



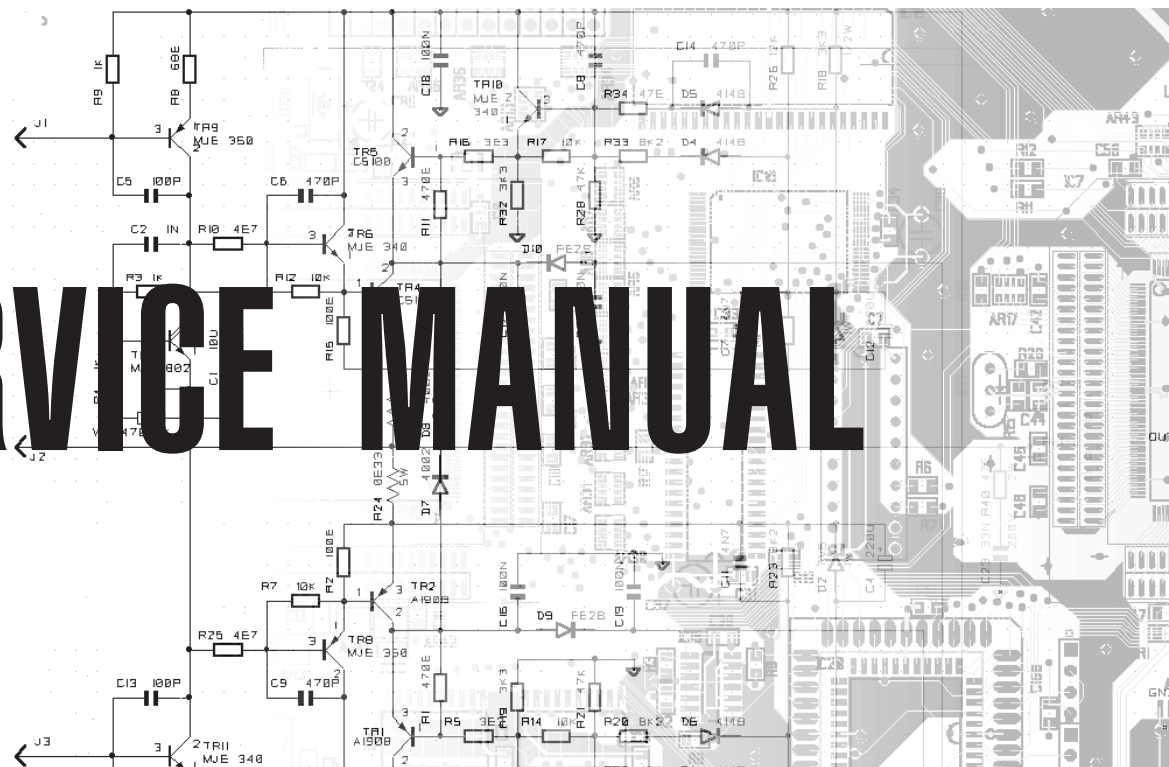
RP100

RP150

RP200

Baldwin Pianovelle

SERVICE MANUAL



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Warnings



Notice

Service must be carried out by qualified personnel only. Any tampering carried out by unqualified personnel during the guarantee period will forfeit the right to guarantee.

For a correct operation of the instrument, after having switched off, be careful to wait at least 3 seconds before switching on again.

To improve the device's specifications, the schematic diagrams may be subject to change without prior notice.

All components marked by this symbol have special safety characteristics, when replacing any of these components use only manufacturer's specified parts.

The (μ) micro symbol of capacitance value is substituted by U.

The (Ω) omega symbol of resistance value is substituted by E.

The electrolytic capacitors are 25Vdc rated voltage unless otherwise specified.

All resistors are 1/8 Ω unless otherwise specified.

All switches shown in the "OFF" position. All DC voltages measured to ground with a voltmeter 20K Ω m/V.

← Soldering point.

↑ Supply voltage.

⊥ Logic supply ground.

• Male connector.

□ Test point.

⊥ Analog supply ground.

○ Female connector.

◊ Flag joined with one or more flags

⊥ Chassis ground.

⊔ M/F faston connector.

with the same signal name inscribed.

⊕ Earth ground.



ATTENTION

Observe precautions when handling electrostatic sensitive devices.

Address

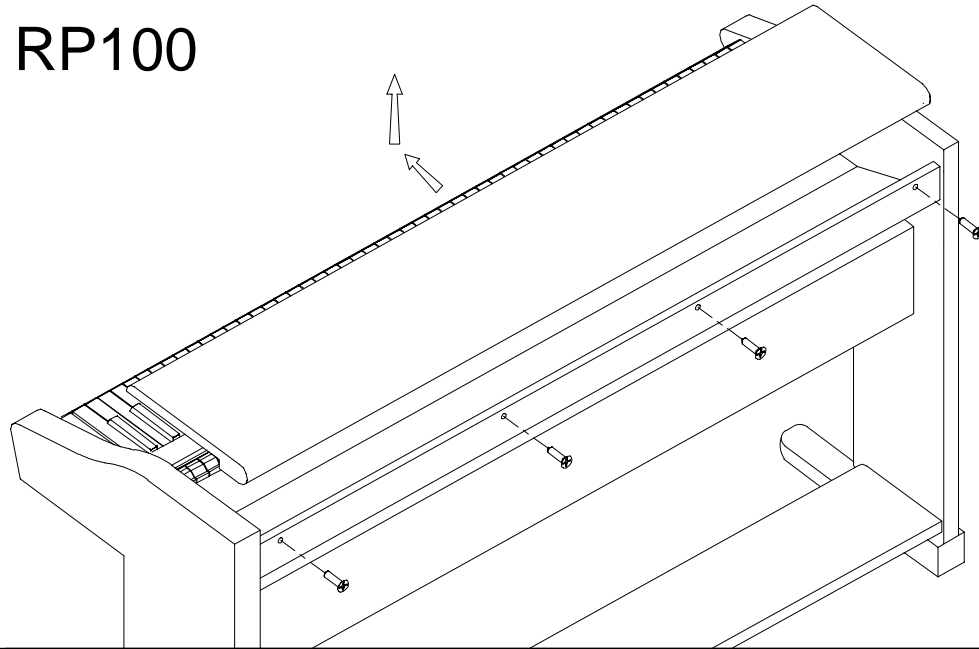
GENERALMUSIC S.p.A. Sales Division: 47842 S.Giovanni in Marignano (RN) ITALY - Via delle Rose, 12 - tel. 0541/959511 - fax 0541/957404
GENERALMUSIC on the NET: <http://www.generalmusic.com>



▲ CODE: 270212 ▼

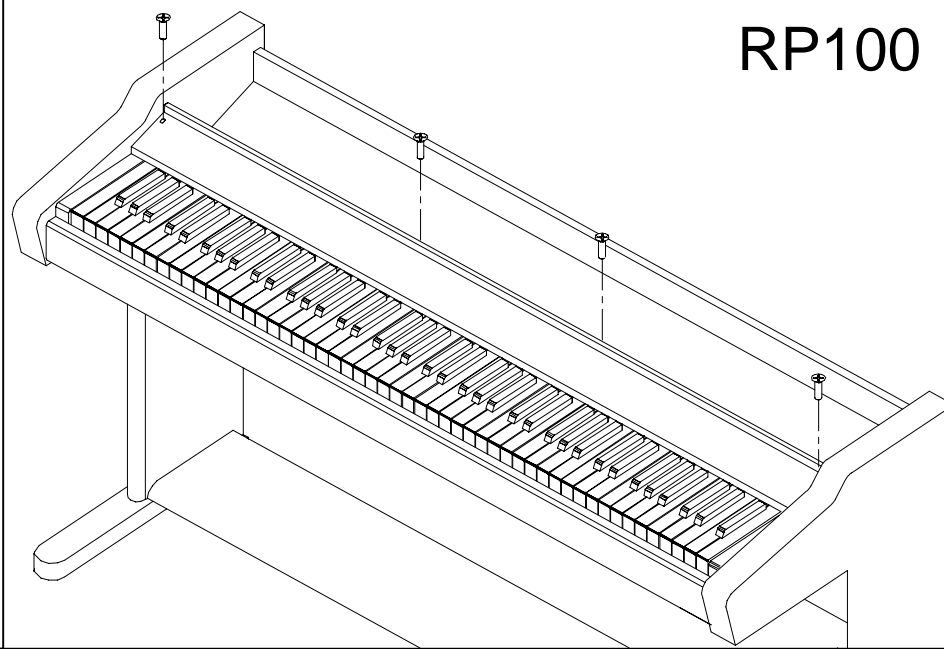
1) TO REMOVE THE COVER UNSCREW THE 4 SCREWS ON THE REAR, PULL THE COVER TOWARDS YOU AND LIFT IT UP.

RP100



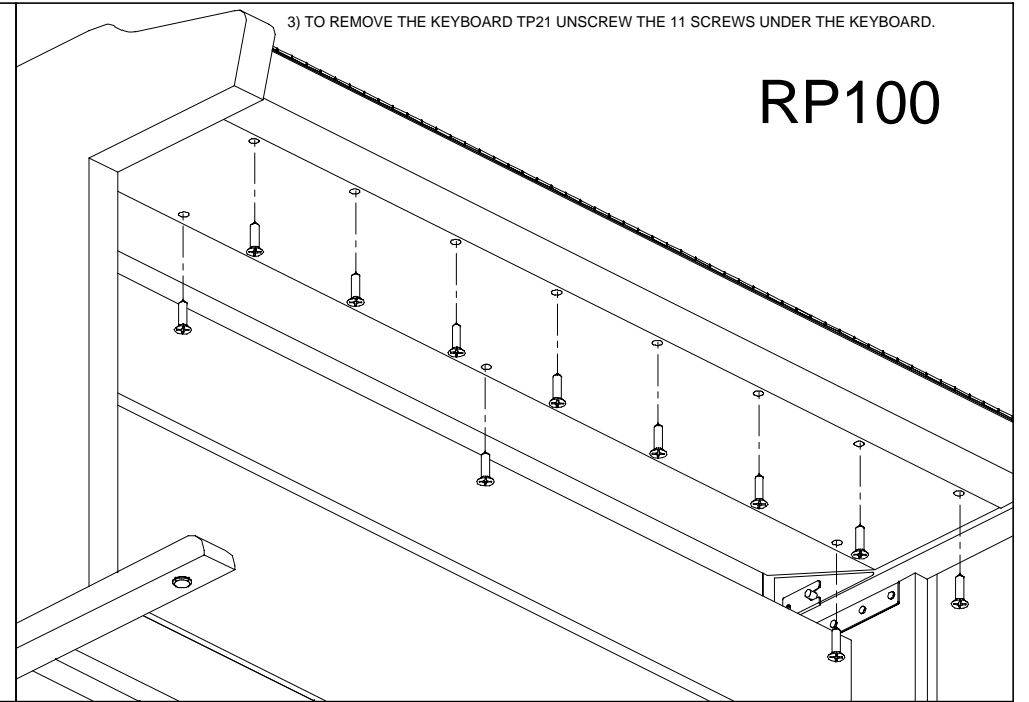
2) TO REMOVE THE CONTROL PANEL UNSCREW THE SCREWS AT EACH END AND THE SCREWS THAT ANCHOR THE CONTROL PANEL SUPPORTS TO THE CHASSIS.

RP100



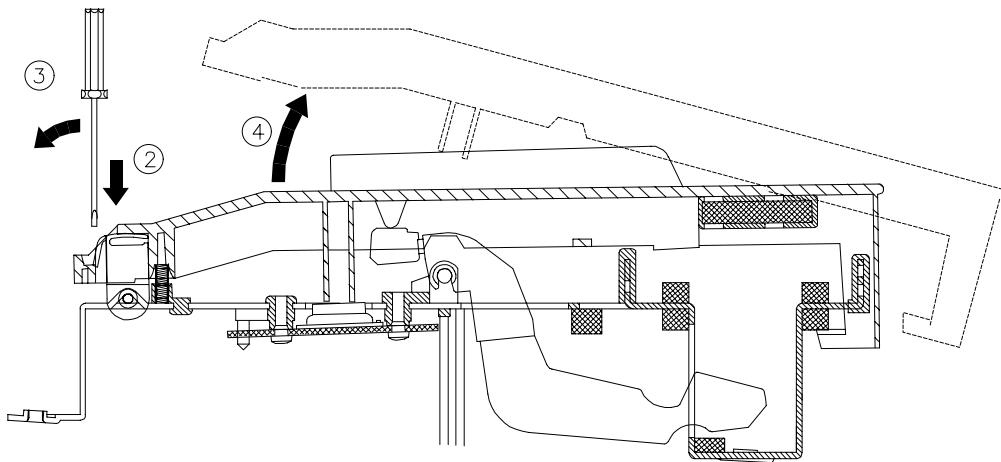
3) TO REMOVE THE KEYBOARD TP21 UNSCREW THE 11 SCREWS UNDER THE KEYBOARD.

RP100



4) TO REMOVE A KEY INSERT A SCREWDRIVER OR OTHER SIMILAR OBJECT IN THE SPLIT AT THE KEY BACK, APPLY A LIGHT PRESSURE AND PUSH IN THE DIRECTION SHOWN.
NOTE: BEFORE YOU REMOVE A NATURAL KEY YOU MUST REMOVE THE KEYBOARD, IF YOU REMOVE A SHARP KEY THIS OPERATION IS NOT NECESSARY

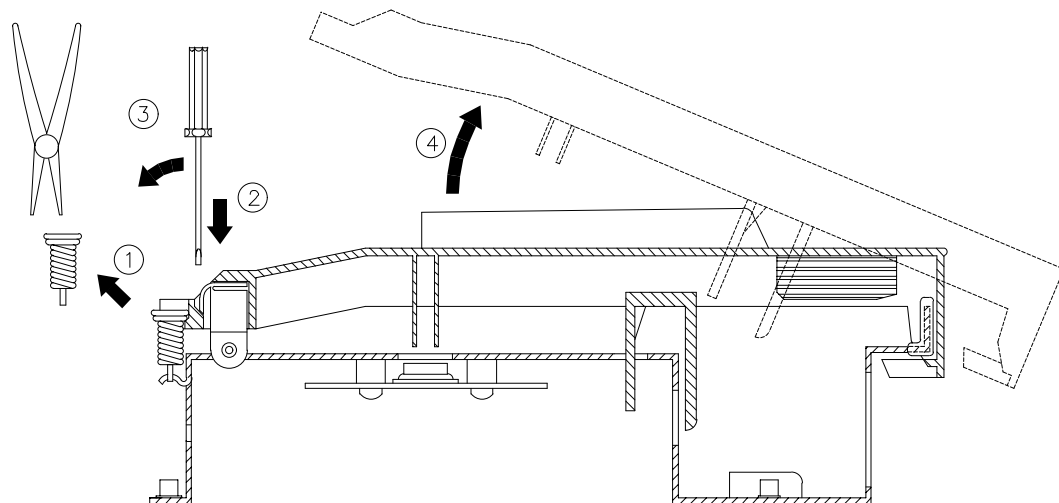
TP21



- ① REMOVE THE KEY RETURN SPRING.
- ②③④ UNLOCK THE KEY APPLYING NOT MUCH STRENGTH.

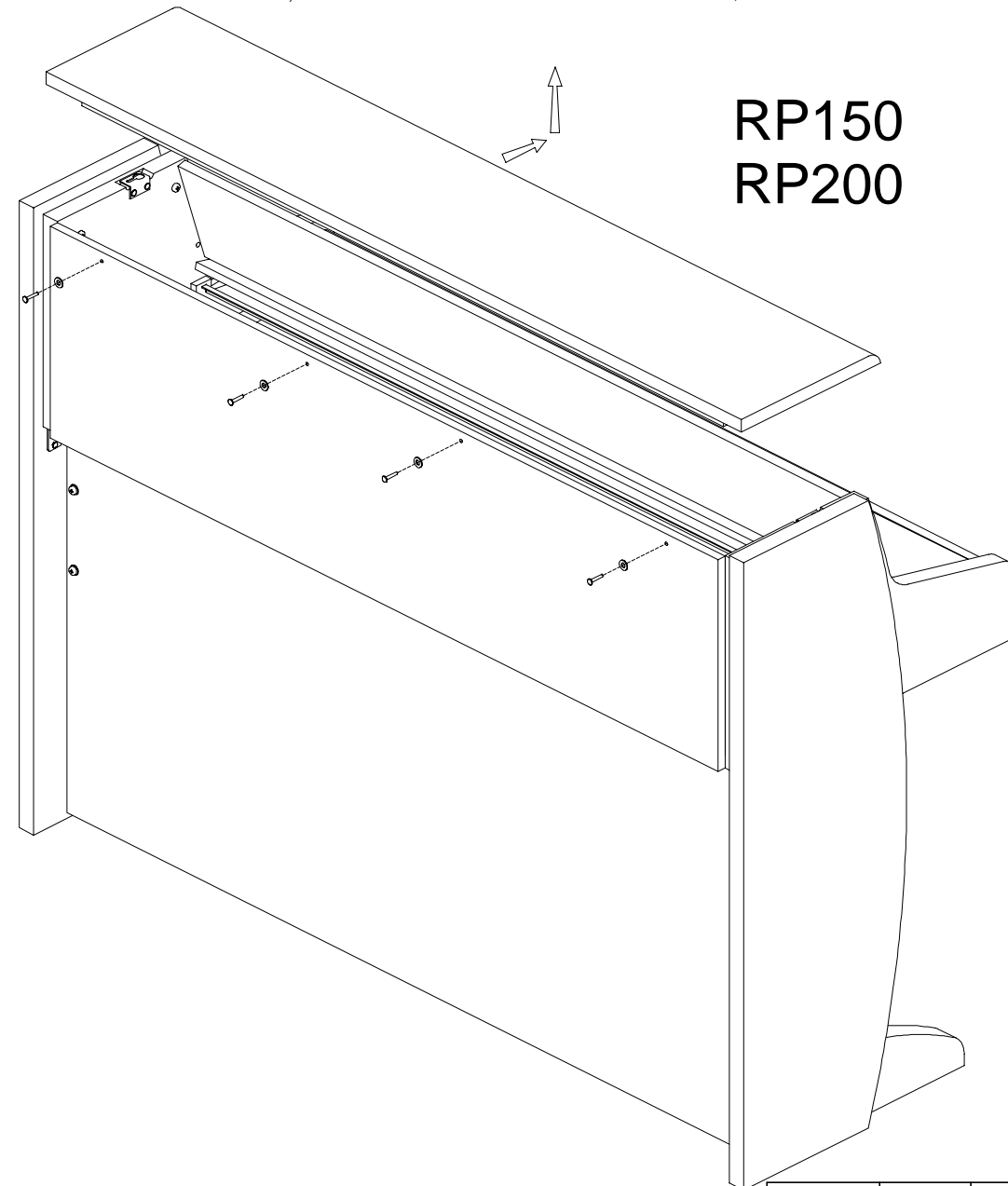
NOTE: TO REMOVE A SHARP KEY BEFORE YOU MUST REMOVE THE NEAR NATURAL KEYS.

TP10



1) TO REMOVE THE COVER UNSCREW THE 4 SCREWS ON THE REAR, PULL THE COVER TOWARDS YOU AND LIFT IT UP.

RP150
RP200



DRWG. BOCCATO	DWG#00870	PCB#	GENERALMUSIC S.p.A. ITALY
CKD	DISK: PARTn	RP-100-150-200	ALL RIGHTS ARE RESERVED NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP.	REV26/07/99	Opening Instructions & Keyboard disassembling	

RPI00-150 INITIAL CHECK																																											
Operation Descriptions	Display																																										
The procedures that follow must be executed subsequently in the order specified.																																											
Before turn on the instrument check the jumpers setting on CPU & SOUND GENERATOR BOARD corresponds at the model accordingly to the following table:	* REALPIANO * RP100																																										
<table border="0"> <tr> <td>MODEL</td> <td>J4</td> <td>J5</td> <td>J3</td> <td>J6</td> <td>J2</td> </tr> <tr> <td>RP100 GEM</td> <td>1-2</td> <td>1-2</td> <td>1-2</td> <td>1-2</td> <td>1-2</td> </tr> <tr> <td>RP100 BALDWIN</td> <td>1-2</td> <td>1-2</td> <td>1-2</td> <td>1-2</td> <td>2-3</td> </tr> <tr> <td>RP150 GEM</td> <td>1-2</td> <td>1-2</td> <td>1-2</td> <td>2-3</td> <td>1-2</td> </tr> <tr> <td>RP150 BALDWIN</td> <td>1-2</td> <td>1-2</td> <td>1-2</td> <td>2-3</td> <td>2-3</td> </tr> <tr> <td>RP90 GEM</td> <td>1-2</td> <td>1-2</td> <td>2-3</td> <td>1-2</td> <td>1-2 ** v.2.00 or greater</td> </tr> <tr> <td>RP90 BALDWIN</td> <td>1-2</td> <td>1-2</td> <td>2-3</td> <td>1-2</td> <td>2-3 ** v.2.00 or greater</td> </tr> </table>	MODEL	J4	J5	J3	J6	J2	RP100 GEM	1-2	1-2	1-2	1-2	1-2	RP100 BALDWIN	1-2	1-2	1-2	1-2	2-3	RP150 GEM	1-2	1-2	1-2	2-3	1-2	RP150 BALDWIN	1-2	1-2	1-2	2-3	2-3	RP90 GEM	1-2	1-2	2-3	1-2	1-2 ** v.2.00 or greater	RP90 BALDWIN	1-2	1-2	2-3	1-2	2-3 ** v.2.00 or greater	* BALDWIN * PIANOVELLE RP100
MODEL	J4	J5	J3	J6	J2																																						
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RP90 GEM	1-2	1-2	2-3	1-2	1-2 ** v.2.00 or greater																																						
RP90 BALDWIN	1-2	1-2	2-3	1-2	2-3 ** v.2.00 or greater																																						
Remove the secondary fuses F1, F2, F3, located on POWER AMPLIFIER & SUPPLY BOARD; turn on the instrument and verify the supply AC voltages: (CN5) between pin1 and pin3 = 10±0,5Vac (CN9) between pin1 and pin2 = 16±0,8Vac (CN9) between pin1 and pin3 = 16±0,8Vac (CN9) between pin2 and pin3 = 32±1,6Vac	* REALPIANO * RP150																																										
Turn off the instrument, and put the fuses back on its holders.	* BALDWIN * PIANOVELLE RP150																																										
Turn on the instrument and the appropriate welcome message appears on the display.	* REALPIANO * RP90																																										
A few seconds later the led GRAND PIANO light. Check the supply DC voltages on CPU & SOUND GENERATOR BOARD: (CN8) between pin9 and pin7 = +5±0,25Vdc (CN8) between pin1 and pin4 = +12±0,6Vdc (CN8) between pin1 and pin5 = -12±0,6Vdc	* BALDWIN * PIANOVELLE RP90																																										
	INTERNAL PRESET GRAND PIANO																																										

RPI00-150 AUTOTEST PROCEDURE	
Operation Descriptions	Display
The instrument starts in AUTOTEST mode turning on the instrument while pressing down the "GRAND PIANO" button (pressing PRESET instead GRAND PIANO the procedure starts from LCD display test). NOTE: Each time you press the "GRAND PIANO" button the autotest procedure proceeds to the next step.	RP98 AUTOTEST
Set the default display contrast in the ±6 range by pressing the DATA + or - buttons.	CONTRAST = #
The instrument show the date, time and release version of the software loaded in flash memory.	mmm dd yyyy hh:mm:ss V #.##
The instrument asks if you want to update it, press GRAND PIANO to skip, the appropriate procedure to update the software is explained further.	EPROM to FLASH push REC to prog
The instrument performs the flash memory data checksum and display it in hexadecimal value. NOTE: the BT (boot) value must be 95C4 for ver.2.00, if it does not correspond you can not update software thru serial port but only with Update Software Board.	Wait * Eprom Checksum
The instrument performs the RAM memory test showing the address checked.	cks BT PR ALL #### #### ####
The LCD display test shows two rows of sixteen dark spaces.	RAM MEMORY CHECK addr 23BFFF OK
Check that all leds are lighting.	██████████ ██████████ --- LED TEST --- Are all leds on?
Check the VOLUMES ranges from 0 to 127. Check all buttons (except GRAND PIANO) pressing their one at a time and checking that corresponding led lights, pressing PAGE UP and DOWN buttons the display shows "U" and "D", pressing DATA + and - buttons the display shows "+" and "-", pressing BALANCE < and > buttons the display shows an "X" in 1 and 2 digits, pressing TOUCH, STORE and REC/CONTROL buttons the display shows an "X" in 3, 4 and 5 digits respectively.	Button test Vol:0 12345
Check the SOFT and SUSTAIN pedals, pressing each one the value change from 0 (released) to 127 (pressed), for RP100 the DAMPER pedal operation is similar, for RP150 the DAMPER pedal varying its value continuously from 0 (released) to nearly 127 (pressed).	U Button test + D Vol:127 XXXXX-
Check the MIDI I/O connecting the MIDI OUT and MIDI IN sockets by a MIDI cable.	Soft Sust Damp 0 0 0
Check COMPUTER I/O shorting pin 3 and pin 5 on the COMPUTER socket, check with the oscilloscope a 4Vpp (1Mhz) signal on pin 1, set volume to half stroke.	TEST MIDI IN/OUT LOOP DETECTED OK
The instrument generates a 1KHz sinusoidal signal in both audio channels. VOLUME fader controls the amplitude of signal and TRANPOSE b and # buttons controls the frequency from 10Hz to 2756Hz.	TST COMPUTER I/O LOOP DETECTED OK
	SINUS. SWEEP Freq. 1000 Hz

Re-set the frequency at 1KHz and check HEADPHONES and AUX outputs with the oscilloscope inserting a stereo jack in the left phones socket (speakers will go be silent) and two mono jack in the AUX OUT sockets and set volume to its maximum.	
Now verify the following level of signals: Phones output without load = 17±1.7Vpp AUX output = 1.35±0.14Vpp	
Set the VOLUME to minimum.	
Apply a sinusoidal signal of 0.730Vpp at 1KHz with a generator to the AUX IN left and right sockets and verify the signal output: AUX output = 1.35±0.07Vpp	
Autotest is over, turn off the instrument.	TEST END: SWITCH POWER TO RESTART

RPI00-150 O.S. UPDATING PROCEDURE up to ver. 2.00 with Updating Software Board (751180)	
Operation Descriptions	Display
Start with the instrument in AUTOTEST mode as described above and press GRAND PIANO 2 times until the display shows the software version loaded in flash memory.	mmm dd yyyy hh:mm:ss V #.##
Press GRAND PIANO to skip this procedure.	EPROM to FLASH push REC to prog
The instrument performs the flash memory data checksum and display it in hexadecimal value.	Wait * Eprom Checksum
Compare the software version and checksum with the value imprinted onto the EPROM, if one of these does not match, the system must be upgraded, proceed to the next step.	cks BT PR ALL #### #### ####
Turn off the instrument.	
Insert the EPROM BOARD (where the operating system is stored) in the CN3 connector located on CPU & SOUND GENERATOR BOARD.	
Start with the instrument in AUTOTEST mode as described above and press GRAND PIANO 3 times.	
When the display shows this message press REC.	EPROM to FLASH push REC to prog
The instrument erases the previous data in flash memory. After which the instrument displays the amount of memory programming and finally the operation successful. If the programming fails check the EPROM BOARD connection and repeat this procedure from start.	EPROM to FLASH erasing
The instrument performs the eprom memory data checksum and displays it in hexadecimal value, compare this value with the value imprinted onto the EPROM: if it matches the EPROM is good.	EPROM to FLASH prog: 1024/1024K
Turn off the instrument and disconnect the EPROM BOARD.	Wait * Eprom Checksum
Start with the instrument in AUTOTEST mode as described above and press GRAND PIANO 2 times until the display show the new software version loaded in flash memory.	cks BT PR ALL #### #### ####
Press GRAND PIANO to skip this procedure.	mmm dd yyyy hh:mm:ss V #.##
The instrument performs the flash memory data checksum and displays it in hexadecimal value, compare this value with the value imprinted onto the EPROM: if it matches the procedure has been executed successfully.	EPROM to FLASH push REC to prog
The procedure proceed as described in AUTOTEST section, if you do not want to check the rest of the instrument simply turn off it.	Wait * Eprom Checksum
	cks BT PR ALL #### #### ####

RPI00-150 O.S. UPDATING PROCEDURE from Serial Port (COMPUTER) ver. 2.xx or greater	
Operation Descriptions	Display
NOTE: This procedure is valid only if the software version installed on the piano is the 2.00 or greater. Some additional tips and advices are included in the Flashblaster Firmware Update Disk. The disk containing the Fblaster program can also be downloaded by internet at generalmusic web site (www.generalmusic.com) or required at support@generalmusic.com	
Connect the serial cable between the COMPUTER of the piano and the RS232 COM port of the computer (PC-Ibm or compatible).	
Insert the disk in the drive A (or whatever your 3.5" drive is assigned to), open the contents of drive A and double click on the fblaster.exe file.	
From the OPTIONS/SETTINGS menu, make sure that the TEST AND PROGRAM choice is selected. This is very important.	

Turn on the piano, while holding down the REC button until the display shows:	READY TO UPDATE
Click with the mouse on the GO! button or, from the ACTION menu, select EXECUTE (ALT+A, E). The piano display appears as follows:	TESTING... n1/n2 PACKETS
At the end of the test the following display appears:	TEST OK
After a short time, the following display appears:	ERASING...
You are now erasing the old operating system from FLASH memory. When the system is erased, the following display appears as your new operating system is installed into Flash Memory:	UPDATING... n1/n2 PACKETS
When the entire update procedure is completed, the following display appears:	UPDATE_OK:SWITCH POWER TO RESTART
The update has now been successfully completed. Turn off the power switch on the piano, and turn it back on again to use your updated instrument.	

RP100-150 Some Repairing Tips

Operation Descriptions	Display
This message could be appear if an error occur on the communication channel. Possible solutions: 1) inconsistent data received on MIDI or COMPUTER input socket, check the ratings of the device connected to the piano. 2) if the error persist, try to replace Outputs Board first and CPU board second.	MIDI SCI error
This message could be appear if an error occur on the communication channel. Possible solutions: 1) verify all the connections between Keyboard Interface Board and the CPU board. 2) if the error persist, try to replace Keyboard Interface Board first and CPU board second.	VALIS SCI error
This message could be appear if an error occur on the communication between CPU and DISP3 chips. Possible solutions: 1) verify all the tracks, solders and components between CPU and DISP3 chips as shown in schematics. 2) if the error persist, replace the CPU board and send back to generalmusic the failed CPU board.	Disp Failure

RP200 INITIAL CHECK

Operation Descriptions	Display																																															
The procedures that follow must be executed subsequently in the order specified.																																																
Before turn on the instrument check the jumpers setting on CPU & SOUND GENERATOR BOARD corresponds at the model accordingly to the following table:																																																
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MODEL	J4	J5	J3	J6	J2																																											
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Remove the secondary fuses F1, F2, F3, located on POWER AMPLIFIER & SUPPLY BOARD; turn on the instrument and verify the supply AC voltages: (CN6) between pin1 and pin2 = 27,5±1,5Vac (CN6) between pin1 and pin3 = 27,5±1,5Vac (CN6) between pin2 and pin3 = 55±3Vac (CN12) between pin1 and pin2 = 16±0,8Vac (CN12) between pin1 and pin3 = 16±0,8Vac (CN12) between pin2 and pin3 = 32±1,6Vac																																																
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INTERNAL PRESET																																																
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RP200 AUTOTEST PROCEDURE

Operation Descriptions	Display				
The instrument starts in AUTOTEST mode turning on the instrument while pressing down the "GRAND PIANO" button (pressing PRESET instead GRAND PIANO the procedure starts from LCD display test). NOTE: Each time you press the "GRAND PIANO" button the autotest procedure proceeds to the next step.	<table border="0"> <tr> <td> RP98 </td> </tr> <tr> <td> AUTOTEST </td> </tr> </table>	RP98	AUTOTEST		
RP98					
AUTOTEST					
Set the default display contrast in the ±6 range by pressing the DATA + or - buttons.	CONTRAST = #				
The instrument shows the date, time and release version of the software loaded in flash memory.	<table border="0"> <tr> <td>mmm dd yyyy</td> </tr> <tr> <td>hh:mm:ss V #.##</td> </tr> </table>	mmm dd yyyy	hh:mm:ss V #.##		
mmm dd yyyy					
hh:mm:ss V #.##					
The instrument asks if you want to update it, press GRAND PIANO to skip, the appropriate procedure to update the software is explained further.	EPROM to FLASH push REC to prog				
The instrument performs the flash memory data checksum and display it in hexadecimal value. NOTE: the BT (boot) value must be EAAB for ver.2.00, if it does not correspond you can not update software thru serial port but only with Update Software Board see more further.	<table border="0"> <tr> <td>Wait *</td> </tr> <tr> <td>Eprom Checksum</td> </tr> <tr> <td>cks BT PR ALL</td> </tr> <tr> <td>#### #### ####</td> </tr> </table>	Wait *	Eprom Checksum	cks BT PR ALL	#### #### ####
Wait *					
Eprom Checksum					
cks BT PR ALL					
#### #### ####					
The instrument performs the "LIBRARY" Rom memory data checksum and display it in hexadecimal value.	<table border="0"> <tr> <td>Wait *</td> </tr> <tr> <td>Library Checksum</td> </tr> <tr> <td>Wait ok!</td> </tr> <tr> <td>Checksum: A021</td> </tr> </table>	Wait *	Library Checksum	Wait ok!	Checksum: A021
Wait *					
Library Checksum					
Wait ok!					
Checksum: A021					
The instrument performs the RAM memory test showing the address checked.	<table border="0"> <tr> <td>RAM MEMORY CHECK</td> </tr> <tr> <td>addr 23BFFF OK</td> </tr> </table>	RAM MEMORY CHECK	addr 23BFFF OK		
RAM MEMORY CHECK					
addr 23BFFF OK					
The LCD display test fades from light to dark and viceversa.	<table border="0"> <tr> <td>██████████████████</td> </tr> <tr> <td>██████████████████</td> </tr> <tr> <td>██████████████████</td> </tr> </table>	██████████████████	██████████████████	██████████████████	
██████████████████					
██████████████████					
██████████████████					
Check that all leds are lighting.	<table border="0"> <tr> <td>--- LED TEST ---</td> </tr> <tr> <td>Are all leds on?</td> </tr> </table>	--- LED TEST ---	Are all leds on?		
--- LED TEST ---					
Are all leds on?					

Check the VOLUMES ranges from 0 to 127. Check all buttons (except GRAND PIANO) pressing their one at a time and checking that corresponding led lights, pressing PAGE UP and DOWN buttons the display shows "U" and "D", pressing DATA + and - buttons the display shows "+" and "-", pressing MASTER EQ and DSP buttons the display shows an "X" in 1 and 2 digits, pressing UP, LEFT, DOWN and RIGHT buttons the display shows an "X" in 3, 4, 5 and 6 digits respectively.	Button test Vol:0 123456 U Button test + D Vol:127 - XXXXXX
Check the SOFT and SUSTAIN pedals, pressing each one the value change from 0 (released) to 127 (pressed), the DAMPER pedal varying its value continuously from 0 (released) to nearly 127 (pressed).	Soft Sust Damp 0 0 0
Check the MIDI I/O connecting the MIDI OUT and MIDI IN sockets by a MIDI cable.	TEST MIDI IN/OUT LOOP DETECTED OK
Check COMPUTER I/O shorting pin 3 and pin 5 on the COMPUTER socket, check with the oscilloscope a 4Vpp (1Mhz) signal on pin 1, set volume to half stroke.	TST COMPUTER I/O LOOP DETECTED OK
The instrument generates a 1KHz sinusoidal signal in both audio channels reading data from 104043 ROM. VOLUME controls the amplitude of signal and TRANSPOSE b and # buttons controls the frequency from 10Hz to 2756Hz.	SINUS. SWEEP Freq. 1000 Hz
Re-set the frequency at 1KHz and check HEADPHONES and AUX outputs with the oscilloscope inserting a stereo jack in the left phones socket (speakers will go be silent) and two mono jack in the AUX OUT sockets and set volume to its maximum.	
Now verify the following level of signals: Phones output without load = 5,7±1.1Vpp AUX output = 0,8±0,16Vpp	
Set the VOLUME to minimum.	
Apply a sinusoidal signal of 0.730Vpp at 1KHz with a generator to the AUX IN left and right sockets and verify the signal output: AUX output = 1,35±0.07Vpp	
The instrument generates a tone signal in both audio channels reading data from 104023 ROM.	TONE ON 104023
Autotest is over, turn off the instrument.	TEST END: SWITCH POWER TO RESTART

RP200 O.S. UPDATING PROCEDURE up to ver. 2.00 with Updating Software Board (751180)

Operation Descriptions	Display
Start with the instrument in AUTOTEST mode as described above and press GRAND PIANO 2 times until the display show the software version loaded in flash memory.	mmm dd yyyy hh:mm:ss V #.##
Press GRAND PIANO to skip this procedure.	EPROM to FLASH push REC to prog
The instrument performs the flash memory data checksum and displays it in hexadecimal value.	Wait * Eprom Checksum cks BT PR ALL #####
Compare the software version and checksum with the value imprinted onto the EPROM, if one of these does not match, the system must be upgraded, proceed to the next step.	
Turn off the instrument.	
Insert the EPROM BOARD (where the operating system is stored) in the CN3 connector located on CPU & SOUND GENERATOR BOARD.	
Start with the instrument in AUTOTEST mode as described above and press GRAND PIANO 3 times.	
When the display shows this message press REC.	EPROM to FLASH push REC to prog
The instrument erases the previous data in flash memory. After which the instrument displays the amount of memory programming and finally the operation successful. If the programming fails check the EPROM BOARD connection and repeat this procedure from start.	EPROM to FLASH erasing EPROM to FLASH prog: 1024/1024K
The instrument performs the eeprom memory data checksum and display it in hexadecimal value, compare this value with the value imprinted onto the EPROM: if it matches the EPROM is good.	Wait * Eprom Checksum cks BT PR ALL #####

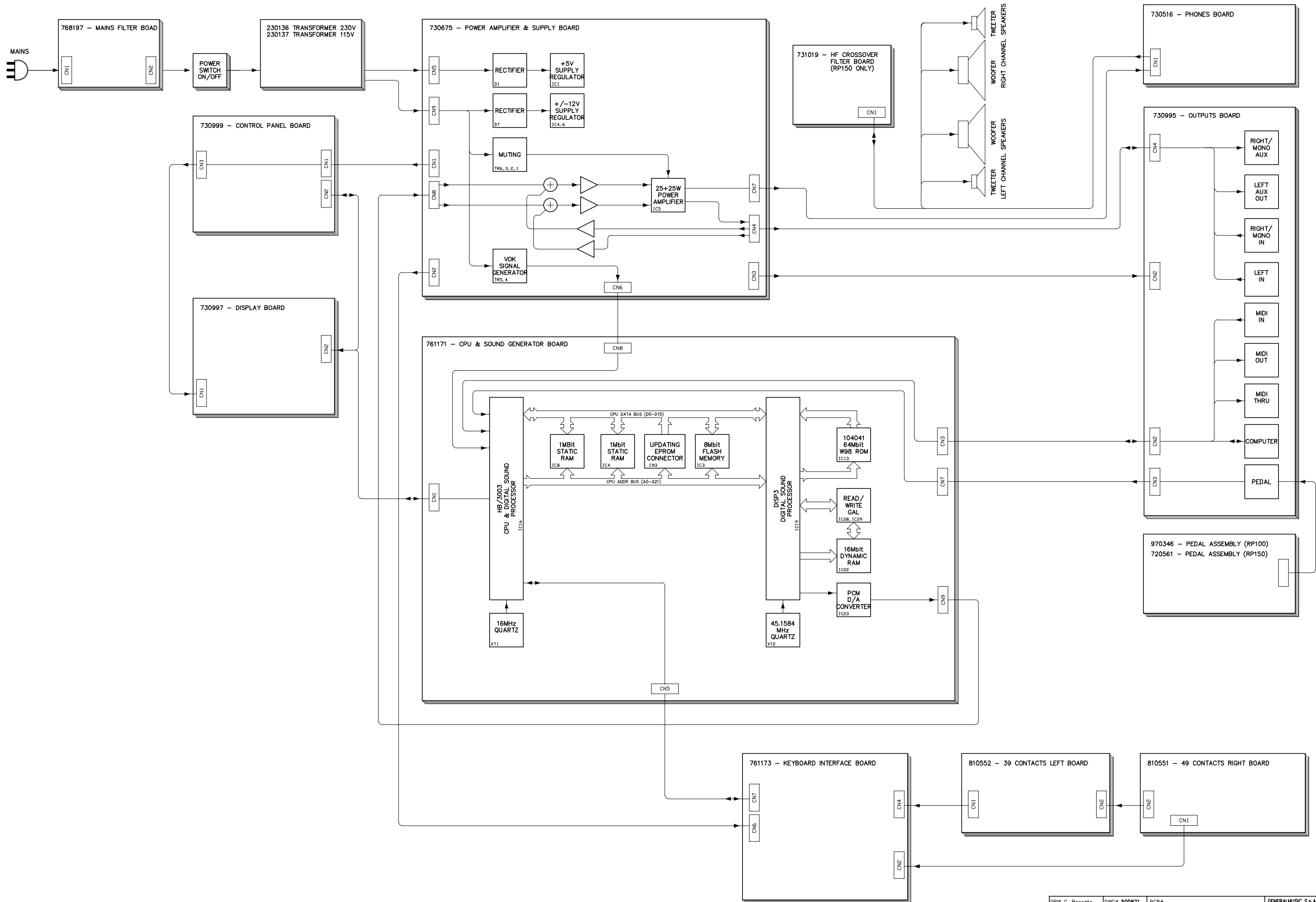
Turn off the instrument and disconnect the EPROM BOARD.	
Start with the instrument in AUTOTEST mode as described above and press GRAND PIANO 2 times until the display show the new software version loaded in flash memory.	mmm dd yyyy hh:mm:ss V #.##
Press GRAND PIANO to skip this procedure.	EPROM to FLASH push REC to prog
The instrument performs the flash memory data checksum and display it in hexadecimal value, compare this value with the value imprinted onto the EPROM: if it matches the procedure has been executed successfully.	Wait * Eprom Checksum cks BT PR ALL #####
The procedure proceed as described in AUTOTEST section, if you do not want to check the rest of the instrument simply turn off it.	

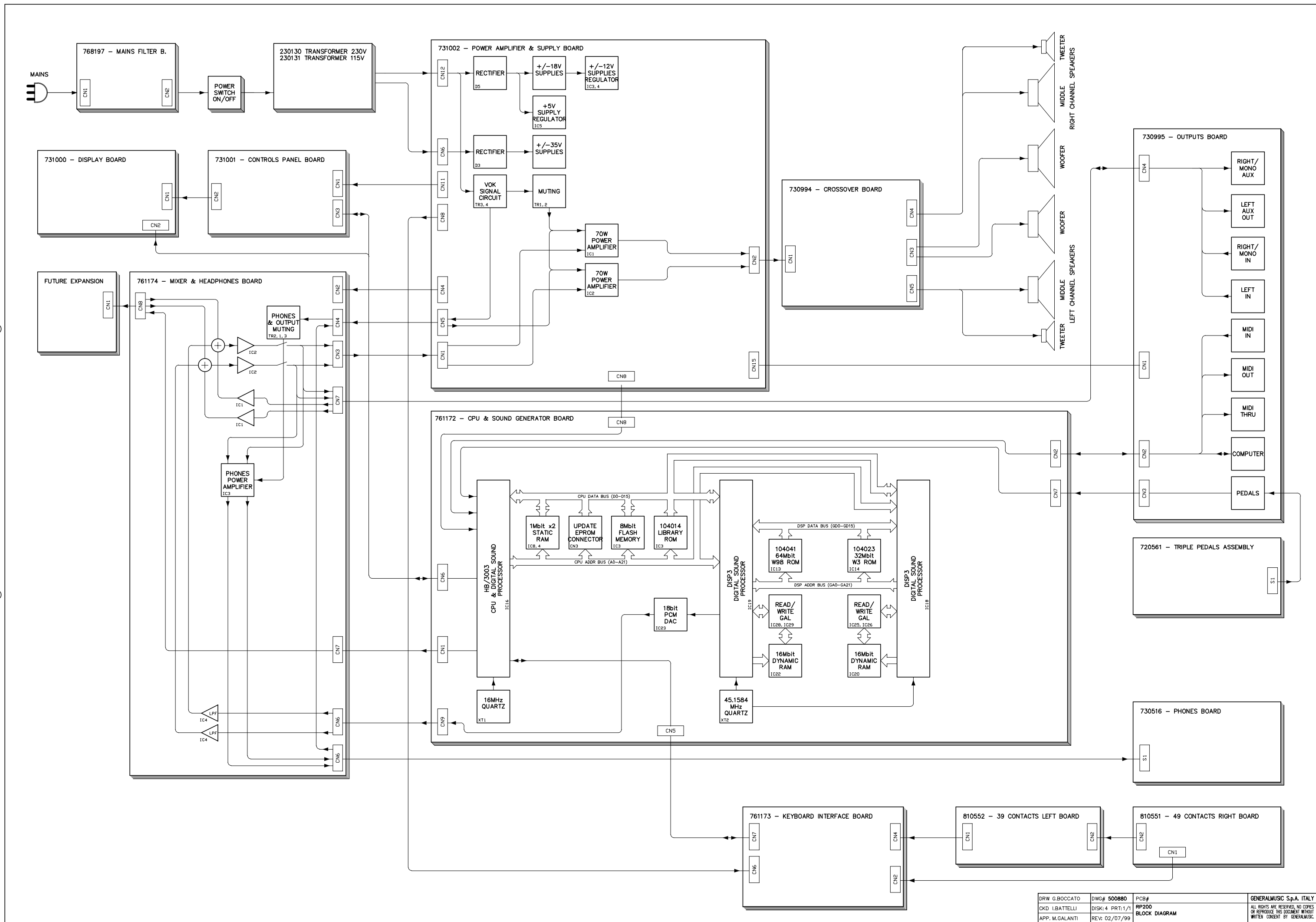
RP200 O.S. UPDATING PROCEDURE from Serial Port (COMPUTER) ver. 2.xx or greater

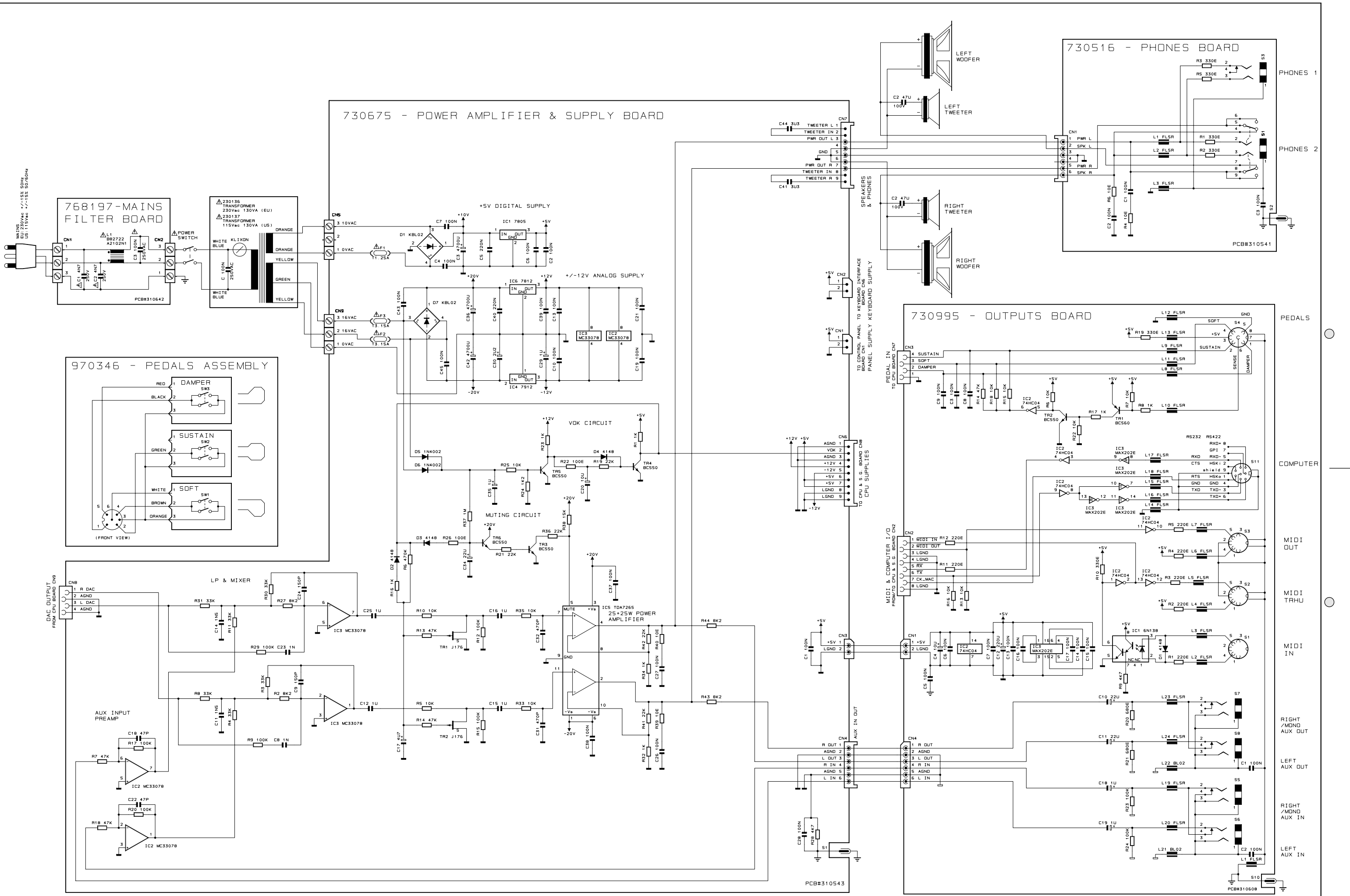
Operation Descriptions	Display
NOTE: This procedure is valid only if the software version installed on the piano is the 2.00 or greater. Some additional tips and advices are included in the Flashblaster Firmware Update Disk. The disk containing the Fblaster program can also be downloaded by internet at generalmusic web site (www.generalmusic.com) or required at support@generalmusic.com	
Connect the serial cable between the COMPUTER of the piano and the RS232 COM port of the computer (PC-Ibm or compatible).	
Insert the disk in the drive A (or whatever your 3.5" drive is assigned to), open the contents of drive A and double click on the fblaster.exe file.	
From the OPTIONS/SETTINGS menu, make sure that the TEST AND PROGRAM choice is selected. This is very important.	
Turn on the piano, while holding down the REC button until the display shows:	READY TO UPDATE
Click with the mouse on the GO! button or, from the ACTION menu, select EXECUTE (ALT+A, E). The piano display appears as follows:	TESTING... n1/n2 PACKETS
At the end of the test the following display appears:	TEST OK
After a short time, the following display appears:	ERASING...
You are now erasing the old operating system from FLASH memory. When the system is erased, the following display appears as your new operating system is installed into Flash Memory:	UPDATING... n1/n2 PACKETS
When the entire update procedure is completed, the following display appears:	UPDATE_OK:SWITCH POWER TO RESTART
The update has now been successfully completed. Turn off the power switch on the piano, and turn it back on again to use your updated instrument.	

RP200 Some Repairing Tips

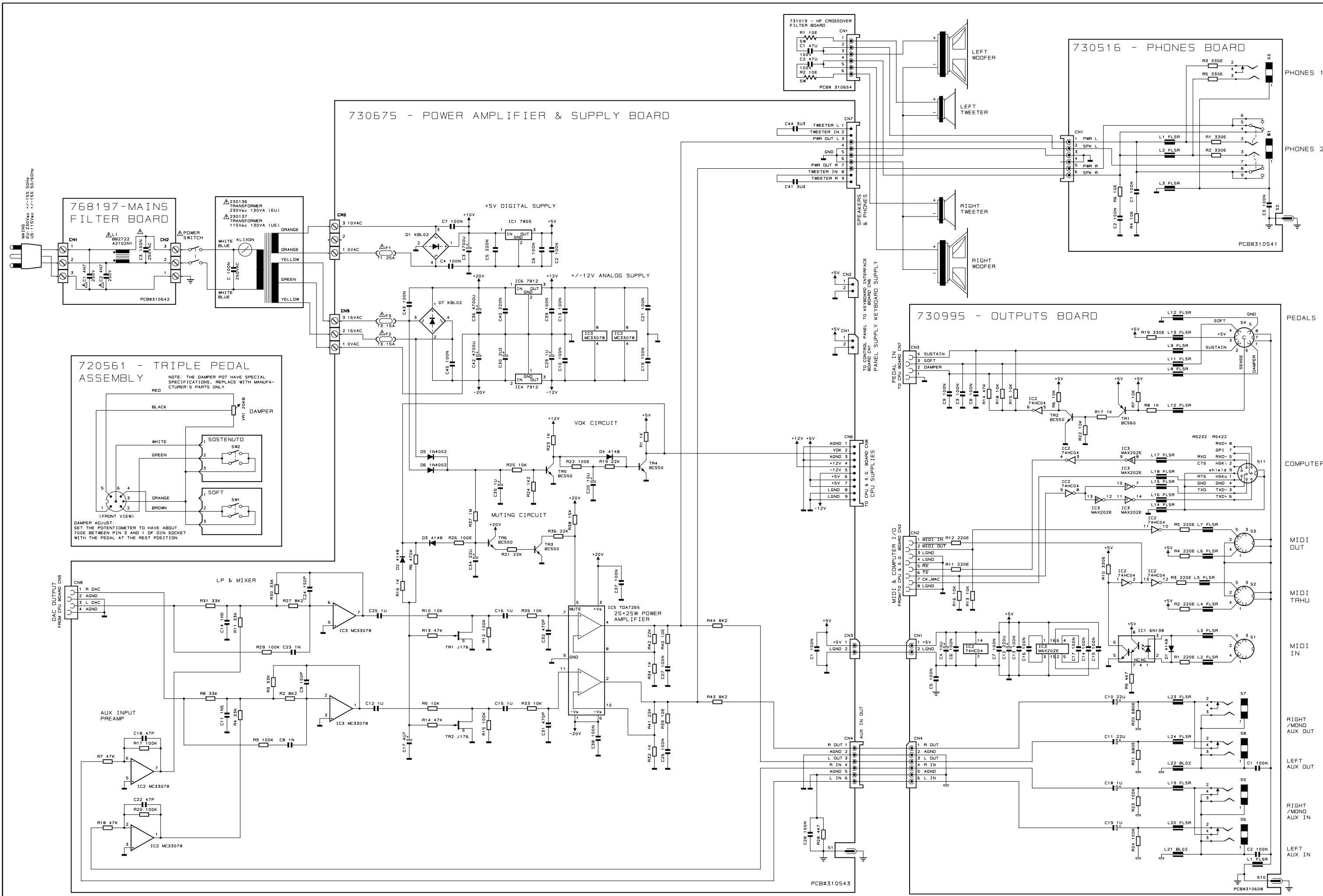
Operation Descriptions	Display
This message could be appear if an error occur on the communication channel. Possible solutions: 1) inconsistent data received on MIDI or COMPUTER input socket, check the ratings of the device connected to the piano. 2) if the error persist, try to replace Outputs Board first and CPU board second.	MIDI SCI error
This message could be appear if an error occur on the communication channel. Possible solutions: 1) verify all the connections between Keyboard Interface Board and the CPU board. 2) if the error persist, try to replace Keyboard Interface Board first and CPU board second.	VALIS SCI error
This message could be appear if an error occur on the communication between CPU and DISP3 chips. Possible solutions: 1) verify all the tracks, solders and components between CPU and DISP3 chips as shown in schematics. 2) if the error persist, replace the CPU board and send back to generalmusic the failed CPU board.	Disp Failure





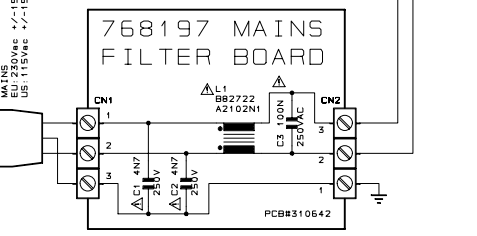
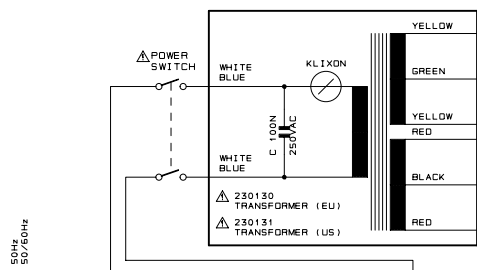
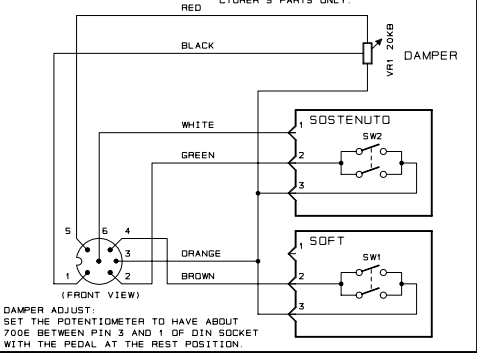


DRW I BATELLI	DWG# 500872	PCB# 310543 - 310608 - 310541	GENERALMUSIC S.p.A.
DEPT. DIG. PIAND	DATE 21-02-99	DESCRIPTION: RP100	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCTIONS OF THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
PART# 1 OF 1	REV# B	POWER AMPLIFIER & SUPPLY BOARD	
		OUTPUTS BOARD - PHONES BOARD	

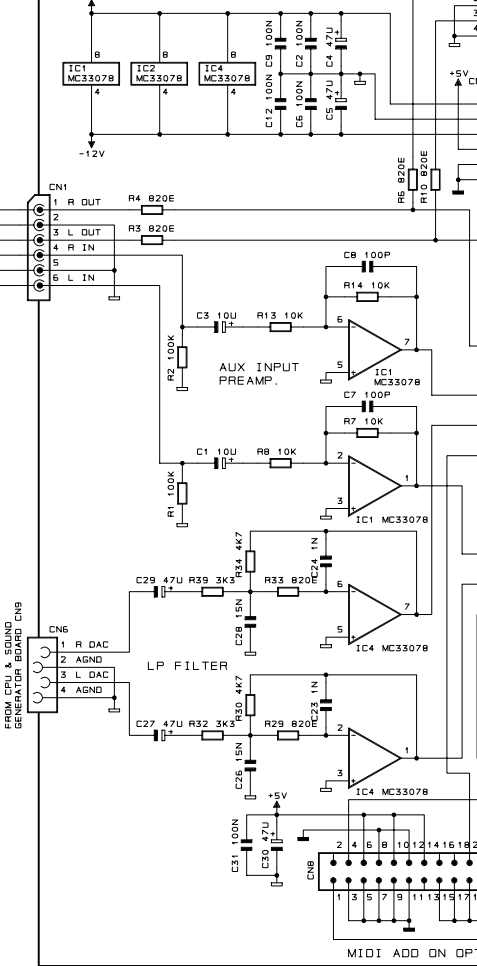


DRW I. BATELLI	DWG# 500873	PCB# 310543 - 310608 - 310541	GENERALMUSIC S.p.A.
DEPT. DIG. PIAND	DATE 21-02-99	DESCRIPTION: RP150	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCTIONS OF THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
PART# 1 OF 1	REV# B	POWER AMPLIFIER & SUPPLY BOARD	
		OUTPUTS BOARD - PHONES BOARD	

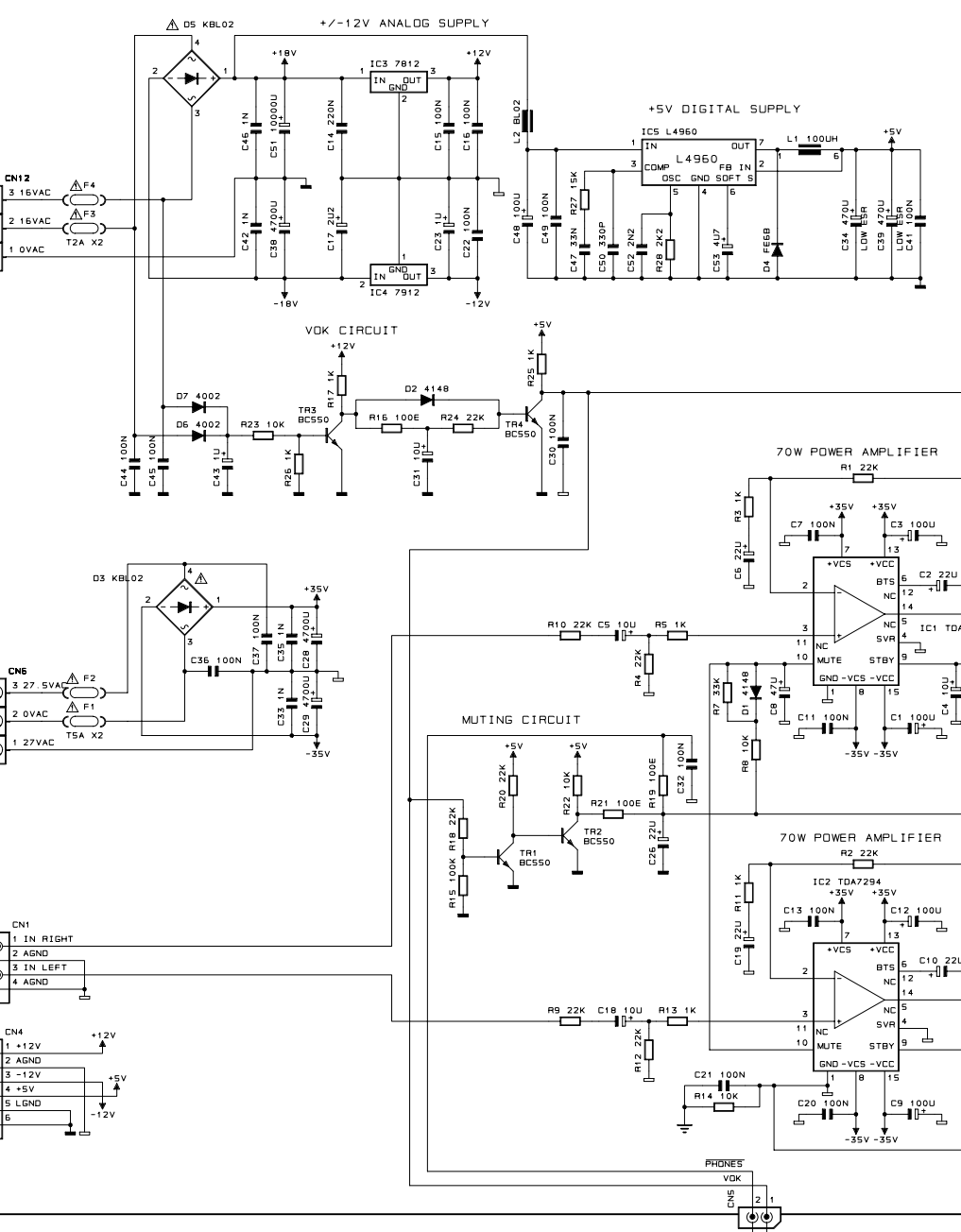
720561 - TRIPLE PEDAL ASSEMBLY



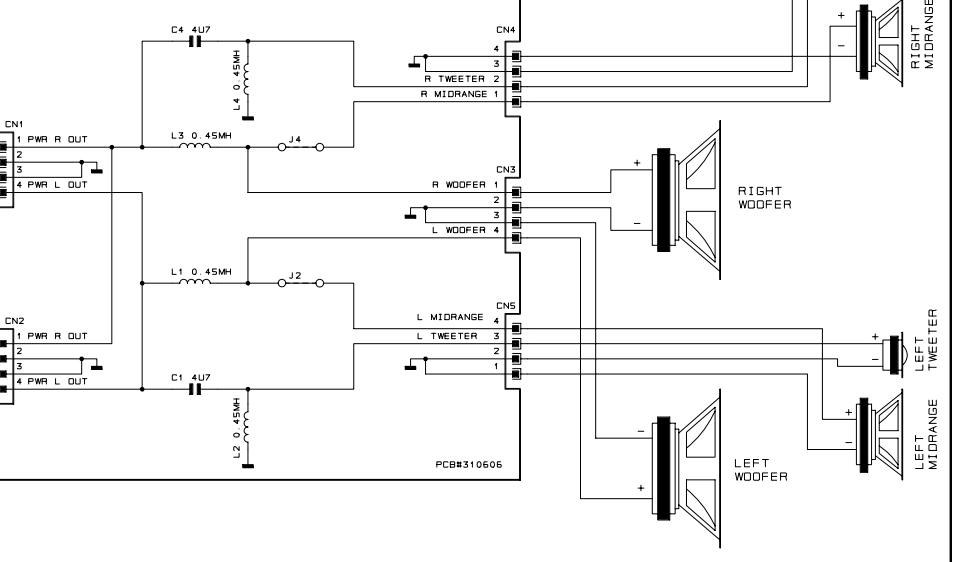
**761174 with TDA8542 in DIP package. PCB#310607
731024 with TDA8542 in SOIC package PCB#310658
MIXER & PHONES AMPLIFIER BOARD**



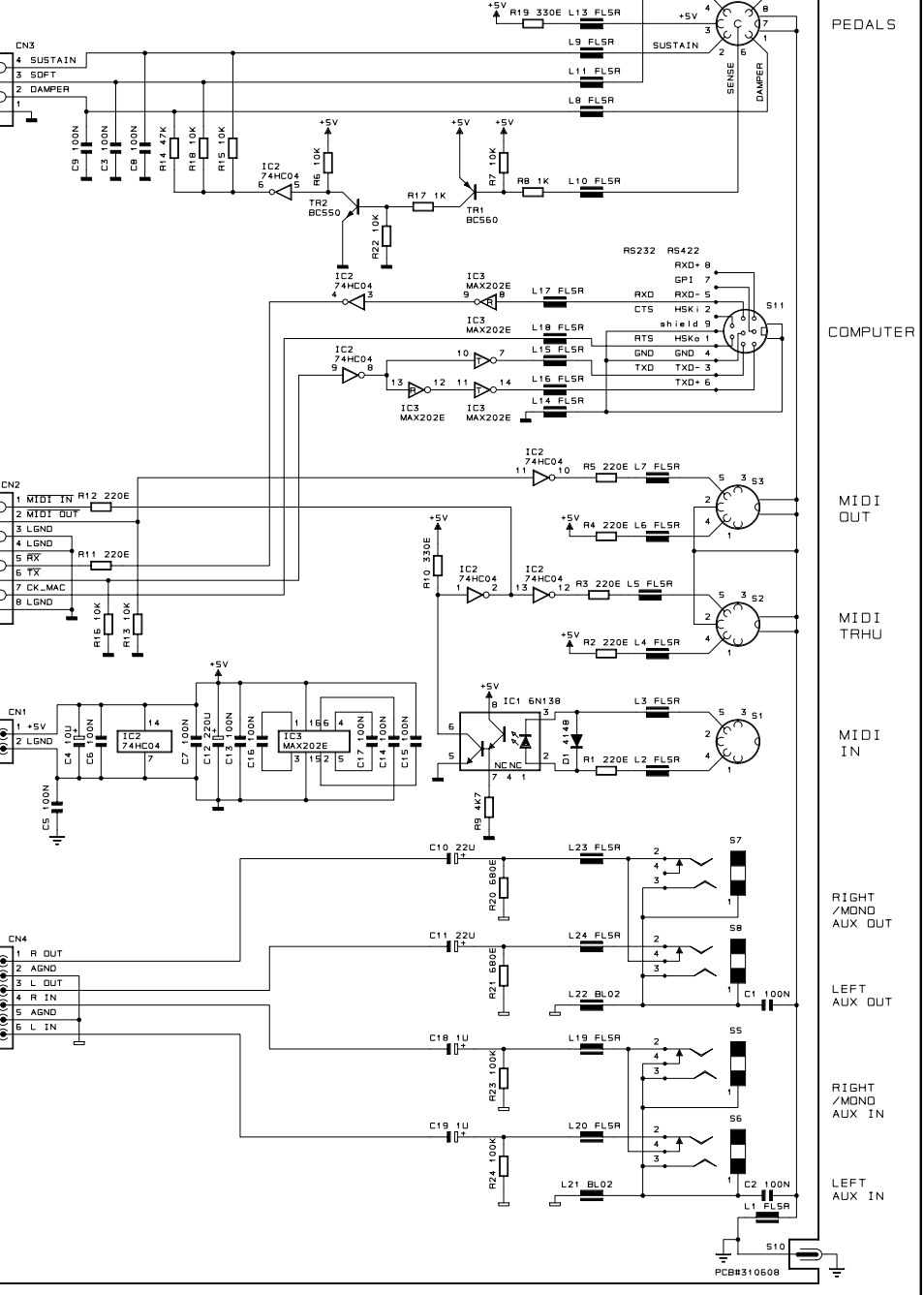
731004 - POWER AMPLIFIER & SUPPLY BOARD



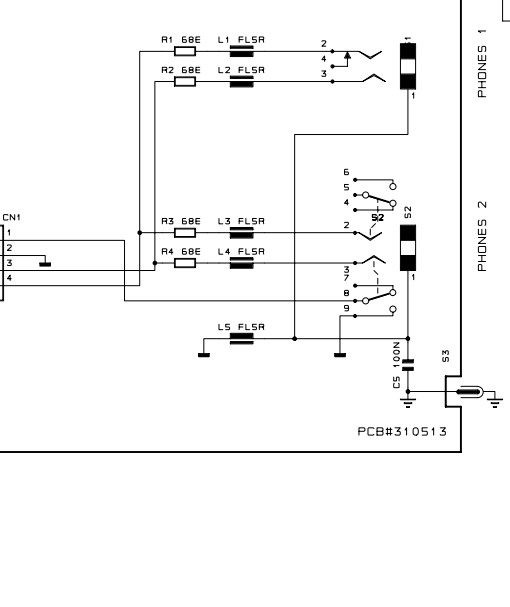
730994 - CROSSOVER BOARD



730995 - OUTPUTS BOARD

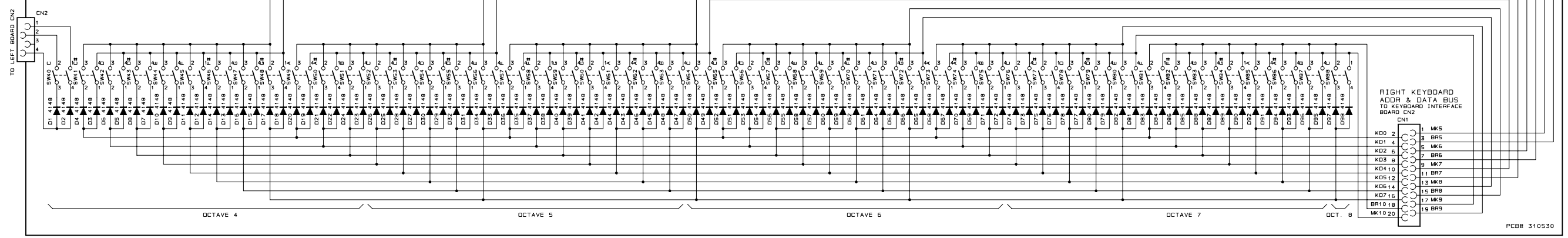


731007 - PHONES BOARD

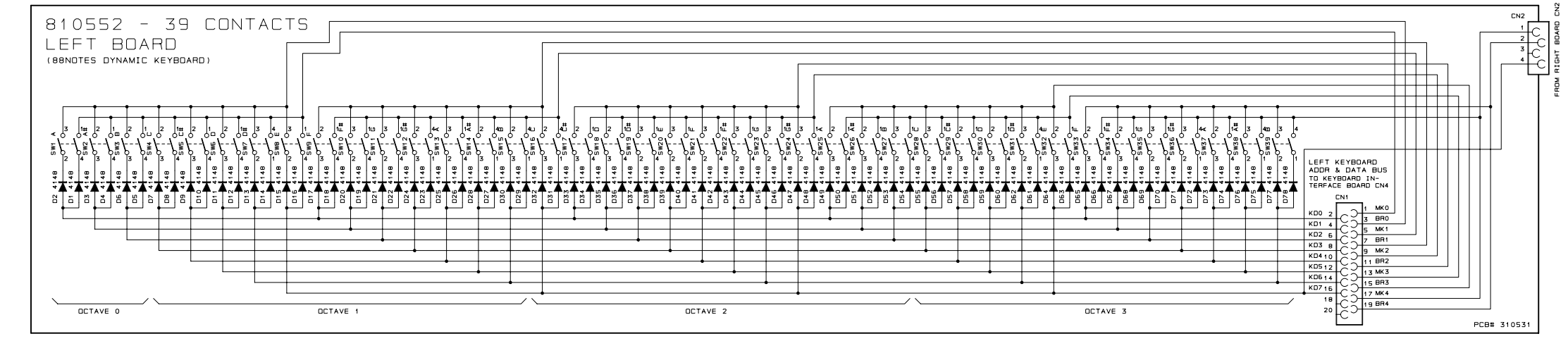


DRW. J. BATTELLI	DWG# 500874	PCB# 310604 - 310658 - 310608 - 310606	GENERALMUSIC S.p.A.
DEPT. DIG. PIANO	DATE 13-07-98	DESCRIPTION: MP 200 70+70W POWER AMP & SUPPLY, OUTPUTS, MIXER & PHONES AMP. AND PHONES BOARDS	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
PART# 1 OF 1	REV# 1/1		

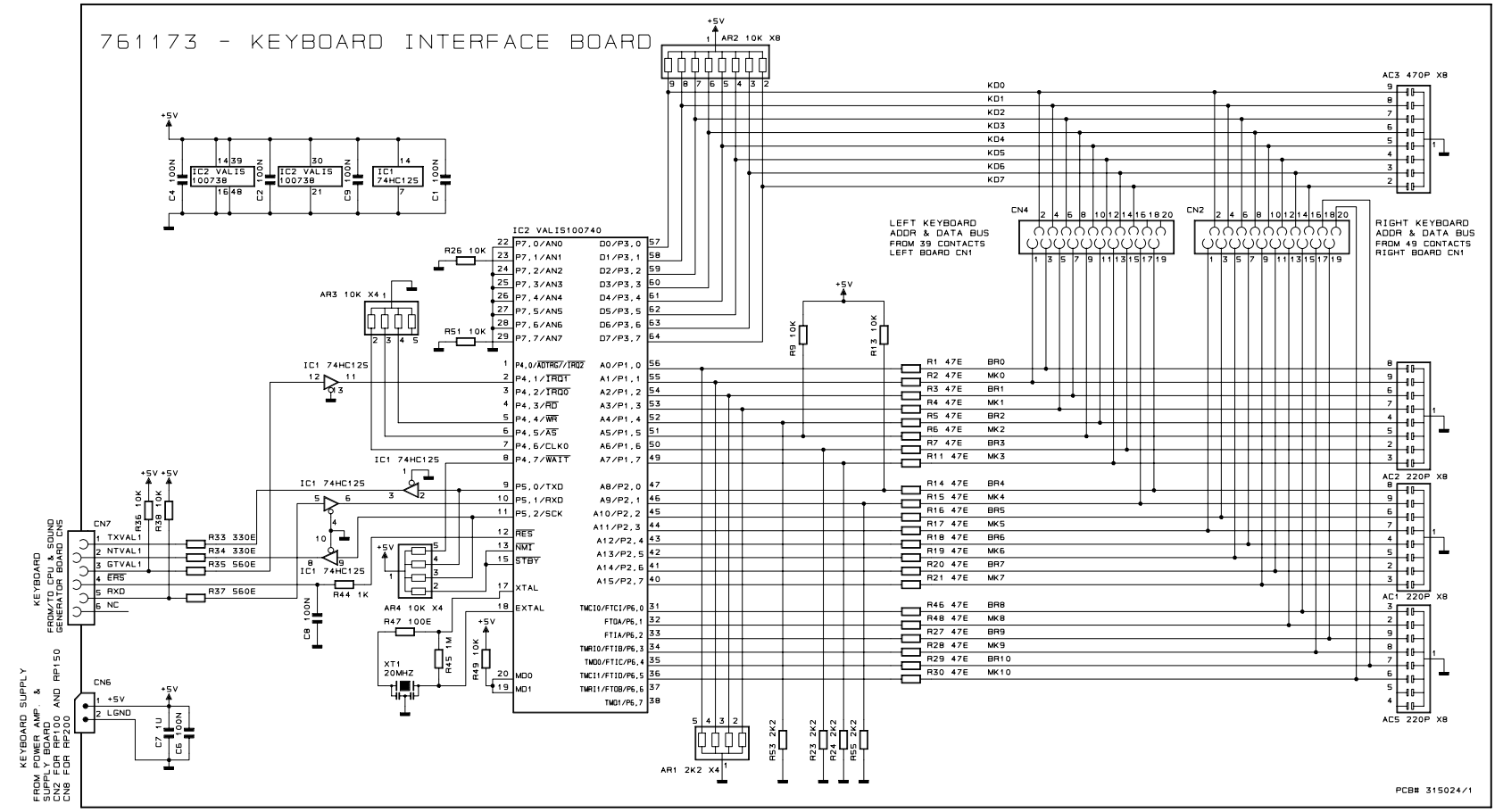
810551 - 49 CONTACTS
RIGHT BOARD
(88NOTES DYNAMIC KEYBOARD)

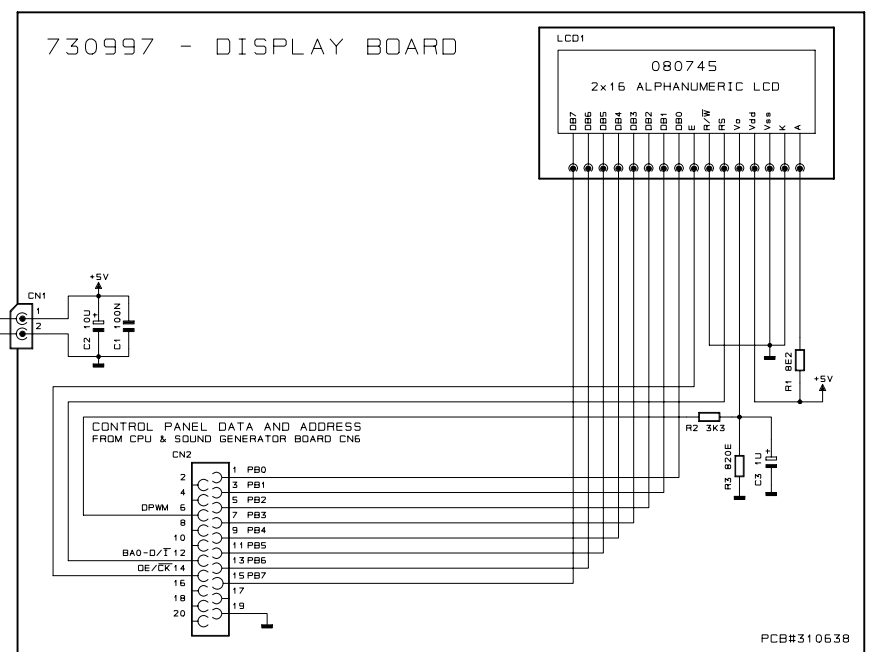
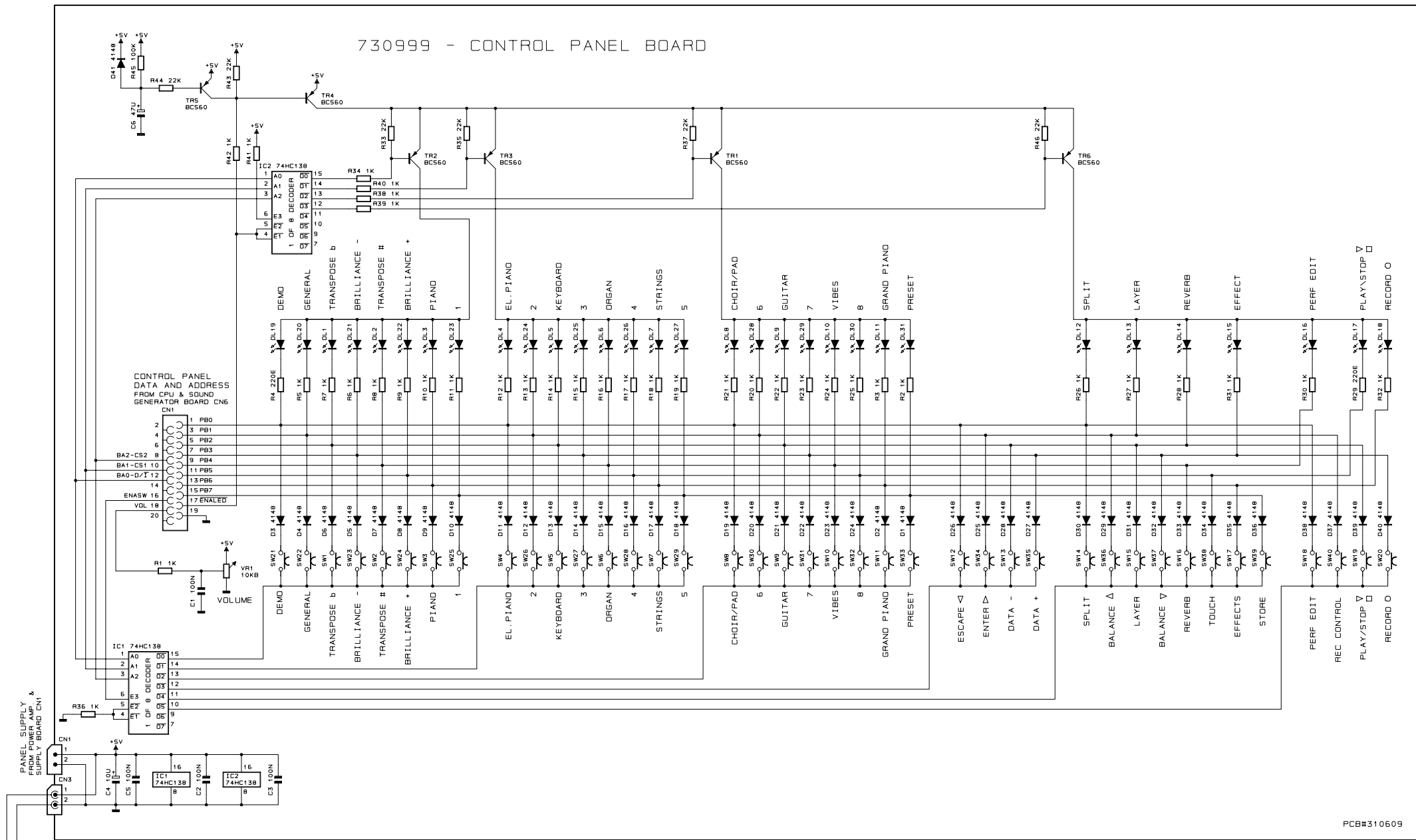


810552 - 39 CONTACTS
LEFT BOARD
(88NOTES DYNAMIC KEYBOARD)



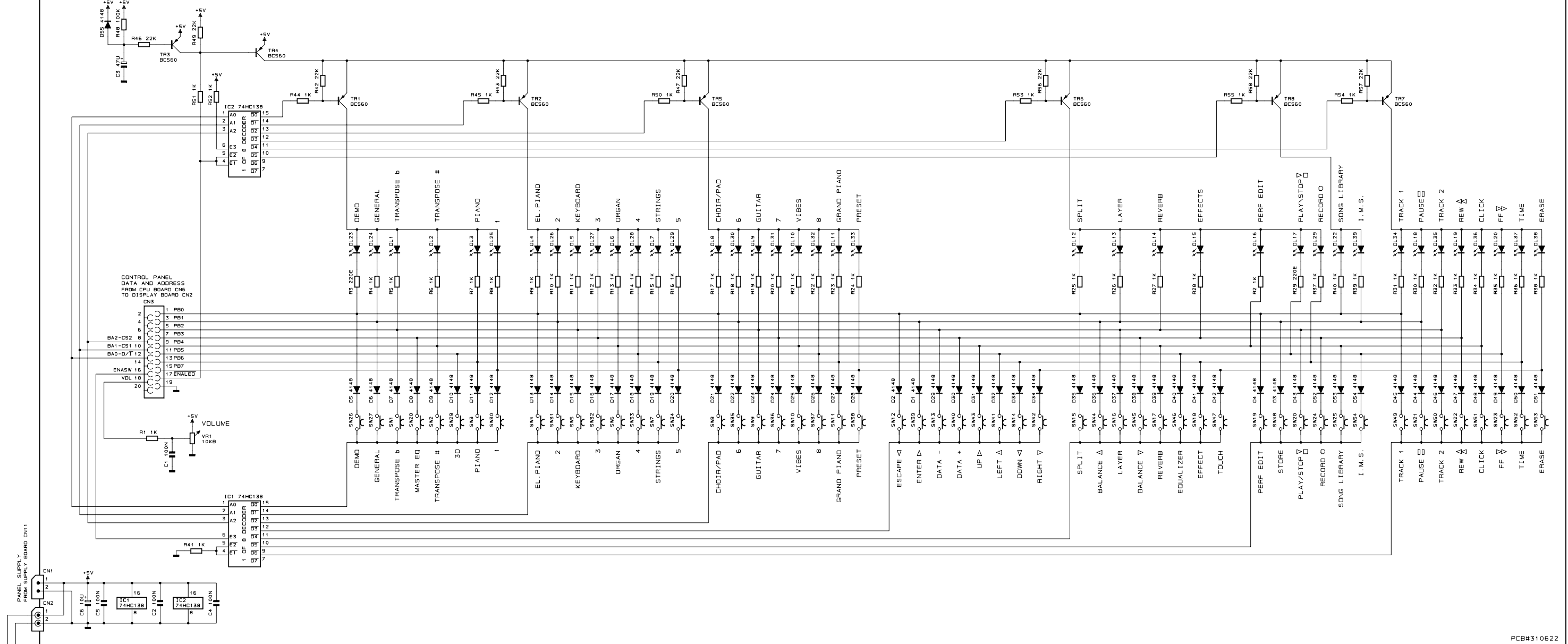
761173 - KEYBOARD INTERFACE BOARD





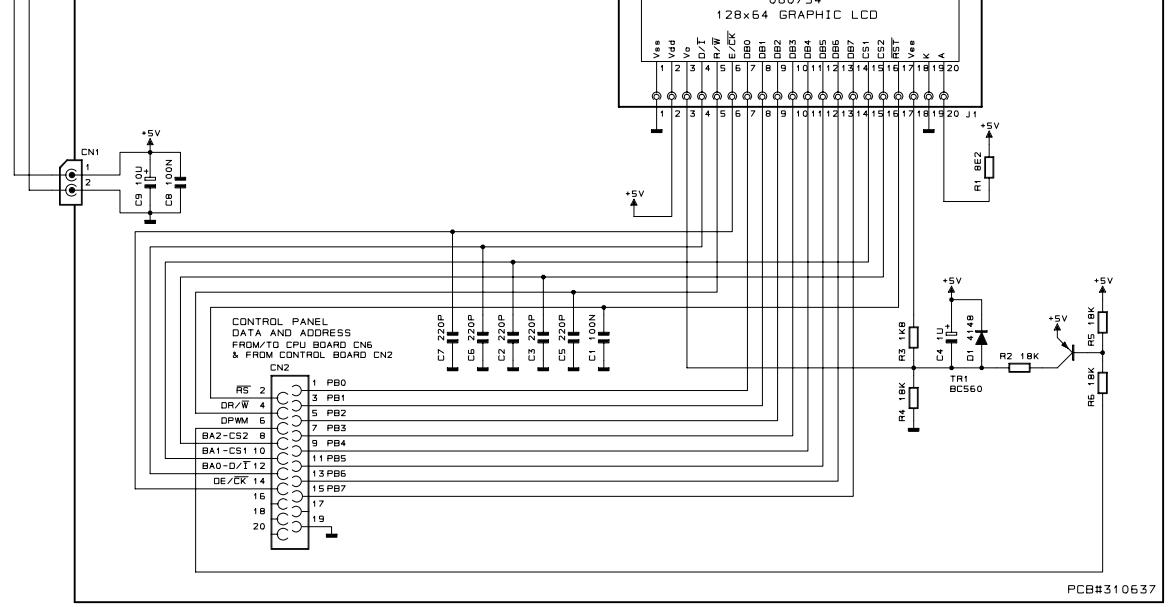
DWG R. GIORGI	DWG# 500876	PCB# 310609 - 310638	GENERALMUSIC S.p.A.
DEPT. DIG. PIANO	DATE 08-10-98	DESCRIPTION RP 100-150 CONTROL PANEL BOARD	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
PART# 1 OF 1	REV# B		

731001 - CONTROL PANEL BOARD



PCB#310622

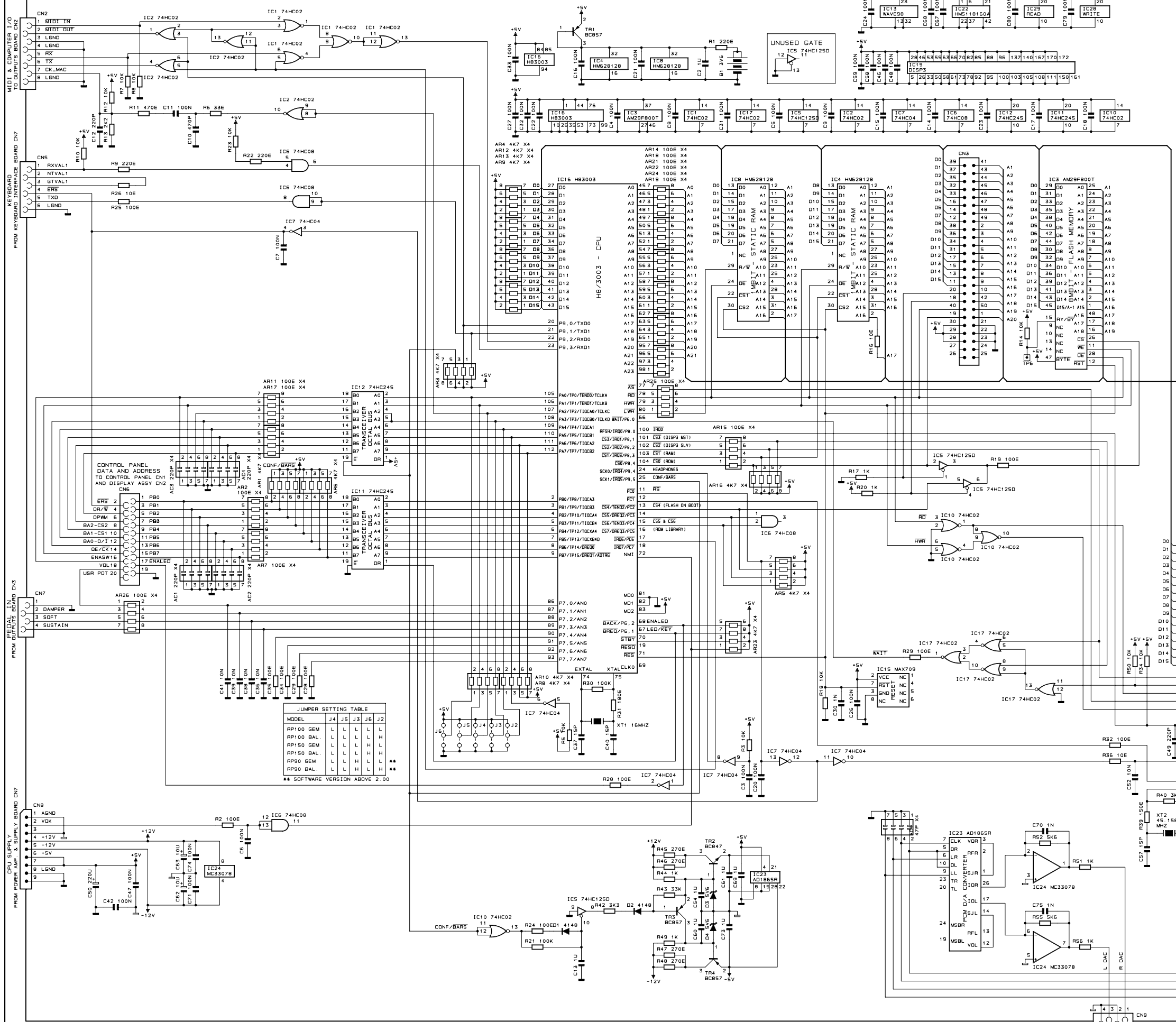
731000 - DISPLAY BOARD



PCB#310637

DRW R. GIORGI	DWG# 500877	PCBR 310622 - 310637	GENERALMUSIC S.p.A.
DEPT. DIG. PIANO	DATE 13/07/98	DESCRIPTION: RP 200 CONTROL PANEL BOARD	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
PART# 1 OF 1	REV# B	DISPLAY BOARD	

761171 - CPU & SOUND GENERATOR BOARD

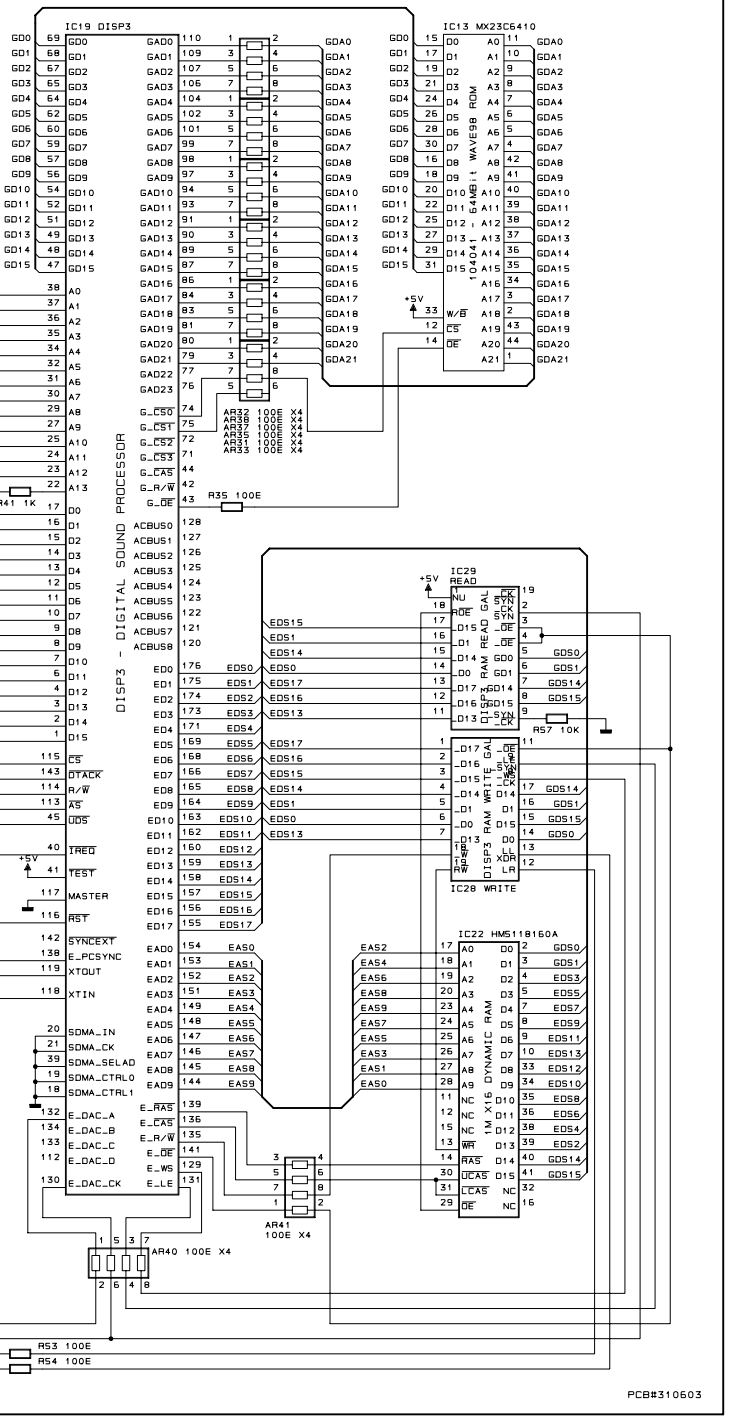
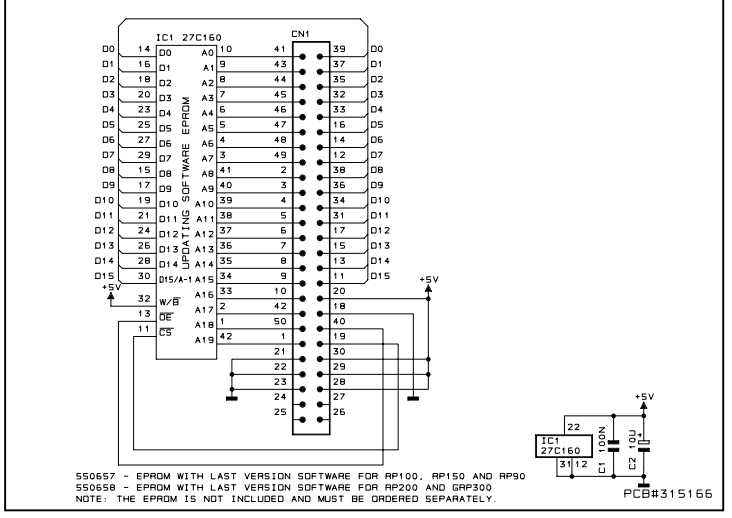


JUMPER SETTING TABLE

MODEL	J4	J5	J3	J6	J2
RP100 GEN	L	L	L	L	L
RP100 BAL	L	L	L	L	H
RP150 GEN	L	L	L	L	L
RP150 BAL	L	L	L	L	H
RP90 GEN	L	L	L	L	L
RP90 BAL	L	L	L	L	H

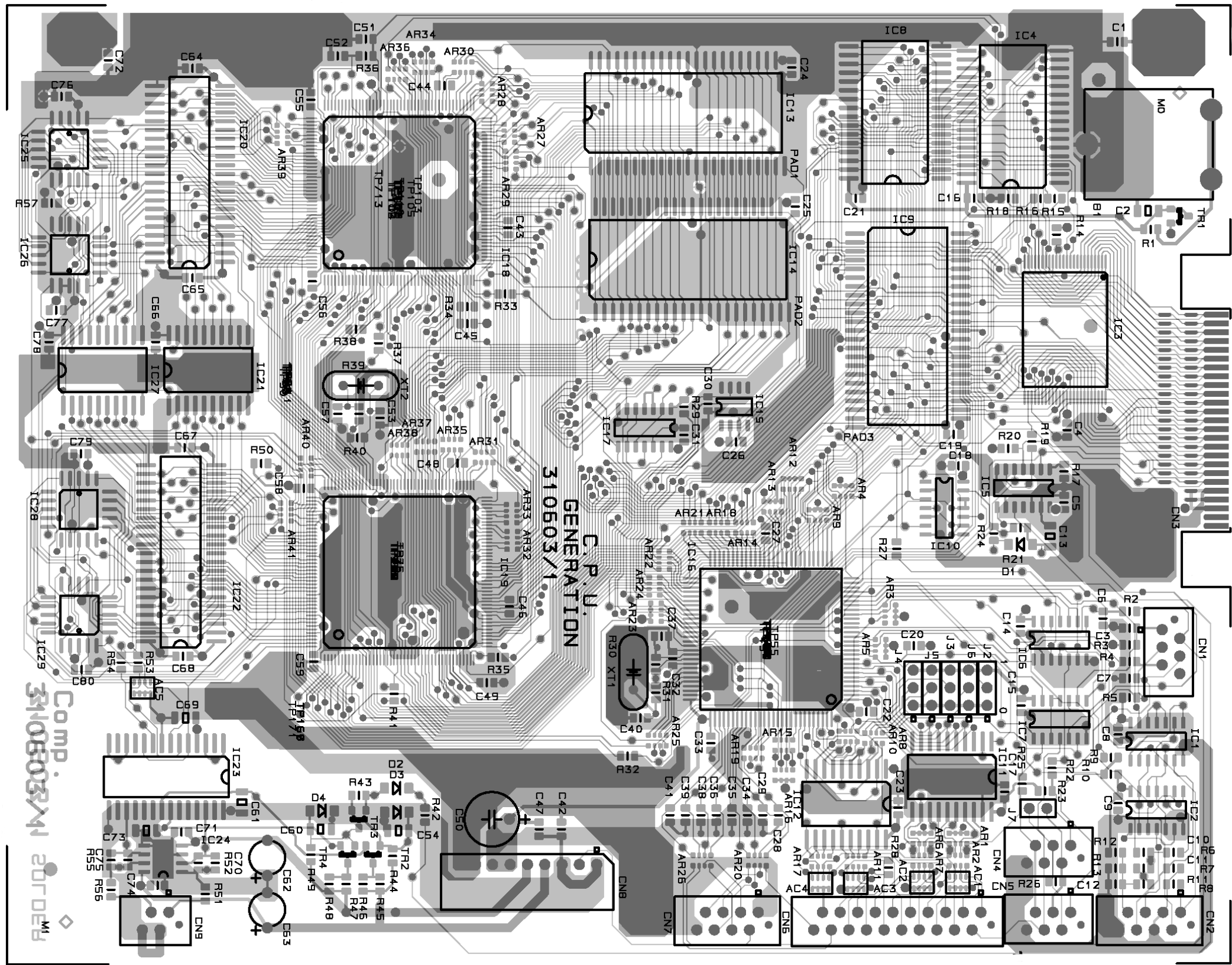
** SOFTWARE VERSION ABOVE 2.00

751180 - UPDATING SOFTWARE BOARD

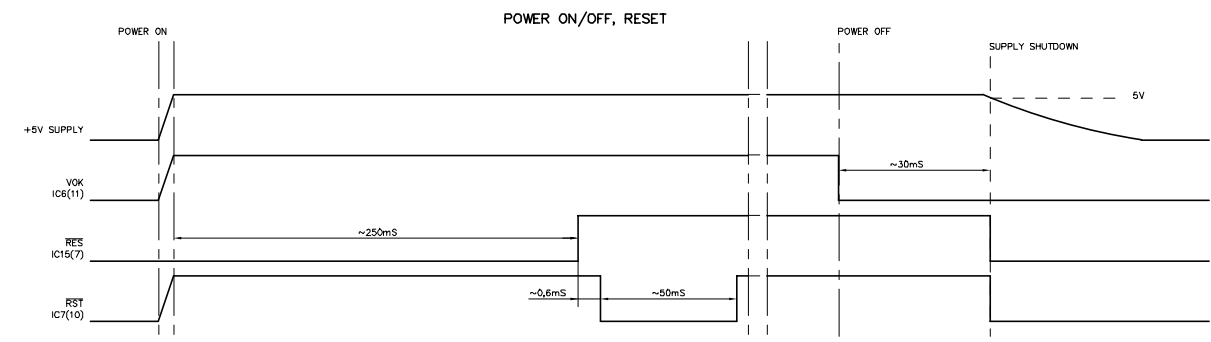
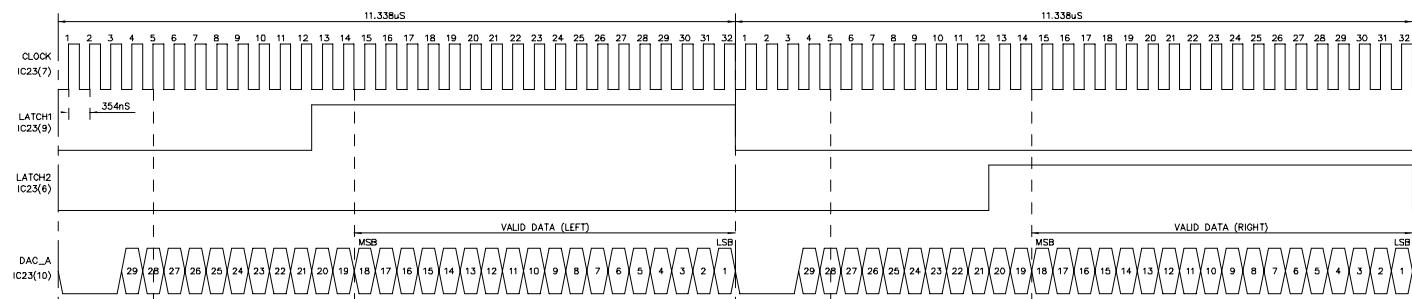


CPU & SOUND GENERATOR BOARD

PCB# 310603/1



PCM SERIAL DATA BUS



NOTE: ALL COMPONENTS PIN REFERENCE ARE LOCATED ON "CPU & SOUND GENERATOR BOARD" UNLESS OTHERWISE SPECIFIED.

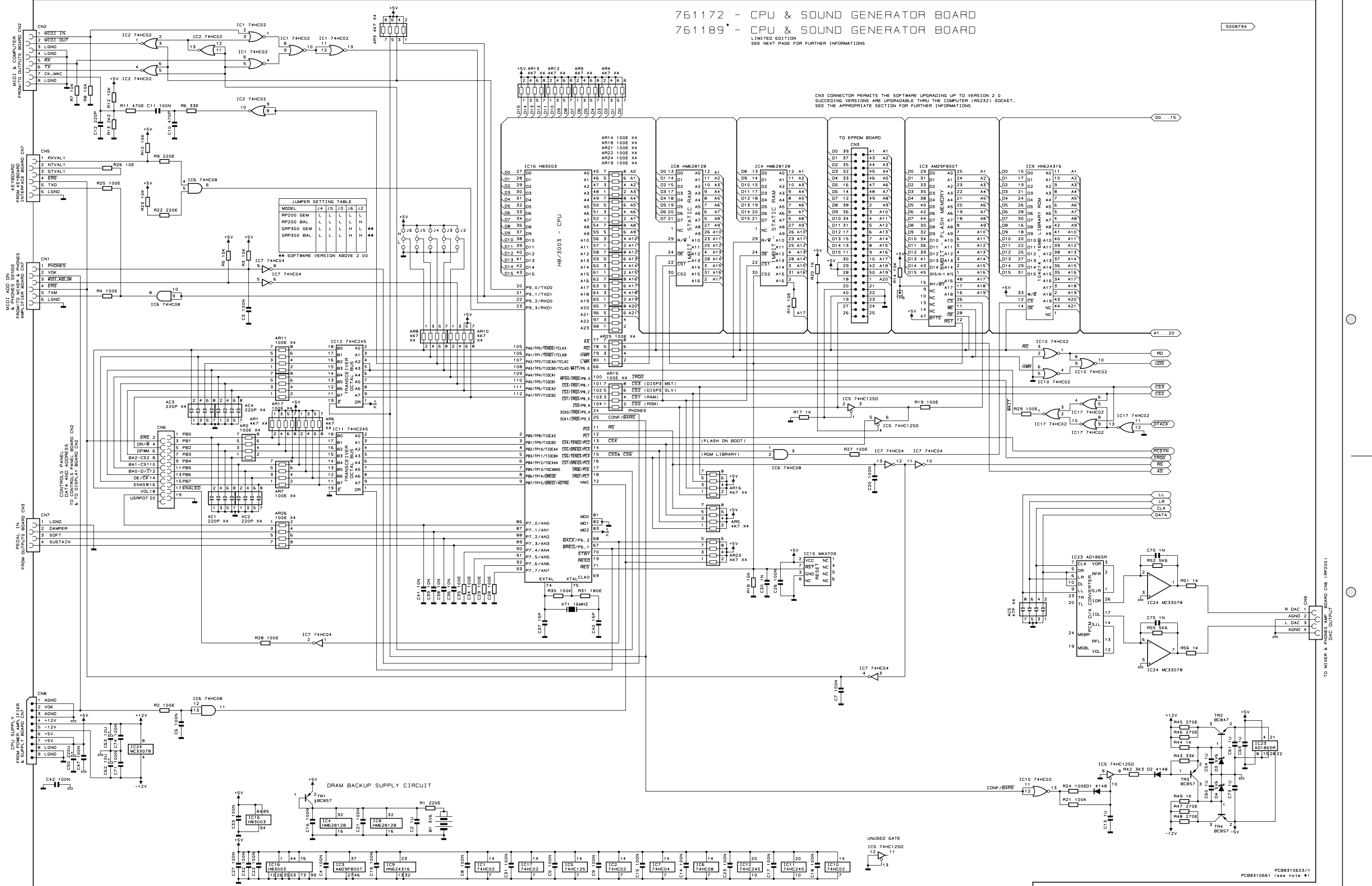
DRW G. Boccato	DWG# 500869	PCB#
CKD	DISK: PRT:1/1	Timing Table &
APP.	REV: 03/08/99	310603 Board Layout

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761172 - CPU & SOUND GENERATOR BOARD
761189 - CPU & SOUND GENERATOR BOARD

LIMITED EDITION
SEE NEXT PAGE FOR FURTHER INFORMATIONS

500879A



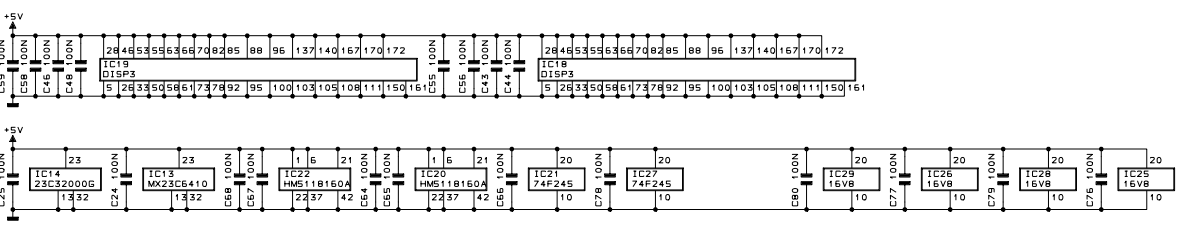
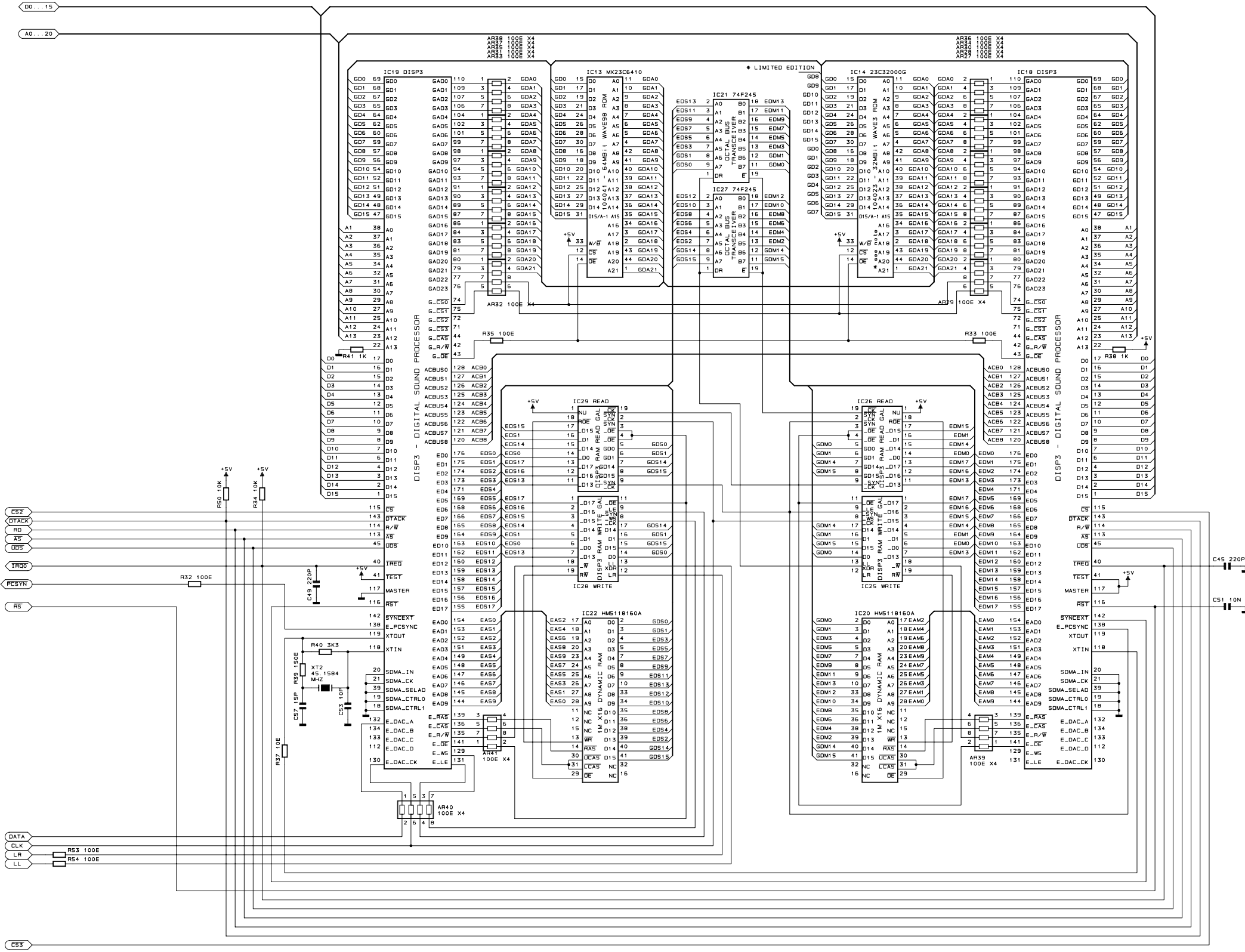
JUMPER SETTING TABLE

MODEL	J4	J5	J3	J6	J2
RP200 GEM	L	L	L	L	L
RP200 BAL	L	L	L	L	H
GRP300 GEM	L	L	L	H	H
GRP300 BAL	L	L	L	H	H

SOFTWARE VERSION ABOVE 2.00

761172 - CPU & SOUND GENERATOR BOARD
 761189* - CPU & SOUND GENERATOR BOARD
 LIMITED EDITION
 SEE NOTE *

* NOTE: Because of an erroneous marking of the 104023 ROM (where the 00-7 data are scrambled with the 0B-15 data respectively), GM have manufactured a limited number of board identified by the code 761189 using the Pcb# 310661. When you replace any component on this board refer to the same components of the board 761172 with the exception of IC14, if you need just this IC order 104046 LIMITED EDITION in detail, or in case this IC is no longer available replace the entire CPU board, in every respect the boards 761172 and 761189 are perfectly reciprocal changeable between them.



<p>Spare Part List</p>
<p>Legend</p>
EU = Specify European Version (230Vac)
US = Specify United States Version (115Vac)
R = Rosewood finish
B = Gloss Black finish
M = Mahogany finish
W = Gloss White finish
Baldwin = Baldwin version
Gem = Gem version
Code Description

<p><i>RP100</i></p>
<p>Accessories</p>
970243 Pianist's Bench
970346 Portable Triple Pedal Switch
271243 Owner's Manual (English,Italian,French,German)(Gem)
271266 Owner's Manual (Dutch,Spanish,Danish)(Gem)
271236 Owner's Manual (English, French, Spanish)(Baldwin)
130274 Mains Cable (EU)
130276 Mains Cable (US)
<p>Consolette</p>
970345 Consolette
660603 * Lower Cross-Bar Strengthening
660511 * Left Cabinet Support
660510 * Right Cabinet Support
651924 * Foot
261820 * Lower Cross-Bar
261819 * Left Leg
261818 * Right Leg
261092 * Upper Cross-Bar
150618 * Thumbscrew
120687 * Barrel Nut
120686 * Conical Screw
120685 * Threaded Rod
<p>Cabinet</p>
710472 Cabinet (Gem)
710471 Cabinet (Baldwin)
660606 Cover
660553 Keyboard Cross-Bar (Gem)
660505 Keyboard Cross-Bar (Baldwin)
660509 Flange for Left Side
660508 Flange for Right Side
653427 Left Side
653426 Right Side
652875 Speaker Grid
340075 Nylon Board Spacer
210017 2x10mm Adhesive Black Felt (specify mt)
210016 1x10mm Adhesive Black Felt (specify mt)
190015 Adhesive Rubber Foot
171657 Left Side Support
171656 Right Side Support
<p>Music Stand</p>
340913 Music Stand Stop
720566 Music Stand Assembly (Gem)
720564 Music Stand Assembly (Baldwin)
710466 * Wooden Music Stand Support (Gem)
710465 * Wooden Music Stand Support (Baldwin)
340914 * Plexiglass Music Stand
170612 * Music Stand Hinge
210017 * 2x10mm Adhesive Black Felt (specify mt)
<p>Keyboard Cover</p>
653431 Left Rack
653430 Right Rack
340811 Toothed Wheel
171651 Toothed Wheel Bar
120690 Toothed Wheel Lock
720565 Keyboard Cover Assembly
660599 * Bar Support Profile for Keyb. Cover
660598 * Top Handle Profile for Keyb. Cover
660597 * Bottom Handle Profile for Keyb. Cover
340922 * Plastic Sliding Cap for Handle
340912 * Plexiglass Keyboard Cover
340119 * Bush
190015 * Adhesive Rubber Foot
<p>Mains Assembly</p>
770839 Mains Cables Assembly
770834 Power Switch Cables Assembly
110320 * Power Switch
768197 Mains Filter Board (Pcb#310642)

230568 * 10mH 250Vac 1A AC Line EMI Coil "Siemens"
140010 * 3 Contacts P=10 Vert Terminal Block
020493 * 100n 250Vac MKP EMI Capacitor "Siemens"
010545 * 4n7 250V Ceramic Capacitor (Iec-UI-Csa)
340916 Button for Power Switch
190133 Lateroid Insulator For Screw Block
171638 Mains Switch Support
140036 Screw Block (specify contacts)
110614 Mains Socket
020493 100n 250Vac MKP EMI Capacitor "Siemens"

<p>Transformers</p>
230136 Transformer 230Vac 130W (EU)
230137 Transformer 115Vac 130W (US)

<p>Power Amplifier & Supply Board</p>
730675 Power Amplifier & Supply Board (Pcb#310543)
340154 * TO3/TO218 Mica Washer
340079 * TO220 Mica Washer
340078 * TO220 Insulated Bush
141010 * 4 Contacts Vert Female Connector
140917 * 2 Contacts Vert Male Connector
140352 * 9 Contacts Hor Male Connector
140351 * 6 Contacts Hor Male Connector
140010 * 3 Contacts P=10 Vert Terminal Block
110119 * Fuse Clip 10A max (EU) (US)
100958 * TDA7265 Dual 25W Power Amplifier
100919 * MC33078 Dual LN Operational Amplifier
100059 * 7805 +5V 1A Voltage Regulator
100045 * 7812 +12V 1A Voltage Regulator
100043 * 7912 -12V 1A Voltage Regulator
090856 * J176 TO92 P-Channel J-Fet Transistor
090183 * BC550 TO92 LN Npn Transistor
080605 * KBL02 4A 200V Rectifier Diode Bridge
080156 * 1N4002 1A 100V Rectifier Diode
080103 * 1N4148 100mA 75V Signal Diode
110013 T1.25A Fuse 5x20mm (EU)
110003 T3.15A Fuse 5x20mm (EU)
110061 T3A Fuse 6.3x32mm (US)
110026 T1.25A Fuse 6.3x32mm (US)
<p>Speakers Assembly</p>
770835 Speakers Cables Assembly
261788 Speaker Box
220117 8ohm 5" Woofer Speaker
220115 8ohm 3" Tweeter Speaker
030171 4u7 63V 20% Axial Electrolytic Bipolar Capacitor
<p>Phones Board</p>
730516 Phones Board (Pcb# 310541)
230569 * FL5R200PNT EMI Coil For Signal
140351 * 6 Contacts Hor Male Connector
140217 * Jack Slim Horizontal S-F Socket
140207 * Jack Horizontal F Socket (with dual switch)
<p>Keyboard Assembly</p>
720558 Keyboard Assembly (TP21)
840762 * 20 Wires 25cm Length Flat Cable
840761 * 20 Wires 12.5cm Length Flat Cable
761173 * Keyboard Interface Board (Pcb#315024)
141018 ** 20 Contacts Vert Female Connector
141011 ** 6 Contacts Vert Female Connector
140918 ** 2 Contacts Hor Male Connector
100740 ** HD6433278 Cpu F=20MHz
100605 ** 74HC125 Quad 3-State Buffer
050493 ** 10Kx4 1/8w 5% Resistor Array
050492 ** 10Kx8 1/8w 5% Resistor Array
050414 ** 2K2x4 1/8w 5% Resistor Array
010725 ** 20MHz Ceramic Resonator With Capacitors
010662 ** 220p 10% 50V X8 Cap Array
010661 ** 47p 10% 50V X8 Cap Array
720560 * Keyboard Assembly (TP21)
840738 ** 4 Wires 5cm Length Flat Cable
810552 ** 39 Contacts L Board For Dynamic Keyb. (PCB#310531)
340764 *** 3 Dual Contacts Rubber Strip
340211 *** 12 Dual Contact Rubber Strip
141018 *** 20 Contacts Vert Female Connector
141010 *** 4 Contacts Vert Female Connector
080103 *** 1N4148 100mA 75V Signal Diode
810551 ** 49 Contacts R Board For Dynamic Keyb. (PCB#310530)
340212 *** 13 Dual Contact Rubber Strip
340211 *** 12 Dual Contact Rubber Strip
141018 *** 20 Contacts Vert Female Connector
141010 *** 4 Contacts Vert Female Connector
080103 *** 1N4148 100mA 75V Signal Diode

500075 ** Mechanical Keyboard (TP21)
160217 *** Sharp Key Return Spring
160216 *** Natural Key Return Spring
151236 *** Last C Key (TP21P)
151235 *** First A Key (TP21P)
151234 *** Sharp Key (TP21P)
151233 *** B Key (TP21P)
151232 *** A Key (TP21P)
151231 *** G Key (TP21P)
151230 *** F Key (TP21P)
151229 *** E Key (TP21P)
151228 *** D Key (TP21P)
151227 *** C Key (TP21P)

<p>Controls Panel Assembly</p>
820583 Controls Panel Assembly (Gem)
820582 Controls Panel Assembly (Baldwin)
810677 * Controls & Display Boards Assembly
730999 ** Controls Panel Board (Pcb#310609)
141018 ** 20 Contacts Vert Female Connector
140918 *** 2 Contacts Hor Male Connector
140529 *** Microswitch 12V 50mA 0.25mm
100606 *** 74HC138 1 Of 8 Decoder
090194 *** BC560 TO92 LN Pnp Transistor
080752 *** Led 3mm Wide Diffused Red
080724 *** Led 3mm 40deg High Eff Green
080103 *** 1N4148 100mA 75V Signal Diode
070551 *** 10K Linear 30mm Slider Potentiometer
730997 ** Display Board (Pcb#310638)
323069 *** 11.1X5mm Bumpom Rubber
141018 *** 20 Contacts Vert Female Connector
140918 *** 2 Contacts Hor Male Connector
140890 *** 4 Contacts Hor Male Single-Strip
080745 *** 2x16 Characters Lcd Display
660591 * Controls Panel (Gem)
660592 * Controls Panel (Baldwin)
653420 * << -> Rubber Pad
653419 * <<< >> Rubber Pad
653418 * <PLAY-REC> Rubber Pad
653417 * 2+4+8+8 Rubber Pad
653415 * 5+5+2 Rubber Pad
653413 * 4+1 Rubber Pad
651648 * Plexiglass Display Screen
340915 * LED Lens
340820 * Slider Knob
340523 * 6.5mm Spacer
340512 * Slider Potentiometer Guide
210258 * Slider Potentiometer Felt
210020 * 1.5x12mm Adhesive Red Felt (specify mt)
210017 * 2x10mm Adhesive Black Felt (specify mt)

<p>CPU & Sound Generator Board</p>
761171 CPU & Sound Generator Board (Pcb#310603)
560021 * GAL 16V8C-7 Programmed Disp3 Ram Read
560020 * GAL 16V8C-7 Programmed Disp3 Ram Write
141018 * 20 Contacts Vert Female Connector
141012 * 8 Contacts Vert Female Connector
141011 * 6 Contacts Vert Female Connector
141010 * 4 Contacts Vert Female Connector
140930 * 9 Contacts Hor Male Connector
140874 * Single In Line Vert Male Strip (specify contacts)
106003 * MAX709 Power Monitor With Reset
106001 * MC33078P SOIC Dual Low Noise Op. Amp.
105009 * DISP3 QFP Digital Sound Processor (Hitachi)
105006 * HD6413003F16 QFP Cpu
104042 * HM5118160J-5 16Mbit Dram Ta=50nS
104041 * 23C64000G SOP 64MBit Rom Wave98
104030 * AM29F400B-90EC TSOP 4Mbit Flash Memory Ta=90nS
104000 * HM628128LFP5 SOP 1Mbit Static Ram Ta=55nS
103012 * 74HC125D SOIC Quad Tri-State Buffer
103010 * 74HC04D SOIC Hex Inverter
103009 * 74HC02D SOIC Quad 2-In Nor Gate
103004 * AD1865R SOP 18bit D/A Converter
103002 * 74HC245DW SOIC Octal Bus Transceiver
103001 * 74HC08D SOIC Quad 2-Input And Gate
091001 * BC857 TO236 Smd Pnp Transistor
091000 * BC847 TO236 Smd Npn Transistor
081204 * 5.6V 0.5W Zener
081000 * PMLL4148 Smd 100mA 75V Signal Diode
055101 * 4K7 X4 1/16w 5% Smd Resistor Array
055100 * 100E X4 1/16w 5% Smd Resistor Array
011501 * 220pF x4 10% 100V NPO Smd Capacitor Array
011500 * 47pF x4 10% 100V NPO Smd Capacitor Array
010727 * 45.1584MHz Quartz Resonator
010704 * 16MHz Quartz Resonator

140877 * Jumper For Contacts Strip (p=2.54mm)
110282 * 3.6V 60mAh Nicd Battery

<p>Outputs Assembly</p>
730996 Outputs Assembly
730995 * Outputs Board (Pcb#310608)
230569 ** FL5R200PNT EMI Coil For Signal
230527 ** BL02RN2-R62 EMI Coil For Signal
141012 ** 8 Contacts Vert Female Connector
141010 ** 4 Contacts Vert Female Connector
140918 ** 2 Contacts Hor Male Connector
140908 ** 6 Contacts Vert Male Small Connector
140247 ** 8 Poles Mini Din Female Socket
140217 ** Jack Slim Horizontal S-F Socket
140216 ** 6 Poles Din Horizontal Female Socket
140212 ** 5 Poles Din Horizontal Female Socket
120857 ** Vertical Male Faston 6.3mm
100734 ** MAX202E RS232 Drivers/Receiver
100602 ** 74HC04 Hex Inverter
100035 ** 6N138 Optocoupler
090194 ** BC560 TO92 LN Pnp Transistor
090183 ** BC550 TO92 LN Npn Transistor
080103 ** 1N4148 100mA 75V Signal Diode
653440 * Outputs Panel
210018 * 1x5mm Adhesive Red Felt (specify mt)
171329 * Support for Outputs Panel
<p>Wiring Connections</p>
841174 20 Wires 20cm Length Flat Cable (3 Connectors)
841173 6 Wires 7.5cm Length Crimp Terminal Cable
841172 9 Wires 15cm Length Crimp Terminal Cable
841043 2 Wires 35cm Length Crimp Terminal Cable
841038 8 Wires 25cm Length Flat Cable
841036 6 Wires 45cm Length Flat Cable
840844 2 Wires 7.5cm Length Crimp Terminal Cable
840842 4 Wires 15cm Length Flat Cable
840768 4 Wires 10cm Length Flat Cable
840765 2 Wires 20cm Length Crimp Terminal Cable

<p><i>RP150</i></p>
<p>Accessories</p>
970319 Pianist's Bench (M)
970297 Pianist's Bench (B)
970296 Pianist's Bench (R)
340116 Adhesive Clamp For Pedals Cable
271276 Owner's Manual (English,French,Spanish)(Baldwin)
271259 Owner's Manual (English,Italian,French,German)(Gem)
271267 Owner's Manual (Dutch,Spanish,Danish)(Gem)
130274 Mains Cable (EU)
130276 Mains Cable (US)
<p>Consolette</p>
830746 Legs & Pedals Assembly (M)
830745 Legs & Pedals Assembly (B)
830744 Legs & Pedals Assembly (R)
710504 * Pedals Cross-bar Assembly (M)
710503 * Pedals Cross-bar Assembly (B)
710502 * Pedals Cross-bar Assembly (R)
720561 ** Triple Brassed Pedals Assembly
070556 *** 20K 90deg stroke potentiometer
510258 ** Pedal Wooden Parts (M)
510257 ** Pedal Wooden Parts (B)
510256 ** Pedal Wooden Parts (R)
261965 *** 20x20x70mm Deal Fillet
261946 *** Rear Cross-Bar for Pedals
261866 *** 20x20x200mm Deal Fillet
261812 *** Support for Pedalboard
261952 *** Top Cross-Bar for Pedals (M)
261831 *** Top Cross-Bar for Pedals (B)
261806 *** Top Cross-Bar for Pedals (R)
261953 *** Front Cross-Bar for Pedals (M)
261830 *** Front Cross-Bar for Pedals (B)
261807 *** Front Cross-Bar for Pedals (R)
261811 ** Pedalboard
210021 *** 1x15mm Adhesive Red Felt (specify mt)
171585 ** Angular Fixing for Pedals Cross-bar
660407 * Speaker Box Fixing
261943 * Lower Panel (M)
261940 * Lower Panel (B)
261937 * Lower Panel (R)
261962 * Left Foot (M)
261828 * Left Foot (B)
261809 * Left Foot (R)

261961 * Right Foot (M)
261829 * Right Foot (B)
261808 * Right Foot (R)
261951 * Left Side (M)
261833 * Left Side (B)
261803 * Left Side (R)
261950 * Right Side (M)
261834 * Right Side (B)
261802 * Right Side (R)
171702 * Right Cabinet Support
171701 * Left Cabinet Support

<p>Cabinet</p>
<p>Top Cabinet Assembly</p>
710534 Top Cabinet Assembly (M)
710533 Top Cabinet Assembly (B)
710532 Top Cabinet Assembly (R)
510268 * Top Cover Assembly (M)
510267 * Top Cover Assembly (B)
510266 * Top Cover Assembly (R)
261866 ** 20x20x200mm Deal Fillet
261958 ** Cabinet Cover (M)
261837 ** Cabinet Cover (B)
261798 ** Cabinet Cover (R)
340090 * Music Stand Bush
<p>Front Panel Assembly</p>
710544 Front Panel Assembly (Baldwin) (M)
710543 Front Panel Assembly (Baldwin) (B)
710542 Front Panel Assembly (Baldwin) (R)
710523 Front Panel Assembly (Gem)(M)
710522 Front Panel Assembly (Gem)(B)
710521 Front Panel Assembly (Gem)(R)
710553 * Front Panel (Baldwin)(M)
710552 * Front Panel (Baldwin)(B)
710551 * Front Panel (Baldwin)(R)
710501 * Front Panel (Gem)(M)
710500 * Front Panel (Gem)(B)
710499 * Front Panel (Gem)(R)
324405 * Hinge
261944 * Music Stand (M)
261941 * Music Stand (B)
261938 * Music Stand (R)
219066 * Adhesive Black Felt for Music Stand
210016 * 1x10mm Adhesive Black Felt (specify mt)
171679 * Front Panel Angular Reinforcement
171669 * Left Fixing Bar
171664 * Right Fixing Bar
<p>Keyboard Cover Assembly</p>
710520 Keyboard Cover Assembly (M)
710519 Keyboard Cover Assembly (B)
710518 Keyboard Cover Assembly (R)
660612 * Front Keyboard Cover Handle
340922 * Plastic Sliding Cap for Handle
340811 * Toothed Wheel
340119 * Bush
261949 * Keyboard Cover (M)
261948 * Keyboard Cover (B)
261947 * Keyboard Cover (R)
210017 * 2x10mm Adhesive Black Felt (specify mt)
210016 * 1x10mm Adhesive Black Felt (specify mt)
171665 * Keyboard Cover Bar Support
171335 * Toothed Wheel Bar
120690 * Toothed Wheel Lock
<p>Cabinet Assembly</p>
710557 Cabinet (Baldwin) (M)
710556 Cabinet (Baldwin) (B)
710555 Cabinet (Baldwin) (R)
710513 Cabinet (Gem) (M)
710512 Cabinet (Gem) (B)
710511 Cabinet (Gem) (R)
660609 * Speaker Socket Support
660410 * Speakers Protection Grid
660405 * Heatsink Grid
510264 * Cabinet Wooden Parts (Baldwin) (M)
510262 * Cabinet Wooden Parts (Baldwin) (B)
510260 * Cabinet Wooden Parts (Baldwin) (R)
510263 * Cabinet Wooden Parts (Gem) (M)
510261 * Cabinet Wooden Parts (Gem) (B)
510259 * Cabinet Wooden Parts (Gem) (R)
710540 ** Keyboard Cross-Bar (Baldwin) (M)
710480 ** Keyboard Cross-Bar (Baldwin) (B)
710469 ** Keyboard Cross-Bar (Baldwin) (R)
710497 ** Keyboard Cross-Bar (Gem) (M)
710481 ** Keyboard Cross-Bar (Gem) (B)
710470 ** Keyboard Cross-Bar (Gem) (R)

710541	**	Rear Panel (Baldwin) (M)
710474	**	Rear Panel (Baldwin) (B)
710467	**	Rear Panel (Baldwin) (R)
710498	**	Rear Panel (Gem) (M)
710475	**	Rear Panel (Gem) (B)
710468	**	Rear Panel (Gem) (R)
261840	**	Bottom Support Panel
261954	**	Cabinet Right Side (M)
261841	**	Cabinet Right Side (B)
261791	**	Cabinet Right Side (R)
261955	**	Cabinet Left Side (M)
261842	**	Cabinet Left Side (B)
261790	**	Cabinet Left Side (R)
340904	*	Toothed Bar
323012	*	Plastic Pivot
171331	*	Left Cover Clamp
171330	*	Right Cover Clamp
150474	*	Plug For Unused Hole
653433	*	Left Plastic Lateral
653432	*	Right Plastic Lateral
340075	*	Nylon Board Spacer
210217	*	Black Sealer (specify mt)
210216	*	Adhesive Rubber Foam 20x5mm (Specify mt)
210054	*	1x5mm Adhesive Spik (specify mt)

Mains Assembly

770860	*	Mains Cables Assembly
110320	*	Power Switch
340916	*	Switch Button
171638	*	Mains Switch Support
110614	*	Mains Socket
768197	*	Mains Filter Board (Pcb#310642)
230568	*	10mH 250Vac 1A AC Line EMI Coil "Siemens"
140010	*	3 Contacts P=10 Vert Terminal Block
020493	*	100n 250Vac MKP EMI Capacitor "Siemens"
010545	*	4n7 250V Ceramic Capacitor (Iec-UI-Csa)

Transformer

230137	*	Transformer 115Vac 130W (US)
230136	*	Transformer 230Vac 130W (EU)

Power Amplifier & Supply Board

730675	*	Power Amplifier & Supply Board (Pcb#310543)
340154	*	TO3/TO218 Mica Washer
340079	*	TO220 Mica Washer
340078	*	TO220 Insulated Bush
141010	*	4 Contacts Vert Female Connector
140917	*	2 Contacts Vert Male Connector
140352	*	9 Contacts Hor Male Connector
140351	*	6 Contacts Hor Male Connector
140010	*	3 Contacts P=10 Vert Terminal Block
110119	*	Fuse Clip 10A max (EU) (US)
100958	*	TDA7265 Dual 25W Power Amplifier
100919	*	MC33078 Dual LN Operational Amplifier
100059	*	7805 +5V 1A Voltage Regulator
100045	*	7812 +12V 1A Voltage Regulator
100043	*	7912 -12V 1A Voltage Regulator
090856	*	J176 TO92 P-Channel J-Fet Transistor
090183	*	BC550 TO92 LN Npn Transistor
080605	*	KBL02 4A 200V Rectifier Diode Bridge
080156	*	1N4002 1A 100V Rectifier Diode
080103	*	1N4148 100mA 75V Signal Diode
110013	*	T1.25A Fuse 5x20mm (EU)
110003	*	T3.15A Fuse 5x20mm (EU)
110061	*	T3A Fuse 6.3x32mm (US)
110026	*	T1.25A Fuse 6.3x32mm (US)

Speakers Assembly

770859	*	Speaker Cables Assembly
220120	*	6" Full-range 8E Speaker
220119	*	3" Full-range 8E Speaker
340928	*	Plastic Speaker Box
210242	*	Filler for Speaker Box (Specify m²)
171699	*	3" Speaker Support

Keyboard Assembly

720568	*	Keyboard Assembly (TP10MDS)
840762	*	20 Wires 25cm Length Flat Cable
840761	*	20 Wires 12.5cm Length Flat Cable
761173	**	Keyboard Interface Board (Pcb#315024)
141018	**	20 Contacts Vert Female Connector
141011	**	6 Contacts Vert Female Connector
140918	**	2 Contacts Hor Male Connector
100740	**	HD6433278 Cpu F=20MHz
100605	**	74HC125 Quad 3-State Buffer

050493	**	10Kx4 1/8w 5% Resistor Array
050492	**	10Kx8 1/8w 5% Resistor Array
050414	**	2K2x4 1/8w 5% Resistor Array
010725	**	20MHz Ceramic Resonator With Capacitors
010662	**	220p 10% 50V X8 Cap Array
010661	**	47p 10% 50V X8 Cap Array
720559	*	Keyboard Assembly (TP10MDS)
840738	**	4 Wires 5cm Length Flat Cable
810552	**	39 Contacts L Board For Dynamic Keyb. (PCB#310531)
340764	**	3 Dual Contacts Rubber Strip
340211	***	12 Dual Contact Rubber Strip
141018	***	20 Contacts Vert Female Connector
141010	***	4 Contacts Vert Female Connector
080103	***	1N4148 100mA 75V Signal Diode
810551	**	49 Contacts R Board For Dynamic Keyb. (PCB#310530)
340212	***	13 Dual Contact Rubber Strip
340211	***	12 Dual Contact Rubber Strip
141018	***	20 Contacts Vert Female Connector
141010	***	4 Contacts Vert Female Connector
080103	***	1N4148 100mA 75V Signal Diode
500074	**	Mechanicals Parts (TP10MDS)
151226	***	Last C Key (TP10MDS)
151225	***	First A Key (TP10MDS)
151224	***	Sharp Key (TP10MDS)
151223	***	B Key (TP10MDS)
151222	***	A Key (TP10MDS)
151221	***	G Key (TP10MDS)
151220	***	F Key (TP10MDS)
151219	***	E Key (TP10MDS)
151218	***	D Key (TP10MDS)
151217	***	C Key (TP10MDS)
340092	*	5mm Board Spacer
210017	*	2x10mm Adhesive Black Felt (specify mt)

Controls Panel Assembly

820592	*	Controls Panel Assembly (Baldwin)
820590	*	Controls Panel Assembly (Gem)
810677	*	Controls & Display Boards Assembly
730999	**	Controls Panel Board (Pcb#310609)
141018	**	20 Contacts Vert Female Connector
140918	***	2 Contacts Hor Male Connector
140529	***	Microswitch 12V 50mA 0.25mm
100606	***	74HC138 1 Of 8 Decoder
090194	***	BC560 TO92 LN Pnp Transistor
080752	***	Led 3mm Wide Diffused Red
080724	***	Led 3mm 40deg High Eff Green
080103	***	1N4148 100mA 75V Signal Diode
070551	***	10K Linear 30mm Slider Potentiometer
730997	**	Display Board (Pcb#310638)
323069	***	11.1X5mm Bumpom Rubber
141018	***	20 Contacts Vert Female Connector
140918	***	2 Contacts Hor Male Connector
140890	***	4 Contacts Hor Male Single-Strip
080745	***	2x16 Characters Led Display
660635	*	Control Panel (Baldwin)
660610	*	Control Panel (Gem)
653420	*	<-> Rubber Pad
653419	*	<<>> Rubber Pad
653418	*	<PLAY-REC> Rubber Pad
653417	*	2+4+8+8 Rubber Pad
653415	*	5+5+2 Rubber Pad
653413	*	4+1 Rubber Pad
651648	*	Plexiglass Display Screen
651563	*	Cloth For Panel Slits
340915	*	LED Lens
340820	*	Slider Knob
340523	*	6.5mm Spacer
340512	*	Slider Potentiometer Guide
210258	*	Slider Potentiometer Felt
210020	*	1.5x12mm Adhesive Red Felt (specify mt)
210017	*	2x10mm Adhesive Black Felt (specify mt)
171661	*	Front Support

CPU & Sound Generator Board

761171	*	CPU & Sound Generator Board (Pcb#310603)
560021	*	GAL 16V8C-7 <DISP3 RAM READ
560020	*	GAL 16V8C-7 <DISP3 RAM WRITE
141018	*	20 Contacts Vert Female Connector
141012	*	8 Contacts Vert Female Connector
141011	*	6 Contacts Vert Female Connector
141010	*	4 Contacts Vert Female Connector
140930	*	9 Contacts Hor Male Connector
140874	*	Single In Line Vert Male Strip (specify contacts)
106003	*	MAX709 Power Monitor With Reset
106001	*	MC33078P SOIC Dual Low Noise Op. Amp.

105009	*	DISP3 QFP Digital Sound Processor (Hitachi)
105006	*	HD6413003F16 QFP Cpu
104042	*	HM5118160J-5 16Mbit Dram Ta=50nS
104041	*	23C64000G SOP 64MBit Rom Wave98
104030	*	AM29F400B-90EC TSOP 4Mbit Flash Memory Ta=90nS
104000	*	HM628128LFP5 SOP 1Mbit Static Ram Ta=55nS
103012	*	74HC125D SOIC Quad Tri-State Buffer
103010	*	74HC04D SOIC Hex Inverter
103009	*	74HC02D SOIC Quad 2-In Nor Gate
103004	*	AD1865R SOP 18bit D/A Converter
103002	*	74HC245DW SOIC Octal Bus Transceiver
103001	*	74HC08D SOIC Quad 2-Input And Gate
091001	*	BC857 TO236 Smd Pnp Transistor
091000	*	BC847 TO236 Smd Npn Transistor
081204	*	5.6V 0.5W Zener
081000	*	PMLL4148 Smd 100mA 75V Signal Diode
055101	*	4K7 X4 1/16w 5% Smd Resistor Array
055100	*	100E X4 1/16w 5% Smd Resistor Array
011501	*	220pF x4 10% 100V NP0 Smd Capacitor Array
011500	*	47pF x4 10% 100V NP0 Smd Capacitor Array
010727	*	45.1584MHz Quartz Resonator
010704	*	16MHz Quartz Resonator
140877	*	Jumper For Contacts Strip (p=2.54mm)
110282	*	3.6V 60mAh Nicd Battery

HF Crossover Filter Board

731019	*	HF Crossover Filter Board (Pcb#310654)
140323	*	6 Contacts Vert Male Connector
060253	*	10E 5W 10% Wire Resistor
030348	*	47u 100V 20% Axial Electrolytic Bipolar Capacitor

Outputs Assembly

730996	*	Outputs Assembly
730995	*	Outputs Board (Pcb#310608)
230569	**	FL5R200PNT EMI Coil For Signal
230527	**	BL02RN2-R62 EMI Coil For Signal
141012	**	8 Contacts Vert Female Connector
141010	**	4 Contacts Vert Female Connector
140918	**	2 Contacts Hor Male Connector
140908	**	6 Contacts Vert Male Small Connector
140247	**	8 Poles Mini Din Female Socket
140217	**	Jack Slim Horizontal S-F Socket
140216	**	6 Poles Din Horizontal Female Socket
140212	**	5 Poles Din Horizontal Female Socket
100734	**	MAX202E RS232 Drivers/Receiver
100602	**	74HC04 Hex Inverter
100035	**	6N138 Optocoupler
090194	**	BC560 TO92 LN Pnp Transistor
090183	**	BC550 TO92 LN Npn Transistor
080103	**	1N4148 100mA 75V Signal Diode
653440	**	Output Panel Box
210018	*	1x5mm Adhesive Red Felt (specify mt)
171329	*	Support for Output Panel Box

Phones Assembly

730674	*	Phones Assembly
730516	*	Phones Board (pcb# 310541)
230569	**	FL5R200PNT EMI Coil For Signal
140351	**	6 Contacts Hor Male Connector
140217	**	Jack Slim Horizontal S-F Socket
140207	**	Jack Horizontal F Socket (with dual switch)
652854	*	Phones Board Support
210017	*	2x10mm Adhesive Black Felt (specify mt)

Wiring Connections

841206	4	Wires 20cm Length Flat Cable
841205	9	Wires 7.5cm Length Crimp Terminal Cable
841176	20	Wires 48cm Length Flat Cable (3 Connectors)
841173	6	Wires 7.5cm Length Crimp Terminal Cable
841063	6	Wires 55cm Length Flat Cable
841043	2	Wires 35cm Length Crimp Terminal Cable
841041	8	Wires 12.5cm Length Flat Cable
841010	2	Wires 50cm Length Crimp Terminal Cable
840844	2	Wires 7.5cm Length Crimp Terminal Cable
840799	4	Wires 7.5cm Length Flat Cable

RP200

Accessories

970319	*	Pianist's Bench (M)
970297	*	Pianist's Bench (B)
970296	*	Pianist's Bench (R)
970298	*	Pianist's Bench (W)
340116	*	Adhesive Clamp For Pedals Cable

271237	*	Owner's Manual (English, Italian, French, German)(Gem)
271268	*	Owner's Manual (Dutch,Spanish,Danish)(Gem)
271258	*	Owner's Manual (English, French, Spanish)(Baldwin)
130274	*	Mains Cable (EU)
130276	*	Mains Cable (US)

Consolette

830743	*	Legs & Pedals Assembly (M)
830742	*	Legs & Pedals Assembly (B)
830741	*	Legs & Pedals Assembly (R)
830752	*	Legs & Pedals Assembly (W)
710530	*	Cloth Panel Assembly
340159	**	3M Dual Lock Fastening (Specify mt)
261805	**	Cloth Panel
210074	**	Speaker Cloth
710517	*	Speaker Box Assembly (M)
710516	*	Speaker Box Assembly (B)
710515	*	Speaker Box Assembly (R)
710549	*	Speaker Box Assembly (W)
770727	**	Speaker Cables Assembly
510265	**	Speaker Box (M)
510243	**	Speaker Box (B)
510245	**	Speaker Box (R)
510244	**	Speaker Box (W)
261963	***	Speaker Box Rear Panel (M)
261832	***	Speaker Box Rear Panel (B)
261804	***	Speaker Box Rear Panel (R)
261848	***	Speaker Box Rear Panel (W)
261823	***	Speaker Box Lower Panel
261822	***	Speaker Box Upper Panel
261821	***	Speaker Box Divider Panel
261794	***	Speaker Box Front Panel
261793	***	Speaker Box Side Panel
340159	**	3M Dual Lock Fastening (Specify mt)
220118	**	8ohm 8" Woofer Speaker
210242	**	Filler for Speaker Box (Specify m²)
710504	*	Pedals Cross-bar Assembly (M)
710503	*	Pedals Cross-bar Assembly (B)
710502	*	Pedals Cross-bar Assembly (R)
710550	*	Pedals Cross-bar Assembly (W)
720561	**	Triple Brassed Pedals Assembly
510258	**	Pedal Wooden Parts (M)
510257	**	Pedal Wooden Parts (B)
510256	**	Pedal Wooden Parts (R)
510270	**	Pedal Wooden Parts (W)
261965	***	20x20x70mm Deal Fillet
261946	***	Rear Cross-Bar for Pedals
261866	***	20x20x200mm Deal Fillet
261952	***	Top Cross-Bar for Pedals (M)
261831	***	Top Cross-Bar for Pedals (B)
261806	***	Top Cross-Bar for Pedals (R)
261847	***	Top Cross-Bar for Pedals (W)
261953	***	Front Cross-Bar for Pedals (M)
261830	***	Front Cross-Bar for Pedals (B)
261807	***	Front Cross-Bar for Pedals (R)
261846	***	Front Cross-Bar for Pedals (W)
261812	***	Support for Pedalboard

