



A 2702A AM/FM RDS TUNER



Operating Instructions

INTRODUCTION:

This radio tuner is a 1RU rack-mountable device with a sleek design and a symmetrical layout of buttons across the front panel. The stylish two-line LCD screen displays essential information in both the AM and FM modes. This receiver uses precision Phase Lock Loop (PLL) synthesized digital tuning technology, and is sensitive to the weakest signals when connected to appropriate antennas.

IN THE BOX:

Radio Tuner 1RU	Remote Control
IEC Power Cord	AM Loop Antenna
RCA stereo cable 1.5m	Instruction Manual (Consult place of purchase if missing))



FRONT PANEL FUNCTIONS:

1. POWER – Master ON / OFF Switch.
2. 1~10/0 – Numeric keys for frequency tuning and memory storage locations.
3. DOWN – Tune frequency in decreasing numerical value.
4. UP – Tune frequency in increasing numerical value.
5. BAND – Switch between AM and FM bands.
6. DIRECT – Tune to a specific station using the numeric keys to enter the frequency.
7. SLEEP – Sets the duration for the playback timer that counts down the minutes to power standby.
8. ME DOWN – Scroll down through the Memory presets.
9. ME UP – Scroll up through the Memory presets.
10. MEMORY – This button can store a station frequency into a Memory preset number.
11. ASM – Auto Search Memory. Automatically scans the entire band (AM or FM) and stores the strongest frequencies found in memory.
12. MO/ST – Mono / Stereo - change between mono and stereo mode for FM radio tuning.



REAR PANEL INPUT / OUTPUT:

1. AM Antenna – Insert wires from AM loop to facilitate fine tuning on AM frequencies.
2. FM Antenna – Insert PAL-type connector from antenna wire to improve FM reception.
3. L & R – RCA output sockets for stereo line-level audio connection to external amplifier.
4. Power – Socket for approved IEC 240Va.c. mains power cord.



REMOTE CONTROL FUNCTIONS:

1. 1~10/0 – Numeric keys for frequency tuning and memory storage locations.
2. DOWN – Tune frequency in decreasing numerical value.
3. UP – Tune frequency in increasing numerical value.
4. BAND – Switch between AM and FM bands.
5. DIRECT – Tune to a specific station using the numeric keys to enter the frequency.
6. SLEEP – Sets the duration for the playback timer that counts down the minutes to power standby.
7. ME DOWN – Scroll down through the Memory presets.
8. ME UP – Scroll up through the Memory presets.
9. MEMORY – This button can store a station frequency into a Memory preset number.
10. ASM – Auto Search Memory. Automatically scans the entire band (AM or FM) and stores the strongest frequencies found in memory.
11. MO/ST – Mono / Stereo - change between mono and stereo mode for FM radio tuning.
12. MUTE – Press to turn audio off and on. Volume level is retained. 'MUTE' flashes on LCD.
13. +10/- – Use this button to activate FM stations in memory locations higher than 10.
14. RDS – Changes the RDS (Radio Data System) code information shown on the LCD for FM stations that transmit RDS.

OPERATION:

TUNING A FREQUENCY: MANUAL TUNING

Use the UP or DOWN buttons on the front panel or the remote control to manually tune to a desired frequency. Every time the UP or DOWN button is pressed once, the radio frequency is changed by 0.05MHz steps for FM and 9kHz steps for AM.

When either the UP or DOWN button is pressed and held for two seconds, the automatic tuning starts. The scan will stop as soon as it locks onto a viable station frequency.

TUNING A FREQUENCY: DIRECT TUNING

The quickest way to tune to a known station is to enter the frequency numbers directly. This can be achieved using the DIRECT button on the front panel or the remote control. Press the DIRECT button once. If you fail to enter any numbers within three seconds, the function will deactivate and the tuner will retain its current channel status. Use the number buttons to enter a station frequency to fill the blank spaces on the LCD.

There are five blank spaces for FM and four blank spaces for AM tuning. FM frequencies below 100.10MHz have only four places and AM frequencies below 1008 kHz have only three places, and the direct tuning function is programmed to account for this. Press DIRECT again to confirm the frequency entered. The tuner will jump directly to this exact position on the dial in either the AM or FM bands. (E.G. Press DIRECT, enter 9+3+7+0 for frequency 93.70 MHz station, and press DIRECT again.)

If the user enters fewer numbers than required, then when you press DIRECT, it will not accept it. If the input frequency is beyond the tuner's range, the LCD will display the error message 'ERROR'.

AUTO SEARCH MEMORY (ASM):

For those looking for a quick and easy solution to capture all the readily available stations in a region, use the ASM function. Press the ASM button on the front panel or the remote control for three seconds. The tuner will search the frequencies across the selected band, and automatically store the strongest received signals into the preset memories.

The ASM function scans from the lowest to highest frequencies in the band, and stores the transmitting frequencies that it finds into the device's memories in sequential ascending order. I.E. the lowest frequency will be stored in Memory 1, the next lowest will be stored in Memory 2 and so on. The scan and store function will replace previously stored frequencies and overwrite the channel memories so far as is needed to capture and save the stations the tuner can detect. (E.G. If ASM captures 20 FM channels, it will overwrite and replace the memories for stored CH01 – 20, and leave CH21 – 30 untouched.)

After the ASM function has completed its task, it is still possible to replace a stored frequency in a memory with a new frequency. See below for instructions on using the MEMORY function to save frequencies.

STORING A FREQUENCY IN MEMORY:

The FM band has 30 preset memories assigned to it. The AM band has 10 preset memories. These memory locations are shown on the far right side of the tuner LCD as 'CH01', 'CH02'... 'CH30'.

To save a favourite station frequency, and thereby make it easy to recall at a later time, use the MEMORY function on the front panel or the remote control to store the station frequency to any of the preset memories. Here are the steps...

Tune to a preferred station frequency on either AM or FM band.

Press the MEMORY button to allow the frequency to be recorded. The 'CH01' will flash in the memory mode until channel memory number is entered. You have five seconds within which to enter two numbers for your chosen preset memory location, into which your tuned station frequency will be saved.

Press the number key on the front panel or on the remote control to select the channel number to which the station frequency will be allocated – 01-30 for FM and 01-10 for AM. You can also use the ME UP button to select a channel number to be used to store a frequency.

Press MEMORY button again to store the frequency to that channel memory preset. Once stored, it can be recalled whenever you desire to listen again to that station, just by pressing that number button.

STORING OR ACCESSING MEMORIES ABOVE NUMBER 10:

To access FM preset memories above 10, use the ME UP button on the front panel or use the +10/- button on the remote control. When you are on a preset station, pressing the +10/- button will add 10 to that preset memory number and transport the tuner to the frequency of a new memory that is 10 channels up. Press the button again and jump up another 10 memory locations. (E.G. If preset memory is showing 'CH04', press +10/- button once to get to 'CH14', and again to jump to 'CH24', and again to get to 'CH30' – the last FM preset memory.)

Furthermore, pressing the +10/- button on the remote control for two seconds will allow the user to input a channel number between 'CH01' and 'CH30'. Press and hold +10/- button for two seconds and the 'CH_ _' will appear on the right side of the LCD. Enter the numbers for the two blank spaces and the tuner will immediately transfer to that memory preset number. (E.G. +10/- > 'CH_ _' > 2 + 3 = Preset Memory 23). If a user activates the +10/- button and does not enter two numbers within five seconds, it will deactivate the function and maintain the existing channel status.

When storing an FM frequency in a channel memory location between CH11 and CH30, follow the +10/- procedures to select the channel number you want for that station.

SLEEP FUNCTION:

Press the SLEEP button on either the front panel or the remote control, and the sleep playback timer will activate and show 'SLEEP 90 MIN' on the top line of the LCD. The sleep timer begins from 90 minutes, and with each press of the SLEEP button, decreases the timer in 10 minute steps, with 10 minutes being the shortest sleep timer period.

The sleep time will flash for five seconds and then select the last time that was displayed and start counting down to zero with the radio playing the tuned frequency. The unit will automatically power off to standby once the countdown timer reaches zero.

When active, the remaining SLEEP time will be displayed on the top line of the LCD, and it will only be removed momentarily by pressing the MO-ST button. The sleep function is cleared if the SLEEP button is pressed when the sleep timer is showing the minutes remaining, without flashing, on the top line of the LCD. Once the unit is off, press SLEEP again to power the unit back up. 'SLEEP 90 MIN' will again appear on the LCD, and can be deactivated as described above.

NOTE: AM radio is only broadcast in mono in Australia. Some low-power FM stations, especially those with frequencies 88 MHz and below, are also only broadcasting in mono. You cannot force a mono-only transmission to be received in stereo. If the FM stereo signal is weak, the unit automatically enters mono mode and MONO is displayed on screen. This tuner does not have a signal strength indicator light or bar on the LCD.

RDS INFORMATION: These are the codes that are decoded by the RDS function in this tuner: PS (Program Station), PTY (Program Type), RT (Radio Text), CT (Clock Time) functions. If an FM station is not transmitting RDS codes, then when you press the RDS button on the remote control, the bottom line of the LCD will show 'PS NONE', 'PTY NONE', 'RT NONE', and 'CT NONE'.

SPECIFICATIONS

General:

Phase Lock Loop (PLL) synthesized digital tuning.

Preset memories:AM = 10, FM = 30.

Input:FM 75 Ω unbalanced antenna terminals.
AM loop antenna terminals.

Output:RCA stereo audio.

Screen:Liquid Crystal Display (LCD), two lines of 16 characters each, backlit.

Power supply:230Va.c.

Power consumption:50VA

Weight:2.35kg

Dimension:482mm X 44mm X 185mm (1 Rack unit height)

Electrical performance:

FM section – only one FM band

Frequency range:87.5–108.0MHz

Sensitivity:10 μ v emf

AM Suppression:38dB

Adjacent Channel Selectivity:50dB

Image Rejection:45dB

Audio Stereo Separation:35dB

Audio Output Voltage:400mV rms

Audio(S+N)/N:55dB

Audio THD:1%

FM step Frequency:50kHz

AM section – only one AM band

Sensitivity:52 μ V emf

Frequency range:522–1710kHz

AM step Frequency:9kHz

REDBACK® A 2702A AM/FM RDS Tuner

This product for 12 months from date of purchase from its resellers to the consumer. If this item is part of an installation or another product, 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.

It is at manufacturer 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 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.