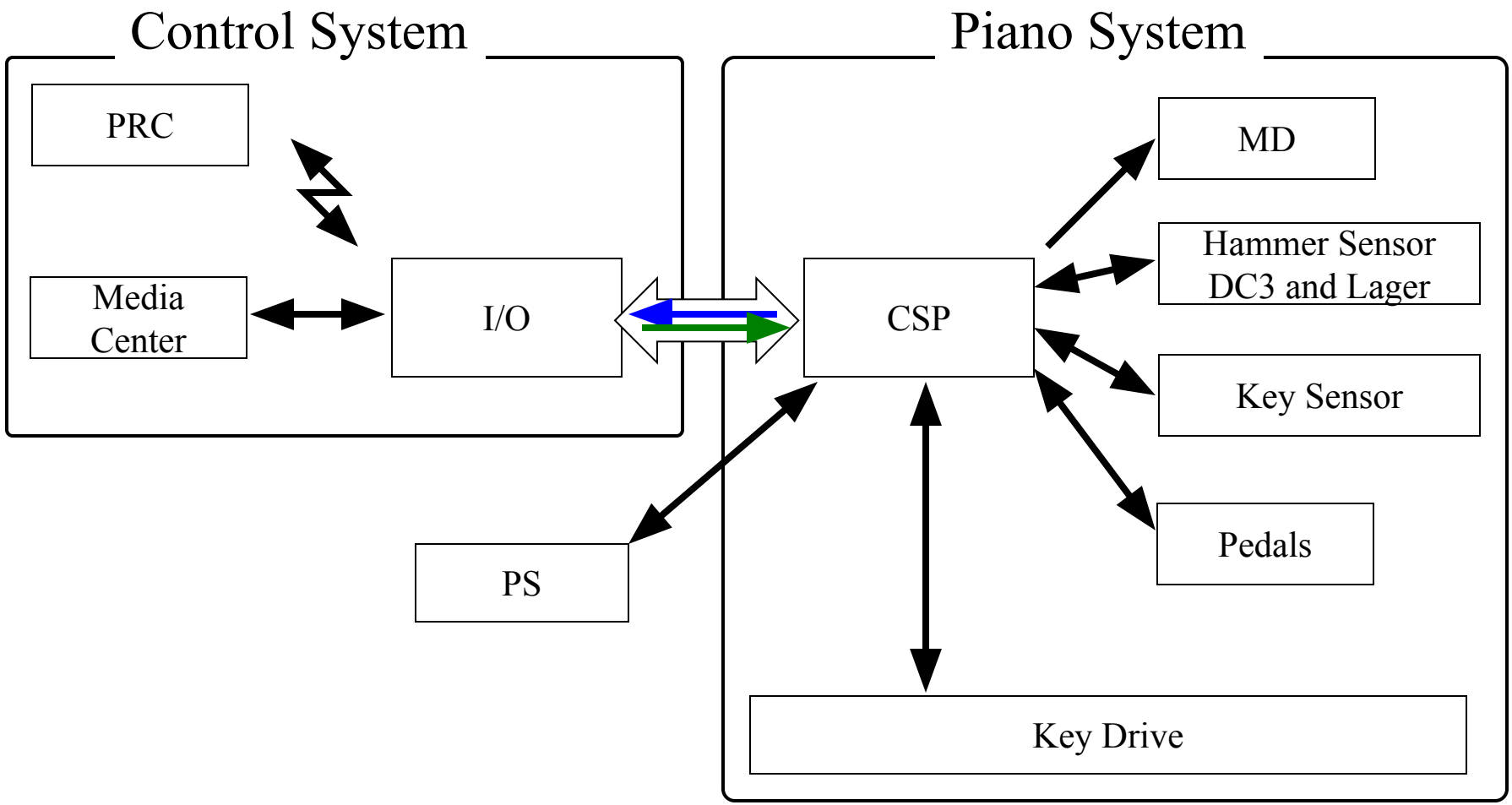
YMHE MKIV V.2.0 technical seminar 2007

Review of Previous Seminar

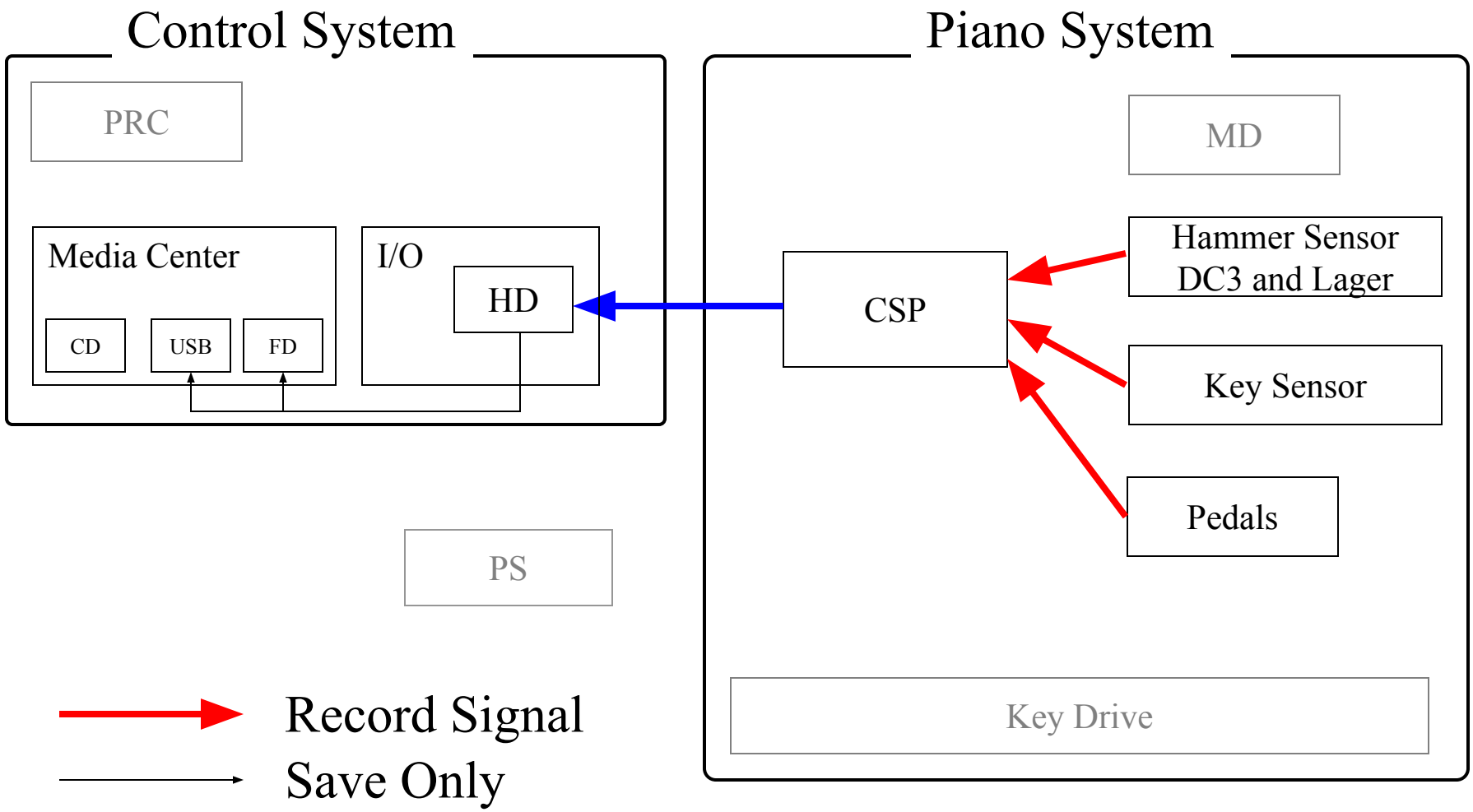
1. Overall diagram
2. Boot up sequence
3. Tools for servicing

YCJ E.P.S.D. (CS planning div.) Yokoyama Sep.27

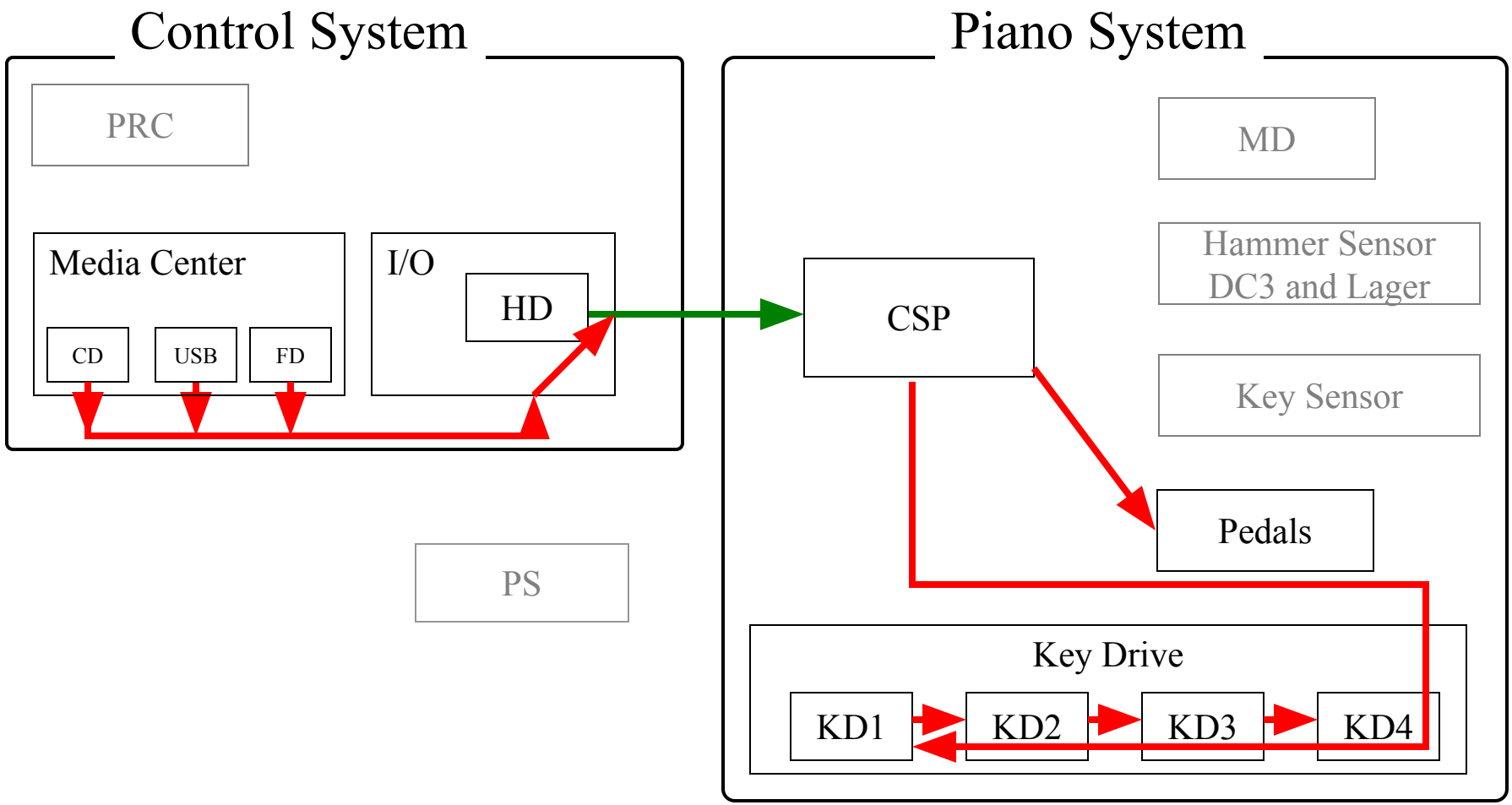
Overall Diagram



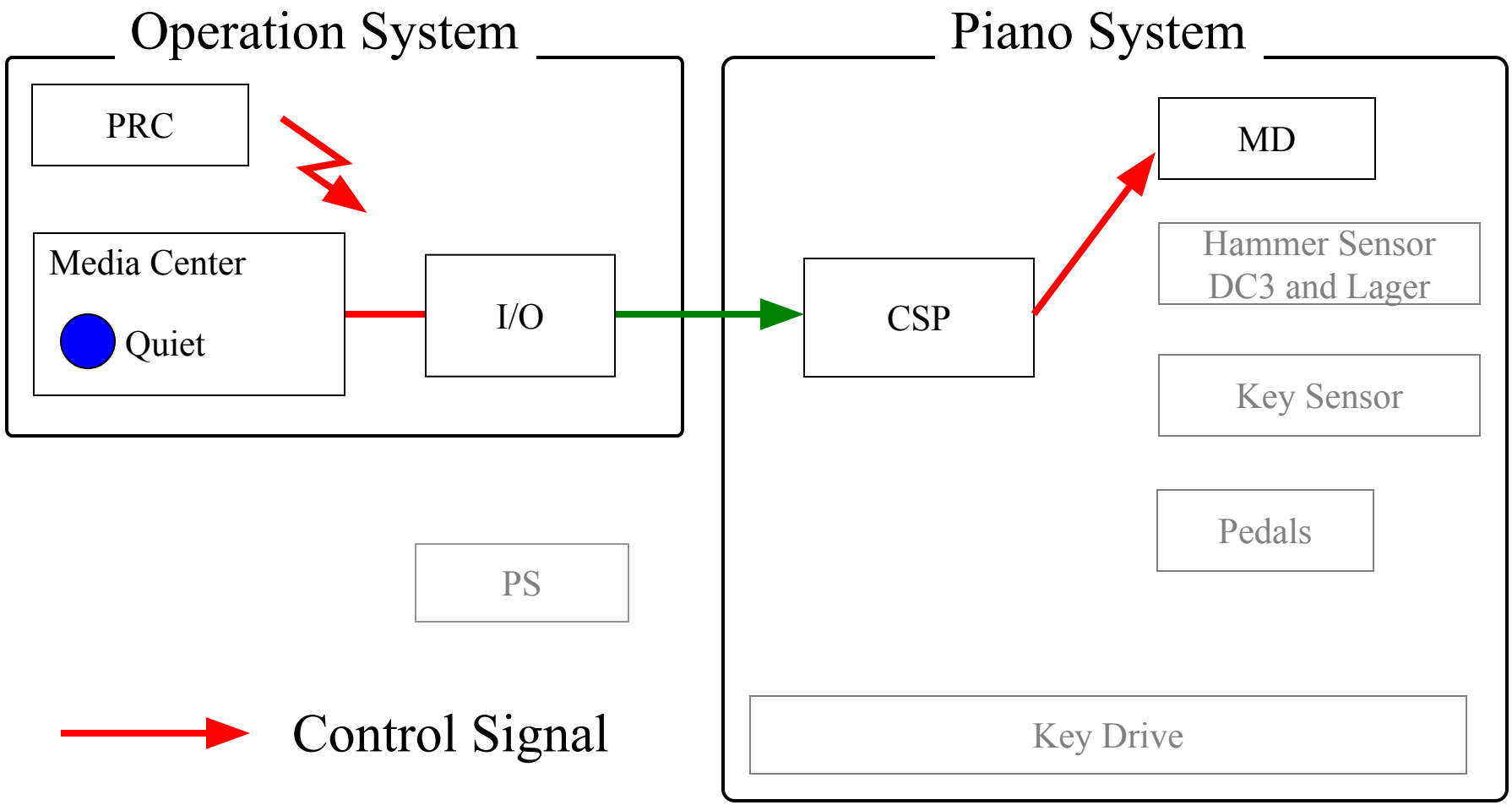
Record Flow Chart



Playback Flow Chart

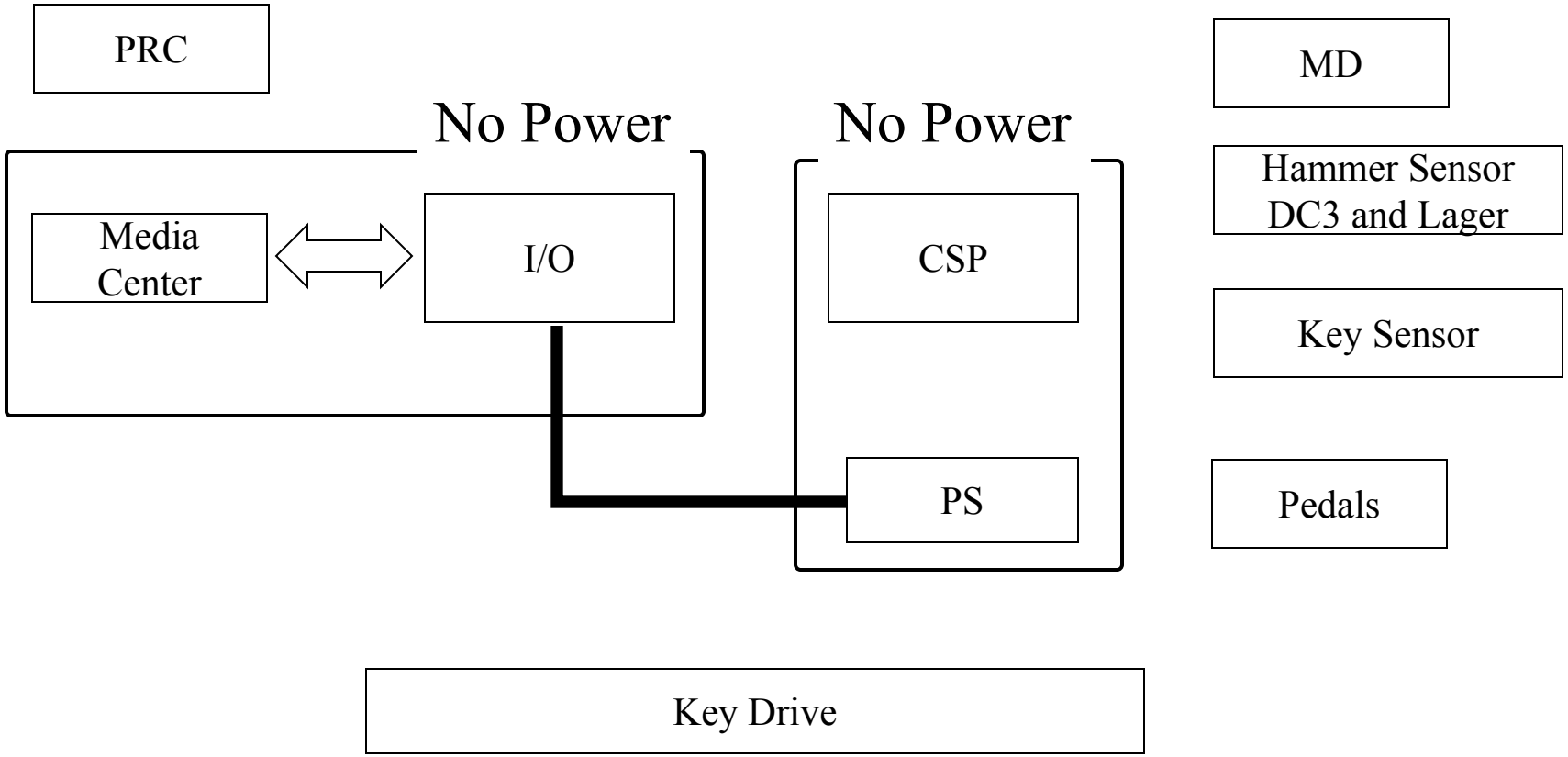


Quiet Mode Flow Chart

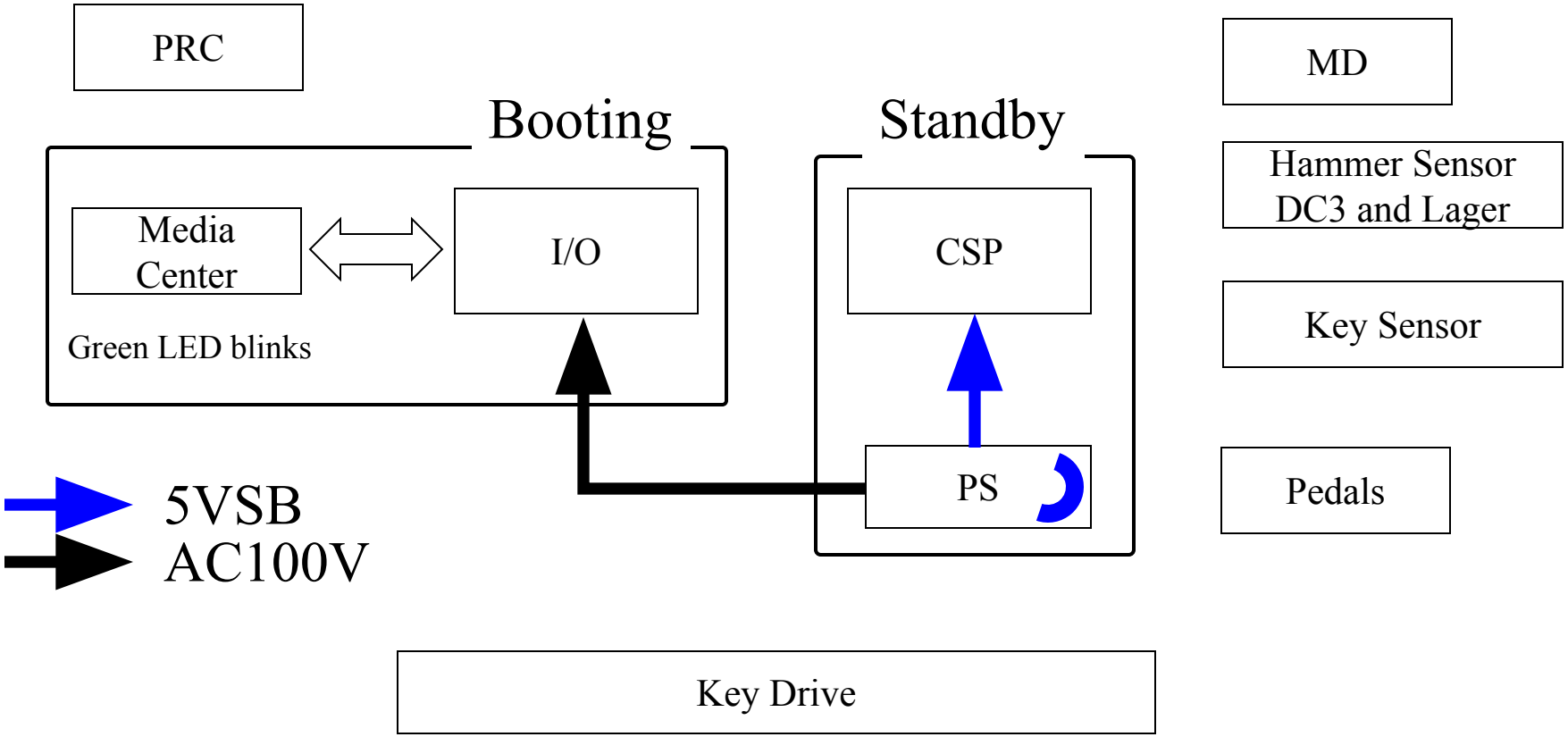


Boot up Sequence

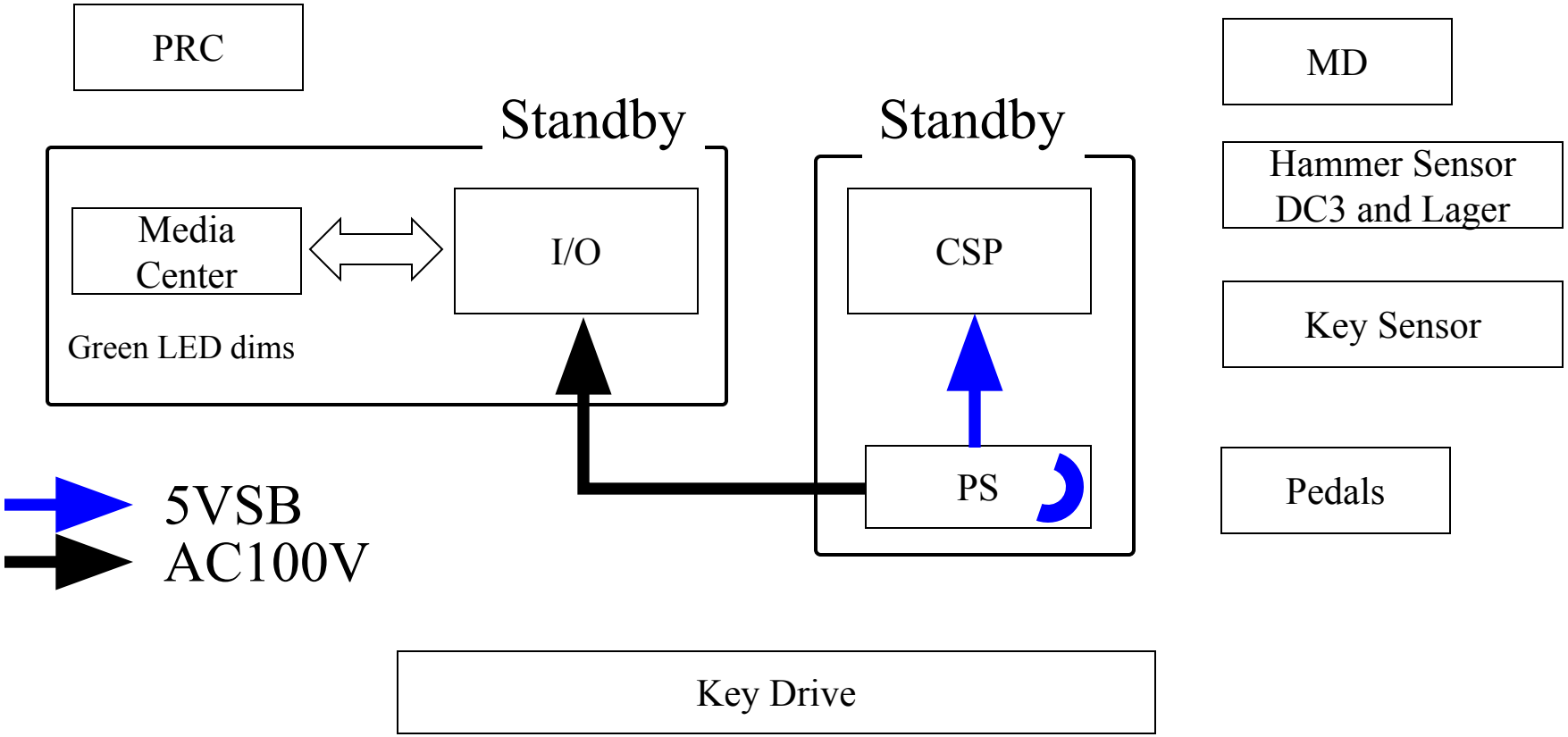
Boot Procedure 0



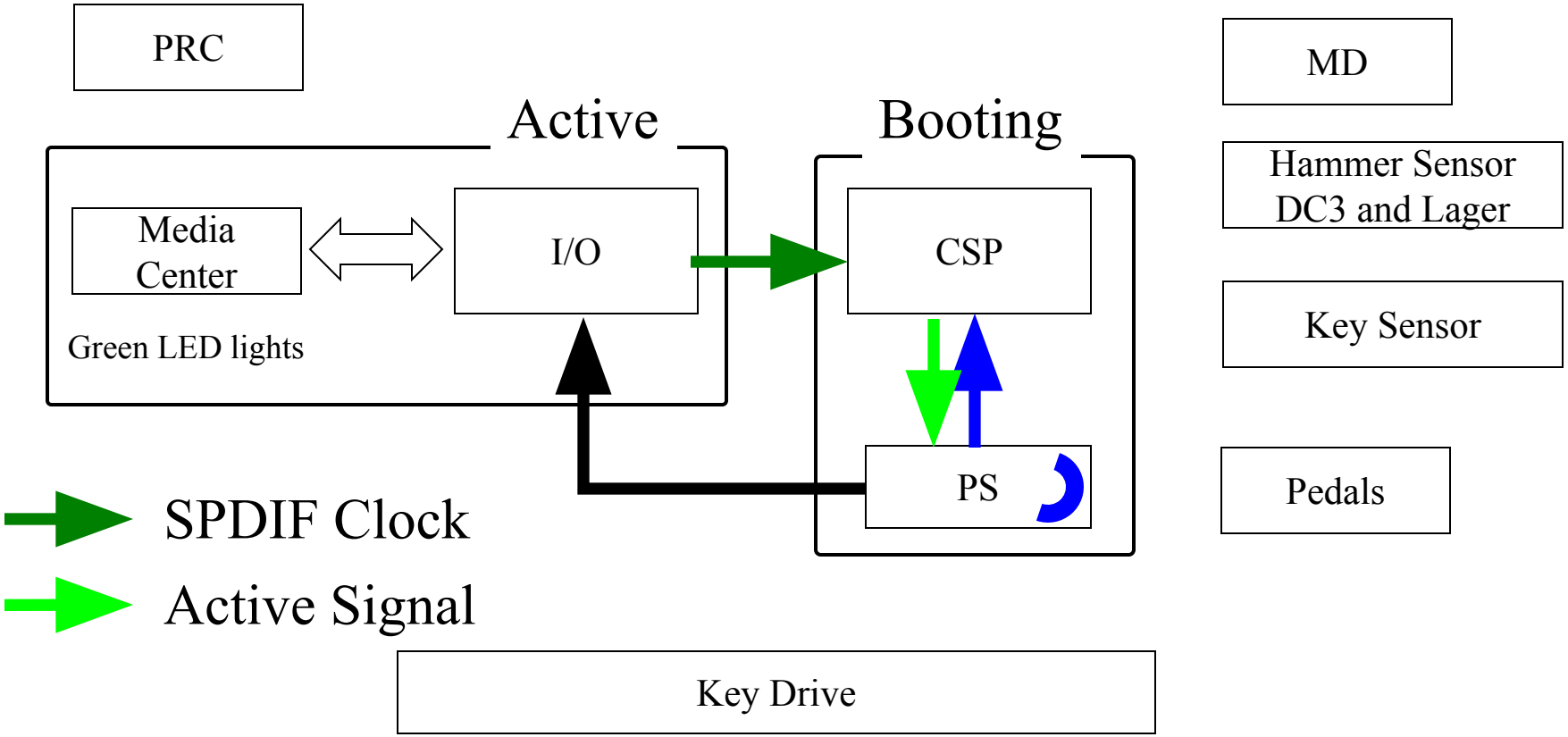
Boot Procedure 1



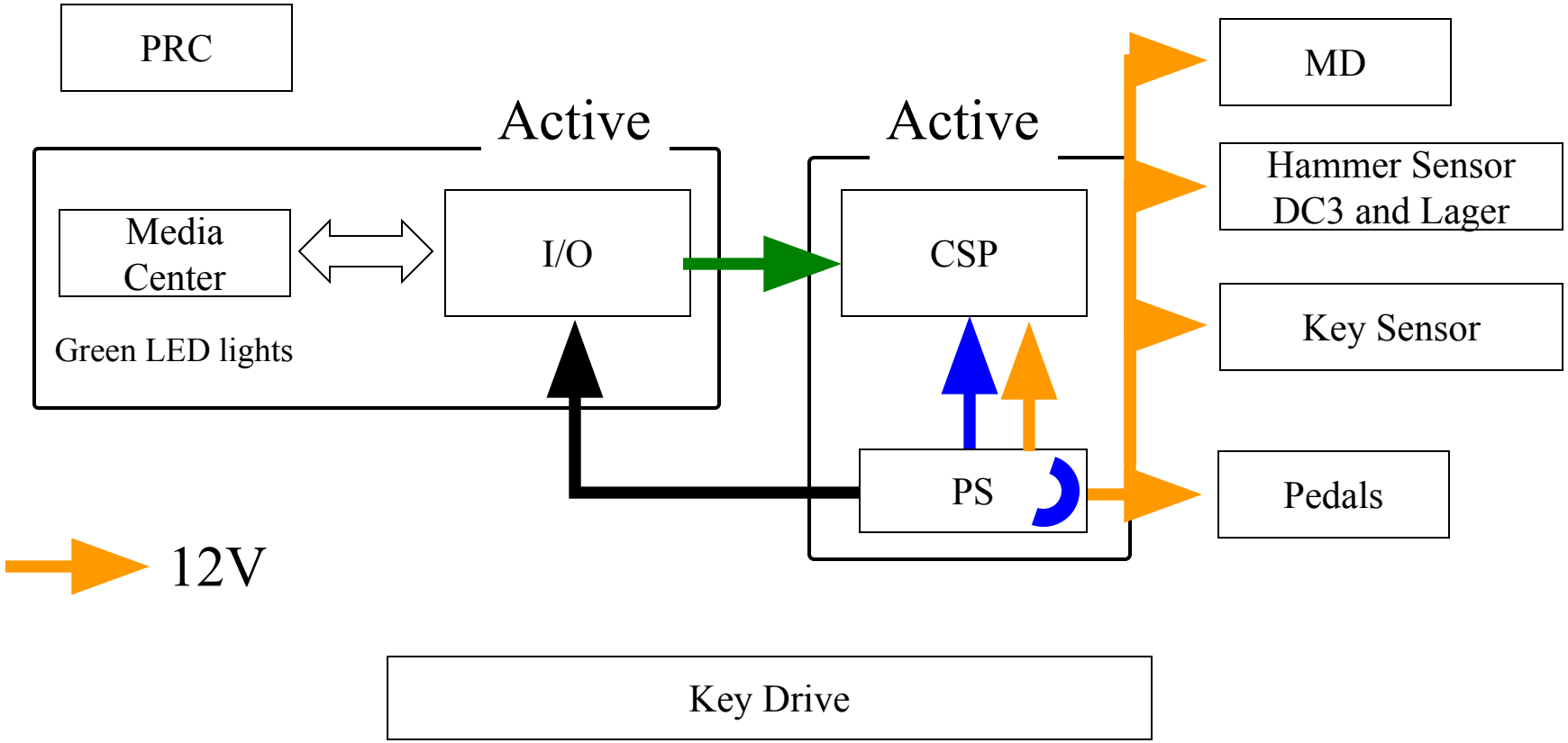
Boot Procedure 2



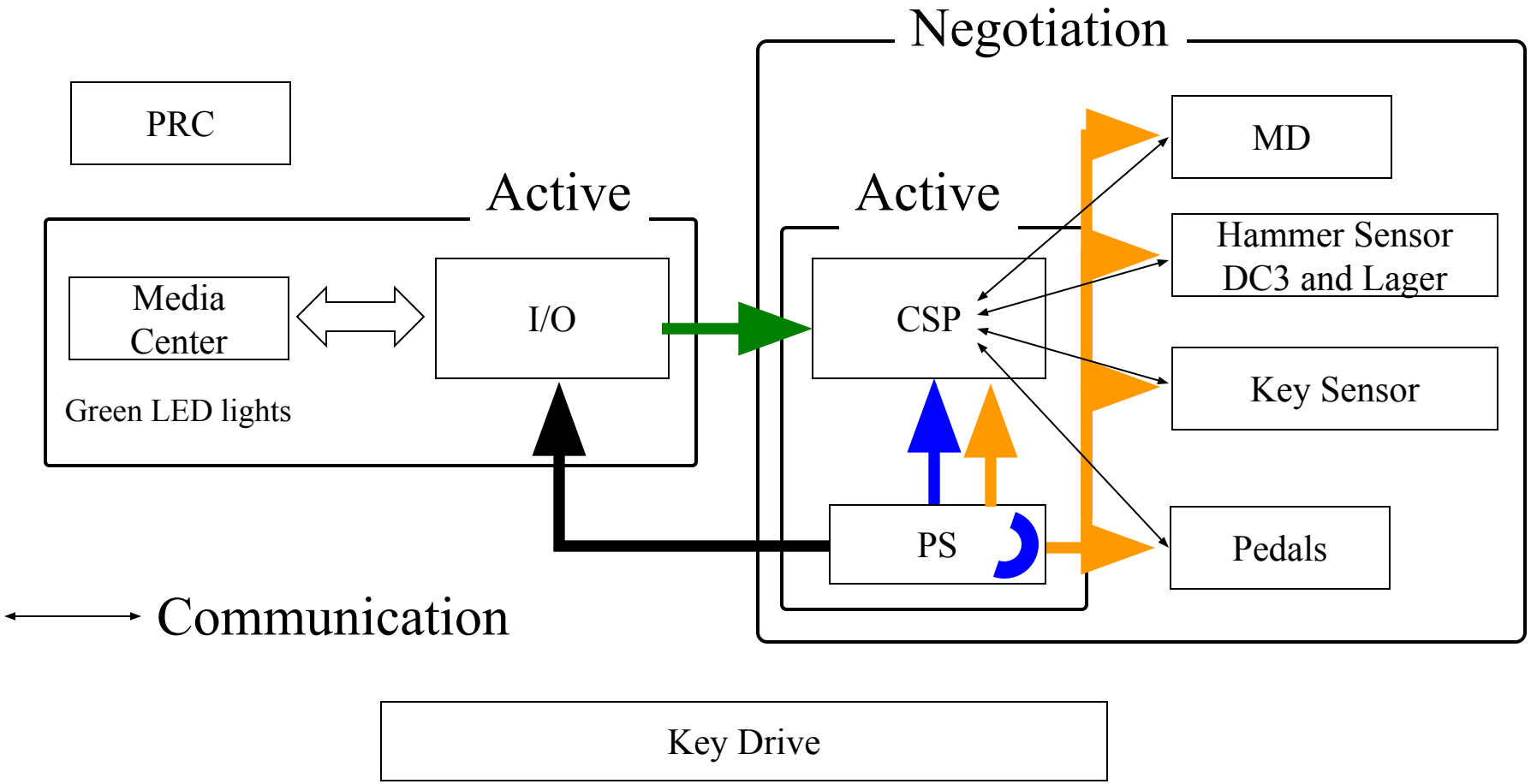
Boot Procedure 3



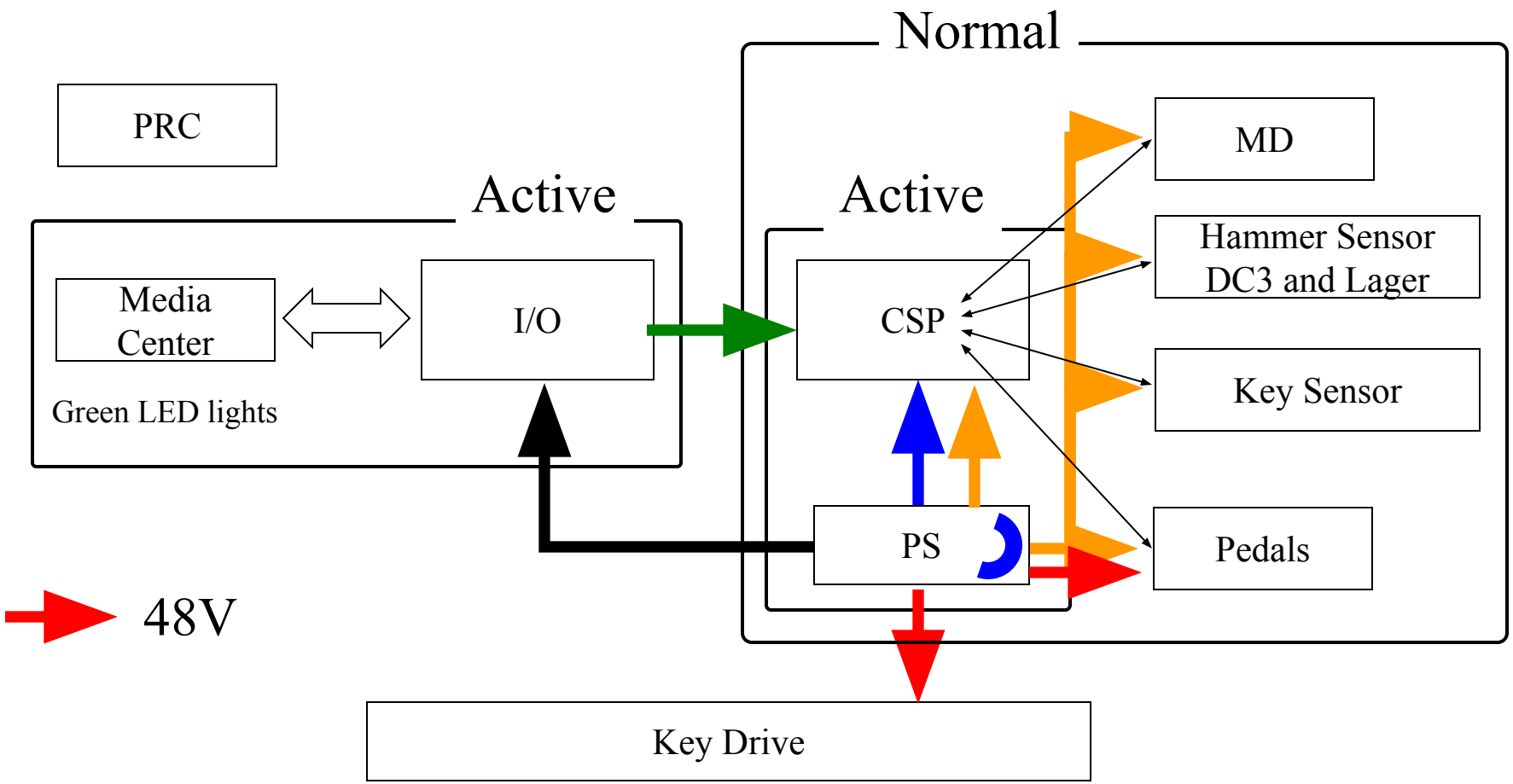
Boot Procedure 4



Boot Procedure 5



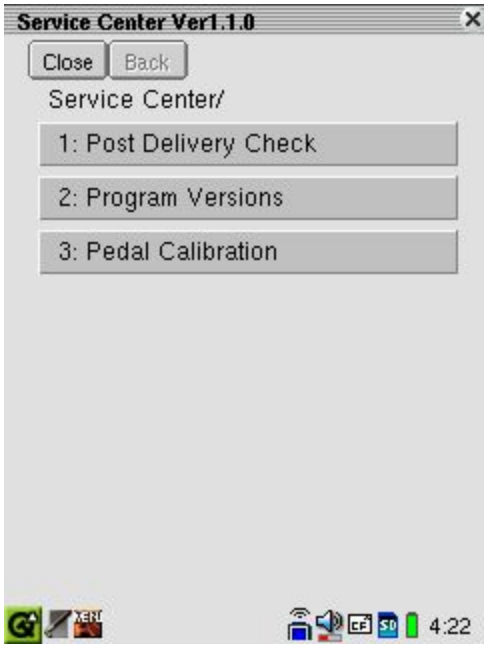
Boot Procedure 6



Tools for Servicing

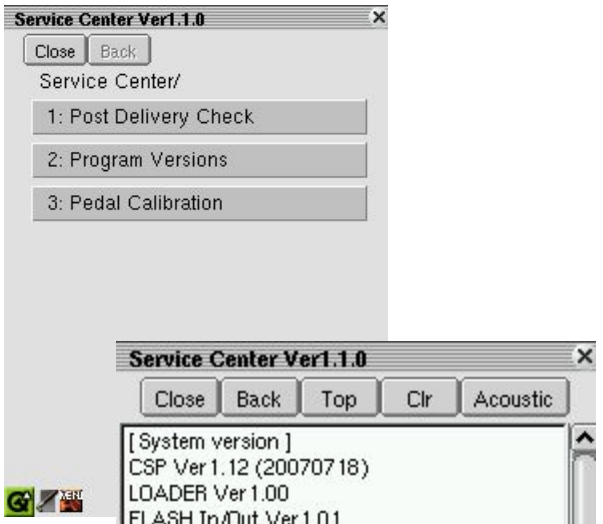
1. Maintenance Mode
2. LED Diagnostics
3. Start up Message of I/O Center

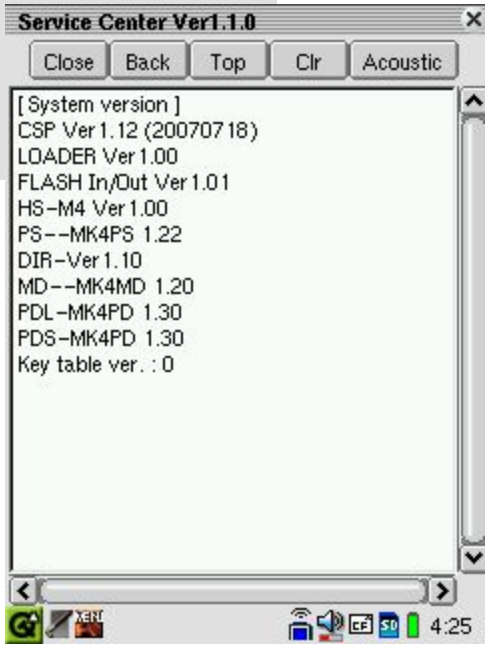
How to Enter Maintenance Mode

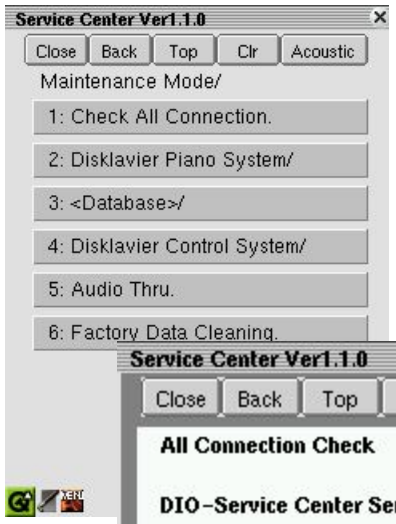


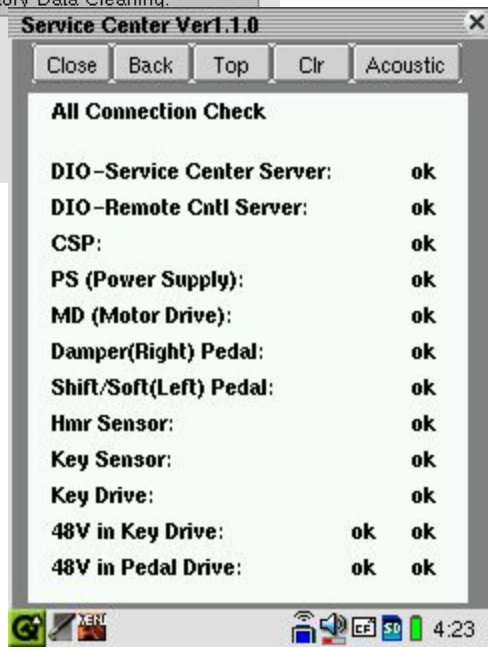
Press and hold keys [D], [M], and [P] in sequence within a second.

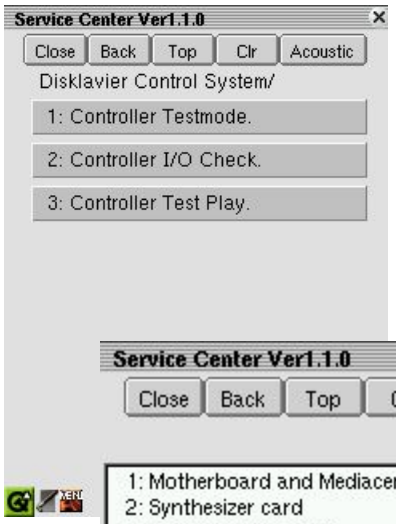
Important Maintenance Mode

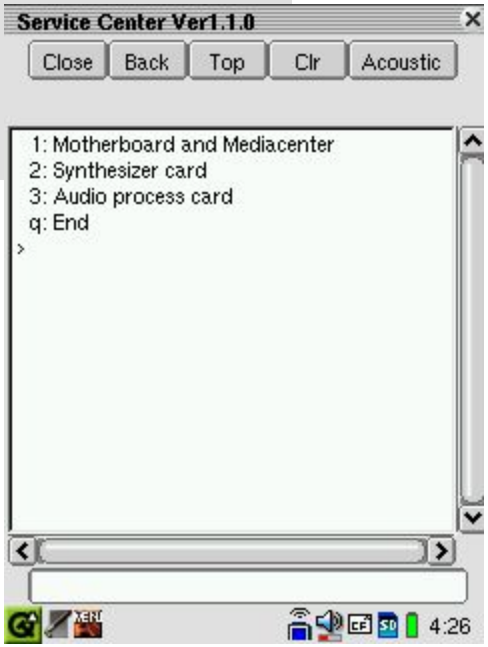












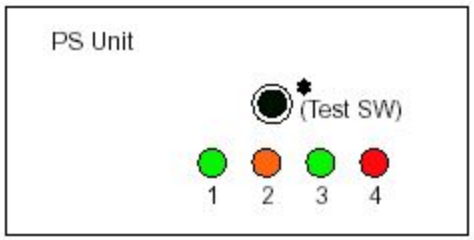
Failure Diagnostics Using LED

1.PS Unit

2.CSP Unit

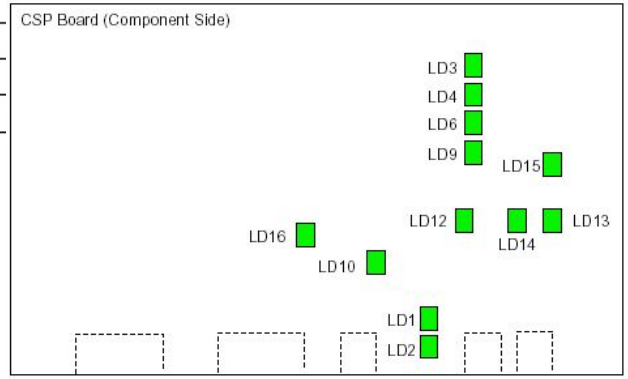
LED on the PS Unit

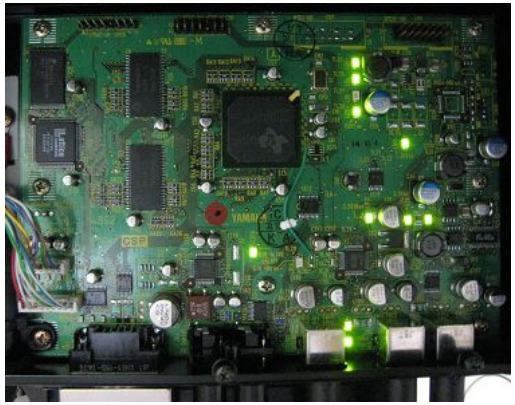
<table>
<tr><th>Ref No.</th><th>Printed</th><th>What</th><th>Normal</th></tr>
<tr><td>LD10
(1)</td><td>CPU ACTIVE</td><td>CPU running state</td><td>
<table>
<tr><td></td><td colspan="2">Lighting/Blinking pattern</td></tr>
<tr><td>①</td><td>Piano Standby Status</td><td>once / 3sec</td></tr>
<tr><td>②</td><td>Time elapsing from status 1 to status 3.</td><td>Fast blinking</td></tr>
<tr><td>③</td><td>On Status</td><td>once /1.5sec</td></tr>
</table>
※ 2 times /3 sec blinking or more during abnormal time.
</td></tr>
<tr><td>LD11
(2)</td><td>---</td><td>Power 5VSB (standby) output on</td><td>Lighting (green)
When primary SW is ON,5VSB is alive.
NOTE: In override mode,it is orange.
●(override mode is made by pushing the Test SW, and Primary SW ON))</td></tr>
<tr><td>LD5
(3)</td><td>+12VOUT</td><td>12V output</td><td>Lighting (green)</td></tr>
<tr><td>LD3
(4)</td><td>+48VIN</td><td>48V output</td><td>Lighting (red)
When some errors occureds,system will shutdown 48V intet.
※ Off during abnormal time, but it takes some time until the LED is turned off because a large-volume chemical capacitor is connected.</td></tr>
</table>



LED on the CSP

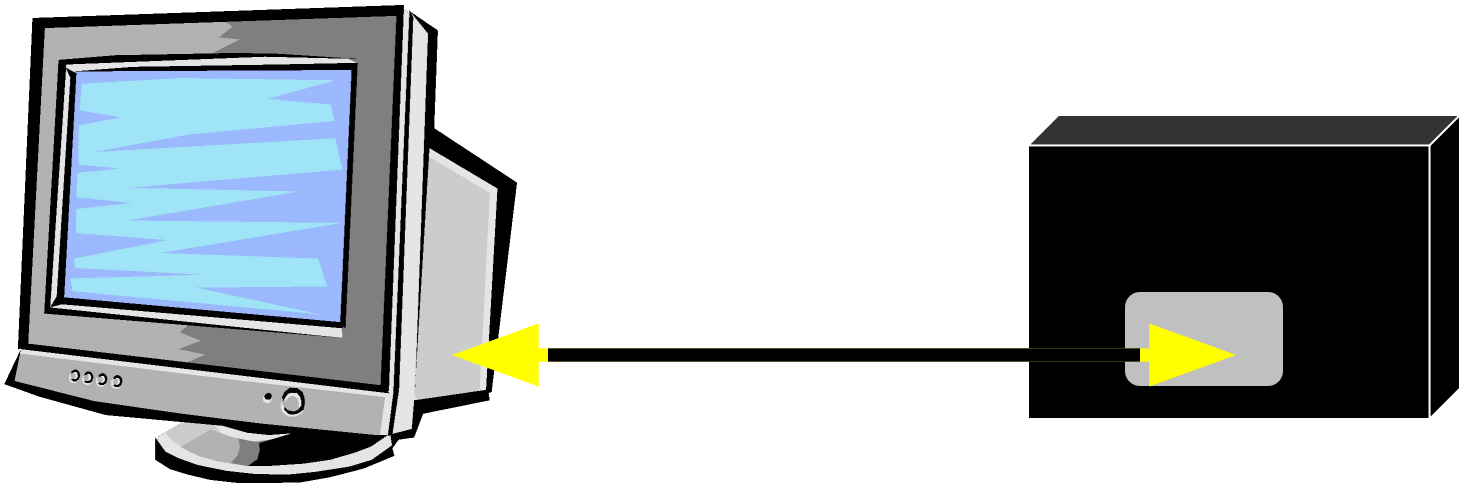
Ref No.	Printed	What	Normal
LD1	12Von		Lighting (green)
LD2	5VSBon		Lighting (green)
LD3	---		Lighting (green) Program started at DSP on CSP.
LD4	---		Blinking (green) Data on start-up is exchanged between CSP and other units.
			Lighting (green) Above-mentioned data exchange is completed.
LD6	---	For design	
LD9	DSPrun		Blinking (green) DSP on CSP is working normally.
LD10	DIR-H8run		Blinking with shorter light on time (green) No signal is coming from I/O center. Power of the piano is turned off.
			Blinking with the same lighting time as the extinguished time (light on time and light off time are 50%/50%) (green) Receiving signal from I/O center. Power of the piano is turned on.
LD12	3.3VSBon	+3.3VSB	Lighting (green)
LD13	5Von	+5V	Lighting (green)
LD14	3.3Von	+3.3V	Lighting (green)
LD15	1.26Von	+1.26V	Lighting (green)
LD16	DIR-ALIVE	For design	





Start up message of I/O Center

Connection with I/O Center



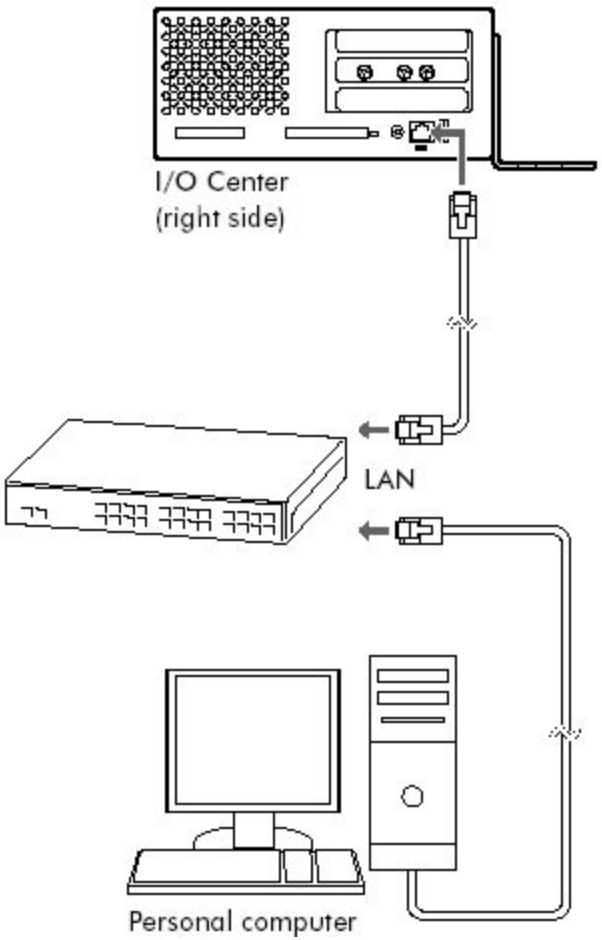
RGB cable or RCA cable

Thank you for your attention

Let’s have a 15min break.

From/To PC

From/To PC



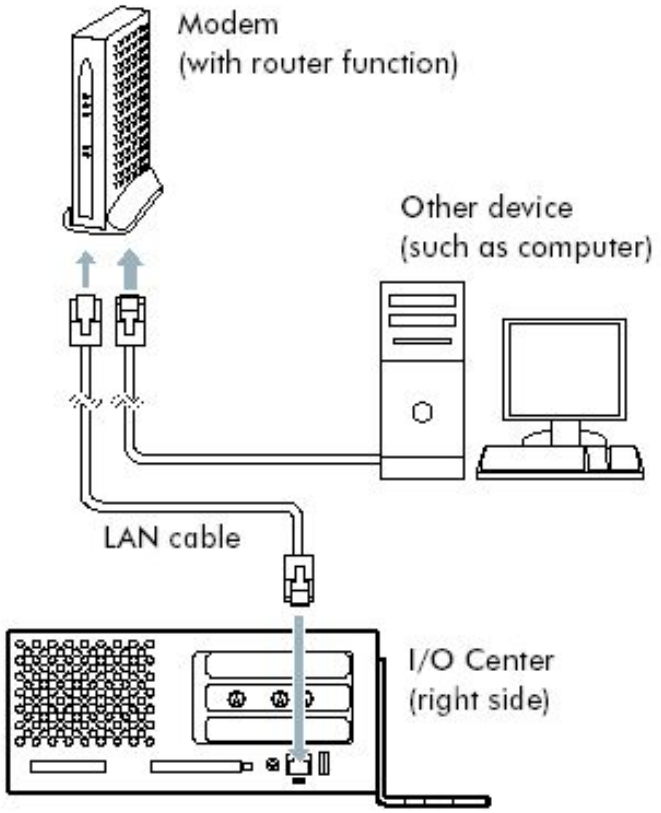
- Connect the I/O Center to a LAN
- [Start] -> [My Network Places]
- Open [DKV****] folder.
- Copy the song files to [FromToPC] folder

Basic Internet Connection

Connecting the Disklavier to the Internet

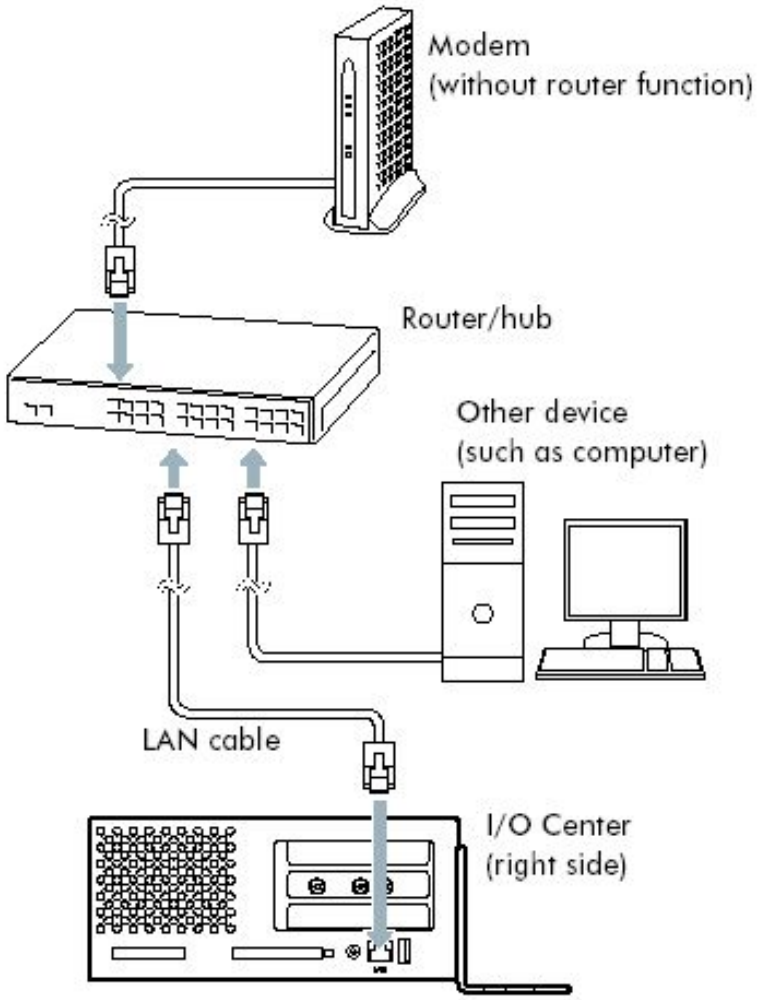
Connection example 1:

Using a modem with router function

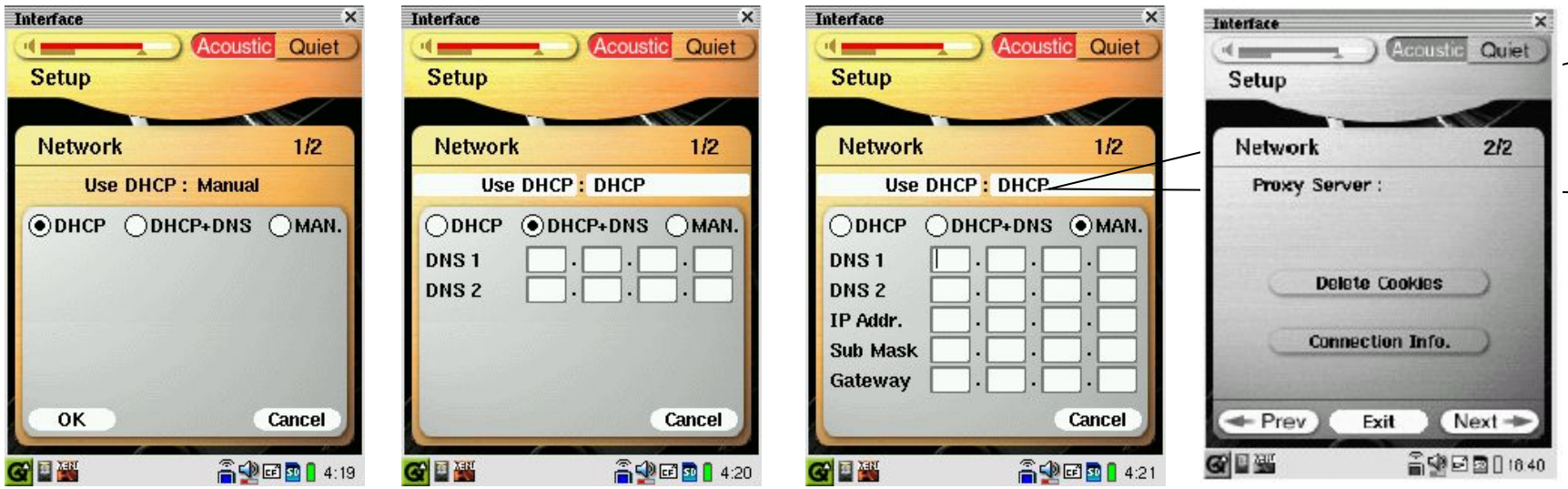


Connection example 2:

Using a modem without router function



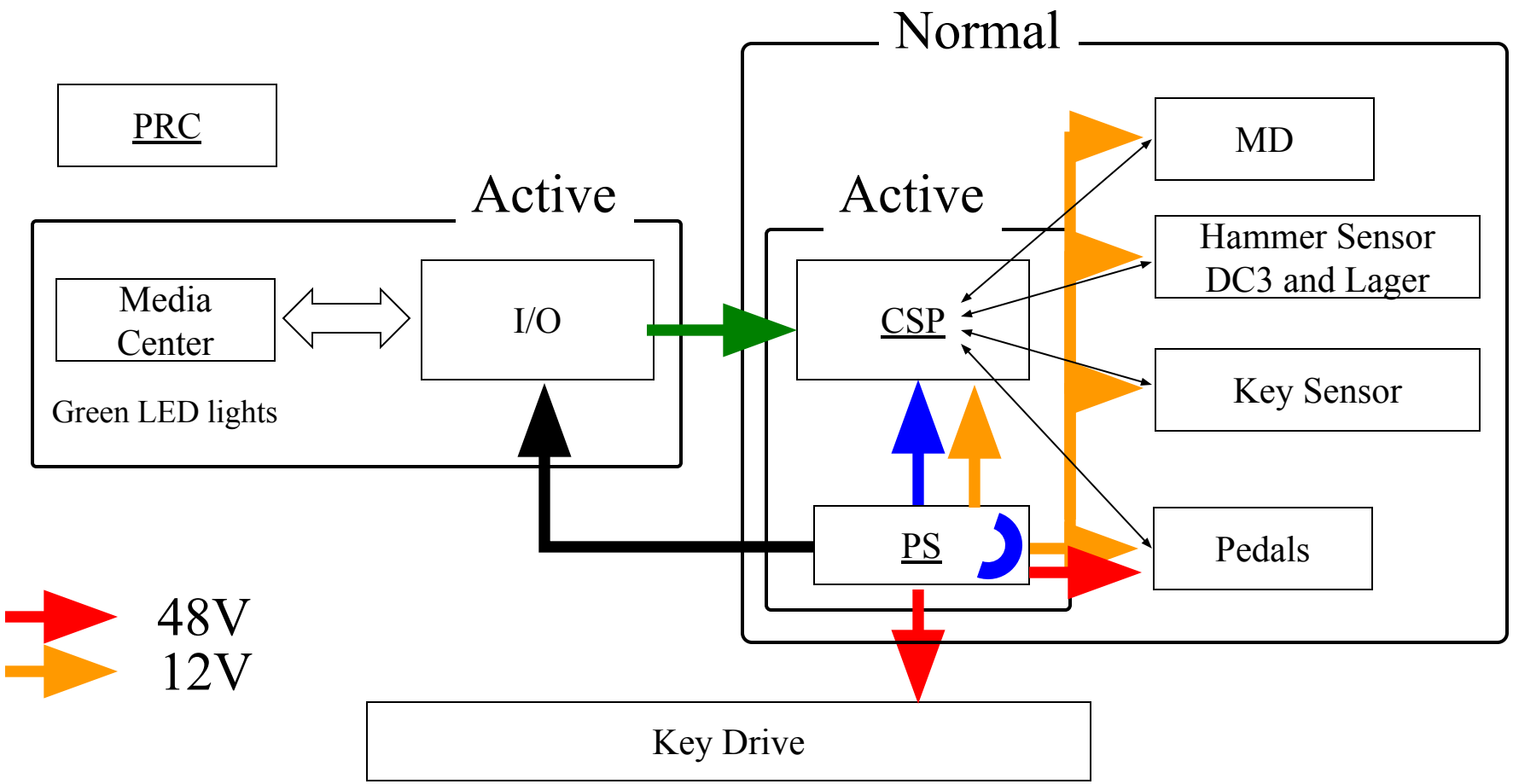
Setting Up the Disklavier for Internet Connection



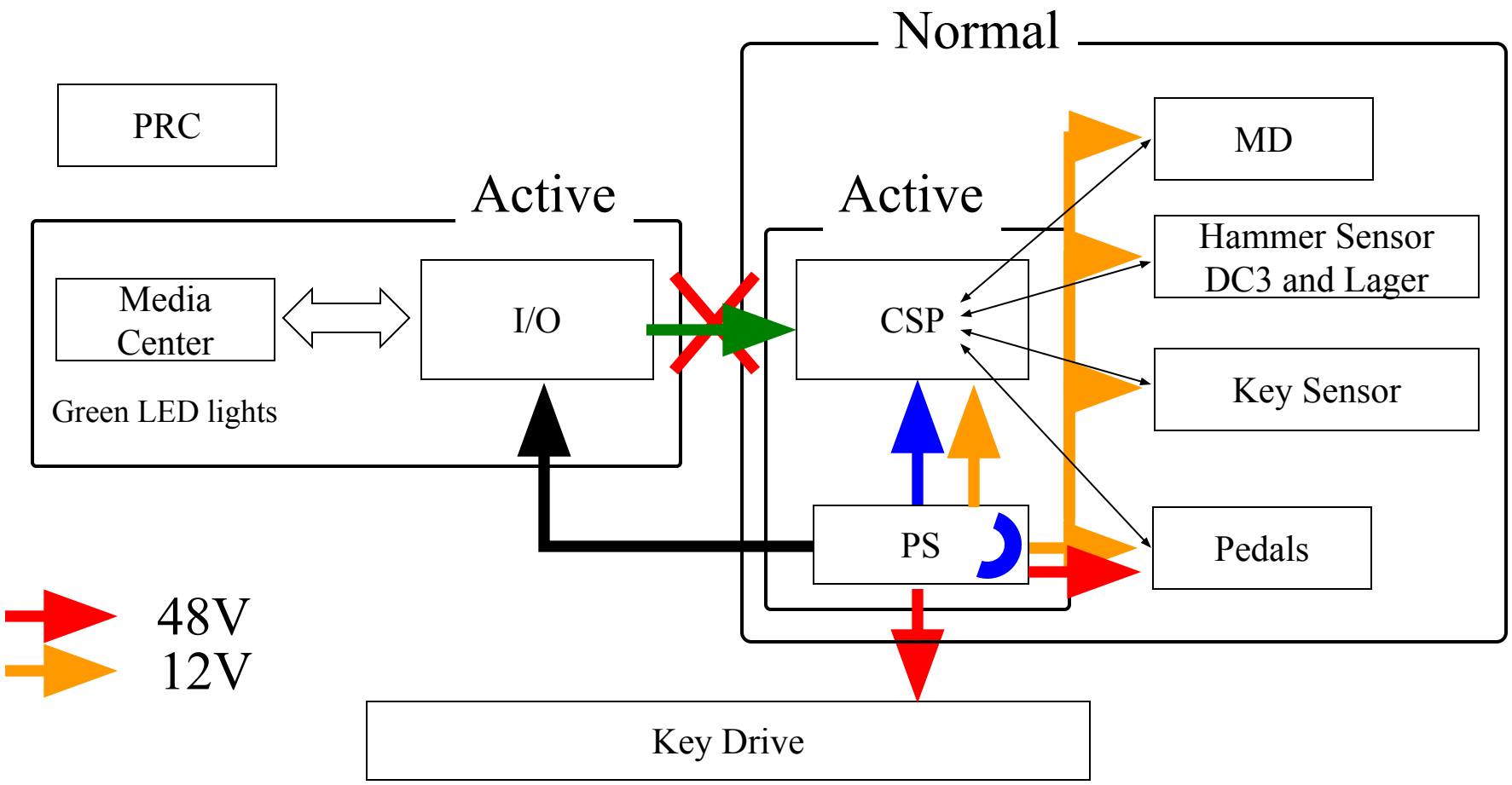
Field Case Analysis

- I/O - No booting up
- No Disklavier
  - No Recording, No Playback, No Quiet Mode
- Power Supply (PS) - click noise
- PRC - unresponsive touch screen
- PRC - reinstalling the OS
- etc

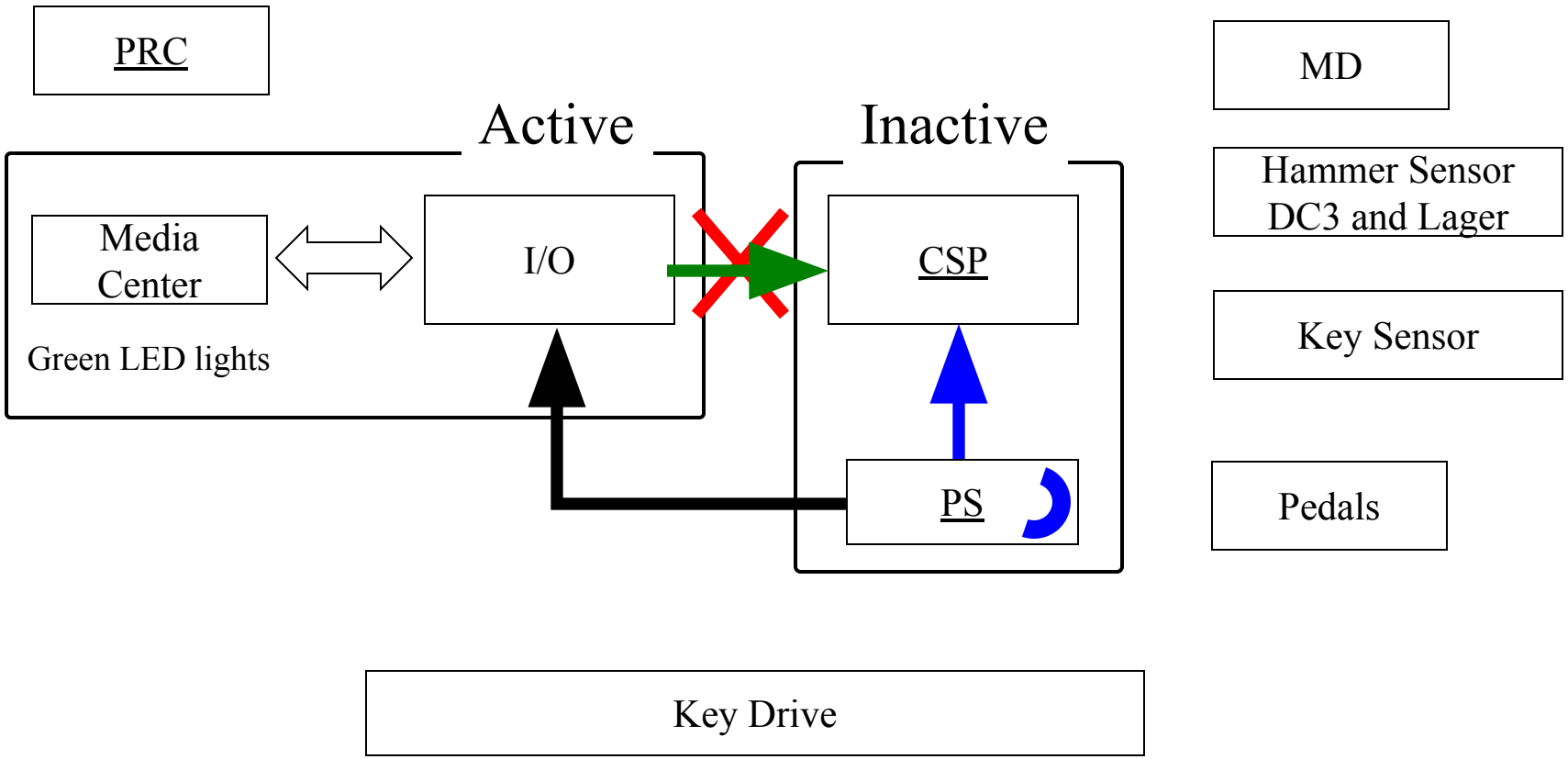
Normal Situation



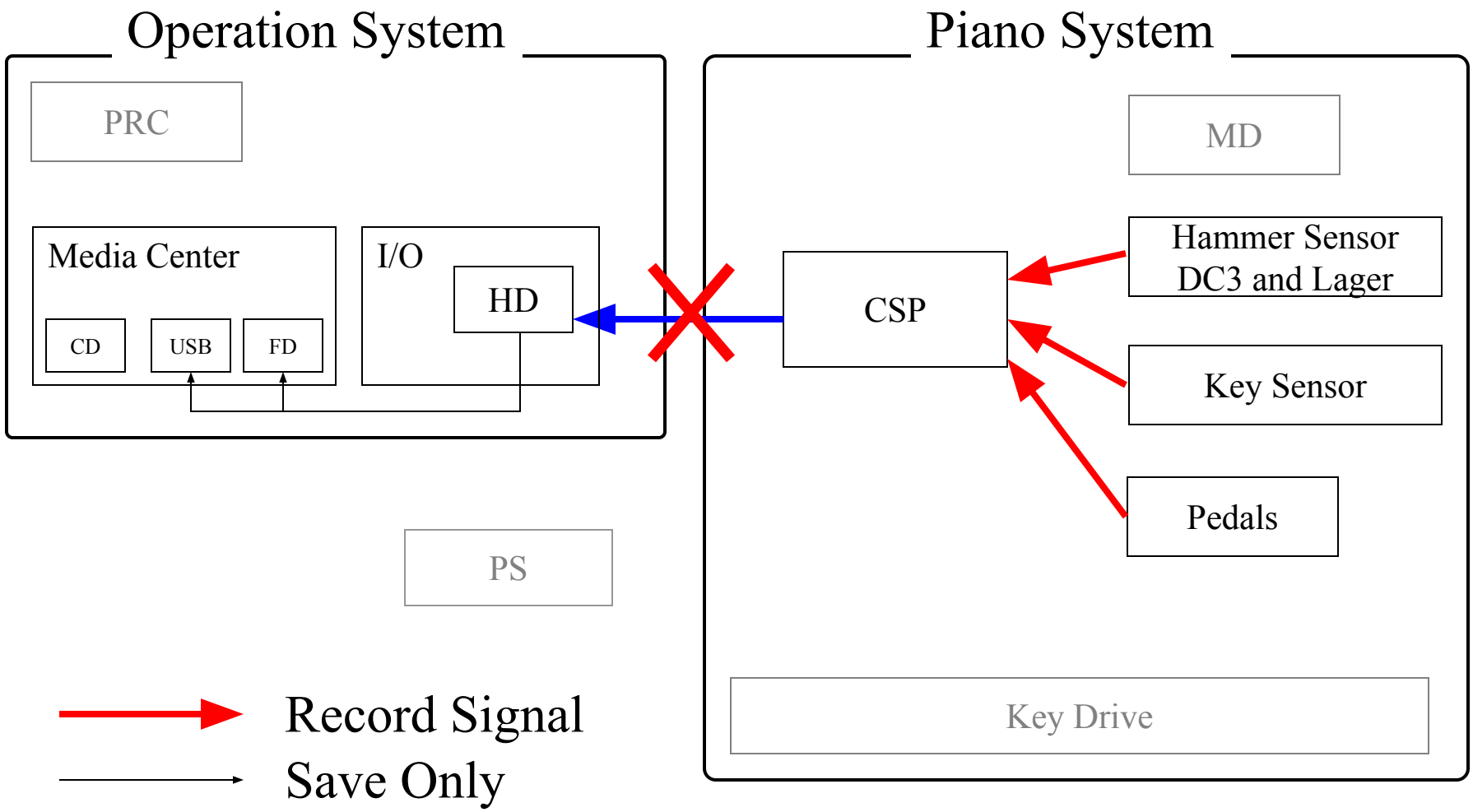
Abnormal Situation



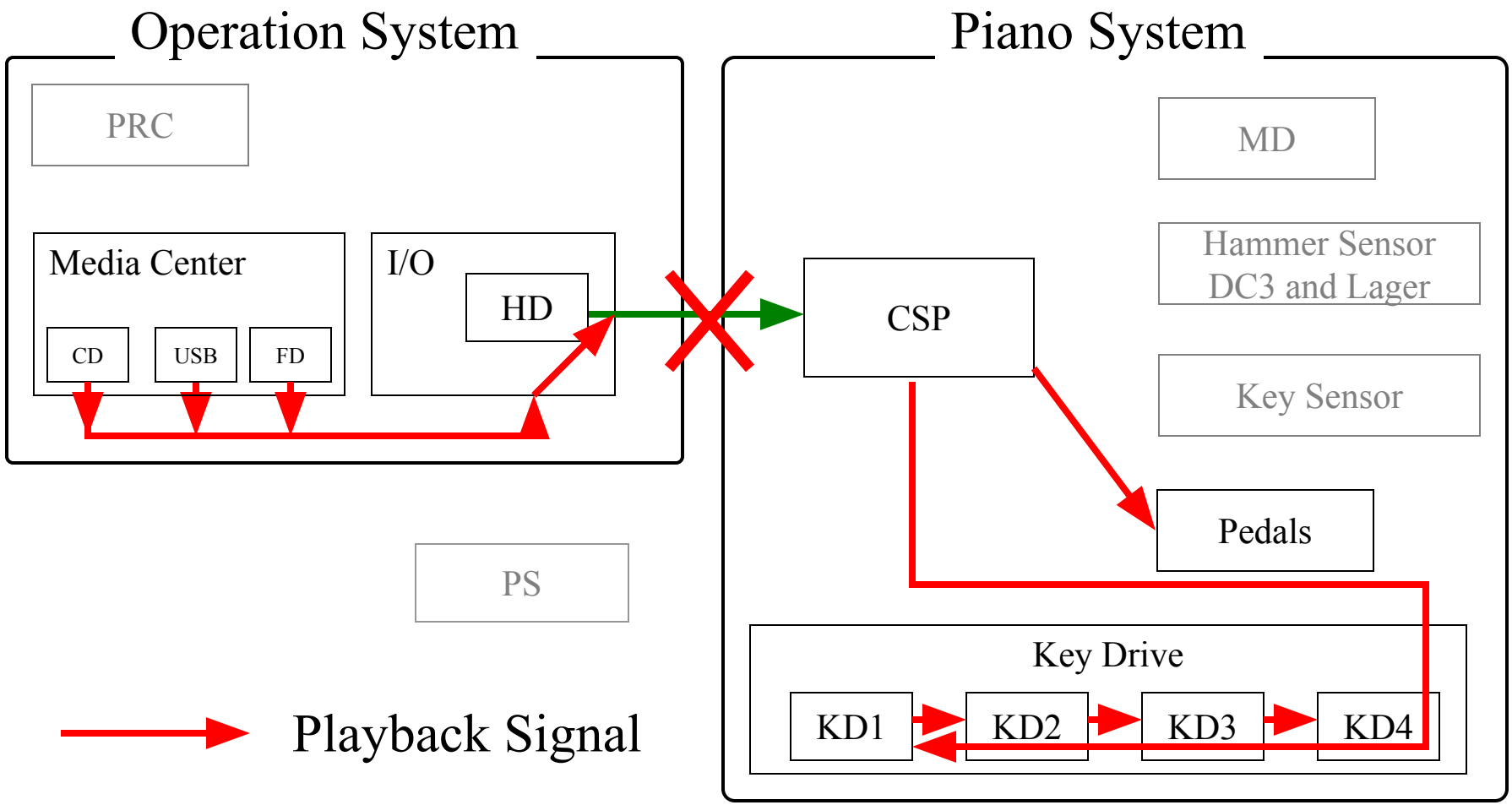
Abnormal Situation



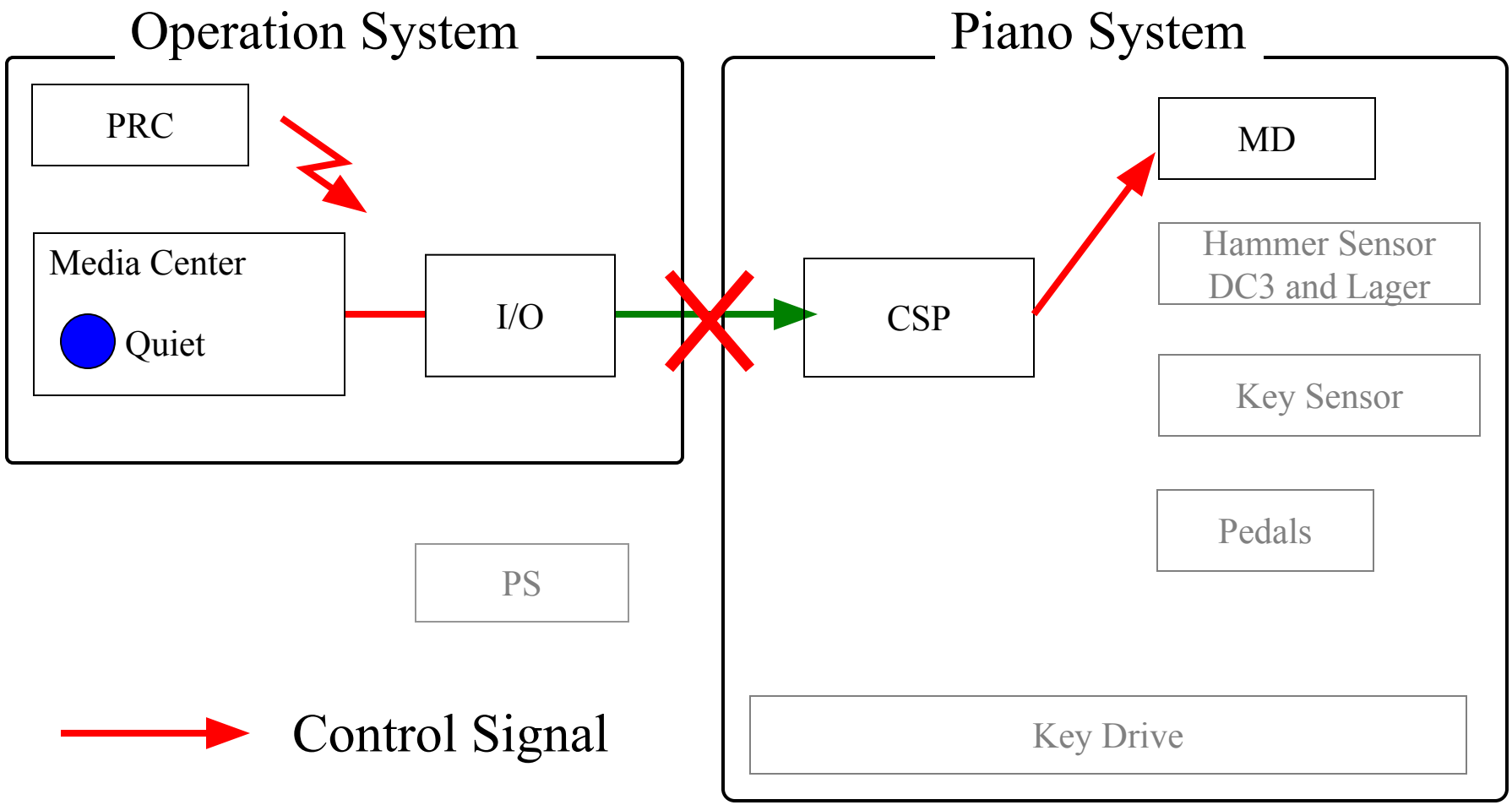
Record Flow Chart



Playback Flow Chart



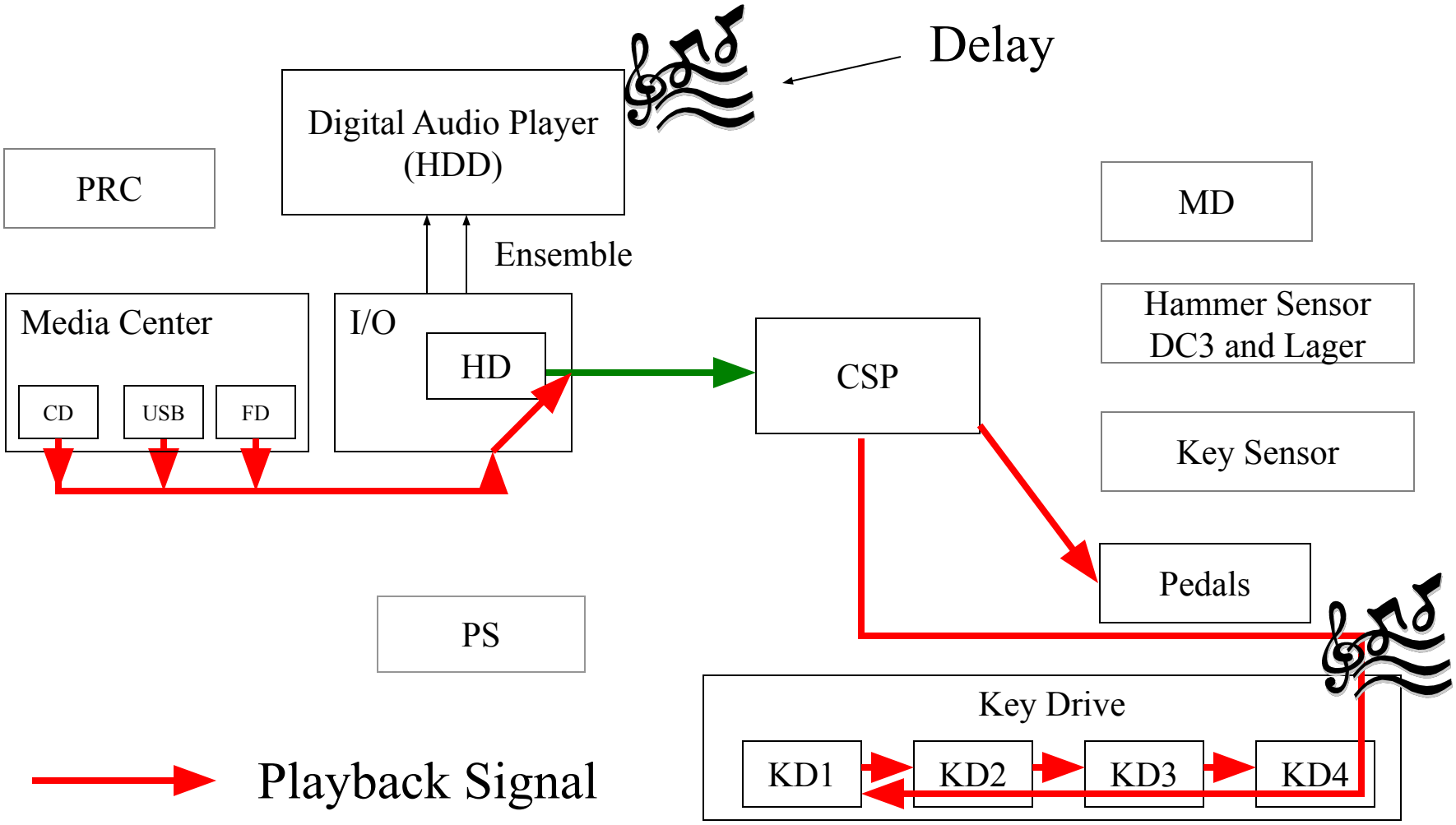
Quiet Mode Flow Chart



RCA cable

- The Green RCA cable is most important for working of the CSP - Piano System - .
- The Blue RCA cable is important for transmission of the signal from Piano System to I/O Center, especially in the recording mode.

Digital Audio Connection



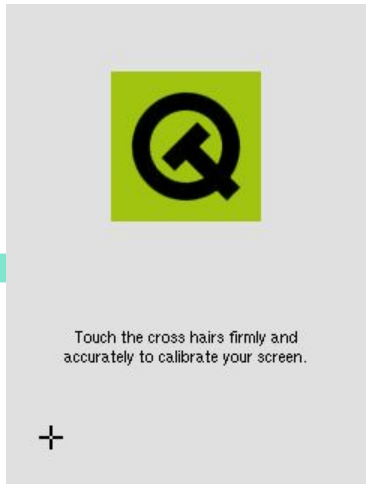
PRC-100

Fixing the unresponsive Screen

- This procedure is done when the screen does not respond or tapping a specific icon gives us a different result.

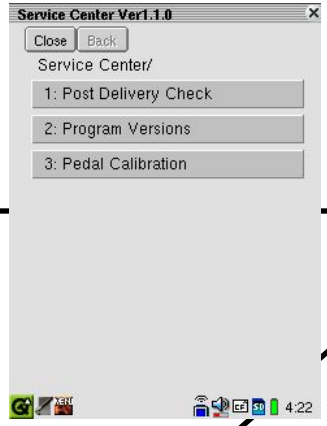
Press
[Q][F][I]

Press
[R]

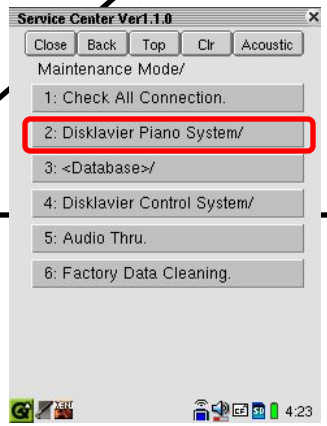


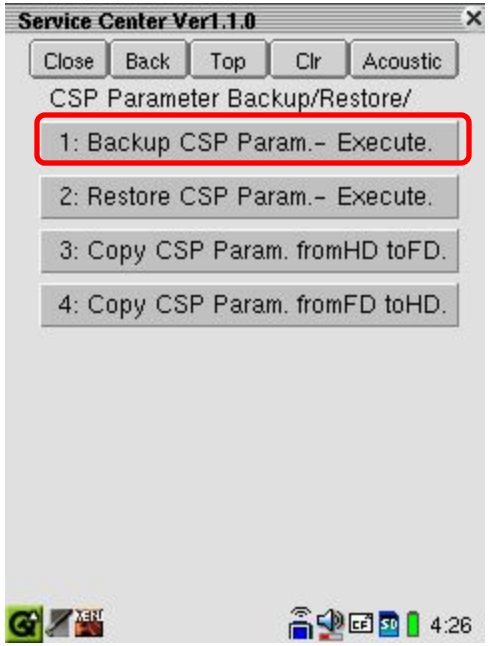
Thank you for your attention

Replacing the CSP Board

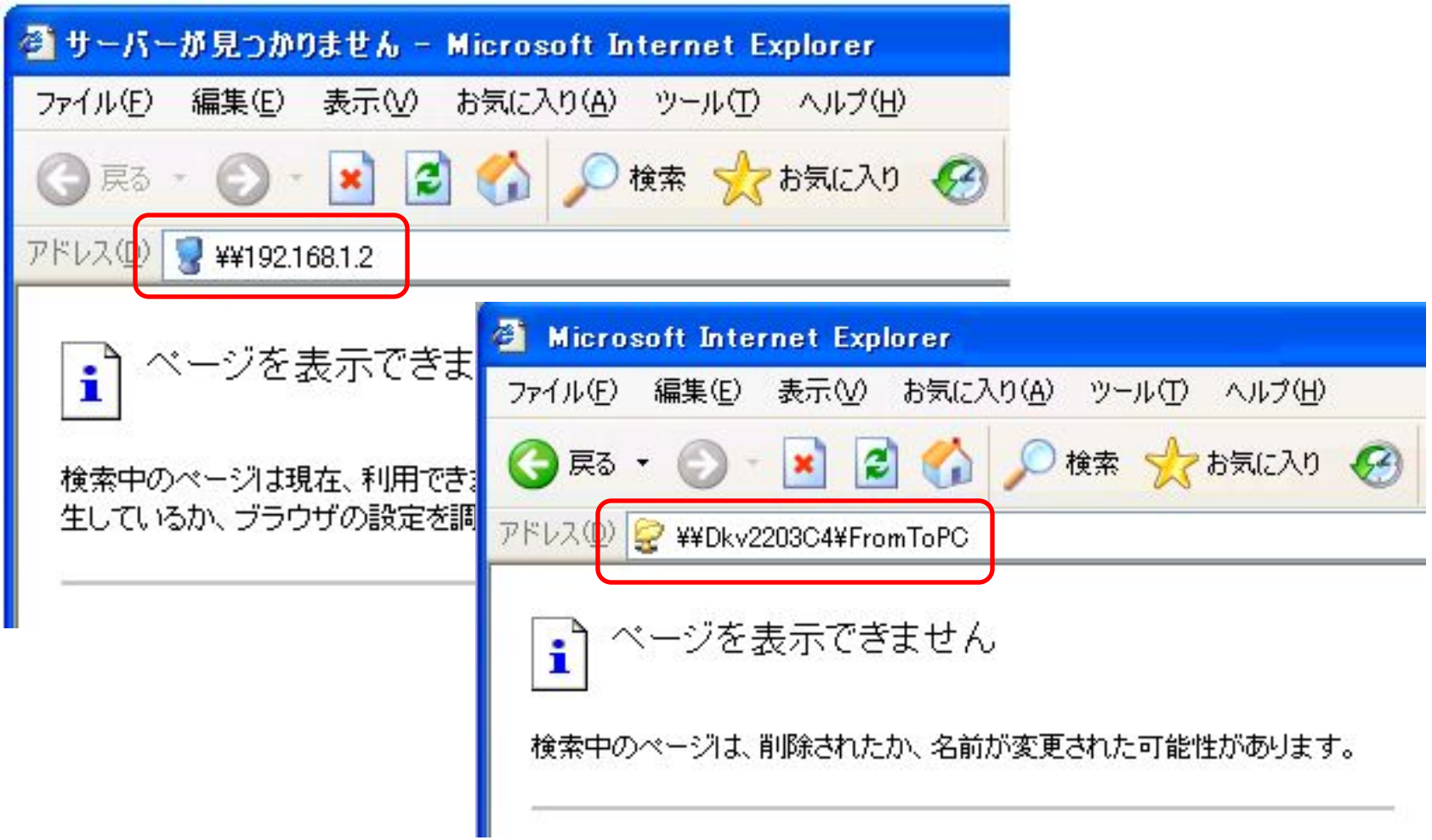


Hold keys [D], [M], and [P] in sequence within a half second.

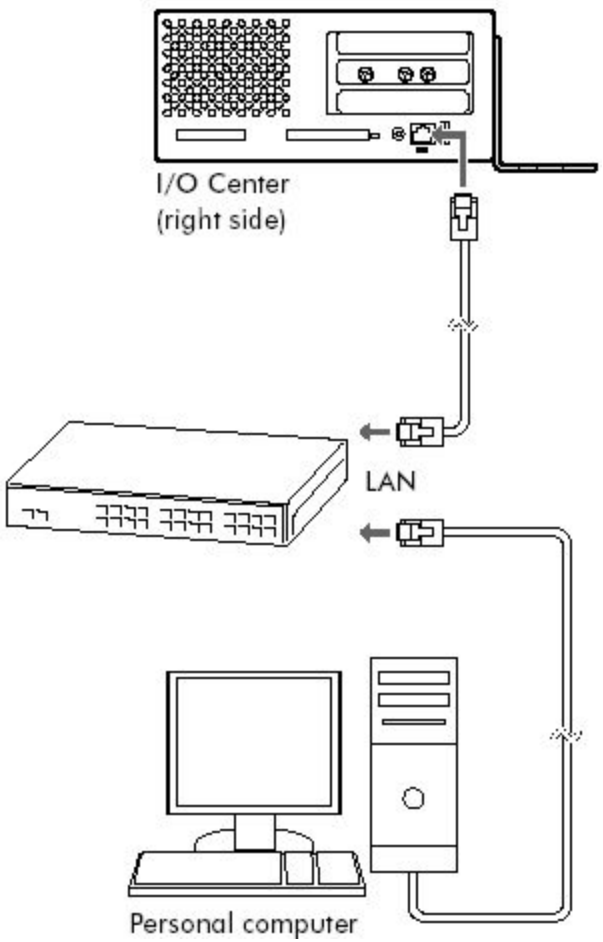




Direct Connection Between I/O and PC

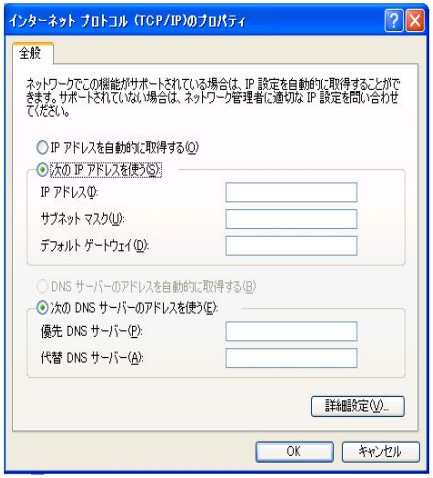


Direct Connection Between I/O and PC



Example
DNS1 :192.168.1.1
DNS2 :192.168.1.1
IP :192.168.1.**2**
Sub Mask :255.255.255.0
Gateway :192.168.1.1

Example
DNS1 :192.168.1.1
DNS2 :192.168.1.1
IP :192.168.1.**1**
Sub Mask :255.255.255.0
Gateway :192.168.1.1



LEDs on the HS

Ref No.	Printed	What	Normal
LD1	+12VIN	+12V Power Income	lighting(green)
LD2	+3.3DIN	+3.3V Digital Power Income	lighting(green)
LD3	+3.3AIN	+3.3V Analog Power Income	lighting(green)
LD4	DSPCHK	DSP Running	blinking(green)