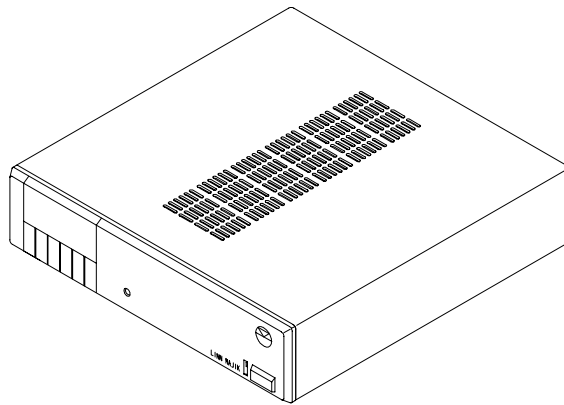


# **LINN**

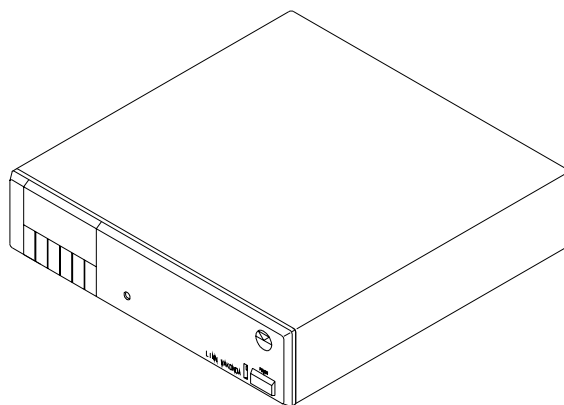
## **SERVICE MANUAL**

### **MAJIK AMPLIFIER**



### **&**

### **WAKONDA PRE-AMPLIFIER**





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**INTRODUCTION**

**INTRODUCTION**

Both the Linn MAJIK control amplifier and WAKONDA pre- amplifier use microprocessor control, Linn's solid state input switching and volume control technology, and the latest surface mount manufacturing techniques to deliver unprecedented audio performance and ease of use.

They accommodate six input sources, and provide outputs for two tape decks. You may record any source while listening to the same or any other source. For the purposes of this manual, the Majik and Wakonda are the same, unless otherwise stated, except when referring to the POWER- AMP section, which is only fitted to the MAJIK

Separate pre-amp output and power amp inputs (MAJIK ONLY) provide exceptional flexibility, and offer the possibility of a neat and economical upgrade to active systems. Two sets of speaker sockets facilitate bi-wiring. Options include multi-room modules and a tuner which simply plugs into the internal expansion port known as the "Sneaky" slot.

Like any electronic product, the MAJIK and WAKONDA will perform at their best when used with the highest quality source. The better the sound from your turntable, tuner or CD player, the better the sound you will hear from the other components in the system.

**INSTALLATION**

Unpack the product and retain the packing for future transportation.

Check the contents are as follows:

- MAJIK or WAKONDA                      Remote handset
- Owner's manual                              Mains lead
- 1 spare fuse.

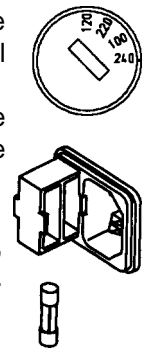
**VOLTAGE SELECTION - MAJIK**

This is factory set for a 240 Volts mains supply and must not be connected to a mains supply before it is adjusted for the local voltage, and fitted with the appropriate fuse.

To set the voltage, rotate the voltage selector on the underside of the product until the appropriate voltage is aligned with the white marker.

To fit the fuse, first identify the correct fuse for the local voltage

MAJIK	3.15A anti-surge for 220V and 240V,
	6.3A anti-surge for 100V and 120V.



**VOLTAGE SELECTION - WAKONDA**

As the WAKONDA is fitted with a Brilliant switched mode power supply, voltage selection is automatic.

Fuse: WAKONDA T500 mA for all input voltages (90-264 V AC)

Pull open the fuse-drawer at the left-hand side of the mains inlet, insert the fuse in the rear compartment and close the drawer.

**IMPORTANT NOTE FOR UK USE:** The wires in this mains lead use the following colour code:

- Green-and-yellow:                      Earth
- Blue:                                              Neutral
- Brown:                                              Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E, or by the earth symbol or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

### **POSITIONING**

You can put your MAJIK/WAKONDA more or less anywhere you find convenient, but there are a few considerations which may affect your choice. Turntables have short signal leads, so the MAJIK/WAKONDA will need to be close to your turntable. However, if they are too close together the cartridge may pick up hum from the amplifier, especially if it is a moving coil cartridge. 30 cm between the amplifier and the cartridge is usually enough to avoid such problems. Some cassette decks may also pick up hum if they are too close to the MAJIK/WAKONDA

The MAJIK is a high-powered amplifier in a compact case and in normal use the case will get quite warm. So allow a minimum of a few centimetres of space around the amplifier, and ample access for air to circulate, and in particular don't block the vent holes on the top. No harm will come to your MAJIK if it has inadequate ventilation - it will simply turn itself off until the temperature drops.

**WARNING: Be careful about putting it on or close to anything delicate or expensive which may be affected by the heat.**

### **USEFUL INFORMATION**

**LOAD IMPEDANCE** The MAJIK will drive two pairs of 8 Ohm loudspeakers, or one pair of 4 Ohm loudspeakers. You can use the MAJIK to drive two pairs of 4 Ohm loudspeakers if only moderate listening levels are required as this can cause the over-current protection to trip at moderate volume levels. However, this will in no way damage the MAJIK. It is not possible to switch between the speakers as they will be wired in parallel on the speaker outputs.

**PROTECTION** The MAJIK provides fully automatic overload protection against both over-current and overheating. If it operates, the audio signal mutes until the power amplifier has reset itself, and un-mutes within a few seconds. The volume is reduced by 1 dB, to reduce the likelihood of further overloads. If overload persists, the volume will be reduced by a further 1 dB, and so on until no overload condition is sensed.

**CUSTOMISING THE MAJIK** There are three ways you can vary the behaviour of THE MAJIK from standard:

- the display can be set to remain on all the time (MAJIK/WAKONDA)
- the start-up volume can be set to 15 instead of 30 (MAJIK/WAKONDA)
- the power amp can be disabled to save power when the MAJIK- is being used as a pre-amp only. (MAJIK ONLY)

This is simply done by removing the sleeve and fitting a shorting link across specific pins. Please see the section on how do this.

**PHASE** The MAJIK and WAKONDA pre-amplifiers preserve the phase of the signal to the power amplifier. Therefore the wiring from the power amplifier to the speakers does not require its polarity inverted.

## INTRODUCTION

**EXPANSION** We designed the MAJIK and WAKONDA to last for many years and to give your customers unique opportunities to extend their capabilities as needs evolve and resources allow. At the rear of the MAJIK, there is an expansion slot, known as the **SNEAKY** slot, into which one of a range of **SNEAKY** add-on modules may be fitted:

A **SNEAKY KUDOS** tuner module for high-quality radio reception.

A **SNEAKY AKTAMP** active crossover board which, with additional amplifiers can be used to drive Aktiv speakers.

**SNEAKY KNEKT** Either a Line Driver module which will expand the MAJIK / WAKONDA into the heart of a multi-room system feeding other rooms in the house or a Local Receiver module could be fitted so that the MAJIK / WAKONDA can integrate with a Linn multi-room system elsewhere in the house.

**PROBLEMS** Rarely, some types of computer monitors and high-frequency or low-energy fluorescent lights can affect the infra-red control range of the MAJIK, or make it behave erratically. Such problems are very rare and your retailer will advise on a solution.

## **MAINTENANCE**

**FUSE PROTECTION** A fuse is fitted to the power input socket on the rear of the MAJIK. The fuse holder also contains one spare fuse. The Linn MAJIK amplifier is designed for a long life and any servicing should be carried out by an authorised retailer.

**CLEANING** Dust or finger marks can be removed using a soft damp cloth. Avoid the use of domestic cleaning products.

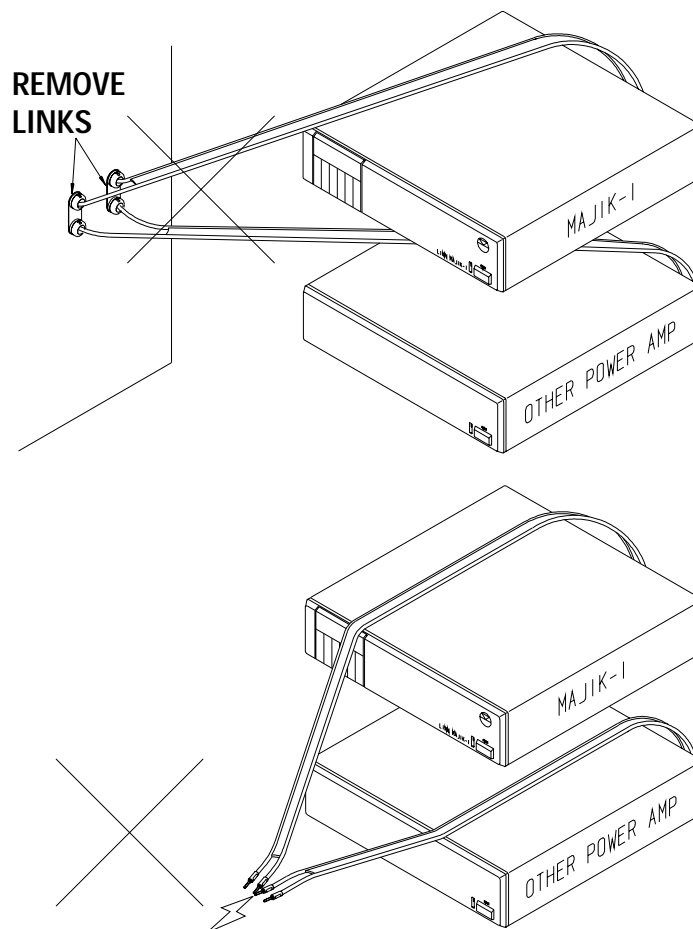
Notes:

- 1. KUDOS:**  
When fitting the KUDOS SNEAKY the display sleep function must be disabled on the MAJIK main board. The KUDOS then controls this function and cannot be configured to remain on.
- 2. MULTI-ROOM:**  
If using the Majik in a Multiroom system with an RCU in the same room you will need to disable the IR receiver in the Majik. This is simply done by fitting a Link across pins which are located in the Sneaky Board and are clearly marked.
- 3. SNEAKY SLOT:**  
Always disconnect the MAJIK/WAKONDA from everything, **ESPECIALLY MAINS**, before fitting a SNEAKY module or carrying out any configurations.

**WARNING**

Please note when Bi-Amping ANY Majik that each of the two methods shown will cause the Majik to suffer terminal damage. Whilst the protection was improved for the Majik in Feb. 1995, NO amplifier likes to be "back driven".

**Please ensure that ALL THE AMPLIFIERS ARE SWITCHED OFF and all speaker links are removed before plugging or unplugging the connectors into speakers during installation OR demonstrations.**



**MAJIK AMPLIFIERS DAMAGED IN THIS WAY WILL INCUR FULL PARTS AND LABOUR CHARGES!**

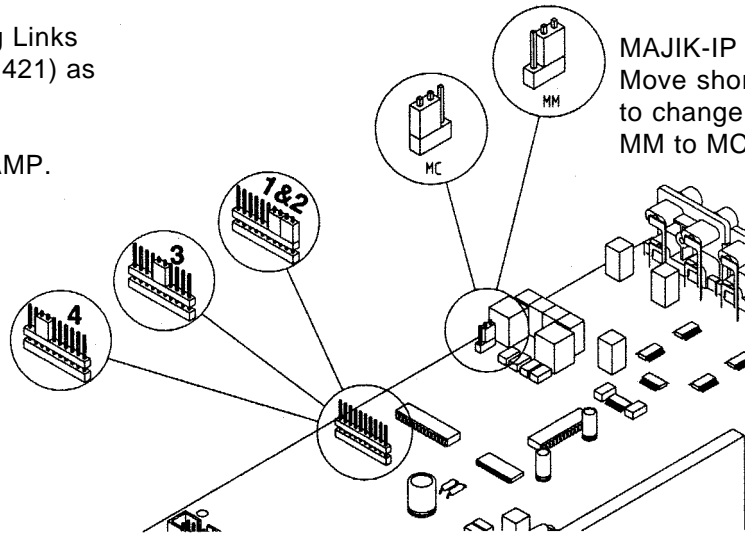
**MAJIK**

**From Board revision L6 upward**

To customise fit Shorting Links (Linn Part Number CONN 421) as shown:

- 1 & 2 Disable the power-AMP. (Power save mode)
- 3. Display ON all the time.
- 4. Start volume 15 (factory setting 30).

Please note:  
 Last two pins not used.



**MAJIK**

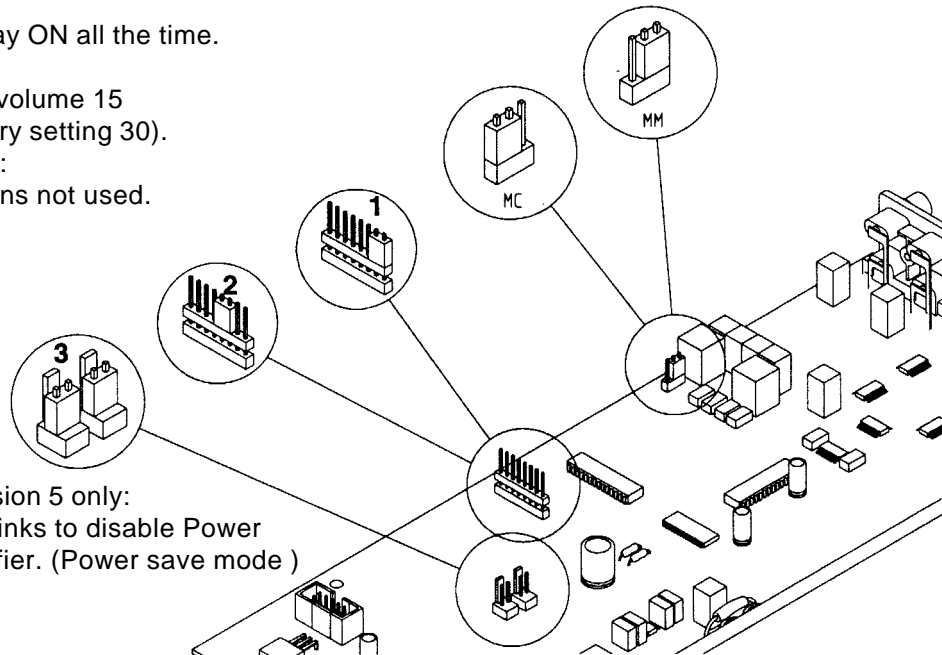
**Board revision L 4 and L 5.**

To customise fit Shorting Links (Linn Part Number CONN 421) as shown:

- 1 Display ON all the time.
- 2 Start volume 15 (factory setting 30).

Please note:  
 Last four pins not used.

MAJIK-IP only:  
 Move shorting link to change from MM to MC.



Board Revision 5 only:  
 3. Fit 2 links to disable Power amplifier. (Power save mode)



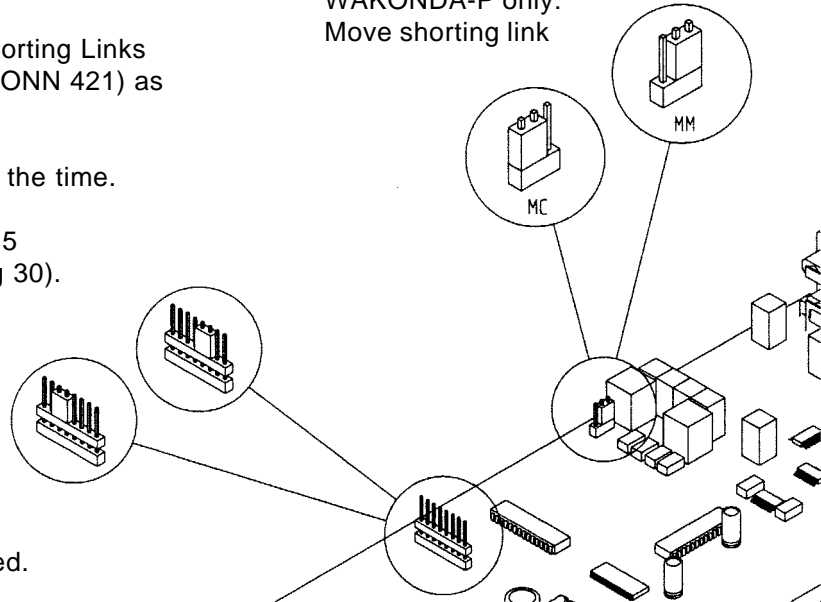
**WAKONDA**

**From Board revision L6 upward**

To customise fit Shorting Links (Linn Part Number CONN 421) as shown:

1. Display ON all the time.
2. Start volume 15 (factory setting 30).

WAKONDA-P only:  
Move shorting link



INSTALLING AKTIV MODULES IN THE MAJIK / WAKONDA

**Time required:**  
30 min, approx.

**INSTALLING AKTIV MODULES**

Parts Required:

1 x Set Aktiv Modules. (See contents list in box.)

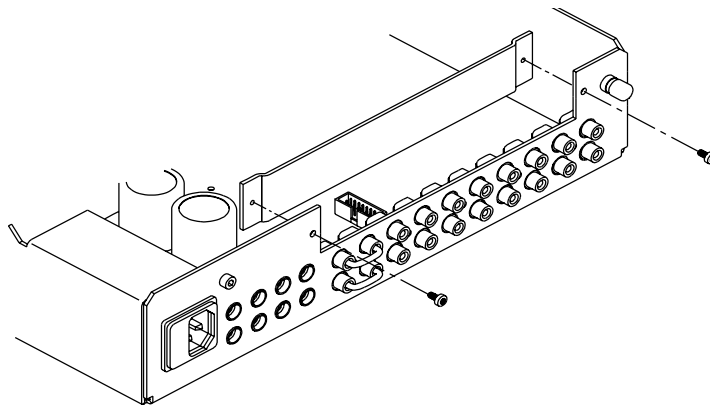
Tools Required:

1 x No 2 Pozi (or Supa) screwdriver  
Antistatic work station

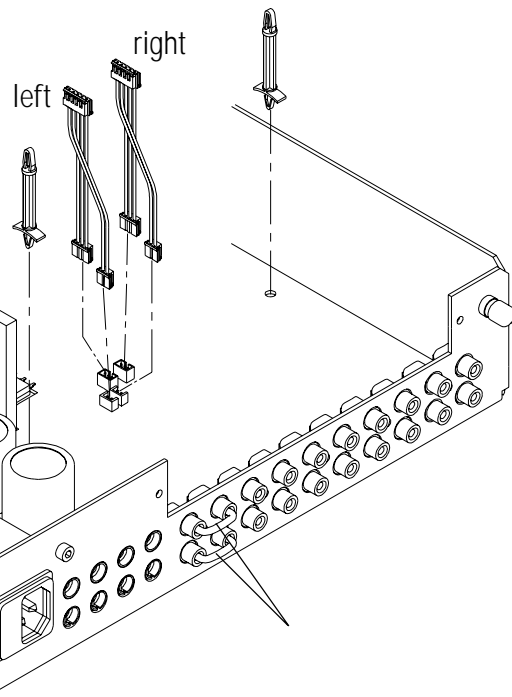


Before starting, you must ensure that you have a clean workbench and take the necessary anti-static precautions. Always wear an anti-static wrist strap. Refer to the Service Manual (5.8) for full details of the necessary working practices. Always disconnect the MAJIK/WAKONDA from everything, **ESPECIALLY MAINS**, before fitting a SNEAKY module.

- 1 Remove the sleeve from the MAJIK and place the amplifier with the back panel facing you.
- 2 Remove the 2 screws on the back panel and remove the SNEAKY blanking plate. Give the blanking plate to the customer to retain for future use.



- 3 Take 2 of the wiring harnesses, which have a 5 way connector at one end and a 2 and 3 way connector at the other end. Fit the 2 and 3 way connectors to the MAJIK main board. Make sure they are pressed fully home.



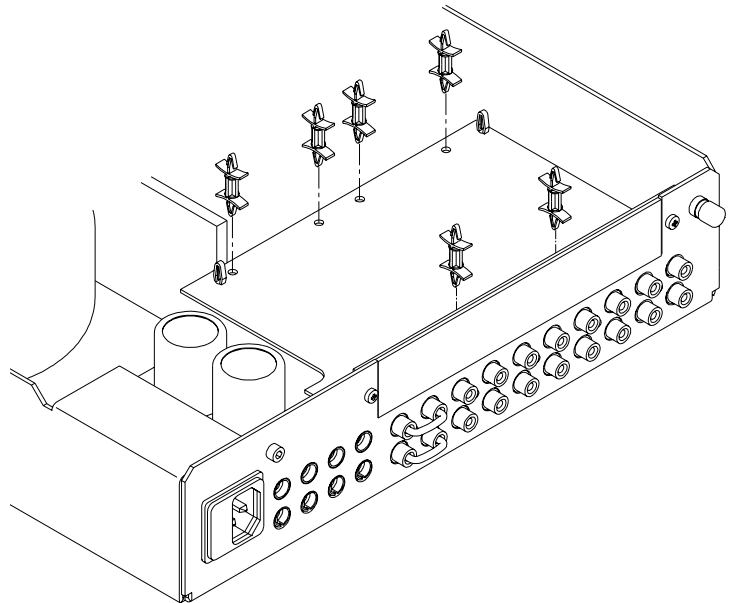
4. Fit the two long standoffs to the MAJIK main board. Make sure the standoffs are fitted the correct way round.

**REVISION 14: MAJIK and WAKONDA**  
INSTALLING AKTIV MODULES IN THE MAJIK- / WAKONDA

5. Fit the SNEAKY Aktiv module tray. Make sure the standoffs click into position. Refit the screws in the back panel.

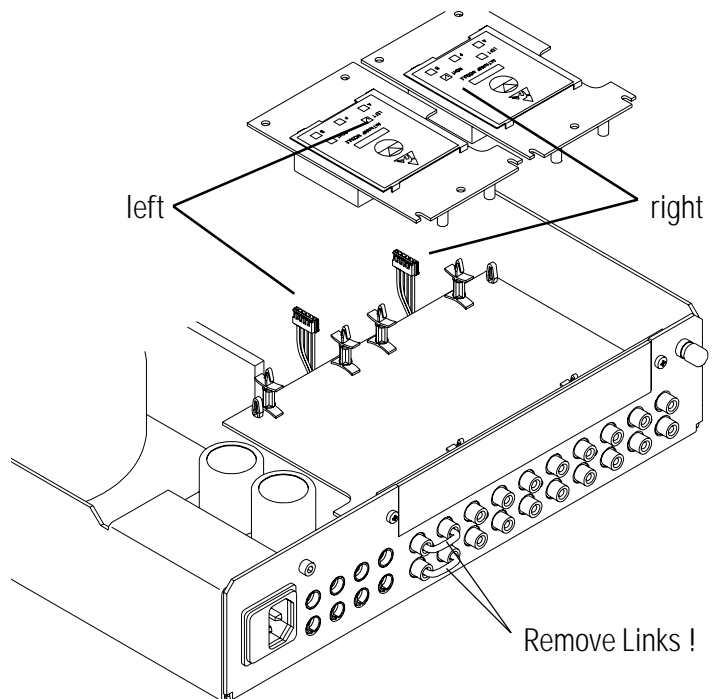
**IMPORTANT:** From March 1994 the SNEAKY AKTIV MODULE TRAY is attached to the back panel by two MECH 001 bolts which fit into threaded inserts in the module tray. Please use the two MECH 001 bolts provided.

6. Fit the plastic spacers to the tray.



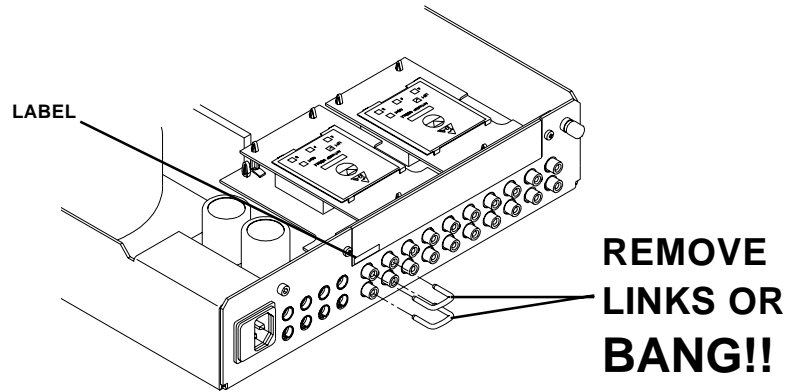
7. Fit the 5 way connectors of each wiring harness to the AKTIV modules. Make sure that they are fully pressed home. Identify the channel each board is wired to by ticking the appropriate box on each board. Use a felt pen.

8. Fit the modules onto the tray. The big screening cans are fitted toward the tray. Make sure the spacers click into position.

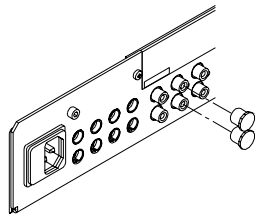


INSTALLING AKTIV MODULES IN THE MAJIK- / WAKONDA

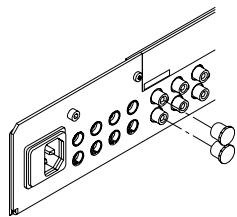
9. Stick the correct identification label onto the lower left hand corner of the SNEAKY Aktiv module tray.
10. **Remove the shorting links between the PRE-OUT and POWER-IN Sockets.**



11. If the MAJIK is being used as the pre-amp in the system, fit 2 dust caps over the POWER-IN sockets.



Alternatively, if the MAJIK is being used exclusively as the power-amp in the system, fit 2 dust caps over the PRE-OUT sockets.



When the Aktiv cards are fitted in the SNEAKY slot they form the link between the Pre-Amp and the Power -Amp sections of the Majik.

**NEVER LINK THE PRE AND POWER SECTIONS EXTERNALLY (EITHER DIRECT OR THROUGH ANOTHER POWER-AMP) WHEN AKTIV BOARDS ARE FITTED AS DAMAGE WILL RESULT.**

12. Refit the sleeve.

INSTALLING SNEAKY KUDOS MODULE IN THE MAJIK / WAKONDA

INSTALLING SNEAKY KUDOS

**Time required:**  
45 min, approx.

1. Unpack and check the contents of your KUDOS Sneaky upgrade kit.  
(See contents list in box.)

Tools required: No.1 Pozidrive screwdriver  
Small Pliers  
Digital Multimeter



Before starting, you must ensure that you have a clean workbench and take the necessary anti-static precautions. Always wear an anti-static wrist strap. Refer to the Service Manual (5.8) for full details of the necessary working practices. Always disconnect the MAJIK/WAKONDA from everything, **ESPECIALLY MAINS**, before fitting a SNEAKY module.

2. On a clean bench, and with a protective pad to protect the fascia, turn the MAJIK / WAKONDA upside down, remove the four screws and slide off the outer sleeve.

3. With the MAJIK / WAKONDA sitting on its feet again, remove the two screws on the back-panel, and take off the Sneaky slot blanking plate.

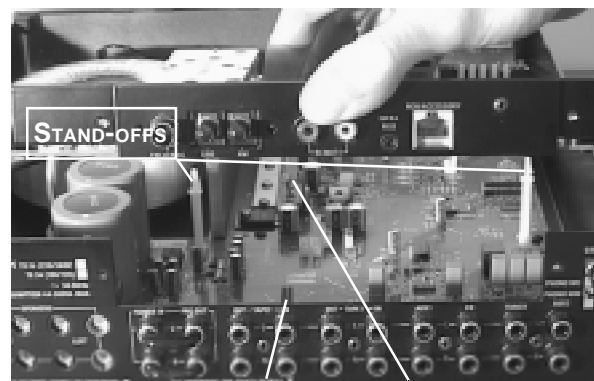


PHOTO 1

4. Push-fit the two white plastic stand-offs into the holes in the MAJIK / WAKONDA main PCB until they audibly 'click' and lock into position. (See photo 1)



5. Push the extension connector into the holes on the underside of the KUDOS tuner PCB. (See photo 2) It is important to fit this connector first to the KUDOS tuner PCB, and not to the MAJIK / WAKONDA main PCB, otherwise the pins may be damaged on assembly.

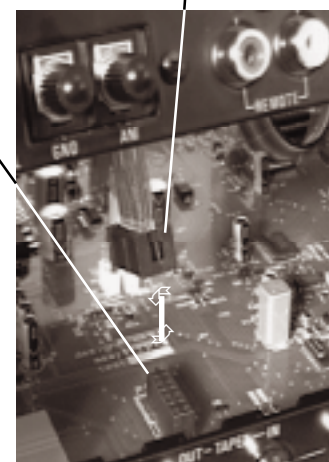


PHOTO 2

LINN KUDOS SNEAKY MODULE UPGRADE IN LINN MAJIK / WAKONDA

6. Fit the KUDOS tuner PCB into the MAJIK/WAKONDA :-

(i) Align the mounting plate in the Sneaky slot aperture,

(ii) Align the two white plastic stand-offs in their holes,

(iii) Apply a steady even pressure on top of the extension connector and near the plastic stand-offs to push the KUDOS tuner PCB into position. (See photo 3). Try and keep the board horizontal whilst pushing into position.



PHOTO 3

**Excessive force is not required.**

7. Fit two M3 screws with shake-proof washers to hold the mounting plate into the Sneaky slot. The shake-proof washers **MUST** be used to ensure electrical grounding. Check with Multi-meter (set to Ohms) for continuity between earth pin of mains plug and top of screening can on Kudos board.

8. Remove the facia assembly from the MAJIK / WAKONDA :-

- (i) Unplug the display ribbon cable and the power-on LED connector,
- (ii) Remove the two facia screws underneath and the two counter sunk screws at each end, then lift off the facia.

9. Now working on the facia assembly, remove the four screws and take off the MAJIK / WAKONDA control PCB.

10. Lift off the grey rubber switch membrane.

11. Snap off the four legs along on the back of the display window along with the rivet washers. (See photo 4)

12. Push off the MAJIK / WAKONDA display window along with the control buttons.

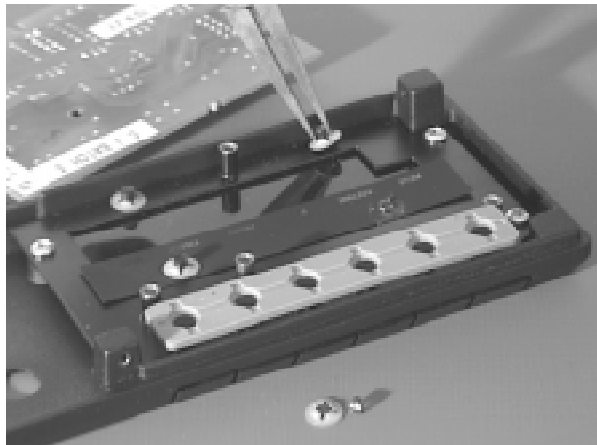


PHOTO 4

13. Remove the four screws and lift-off the MAJIK / WAKONDA control area mounting plate.

14. Fit the new KUDOS control area mounting plate, which has extra holes for the additional buttons, using the existing screws. Ensure the two in-fill mouldings which are located under the mounting plate are correctly positioned. (New screws are included for use if required.)

LINN KUDOS SNEAKY MODULE UPGRADE IN LINN MAJIK / WAKONDA

15. Fit the new 11-buttons assembly by engaging the return hooks first to ensure they are not damaged, and then fit the new window to hold the buttons to the control area plate and push firmly into place. Ensure the protective film can be easily removed, and is not trapped behind the window.

16. Turn the facia over, fit the display legends label (check it is the right way around!) over the locating pins and rivet in place by pushing the push-on rivet washers HARD into place on the pins using a 5 mm Nut-runner. (See photo 5)

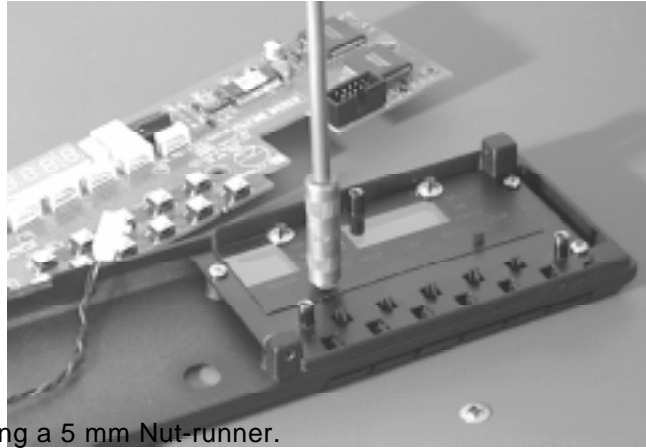


PHOTO 5

17. Fit one of the long ribbon cables to the KUDOS control PCB. Both the cables are same, but the end are handed differently. Fit the cable with the end that enables the cable to point directly downwards.
18. Fit the KUDOS control board to the facia with three M3 screws removed previously. A nylon insulating bush MUST be fitted under the top screw to prevent a short-circuit to the adjacent track. (New screws are included for use if required, as is an additional insulating bush.)
19. Ensure all the buttons are functioning properly and clicking audibly, then refit the facia assembly to the MAJIK/WAKONDA using the two counter-sunk screws at the ends and the two screws underneath which were removed earlier.
20. Re-fit the power-on LED connector to the MAJIK / WAKONDA main PCB.

Plug the ribbon cable from the KUDOS control PCB into the furthest connector (P6) on the KUDOS main PCB. Plug the second long ribbon cable into the other connector (P5) on the KUDOS main PCB using the end which makes the cable face forwards, and then plug the other end into the connector (P8) on the MAJIK/WAKONDA main PCB.

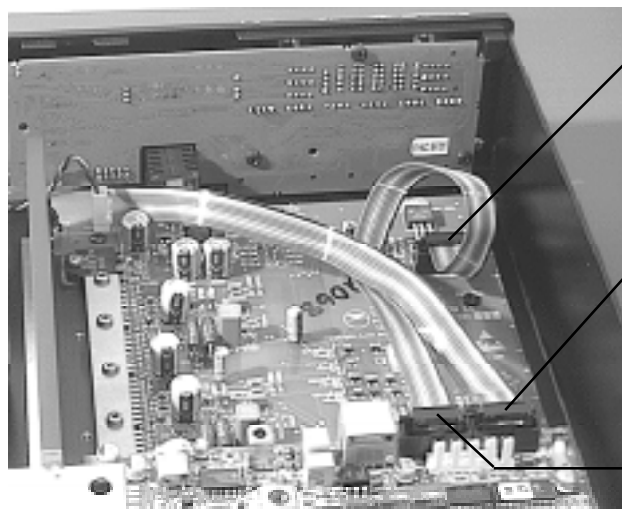


PHOTO 6

If the cables are correctly fitted they will cross-over each other. Incorrect connection will not cause any damage, but the control panel will not operate.

INSTALLING SNEAKY KUDOS MODULE IN THE MAJIK / WAKONDA

21. Disable the sleep function of the MAJIK/WAKONDA display by fitting a link (CONN 421) to pins 3 on P11 connector. This passes the "sleep" control over to the Kudos board and MUST be fitted. (See photo 7)  
 Previous board revisions will be different, find the pins and fit the link across the pins marked DISPLAY ON.  
 Please note: It is not possible to Configure the display to remain on the time when the Sneaky Kudos is fitted.

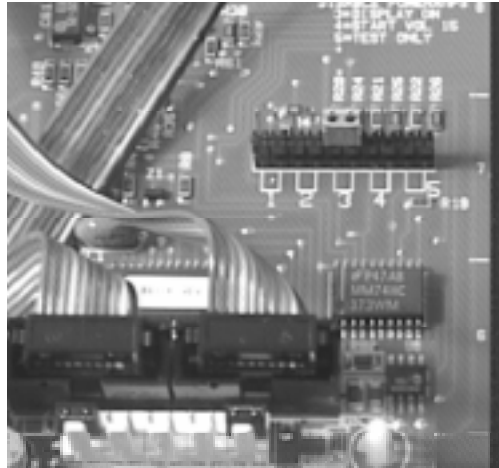


PHOTO 7

22. Re-fit the outer sleeve to the MAJIK/WAKONDA using the four screws underneath which were removed previously.
23. Power the product up and check that all is working and fully functioning. Remove the protective tape from the front window. Installation is complete. Please note: The Kudos Sneaky is selected by using any of the following:  
 Any of the top row of buttons on the Majik front panel  
 on the large Linn hand set  
 on the KUDOS hand set (when available)  
 on the Majik hand set (steps up and down through presets only)
- ZONE  
 WHERE  
 TUNER
- The TUNER input on the Majik is not affected and can be used as an auxiliary input, by selecting tuner. For further details refer to the Owners Manual.
24. You should have the following parts left over from the MAJIK / WAKONDA which should be retained in case of future removal of the KUDOS :-  
*MAJIK / WAKONDA control board*    *Sneaky slot blanking plate*  
*Control area mounting plate*        *Rubber switch membrane*  
*Six buttons*                                *Display legends label*  
 The Display window should be discarded as the mounting legs have been broken off.

**Configure for USA**

If the Kudos is to be used in the USA it must be configured differently. Fit 3 shorting links (supplied) to the two-pin connectors at locations:

LK4 (middle one)

LK2

LK1

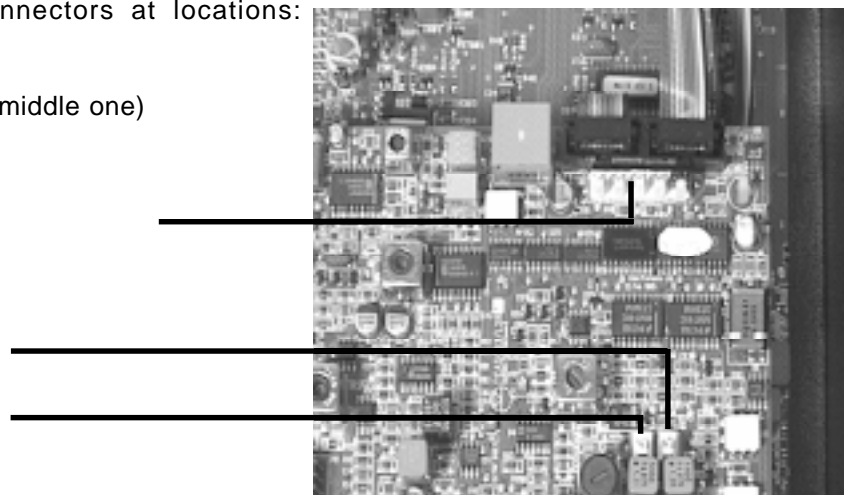


PHOTO 8



INSTALLING SNEAKY KNEKT MODULE IN THE MAJIK / WAKONDA

INSTALLING KNEKT SNEAKY DRIVERS / RECEIVERS

**Time required:**  
20 min, approx.

Before starting, you must ensure that you have a clean workbench and take the necessary anti-static precautions.

Always wear an anti-static wrist strap. Refer to the Service Manual (5.8) for full details of the necessary working practices.

Note: This procedure is the same for the MAJIK or the WAKONDA, so from here, the procedure will refer only to the MAJIK..



Always disconnect the MAJIK from everything, **ESPECIALLY MAINS**, before fitting a SNEAKY module.

**Parts required:**

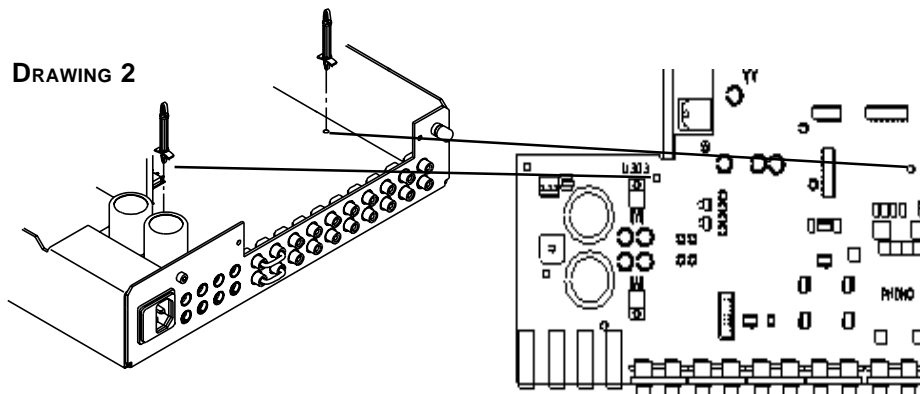
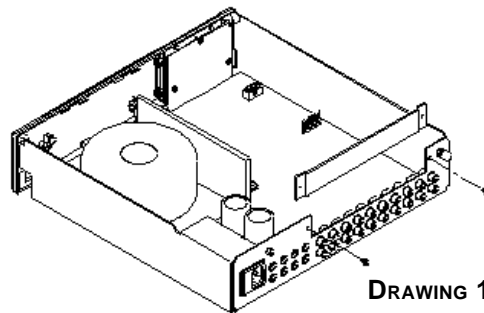
KNEKT SNEAKY MODULE (DRIVER OR RECEIVER)

**Tools required:**

No.1 Pozidrive screwdriver  
Small Pliers

**Procedure**

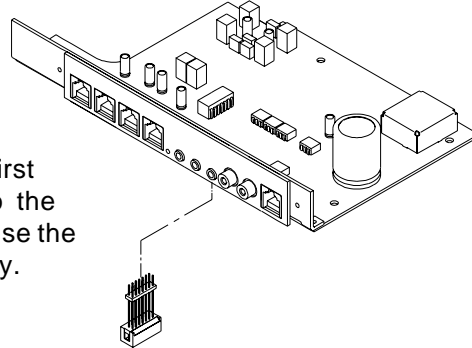
1. Unpack and check the contents of your KNEKT Sneaky (See contents list in box.)
2. On a clean bench, and with a protective pad to protect the fascia, turn the MAJIK upside down, remove the four screws and slide off the outer sleeve.
3. With the MAJIK sitting on its feet again, remove the two screws on the back-panel, and take off the Sneaky slot blanking plate.
4. Push-fit the two white plastic stand-offs into the holes in the MAJIK main PCB until they audibly 'click' and lock into position. (See drawing 2)



INSTALLING SNEAKY KNEKT MODULE IN THE MAJIK / WAKONDA

5. Push the extension connector into the holes on the underside of the KNEKT board.

It is important to fit this connector first to the KNEKT board and not to the MAJIK / WAKONDA board, otherwise the pins may be damaged on assembly.



6. Lower the Sneaky board on to the pillars.



7. Align the header connector and socket on the MAJIK/WAKONDA.

8. Press down the header connector and socket on the MAJIK/WAKONDA.



9. Press down the header on the SNEAKY board fully into the socket on the MAJIK/WAKONDA board.
10. Replace the two screws on to the SNEAKY slot and tighten in place.
11. Change configuration if required. (See Knektips.doc on RCU Instal Disc).
13. Replace the sleeve including the 4 screws.

**MAJIK:** For Majik-IL after sn 2966 and Majik-IP after sn 3897. Majiks prior to these serial number will require the main board to be changed. Contact Linn Service (or your Linn Distributor) for further details.

**WAKONDA:** All Wakonda pre-amplifiers can have the RCU fitted.

Before starting, you must ensure that you have a clean workbench and take the necessary anti-static precautions.



Always wear an anti-static wrist strap. Refer to the Service Manual (5.8) for full details of the necessary working practices.

Note: This procedure is the same for the MAJIK or the WAKONDA.

Always disconnect the MAJIK/WAKONDA from everything, **ESPECIALLY MAINS**, before fitting a RCU.

**Parts required:**

**RCU/s (and fitting kit)**

Unpack and check the contents of your RCU/S

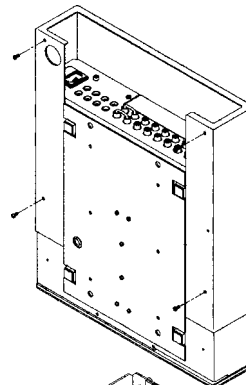
**Tools required:**

No.1 Pozidrive screwdriver

Small Pliers

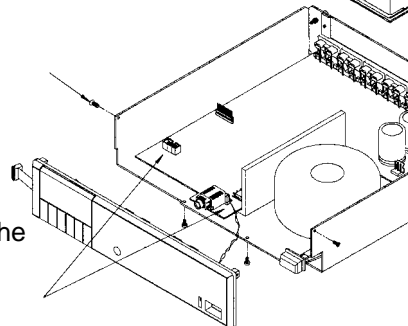
**PROCEDURE:**

1. On a clean bench, and with a protective pad to protect the facia, turn the MAJIK upside down, remove the four screws and slide off the outer sleeve. Stand the Majik on its facia. Remove the 4 screws and slip the case off.



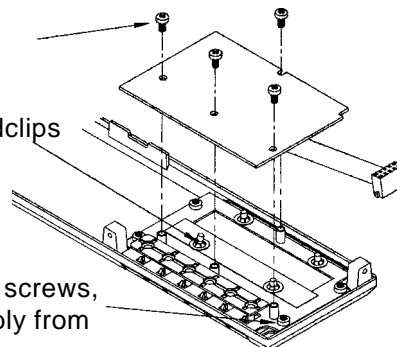
2. Remove the four facia securing screws.

Unplug the LED wire and the control board ribbon cable, then remove the facia.



3. With the facia face down, remove the 4 control board screws.

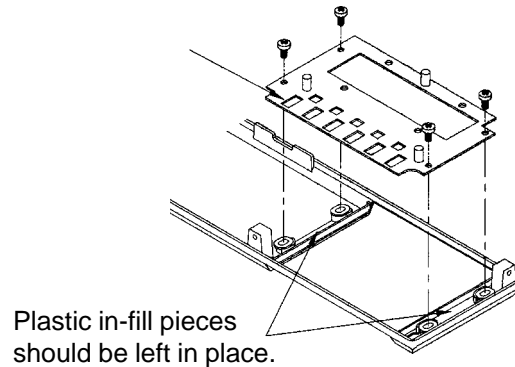
Break the four plastic securing legs and clips off the display window.



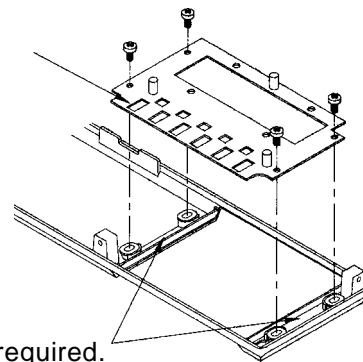
Remove the four interim plate retaining screws, then remove the window/button assembly from the facia.

INSTALLING THE KNEKT RCU/S CONTROL PANEL

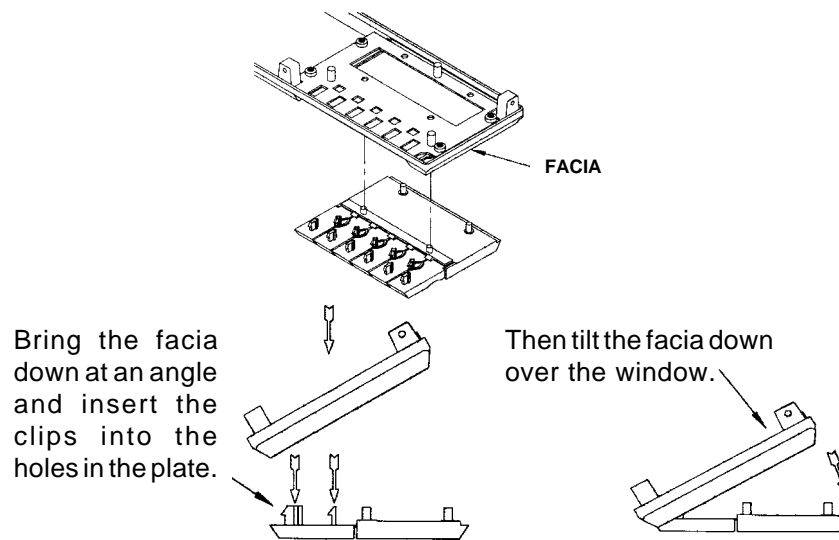
4. Fit the new interim plate into the facia, and secure with four screws.



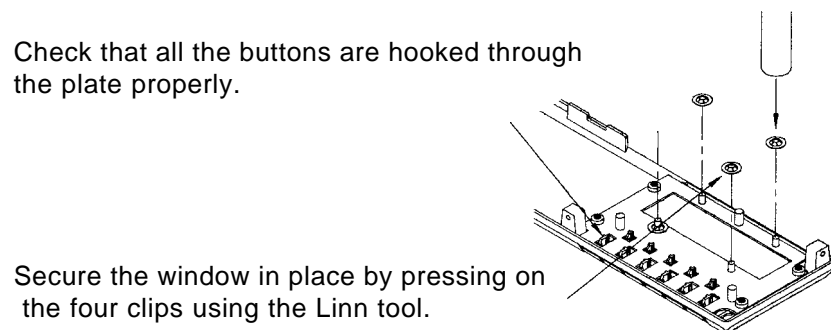
5. Assemble the buttons to the window.



6. Place the facia over the top with the method shown below:

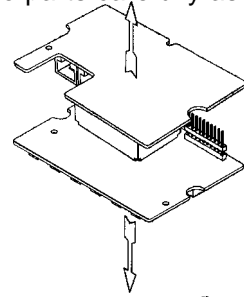


7. Check that all the buttons are hooked through the plate properly.

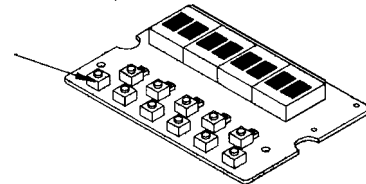


**REVISION 14: MAJIK and WAKONDA**  
**INSTALLING THE KNEKT RCU/S CONTROL PANEL**

8. Take the RCU module and separate the two parts carefully as shown.

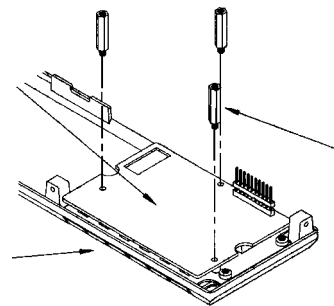


- 9.. Take the part of the RCU with the buttons.



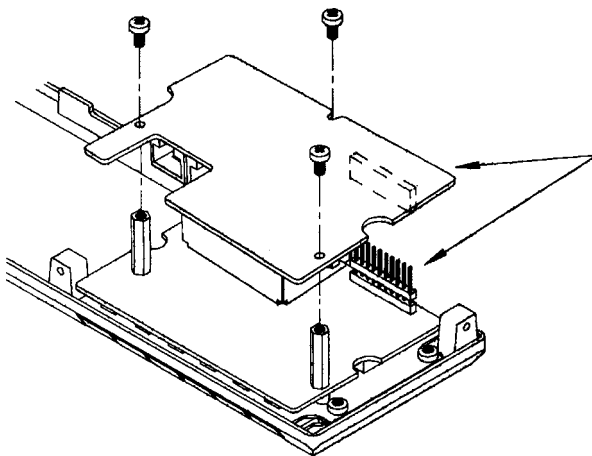
- 10.. Place it face down over the facia interim plate.

Check the operation of the buttons.



Secure in place using three stand-offs.

11. Fit the other half of the RCU onto the assembly.



Take care that the ten-pin plug and socket are aligned properly. Secure with three screws.

The re-assembly is the reverse of the strip, (step 2 & 1), except for the connections.

Connect the RCU to the Sneaky module as follows:

**Sneaky Receiver:**

1. Connect 'Main' on RCU to 'Internal RCU OUT' on Sneaky module.
2. Connect 'Ext' on RCU to 'Internal RCU Return' on Sneaky module.

**Sneaky Driver:**

Connect 'MAIN' on RCU to 'Internal RCU Out' on Sneaky Receiver

**Links:**

- Sneaky Receiver: Remove all 4 links at P5.  
 Sneaky Driver: No links changes required.

**MAJIK**

**GENERAL**

**DIMENSIONS**

Width: 320 mm  
Depth: 320 mm  
Height: 80 mm  
Weight: 4.9 Kg

**POWER CONSUMPTION**

320VA maximum, 25 Watts idling

**MAINS SUPPLY FUSE**

100V and 120V: T6.3A antisurge  
220V and 240V: T3.15A antisurge

**MAINS SUPPLY TOLERANCE**

Nominal +/- 10% with no performance change

**PREAMPLIFIER SPECIFICATION**

Sensitivities for 0.7V rms at line output, 1kHz into 2K Ohm load.

<b>INPUTS</b>	Sensitivity	Load
MM:(MAJIKP)	3.1mV rms	47K Ohms/68pF
MC:(MAJIKP)	250uV rms	150 Ohms/10nF
TUNER/CD/ AUX/TAPE	300mV rms	10K Ohms

**OUTPUTS**

Tape output: Equal to auxiliary input level (unity gain).  
Output impedance: 100 Ohm  
Minimum load: 5K Ohms.

Line output: Output impedance: 200 Ohm  
Minimum load on line outputs: 1K Ohm total

Headphone: Output impedance: < 8 Ohm  
Output level: same as preamp output level  
Output current limit: 60mA  
Load impedance: 8 to 2000 Ohm

**POWER AMPLIFIER SPECIFICATION**

Input impedance: 10 KOhms

Voltage gain: 28.5dB

Input sensitivity: 592mV rms for 16.2V rms output  
(33W into 8 Ohms)

Power output: 66W per channel into 4 Ohms  
33W per channel into 8 Ohms

**WAKONDA****GENERAL****DIMENSIONS**

Width: 320 mm  
 Depth: 320 mm  
 Height: 80 mm  
 Weight: 4.9 Kg

**POWER CONSUMPTION**

20 VA maximum, 25 Watts idling

**MAINS SUPPLY FUSE**

T500mA for all input voltages

**MAINS INPUT VOLTAGE**

90-264 Vac 50/60 Hz.

**PRE-AMPLIFIER SPECIFICATION**

Sensitivities for 0.7V rms at line output, 1kHz into 2K Ohm load.

<b>INPUTS</b>	<b>Sensitivity</b>	<b>Load</b>
MM: (MAJIKP)	3.1 mV rms	47K Ohms/68pF
MC: (MAJIKP)	250 uV rms	150 Ohms/10nF
TUNER/CD/ AUX/TAPE	300 mV rms	10K Ohms

**OUTPUTS**

Tape output: Equal to auxiliary input level (unity gain).  
 Output impedance: 100 Ohm  
 Minimum load: 5K Ohms.

Line output: Output impedance: 200 Ohm  
 Minimum load on line outputs: 1K Ohm total

Headphone: Output impedance: < 8 Ohm  
 Output level: 6 dB above line level input  
 Output current limit: 60 mA  
 Load impedance: 8 to 2000 Ohm

HISTORY

**MAJIK**

<b>Upgrade</b>	<b>Date</b>	<b>Serial No.</b>
<b>MAJIK-IL (Line level)</b>	<b>Introduced</b>	<b>Sept. 1993</b>
Modification to the headphones IC		
Improved protection	1410	Feb. 1994
Dropped the I in MAJIK on logo	2375	Oct. 1994
Added protection for monoliths , compatible with RCU control panel from this revision (L11)	2996	Jan. 1995
<b>MAJIK-IP (Phono)</b>	<b>Introduced</b>	<b>Oct. 1993</b>
Modification to the headphones IC		
Improved protection	1779	Feb. 1994
Dropped the I in MAJIK on logo	3358	Oct. 1994
Added protection for monoliths compatible with RCU control panel from this revision (L11)	3897	Jan. 1995

**WAKONDA-L (Line level)      Introduced Nov. 1994**

(All compatible with RCU control panel)

**WAKONDA-P (Phono)      Introduced Nov. 1994**

(All compatible with RCU control panel)