



A 2698 DAB+/FEM RDS Tuner



Instruction Manual

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INTRODUCTION

Congratulations on purchasing this tuner. It has been designed following an extensive research and development program that has culminated in what we regard as an exceptional hi-fi product. We trust that this system will give you hours of listening pleasure, and provide years of unparalleled performance. Please do not operate this product at high volume levels immediately after switching on.

FEATURES

- DAB+ Digital Tuner / decoder
- FM Radio Tuner
- Station Presets (10 for DAB+, 10 for FM)
- Remote Control with Mute button
- DLS and RDS enabled
- Autoscan tuning feature for both DAB+ and FM (Seek)
- Jog wheel for tuning and volume control

In The Box

- Tuner with power cord
- Remote Control with battery
- Instruction Manual
- 300Ω FM Antenna cable
- RCA audio cable 1.5m

IMPORTANT:

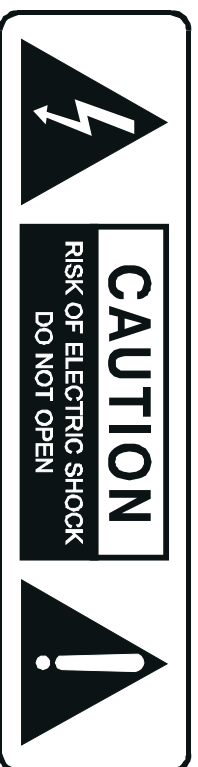
In this manual, wherever 'DAB' is found, it should be taken to refer to the internationally recognized DAB+ radio transmission standard protocol, which is an upgrade of the original DAB standard. DAB+ is the broadcasting technology being implemented in all of Australia's largest cities. The earliest standard transmission protocol designated for DAB is not broadcast in Australia.

SAFETY INSTRUCTIONS

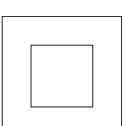
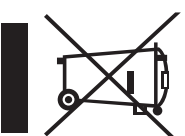
CAUTION: To reduce the risk of electric shock, do not remove cover.
NO USER-SERVICEABLE PARTS INSIDE, REFER ANY SERVICING TO QUALIFIED SERVICE PERSONNEL.

IMPORTANT SAFETY INSTRUCTIONS

- Read and keep these instructions available for future reference.
- For indoor use only.
- The unit must only be connected to a suitable mains power supply using the mains power lead provided. Protect the mains power cable from being damaged.
- To reduce the risk of fire or electrical shock, do not expose this unit to rain or the spillage of water or liquids of any kind. Do not place objects containing liquids on or near the apparatus.
- Unplug the unit from the wall socket during lightning storms and when it is not going to be used for a long period of time.
- Take care that foreign objects do not enter into the enclosure through any openings. If this should happen, refer to qualified service personnel before attempting to use.
- Ensure adequate ventilation - do not cover this unit with curtains, cloth mats etc.
- Do not install near any heat source, such as radiators, or other equipment that produces heat.



- Do not drop the unit. Clean the apparatus using a dry cloth to remove dust. The lightning flash symbol with the arrowhead within an equilateral triangle is intended to alert the user to the presence of non-insulated 'dangerous voltage' within the product's enclosure that may be sufficient to constitute a risk of electric shock to persons. The exclamation point within an equilateral triangle is intended to alert the user to important operating and maintenance instructions in the service literature relevant to this



appliance.

A symbol for class II (double insulation)

Information for the consumer

Disposal of your old product
Your product is designed and manufactured with high quality components, which can be recycled and reused.

When this crossed out wheely bin symbol is attached to a product it means the product is covered by the European directive 2002/96/EC.

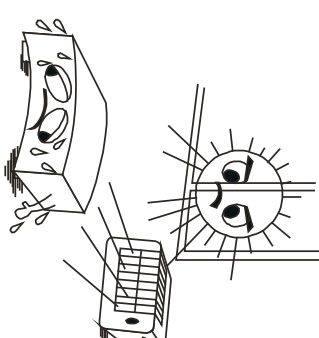
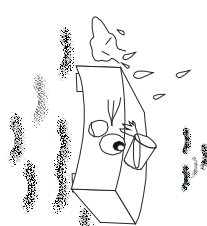
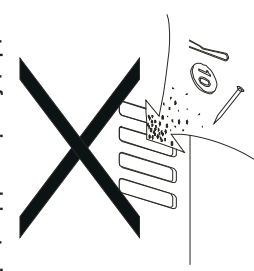
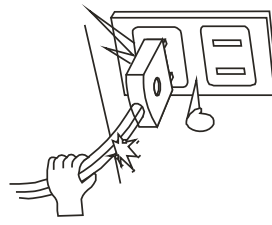
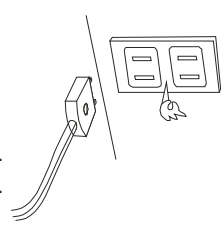

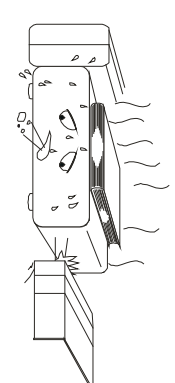
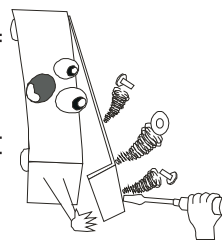
Please make yourself aware of the local collection system for electrical and electronic products.

Please act according to your local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.



This product complies with European low voltage (73/23/EEC) and electromagnetic compatibility (89/336/EEC) directives.

Notes On Use

<ul style="list-style-type: none"> Avoid high temperatures. Allow for sufficient heat dissipation when installed on a rack. 	<ul style="list-style-type: none"> Keep the set free from moisture, water and dust. 	<ul style="list-style-type: none"> Do not let foreign objects in the set. 
<ul style="list-style-type: none"> Handle the power cord carefully. Hold the plug when unplugging the cord. 	<ul style="list-style-type: none"> Unplug the power cord when not using the set for long periods of time. 	<ul style="list-style-type: none"> Do not let insecticides, benzene or thinner come in contact with the set. 
<ul style="list-style-type: none"> Do not obstruct the ventilation holes. <p>*(For sets with ventilation holes)</p> 	<ul style="list-style-type: none"> Never disassemble or modify the set in any way. 	

REMOTE CONTROL

BATTERY INSTALLATION

1. Remove the battery compartment cover.
2. Insert 1 "CR2025" lithium battery. Make sure that the battery is inserted with the positive "+" and negative "-" poles positioned correctly.
3. Close the cover until it clicks.

Note: If the distance required between the remote control unit and main unit decreases, the battery is exhausted. In this case, replace the battery



Figure 1 : Under side of remote control show battery compartment

Precautions concerning batteries

- Be sure to insert the batteries with correct positive + and negative - polarities.
- When the remote control unit is not to be used for a long time (more than a month), remove the batteries from the remote control unit to prevent them from leaking.
- If a leak occurs, wipe away the liquid inside the battery compartment and replace the batteries with new ones.
- Do not heat or disassemble batteries and never dispose of old batteries by throwing them in a fire.

REMOTE CONTROL - OPERATION

By using the provided remote control unit, the system can be controlled from your listening position. To use the remote control unit, point it at the remote sensor window at the front of the receiver. Use the remote control unit within a range of about seven metres and an angle of up to 30 degrees aiming at the remote sensor.

Notes:

- Even if the remote control unit is operated within the effective range, remote control operation may be impossible if there are obstacles between the unit and the remote control.
- If the remote control unit is operated near other appliances which generate infrared rays, or if other remote control devices using infrared rays are used near the unit, it may operate incorrectly.

Functions

1. **DAB/FM SELECTOR button:**
Press this to switch between DAB digital radio and FM analogue radio.
2. **MUTE button:**
Press once to activate MUTE function. Press again to cancel MUTE function.
3. **STANDBY button:**
The Standby button turns the unit on or to standby mode. When the unit is in standby mode the LCD backlight is off and the power LED is red.
4. **PRESET CHANNEL buttons:**
Press once to select preset station from 1 to 10, for both DAB+ and FM stations (10 presets for each band). Press and hold the numeric button to save a station frequency to that preset number.

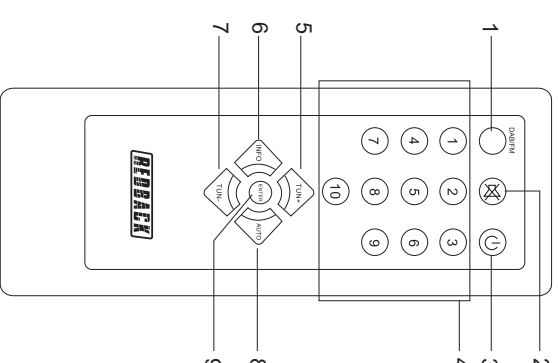


Figure 2: Remote Control

- 5/7. **TUN+ / TUN- buttons:**
 - **In DAB Mode:** Press TUN+ or TUN- to scroll through the station list i.e. the names of the stations.
 - **In FM Mode:** Press TUN+ or TUN- to scroll through the frequencies (in steps of 0.05MHz).

6. INFO button:

This changes what information is displayed on line two of the LCD display in both DAB+ and FM modes. See section on LCD Display Information on page 8 for more details.

Furthermore, by holding this button on the remote control for a few seconds while in DAB+ mode, the device will activate Manual Tuning for DAB+ stations (See Start Operations on page 8).

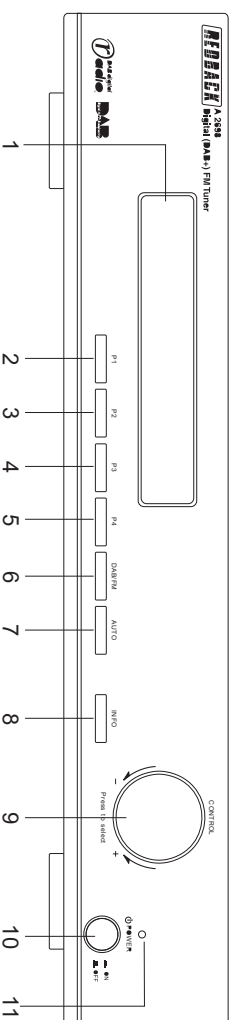
8. AUTO TUNE button:

- **In DAB mode:** Press once for quick scan mode. Hold for longer than two seconds to activate a full search across entire band(s).
- **In FM mode:** Press once to activate a 'seek' up through FM frequencies to find the next available station. Press and hold to activate a 'seek' down through FM frequencies to find the next available station.

9. ENTER button:

- **In DAB mode:** Confirm to select the station after scrolling through the station list. Press and hold for two seconds to switch 'AUTO ENTER' on/off. (Default is off). A message will appear on the screen to indicate the status of the AUTO ENTER function. [Bullets for text below]
 - **AUTO ENTER ON:** No need to press ENTER button or rotary CONTROL knob on front panel to confirm the station selected after scrolling.
 - **AUTO ENTER OFF:** Must press the ENTER button or the rotary CONTROL knob on front panel to confirm the station selected after scrolling.
- **In FM mode:** Press once to change audio mode. AUTO mode will automatically detect between stereo and mono broadcasts. Press again to activate mono mode, which will play all broadcasts in mono only.

FRONT PANEL



1. DISPLAY:

Indicates the tuning band (DAB+ / FM) and station name (or sometimes frequency for FM) on first line, and displays dynamic text (RDS or DLS) below on second line, which also displays other menu features.

2-5. Preset memory: numbered P1/P2/P3/P4.

Press a button once to select a preset station already stored in a memory.

Press and hold a button to save the tuned station's frequency to that preset number.

6. DAB/FM:

Press this to switch between DAB+ radio and FM radio bands.

7. AUTO:

In DAB mode: Press once for quick scan mode - secondary DAB+ stations ignored.

Press and hold for longer than two seconds for full scan mode - all DAB+ station captured and stored. Takes approximately one minute

In FM mode: Press once to activate a 'seek' up through FM frequencies to find the next available station.

Press and hold for longer than two seconds to activate a 'seek' down through FM frequencies to find the previous available station.

8. INFO button:

This changes what information is displayed on line two of the LCD display. See LCD Display Information section on page 8 for a full summary.

9. CONTROL:

- In DAB mode:** Turn the rotary CONTROL knob clockwise to scroll up through station list. Turn the knob anticlockwise to scroll down through station list. Press once to select a required station.

Press the knob and hold for two seconds to switch 'AUTO ENTER' on/off.

- AUTO ENTER on:** no need to press rotary CONTROL knob on front panel to confirm the station selected after scrolling.

- AUTO ENTER off:** must press rotary CONTROL knob on front panel to confirm the station selected after scrolling through the list of station names or frequencies (FM mode). Pressing the knob performs the same function as pressing ENTER button on the remote control.

- In FM mode:** Turn knob clock wise to scroll up through frequencies, turn anticlockwise to scroll down through frequencies. Stop on a frequency that has a strong signal and commence listening.

Press knob once to change the audio mode:

- AUTO:** this will automatically detect between stereo and mono broadcasts
- Press again to activate mono mode- this will play all broadcasts in mono only.

10. POWER BUTTON:

Switches the mains power on or off to internal components.

11. LED indicator:

Glowes blue when switched on, and red when in standby mode.

Press STANDBY button on remote control to switch on again.

OPERATIONS

Start Operation:

1. Press the standby button on the remote control to turn on the unit.
2. Select either DAB+ or FM by pressing the DAB/FM button.
3. In DAB mode you need to perform a full scan before you can begin listening to any stations. Press and hold the AUTO button. (When the A2698 is first turned on after connecting the power and the antenna cable, the unit will normally do a full scan for DAB+ stations as soon as the unit is switched on.)
This scan will take about a minute to complete.
4. To change the station, press the TUN+ or TUN- button on the remote control.
5. Manual tuning for DAB+ - Press and hold the INFO key on the remote control (pressing and holding the INFO button on the front panel will initiate a system reset - see next section) until 'Manual Tune' appears on line two of the display. Then press ENTER key and use TUN+ or TUN- key to select DAB stations by frequency and channel (5A to 13F). When a channel is highlighted, it will state the ensemble name (i.e. transmitter location). Press enter and the stations operating on that channel will be stored. Repeat for as many channels as are operating in your area. Some channels may not have any stations operating.

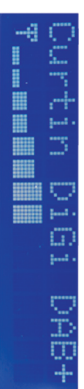
System Reset:

If you are having trouble with your unit or you have moved to another city or you wish to delete the station presets, perform a station reset using the following method:

1. Press and hold the INFO button on the front panel for two seconds.
2. Press the INFO button again. 'System Reset' will be displayed on the screen.
3. Press the ENTER button on the remote control or press the rotary CONTROL knob.
4. You will now have to rescan. In most cases the rescanning will commence automatically after reset. If not, press and hold AUTO button.

LCD Display Information:

The LCD display has three areas of information decoded from digital data that is broadcast by most stations. Dynamic Label Segment (DLS) is the name of the encoded text data system for DAB+, while Radio Data System (RDS) is the name of the system used with analogue FM radio. Both systems are described below.



Top Line centre shows the chosen preset memory number (eg. P04 for memory #4)

Top left corner of LCD continually shows the name of the station now playing for both DAB+ and FM, and when tuning manually displays the FM frequency which scrolls up or down.

Top right corner continually shows the mode - DAB+ or FM.

The bottom line shows user selectable information. Press the INFO button to toggle between:

DAB+ DLS Information:

1. Ensemble name: This tells you from which transmitter the signal comes.
2. Time and Date.
3. DLS - Dynamic Label Segment is information which may be transmitted by the station including: song title and artist, program information, news, sport and weather information, contact details (web, phone etc.).
4. Signal Strength - this is useful when trying to determine the best position for the unit and its antenna. This can also be available through FM RDS.
5. Program Type - describes the primary format or genre of a station i.e. Jazz, Rock, Talk, Classical etc.
6. Transfer rate – displayed on screen as a number measuring kb/s e.g. 64 kb/s
7. Channel frequency – displayed as a specific frequency in MHz. It may also show the word 'Stereo'

Commonly used FM RDS information codes:

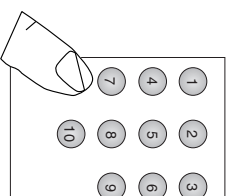
1. **PTY** - Program Type (i.e. Station format or music genre);
2. **PS** - Program Service = Station ID or frequency;
3. **CT** - Clock Time and often date as well.
4. **RT** - Radio Text = Song title, Artist, Slogan, (scrolling) etc.
5. **PI** - Program Identity = either station call sign or frequency.

Note:

If the radio station in question has not activated and/or is not broadcasting DLS or RDS data, then the LCD will show nothing, no scrolling text etc. or it may just show the frequency or an error 'N/A' (Not Available) message.

Presets:

The unit has 10 preset memories which can store 10 DAB+ and 10 FM stations of your choice with one-button recall operation. Please note that if you decide to store a secondary level DAB+ station, there is a possibility that this station will only be broadcast periodically. This means that when you recall the designated preset at some time in the future, either using the number pad on the remote control or the buttons on the front panel, it may no longer have any program or music content. It will then be necessary to return to an alternative station and save it to that memory.



Station	P04	DAB
Preset	4	Saved

To store a preset:

1. Tune the unit to the station required using either the remote control or the rotary control knob on the front panel.
2. Decide which preset you want to store this station on (for memories numbered five to 10, you must use the remote control number pad)
3. Hold down this preset for a period of a few seconds.
4. LCD display will read 'Preset X Saved', where 'X' is the number you pressed on remote control or front panel (for presets 1 to 4 only). When the preset saved message disappears, the preset memory number will remain displayed on the top line of the LCD e.g. 'P04' is displayed for a station present to memory 4. (See screen example above)

If a preset does not have a station allocated to it, the LCD will read 'Preset X Free' if this button is pressed.

TROUBLE SHOOTING:

Problem	Possible Solution
<p>A. No sound output from the unit.</p>	<ol style="list-style-type: none"> 1. Ensure that connection leads to the amplifier are correct. 2. Check that the speakers are connected to the amplifier. 3. See that the power of the unit or connected amplifier is turned on. 4. Ensure that the unit has been able to locate the DAB+ stations.
<p>B. Display has gone blank or says 'Signal N/A' or 'Service N/A'.</p>	<ol style="list-style-type: none"> 1. Check that antenna is connected. 2. Ensure that DAB+ coverage exists in your area. 3. This may occur if a broadcaster changes the label of a service or removes a label whilst you are listening to it. The unit will try to return to this station, or alternatively follow the procedure for auto tune. <p>Note: DAB+ is available or soon to be available in Australia's largest cities.</p>
<p>C. Cannot access secondary services.</p>	<p>At the time of publishing this manual, not many secondary services are available, but this will increase as more DAB+ stations start broadcasting. If a secondary service station is available, the secondary indicator will be displayed next to the station name.</p>

Problem	Possible Solution
<p>D. Remote control does not work.</p>	<ol style="list-style-type: none"> 1. Check that the battery is inserted correctly. 2. Replace the remote control battery if it is old and degraded in responsiveness. 3. Turn the unit off then back on at the power point.
<p>E. DAB+ reception is poor. Cannot find any stations.</p>	<ol style="list-style-type: none"> 1. In a country that uses DAB+, make sure you first perform a full scan, not quick scan. 2. Make sure there is coverage in your area.
<p>F. Burbling sound on some stations.</p>	<p>DAB+ like other digital media is good at producing quality audio from a low level signal, however if this signal level is too low a burbling sound can sometimes be heard. To reduce this effect, try repositioning your antenna to gain maximum signal strength. Or connect the unit to an external TV antenna. Think of the burbling sound with DAB+ as being similar to the audible hiss or static heard when an analogue FM signal is weak and unclear.</p>
<p>G. A station or service can not be received when a preset button is pressed.</p>	<ol style="list-style-type: none"> 1. The station or service has not been preset. 2. Another station or service is preset. Preset the station or service again.

SPECIFICATIONS

Digital (DAB+) and FM Tuner

Frequency range:.....DAB+ BAND III: 174.928 - 239.200MHz
(Ch 5A to 13F)

Quick Scan range:188.928 - 232.496MHz (Ch 7A to 13B)

FM:.....87.5-108MHz

Audio output level:.....800mV (RMS)

Power supply:AC 240V 50Hz

Max power consumption:.....12W

Signal to noise ration:>80dB

Frequency response:20Hz - 20KHz

Channel separation:>70dB

RF Sensitivity:.....-97dBm

Output:.....RCA jacks at line level

Antenna:.....F-type connector 50Ω suiting 300Ω wire
(supplied) or 75Ω coaxial cable for TV
antenna
(recommended for ideal reception)

LCD:.....Two lines, 16 characters each line,
blue backlight
Internal LCD contrast adjustment
(Technicians only)

NOTE: Specifications and design features are subject to modification without notice

Altronic Distributors warrants this product for one year from the date of purchase from Altronics or its resellers to the consumer. If this item is part of an installation, please contact the installer or supplier for your warranty.

During the warranty period, we undertake to repair or replace your product at no charge if found to be defective due to a manufacturing fault. The warranty excludes damage by misuse or incorrect installation (i.e. failure to install and operate device according to specifications in the supplied instruction manual), neglect, shipping accident, or no fault found, nor by use in a way or manner not intended by the supplier.

For repair or service please contact your PLACE OF PURCHASE.

If this item was **purchased directly from Altronics** please make a warranty claim by:

1. FOR MAIL ORDER CUSTOMERS (includes school and trade orders),
 - a) Ringing us on 1300 797 007 and quoting your tax invoice number.
 - b) Upon contacting Altronics, we will issue an R.A. (Return Authorisation). As Altronics have a number of service agents throughout Australia, a copy of the R.A. will be emailed, faxed or mailed to you with full instructions of how and where to send the goods. The freight for shipping goods back to Altronics for all repairs is at the customers expense.
 - c) A copy of the R.A. form, (or at the very minimum, the R.A. number) must accompany the goods to effect the repair.
 - d) Altronics will pay the return freight to the customer where the warranty claim has been accepted.
 - e) Please quote the R.A. number in any correspondence to us.
2. FOR OVER THE COUNTER PURCHASES: to make a warranty claim, please return the goods to us in any of our stores, with a copy of your proof of purchase (tax invoice).
 - a) Upon leaving the goods at one of our stores, an R.A. number will be issued to you.
 - b) Once repaired, you will be contacted, advising that the goods are ready to be collected from the store.

It is at Altronics discretion as to whether the goods will be repaired or replaced (whilst under warranty); and as to whether identical goods will be used to replace the item due to changes of models / products.

Note: Under no circumstances should you attempt to repair the device yourself or via a non-authorised Altronics service centre, as this will invalidate the warranty!

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

NOT FIELD SERVICEABLE.

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