE624 | 46621 |
| IC405 | Integrated_circuit | TC4S584F | 46207 |
| TR201 | Trafo | 75904 | 75904 |

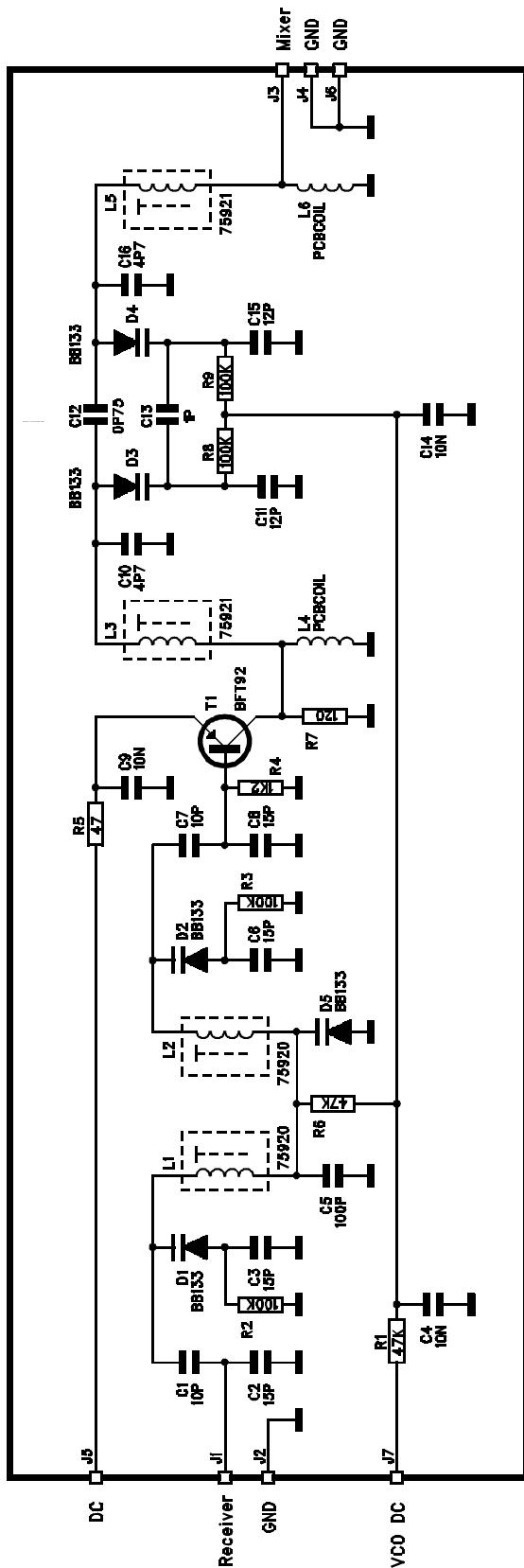
| Partlist for Radioboard TRX1001C Drawing No. 0-9613-03-6 | | Date 30-08-2004 | Unit No. 5602 |
|---|--------------------------|---------------------|---------------|
| Component | Description | Value | Niros No. |
| L101 | Coil,chip | 75877 | 75877 |
| L102 | Coil,chip | 75877 | 75877 |
| L103 | Coil,chip | 75877 | 75877 |
| L104 | Coil,chip | 75922 | 75922 |
| L105 | Coil | 75918 | 75918 |
| L106 | Coil,chip | 75922 | 75922 |
| L107 | Coil | 75917 | 75917 |
| L108 | Coil,chip | 75922 | 75922 |
| L109 | Coil | 75917 | 75917 |
| L201 | Coil_chip | 76008 | 76008 |
| L202 | Coil,chip | 75879 | 75879 |
| L203 | Coil,chip | 75883 | 75883 |
| L204 | Coil | 75901 | 75901 |
| L301 | Coil,chip | 75905 | 75905 |
| L302 | Coil_chip | 76008 | 76008 |
| L303 | Coil | 75900 | 75900 |
| L401 | Coil,chip | 75883 | 75883 |
| J1 | Connector_12pol | | 83315 |
| AB1 | Connector_pin | | 83245 |
| AB2 | Connector_pin | | 83245 |
| AB3 | Connector_pin | | 83245 |
| AB4 | Connector_PIN | | 83245 |
| A4 | Power_input_terminal | | 97530 |
| | Acryl_tape 64X12 | 1 pcs | 85240 |
| | Washer CW1,6 | 2 pcs | 92024 |
| | Screw M1,6X6 | 2 pcs | 92027 |
| | Screw M1,6X4 | 1 pcs | 92022 |
| | Washer 1,7 | 2 pcs | 93203 |
| | Pc_board_no. 722-3 | 1 pcs | 95722 |
| | Antenna_center_connector | 1 pcs | 97521 |
| | Antenna_gnd_conektor | 1 pcs | 97522 |
| | Heat_sink_PA | 1 pcs | 97524 |
| | Spring_for_PA | 1 pcs | 97576 |
| | Magnetic_shield | 2 pcs | 97577 |
| | Heat_sink_PA | 1 pcs | 98015 |
| | Receiver_gnd_spring | 1 pcs | 98022 |
| | Coax_cable | 1 pcs | 182524 |
| p. 10 of 10 | | PC. Board No. 722-3 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 30-09-05 | 2 | PA |

15. Receiver TRX1012C

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 15-07-98 | 0 | PA |

15.1 Diagram

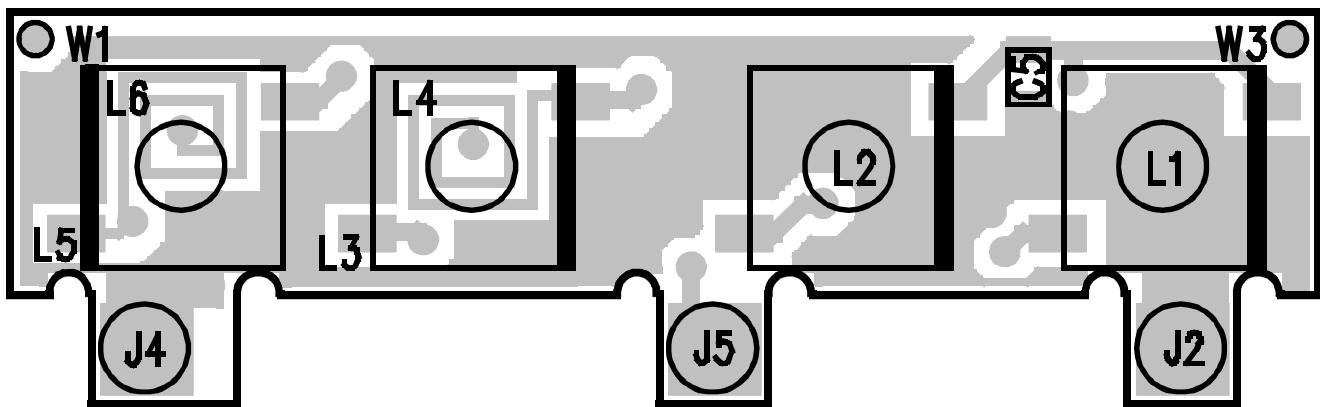


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| | | | |
|-------------------------|----------|---|-----------------------------|
| DATE: 25-5-93 | SIGN: PH | 1 | NIROS TELECOMMUNICATION A/S |
| DATE: 10-6-97 | SIGN: PH | 2 | HIRSEMARKEN 5, 3620 FARUM |
| DATE: | SIGN: | | |
| DRAWING NO: D-9615-03-2 | | | Receiver |
| | | | TRX1001C/TRX1012C |
| | | | PCB NO: 725-2 UNIT NO: 5622 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 15-07-98 | 0 | PA |

15.2 Componentside



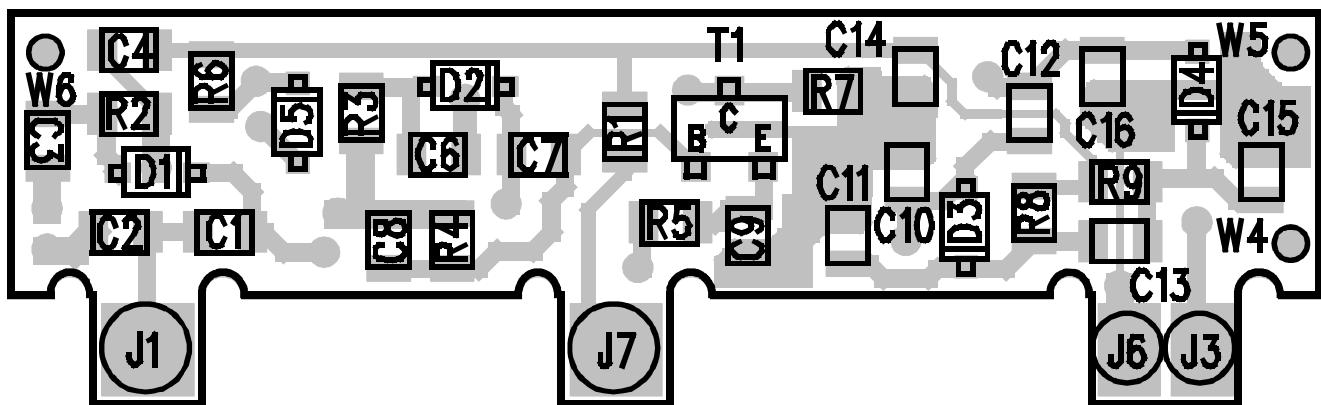
Componentside 725-2

SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|-------------------------|----------|---------------|-----------------------------|
| DATE: 25-5-93 | SIGN: PH | 1 | NIROS TELECOMMUNICATION A/S |
| DATE: 10-6-97 | SIGN: PH | 2 | HØRSEMARKEN 5, 3520 FARUM |
| DATE: | SIGN: | | |
| DATE: | SIGN: | | Receiver |
| DATE: | SIGN: | | TRX1001C/TRX1012C |
| DATE: | SIGN: | | |
| DRAWING NO: 0-0615-05-2 | | PCB NO: 725-2 | UNIT NO: 5622 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 15-07-98 | 0 | PA |

15.3 Wiringside



Wiringside 725-2

SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|-------------------------|----------|---|-----------------------------|
| DATE: 25-5-93 | SIGN: PH | 1 | NIROS TELECOMMUNICATION A/S |
| DATE: 10-6-97 | SIGN: PH | 2 | HØRSEMARKEN 5, 3520 FARUM |
| DATE: | SIGN: | | Receiver |
| DATE: | SIGN: | | TRX1001C/TRX1012C |
| DATE: | SIGN: | | |
| DRAWING NO: D-0815-04-2 | | | PCB NO: 725-2 UNIT NO: 5822 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 15-07-98 | 0 | PA |

15.4 Partlist

| PARTLIST FOR Receiver TRX1001C/TRX1012C DRAWING NO. 0-9615-03-2 | | | DATE 9-6-97 UNIT NO. 5622 |
|--|---------------------|----------|------------------------------|
| Component | Description | Value | Niros No. |
| R1 | Resistor, chip603 | 47 Kohm | 14473 |
| R2 | Resistor, chip603 | 100 Kohm | 14104 |
| R3 | Resistor, chip603 | 100 Kohm | 14104 |
| R4 | Resistor, chip603 | 1,2 Kohm | 14122 |
| R5 | Resistor, chip603 | 47 Ohm | 14470 |
| R6 | Resistor, chip603 | 47 Kohm | 14473 |
| R7 | Resistor, chip603 | 120 Ohm | 14121 |
| R8 | Resistor, chip603 | 100 Kohm | 14104 |
| R9 | Resistor, chip603 | 100 Kohm | 14104 |
| C1 | Capacitor, chip603 | 10 pF | 21100 |
| C2 | Capacitor, chip603 | 15 pF | 21150 |
| C3 | Capacitor, chip603 | 15 pF | 21150 |
| C4 | Capacitor, chip603 | 10 nF | 21103 |
| C5 | Capacitor, chip603 | 100 pF | 21101 |
| C6 | Capacitor, chip603 | 15 pF | 21150 |
| C7 | Capacitor, chip603 | 10 pF | 21100 |
| C8 | Capacitor, chip603 | 15 pF | 21150 |
| C9 | Capacitor, chip603 | 10 nF | 21103 |
| C10 | Capacitor, chip603 | 4,7 pF | 21479 |
| C11 | Capacitor, chip603 | 12 pF | 21120 |
| C12 | Capacitor, chip603 | 0,75 pF | 21758 |
| C13 | Capacitor, chip603 | 1 pF | 21109 |
| C14 | Capacitor, chip603 | 10 nF | 21103 |
| C15 | Capacitor, chip603 | 12 pF | 21120 |
| C16 | Capacitor, chip603 | 4,7 pF | 21479 |
| T1 | Transistor | BFT92 | 40189 |
| D1 | Diode, kap | BB133 | 45195 |
| D2 | Diode, kap | BB133 | 45195 |
| D3 | Diode, kap | BB133 | 45195 |
| D4 | Diode, kap | BB133 | 45195 |
| D5 | Diode, kap | BB133 | 45195 |
| L1 | Coil | 75920 | 75920 |
| L2 | Coil | 75920 | 75920 |
| L3 | Coil | 75921 | 75921 |
| L4 | Coil | PCBCOIL | |
| L5 | Coil | 75921 | 75921 |
| L6 | Coil | PCBCOIL | |
| | Pc._board_no. 725-2 | 1 pcs | 95725 |

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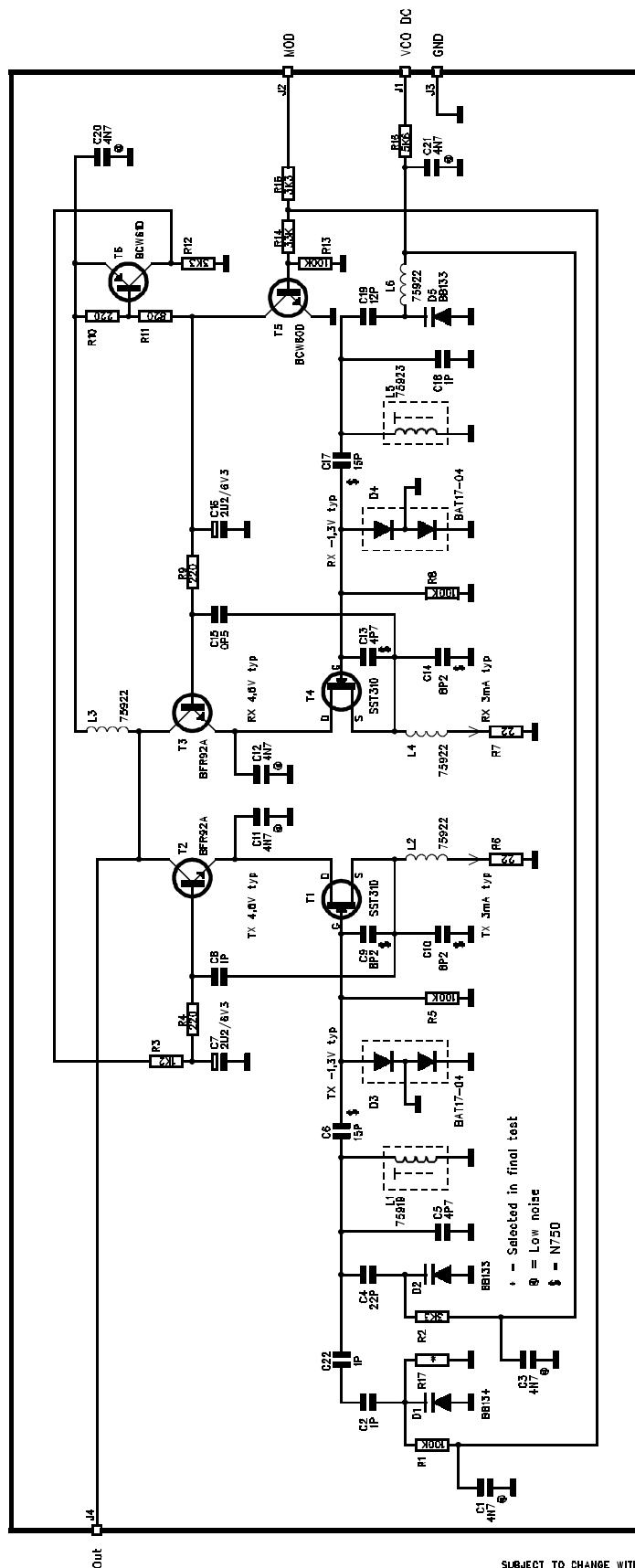
PC. Board No. 725-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 15-07-98 | 0 | PA |

16. VCO-board TRX1012C

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 28-01-99 | 1 | PA |

16.1 Diagram

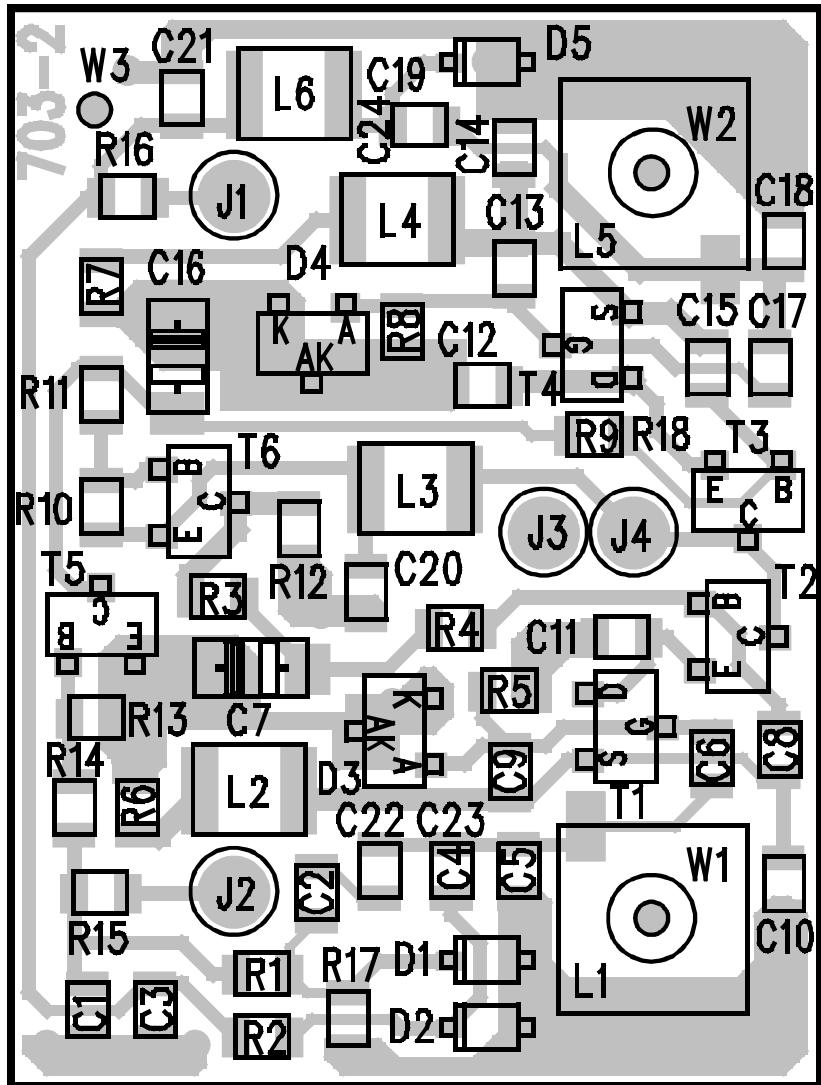


SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|-------------------------|----------|---|-----------------------------|
| DATE: 25-5-93 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 12-1-94 | SIGN: PH | 1 | HØRSEMARKEN 5, 3520 FARUM |
| DATE: 27-1-99 | SIGN: PH | 2 | |
| DATE: | SIGN: | | VCO-board |
| DATE: | SIGN: | | TRX1001C/TRX1012C |
| DATE: | SIGN: | | |
| DRAWING NO: 0-B618-B3-2 | | | PCB NO: 703-2 UNIT NO: 5B42 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 28-01-99 | 1 | PA |

16.2 Componentside



Componentside 703-2

SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|-------------------------|----------|---------------|-----------------------------|
| DATE: 25-5-93 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 12-1-94 | SIGN: PH | 1 | HØRSEMARKEN 5, 3520 FARLM |
| DATE: 27-1-99 | SIGN: PH | 2 | |
| DATE: | SIGN: | | VCO-board |
| DATE: | SIGN: | | TRX1001C/TRX1012C |
| DATE: | SIGN: | | |
| DRAWING NO: 0-9B16-05-2 | | PCB NO: 703-2 | UNIT NO: 5642 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 28-01-99 | 1 | PA |

16.3 Partlist

| PARTLIST FOR VCO-board TRX1001C/TRX1012C DRAWING NO. 0-9616-03-2 | | | DATE 27-1-99 |
|---|-----------------------|------------|---------------|
| | | | UNIT NO. 5642 |
| Component | Description | Value | Niros No. |
| R1 | Resistor, chip603 | 100 Kohm | 14104 |
| R2 | Resistor, chip603 | 3,3 Kohm | 14332 |
| R3 | Resistor, chip603 | 1,2 Kohm | 14122 |
| R4 | Resistor, chip603 | 220 Ohm | 14221 |
| R5 | Resistor, chip603 | 100 Kohm | 14104 |
| R6 | Resistor, chip603 | 22 Ohm | 14220 |
| R7 | Resistor, chip603 | 22 Ohm | 14220 |
| R8 | Resistor, chip603 | 100 Kohm | 14104 |
| R9 | Resistor, chip603 | 220 Ohm | 14221 |
| R10 | Resistor, chip603 | 220 Ohm | 14221 |
| R11 | Resistor, chip603 | 820 Ohm | 14821 |
| R12 | Resistor, chip603 | 3,3 Kohm | 14332 |
| R13 | Resistor, chip603 | 100 Kohm | 14104 |
| R14 | Resistor, chip603 | 33 Kohm | 14333 |
| R15 | Resistor, chip603 | 3,3 Kohm | 14332 |
| R16 | Resistor, chip603 | 5,6 Kohm | 14562 |
| R17 | Resistor, chip603 | Selected | |
| C1 | Capacitor, chip603_ln | 4,7 nF | 20803 |
| C2 | Capacitor, chip603 | 1 pF | 21109 |
| C3 | Capacitor, chip603_ln | 4,7 nF | 20803 |
| C4 | Capacitor, chip603 | 22 pF | 21220 |
| C5 | Capacitor, chip603 | 4,7 pF | 21479 |
| C6 | Capacitor, chip603_sp | 15 pF | 20808 |
| C7 | Capacitor, ctan_a | 2,2 uF/6V3 | 25602 |
| C8 | Capacitor, chip603 | 1 pF | 21109 |
| C9 | Capacitor, chip603_sp | 8,2 pF | 20807 |
| C10 | Capacitor, chip603_sp | 8,2 pF | 20807 |
| C11 | Capacitor, chip603_ln | 4,7 nF | 20803 |
| C12 | Capacitor, chip603_ln | 4,7 nF | 20803 |
| C13 | Capacitor, chip603_sp | 4,7 pF | 20806 |
| C14 | Capacitor, chip603_sp | 8,2 pF | 20807 |
| C15 | Capacitor, chip603 | 0,5 pF | 21508 |
| C16 | Capacitor, ctan_a | 2,2 uF/6V3 | 25602 |
| C17 | Capacitor, chip603_sp | 15 pF | 20808 |
| C18 | Capacitor, chip603 | 1 pF | 21109 |
| C19 | Capacitor, chip603 | 12 pF | 21120 |
| C20 | Capacitor, chip603_ln | 4,7 nF | 20803 |
| C21 | Capacitor, chip603_ln | 4,7 nF | 20803 |
| C22 | Capacitor, chip603 | 1 pF | 21109 |
| T1 | Transistor | SST310 | 40175 |
| T2 | Transistor | BFR92A | 40150 |
| T3 | Transistor | BFR92A | 40150 |

p. 1 of 2

PC. Board No. 703-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 28-01-99 | 1 | PA |

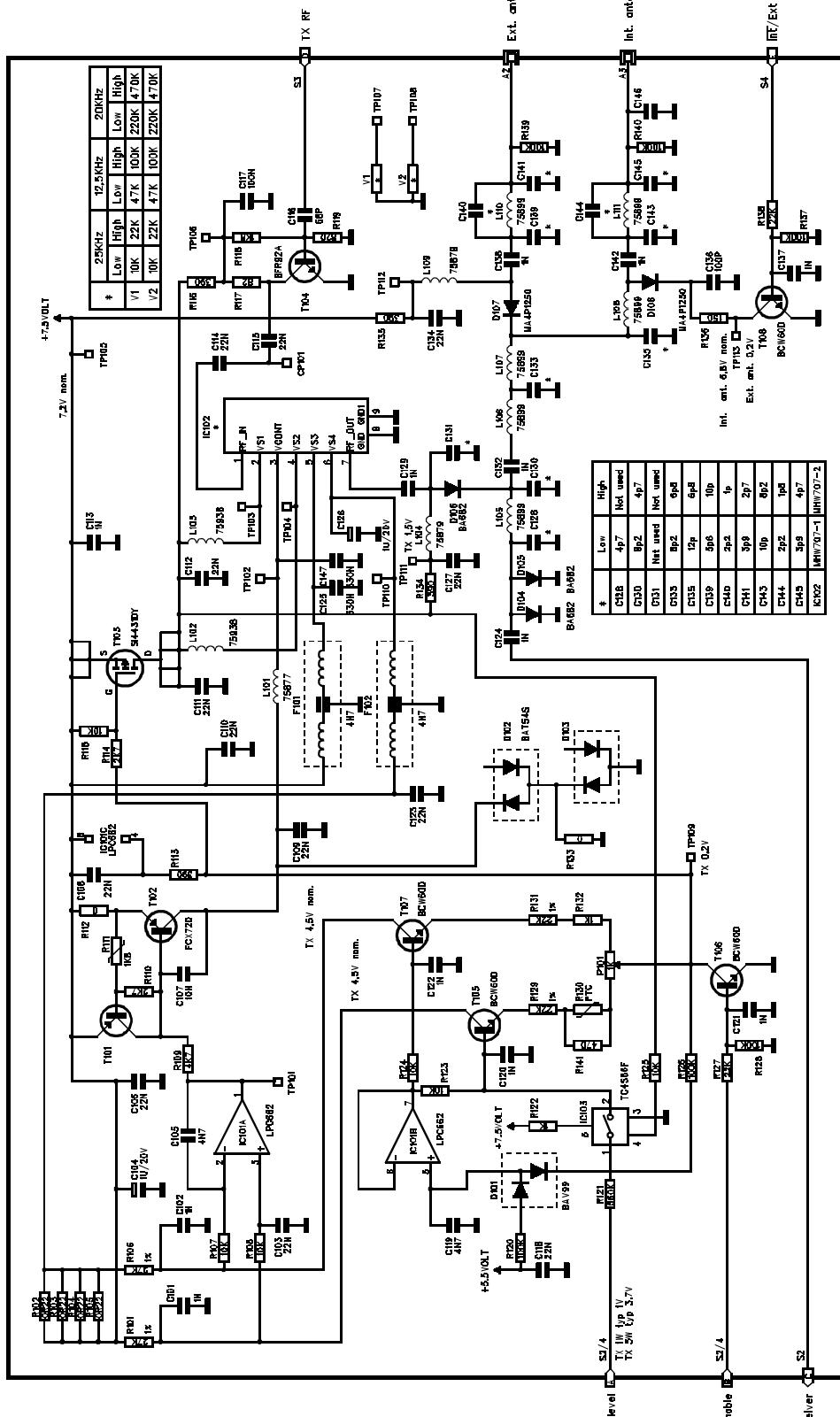
| PARTLIST FOR VCO-board TRX1001C/TRX1012C DRAWING NO. 0-9616-03-2 | | DATE 27-1-99 UNIT NO. 5642 | |
|---|-------------|-------------------------------|-----------|
| Component | Description | Value | Niros No. |
| T4 | Transistor | SST310 | 40175 |
| T5 | Transistor | BCW60D | 40156 |
| T6 | Transistor | BCW61D | 40157 |
| D1 | Diode, kap | BB134 | 45196 |
| D2 | Diode, kap | BB133 | 45195 |
| D3 | Diode | BAT17-04 | 45172 |
| D4 | Diode | BAT17-04 | 45172 |
| D5 | Diode, kap | BB133 | 45195 |
| L1 | Coil | 75919 | 75919 |
| L2 | Coil, chip | 75922 | 75922 |
| L3 | Coil, chip | 75922 | 75922 |
| L4 | Coil, chip | 75922 | 75922 |
| L5 | Coil | 75923 | 75923 |
| L6 | Coil, chip | 75922 | 75922 |
| Pc._board_no 703-2 | | 1 pcs | 95703 |
| p. 2 of 2 | | | |
| PC. Board No. 703-2 | | | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 28-01-99 | 1 | PA |

17. Radioboard TRX1012D

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

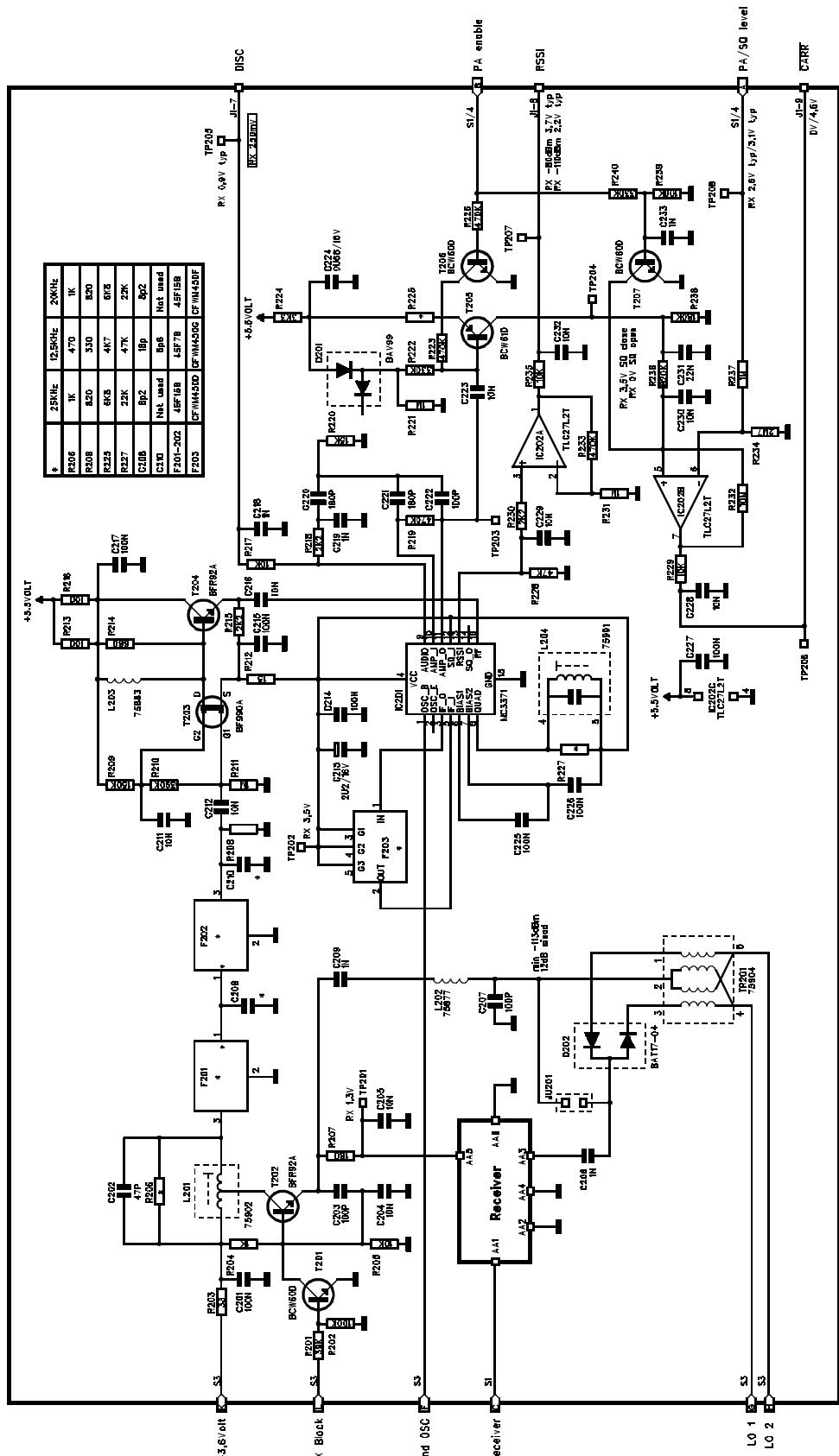
17.1 Diagram



SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|----------------------------------|----------|---|-----------------------------|
| DATE: 24-2-97 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 4-11-98 | SIGN: PH | 1 | HIRSEMARKEN 5, 3520 FARUM |
| DATE: 11-2-00 | SIGN: PH | 1 | |
| DATE: | SIGN: | | Radioboard TRX1012D |
| DATE: | SIGN: | | PA-stage |
| DRAWING NO: 0-9707-03-1 p 1 of 4 | | | PCB NO: 749-3 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |



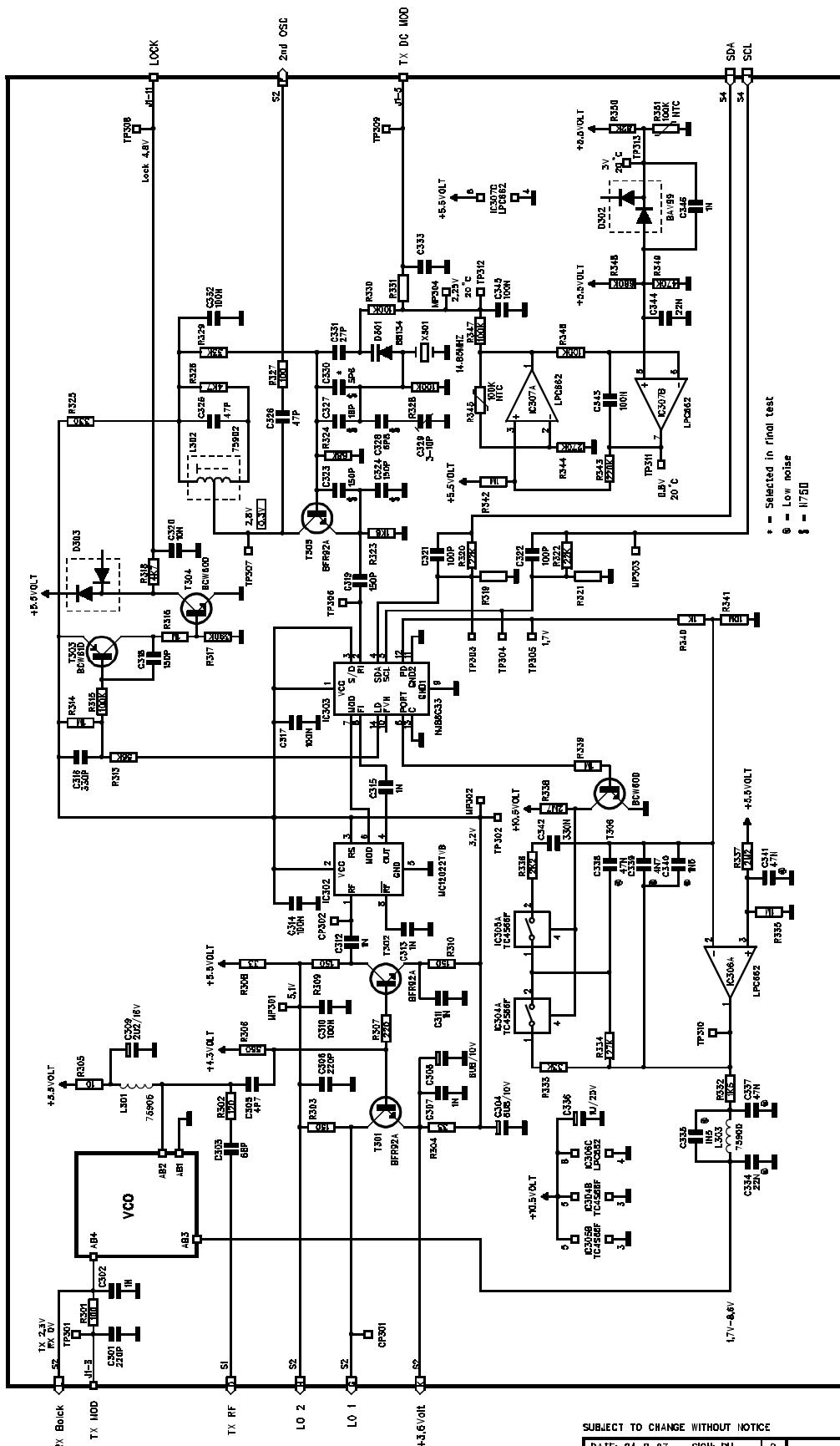
DC voltages are measured with 10Ω instrument.
AC voltages
RF measurements are made with -50dBm

25KHz LOW UNIT NO: 5802
25KHz HIGH UNIT NO: 5803
12.5KHz LOW UNIT NO: 5812
12.5KHz HIGH UNIT NO: 5813
20KHz LOW UNIT NO: 5817
20KHz HIGH UNIT NO: 5818

SUBJECT TO CHANGE WITHOUT NOTICE

| | |
|----------------------------------|-----------------------------|
| DATE: 24-2-97 SIGN: PH O | NIROS TELECOMMUNICATION A/S |
| DATE: 11-2-00 SIGN: PH 1 | HØJSEMARKEN 5, 3520 FARUM |
| DATE: SIGN: | |
| DATE: SIGN: | |
| DATE: SIGN: | |
| DRAWING NO: D-9707-03-1 p 2 of 4 | PCB NO: 749-3 |
| RADIOBOARD TRX1012D | |
| MF-unit | |

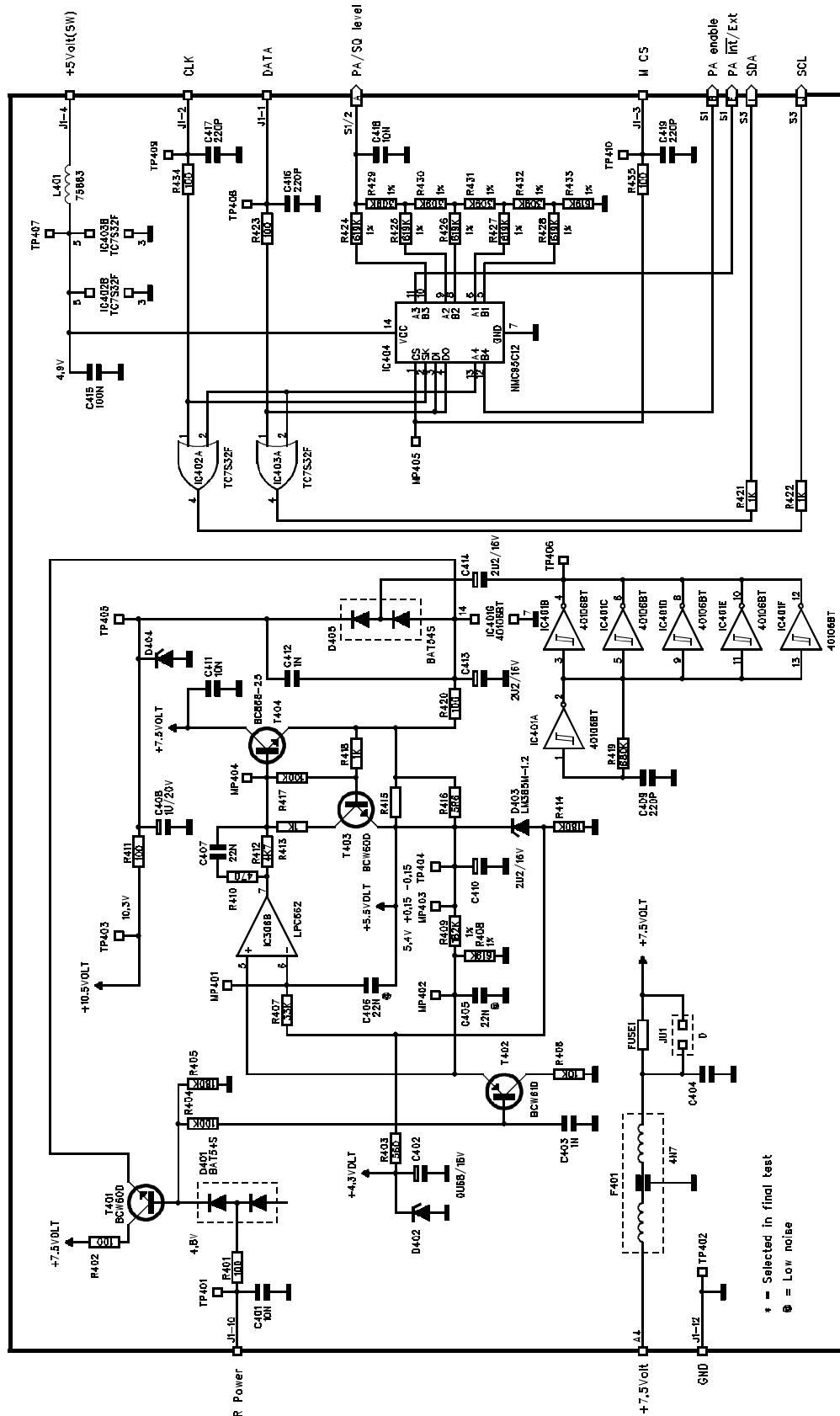
| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |



SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|----------------------------------|----------|---|-----------------------------|
| DATE: 24-2-97 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 4-11-99 | SIGN: PH | 1 | HIRSEMARKEN 5, 3320 FARUM |
| DATE: 11-2-00 | SIGN: PH | 1 | |
| | | | Radioboard TRX1012D |
| | | | Synthesizer |
| DRAWING NO: 0-9707-03-1 p 3 of 4 | | | PCB NO: 749-3 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

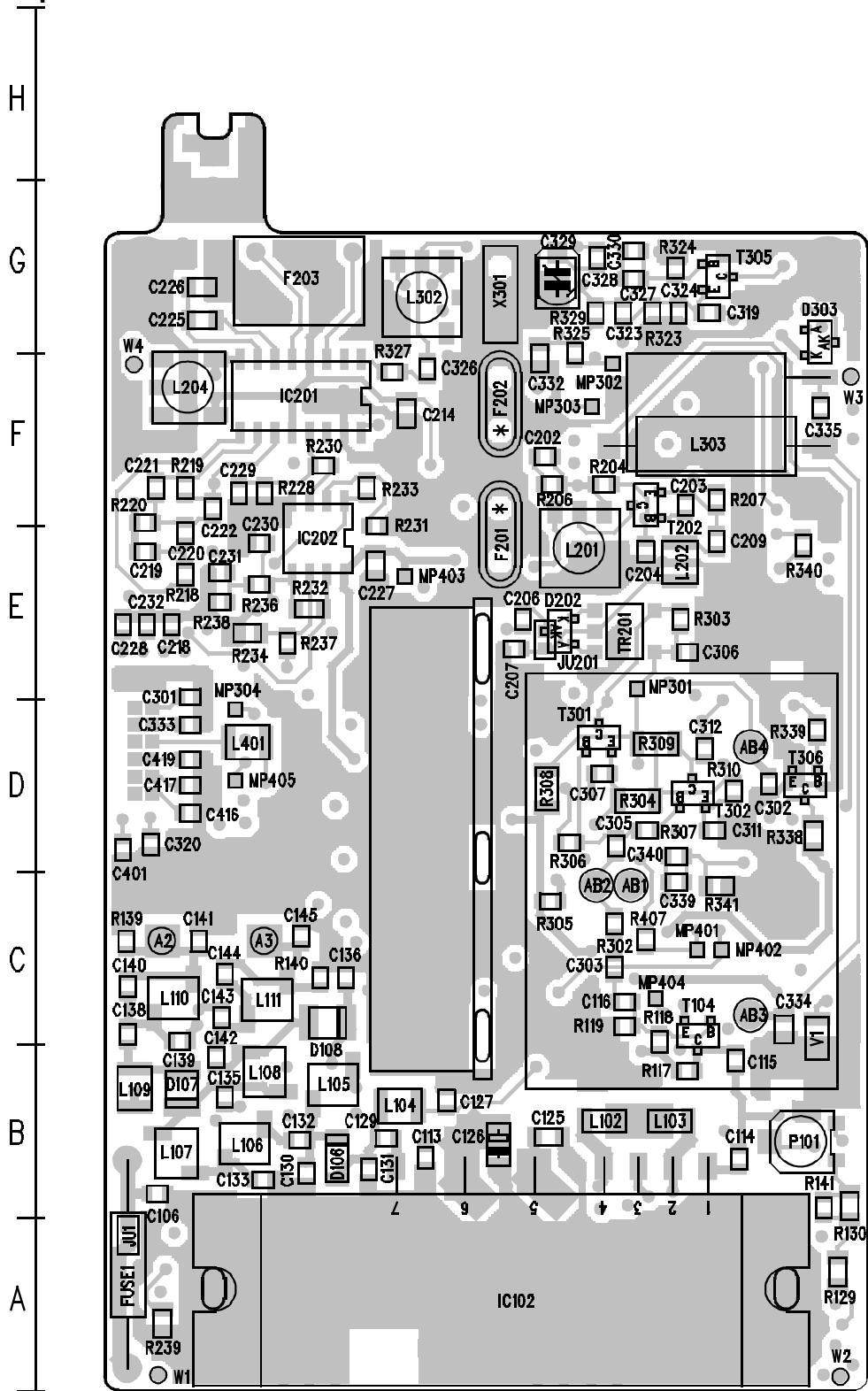


SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|---------------|----------|---|----------------------------------|
| DATE: 24-2-97 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 4-11-99 | SIGN: PH | 1 | HØRSEMARKEN 5, 3320 FARUM |
| DATE: 11-2-00 | SIGN: PH | 1 | |
| | | | Radioboard TRX1012D |
| | | | Power supply |
| | | | DRAWING NO: 0-9707-D3-1 p 4 of 4 |
| | | | PCB NO: 749-3 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

17.2 Componentside



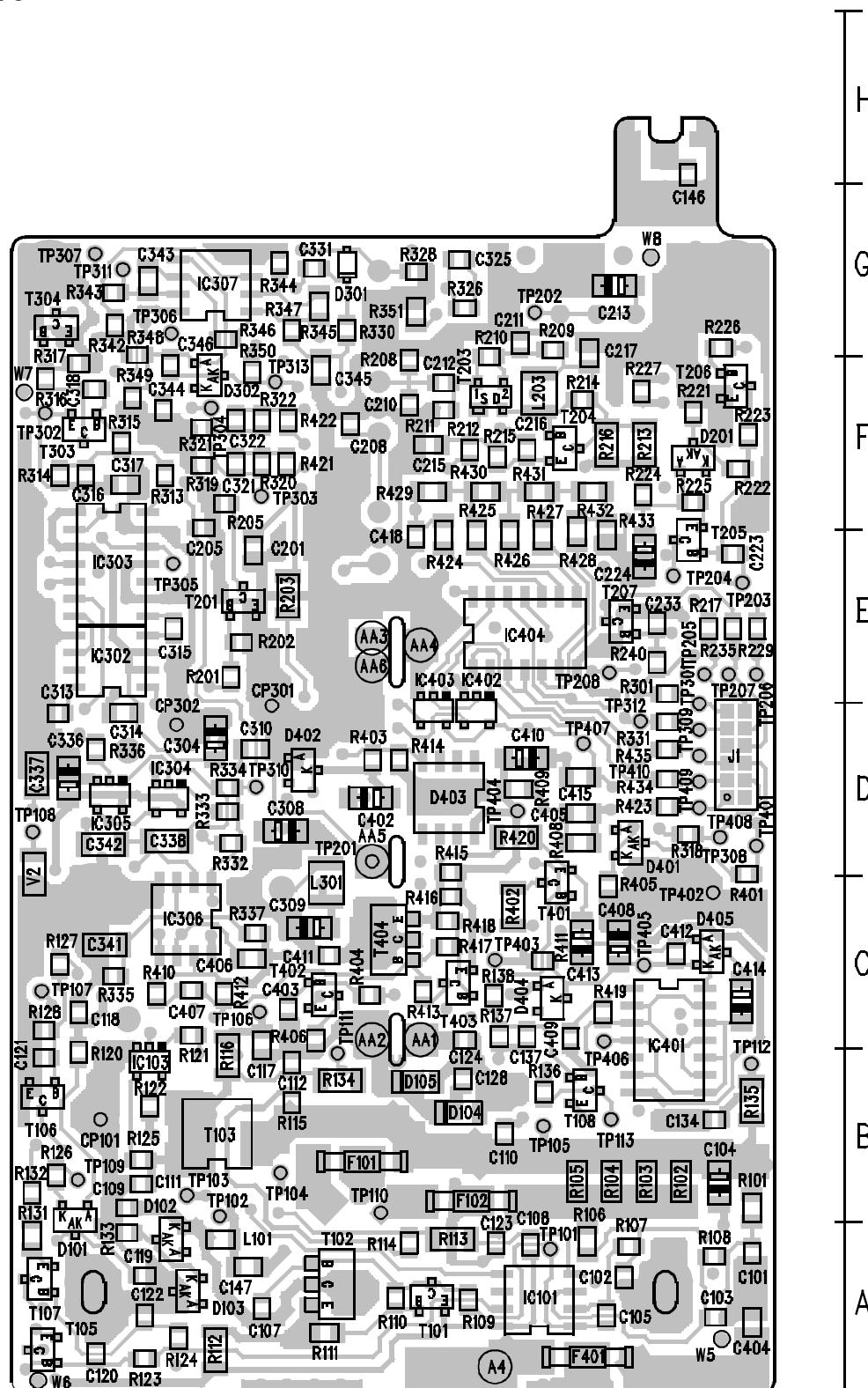
Componentside 749-3

| SUBJECT TO CHANGE WITHOUT NOTICE | | | |
|----------------------------------|----------|---|-----------------------------|
| DATE: 24-2-97 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 4-11-99 | SIGN: PH | 1 | HIRSEMARKEN 5, 3520 FARUM |
| DATE: 11-2-00 | SIGN: PH | 1 | |
| DATE: | SIGN: | | Radioboard TRX1012D |
| DATE: | SIGN: | | |
| DATE: | SIGN: | | |
| DRAWING NO: 0-9707-05-1 | | | PCB NO: 749-3 |

25KHz LOW UNIT NO: 5802
 25KHz HIGH UNIT NO: 5803
 12,5KHz LOW UNIT NO: 5812
 12,5KHz HIGH UNIT NO: 5813
 20KHz LOW UNIT NO: 5817
 20KHz HIGH UNIT NO: 5818

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

17.3 Wiringside



5 4 3 2 1
Wiringside 749-3

25KHz LOW UNIT NO: 5802
25KHz HIGH UNIT NO: 5803
12.5KHz LOW UNIT NO: 5812
12.5KHz HIGH UNIT NO: 5813
20KHz LOW UNIT NO: 5817
20KHz HIGH UNIT NO: 5818

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

17.4 Fieldlist

| TEXT Radioboard TRX1012D DRAWING NO. 0-9707-03-1 | | | | | DATE 14-2-00 UNIT NO. 5802 | | |
|---|------|--------|------|-----------|-------------------------------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| R101 | SMT | BOTTOM | B1 | R213 | SMT | BOTTOM | F1 |
| R102 | SMT | BOTTOM | B1 | R214 | SMT | BOTTOM | F2 |
| R103 | SMT | BOTTOM | B1 | R215 | SMT | BOTTOM | F2 |
| R104 | SMT | BOTTOM | B1 | R216 | SMT | BOTTOM | F1 |
| R105 | SMT | BOTTOM | B2 | R217 | SMT | BOTTOM | E1 |
| R106 | SMT | BOTTOM | A2 | R218 | SMT | TOP | E1 |
| R107 | SMT | BOTTOM | A1 | R219 | SMT | TOP | F1 |
| R108 | SMT | BOTTOM | A1 | R220 | SMT | TOP | F1 |
| R109 | SMT | BOTTOM | A2 | R221 | SMT | BOTTOM | F1 |
| R110 | SMT | BOTTOM | A3 | R222 | SMT | BOTTOM | F1 |
| R111 | SMT | BOTTOM | A3 | R223 | SMT | BOTTOM | F1 |
| R112 | SMT | BOTTOM | A4 | R224 | SMT | BOTTOM | F1 |
| R113 | SMT | BOTTOM | A2 | R225 | SMT | BOTTOM | F1 |
| R114 | SMT | BOTTOM | A3 | R226 | SMT | BOTTOM | G1 |
| R115 | SMT | BOTTOM | B3 | R227 | SMT | BOTTOM | F1 |
| R116 | SMT | BOTTOM | B4 | R228 | SMT | TOP | F1 |
| R117 | SMT | TOP | B4 | R229 | SMT | BOTTOM | E1 |
| R118 | SMT | TOP | C4 | R230 | SMT | TOP | F2 |
| R119 | SMT | TOP | C4 | R231 | SMT | TOP | F2 |
| R120 | SMT | BOTTOM | B5 | R232 | SMT | TOP | E2 |
| R121 | SMT | BOTTOM | C4 | R233 | SMT | TOP | F2 |
| R122 | SMT | BOTTOM | B4 | R234 | SMT | TOP | E1 |
| R123 | SMT | BOTTOM | A4 | R235 | SMT | BOTTOM | E1 |
| R124 | SMT | BOTTOM | A4 | R236 | SMT | TOP | E1 |
| R125 | SMT | BOTTOM | B4 | R237 | SMT | TOP | E2 |
| R126 | SMT | BOTTOM | B5 | R238 | SMT | TOP | E1 |
| R127 | SMT | BOTTOM | C5 | R239 | SMT | TOP | A1 |
| R128 | SMT | BOTTOM | C5 | R240 | SMT | BOTTOM | E1 |
| R129 | SMT | TOP | A5 | R301 | SMT | BOTTOM | E1 |
| R130 | SMT | TOP | B5 | R302 | SMT | TOP | C3 |
| R131 | SMT | BOTTOM | A5 | R303 | SMT | TOP | E4 |
| R132 | SMT | BOTTOM | B5 | R304 | SMT | TOP | D4 |
| R133 | SMT | BOTTOM | A4 | R305 | SMT | TOP | C3 |
| R134 | SMT | BOTTOM | B3 | R306 | SMT | TOP | D3 |
| R135 | SMT | BOTTOM | B1 | R307 | SMT | TOP | D4 |
| R136 | SMT | BOTTOM | B2 | R308 | SMT | TOP | D3 |
| R137 | SMT | BOTTOM | C2 | R309 | SMT | TOP | D4 |
| R138 | SMT | BOTTOM | C2 | R310 | SMT | TOP | D4 |
| R139 | SMT | TOP | C1 | R313 | SMT | BOTTOM | F4 |
| R140 | SMT | TOP | C2 | R314 | SMT | BOTTOM | F5 |
| R141 | SMT | TOP | B5 | R315 | SMT | BOTTOM | F4 |
| R201 | SMT | BOTTOM | E4 | R316 | SMT | BOTTOM | F5 |
| R202 | SMT | BOTTOM | E4 | R317 | SMT | BOTTOM | F5 |
| R203 | SMT | BOTTOM | E3 | R318 | SMT | BOTTOM | D1 |
| R204 | SMT | TOP | F3 | R319 | SMT | BOTTOM | F4 |
| R205 | SMT | BOTTOM | F4 | R320 | SMT | BOTTOM | F3 |
| R206 | SMT | TOP | F3 | R321 | SMT | BOTTOM | F4 |
| R207 | SMT | TOP | F4 | R322 | SMT | BOTTOM | F3 |
| R208 | SMT | BOTTOM | F3 | R323 | SMT | TOP | G4 |
| R209 | SMT | BOTTOM | G2 | R324 | SMT | TOP | G4 |
| R210 | SMT | BOTTOM | G2 | R325 | SMT | TOP | G3 |
| R211 | SMT | BOTTOM | F2 | R326 | SMT | BOTTOM | G2 |
| R212 | SMT | BOTTOM | F2 | R327 | SMT | TOP | F2 |

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PC. Board No. 749-3

| TEXT Radioboard TRX1012D DRAWING NO. 0-9707-03-1 | | | | DATE 14-2-00 UNIT NO. 5802 | | | |
|---|------|--------|------|-------------------------------|------|--------|------|
| Component | Type | Side | Cord | Component | Type | Side | Cord |
| R328 | SMT | BOTTOM | G3 | R430 | SMT | BOTTOM | F2 |
| R329 | SMT | TOP | G3 | R431 | SMT | BOTTOM | F2 |
| R330 | SMT | BOTTOM | G3 | R432 | SMT | BOTTOM | F2 |
| R331 | SMT | BOTTOM | D1 | R433 | SMT | BOTTOM | E1 |
| R332 | SMT | BOTTOM | D4 | R434 | SMT | BOTTOM | D1 |
| R333 | SMT | BOTTOM | D4 | R435 | SMT | BOTTOM | D1 |
| R334 | SMT | BOTTOM | D4 | P101 | SMT | TOP | B5 |
| R335 | SMT | BOTTOM | C4 | C101 | SMT | BOTTOM | A1 |
| R336 | SMT | BOTTOM | D4 | C102 | SMT | BOTTOM | A1 |
| R337 | SMT | BOTTOM | C4 | C103 | SMT | BOTTOM | A1 |
| R338 | SMT | TOP | D5 | C104 | SMT | BOTTOM | B1 |
| R339 | SMT | TOP | D5 | C105 | SMT | BOTTOM | A1 |
| R340 | SMT | TOP | E5 | C106 | SMT | TOP | B1 |
| R341 | SMT | TOP | C4 | C107 | SMT | BOTTOM | A3 |
| R342 | SMT | BOTTOM | G4 | C108 | SMT | BOTTOM | A2 |
| R343 | SMT | BOTTOM | G4 | C109 | SMT | BOTTOM | B4 |
| R344 | SMT | BOTTOM | G3 | C110 | SMT | BOTTOM | B2 |
| R345 | SMT | BOTTOM | G3 | C111 | SMT | BOTTOM | B4 |
| R346 | SMT | BOTTOM | G4 | C112 | SMT | BOTTOM | B3 |
| R347 | SMT | BOTTOM | G3 | C113 | SMT | TOP | B2 |
| R348 | SMT | BOTTOM | G4 | C114 | SMT | TOP | B4 |
| R349 | SMT | BOTTOM | F4 | C115 | SMT | TOP | B4 |
| R350 | SMT | BOTTOM | F4 | C116 | SMT | TOP | C4 |
| R351 | SMT | BOTTOM | G3 | C117 | SMT | BOTTOM | C3 |
| R401 | SMT | BOTTOM | D1 | C118 | SMT | BOTTOM | C5 |
| R402 | SMT | BOTTOM | C2 | C119 | SMT | BOTTOM | A4 |
| R403 | SMT | BOTTOM | D3 | C120 | SMT | BOTTOM | A4 |
| R404 | SMT | BOTTOM | C3 | C121 | SMT | BOTTOM | B5 |
| R405 | SMT | BOTTOM | C1 | C122 | SMT | BOTTOM | A4 |
| R406 | SMT | BOTTOM | C3 | C123 | SMT | BOTTOM | A2 |
| R407 | SMT | TOP | C4 | C124 | SMT | BOTTOM | C2 |
| R408 | SMT | BOTTOM | D2 | C125 | SMT | TOP | B3 |
| R409 | SMT | BOTTOM | D2 | C126 | SMT | TOP | B3 |
| R410 | SMT | BOTTOM | C4 | C127 | SMT | TOP | B2 |
| R411 | SMT | BOTTOM | C2 | C128 | SMT | BOTTOM | B2 |
| R412 | SMT | BOTTOM | C4 | C129 | SMT | TOP | B2 |
| R413 | SMT | BOTTOM | C3 | C130 | SMT | TOP | B2 |
| R414 | SMT | BOTTOM | D3 | C131 | SMT | TOP | B2 |
| R415 | SMT | BOTTOM | D2 | C132 | SMT | TOP | B2 |
| R416 | SMT | BOTTOM | C2 | C133 | SMT | TOP | B1 |
| R417 | SMT | BOTTOM | C2 | C134 | SMT | BOTTOM | B1 |
| R418 | SMT | BOTTOM | C2 | C135 | SMT | TOP | B1 |
| R419 | SMT | BOTTOM | C1 | C136 | SMT | TOP | C2 |
| R420 | SMT | BOTTOM | D2 | C137 | SMT | BOTTOM | C2 |
| R421 | SMT | BOTTOM | F3 | C138 | SMT | TOP | C1 |
| R422 | SMT | BOTTOM | F3 | C139 | SMT | TOP | C1 |
| R423 | SMT | BOTTOM | D1 | C140 | SMT | TOP | C1 |
| R424 | SMT | BOTTOM | E2 | C141 | SMT | TOP | C1 |
| R425 | SMT | BOTTOM | E2 | C142 | SMT | TOP | B1 |
| R426 | SMT | BOTTOM | E2 | C143 | SMT | TOP | C1 |
| R427 | SMT | BOTTOM | E2 | C144 | SMT | TOP | C1 |
| R428 | SMT | BOTTOM | E2 | C145 | SMT | TOP | C2 |
| R429 | SMT | BOTTOM | F2 | C146 | SMT | BOTTOM | H1 |

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PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

TEXT Radioboard TRX1012D
DRAWING NO. 0-9707-03-1

DATE 14-2-00
UNIT NO. 5802

| Component | Type | Side | Cord | Component | Type | Side | Cord |
|-----------|------|--------|------|-----------|------|--------|------|
| C147 | SMT | BOTTOM | A4 | C320 | SMT | TOP | D1 |
| C201 | SMT | BOTTOM | E4 | C321 | SMT | BOTTOM | F4 |
| C202 | SMT | TOP | F3 | C322 | SMT | BOTTOM | F4 |
| C203 | SMT | TOP | F4 | C323 | SMT | TOP | G3 |
| C204 | SMT | TOP | E4 | C324 | SMT | TOP | G4 |
| C205 | SMT | BOTTOM | F4 | C325 | SMT | BOTTOM | G2 |
| C206 | SMT | TOP | E3 | C326 | SMT | TOP | F2 |
| C207 | SMT | TOP | E3 | C327 | SMT | TOP | G4 |
| C208 | SMT | BOTTOM | F3 | C328 | SMT | TOP | G3 |
| C209 | SMT | TOP | E4 | C329 | SMT | TOP | G3 |
| C210 | SMT | BOTTOM | F3 | C330 | SMT | TOP | G4 |
| C211 | SMT | BOTTOM | G2 | C331 | SMT | BOTTOM | G3 |
| C212 | SMT | BOTTOM | F2 | C332 | SMT | TOP | F3 |
| C213 | SMT | BOTTOM | G1 | C333 | SMT | TOP | D1 |
| C214 | SMT | TOP | F2 | C334 | SMT | TOP | C4 |
| C215 | SMT | BOTTOM | F3 | C335 | SMT | TOP | F5 |
| C216 | SMT | BOTTOM | F2 | C336 | SMT | BOTTOM | D5 |
| C217 | SMT | BOTTOM | G2 | C337 | SMT | BOTTOM | D5 |
| C218 | SMT | TOP | E1 | C338 | SMT | BOTTOM | D4 |
| C219 | SMT | TOP | E1 | C339 | SMT | TOP | C4 |
| C220 | SMT | TOP | E1 | C340 | SMT | TOP | D4 |
| C221 | SMT | TOP | F1 | C341 | SMT | BOTTOM | C4 |
| C222 | SMT | TOP | F1 | C342 | SMT | BOTTOM | D4 |
| C223 | SMT | BOTTOM | E1 | C343 | SMT | BOTTOM | G4 |
| C224 | SMT | BOTTOM | E1 | C344 | SMT | BOTTOM | F4 |
| C225 | SMT | TOP | G1 | C345 | SMT | BOTTOM | F3 |
| C226 | SMT | TOP | G1 | C346 | SMT | BOTTOM | F4 |
| C227 | SMT | TOP | E2 | C401 | SMT | TOP | D1 |
| C228 | SMT | TOP | E1 | C402 | SMT | BOTTOM | D3 |
| C229 | SMT | TOP | F1 | C403 | SMT | BOTTOM | C3 |
| C230 | SMT | TOP | E1 | C404 | SMT | BOTTOM | A1 |
| C231 | SMT | TOP | E1 | C405 | SMT | BOTTOM | D2 |
| C232 | SMT | TOP | E1 | C406 | SMT | BOTTOM | C4 |
| C233 | SMT | BOTTOM | E1 | C407 | SMT | BOTTOM | C4 |
| C301 | SMT | TOP | E1 | C408 | SMT | BOTTOM | C1 |
| C302 | SMT | TOP | D4 | C409 | SMT | BOTTOM | C2 |
| C303 | SMT | TOP | C3 | C410 | SMT | BOTTOM | D2 |
| C304 | SMT | BOTTOM | D4 | C411 | SMT | BOTTOM | C3 |
| C305 | SMT | TOP | D3 | C412 | SMT | BOTTOM | C1 |
| C306 | SMT | TOP | E4 | C413 | SMT | BOTTOM | C2 |
| C307 | SMT | TOP | D3 | C414 | SMT | BOTTOM | C1 |
| C308 | SMT | BOTTOM | D3 | C415 | SMT | BOTTOM | D2 |
| C309 | SMT | BOTTOM | C3 | C416 | SMT | TOP | D1 |
| C310 | SMT | BOTTOM | D4 | C417 | SMT | TOP | D1 |
| C311 | SMT | TOP | D4 | C418 | SMT | BOTTOM | E3 |
| C312 | SMT | TOP | D4 | C419 | SMT | TOP | D1 |
| C313 | SMT | BOTTOM | D5 | F101 | SMT | BOTTOM | B3 |
| C314 | SMT | BOTTOM | D4 | F102 | SMT | BOTTOM | B2 |
| C315 | SMT | BOTTOM | E4 | F201 | LEAD | TOP | E3 |
| C316 | SMT | BOTTOM | F4 | F202 | LEAD | TOP | F3 |
| C317 | SMT | BOTTOM | F4 | F203 | LEAD | TOP | G2 |
| C318 | SMT | BOTTOM | F4 | F401 | SMT | BOTTOM | A2 |
| C319 | SMT | TOP | G4 | X301 | LEAD | TOP | G3 |

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PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

TEXT Radioboard TRX1012D
DRAWING NO. 0-9707-03-1

DATE 14-2-00
UNIT NO. 5802

| Component | Type | Side | Cord | Component | Type | Side | Cord |
|-----------|------|--------|------|-----------|------|--------|------|
| T101 | SMT | BOTTOM | A2 | IC307 | SMT | BOTTOM | G4 |
| T102 | SMT | BOTTOM | A3 | IC401 | SMT | BOTTOM | C1 |
| T103 | SMT | BOTTOM | B4 | IC402 | SMT | BOTTOM | D2 |
| T104 | SMT | TOP | C4 | IC403 | SMT | BOTTOM | D2 |
| T105 | SMT | BOTTOM | A5 | IC404 | SMT | BOTTOM | E2 |
| T106 | SMT | BOTTOM | B5 | TR201 | SMT | TOP | E4 |
| T107 | SMT | BOTTOM | A5 | L101 | LEAD | BOTTOM | A4 |
| T108 | SMT | BOTTOM | B2 | L102 | SMT | TOP | B3 |
| T201 | SMT | BOTTOM | E4 | L103 | SMT | TOP | B4 |
| T202 | SMT | TOP | F4 | L104 | SMT | TOP | B2 |
| T203 | SMT | BOTTOM | F2 | L105 | SMT | TOP | B2 |
| T204 | SMT | BOTTOM | F2 | L106 | SMT | TOP | B1 |
| T205 | SMT | BOTTOM | E1 | L107 | SMT | TOP | B1 |
| T206 | SMT | BOTTOM | F1 | L108 | SMT | TOP | B1 |
| T207 | SMT | BOTTOM | E1 | L109 | SMT | TOP | B1 |
| T301 | SMT | TOP | D3 | L110 | SMT | TOP | C1 |
| T302 | SMT | TOP | D4 | L111 | SMT | TOP | C1 |
| T303 | SMT | BOTTOM | F4 | L201 | SMT | TOP | E3 |
| T304 | SMT | BOTTOM | G5 | L202 | SMT | TOP | E4 |
| T305 | SMT | TOP | G4 | L203 | SMT | BOTTOM | F2 |
| T306 | SMT | TOP | D5 | L204 | SMT | TOP | F1 |
| T401 | SMT | BOTTOM | C2 | L301 | SMT | BOTTOM | C3 |
| T402 | SMT | BOTTOM | C3 | L302 | SMT | TOP | G2 |
| T403 | SMT | BOTTOM | C2 | L303 | SMT | TOP | F4 |
| T404 | SMT | BOTTOM | C3 | L401 | SMT | TOP | D1 |
| D101 | SMT | BOTTOM | B5 | FUSE1 | LEAD | TOP | A1 |
| D102 | SMT | BOTTOM | A4 | TP101 | SMT | BOTTOM | A2 |
| D103 | SMT | BOTTOM | A4 | TP102 | SMT | BOTTOM | B4 |
| D104 | SMT | BOTTOM | B2 | TP103 | SMT | BOTTOM | B4 |
| D105 | SMT | BOTTOM | B3 | TP104 | SMT | BOTTOM | B3 |
| D106 | SMT | TOP | B2 | TP105 | SMT | BOTTOM | B2 |
| D107 | SMT | TOP | B1 | TP106 | SMT | BOTTOM | C3 |
| D108 | SMT | TOP | C2 | TP107 | SMT | BOTTOM | C5 |
| D201 | SMT | BOTTOM | F1 | TP108 | SMT | BOTTOM | D5 |
| D202 | SMT | TOP | E3 | TP109 | SMT | BOTTOM | B5 |
| D301 | SMT | BOTTOM | G3 | TP110 | SMT | BOTTOM | B3 |
| D302 | SMT | BOTTOM | F4 | TP111 | SMT | BOTTOM | B3 |
| D303 | SMT | TOP | G5 | TP112 | SMT | BOTTOM | B1 |
| D401 | SMT | BOTTOM | D1 | TP113 | SMT | BOTTOM | B1 |
| D402 | SMT | BOTTOM | D3 | TP201 | SMT | BOTTOM | D3 |
| D403 | SMT | BOTTOM | D2 | TP202 | SMT | BOTTOM | G2 |
| D404 | SMT | BOTTOM | C2 | TP203 | SMT | BOTTOM | E1 |
| D405 | SMT | BOTTOM | C1 | TP204 | SMT | BOTTOM | E1 |
| IC101 | SMT | BOTTOM | A2 | TP205 | SMT | BOTTOM | E1 |
| IC102 | SMT | TOP | A3 | TP206 | SMT | BOTTOM | E1 |
| IC103 | SMT | BOTTOM | B4 | TP207 | SMT | BOTTOM | E1 |
| IC201 | SMT | TOP | F2 | TP208 | SMT | BOTTOM | E1 |
| IC202 | SMT | TOP | E2 | TP301 | SMT | BOTTOM | D1 |
| IC302 | SMT | BOTTOM | E4 | TP302 | SMT | BOTTOM | F5 |
| IC303 | SMT | BOTTOM | E4 | TP303 | SMT | BOTTOM | F3 |
| IC304 | SMT | BOTTOM | D4 | TP304 | SMT | BOTTOM | F4 |
| IC305 | SMT | BOTTOM | D4 | TP305 | SMT | BOTTOM | E4 |
| IC306 | SMT | BOTTOM | C4 | TP306 | SMT | BOTTOM | G4 |

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PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

TEXT Radioboard TRX1012D
DRAWING NO. 0-9707-03-1

DATE 14-2-00
UNIT NO. 5802

| Component | Type | Side | Cord | Component | Type | Side | Cord |
|-----------|------|--------|------|-----------|------|------|------|
| TP307 | SMT | BOTTOM | G4 | | | | |
| TP308 | SMT | BOTTOM | D1 | | | | |
| TP309 | SMT | BOTTOM | D1 | | | | |
| TP310 | SMT | BOTTOM | D3 | | | | |
| TP311 | SMT | BOTTOM | G4 | | | | |
| TP312 | SMT | BOTTOM | D1 | | | | |
| TP313 | SMT | BOTTOM | F3 | | | | |
| TP401 | SMT | BOTTOM | D1 | | | | |
| TP402 | SMT | BOTTOM | C1 | | | | |
| TP403 | SMT | BOTTOM | C2 | | | | |
| TP404 | SMT | BOTTOM | D2 | | | | |
| TP405 | SMT | BOTTOM | C1 | | | | |
| TP406 | SMT | BOTTOM | C1 | | | | |
| TP407 | SMT | BOTTOM | D2 | | | | |
| TP408 | SMT | BOTTOM | D1 | | | | |
| TP409 | SMT | BOTTOM | D1 | | | | |
| TP410 | SMT | BOTTOM | D1 | | | | |
| CP101 | LEAD | BOTTOM | B4 | | | | |
| CP301 | LEAD | BOTTOM | D3 | | | | |
| CP302 | LEAD | BOTTOM | D4 | | | | |
| MP301 | SMT | TOP | E4 | | | | |
| MP302 | SMT | TOP | F3 | | | | |
| MP303 | SMT | TOP | F3 | | | | |
| MP304 | SMT | TOP | D1 | | | | |
| MP401 | SMT | TOP | C4 | | | | |
| MP402 | SMT | TOP | C4 | | | | |
| MP403 | SMT | TOP | E2 | | | | |
| MP404 | SMT | TOP | C4 | | | | |
| MP405 | SMT | TOP | D1 | | | | |
| JU1 | SMT | TOP | A1 | | | | |
| JU201 | SMT | TOP | E3 | | | | |
| J1 | LEAD | BOTTOM | D1 | | | | |
| AA1 | SMT | BOTTOM | C3 | | | | |
| AB1 | LEAD | TOP | C4 | | | | |
| W1 | SMT | TOP | A1 | | | | |
| A2 | SMT | TOP | C1 | | | | |
| AA2 | SMT | BOTTOM | C3 | | | | |
| AB2 | LEAD | TOP | C3 | | | | |
| W2 | SMT | TOP | A5 | | | | |
| A3 | SMT | TOP | C1 | | | | |
| AA3 | SMT | BOTTOM | E3 | | | | |
| AB3 | LEAD | TOP | C4 | | | | |
| W3 | SMT | TOP | F5 | | | | |
| AA4 | SMT | BOTTOM | E3 | | | | |
| AB4 | LEAD | TOP | D4 | | | | |
| A4 | LEAD | BOTTOM | A2 | | | | |
| W4 | SMT | TOP | F1 | | | | |
| AA5 | SMT | BOTTOM | D3 | | | | |
| W5 | SMT | BOTTOM | A1 | | | | |
| AA6 | SMT | BOTTOM | E3 | | | | |
| W6 | SMT | BOTTOM | A5 | | | | |
| W7 | SMT | BOTTOM | F5 | | | | |
| W8 | SMT | BOTTOM | G1 | | | | |

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PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

17.5 Partlist

| PARTLIST FOR Radioboard TRX1012D DRAWING NO. 0-9707-03-1 | | | DATE 14-2-00 | UNIT NO. 5802 |
|---|--------------------------|----------|--------------|---------------|
| Component | Description | Value | Niros No. | |
| | Radioboard TRX1012D Low | 25 KHz | 5802 | |
| | Radioboard TRX1012D High | 25 KHz | 5802 | |
| | Radioboard TRX1012D Low | 12,5 KHz | 5812 | |
| | Radioboard TRX1012D High | 12,5 KHz | 5813 | |
| | Radioboard TRX1012D Low | 20 KHz | 5817 | |
| | Radioboard TRX1012D High | 20 KHz | 5818 | |
| R101 | Resistor, chip805_1% | 27 Kohm | 10906 | |
| R102 | Resistor, mini_melf | 0,22 Ohm | 10900 | |
| R103 | Resistor, mini_melf | 0,22 Ohm | 10900 | |
| R104 | Resistor, mini_melf | 0,22 Ohm | 10900 | |
| R105 | Resistor, mini_melf | 0,22 Ohm | 10900 | |
| R106 | Resistor, chip805_1% | 27 Kohm | 10906 | |
| R107 | Resistor, chip603 | 10 Kohm | 14103 | |
| R108 | Resistor, chip603 | 10 Kohm | 14103 | |
| R109 | Resistor, chip603 | 4,7 Kohm | 14472 | |
| R110 | Resistor, chip603 | 2,7 Kohm | 14272 | |
| R111 | Resistor, chip805 | 1,8 Kohm | 13182 | |
| R112 | Resistor, chip1206 | 0 Ohm | 12000 | |
| R113 | Resistor, chip1206 | 390 Ohm | 12391 | |
| R114 | Resistor, chip603 | 2,7 Kohm | 14272 | |
| R115 | Resistor, chip603 | 10 Kohm | 14103 | |
| R116 | Resistor, chip1206 | 390 Ohm | 12391 | |
| R117 | Resistor, chip603 | 82 Ohm | 14820 | |
| R118 | Resistor, chip603 | 1,8 Kohm | 14182 | |
| R119 | Resistor, chip603 | 820 Ohm | 14821 | |
| R120 | Resistor, chip603 | 100 Kohm | 14104 | |
| R121 | Resistor, chip603 | 560 Kohm | 14564 | |
| R122 | Resistor, chip603_0,1w | 1 Kohm | 10915 | |
| R123 | Resistor, chip603 | 10 Kohm | 14103 | |
| R124 | Resistor, chip603 | 10 Kohm | 14103 | |
| R125 | Resistor, chip603 | 10 Kohm | 14103 | |
| R126 | Resistor, chip603 | 100 Kohm | 14104 | |
| R127 | Resistor, chip603 | 22 Kohm | 14223 | |
| R128 | Resistor, chip603 | 100 Kohm | 14104 | |
| R129 | Resistor, chip805_1% | 22 Kohm | 10905 | |
| R130 | Resistor, ptc | Not used | | |
| R131 | Resistor, chip805_1% | 22 Kohm | 10905 | |
| R132 | Resistor, chip603 | 1 Kohm | 14102 | |
| R133 | Resistor, chip603 | 0 Ohm | 14000 | |
| R134 | Resistor, chip1206 | 390 Ohm | 12391 | |
| R135 | Resistor, chip1206 | 390 Ohm | 12391 | |
| R136 | Resistor, chip603 | 150 Ohm | 14151 | |
| R137 | Resistor, chip603 | 100 Kohm | 14104 | |
| R138 | Resistor, chip603 | 22 Kohm | 14223 | |

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PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

PARTLIST FOR Radioboard TRX1012D
DRAWING NO. 0-9707-03-1

DATE 14-2-00
UNIT NO. 5802

| Component | Description | Value | Niros No. |
|-----------|-----------------------|----------|-----------|
| R139 | Resistor,chip603 | 100 Kohm | 14104 |
| R140 | Resistor,chip603 | 100 Kohm | 14104 |
| R141 | Resistor,chip603 | 470 Ohm | 14471 |
| R201 | Resistor,chip603 | 39 Kohm | 14393 |
| R202 | Resistor,chip603 | 100 Kohm | 14104 |
| R203 | Resistor,chip1206 | 33 Ohm | 12330 |
| R204 | Resistor,chip603 | 1 Kohm | 14102 |
| R205 | Resistor,chip603 | 10 Kohm | 14103 |
| R206 | Resistor,chip603 | 25 L | 1 Kohm |
| | Resistor,chip603 | 25 H | 1 Kohm |
| | Resistor,chip603 | 12 L | 470 Ohm |
| | Resistor,chip603 | 12 H | 470 Ohm |
| | Resistor,chip603 | 20 L | 1 Kohm |
| | Resistor,chip603 | 20 H | 1 Kohm |
| R207 | Resistor,chip603 | 180 Ohm | 14181 |
| R208 | Resistor,chip603 | 25 L | 820 Ohm |
| | Resistor,chip603 | 25 H | 820 Ohm |
| | Resistor,chip603 | 12 L | 330 Ohm |
| | Resistor,chip603 | 12 H | 330 Ohm |
| | Resistor,chip603 | 20 L | 820 Ohm |
| | Resistor,chip603 | 20 H | 820 Ohm |
| R209 | Resistor,chip603 | 150 Kohm | 14154 |
| R210 | Resistor,chip603 | 390 Kohm | 14394 |
| R211 | Resistor,chip603 | 1 Mohm | 14105 |
| R212 | Resistor,chip603 0,1w | 15 Ohm | 10913 |
| R213 | Resistor,chip1206 | 100 Ohm | 12101 |
| R214 | Resistor,chip603 | 680 Ohm | 14681 |
| R215 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R216 | Resistor,chip1206 | 100 Ohm | 12101 |
| R217 | Resistor,chip603 | 10 Kohm | 14103 |
| R218 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R219 | Resistor,chip603 | 470 Kohm | 14474 |
| R220 | Resistor,chip603 | 15 Kohm | 14153 |
| R221 | Resistor,chip603 | 1 Mohm | 14105 |
| R222 | Resistor,chip603 | 330 Kohm | 14334 |
| R223 | Resistor,chip603 | 470 Kohm | 14474 |
| R224 | Resistor,chip603 | 3,3 Kohm | 14332 |
| R225 | Resistor,chip603 | 25 L | 6,8 Kohm |
| | Resistor,chip603 | 25 H | 6,8 Kohm |
| | Resistor,chip603 | 12 L | 4,7 Kohm |
| | Resistor,chip603 | 12 H | 4,7 Kohm |
| | Resistor,chip603 | 20 L | 6,8 Kohm |
| | Resistor,chip603 | 20 H | 6,8 Kohm |
| R226 | Resistor,chip603 | 470 Kohm | 14474 |
| R227 | Resistor,chip603 | 25 L | 22 Kohm |
| | Resistor,chip603 | 25 H | 22 Kohm |

PARTLIST FOR Radioboard TRX1012D
DRAWING NO. 0-9707-03-1

DATE 14-2-00
UNIT NO. 5802

| Component | Description | Value | Niros No. |
|-----------|------------------------|-------|-----------|
| R228 | Resistor, chip603 | 12 L | 47 Kohm |
| | Resistor, chip603 | 12 H | 47 Kohm |
| | Resistor, chip603 | 20 L | 22 Kohm |
| | Resistor, chip603 | 20 H | 22 Kohm |
| | Resistor, chip603 | | 47 Kohm |
| R229 | Resistor, chip603 | | 10 Kohm |
| R230 | Resistor, chip603 | | 2,2 Kohm |
| R231 | Resistor, chip603 | | 1 Mohm |
| R232 | Resistor, chip805 | | 10 Mohm |
| R233 | Resistor, chip603 | | 470 Kohm |
| R234 | Resistor, chip805 | | 2,7 Mohm |
| R235 | Resistor, chip603 | | 10 Kohm |
| R236 | Resistor, chip603 | | 820 Kohm |
| R237 | Resistor, chip603 | | 1 Mohm |
| R238 | Resistor, chip603 | | 180 Kohm |
| R239 | Resistor, chip805 | | 100 Kohm |
| R240 | Resistor, chip603 | | 330 Kohm |
| R301 | Resistor, chip603 | | 100 Ohm |
| R302 | Resistor, chip603 | | 120 Ohm |
| R303 | Resistor, chip603 | | 150 Ohm |
| R304 | Resistor, chip1206 | | 33 Ohm |
| R305 | Resistor, chip603_0,1w | | 10 Ohm |
| R306 | Resistor, chip603 | | 560 Ohm |
| R307 | Resistor, chip603 | | 220 Ohm |
| R308 | Resistor, chip1206 | | 33 Ohm |
| R309 | Resistor, chip1206 | | 150 Ohm |
| R310 | Resistor, chip603 | | 150 Ohm |
| R313 | Resistor, chip603 | | 56 Kohm |
| R314 | Resistor, chip603 | | 1 Mohm |
| R315 | Resistor, chip603 | | 100 Kohm |
| R316 | Resistor, chip603 | | 1 Mohm |
| R317 | Resistor, chip603 | | 390 Kohm |
| R318 | Resistor, chip603 | | 4,7 Kohm |
| R319 | Resistor, chip603 | | Not used |
| R320 | Resistor, chip603 | | 22 Kohm |
| R321 | Resistor, chip603 | | Not used |
| R322 | Resistor, chip603 | | 22 Kohm |
| R323 | Resistor, chip603 | | 1,8 Kohm |
| R324 | Resistor, chip603 | | 68 Kohm |
| R325 | Resistor, chip603 | | 330 Ohm |
| R326 | Resistor, chip603 | | 4,7 Kohm |
| R327 | Resistor, chip603 | | 100 Ohm |
| R328 | Resistor, chip603 | | 100 Kohm |
| R329 | Resistor, chip603 | | 33 Kohm |
| R330 | Resistor, chip603 | | 100 Kohm |

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PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

| PARTLIST FOR Radioboard TRX1012D DRAWING NO. 0-9707-03-1 | | DATE 14-2-00 | UNIT NO. 5802 |
|---|-----------------------|--------------|---------------|
| Component | Description | Value | Niros No. |
| R331 | Resistor,chip603 | Not used | |
| R332 | Resistor,chip603_0,1w | 1,5 Kohm | 10916 |
| R333 | Resistor,chip603 | 33 Kohm | 14333 |
| R334 | Resistor,chip603 | 27 Kohm | 14273 |
| R335 | Resistor,chip603 | 1 Mohm | 14105 |
| R336 | Resistor,chip603 | 2,2 Kohm | 14222 |
| R337 | Resistor,chip603 | 2,2 Mohm | 14225 |
| R338 | Resistor,chip805 | 2,7 Mohm | 13275 |
| R339 | Resistor,chip603 | 1 Mohm | 14105 |
| R340 | Resistor,chip603 | 1 Kohm | 14102 |
| R341 | Resistor,chip805 | 10 Mohm | 13106 |
| R342 | Resistor,chip603 | 1 Mohm | 14105 |
| R343 | Resistor,chip603 | 220 Kohm | 14224 |
| R344 | Resistor,chip603 | 270 Kohm | 14274 |
| R345 | Resistor,ntc | 100 Kohm | 11010 |
| R346 | Resistor,chip603 | 100 Kohm | 14104 |
| R347 | Resistor,chip603 | 100 Kohm | 14104 |
| R348 | Resistor,chip603 | 680 Kohm | 14684 |
| R349 | Resistor,chip603 | 470 Kohm | 14474 |
| R350 | Resistor,chip603 | 82 Kohm | 14823 |
| R351 | Resistor,ntc | 100 Kohm | 11010 |
| R401 | Resistor,chip603 | 100 Ohm | 14101 |
| R402 | Resistor,chip1206 | 100 Ohm | 12101 |
| R403 | Resistor,chip603 | 560 Ohm | 14561 |
| R404 | Resistor,chip603 | 100 Kohm | 14104 |
| R405 | Resistor,chip603 | 180 Kohm | 14184 |
| R406 | Resistor,chip603 | 10 Kohm | 14103 |
| R407 | Resistor,chip603 | 33 Kohm | 14333 |
| R408 | Resistor,chip805_1% | 619 Kohm | 10903 |
| R409 | Resistor,chip805_1% | 182 Kohm | 10901 |
| R410 | Resistor,chip603 | 470 Ohm | 14471 |
| R411 | Resistor,chip603 | 100 Ohm | 14101 |
| R412 | Resistor,chip603 | 4,7 Kohm | 14472 |
| R413 | Resistor,chip603_0,1w | 1 Kohm | 10915 |
| R414 | Resistor,chip603 | 180 Kohm | 14184 |
| R415 | Resistor,chip603 | Not used | |
| R416 | Resistor,chip603 | 5,6 Ohm | 14569 |
| R417 | Resistor,chip603 | 100 Kohm | 14104 |
| R418 | Resistor,chip603 | 1 Kohm | 14102 |
| R419 | Resistor,chip603 | 680 Kohm | 14684 |
| R420 | Resistor,chip1206 | 100 Ohm | 12101 |
| R421 | Resistor,chip603_0,1w | 1 Kohm | 10915 |
| R422 | Resistor,chip603_0,1w | 1 Kohm | 10915 |
| R423 | Resistor,chip603 | 100 Ohm | 14101 |
| R424 | Resistor,chip805_1% | 619 Kohm | 10903 |

PARTLIST FOR Radioboard TRX1012D
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| Component | Description | Value | Niros No. |
|-----------|----------------------|----------|-----------|
| R425 | Resistor, chip805 1% | 619 Kohm | 10903 |
| R426 | Resistor, chip805 1% | 619 Kohm | 10903 |
| R427 | Resistor, chip805 1% | 619 Kohm | 10903 |
| R428 | Resistor, chip805 1% | 619 Kohm | 10903 |
| R429 | Resistor, chip805 1% | 309 Kohm | 10902 |
| R430 | Resistor, chip805 1% | 309 Kohm | 10902 |
| R431 | Resistor, chip805 1% | 309 Kohm | 10902 |
| R432 | Resistor, chip805 1% | 309 Kohm | 10902 |
| R433 | Resistor, chip805 1% | 619 Kohm | 10903 |
| R434 | Resistor, chip603 | 100 Ohm | 14101 |
| R435 | Resistor, chip603 | 100 Ohm | 14101 |
| P101 | Resistor, pre_set | 1 Kohm | 19048 |
| C101 | Capacitor, chip603 | 1 nF | 21102 |
| C102 | Capacitor, chip603 | 1 nF | 21102 |
| C103 | Capacitor, chip603 | 22 nF | 21223 |
| C104 | Capacitor, ctan_a | 1 uF/20V | 25617 |
| C105 | Capacitor, chip603 | 4,7 nF | 21472 |
| C106 | Capacitor, chip603 | 22 nF | 21223 |
| C107 | Capacitor, chip603 | 10 nF | 21103 |
| C108 | Capacitor, chip603 | 22 nF | 21223 |
| C109 | Capacitor, chip603 | 22 nF | 21223 |
| C110 | Capacitor, chip603 | 22 nF | 21223 |
| C111 | Capacitor, chip603 | 22 nF | 21223 |
| C112 | Capacitor, chip603 | 22 nF | 21223 |
| C113 | Capacitor, chip603 | 1 nF | 21102 |
| C114 | Capacitor, chip603 | 22 nF | 21223 |
| C115 | Capacitor, chip603 | 22 nF | 21223 |
| C116 | Capacitor, chip603 | 68 pF | 21680 |
| C117 | Capacitor, chip805 | 100 nF | 20654 |
| C118 | Capacitor, chip603 | 22 nF | 21223 |
| C119 | Capacitor, chip603 | 4,7 nF | 21472 |
| C120 | Capacitor, chip603 | 1 nF | 21102 |
| C121 | Capacitor, chip603 | 1 nF | 21102 |
| C122 | Capacitor, chip603 | 1 nF | 21102 |
| C123 | Capacitor, chip603 | 22 nF | 21223 |
| C124 | Capacitor, chip603 | 1 nF | 21102 |
| C125 | Capacitor, chip805 | 330 nF | 20662 |
| C126 | Capacitor, ctan_a | 1 uF/20V | 25617 |
| C127 | Capacitor, chip603 | 22 nF | 21223 |
| C128 | Capacitor, chip603 | 25 L | 4,7 pF |
| | Capacitor, chip603 | 25 H | Not used |
| | Capacitor, chip603 | 12 L | 4,7 pF |

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| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
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| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

PARTLIST FOR Radioboard TRX1012D
DRAWING NO. 0-9707-03-1

DATE 14-2-00
UNIT NO. 5802

| Component | Description | Value | Niros No. |
|-----------|-------------------|-------|-----------|
| C129 | Capacitor,chip603 | 12 H | Not used |
| | Capacitor,chip603 | 20 L | 4,7 pF |
| | Capacitor,chip603 | 20 H | Not used |
| | Capacitor,chip603 | | 1 nF |
| C130 | Capacitor,chip603 | 25 L | 8,2 pF |
| | Capacitor,chip603 | 25 H | 4,7 pF |
| | Capacitor,chip603 | 12 L | 8,2 pF |
| | Capacitor,chip603 | 12 H | 4,7 pF |
| | Capacitor,chip603 | 20 L | 8,2 pF |
| | Capacitor,chip603 | 20 H | 4,7 pF |
| C131 | Capacitor,chip603 | 25 L | Not used |
| | Capacitor,chip603 | 25 H | Not used |
| | Capacitor,chip603 | 12 L | Not used |
| | Capacitor,chip603 | 12 H | Not used |
| | Capacitor,chip603 | 20 L | Not used |
| | Capacitor,chip603 | 20 H | Not used |
| C132 | Capacitor,chip603 | | 1 nF |
| C133 | Capacitor,chip603 | 25 L | 8,2 pF |
| | Capacitor,chip603 | 25 H | 6,8 pF |
| | Capacitor,chip603 | 12 L | 8,2 pF |
| | Capacitor,chip603 | 12 H | 6,8 pF |
| | Capacitor,chip603 | 20 L | 8,2 pF |
| | Capacitor,chip603 | 20 H | 6,8 pF |
| C134 | Capacitor,chip603 | | 22 nF |
| C135 | Capacitor,chip603 | 25 L | 12 pF |
| | Capacitor,chip603 | 25 H | 6,8 pF |
| | Capacitor,chip603 | 12 L | 12 pF |
| | Capacitor,chip603 | 12 H | 6,8 pF |
| | Capacitor,chip603 | 20 L | 12 pF |
| | Capacitor,chip603 | 20 H | 6,8 pF |
| C136 | Capacitor,chip603 | | 100 pF |
| C137 | Capacitor,chip603 | | 1 nF |
| C138 | Capacitor,chip603 | | 1 nF |
| C139 | Capacitor,chip603 | 25 L | 5,6 pF |
| | Capacitor,chip603 | 25 H | 10 pF |
| | Capacitor,chip603 | 12 L | 5,6 pF |
| | Capacitor,chip603 | 12 H | 10 pF |
| | Capacitor,chip603 | 20 L | 5,6 pF |
| | Capacitor,chip603 | 20 H | 10 pF |
| C140 | Capacitor,chip603 | 25 L | 2,2 pF |
| | Capacitor,chip603 | 25 H | 1 pF |
| | Capacitor,chip603 | 12 L | 2,2 pF |
| | Capacitor,chip603 | 12 H | 1 pF |
| | Capacitor,chip603 | 20 L | 2,2 pF |
| | Capacitor,chip603 | 20 H | 1 pF |
| C141 | Capacitor,chip603 | 25 L | 3,9 pF |
| | Capacitor,chip603 | 25 H | 2,7 pF |

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| Component | Description | Value | Niros No. |
|-----------|-------------------|-------|-----------|
| C142 | Capacitor,chip603 | 12 L | 3,9 pF |
| | Capacitor,chip603 | 12 H | 2,7 pF |
| | Capacitor,chip603 | 20 L | 3,9 pF |
| | Capacitor,chip603 | 20 H | 2,7 pF |
| | Capacitor,chip603 | | 1 nF |
| C143 | Capacitor,chip603 | 25 L | 10 pF |
| | Capacitor,chip603 | 25 H | 8,2 pF |
| | Capacitor,chip603 | 12 L | 10 pF |
| | Capacitor,chip603 | 12 H | 8,2 pF |
| | Capacitor,chip603 | 20 L | 10 pF |
| | Capacitor,chip603 | 20 H | 8,2 pF |
| C144 | Capacitor,chip603 | 25 L | 2,2 pF |
| | Capacitor,chip603 | 25 H | 1,8 pF |
| | Capacitor,chip603 | 12 L | 2,2 pF |
| | Capacitor,chip603 | 12 H | 1,8 pF |
| | Capacitor,chip603 | 20 L | 2,2 pF |
| | Capacitor,chip603 | 20 H | 1,8 pF |
| C145 | Capacitor,chip603 | 25 L | 3,9 pF |
| | Capacitor,chip603 | 25 H | 4,7 pF |
| | Capacitor,chip603 | 12 L | 3,9 pF |
| | Capacitor,chip603 | 12 H | 4,7 pF |
| | Capacitor,chip603 | 20 L | 3,9 pF |
| | Capacitor,chip603 | 20 H | 4,7 pF |
| C146 | Capacitor,chip603 | | Not used |
| C147 | Capacitor,chip805 | | 330 nF |
| C201 | Capacitor,chip805 | | 100 nF |
| C202 | Capacitor,chip603 | | 47 pF |
| C203 | Capacitor,chip603 | | 100 pF |
| C204 | Capacitor,chip603 | | 10 nF |
| C205 | Capacitor,chip603 | | 10 nF |
| C206 | Capacitor,chip603 | | 1 nF |
| C207 | Capacitor,chip603 | | 100 pF |
| C208 | Capacitor,chip603 | 25 L | 8,2 pF |
| | Capacitor,chip603 | 25 H | 8,2 pF |
| | Capacitor,chip603 | 12 L | 18 pF |
| | Capacitor,chip603 | 12 H | 18 pF |
| | Capacitor,chip603 | 20 L | 8,2 pF |
| | Capacitor,chip603 | 20 H | 8,2 pF |
| C209 | Capacitor,chip603 | | 1 nF |
| C210 | Capacitor,chip603 | 25 L | Not used |
| | Capacitor,chip603 | 25 H | Not used |
| | Capacitor,chip603 | 12 L | 5,6 pF |
| | Capacitor,chip603 | 12 H | 5,6 pF |
| | Capacitor,chip603 | 20 L | Not used |
| | Capacitor,chip603 | 20 H | Not used |
| C211 | Capacitor,chip603 | | 10 nF |

| PARTLIST FOR Radioboard TRX1012D DRAWING NO. 0-9707-03-1 | | DATE 14-2-00 | UNIT NO. 5802 |
|---|------------------------|--------------|---------------|
| Component | Description | Value | Niros No. |
| C212 | Capacitor,chip603 | 10 nF | 21103 |
| C213 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C214 | Capacitor,chip805 | 100 nF | 20654 |
| C215 | Capacitor,chip805 | 100 nF | 20654 |
| C216 | Capacitor,chip603 | 10 nF | 21103 |
| C217 | Capacitor,chip805 | 100 nF | 20654 |
| C218 | Capacitor,chip603 | 1 nF | 21102 |
| C219 | Capacitor,chip603 | 1 nF | 21102 |
| C220 | Capacitor,chip603 | 180 pF | 21181 |
| C221 | Capacitor,chip603 | 180 pF | 21181 |
| C222 | Capacitor,chip603 | 100 pF | 21101 |
| C223 | Capacitor,chip603 | 10 nF | 21103 |
| C224 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C225 | Capacitor,chip805 | 100 nF | 20654 |
| C226 | Capacitor,chip805 | 100 nF | 20654 |
| C227 | Capacitor,chip805 | 100 nF | 20654 |
| C228 | Capacitor,chip603 | 10 nF | 21103 |
| C229 | Capacitor,chip603 | 10 nF | 21103 |
| C230 | Capacitor,chip603 | 10 nF | 21103 |
| C231 | Capacitor,chip603 | 22 nF | 21223 |
| C232 | Capacitor,chip603 | 10 nF | 21103 |
| C233 | Capacitor,chip603 | 1 nF | 21102 |
| C301 | Capacitor,chip603 | 220 pF | 21221 |
| C302 | Capacitor,chip603 | 1 nF | 21102 |
| C303 | Capacitor,chip603 | 68 pF | 21680 |
| C304 | Capacitor,ctan_a | 6,8 uF/10V | 25619 |
| C305 | Capacitor,chip603 | 4,7 pF | 21479 |
| C306 | Capacitor,chip603 | 220 pF | 21221 |
| C307 | Capacitor,chip603 | 1 nF | 21102 |
| C308 | Capacitor,ctan_a | 6,8 uF/10V | 25619 |
| C309 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C310 | Capacitor,chip805 | 100 nF | 20654 |
| C311 | Capacitor,chip603 | 1 nF | 21102 |
| C312 | Capacitor,chip603 | 1 nF | 21102 |
| C313 | Capacitor,chip603 | 1 nF | 21102 |
| C314 | Capacitor,chip805 | 100 nF | 20654 |
| C315 | Capacitor,chip603 | 1 nF | 21102 |
| C316 | Capacitor,chip603 | 330 pF | 21331 |
| C317 | Capacitor,chip805 | 100 nF | 20654 |
| C318 | Capacitor,chip603 | 150 pF | 21151 |
| C319 | Capacitor,chip603 | 150 pF | 21151 |
| C320 | Capacitor,chip603 | 10 nF | 21103 |
| C321 | Capacitor,chip603 | 100 pF | 21101 |
| C322 | Capacitor,chip603 | 100 pF | 21101 |
| C323 | Capacitor,chip603_n750 | 150 pF | 20819 |

PARTLIST FOR Radioboard TRX1012D
DRAWING NO. 0-9707-03-1
DATE 14-2-00
UNIT NO. 5802

| Component | Description | Value | Niros No. |
|-----------|------------------------|-------------|-----------|
| C324 | Capacitor,chip603_n750 | 150 pF | 20819 |
| C325 | Capacitor,chip603 | 47 pF | 21470 |
| C326 | Capacitor,chip603 | 47 pF | 21470 |
| C327 | Capacitor,chip603_n750 | 18 pF | 20815 |
| C328 | Capacitor,chip603_n750 | 6,8 pF | 20814 |
| C329 | Capacitor,var_chip | 3-10 pF | 25116 |
| C330 | Capacitor,chip603_n750 | 5,6 pF | 20813 |
| C331 | Capacitor,chip603 | 27 pF | 21270 |
| C332 | Capacitor,chip805 | 100 nF | 20654 |
| C333 | Capacitor,chip603 | Not used | |
| C334 | Capacitor,chip805_ln | 22 nF | 20804 |
| C335 | Capacitor,chip603_ln | 1,5 nF | 20802 |
| C336 | Capacitor,ctan_a | 1 uF/20V | 25617 |
| C337 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C338 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C339 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C340 | Capacitor,chip603_ln | 1,5 nF | 20802 |
| C341 | Capacitor,chip1206_ln | 47 nF | 20805 |
| C342 | Capacitor,chip1206 | 330 nF | 20652 |
| C343 | Capacitor,chip805 | 100 nF | 20654 |
| C344 | Capacitor,chip603 | 22 nF | 21223 |
| C345 | Capacitor,chip805 | 100 nF | 20654 |
| C346 | Capacitor,chip603 | 1 nF | 21102 |
| C401 | Capacitor,chip603 | 10 nF | 21103 |
| C402 | Capacitor,ctan_a | 0,68 uF/16V | 25611 |
| C403 | Capacitor,chip603 | 1 nF | 21102 |
| C404 | Capacitor,chip805 | Not used | |
| C405 | Capacitor,chip805_ln | 22 nF | 20804 |
| C406 | Capacitor,chip805_ln | 22 nF | 20804 |
| C407 | Capacitor,chip603 | 22 nF | 21223 |
| C408 | Capacitor,ctan_a | 1 uF/20V | 25617 |
| C409 | Capacitor,chip603 | 220 pF | 21221 |
| C410 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C411 | Capacitor,chip603 | 10 nF | 21103 |
| C412 | Capacitor,chip603 | 1 nF | 21102 |
| C413 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C414 | Capacitor,ctan_a | 2,2 uF/16V | 25613 |
| C415 | Capacitor,chip805 | 100 nF | 20654 |
| C416 | Capacitor,chip603 | 220 pF | 21221 |
| C417 | Capacitor,chip603 | 220 pF | 21221 |
| C418 | Capacitor,chip603 | 10 nF | 21103 |
| C419 | Capacitor,chip603 | 220 pF | 21221 |
| F101 | Filter | 4N7 | 75906 |

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PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

| PARTLIST FOR Radioboard TRX1012D DRAWING NO. 0-9707-03-1 | | | | DATE 14-2-00 | UNIT NO. 5802 |
|---|----------------|-----------|-----------|--------------|---------------|
| Component | Description | Value | Niros No. | | |
| F102 | Filter | 4N7 | 75906 | | |
| F201-202 | Crystal-filter | 25 L | 45F15B | 30021 | |
| | Crystal-filter | 25 H | 45F15B | 30021 | |
| | Crystal-filter | 12 L | 45F7B | 30022 | |
| | Crystal-filter | 12 H | 45F7B | 30022 | |
| | Crystal-filter | 20 L | 45F15B | 30021 | |
| | Crystal-filter | 20 H | 45F15B | 30021 | |
| F203 | Ceramic-filter | 25 L | CFWM450D | 30061 | |
| | Ceramic-filter | 25 H | CFWM450D | 30061 | |
| | Ceramic-filter | 12 L | CFWM450G | 30063 | |
| | Ceramic-filter | 12 H | CFWM450G | 30063 | |
| | Ceramic-filter | 20 L | CFWM450F | 30064 | |
| | Ceramic-filter | 20 H | CFWM450F | 30064 | |
| F401 | Filter | 4N7 | 75906 | | |
| X301 | Crystal | 14.85 MHz | 31190 | | |
| T101 | Transistor | Not used | | | |
| T102 | Transistor | FCX720 | 40201 | | |
| T103 | Transistor | SI4431DY | 40203 | | |
| T104 | Transistor | BFR92A | 40150 | | |
| T105 | Transistor | BCW60D | 40156 | | |
| T106 | Transistor | BCW60D | 40156 | | |
| T107 | Transistor | BCW60D | 40156 | | |
| T108 | Transistor | BCW60D | 40156 | | |
| T201 | Transistor | BCW60D | 40156 | | |
| T202 | Transistor | BFR92A | 40150 | | |
| T203 | Transistor | BF990A | 40187 | | |
| T204 | Transistor | BFR92A | 40150 | | |
| T205 | Transistor | BCW61D | 40157 | | |
| T206 | Transistor | BCW60D | 40156 | | |
| T207 | Transistor | BCW60D | 40156 | | |
| T301 | Transistor | BFR92A | 40150 | | |
| T302 | Transistor | BFR92A | 40150 | | |
| T303 | Transistor | BCW61D | 40157 | | |
| T304 | Transistor | BCW60D | 40156 | | |
| T305 | Transistor | BFR92A | 40150 | | |
| T306 | Transistor | BCW60D | 40156 | | |
| T401 | Transistor | BCW60D | 40156 | | |
| T402 | Transistor | BCW61D | 40157 | | |
| T403 | Transistor | BCW60D | 40156 | | |
| T404 | Transistor | BC868-25 | 40188 | | |
| D101 | Diode | BAV99 | 45148 | | |

PARTLIST FOR Radioboard TRX1012D
DRAWING NO. 0-9707-03-1

DATE 14-2-00
UNIT NO. 5802

| Component | Description | Value | Niros No. | |
|-----------|--------------------|------------|-----------|-------|
| D102 | Diode | BAT54S | 45173 | |
| D103 | Diode | Not used | | |
| D104 | Diode | BA682 | 45152 | |
| D105 | Diode | BA682 | 45152 | |
| D106 | Diode | BA682 | 45152 | |
| D107 | Diode | MA4P1250 | 45171 | |
| D108 | Diode | MA4P1250 | 45171 | |
| D201 | Diode | BAV99 | 45148 | |
| D202 | Diode | BAT17-04 | 45172 | |
| D301 | Diode, kap | BB134 | 45196 | |
| D302 | Diode | BAV99 | 45148 | |
| D303 | Diode | Not used | | |
| D401 | Diode | BAT54S | 45173 | |
| D402 | Diode, zener | Not used | | |
| D403 | Diode, zener | LM385M-1.2 | 45166 | |
| D404 | Diode, zener | Not used | | |
| D405 | Diode | BAT54S | 45173 | |
| IC101 | Integrated_circuit | LPC662 | 46244 | |
| IC102 | Integrated_circuit | 25 L | MHW707-1 | 46245 |
| | Integrated_circuit | 25 H | MHW707-2 | 46246 |
| | Integrated_circuit | 12 L | MHW707-1 | 46245 |
| | Integrated_circuit | 12 H | MHW707-2 | 46246 |
| | Integrated_circuit | 20 L | MHW707-1 | 46245 |
| | Integrated_circuit | 20 H | MHW707-2 | 46246 |
| IC103 | Integrated_circuit | TC4S66F | 46250 | |
| IC201 | Integrated_circuit | MC3371 | 46247 | |
| IC202 | Integrated_circuit | TLC27L2T | 46222 | |
| IC302 | Integrated_circuit | MC12022TVB | 46248 | |
| IC303 | Integrated_circuit | NJ88C33 | 46249 | |
| IC304 | Integrated_circuit | TC4S66F | 46250 | |
| IC305 | Integrated_circuit | TC4S66F | 46250 | |
| IC306 | Integrated_circuit | LPC662 | 46244 | |
| IC307 | Integrated_circuit | LPC662 | 46244 | |
| IC401 | Integrated_circuit | 40106BT | 46116 | |
| IC402 | Integrated_circuit | TC7S32F | 46252 | |
| IC403 | Integrated_circuit | TC7S32F | 46252 | |
| IC404 | Integrated_circuit | NMC95C12 | 46253 | |
| TR201 | Trafo | 75904 | 75904 | |
| L101 | Coil,chip | 75877 | 75877 | |
| L102 | Coil,chip1206 | 75938 | 75938 | |
| L103 | Coil,chip1206 | 75938 | 75938 | |

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PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

| PARTLIST FOR Radioboard TRX1012D DRAWING NO. 0-9707-03-1 | | | | DATE 14-2-00 | UNIT NO. 5802 |
|---|----------------------|----------|-----------|--------------|---------------|
| Component | Description | Value | Niros No. | | |
| L104 | Coil,chip | 75879 | 75879 | | |
| L105 | Coil | 75899 | 75899 | | |
| L106 | Coil | 75899 | 75899 | | |
| L107 | Coil | 75899 | 75899 | | |
| L108 | Coil | 75899 | 75899 | | |
| L109 | Coil,chip | 75879 | 75879 | | |
| L110 | Coil | 75899 | 75899 | | |
| L111 | Coil | 75899 | 75899 | | |
| L201 | Coil | 75902 | 75902 | | |
| L202 | Coil,chip | 75877 | 75877 | | |
| L203 | Coil,chip | 75883 | 75883 | | |
| L204 | Coil | 75901 | 75901 | | |
| L301 | Coil,chip | 75905 | 75905 | | |
| L302 | Coil | 75902 | 75902 | | |
| L303 | Coil | 75900 | 75900 | | |
| L401 | Coil,chip | 75883 | 75883 | | |
| FUSE1 | Fuse | Not used | | | |
| JU1 | Resistor,melf | 0 Ohm | 10919 | | |
| J1 | Connector_12pol | | 83315 | | |
| AB1 | Connector_pin | | 83245 | | |
| AB2 | Connector_pin | | 83245 | | |
| AB3 | Connector_pin | | 83245 | | |
| AB4 | Connector_pin | | 83245 | | |
| A4 | Power_input_terminal | | 97530 | | |
| V1 | Resistor,chip1206 | 25 L | 10 Kohm | 12103 | |
| | Resistor,chip1206 | 25 H | 22 Kohm | 12223 | |
| | Resistor,chip1206 | 12 L | 47 Kohm | 12473 | |
| | Resistor,chip1206 | 12 H | 100 Kohm | 12104 | |
| | Resistor,chip1206 | 20 L | 220 Kohm | 12224 | |
| | Resistor,chip1206 | 20 H | 470 Kohm | 12474 | |
| V2 | Resistor,chip1206 | 25 L | 10 Kohm | 12103 | |
| | Resistor,chip1206 | 25 H | 22 Kohm | 12223 | |
| | Resistor,chip1206 | 12 L | 47 Kohm | 12473 | |
| | Resistor,chip1206 | 12 H | 100 Kohm | 12104 | |
| | Resistor,chip1206 | 20 L | 220 Kohm | 12224 | |
| | Resistor,chip1206 | 20 H | 470 Kohm | 12474 | |
| | Screw M1,6X4 | | 1 pcs | 92022 | |
| | Washer CW1,6 | | 2 pcs | 92024 | |

PARTLIST FOR Radioboard TRX1012D
DRAWING NO. 0-9707-03-1

DATE 14-2-00
UNIT NO. 5802

| Component | Description | Value | Niros No. |
|-----------|--------------------------|-------|-----------|
| | Screw M1, 6X6 | 2 pcs | 92027 |
| | Washer 1, 7 | 2 pcs | 93203 |
| | Pc. board no. 749-3 | 1 pcs | 95749 |
| | Antenna_center_connector | 1 pcs | 97521 |
| | Antenna_gnd_conektor | 1 pcs | 97522 |
| | Heat_sink_pa | 2 pcs | 97524 |
| | Magnetic_shield | 2 pcs | 97577 |
| | Spring_for_PA | 1 pcs | 97576 |
| | Receiver_gnd_spring | 1 pcs | 98022 |

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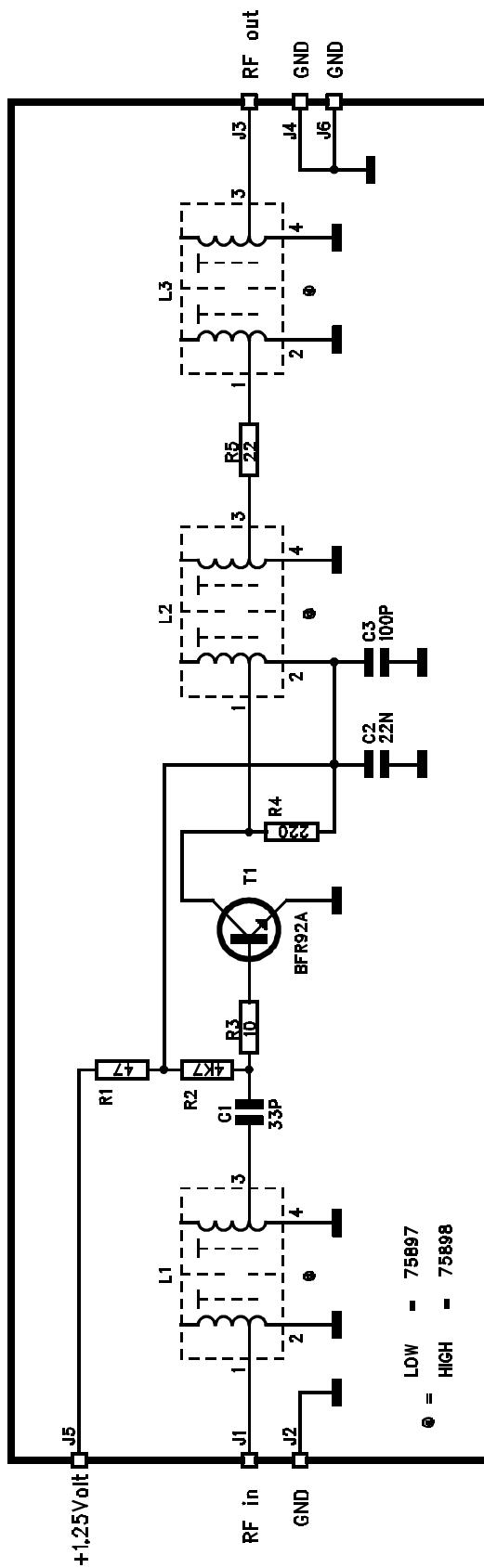
PC. Board No. 749-3

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 14-2-00 | 2 | PA |

18. Receiver TRX1012D

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 18-07-98 | 0 | PA |

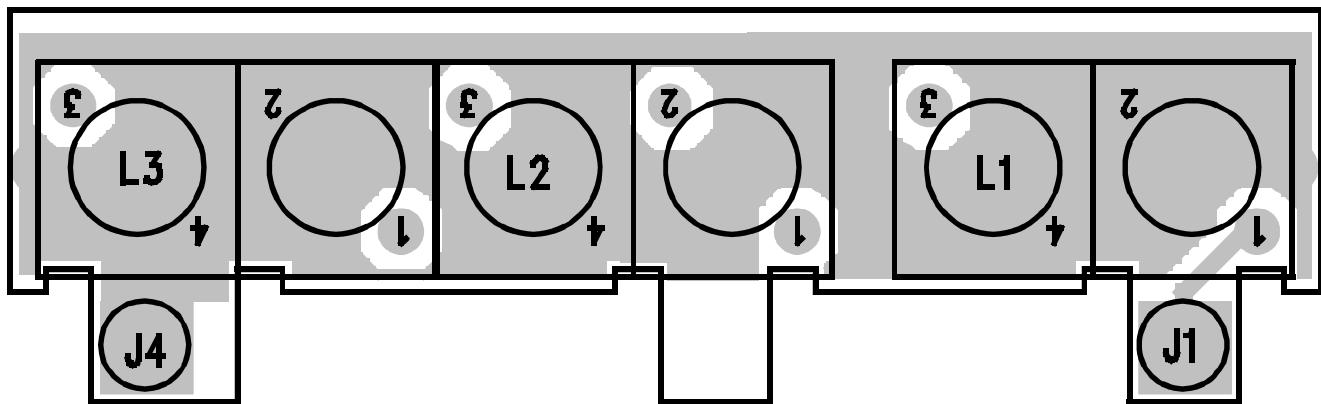
18.1 Diagram



| SUBJECT TO CHANGE WITHOUT NOTICE | | LOW UNIT NO: 5620 | HIGH UNIT NO: 5621 |
|----------------------------------|----------|-------------------|-----------------------------|
| DATE: 9-4-92 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 21-5-92 | SIGN: PH | 1 | HØRSEMARKEN 5, 3520 FARLM |
| DATE: 17-2-93 | SIGN: PH | 1 | |
| DATE: 2-12-95 | SIGN: PH | 1 | Receiver TRX1001D/TRX1012D |
| DATE: | SIGN: | | |
| DATE: | SIGN: | | |
| DRAWING NO: D-9602-03-1 | | | PCB NO: 702-2 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 18-07-98 | 0 | PA |

18.2 Componentside

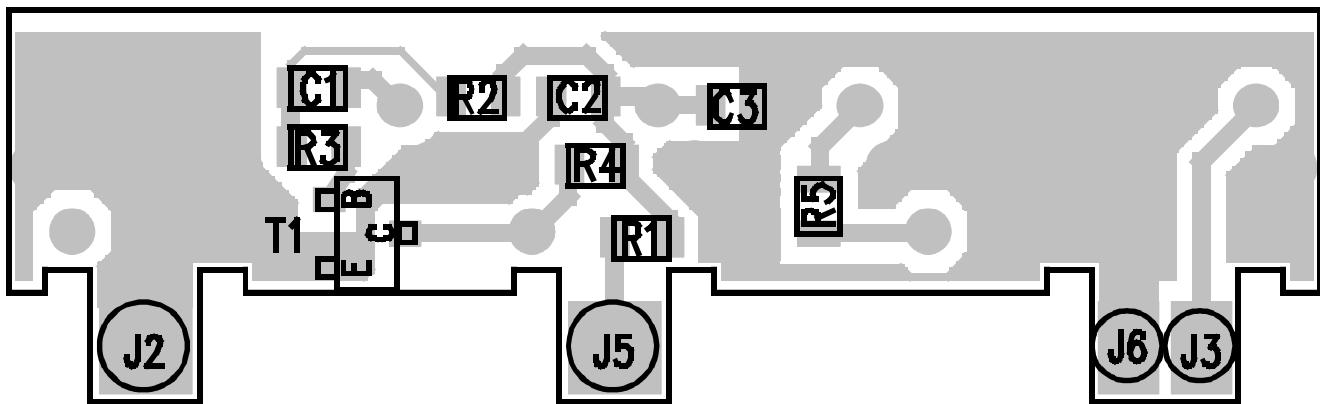


Componentside 702-2

| SUBJECT TO CHANGE WITHOUT NOTICE | | LOW UNIT NO: 5620 | HIGH UNIT NO: 5621 |
|----------------------------------|----------|-------------------|-----------------------------|
| DATE: 0-4-92 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S |
| DATE: 21-5-92 | SIGN: PH | 1 | HØRSEMARKEN 5, 3520 FARLM |
| DATE: 17-2-93 | SIGN: PH | 1 | |
| DATE: 2-12-95 | SIGN: PH | 1 | Receiver TRX1001D/TRX1012D |
| DATE: | SIGN: | | |
| DATE: | SIGN: | | |
| DRAWING NO: D-9602-05-1 | | | PCB NO: 702-2 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 18-07-98 | 0 | PA |

18.3 Wiringside



Wiringside 702-2

| SUBJECT TO CHANGE WITHOUT NOTICE | | | LOW UNIT NO: 5520 | HIGH UNIT NO: 5521 |
|----------------------------------|----------|---|-----------------------------|--------------------|
| DATE: 9-4-92 | SIGN: PH | 0 | NIROS TELECOMMUNICATION A/S | |
| DATE: 21-5-92 | SIGN: PH | 1 | HIRSEMARKEN 5, 3520 FARUM | |
| DATE: 17-2-93 | SIGN: PH | 1 | | |
| DATE: 2-12-96 | SIGN: PH | 1 | Receiver TRX1001D/TRX1012D | |
| DATE: | SIGN: | | | |
| DATE: | SIGN: | | | |
| DRAWING NO: 0-9502-04-1 | | | PCB NO: 702-2 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 18-07-98 | 0 | PA |

18.4 Partlist

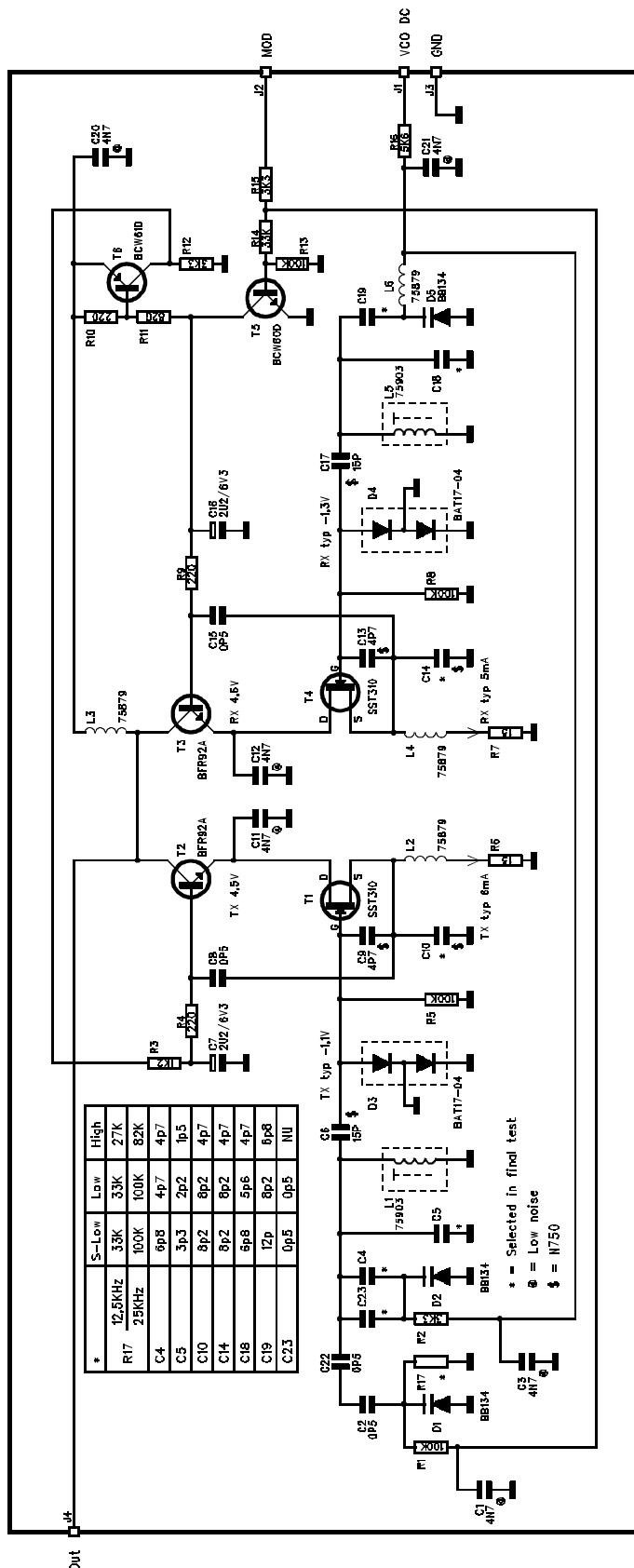
| PARTLIST FOR Receiver board TRX1001D/TRX1012D DRAWING NO. 0-9602-03-1 | | | DATE 28-11-96 | UNIT NO. 5620 |
|--|-------------------------|---------------------|---------------|---------------|
| Component | Description | Value | Niros No. | |
| | Receiver TRX1001D/1012D | Low | 5620 | |
| | Receiver TRX1001D/1012D | High | 5621 | |
| R1 | Resistor, chip603 | 47 Ohm | 14470 | |
| R2 | Resistor, chip603 | 4,7 Kohm | 14472 | |
| R3 | Resistor, chip603 | 10 Ohm | 14100 | |
| R4 | Resistor, chip603 | 220 Ohm | 14221 | |
| R5 | Resistor, chip603 | 22 Ohm | 14220 | |
| C1 | Capacitor, chip603 | 33 pF | 21330 | |
| C2 | Capacitor, chip603 | 22 nF | 21223 | |
| C3 | Capacitor, chip603 | 100 pF | 21101 | |
| T1 | Transistor | BFR92A | 40150 | |
| L1 | Coil | low | 75897 | 75897 |
| | Coil | high | 75898 | 75898 |
| L2 | Coil | low | 75897 | 75897 |
| | Coil | high | 75898 | 75898 |
| L3 | Coil | low | 75897 | 75897 |
| | Coil | high | 75898 | 75898 |
| p. 1 of 1 | | PC. Board No. 702-2 | | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 18-07-98 | 0 | PA |

19. VCO-board TRX1012D

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-09-99 | 1 | PA |

19.1 Diagram

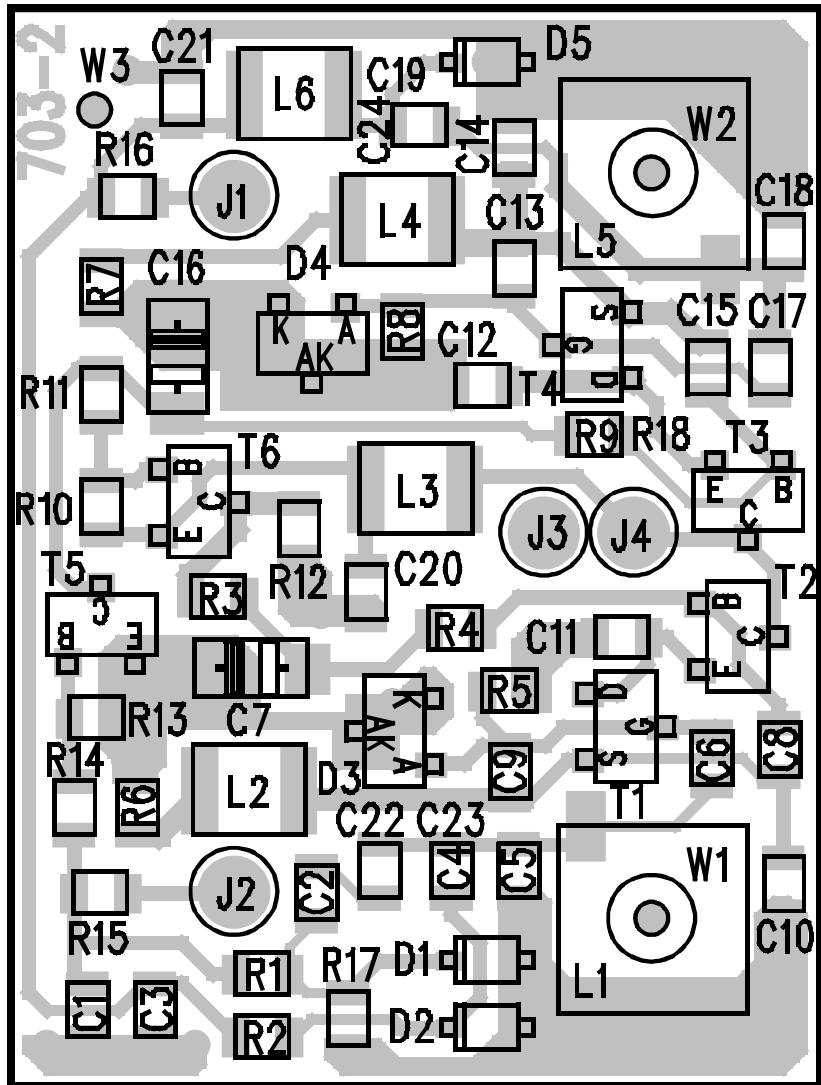


SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|-------------------------|----------|---------------|-----------------------------|
| DATE: 22-4-92 | SIGN: PH | 1 | NIROS TELECOMMUNICATION A/S |
| DATE: 21-5-92 | SIGN: PH | 2 | HØSEMARKEN 5, 3520 FARUM |
| DATE: 21-7-92 | SIGN: PH | 3 | |
| DATE: 23-11-92 | SIGN: PH | 4 | VCO-board |
| DATE: 2-8-93 | SIGN: PH | 5 | TRX1001D/TRX1012D |
| DATE: 7-9-99 | SIGN: PH | 6 | |
| DRAWING NO: 0-9803-03-8 | | PCB NO: 703-2 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-09-99 | 1 | PA |

19.2 Componentside



Componentside 703-2

| | | | |
|-------------------------|----------|---------------|-----------------------------|
| DATE: 22-4-92 | SIGN: PH | 1 | NIROS TELECOMMUNICATION A/S |
| DATE: 21-5-92 | SIGN: PH | 2 | HIRSEMARKEN 5, 3520 FARUM |
| DATE: 21-7-92 | SIGN: PH | 3 | |
| DATE: 23-11-92 | SIGN: PH | 4 | VCO-board |
| DATE: 2-8-93 | SIGN: PH | 5 | TRX1001D/TRX1012D |
| DATE: 7-9-99 | SIGN: PH | 6 | |
| DRAWING NO: 0-9803-05-8 | | PCB NO: 703-2 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-09-99 | 1 | PA |

19.3 Partlist

| PARTLIST FOR VCO-board TRX1001D/TRX1012D | | | | DATE 7-9-1999 |
|--|-------------------------|----------|-----------|---------------|
| DRAWING NO. 0-9603-03-6 | | | | UNIT NO. 5640 |
| Component | Description | Value | Niros No. | |
| | VCO-board | 25KHz | S-Low | 5639 |
| | VCO-board | 25KHz | Low | 5640 |
| | VCO-board | 25KHz | High | 5641 |
| | VCO-board | 12,5KHz | S-Low | 5649 |
| | VCO-board | 12,5KHz | Low | 5650 |
| | VCO-board | 12,5KHz | High | 5651 |
| R1 | Resistor, chip603 | 100 Kohm | 14104 | |
| R2 | Resistor, chip603 | 3,3 Kohm | 14332 | |
| R3 | Resistor, chip603 | 1,2 Kohm | 14122 | |
| R4 | Resistor, chip603 | 220 Ohm | 14221 | |
| R5 | Resistor, chip603 | 100 Kohm | 14104 | |
| R6 | Resistor, chip603 | 15 Ohm | 14150 | |
| R7 | Resistor, chip603 | 15 Ohm | 14150 | |
| R8 | Resistor, chip603 | 100 Kohm | 14104 | |
| R9 | Resistor, chip603 | 220 Ohm | 14221 | |
| R10 | Resistor, chip603 | 220 Ohm | 14221 | |
| R11 | Resistor, chip603 | 820 Ohm | 14821 | |
| R12 | Resistor, chip603 | 3,3 Kohm | 14332 | |
| R13 | Resistor, chip603 | 100 Kohm | 14104 | |
| R14 | Resistor, chip603 | 33 Kohm | 14333 | |
| R15 | Resistor, chip603 | 3,3 Kohm | 14332 | |
| R16 | Resistor, chip603 | 5,6 Kohm | 14562 | |
| R17 | Resistor, chip603 | 25SL | 100 Kohm | 14104 |
| | Resistor, chip603 | 25L | 100 Kohm | 14104 |
| | Resistor, chip603 | 25H | 82 Kohm | 14823 |
| | Resistor, chip603 | 125SL | 33 Kohm | 14333 |
| | Resistor, chip603 | 125L | 33 Kohm | 14333 |
| | Resistor, chip603 | 125H | 27 Kohm | 14273 |
| C1 | Capacitor, chip603_ln | 4,7 nF | 20803 | |
| C2 | Capacitor, chip603 | 0,5 pF | 21508 | |
| C3 | Capacitor, chip603_ln | 4,7 nF | 20803 | |
| C4 | Capacitor, chip603 | 25SL | 6,8 pF | 21689 |
| | Capacitor, chip603 | 25L | 4,7 pF | 21479 |
| | Capacitor, chip603 | 25H | 4,7 pF | 21479 |
| | Capacitor, chip603 | 125SL | 6,8 pF | 21689 |
| | Capacitor, chip603 | 125L | 4,7 pF | 21479 |
| | Capacitor, chip603 | 125L | 4,7 pF | 21479 |
| C5 | Capacitor, chip603 | 25SL | 3,3 pF | 21339 |
| | Capacitor, chip603 | 25L | 2,2 pF | 21229 |
| | Capacitor, chip603 | 25H | 1,5 pF | 21159 |
| | Capacitor, chip603 | 125SL | 3,3 pF | 21339 |
| | Capacitor, chip603 | 125L | 2,2 pF | 21229 |
| | Capacitor, chip603 | 125H | 1,5 pF | 21159 |
| C6 | Capacitor, chip603_n750 | 15 pF | 20808 | |

p. 1 of 3

PC. Board No. 703-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-09-99 | 1 | PA |

PARTLIST FOR VCO-board TRX1001D/TRX1012D
DRAWING NO. 0-9603-03-6

DATE 7-9-1999
UNIT NO. 5640

| Component | Description | Value | Niros No. |
|-----------|---------------------------|------------|-----------|
| C7 | Capacitor,ctan a | 2,2 uF/6V3 | 25602 |
| C8 | Capacitor,chip603 | 0,5 pF | 21508 |
| C9 | Capacitor,chip603_n750 | 4,7 pF | 20806 |
| C10 | Capacitor,c603_n750 25SL | 8,2 pF | 20807 |
| | Capacitor,c603_n750 25L | 8,2 pF | 20807 |
| | Capacitor,c603_n750 25H | 4,7 pF | 20806 |
| | Capacitor,c603_n750 125SL | 8,2 pF | 20807 |
| | Capacitor,c603_n750 125L | 8,2 pF | 20807 |
| | Capacitor,c603_n750 125H | 4,7 pF | 20806 |
| C11 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C12 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C13 | Capacitor,chip603_n750 | 4,7 pF | 20806 |
| C14 | Capacitor,c603_n750 25SL | 8,2 pF | 20807 |
| | Capacitor,c603_n750 25L | 8,2 pF | 20807 |
| | Capacitor,c603_n750 25H | 4,7 pF | 20806 |
| | Capacitor,c603_n750 125SL | 8,2 pF | 20807 |
| | Capacitor,c603_n750 125L | 8,2 pF | 20807 |
| | Capacitor,c603_n750 125H | 4,7 pF | 20806 |
| C15 | Capacitor,chip603 | 0,5 pF | 21508 |
| C16 | Capacitor,ctan a | 2,2 uF/6V3 | 25602 |
| C17 | Capacitor,chip603_n750 | 15 pF | 20808 |
| C18 | Capacitor,chip603_ 25SL | 6,8 pF | 21689 |
| | Capacitor,chip603_ 25L | 5,6 pF | 21569 |
| | Capacitor,chip603_ 25H | 4,7 pF | 21479 |
| | Capacitor,chip603_ 125SL | 6,8 pF | 21689 |
| | Capacitor,chip603_ 125L | 5,6 pF | 21569 |
| | Capacitor,chip603_ 125H | 4,7 pF | 21479 |
| C19 | Capacitor,chip603_ 25SL | 12 pF | 21120 |
| | Capacitor,chip603_ 25L | 8,2 pF | 21829 |
| | Capacitor,chip603_ 25H | 6,8 pF | 21689 |
| | Capacitor,chip603_ 125SL | 12 pF | 21120 |
| | Capacitor,chip603_ 125L | 8,2 pF | 21829 |
| | Capacitor,chip603_ 125H | 6,8 pF | 21689 |
| C20 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C21 | Capacitor,chip603_ln | 4,7 nF | 20803 |
| C22 | Capacitor,chip603_ | 0,5 pF | 21508 |
| C23 | Capacitor,chip603_ 25SL | 0,5 pF | 21508 |
| | Capacitor,chip603_ 25L | 0,5 pF | 21508 |
| | Capacitor,chip603_ 25H | Not used | |
| | Capacitor,chip603_ 125SL | 0,5 pF | 21508 |
| | Capacitor,chip603_ 125L | 0,5 pF | 21508 |
| | Capacitor,chip603_ 125H | Not used | |
| T1 | Transistor | SST310 | 40175 |
| T2 | Transistor | BFR92A | 40150 |
| T3 | Transistor | BFR92A | 40150 |
| T4 | Transistor | SST310 | 40175 |
| T5 | Transistor | BCW60D | 40156 |

p. 2 of 3

PC. Board No. 703-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-09-99 | 1 | PA |

PARTLIST FOR VCO-board TRX1001D/TRX1012D
DRAWING NO. 0-9603-03-6

DATE 7-9-1999
UNIT NO. 5640

| Component | Description | Value | Niros No. |
|-----------|---------------------|----------|-----------|
| T6 | Transistor | BCW61D | 40157 |
| D1 | Diode, kap | BB134 | 45196 |
| D2 | Diode, kap | BB134 | 45196 |
| D3 | Diode | BAT17-04 | 45172 |
| D4 | Diode | BAT17-04 | 45172 |
| D5 | Diode, kap | BB134 | 45196 |
| L1 | Coil | 75903 | 75903 |
| L2 | Coil, chip | 75879 | 75879 |
| L3 | Coil, chip | 75879 | 75879 |
| L4 | Coil, chip | 75879 | 75879 |
| L5 | Coil | 75903 | 75903 |
| L6 | Coil, chip | 75879 | 75879 |
| J1 | Connector_pin | | 83251 |
| J2 | Connector_pin | | 83251 |
| J3 | Connector_pin | | 83251 |
| J4 | Connector_pin | | 83251 |
| | Mylar_for_shield | 1 pcs | 85415 |
| | Pc._board_no: 703-2 | 1 pcs | 95703 |
| | Shield | 1 pcs | 97523 |

p. 3 of 3

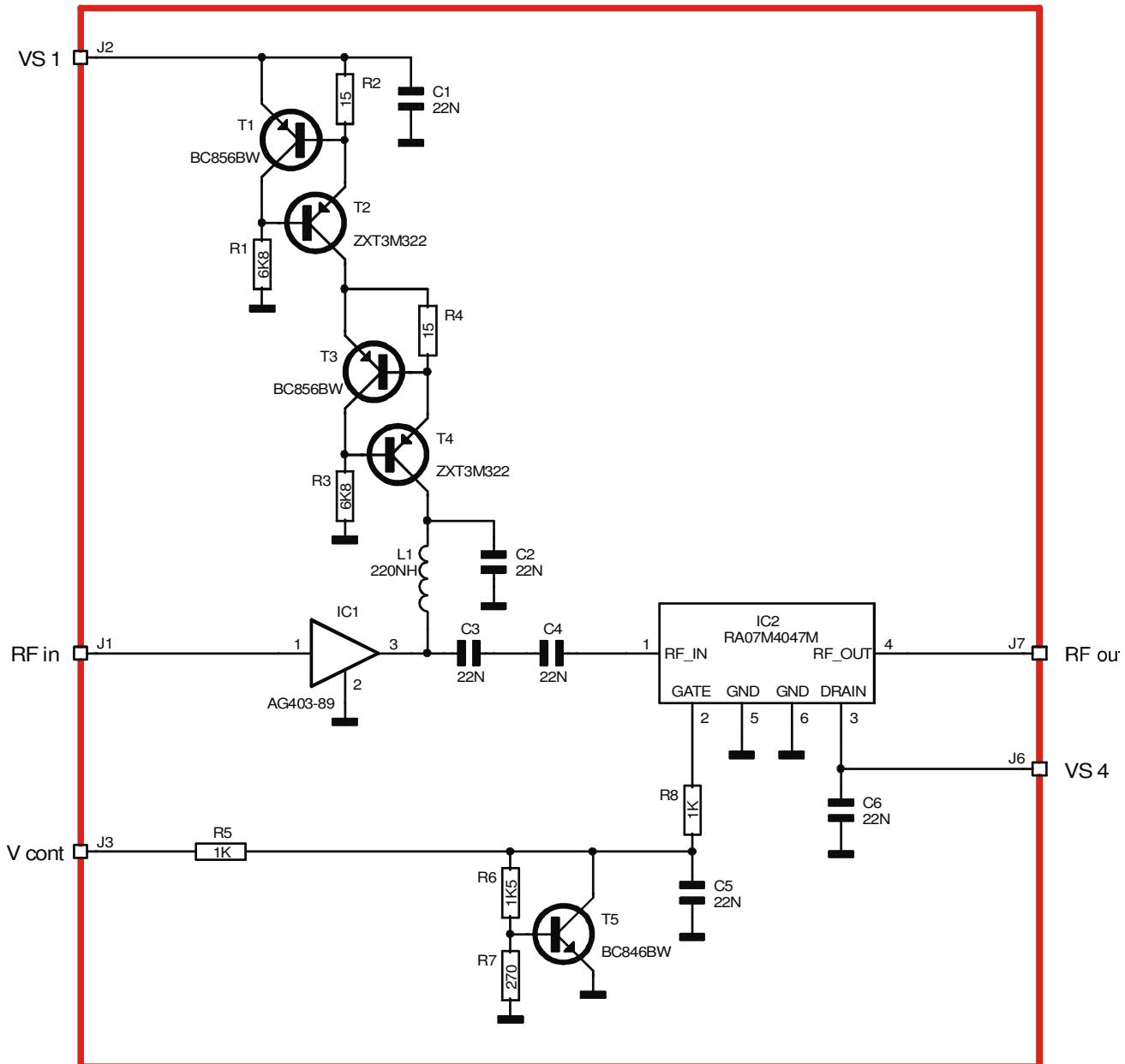
PC. Board No. 703-2

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 08-09-99 | 1 | PA |

20. PA-modul TRX1012D

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-06-05 | 0 | PA |

20.1 Diagram

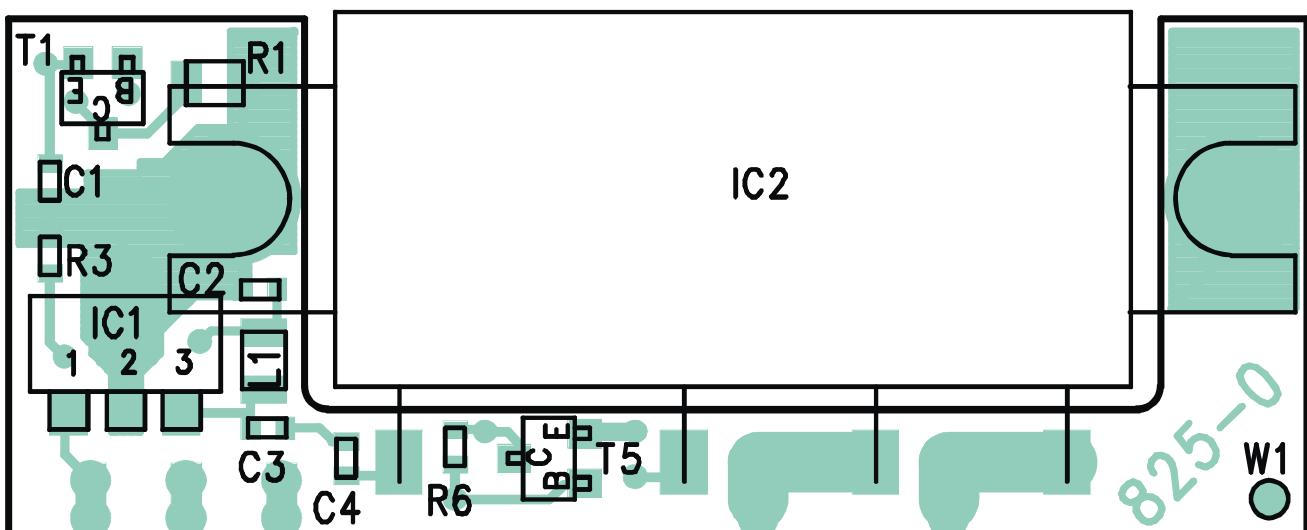


SUBJECT TO CHANGE WITHOUT NOTICE

| | | | | |
|--------------------------|----------|---|---------------------------|----------------------------|
| Date: 11-05-2005 | Sign: PH | D | NIROS COMMUNICATIONS A/S | PA-modul TRX1001D/TRX1012D |
| Date: | Sign: | | Hirsemarken 5, 3520 Farum | |
| Drawing No.: 0-9650-03-0 | | | PC. Board No.: 825-0 | Unit No.: 5980 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-06-05 | 0 | PA |

20.2 Componentside



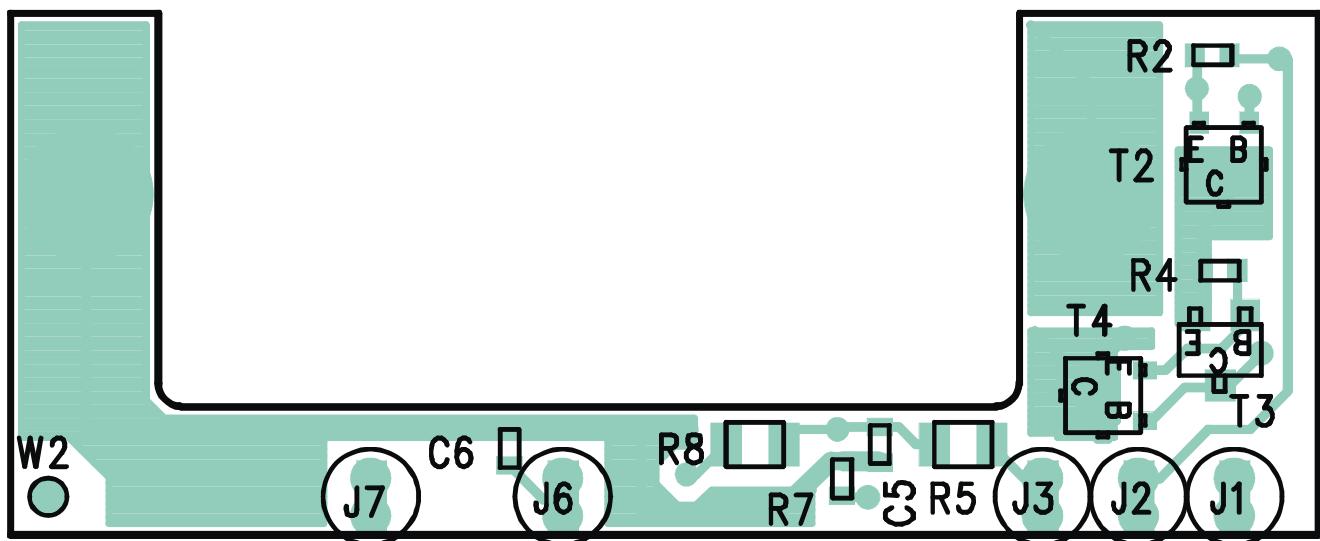
Componentside (825-0)

SUBJECT TO CHANGE WITHOUT NOTICE

| | | | | |
|--------------------------|----------|---|---|----------------------------|
| Date: 11-05-2005 | Sign: PH | 0 | NIROS COMMUNICATIONS A/S Hirsemarken 5, 3520 Forum | PA-modul TRX1001D/TRX1012D |
| Date: | Sign: | | | |
| Drawing No.: 0-9650-05-0 | | | PC. Board No.: 825-0 | Unit No.: 5980 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-06-05 | 0 | PA |

20.3 Wiringside



Wiringside (825-0)

SUBJECT TO CHANGE WITHOUT NOTICE

| | | | | |
|--------------------------|----------------------|---|---|----------------------------|
| Date: 11-05-2005 | Sign: PH | 0 | NIROS COMMUNICATIONS A/S Hirsemarken 5, 3520 Forum | PA-modul TRX1001D/TRX1012D |
| Date: | Sign: | | | |
| Drawing No.: 0-9650-04-0 | PC. Board No.: 825-0 | | Unit No.: 5980 | |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-06-05 | 0 | PA |

20.4 Partlist

| Partlist for PA-modul TRX1001D/TRX1012D Drawing No. 0-9650-03-0 | | | Date 21-06-2005 |
|--|------------------------|------------|---------------------|
| | | | Unit No. 5980 |
| Component | Description | Value | Niros No. |
| R1 | Resistor, chip603 | 6,8 Kohm | 14682 |
| R2 | Resistor, chip402 | 15 Ohm | 111509 |
| R3 | Resistor, chip402 | 6,8 Kohm | 116801 |
| R4 | Resistor, chip402 | 15 Ohm | 111509 |
| R5 | Resistor, chip603_0,1w | 1 Kohm | 10915 |
| R6 | Resistor, chip402 | 1,5 Kohm | 111501 |
| R7 | Resistor, chip402 | 270 Ohm | 112700 |
| R8 | Resistor, chip603_0,1w | 1 Kohm | 10915 |
| C1 | Capacitor, chip402 | 22 nF | 23223 |
| C2 | Capacitor, chip402 | 22 nF | 23223 |
| C3 | Capacitor, chip402 | 22 nF | 23223 |
| C4 | Capacitor, chip402 | 22 nF | 23223 |
| C5 | Capacitor, chip402 | 22 nF | 23223 |
| C6 | Capacitor, chip402 | 22 nF | 23223 |
| T1 | Transistor | BC856BW | 40228 |
| T2 | Transistor | ZXT3M322 | 40232 |
| T3 | Transistor | BC856BW | 40228 |
| T4 | Transistor | ZXT3M322 | 40232 |
| T5 | Transistor | BC846BW | 40226 |
| IC1 | Integrated_circuit | AG403-89 | 46634 |
| IC2 | Integrated_circuit | RA07M4047M | 46633 |
| L1 | Coil, chip603 | 220 nH | 76013 |
| J1 | Wire | | 94020 |
| J2 | Wire | | 94020 |
| J3 | Wire | | 94020 |
| J6 | Wire | | 94020 |
| J7 | Wire | | 94020 |
| | Insulation | 2 pcs | 85290 |
| | Nut M1,6 | 2 pcs | 92023 |
| | Screw M1,6X5 | 2 pcs | 92038 |
| | Pc._board_no.: 825-0 | 1 pcs | 95825 |
| | Pa_base_plate | 1 pcs | 98338 |
| p. 1 of 1 | | | PC. Board No. 825-0 |

| File/Reference | Prepared | Date | Revised by | Revised date | Revision No. | Approved |
|--------------------|----------|----------|------------|--------------|--------------|----------|
| manual for trx1012 | TN | 30-09-05 | TN | 22-06-05 | 0 | PA |