

1. Statutory Warranties

- 1.1 The Trade Practices Act Part V, Division 2A and other legislation imply conditions, warranties and other obligations on us to consumers that cannot be excluded, restricted or modified. Those provisions apply to the extent required by law.
- 1.2 We exclude all other conditions, warranties and obligations which would otherwise be implied concerning the activities covered by this agreement.
- 1.3 We limit our liability where we are allowed to do so. Examples of where we are allowed to limit liability are -
 - (a) you acquire goods from us for re-supply;
 - (b) the goods or services we supply are not of a kind ordinarily acquired for personal, domestic or household use or consumption.
- 1.4 Where we are allowed to limit our liability, to the extent permitted by law, our sole liability for breach of a condition, warranty or other obligation implied by law is limited -
 - (a) in the case of goods we supply, to any one of the following as we decide -
 - (i) the replacement of the goods or the supply of equivalent goods;
 - (ii) the repair of the goods;
 - (iii) the payment of the cost of repairing the goods or of acquiring equivalent goods;
 - (iv) the payment of the cost of having the goods repaired; or
 - (b) in the case of services we supply, to any one of the following as we decide -
 - (i) the supplying of the services again;
 - (ii) the payment of the cost of having the services supplied again.

2. Additional Warranties

- 2.1 The warranties in this clause are in addition to the statutory warranties referred to in the previous clause.
- 2.2 We warrant this product to be free from defects in materials and workmanship for three years from the date of original sale (or another period we agree to in writing). During this period and as our sole liability to you under this warranty, we agree to, at our option, either repair or replace goods which we are satisfied are defective. We warrant replacement parts for the remainder of the period of warranty for the goods into which they are incorporated.

- 2.3 We warrant our other repairs to be free from defects in materials and workmanship for three months from the date of the original repair. During this period and as our sole liability to you for the repair, we agree to repair or replace (at our option) repaired goods which we are satisfied are defective.
- 2.4 We warrant that we will perform services with reasonable care and skill and agree to investigate any complaint made in good faith that we have performed services unsatisfactorily. If we are satisfied that the complaint is justified, and as our sole liability to you under this warranty, we agree to supply those services again at no extra charge to you.
- 2.5 If you want warranty service under this clause you must give us an original or copy of the sales invoice from the transaction or some other evidence showing details of the transaction.

3. Other Limitations

- 3.1 You may not rely on any representation, warranty or other provision by or for us which is not covered by clause [1] or repeated in this agreement in clear terms.
- 3.2 We are not liable (nor are our employees, contractors and agents) for any damage, economic loss or loss of profits whether direct, indirect, general, special or consequential -
 - (a) arising out of any breach of any implied or express term, condition or warranty; or
 - (b) suffered as a result of our negligence (or that of our employees, contractors or agents) apart from liability as set out in the previous two clauses.
- 3.3 The liability of a party under this agreement (whether arising in contract, tort or by statute) is to be reduced by the same proportion as represents the proportion of the loss or damage caused or contributed to by the other party, its contractors or agents.

Kingray After Sales Service

Your Kingray KCC-110 is especially designed with the use of solid state circuitry and rigorous testing, resulting in high reliability. Should failure occur however, Kingray maintain a fully equipped service facility and spare parts stock to meet the customer's requirements long after expiry of the warranty period. Standard Communications PTY. LTD warrants this Kingray product to be free from defects in material and workmanship for a period of 3 years from the date of installation and reserves the right to void warranty if unit was misused, improperly installed or damaged by claimant.



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List of certified characteristics available at www.sgs.com



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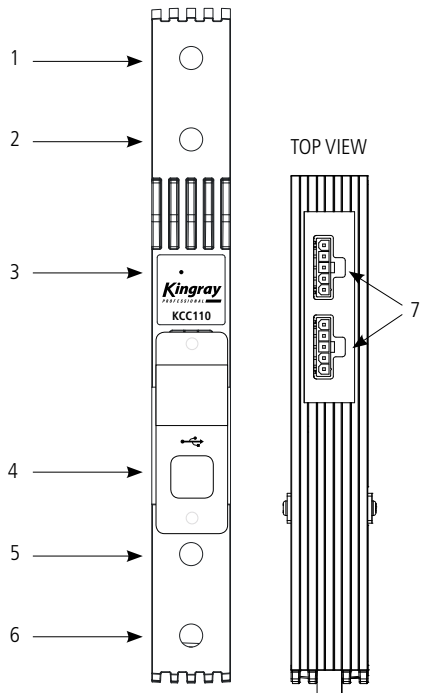
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INSTALLATION MANUAL

KCC-110 Channel Convertor/Processor

Your KCC-110 channel Convertor/Processor is Australian designed and built and is the most advanced channel Convertor/Processor available. The KCC-110 works as a Channel Convertor or a Channel Processor. This module was designed to either convert an input channel to a different channel or the module can be used as a Channel Processor in which the output channel is the same as the input channel. The KCC-110 is capable of adjacent channel operation at both input and output. For stand alone operation, use a PSK24 power supply. For instructions on programming, please refer to the Programming Manual.



CONNECTION DIAGRAM

1. RF Input
2. RF Input (link)
3. Power/status LED
4. USB port
(for programming single module)
5. RF output (link)
6. Output
7. DC power/data bus (link)

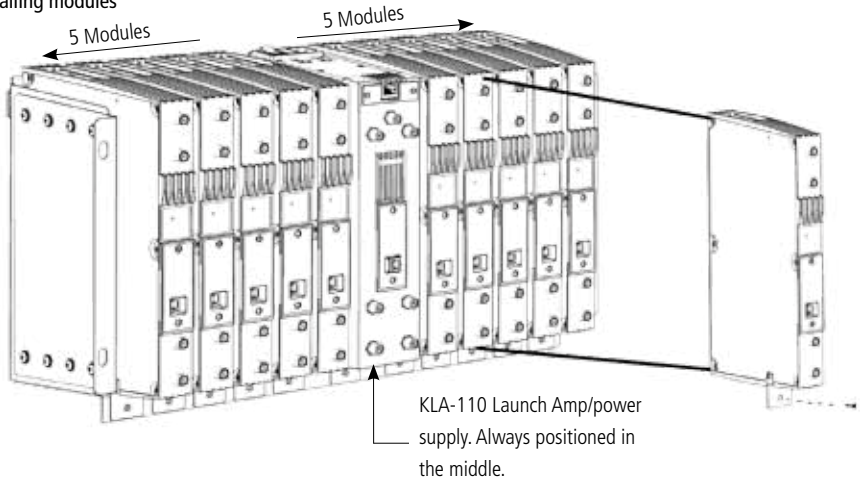
CONTENTS

- | | |
|----------------------|---------------------------|
| 1 x KCC-110 module | 1 x Spare label |
| 2 x RF jumper cables | 2 x Cable support bracket |
| 1 x Power/bus cable | |

When connecting several modules into a rack, first mount the KR-110 rack securely on the wall or in the 19" cabinet and then mount the modules in the rack with the locating screw on the bottom of the module (Fig.1). Then connect the RF input and RF output links as shown on the drawing (Fig.2). Once mounted, connect the Power and Bus cable at the top of each module (Fig.3). When all modules have been mounted and plugged in, switch power on (Fig.4).

Note: When connecting a mix of channel converters and USB modulators, make sure the VSB modulators are installed furthest away from the launch amplifier.

FIG.1 Installing modules



When connecting the RF link cables, always install a 75 ohm terminator in any unused inputs/outputs.

FIG.2 RF cable connection

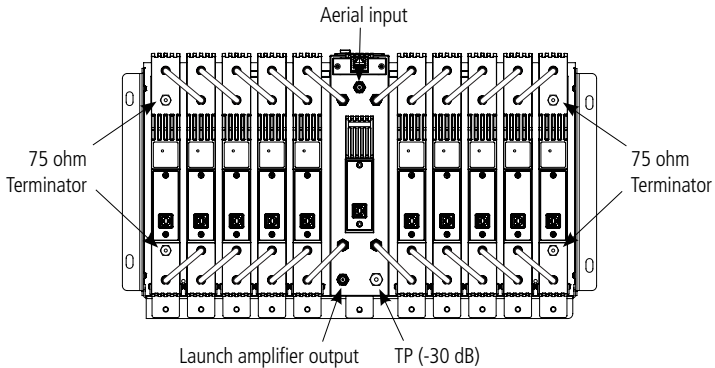
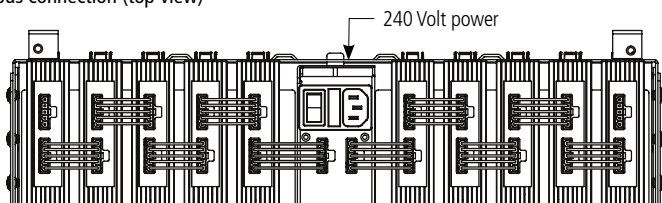
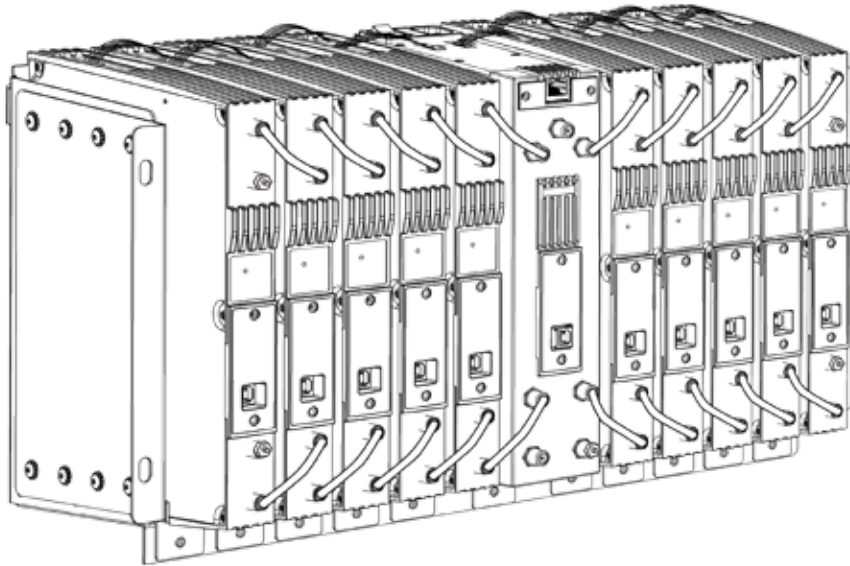


FIG.3 Power data/bus connection (top view)



Once the system has been installed and correctly cabled, the system is now ready for programming via your computer. See programming manual.

FIG. 4 Completed system



KCC-110 SPECIFICATIONS

Input Frequency Range	44-862 MHz
Output Frequency Range	44-862 MHz
Frequency Resolution	0.125 MHz
Input/Output Channel Naming	By frequency, software selectable
Channel Bandwidth	7/8 MHz
Output S/N and Spurious	> 55 dB
Input Level Range	65-95 dBuV (looped input)
AGC Range	30 dB Min. Automatic
Output Level Adjustment	60-80 dBuV (looped output)
Output Connector	Female F type
Phase Noise	< -85 dBc / Hz at 10 kHz, < -103 dBc / Hz at 100 kHz
Noise Figure	< 9 dB
Monitor Output (T.P.)	-30 dB
AGC LED	Green-Within range, Amber-Low level, Red-Excessive level
RF Input/Output Level Monitor	LED on front or via software
Supply Voltage	24 VDC
Power Consumption	12W MAX
Operating Temperature Range	0-55 °C
RF Shielding	> 70 dB