Hi-Fi Products
Service Bulletin

CSA-13

Sony Service Company - Technical Services
A Division of Sony Electronics Inc.
Sony Drive, Park Ridge, New Jersey 07656

Model: HCD-C33/C55

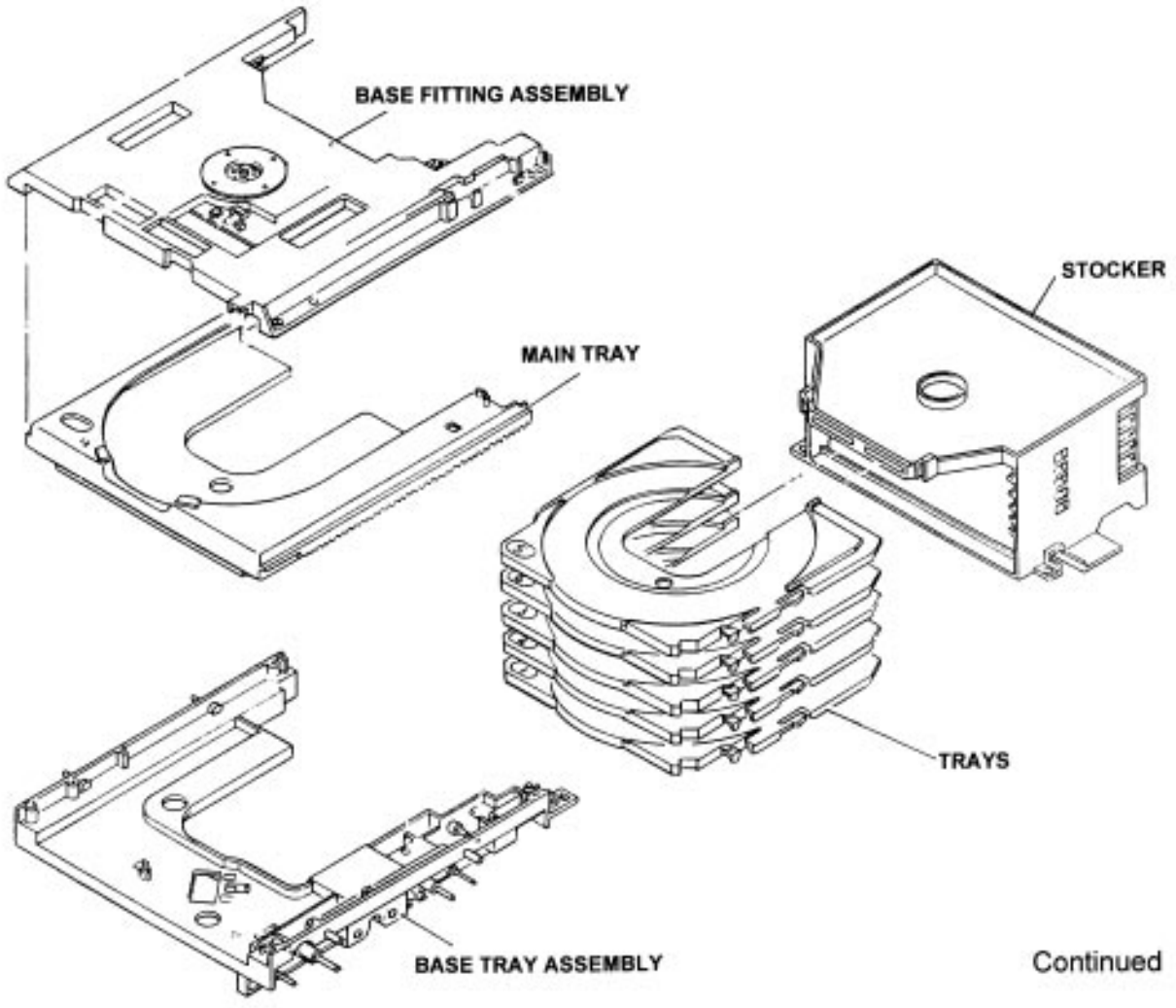
No. 460

Subject: Initialization Information

Date: November 27, 1995

Symptom:

(**) Sequence of events during Initialization



Continued

Reference: Tokyo fax
Autoflagged - NO

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Tray Open/Stock-In Function

Begin - Open/Stock-In

⇓

Wait for completion of Open (CF1*)/Stock-In(CF2*)cycle.

⇓

100 msec. Brake

⇓

150 msec PWM push

⇓

100 msec Brake (again)

⇓

Confirm - Open/Stock In Completion

⇓

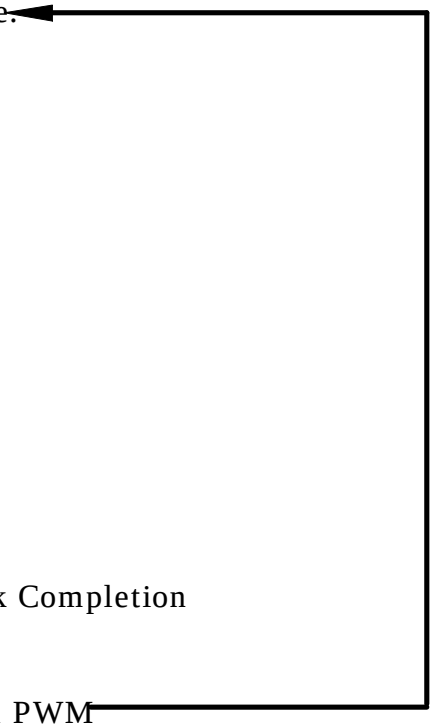
If Open/Stock-In Completion

⇓

End

If **no** Open/Stock Completion

Push with PWM



*__Cf1__= Open Completion (Out-SW is On or closed, and In-SW is OFF or open)
*__Cf2__= Stock-In Completion (Stock-In-SW is ON or closed)

Tray Closed/Stock -Out Function

Begin Close/Stock-Out

⇓

Wait for close (Cf3*)/Stock-Out (Cf4*)completion

40 msec reverse Turning

⇓

After 100 msec braking, confirm Close/stock-out Completion

⇓ ↓

If Close/Stock-out Completion | If not Close/Stock-Out Completion

⇓ ↓

⇓ Begin Close/Stock-Out (again)

⇓ ↓

⇓ Wait for Close/Stock-out Completion

⇓ ↓

⇓ After 100 msec braking, confirm

⇓ Close/Stock-out

⇓ ↓

⇓ If confirmed | If not confirmed

⇓ ⇓

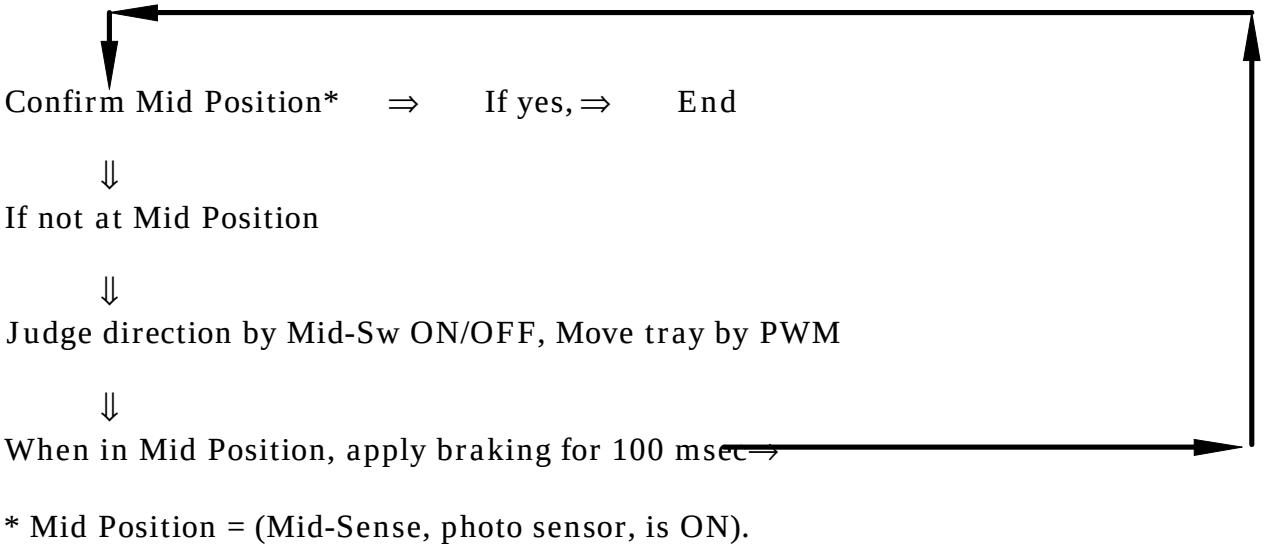
Positioning of tray in Mid position by PWM

⇓

End, with elevator at Mid position

*__Cf3__= Open Completion (Out-SW is OFF or opened, and In-SW is ON or closed)
*__Cf4__= Stock-Out Completion (Mid-Sense, photo sensor, is On or Mid-Sw is OFF)

Positioning of Tray in a Mid Position



* Mid Position = (Mid-Sense, photo sensor, is ON).

Elevator Up & Down Movement

When Count SW is OFF, “Mechanism Initialization” will scroll across display
When Count SW is ON

⇓

Compare the Current disc and Target disc ⇒ If same ⇒ End

⇓

If Discs are different

⇓

Move UP or DOWN Toward the target Disc

⇓

Wait for Count SW OFF → If not OFF in 5 sec., 1st time, it will try a second time by mechanically reversing until the Count SW is OFF. If not, then “**Mechanical Error**” is displayed.

⇓

If Count SW OFF within 5 sec.

⇓

Wait for Count SW ON → If not ON in 5 sec., 1st time, it will try a second time by reversing until Count SW is ON. If not, then “**Mechanical Error**” is displayed

⇓

If Count SW is ON in 5 sec

⇓

Current Disc = Target Disc

⇓

⇓

⇓

⇓

⇓

100 msec braking

⇓

⇓

If Count SW = H, “Mechanical Initialization” is displayed
If Count SW = L, End.

If Current disc is not Target Disc, and Reverse is necessary.

↓

100 msec braking

If Current Disc is not Target Disc, and Forward is necessary.

Main Protection Functions

1.) When Opening the Tray
If Count -SW is OFF, it triggers Mech Initialization.
If it does not finish opening the tray in 6 sec, it will reverse and close the tray.

2.) When Closing the Tray
If it does not finish closing the tray in 6 sec, it will reverse and open the tray.

3.) When Stock-In or Stock-Out
If Count SW is OFF, it triggers Mech Initialization.
If it does not complete Stock-In/Stock-Out in 6 sec, it will bring the tray back to Mid Position. This function does have 6 sec time limit and if it does not comeback into the Mid Position within 6 sec., it will trigger a "Mechanical Error" message. If it is back with in 6 sec., it will try Stock-In/Stock-Out once again. If it times out, it triggers a "Mechanical Error" message.

Mechanical Initialization

When the A/C cord is first connected, the CPU does not know the status of the CD Mechanism. Therefore, it goes into "Mechanical Initialization" which is as follows:

- First, the Main Tray is brought to Mid position if it is not already there.
- Second, if any tray (1 to 5) is out, it is returned to the Stocker.
- Third, The Elevator is brought to the lowest or Home position.

The Mechanical Initialization is also triggered when the Count SW is OFF, that means the Elevator position is in between tray (1 to 5) positions.

Explanation of Switches*

Out-SW (Open- SW): When the tray is all the way out, this switch is ON.
In-SW (Close-SW): When the tray is inside of front panel, this switch is ON
Stock-In SW (In-SW): When the tray is all the way inside of the stocker the switch is ON
Mid-SW (Out-SW): At Mid position (Mid-Sense is ON), H/L change takes place. When the tray is out, it is OFF (H).
Mid-Sense (Mid-Sense): At Mid position (only about 2mm section), ON
Count-SW (Count -SW): At every elevator position (1 to 5), this switch is ON.
Init-SW (Init-SW): When the CD is being chucked this switch is ON.
P.W.M. P.W.M. is used for the loading operation only.
Mechanical (Mech.) Error: All motors stop and no further function is activated.

*Former Switch names are in ( )

Filename:	HFP0460.SB
Directory:	J:\SBDOC\NOV95
Template:	C:\WINWORD\TEMPLATE\S_BULL.DOT
Title:	
Subject:	
Author:	Hoyt Wing Lee
Keywords:	
Comments:	
Creation Date:	11/27/95 11:10 AM
Revision Number:	2
Last Saved On:	11/27/95 11:10 AM
Last Saved By:	Hoyt Wing Lee
Total Editing Time:	1 Minute
Last Printed On:	04/01/96 10:20 AM

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