

User Guide

This replacement board is designed to replace the original Rowe R80s to R83 memory unit. It receives selections from the selector, stores the selections, scans the magazine to the requested record, starts transfer, and controls the display feedback.

What The Board Does

- Stores selections in a queue.
- Controls magazine scanning to the selected record.
- Starts the record transfer cycle.
- Selects the correct record side using the toggle shift output.
- Shows the current selection on the selector display.
- Supports 20 minute, 40 minute, and continuous autoplay switch settings.

Normal Operation

- After power-up, the board waits briefly for the jukebox power supply to settle.
- If a record is already loaded, the board attempts to recover it back to the magazine.
- On startup only, the magazine does a park scan to the normal 27 or 77 position.
- When selections are made, the board stores them and plays them in order.
- When the queue becomes empty, the board completes transfer-back and stops without doing an extra park scan.

Autoplay

- 20 minute autoplay queues a random A-side selection after roughly 20 minutes of idle time.
- 40 minute autoplay queues a random A-side selection after roughly 40 minutes of idle time.
- Continuous autoplay queues the next random A-side selection as soon as the machine is idle.

Fault Code Display

If the board detects a fault, it flashes a three-digit number on the selector display. The first digit is shown as 1 because the original R-82 display protocol does not allow this board to freely choose any first digit. The last two digits are the real fault code.

- Fault code 10 is shown as flashing 110.
- Fault code 23 is shown as flashing 123.
- The code flashes on and off about once every half second.
- Stop faults keep flashing until the jukebox or board is reset.
- Warning faults flash for about 20 seconds every couple of minutes.

If unsure of any of the terms used in the below chart, it is highly recommended that you purchase the correct manual for your jukebox which explains many of the terms referred to in the chart.

Fault Codes

Display	Code	Type	Meaning	Likely causes and what to look for
101	01	Warning	Selector data started but did not complete cleanly.	Electrical noise, loose selector clock/data wiring, poor connector contact, selector logic fault.
102	02	Warning	Selector sent an invalid selection code several times.	Electrical noise, data collision, selector logic issue, bad clock/data wiring.
103	03	Warning	Display or selector bus stayed busy too often.	Selector holding the clock line active, wiring fault, display bus noise, connector problem.
110	10	Stop	Movement was expected, but no encoder feedback was seen for about 5 seconds.	Look for magazine/carriage movement while the board is trying to scan. If nothing moves, suspect the mechanism control unit, magazine motor, belt, detent, or wiring. If the magazine moves but the code still appears, suspect the encoder plug, encoder wiring, encoder board.
111	11	Stop	Encoder readings were repeatedly invalid.	Dirty encoder disc, misaligned encoder wipers, damaged encoder board, poor encoder connector contact.
112	12	Stop	Encoder feedback is present, but the magazine did not make sensible progress for about 10 seconds.	Encoder feedback is present, but the position is not changing sensibly. If the magazine/carriage is not moving, suspect mechanism control, motor, belt, detent, or a jam. If it is moving, suspect encoder gear slip, dirty encoder, bad wipers, or encoder alignment.

113	13	Stop	Requested record position was not found after two full scans.	Watch the magazine/carriage during scan. If it makes two full scans and misses the target, suspect encoder alignment, encoder slip, dirty encoder or bad wipers.
120	20	Stop	Transfer did not start within about 5 seconds.	Watch the transfer arm when a selection starts. If it does not move at all, suspect transfer motor, mechanism control unit, start-transfer wiring, or cam switch 5. If it tries to move then stops, look for a jam or stiff transfer mechanism.
121	21	Stop	Transfer or play cycle did not complete in the expected time.	Watch the transfer arm through play and return. If it stalls or does not return, suspect a stuck transfer mechanism, cam switch adjustment, record return problem, tone arm/cutoff issue, or mechanism control fault. If motion looks normal, check cam switch 5 and wiring.
122	22	Stop	Transfer-back should have caused magazine movement, but no encoder cycle was seen.	After transfer-back, watch for magazine/carriage movement. If there is no movement, suspect mechanism control unit, magazine motor, detent, belt, or wiring. If it moves but still faults, suspect encoder wiring or missing encoder cycle feedback.
123	23	Stop	Startup recovery failed while trying to return a loaded record.	At power-up with a record loaded, watch the transfer arm and magazine. No transfer arm movement points toward transfer motor, mechanism control unit, cam switch, or wiring.
130	30	Warning	More than one autoplay switch position is active.	Shorted switch input. Board fault.
131	31	Warning	Autoplay timing clock is missing or not running reliably.	32 kHz clock fault, oscillator wiring fault, timing input fault. Board Fault.

What To Do If A Stop Fault Appears

- Write down the flashing number before switching the jukebox off.
- Check for a jammed record, stuck transfer arm, stopped magazine, or loose plug.
- Reset the jukebox only after checking that the mechanism is free to move.
- If the same code returns, investigate the likely causes shown in the table.
- Make sure all plugs into all 3 main modules (Memory Unit, Mech Control Unit, Selector Logic Unit) are fully seated.

- Check that the magazine belt is present and not slipping.
- For encoder faults, inspect and clean the encoder disc and wiper contacts. (Follow instructions for doing this from the original manual. Do not attempt this if you have no reference for how to do it).
- For transfer faults, check cam switch 5 and the transfer mechanism before replacing electronics.

If unsure consult an expert.

Resetting After A Fault

Stop faults remain on the display until power is removed or the unit is reset. Before resetting, make sure the mechanism is not jammed. Resetting without clearing a mechanical jam may cause the same fault to return immediately.

Any unit predating this documentation may not have all the functions of the board described in this document, including fault code display. Boards can be returned for software update to enable this at the cost of the customer. The original Rowe Ami unit has no fault code indication whatsoever and can not be adjusted to do so.