

## SECTION 1 - DESCRIPTION

### INTRODUCTION

The Rowe/AMI Model R81 is a 200 selection Stereo Phonograph featuring solid state circuitry for unparalleled reliability and performance. Credit is registered by the versatile solid state credit computer which enables price changes at the flick of a switch. The selector is a mini-module mounted on the rear wall of the cabinet. A solid state selection memory module is mounted on the record changer mechanism frame. Record changer operation is controlled by a third plug-in module on the mechanism.

Long life light emitting diodes on the mechanism control, memory and main power supply modules indicate the presence of voltage and signal information. The three digit selection code is displayed on a modern electronic annunciator which confirms selections as well as indicating the selection playing.

In addition to technical innovation, the R81 retains features that have made Rowe/AMI the leader in sound. The highly reliable record changer mechanism is greatly simplified requiring lubrication only once every five years.

The stereo sound system starts with a diamond stylus and ends with the biggest sound available. The 64-watt (RMS) solid state amplifier incorporates automatic volume control, automatic record quality control, and automatic loudness contour. Two speakers in a duct-tuned bass reflex enclosure and two wide range speakers in the upper part of the cabinet project sound over a large area.

A quad sound system using four separate channels of amplification and an SQ\* logic decoder is available as a factory-installed option - a Rowe/AMI exclusive. Included in an array of optional accessories is a 120 watt (RMS) solid state stereo amplifier for locations with many extension speaker requirements.

\*Trademark of CBS, Inc.

### ACCESSORY EQUIPMENT

Phonograph accessory equipment is listed in the following table. All accessory equipment and kits include mounting parts and installation instructions. These accessories are available from your Rowe/AMI Distributor. Contact Rowe Customer Services for information on special accessories and hookups. New accessories will be announced as they become available in service bulletins issued by Rowe International, Inc. These service bulletins are mailed to all Rowe Distributors. Blank space has been left on page 1-2 for writing in new accessories.

**TABLE 1-1. ACCESSORY EQUIPMENT**

PART NO.	DESCRIPTION	FUNCTION
605-07406	Optional 120-watt (RMS) Stereo Amplifier and Output Transformer Package.	Used in locations with heavy extension speaker requirements. Plugs into phono harness. Delivers 120W (RMS) power. Includes matching output transformer package.
203-66808	Dollar Bill Acceptor Kit. (Includes Bill Stacker)	Accepts valid one dollar bills in U.S. currency and establishes one dollar's worth of credit in the phonograph credit computer. Use with solid state selector only.
204-66819	Model MBB Digital Print-Out Money Meter.	Solid state device records total receipts on ticket inserted at each service call. The surest security device available. Plug-in installation.
401-06355	Model MCA Money Counter	Records total cash input. Does not have print-out feature.
301-65327	Amplifier Overload Tester	Warns installer if extension speaker hook-up causes an overload.
202-15303	Monitor Alarm Kit	Makes an incredibly loud noise if an attempt is made to pry open or smash in cash box door. Consists of a horn operated by a replaceable Freon aerosol can. Because the alarm is not electrically operated and is not accessible without a key, it cannot be disarmed.
204-66681	Automix Kit	Enables phonograph to play 33 and 45 RPM records interchangeably.

TABLE 1-1. ACCESSORY EQUIPMENT (Continued)

PART NO.	DESCRIPTION	FUNCTION
201-15350	Phono Paging System Amplifier Accessory Kit	New improved Paging System, not affected by A.V.C. All plug-in unit, complete with microphone and 50 feet of microphone cable. Receptacle provided for additional microphone, not supplied. Allows use of phono sound system for paging.
202-15350	Background Music Adaptor Amplifier Accessory Kit	Allows Customusic Program to play through phonograph speaker system. Automatically cuts off and advances to next selection when record is selected at phonograph. Includes provisions for one microphone, not supplied.
601-03441	WRD Wallethe Wallbox	Remote control unit for solid state phonograph. Has self-contained credit and pricing and selection system. Takes nickels, dimes, quarters and half-dollars. No stepper or code converter needed.
401-06891	Auxilliary Power Supply	Permits solid state phono operation with WRD Wallbox.
205-15336	Code Converter Kit	Permits solid state phono operation with WRA and WRC wallboxes.
401-05627	Auxiliary Power Supply	Powers up to 6 Rowe/AMI WRA or WRC Wallethe wallboxes. Low voltage supply separate from that required for the phonograph.
401-05678	Secondary Power Supply	Powers each additional six or more Rowe/AMI WRA or WRC Wallethe wallboxes.
SPEC 5054	12-Conductor Cable	For connecting Wallethe WRA or WRC to phonograph.
SPEC 5076	9-Conductor Cable	For connecting WRD Wallethe to phonograph.
601-02187	Extension Speaker (Model EX-201)	12-watt, compact "bookshelf" speaker system contains one 8-inch full range speaker.
601-02188	Extension Speaker (Model EX-301)	25-watt, two channel system includes 3-1/2 inch tweeter and 10-inch bass speaker.
601-02105	Extension Speaker (Model EX-401)	25-watt, high efficiency, two-channel sytem includes horn and cone type speakers.
301-06322	Remote Volume and Cancel Control	Remote stereo volume control and cancel button.
205-08199	Remote Volume and Cancel Control Cable	For connecting remote volume control to Phonograph. 4-conductor cable, 50' length.
203-17666	Quad Amplifier Kit	Provides 4 channel quad sound. Includes matching transformer packages.
201-66867	Dual Channel Plug	Parallels two channels for monaural input. Separates phono and extension speakers. Requires 5-wire preamp.
308-06322	Dual Channel Remote Volume Control	For use with 201-66867 dual channel plug. Controls volume of each channel separately. Requires 5-wire preamp.

## OPTIONAL TEST EQUIPMENT

Rowe International, Inc. has arranged with Kurz Kasch, Inc. to provide diagnostic circuit boards to check phonograph components. These circuit boards must be used together with the Kurz Kasch Model TF-650-5A Test Fixture. The following circuit boards are available from Kurz Kasch, Inc., Electronics Division, 1501 Webster Street, Dayton, Ohio 45404. Please order as follows:

<u>BOARD PART NO.</u>	<u>COMPONENT TESTED</u>
193A	Credit Computer
203	Memory Module
204	Selector Logic Module

## OPERATION

The phonograph incorporates a three digit numerical identification system (100 through 299) instead of letters and numbers. Selections beginning with the number 1 are left side selections, while a selection beginning with a 2 designation is on the right side of the record. For example: selection 200 is on the flip side of selection 100.

Before making a selection, the three digit selection number appears on the annunciator display as the record playing. Pressing the first digit of a selection erases the display and lights the "Your Selection" lamp. When the selection is entered and has been displayed for five seconds, the display switches back to the selection playing.

Using the selection keyboard, it is possible to choose a first number for which there is no selection; for example, the number 3. In this instance, the "Reset and Reselect" lamp flashes, indicating that this selection cannot be made. Pressing the RESET button on the selector keyboard resets the selection circuit to receive the correct selection.

**ALLOW THE MECHANISM TO SCAN OUT ON INITIAL START BEFORE MAKING A SELECTION**

The selector logic module incorporates a free play switch (TEST-NORM) and provisions for setting selections 60 through 99 for premium pricing.

The toggle shifter coil is energized for right side play only; left side shift is provided by a spring return mechanism. The mechanism rotates 360 degrees to scan for a selection and will stop at selection 27 or 77, whichever is closer after the scan is complete.

The optional dollar bill acceptor operates directly from 120 vac and requires only one pigtail connection to the credit circuit. Instead of a stepper, a code converter is used to provide wallbox (WRA, WRC) operation. No stepper or code converter is necessary if the solid state WRD Walette is used. The credit computer used in the R80S is not interchangeable with previous models although the programs are essentially the same.

The record mechanism contains a DC converter incorporating a battery power source. The battery maintains voltage to the memory unit to retain selections when the phonograph is turned off temporarily or if power is interrupted. If power has been turned off for several hours the battery may be discharged. Allow approximately one minute after power turn on and initial scan before making the first selection.

## COMPATIBILITY CHART

The table on the following page shows the compatibility of various component systems and accessories with solid state phonographs. Use this table as an aid in determining interchangeability of accessories, for field exchange and ordering purposes.

To check if a component or accessory is applicable to a particular phonograph, first locate the item in the PRODUCT column, then reference across horizontally until the phonograph model designation is located in the EQUIPMENT column.

An "OK" indicates that the component or accessory can be installed or that a major component is directly interchangeable. An "X" in the column indicates that the component or accessory can not be used in that particular phonograph.

TABLE 1-2. COMPATIBILITY CHART

EQUIPMENT	PRODUCT	R-80S	R-81	R1-2	CTI-1S	HMJ	WRD	COMMENTS
Record Changer Mech.	601-03065	STD	STD	O.K.	STD.	STD	X	200 selections - Can use on R1-2 by adding jumper wire W-501 to 601-08060 selector logic or substituting 603-08060 sel. logic, 120 selections.
Record Changer Mech.	602-03065	X	X	STD.	X	X	X	
Credit Computer	601-07674	STD	STD	STD	STD	X	STD	
Selector Logic	601-08060	STD	STD	CONVERTIBLE	STD	X	WILL SELECT, NO SOUND	
Selector Logic	602-08060	O.K.	O.K.	CONVERTIBLE	O.K.	X	STD	Same as 601-08060 but speaker relays added
Selector Logic	603-08060	CONVERTIBLE	CONVERTIBLE	STD	CONVERTIBLE	X	CONVERTIBLE NO SOUND	Same as 601-08060 but jumper W501 added to reduce to 120 selections.
Memory Unit	601-07666	STD	STD	STD	STD	STD	X	
Mechanism Control	401-06905	STD	STD	STD	STD	STD	X	
Digital Display	401-06904	STD	STD	X	X	X	X	
Digital Display	402-06904	X	X	STD	X	X	X	LED display units are interchangeable - Circuit boards are different
Digital Display	403-06904	X	X	X	STD	X	X	
Digital Display	401-05487	X	X	X	X	X	X	
Main Power Supply	401-06894	STD	STD	STD	STD	STD	X	120 Volt
Main Power Supply	402-65079	STD	STD	STD	STD	STD	X	220 or 240 Volt
64W Power Amplifier & Transformer	601-02179	STD	STD	STD	STD	STD	X	
64W Amplifier, 5 wire Pre-amp & Transformer	602-02179	STD	STD	O.K.	STD	O.K.	X	
64W Amplifier, 5 wire Pre-amp & Transformer	404-06322	O.K.	O.K.	STD	O.K.	O.K.	X	For dual channel add 201-66867 adapter plug and dual channel volume control, 308-06322
120W Amplifier, 2 wire Pre-amp & Transformer	601-07406	O.K.	O.K.	O.K.	O.K.	STD	X	
120W Amplifier, 5 wire Pre-amp & Transformer	602-07406	O.K.	O.K.	O.K.	O.K.	O.K.	X	For dual channel add 201-66867 adapter plug and dual channel volume control, 308-06322.
Quad Amplifier with 2 transformers	602-07411	O.K.	O.K.	X	O.K.	X	X	
BA-4 Bill Acceptor includes Bill Stacker	203-66808	O.K.	O.K.	X	X	X	X	
BA-4 Bill Acceptor	207-66808	X	X	X	O.K.	X	X	
Burglar Alarm	201-15303	O.K.	O.K.	X	O.K.	X	X	
Burglar Alarm	201-17250	X	X	O.K.	X	X	X	
Wallette (WRA) Wallette (WRC) Power Supply	601-03400	O.K.	O.K.	O.K.	O.K.	O.K.	X	Code converter replaces stepper to adapt to Rowe solid state phonos. Specify phono model when ordering.
Power Supply	401-05627	O.K.	O.K.	O.K.	O.K.	O.K.	X	
Code Converter	201-15336	O.K.	O.K.	O.K.	O.K.	O.K.	X	
Wallette (WRD) Power Supply	601-03440	O.K.	O.K.	O.K.	O.K.	O.K.	REQ'D	Use only with Rowe solid state phonos.
Paging Kit	401-06891	O.K.	O.K.	O.K.	O.K.	O.K.	REQ'D	Plug-in adapter allows paging from 1 or 2 mikes over phono sound system. Fits all amplifiers shown.
Paging Kit	201-15350	O.K.	O.K.	O.K.	O.K.	O.K.	X	
Background Music Interface Kit	202-15350	O.K.	O.K.	O.K.	O.K.	O.K.	X	Similar to above. Plays background music over phono system or allows paging from 1 mike. Priority is (1) paging; (2) phono; (3) Background music.
Model MBB	204-66819	O.K.	O.K.	X	X	X	X	Includes adapter harness 301-65315.
Printout	205-66819	X	X	X	X	O.K.	X	Includes adapter harness 302-65315;
Money Meter	206-66819	X	X	X	O.K.	X	X	Includes adapter harness 303-65315.
Money Counter (MCA) Non-print	201-15377	O.K.	O.K.	O.K.	O.K.	O.K.	X	Use only with Rowe solid state phonos. Records income from phono and WRD.