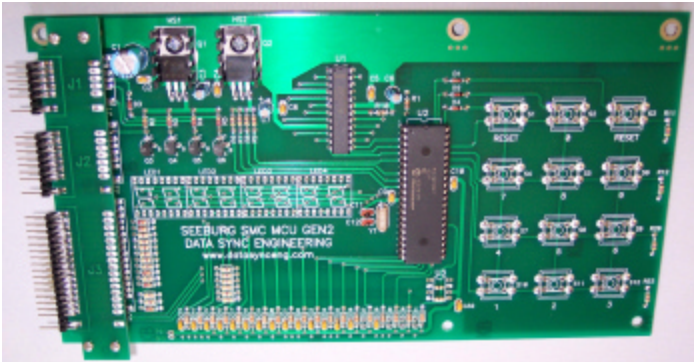


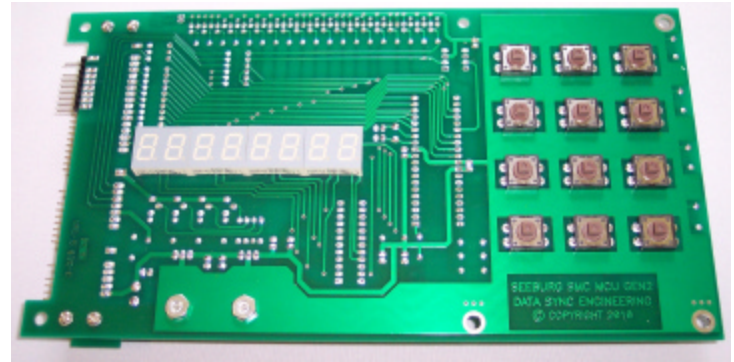
# SEEBURG SMC MCU GEN2

*"The Next Generation Microcomputer Control Unit"*

## USER MANUAL



Rear View



Front View

The GEN2 MCU is the "Next Generation" Microcomputer Control Unit for the last of the Seeburg 45's jukebox. This includes models SMC1 (Disco), SMC1 JR. (100-79M 'Da Vinci'), SMC2 (Phoenix) and SMC3 (Prelude).

Using highly advanced technology, the GEN2 MCU board offers many years of reliable, trouble-free operation with it's 2-chip design along with many new features. Installations a snap! Only three connectors. You can have your jukebox up and running in a matter of minutes.

Easy setup ! No wires to solder. Select your options and features directly from the keypad. All setup is saved in memory and doesn't need batteries.

What the Seeburg experts had to say ...

*"It's a WINNER ! This new board cures ALL of the problems inherent in the original design and even in the re-design !"*

### Features

- Bright blue LED display with intensity control
- Keypad programmable PRICING SETUP
- Keypad forward/backward display of AUDITS
- Keypad forward/backward display of LEAST POPULAR selections
- Displays 25 of the Least Popular records.
- No batteries needed
- True FREE PLAY operating mode
- Programmable save/erase credits or selections at power up
- Programmable 80 or 50 record selection mode
- Programmable wallbox type: DEC or 3-wire (requires translator/adaptor)
- Programmable random autoplay: off, 1-98-minutes or continuous
- Programmable autoplay record sides: A, B or alternate A & B
- Factory Test Mode for diagnostic troubleshooting



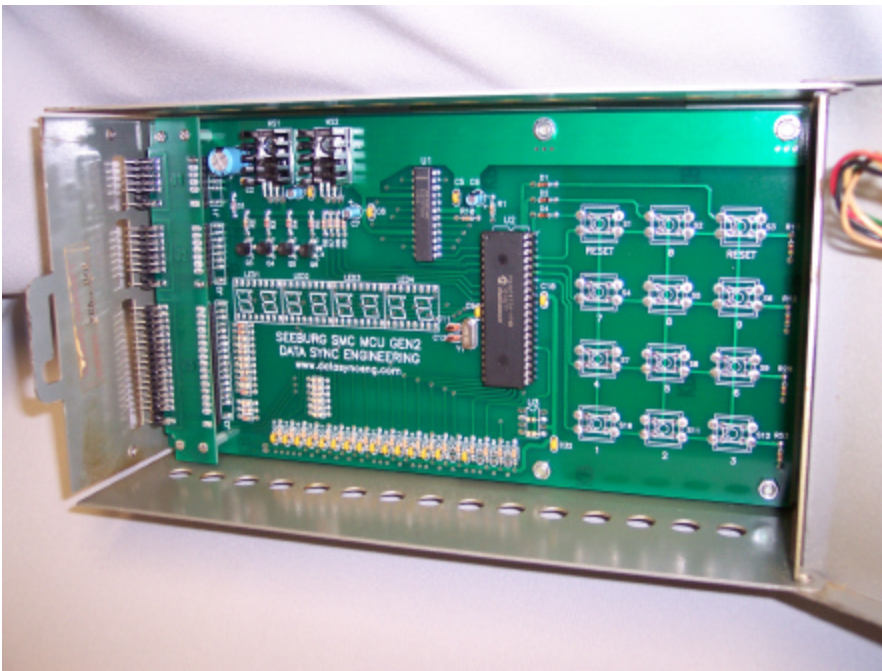
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## GEN2 MCU INSTALLATION



### MCU REPLACEMENT

Unplug the battery / regulator connector.

Remove the six nuts on the front panel.

Wiggle the old MCU boards out through the back of the enclosure.

Remove the six 13/64" 8-32 male-to-male spacers from the old MCU board stack.

Using the six provided nuts, hand tighten the six male-to-male spacers to the new MCU board.

Position the new MCU board through the front panel holes and hand tighten nuts.

Align the connectors, display and keypad then tighten nuts (do not over-tighten).

The old back cover regulators & batteries are not used. You can remove them or tape the old connector to the back cover.

Mount the MCU enclosure box to the jukebox front panel brackets.

From the CPA wire harness, plug in the J1 (keyboard), J1 (CPU) and J3 (CPU) connectors.

The connectors are keyed with a block at the number 2 pin position.

If your using wallbox selectors, the translator / adapter plugs into J2 (CPU).

### INITIAL POWER UP CHECK

Turn on the jukebox. You may see three dashes at the center of the display until the record mechanism reaches the left or right end position.

When the jukebox is ready, you should see the credits or FP displayed.

If you see "Error ##" displayed, then a keypad key is stuck on. Realign the MCU to the front panel keypad buttons.

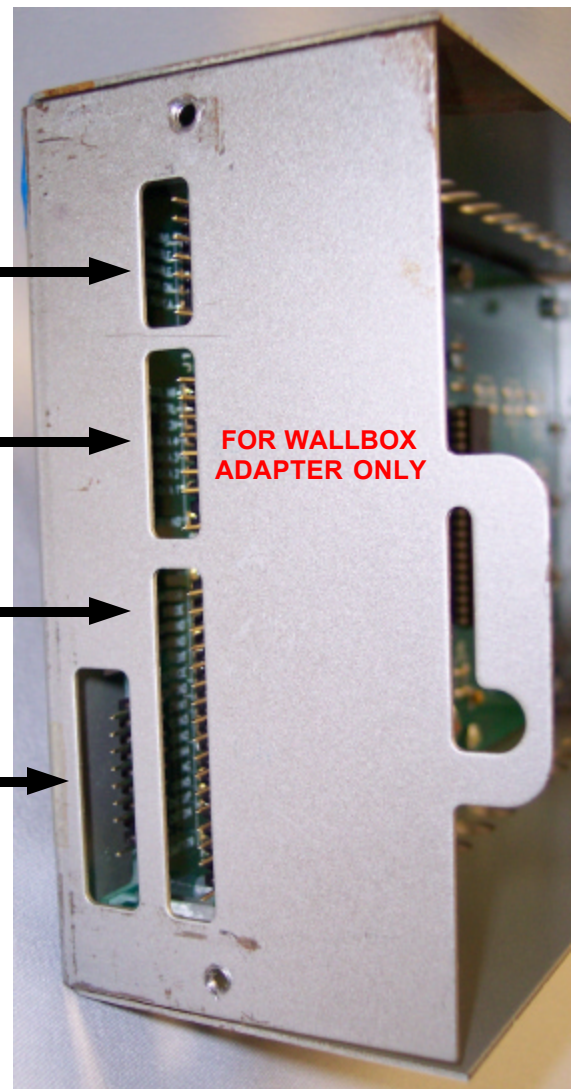
If the mechanism continues to scan back and forth, recheck the MCU connectors.

**J1**  
CPU Module  
7-Pin connector  
Power & Mech Control

**J2**  
CPU Module  
9-Pin connector  
Wallbox Interface

**J3**  
CPU Module  
17-Pin connector  
Input Signals

**J1**  
Keyboard / Display  
9-Pin connector  
*The signals from this connector are not used by the new MCU*



## SERVICE MODE FUNCTIONS

The GEN2 MCU offers six service mode functions in addition to LED display intensity control. To select a function, move the SERVICE SWITCH on the CPA panel to SERVICE MODE. The display will show SCE and the current 2-digit record position number. While holding the CREDIT switch on, press a digit on the keypad to select the desired function or press the Left or Right RESET key to adjust the LED display intensity.

The following numeric key functions are available:

- 1            Enter Pricing Setup
- 2            Enter Audit Mode
- 3            Enter Pop Mode
- 4            Enter General Setup
- 5            Enter Autoplay Setup
- 8            Enter Factory Test Mode

<b>1) PRICING SETUP</b>	
(Left RESET= step to previous, Right RESET= step to next)	
DISPLAYED PARAMETER	DESCRIPTION
L 1    0	(L1) Credits to add when Level 1 is reached
L 2    0	(L2) Credits to add when Level 2 is reached
L 3    0	(L3) Credits to add when Level 3 is reached
L 4    0	(L4) Credits to add when Level 4 is reached
L 5    2	(L5) Credits to add when Level 5 is reached
L 6    0	(L6) Credits to add when Level 6 is reached
L 7    0	(L7) Credits to add when Level 7 is reached
L 8    0	(L8) Credits to add when Level 8 is reached
L 9    0	(L9) Credits to add when Level 9 is reached
L 10   2	(L10) Credits to add when Level 10 is reached
L 11   0	(L11) Credits to add when Level 11 is reached
L 12   0	(L12) Credits to add when Level 12 is reached
L 13   0	(L13) Credits to add when Level 13 is reached
L 14   0	(L14) Credits to add when Level 14 is reached
L 15   2	(L15) Credits to add when Level 15 is reached
L 16   0	(L16) Credits to add when Level 16 is reached
L 17   0	(L17) Credits to add when Level 17 is reached
L 18   0	(L18) Credits to add when Level 18 is reached
L 19   0	(L19) Credits to add when Level 19 is reached
L 20   3	(L20) Credits to add when Level 20 is reached
WT    0	(WT) Coin ratio, 0= 1-2-5-10, 1= 1-2-4-10, 2= 1-2-5-8, 3= 1-2-4-8
Adr   20	(ADD R) Last level step
b on   0	(BON) Last level bonus
bb    0	(BB) Bill bonus

2) AUDIT MODE (Left RESET= step to previous, Right RESET= step to next)	
DISPLAYED PARAMETER	DESCRIPTION
COL 0	COLLECTION total in Nickel Units (X .05 = Dollars)
t 0	total cumulative income in Nickel Units (X .05 = Dollars)
SEL 0	Number of SELECTIONS made
PLA 0	Number of selections PLAYED
Cr d 0	Number of free Credits
C1 0	Number of Nickels
C2 0	Number of Dimes
C3 0	Number of Quarters
C4 0	Number of Half Dollars
C5 0	Number of Dollar Bills

3) POP MODE (Left RESET= step to previous, Right RESET= step to next)	
DISPLAYED PARAMETER	DESCRIPTION
POP 00 0	Least popular record number, 1st 2-digits = Record #, Last 2-digits = Times played

4) GENERAL SETUP (Left RESET= step to previous, Right RESET= step to next)	
DISPLAYED PARAMETER	DESCRIPTION
FRY 0	Free Play or credits, any numeric key toggles <u>FP</u> and credits
CLC n	Clear Credits at power-up, any numeric key toggles <u>no</u> and <u>Yes</u>
CLS n	Clear Selections at power-up, any numeric key toggles <u>no</u> and <u>Yes</u>
rEC 80	Number of records, any numeric key toggles <u>80</u> and <u>50</u>
rSE 0	Remote Selector type, enter 1 or 2 digit #, 0= DEC, (see Wallbox Adapter List for other types)
APr Ab	Autoplay Record sides, any numeric key toggles <u>A</u> , <u>b</u> or <u>Ab</u>

5) AUTOPLAY SETUP	
DISPLAYED PARAMETER	DESCRIPTION
APL 99	0 Continuous autoplay (if no selections are available to play) 1-98 Number of no-activity minutes before autoplay selection 99 Autoplay disabled

## 8) FACTORY TEST MODE

DISPLAYED PARAMETER	DESCRIPTION
Fct 00	Displays current 2-digit record position, press SCAN or key digit for test function

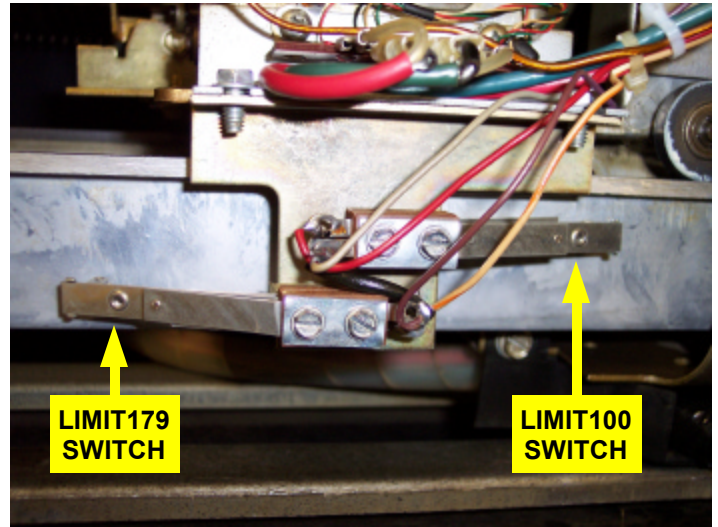
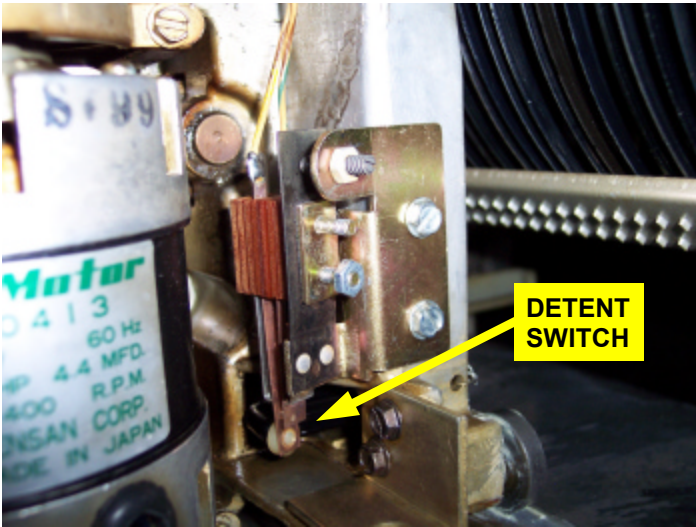
Pressing the SCAN switch will cause the record mechanism to scan. If at any time, while holding the SCAN switch, you see the error symbol -| or |- before the 2 digit record position number, then ...

- | Limit switch 179 signal detected, but the expected position count was incorrect.
- |- Limit switch 100 signal detected, but the expected position count was incorrect.

Press Left or Right RESET key to clear error symbol.



KEY #	DISPLAYED RESULT	DESCRIPTION
1	29 44 1	Show detent on/off period (mS), 1st 2 digits = on period, next 2 digits = off period
2	22 22 2	Show detent to limit switch period (mS), 1st 2 digits = limit100, next 2 digits = limit179
3	C3 3	Coin switch check: C1=nickel, C2=dime, C3=quarter, C4=half dollar, C5=dollar bill
4	39 4	Turns mechanism motor on, 1st 2 digits are the current record position
5	39 5	Play Side A trip, 1st 2 digits are the current record position
6	39 6	Play Side B trip, 1st 2 digits are the current record position
7	39 7	Turns mechanism motor off, 1st 2 digits are the current record position
8	dEC	Generates "audio control" pulse, only used while in " show DEC codes" function
9	dEC 139	Show all received DEC port codes from the DEC translator or wallbox adapter
0	88888888	Display all 8's on LED display. (for display check and maximum power stress-test)



Factory Test #1, Show detent on/off period (ms)  
 1st 2 digits = on period, next 2 digits = off period

29 44 1

Factory Test #2, Show detent to limit switch period (ms)  
 1st 2 digits = limit100, next 2 digits = limit179

22 22 2

ERROR CODES	
DISPLAYED	DESCRIPTION
Error 0-	Codes 00 to 09 is a stuck keypad key 0 to 9
Error 8-	Code 80 is a stuck Left RESET key. Code 81 is a stuck Right RESET key.
Error 99	Mechanism motor timeout. No activity detected after 9.4 minutes. <i>This can be caused by a missing / not playing record or from a continuous scan malfunction.</i>

WALLBOX ADAPTER LIST			
rSE Setting	WALLBOX MODEL (Any setting, other than 0, requires the SMC-WB Wallbox Adapter)	Max Sel	Seq Type
0	Seeburg digital DEC (requires the blue box DMT1, DEC-MCU TRANSLATOR)	160	
1	Seeburg Consolette SC1/2/3/4, SCH1/2/3/4	160	Letter
2	Wurlitzer 5210, 5220, 5250	160	Number
3	Seeburg Wall-O-Matic 3W1, 3W100	100	Number
4	Seeburg Wall-O-Matic 3WA	160	Letter
5	Rowe WRA, WRB, WRC	160	Letter
6	AMI W-40, W-80, W-120, WQ200	160	Button
7	Wurlitzer 5207	104	Button
8	Wurlitzer 5225	100	Number
9	Wurlitzer 3020	24	Button
10	Rock-Ola 500, 1555, 1558 (and most other models)	160	Button