



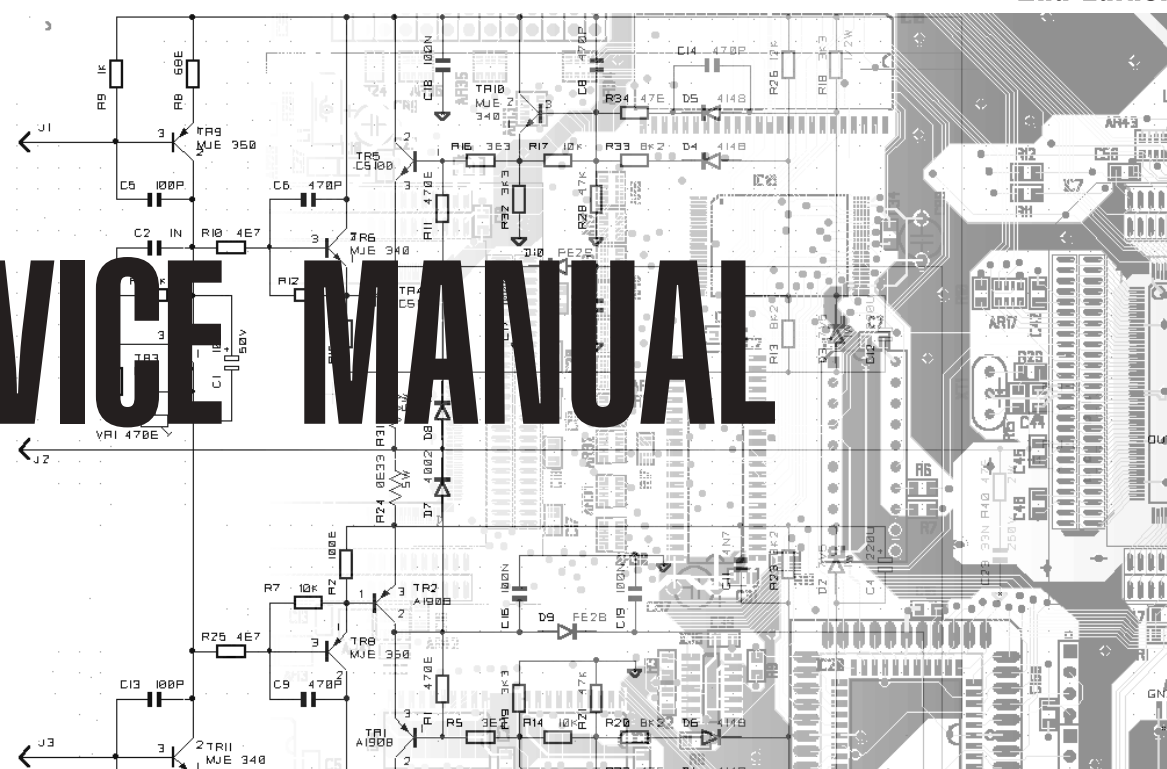
GK310

GK330

Arranger Keyboards

2nd Edition

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 1/8W unless otherwise specified.

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

← Soldering point.

• Male connector.

○ Female connector.

— M/F faston connector.

↑ Supply voltage.

□ Test point.

◁ Flag joined with one or more flags with the same signal name inscribed.

⊥ Logic supply ground.

⊥ Analog supply ground.

⊥ Chassis ground.

⊥ Earth ground.



ATTENTION

Observe precautions when handling electrostatic sensitive devices.

Address



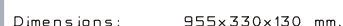
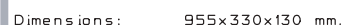
GENERALMUSIC S.p.A. Sales Division: 47842 S.Giovanni in Marignano (RN) ITALY - Via delle Rose, 12



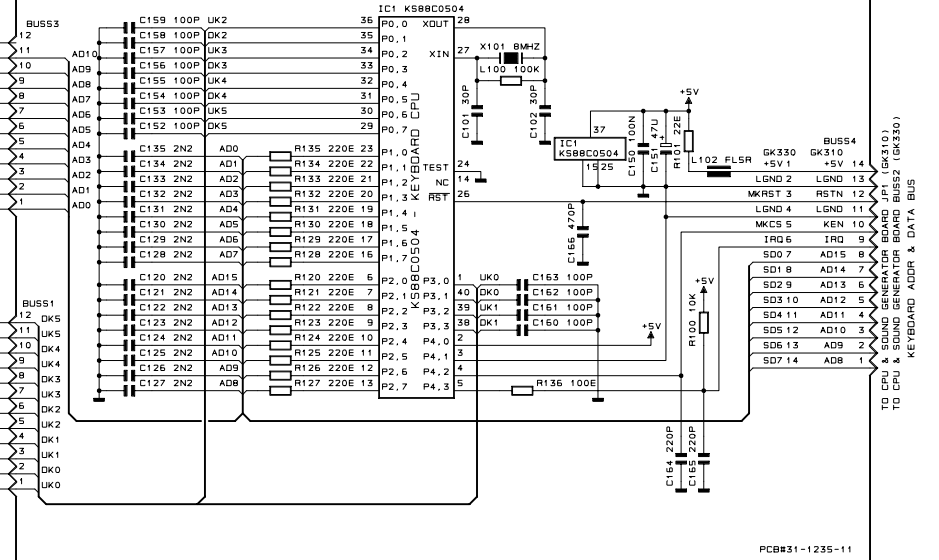
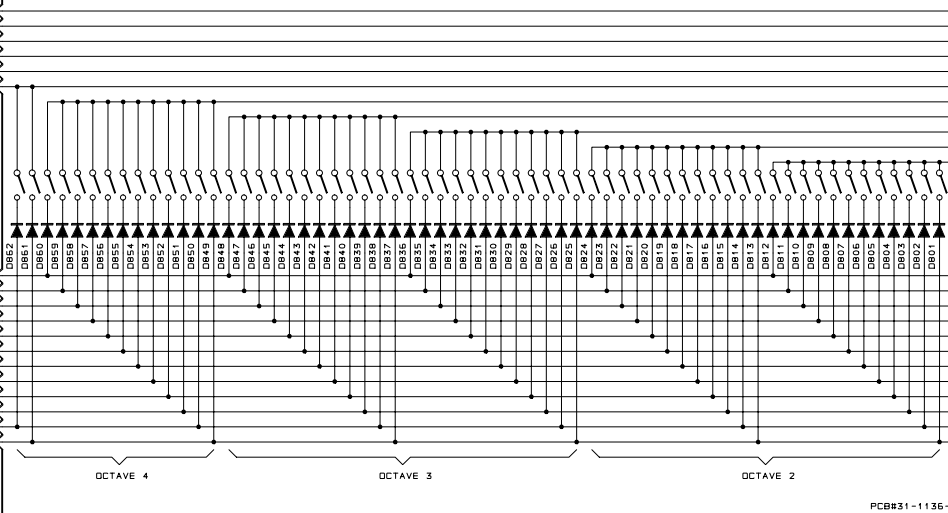
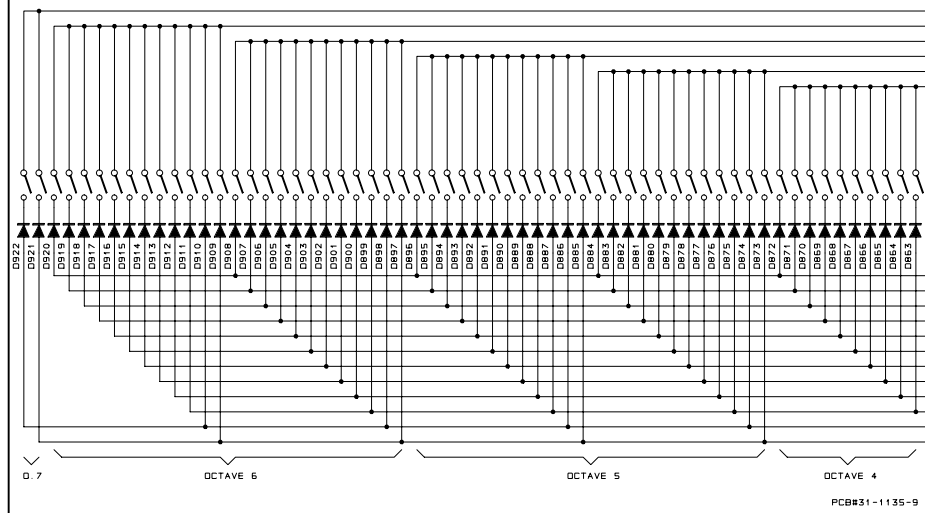
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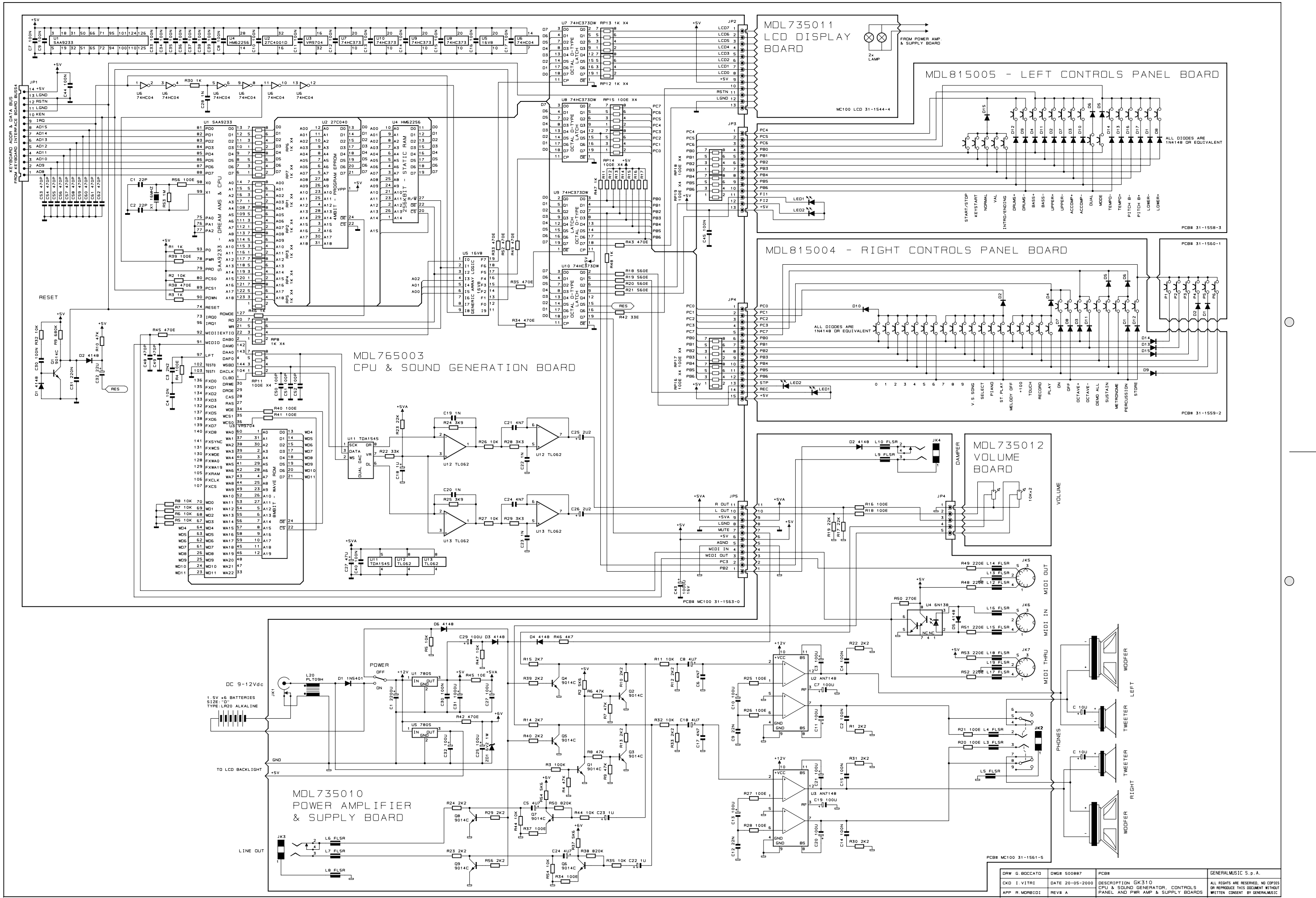


▶ CODE: 270239 ◀



DRW G. BOCCATO	DWG# 500907	PCB#	GENERALMUSIC S.p.A. ITALY
CKD I. VITRI	DATE 20-05-2000	SCHEMATIC DIAGRAM GK330 WIRING & BLOCK DIAGRAM RESET PROCEDURE ~ SPECIFICATIONS	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP. R. MORBIDI	REV: A		





DRW G. BOCCATO	DWG# 500887	PCB#	GENERALMUSIC S.p.A.
CKD I. VITRI	DATE 20-05-2000	DESCRIPTION GK310	ALL RIGHTS ARE RESERVED. NO COPIES
APP R. MORBIDI	REV# A	CPU & SOUND GENERATOR, CONTROLS	OR REPRODUCE THIS DOCUMENT WITHOUT
		PANEL AND PWR AMP & SUPPLY BOARDS	WRITTEN CONSENT BY GENERALMUSIC

Spare Part List

Code	Description
Accessories	
MDL345019	Music Stand
271284	GK310 Owner's Manual (English, Italian, French, German)
271289	GK310 Owner's Manual (Spanish, Dutch, Danish)
271286	GK330 Owner's Manual (English, Italian, French, German)
271288	GK330 Owner's Manual (Spanish, Dutch, Danish)
Optional Accessories	
970315	AC-DC Adapter 230Vac 26.4W (Europe)
970316	AC-DC Adapter 115Vac 26.4W (U.S.)
130301	2mt Midi Cable
970116	Switch Pedal
970110	X Metal Stand
GK310 Assembly	
MDL825000	Controls Panel Assembly
MDL815004	* Right Controls Panel Board (Pcb#31-1559-2 and 31-1560-1)
MDL815005	* Left Controls Panel Board (Pcb#31-1558-3)
MDL735011	* Lcd Display Assembly (Pcb#31-1544-4)
MDL675003	* Actuators Kit (comprehensive of all actuactors)
MDL655037	** <+100> Rubber Actuator
MDL655023	** <0> Rubber Actuator
MDL655022	** <9> Rubber Actuator
MDL655021	** <8> Rubber Actuator
MDL655020	** <7> Rubber Actuator
MDL655019	** <6> Rubber Actuator
MDL655018	** <5> Rubber Actuator
MDL655017	** <4> Rubber Actuator
MDL655016	** <3> Rubber Actuator
MDL655015	** <2> Rubber Actuator
MDL655014	** <1> Rubber Actuator
MDL345013	** Trapezoidal Grey Rubber Actuator
MDL345011	** Circular Grey Rubber Actuator
MDL345010	** Rectangular Grey Rubber Actuator
MDL345023	** Rectangular Red Rubber Actuator
MDL345024	** Rectangular Black Actuator
MDL345025	** Pitch Bender Rubber Actuator
MDL345002	* Rubber Contact Strip (step=20mm)
MDL345001	* Rubber Contact Strip (step=14mm)
MDL345000	* Single Rubber Contact for Controls
MDL655035	* Front Panel
MDL655036	* Lcd Display Screen
MDL345020	* Power On/Off Actuator
MDL115000	* On/Off Power Switch
MDL735012	* Volume Board
MDL345017	* Volume Knob
MDL765003	Cpu & Sound Generator Board (GK310)
The service support is made only by replacement the entire Cpu Board unless for the ICs listed below:	
MDL105000	* SAA9233 - DREAM Ams & Cpu
MDL550000	* 27C040 - 4Mbit Program Eprom
MDL104000	* VR9704 - 8Mbit Wave Rom
MDL560000	* 16V8H-15 Programmed GAL
MDL103000	* TDA1545 1bit DA Converter
100061	* TL072 Dual J-Fet Operational Amplifier
103016	* 74HC373DW SOIC Octal D-Type Latch
104020	* KM62256CLG SOP 256Kbit SRam Ta=55nS
MDL735010	Power Amplifier & Supply Board (Pcb#31-1561-5)
MDL100000	* AN7148 Dual Power Amplifier
MDL145000	* 5 Poles Din Socket
140217	* Jack Stereo Slim Horizontal Socket
140207	* Jack Horizontal Female Socket
140211	* Dc Horizontal Male Socket
MDL090000	* 9014C TO92 Npn Transistor
100035	* 6N138 Optocoupler
100059	* 7805 +5V 1A Voltage Regulator
080187	* 1N5403 3A 300V Rect. Diode (spare part supplied instead of 1N5401)
MDL725003	61Notes Dynamic Keyboard
MDL765004	* Keyboard Interface Board (Pcb#31-1235-8)
MDL100002	** KS88C0504 Keyboard Interface CPU
MDL815006	* Right Contacts Board (30Notes) (Pcb#31-1135-9)
MDL815007	* Left Contacts Board (31Notes) (Pcb#31-1136-9)
MDL345009	* 1 Octave Sharp Keys
MDL345008	* D-F-A Natural Keys
MDL345007	* C-E-G-B Natural Keys
MDL345006	* 13 Contacts Grey Strip
MDL345005	* 13 Contacts White Strip
MDL345004	* Last C Key
MDL655034	Top Chassis
MDL665000	* Right Speaker Grid
MDL665001	* Left Speaker Grid

MDL655033	Bottom Chassis (Batteries Slot included)
MDL345022	Batteries Cover
MDL225000	Low Range Speaker
MDL225001	High Range Speaker

GK330 Assembly

MDL825001	Controls Panel Assembly
MDL815008	* Controls Panel Board (Pcb#31-1467-3)
MDL735013	* Lcd Display Assembly (Pcb#31-1461-2)
MDL675004	* Actuators Kit (comprehensive of all actuactors)
MDL655023	** <0> Rubber Actuator
MDL655022	** <9> Rubber Actuator
MDL655021	** <8> Rubber Actuator
MDL655020	** <7> Rubber Actuator
MDL655019	** <6> Rubber Actuator
MDL655018	** <5> Rubber Actuator
MDL655017	** <4> Rubber Actuator
MDL655016	** <3> Rubber Actuator
MDL655015	** <2> Rubber Actuator
MDL655014	** <1> Rubber Actuator
MDL345013	** Trapezoidal Grey Rubber Actuator
MDL345011	** Circular Grey Rubber Actuator
MDL345024	** Rectangular Black Actuator
MDL345025	** Pitch Bender Rubber Actuator
MDL345026	** Square Dark Grey Rubber Actuator
MDL345027	** Square Light Grey Rubber Actuator
MDL345028	** Square Red Rubber Actuator
MDL345029	** Square Yellow Rubber Actuator
MDL345030	** Small Circular Grey Rubber Actuator
MDL345031	** "TEMPO" Rubber Actuator
MDL345001	* Rubber Contact Strip (step=14mm)
MDL345000	* Single Rubber Contact for Controls
MDL655039	* Front Panel
MDL655040	* Lcd Display Screen
MDL345020	* Power On/Off Actuator
MDL115000	* On/Off Power Switch
MDL735014	* Volume Board
MDL345017	* Volume Knob
MDL765005	Cpu & Sound Generator Board (GK330)
The service support is made only by replacement the entire Cpu Board unless for the ICs listed below:	
MDL105001	* CA8889 - A401 ASIC for SAA9733
MDL105002	* SAA9733 - DREAM Ams & Cpu
sound/program memories:	
MDL104001	* MX29F1610 16Mbit Rom -H GK330
MDL104002	* MX29F1610 16Mbit Rom -L GK330
or alternatively a single memory:	
MDL104004	* M23C3210 32Mbit Rom GK-330V2
104020	* KM62256CLG SOP 256Kbit SRam Ta=55nS
103033	* TDA1305T SOT Dual Bitstream DA Converter
103031	* 74HC00D SOIC Quad 2-In Nand Gate
103010	* 74HC04D SOIC Hex Inverter
103003	* 74HC374DW SOIC Octal D-Type Flip-Flop
MDL115001	* Lithium Battery type CR2038 3V-180mAh
MDL735015	Power Amplifier & Supply Board
MDL100000	* AN7148 Dual Power Amplifier
MDL145000	* 5 Poles Din Socket
140217	* Jack Stereo Slim Horizontal Socket
140207	* Jack Horizontal Female Socket
140211	* Dc Horizontal Male Socket
MDL090000	* 9014C TO92 Npn Transistor
100035	* 6N138 Optocoupler
100059	* 7805 +5V 1A Voltage Regulator
080187	* 1N5403 3A 300V Rect. Diode (spare part supplied instead of 1N5401)
MDL725003	61Notes Dynamic Keyboard
MDL765004	* Keyboard Interface Board (Pcb#31-1235-11)
MDL100002	** KS88C0504 Keyboard Interface CPU
MDL815006	* Right Contacts Board (30Notes) (Pcb#31-1135-9)
MDL815007	* Left Contacts Board (31Notes) (Pcb#31-1136-9)
MDL345009	* 1 Octave Sharp Keys
MDL345008	* D-F-A Natural Keys
MDL345007	* C-E-G-B Natural Keys
MDL345006	* 13 Contacts Grey Strip
MDL345005	* 13 Contacts White Strip
MDL345004	* Last C Key
MDL655038	Top Chassis
MDL665000	* Right Speaker Grid
MDL665001	* Left Speaker Grid
MDL655033	Bottom Chassis (Batteries Slot included)
MDL345022	Batteries Cover
MDL225000	Low Range Speaker
MDL225001	High Range Speaker

Note:

Each spare part is single quantity unless otherwise specified.

Asterisk prefix explanation:

Omitted = First level spare part.

One asterisk = Second level, part of previous listed first level part.

Two asterisk = Third level, part of previous listed second level part.

Three asterisk =

Any request for not above mentioned part must encompass specific description including:

1) Model name,

2) Section name,

3) Module code,

4) Reference name,

5) Quantity number.