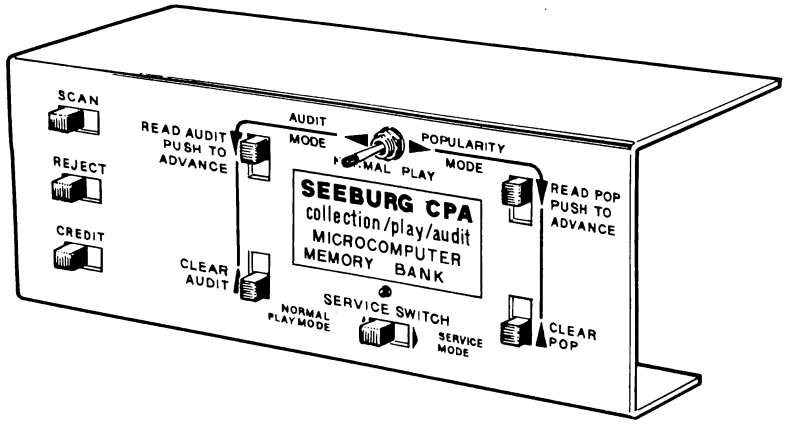
SEEBURG®

STEREO PHONOGRAPH

MODEL SMC1

the SEEBURG cpa

MICROCOMPUTER MEMORY BANK



SERVICE CONVENIENCE FEATURES

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THE SEEBURG CORPORATION, CHICAGO, ILLINOIS 60622 U. S. A.

THE SEEBURG CPA MICROCOMPUTER MEMORY BANK

The Seeburg SMC-1 phonograph is equipped with the latest advances in microcomputer technology, including the Seeburg CPA Microcomputer Memory Bank which offers the operator the most complete money audit and record play audit system ever incorporated into a coin operated phonograph.

Through the use of the Seeburg CPA system the operator can determine the exact amount of money deposited since the last collection, the cumulative amount of money deposited since the date of installation of the phonograph into its location, and the exact number of each type of coin and of dollar bills deposited during the collection period, thus giving the operator total audit control of phonograph income. In a location equipped with Consolettes, the Seeburg CPA system will record all money deposited and selections made at the Consolettes as well as at the phonograph.

In addition to complete money audits, the Seeburg CPA will display the number of selections made by customers, the number of selections played by the mechanism, the number of free credits entered through the credit switch, and will also show the fifteen least selected records during the most recent collection period.

The following explanations describe the functions of the digital display, the typical Collection/Record Change procedure, the methods used to read the memory bank registers, the functions of various service convenience switches, the routines used to place the phonograph in a continuous free play or a continuous free credit operating mode if needed for service test purposes and the function of the batteries in the MCU-1.

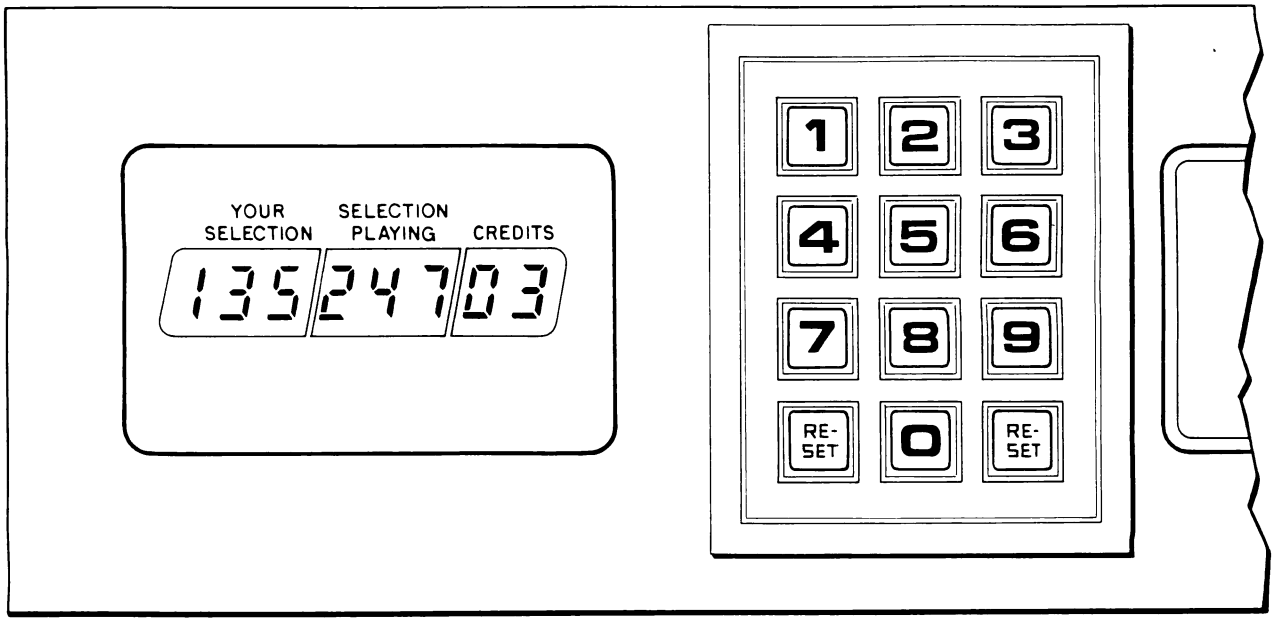

Figure 1. Digital Display and Electrical Selector Button Assembly

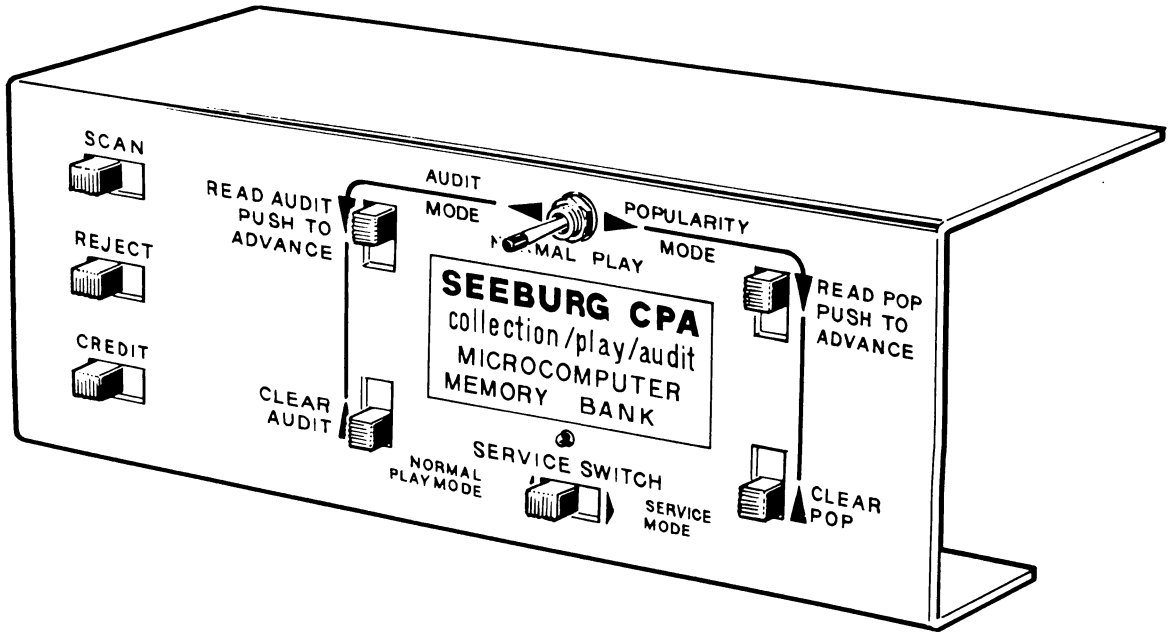

Figure 2. Seeburg CPA Microcomputer Memory Bank Control Unit

I. DIGITAL DISPLAY

The eight-digit fluorescent display in the MCU-1 is used to exhibit a variety of normal play and service functions.

A. Normal Play Mode

In the Normal Play Mode, the first set of three digits displays, for a few seconds, the number of the tune just selected. The second set of three digits shows the number of the selection which is playing. The last set of two digits shows the number of available credits.

B. Error Display

If a customer erroneously selects an invalid number, the first set of three digits will display the actual invalid number selected by the customer and the following five digits will read "Error" to immediately indicate to the customer that he selected an invalid number. No loss of credits will occur. The wrong number and the "Error" display will be turned off either by making a valid selection or by momentarily depressing a RESET button on the selector.

C. Service Mode

During Collection-Record Change-Service procedures the digital display is used for a variety of functions as described in sections II through VI below.

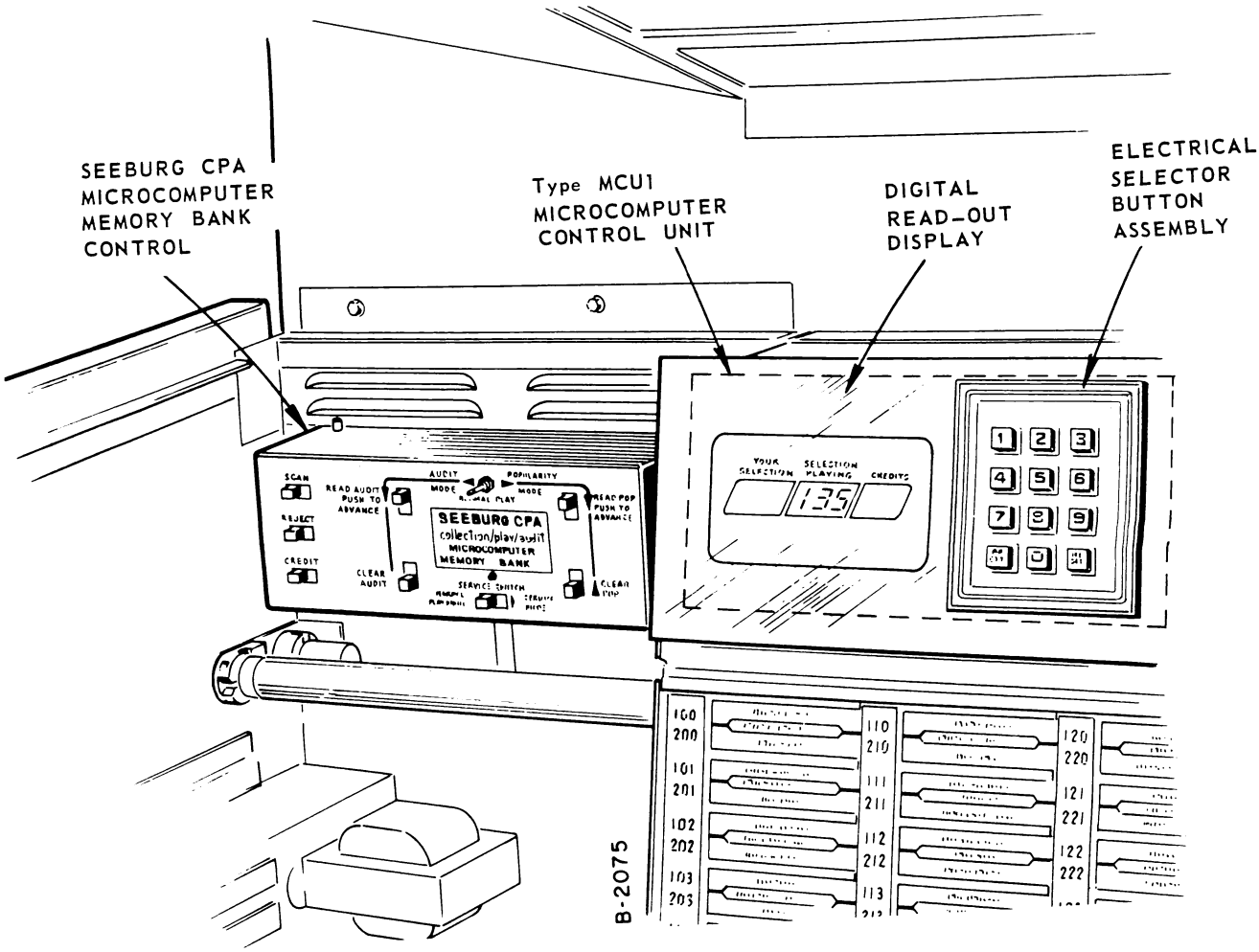

Figure 3. Location of Seeburg CPA Control Unit, Digital Display and Electrical Selector inside of Phonograph with lid up and Upper Program Assembly lowered to the Service Position

II. COLLECTION/RECORD CHANGE PROCEDURE AND SERVICE CONVENIENCE SWITCHES

A. Unlock the lid and open it to its fully raised position.

B. Unlatch the upper and lower title strip assemblies and lower them to their service positions.

C. Move the SERVICE SWITCH actuator to the SERVICE MODE position. (This turns off the motor and disables the carriage trip-to-play circuits temporarily preventing the playing of any selections which may be pending in the computer memory.) The red light above the SERVICE SWITCH will be turned on and the display will show "SCE" to indicate that the control circuits are in the SERVICE MODE.

D. Read the Audit Memory (See section III below) and the Popularity Memory (See section IV below)) to determine the amount of money which should be in the cash box and the numbers of the fifteen least selected records.

E. Check actual money collected against the amount recorded in the Audit Memory Bank Registers.
NOTE: In a location using Consolettes the Audit Memory Bank Registers will record the totals of all money and individual coin counts deposited in the Consolettes together with the money deposited in the phonograph.

F. Change records and corresponding title strips as required.
NOTE: Each tune (record side) is designated by a three-digit number. The first digit is always a "1" or a "2". As viewed while standing in front of the phonograph facing the record magazine, a first digit of "1" designates the left side of the record while a first digit of "2" designates the right side of the record. The second and third digits combined designate the record number.
Example: Tune number "135" designates the left side of record number 35. Tune number "235" designates the right side of record number 35.

G. Service Convenience Switches.

1. SCAN SWITCH
If it is necessary to move the carriage in order to change records the SCAN SWITCH will operate the motor and will cause the carriage to scan without stopping to play any selections which may be stored in the computer memory.

2. REJECT SWITCHES
If it is necessary to manually reject a record which is playing before it has finished playing, this can be done by operating the REJECT SWITCH located on the SEEBURG CPA panel or by operating the equivalent REJECT SWITCH at the back of the phonograph cabinet next to the volume control shaft.

3. CREDIT SWITCH
Each operation of this switch will establish one free credit. (There is an upper limit of ten free credits permitted through this switch on any given cycle of its operation.)

III. TO READ THE AUDIT MEMORY

A. Place the AUDIT/NORMAL/POPULARITY switch lever in the AUDIT MODE position. (The display will show "SCE" to indicate that the control circuits are in the SERVICE mode.)

B. Thereafter, each operation of the "READ AUDIT" switch will display successively the audit information stored in the Microcomputer Memory Bank in the order listed below:

COL -- COLLECTION TOTAL. Number of basic coin* units deposited since the last Audit Clear.

t -- CUMULATIVE TOTAL of basic coin* units deposited since installation date of phonograph. Non-resettable.

SEL -- Number of SELections made since the last Audit Clear.

PLA -- Number of selections PLAyed since the last Audit Clear.

Crd -- Number of free Credits entered through the Credit Switch since the last Audit Clear.

C1 -- Number of Nickels deposited since the last Audit Clear. (**)

C2 -- Number of Dimes deposited since the last Audit Clear. (**)

C3 -- Number of Quarters deposited since the last Audit Clear. (**)

C4 -- Number of Half Dollars deposited since the last Audit Clear. (**)

C5 -- Number of Dollar Bills deposited since the last Audit Clear. (**)

TO RESET THE AUDIT MEMORY BANK REGISTERS TO ZEROS

- After reading the Audit Memory Bank Registers,
- Push the CLEAR AUDIT switch actuator upward once and release. The display will show "AUD Clr" and all Audit Memory Bank Registers will be reset to zeros,*** except for the "t" register which is continuously cumulative and non-resettable. The registers are then ready to accumulate collection and play information for the next collection period.
- Return the AUDIT/NORMAL/POPULARITY switch lever to the NORMAL PLAY (center) position.

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* In the USA pricing system the Nickel is designated as the "basic coin" so all coins and dollar bills are converted to their number of nickel equivalents (i.e. One Quarter = Five Nickels, etc.). Therefore in the USA pricing system the "COL" (COLLECTION TOTAL) and "t" (CUMULATIVE TOTAL) will show the total number of nickel equivalents deposited. To convert to Dollars simply multiply (COL) X .05 = Dollars and (t) X .05 = Dollars. For the "basic coin" designations in other countries please see the pricing charts of those countries.

** For countries other than the USA please see their pricing charts for the specific assignments of C1 through C5.

*** The CLEAR AUDIT switch will not clear the Audit Memory Bank Registers unless the READ AUDIT circuit has been advanced at least one position. This prevents inadvertent erasure of the Audit Memory Bank Registers.

IV. TO READ THE POPULARITY MEMORY

A. Place the AUDIT/NORMAL/POPULARITY switch lever in the POPULARITY MODE position. (The display will show "SCE" to indicate that the control circuits are in the SERVICE mode.)

B. Thereafter, each operation of the "READ POP" switch will display successively the record popularity information stored in the Microcomputer Memory Bank. The display will exhibit the fifteen least popular records starting with the least selected of all the records and successively, with each operation of the "READ POP" switch, up to the 15th least selected record. In each case, the display shows the two-digit record number and the number of times the record was selected since the last Pop Clear.

Example: A display indication of POP 64 07 means that record #64 was played 7 times.

Note that the Popularity Memory Bank adds the left and the right side selections made of each record, and the display shows the total number of times each record was selected (left side selections plus right side selections) for the fifteen records receiving the least number of selections since the last Pop Clear.

TO RESET THE POPULARITY MEMORY BANK REGISTERS TO ZEROS

- After reading the Popularity Memory Bank Register,
- Push the CLEAR POP switch actuator upward once and release. Display will show "POP Clr" and the Popularity Memory Bank Registers will all be reset to zeros.* The registers are then ready to accumulate popularity information for the next collection period.
- Return the AUDIT/NORMAL/POPULARITY switch lever to the NORMAL PLAY (center) position.

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* The CLEAR POP switch will not clear the Popularity Memory Bank Registers unless the READ POP circuit has been advanced at least one position. This prevents inadvertent erasure of the Popularity Memory Bank Registers.

IMPORTANT

When the red indicator light on the SEEBURG CPA control panel is ON this indicates that the phonograph control circuits are in the SERVICE MODE.

Before locking the phonograph lid, place both the SERVICE SWITCH and the AUDIT/NORMAL/POPULARITY SWITCH in their NORMAL PLAY positions. This turns the red indicator light OFF and places the phonograph in its NORMAL PLAY condition ready to accept coins and play selections made by customers.

V. CONTINUOUS FREE PLAY MODE

To place the phonograph in a continuous free play operating condition --

A. Place the SERVICE SWITCH actuator in the SERVICE MODE position. (Leave it in this position.)

B. While holding the CREDIT SWITCH actuator to the right in the Credit position, push "00" on the electrical selector.

C. Release the CREDIT SWITCH actuator. Leave the SERVICE SWITCH actuator in the SERVICE MODE position.

Under these conditions --

-- The mechanism will play all records continuously in sequence.

-- The display will show the number of the SELECTION PLAYING.

-- The CREDITS section of the display will show 00.

-- The electrical selector will be inoperative.

TO RETURN THE PHONOGRAPH TO ITS NORMAL PLAY MODE, simply push the SERVICE SWITCH actuator back to its NORMAL PLAY MODE position.

NOTE: The Continuous Free Play Mode feature is provided principally for shop service test purposes.

VI. CONTINUOUS FREE CREDIT MODE

To place the phonograph in a continuous free credit operating condition --

A. Place the SERVICE SWITCH actuator in the SERVICE MODE position. (Leave it in this position.)

B. While holding the CREDIT SWITCH actuator to the right in the Credit position, push "99" on the electrical selector.

C. Release the CREDIT SWITCH actuator. (Leave the SERVICE SWITCH actuator in the SERVICE MODE position.)

Under these conditions --

-- Unlimited free credits are available and one can make any selections desired through the electrical selector without depositing money.

-- The CREDITS section of the display will show "99" credits at all times. The other sections of the display will show SELECTION PLAYING and YOUR SELECTION in a normal manner.

TO RETURN THE PHONOGRAPH TO ITS NORMAL PLAY MODE, simply push the SERVICE SWITCH actuator back to its NORMAL PLAY MODE position.

NOTE: The Continuous Free Credit Mode feature is provided for shop test purposes, or for use when placing a phonograph in a non-coin operated rental location.

VII. BATTERIES

When the main power to the phonograph is turned OFF the memory content of the Microcomputer Memory Bank is maintained by a set of three standard alkaline size "C" batteries located inside the MCU-1.

The standard alkaline size "C" batteries are used in this system because of their relatively high energy content for this application, resulting in long useful life, and because replacements are readily available at a very modest cost.

There is no current drain on the batteries when the phonograph power is ON. The useful life of the batteries will depend principally on the number of hours per day that the phonograph power is turned OFF. Typically a fresh set of batteries should last well over a year. To avoid loss of memory information due to battery failure, it would be advisable to install a fresh set of batteries periodically before memory failure occurs. On a typical location a fresh set of batteries installed once per year should maintain continuity of memory storage.

To avoid loss of stored memory information while changing batteries, the batteries must be replaced while the phonograph power is ON.

CAUTION: Be sure to observe correct polarity, as indicated on the battery holder, when replacing batteries.