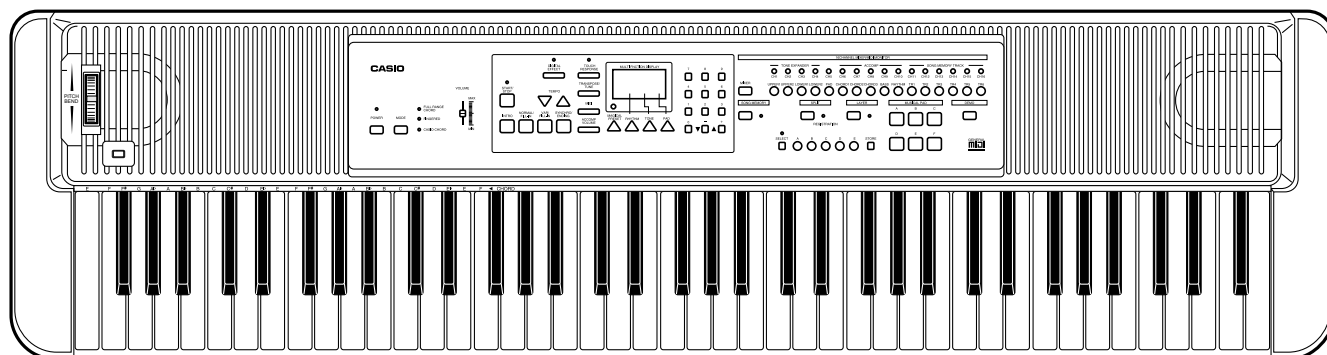


CASIO®

Service Manual

(without price)

WK-1500



WK-1500

GM SOUND KEYBOARD

INDEX

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SPECIFICATIONS

GENERAL

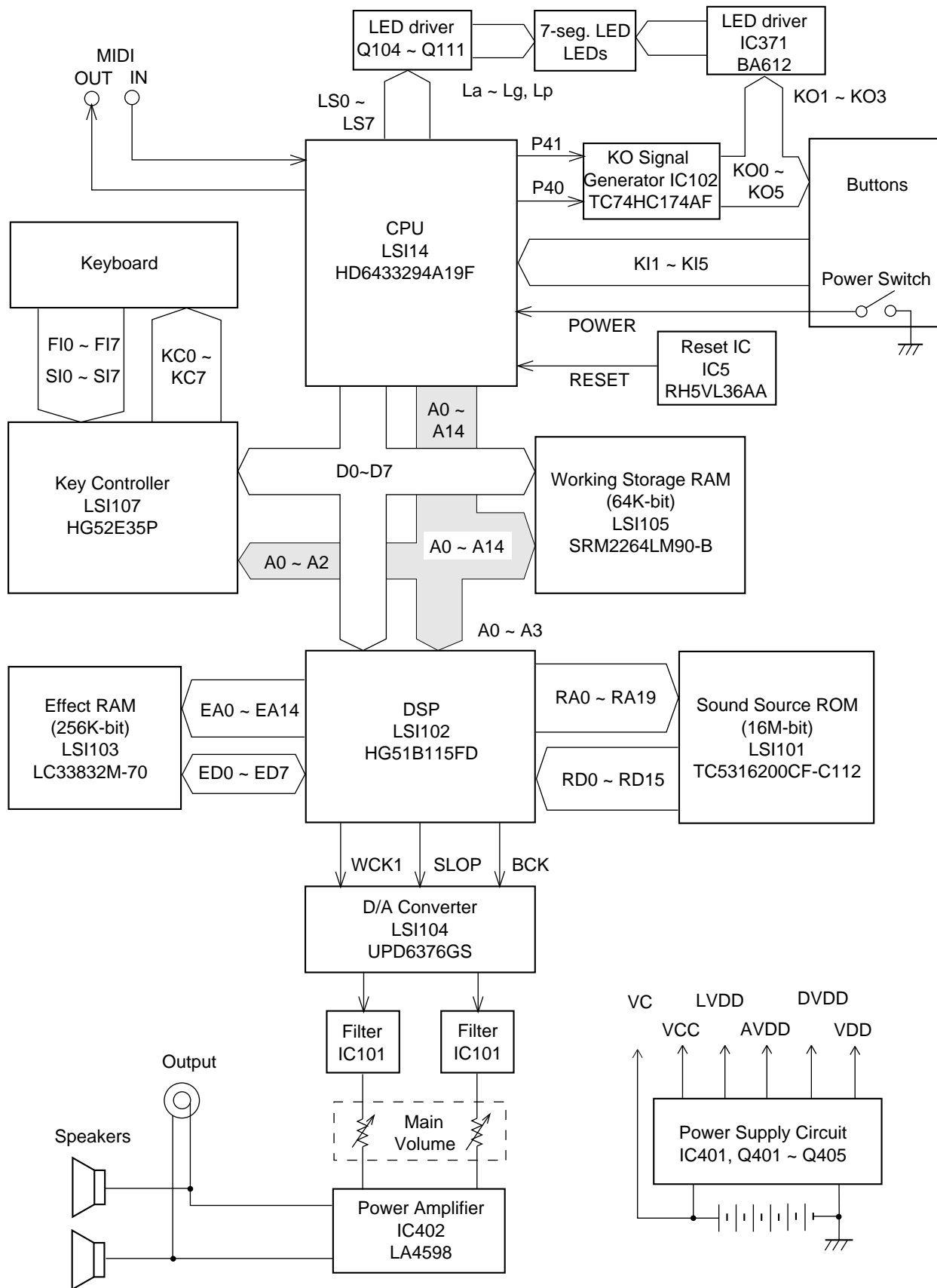
| | |
|----------------------|---|
| Number of keys: | 76 |
| Polyphonic: | 32-note |
| Digital effects: | 10 REVERB 1, REVERB 2, REVERB 3, CHORUS, TREMOLO, PHASE SHIFTER, ORGAN SPEAKER, ENHANCER, FLANGER, LOUDNESS |
| Pads: | 180 (six pads × 30 sets) Phrases (22 sets), drums/percussion (8 sets) Melody tone matches chord |
| Demo tunes: | 3, sequential repeat playback |
| Auto-accompaniment | |
| Rhythm patterns: | 100 |
| Tempo: | Adjustable (216 levels, ♩ = 40 to 255) |
| Chords: | 3 types (CASIO Chords, Fingered, Full-Range Chords) |
| Pads: | Rhythm, bass, Chord 1, Chord 2, Chord 3 (adjustable on/off, tone, volume, pan, effect send, fine tune, coarse tune, expression settings) |
| Magical presets: | 50 types (Break beat, Melodycomp, Shadow Drum, Free Session) |
| Registration memory: | 10 Tone changes, tempo setting, auto-accompaniment volume setting, mode, layer on/off, Mixer settings, effect type, split on/off, rhythm type, auto-accompaniment rhythm assignment, pad type, chord fingering method, touch response setting, MIDI settings (including assignable jack settings), Magical Preset type |
| Mixer | |
| Number of channels: | 16 |
| Parameters: | TONE, VOLUME, PAN, EFFECT SEND, FINE TUNE, COARSE TUNE, EXPRESSION, MUTE |
| MIDI monitor: | 16 LED monitor |
| Song memory | |
| Number of songs: | 2 |
| Tracks: | 6 (individual adjustment of on/off, tone, volume, pan, effect send, fine tune, coarse tune, expression) |
| Type: | Real-time |
| Capacity: | Approximately 5,200 notes |
| Other functions | |
| Transpose: | 25 levels (1 octave lower C to 1 octave upper C) |
| Tuning: | Adjustable: A4 = 440 Hz ± 50 cents |
| Pitch Bender: | Adjustable range: ± 12 semitones |
| Tone Expander: | Individual adjustment of volume, tuning, pan, effect send for each layer and split tone |

| | |
|--------------------|--|
| MIDI: | 16-timbre multi-timbre receive (General MIDI Level 1) |
| Built-in speakers: | 12 cm diameter × 2 (output: 5 W + 5 W) |
| Input/Output Jacks | |
| Power supply: | 12 V DC |
| Headphones: | Stereo standard jack |
| Output jacks: | Output impedance: 100 Ω Output voltage 2.5 V (RMS) MAX |
| Assignable Jack: | Standard jack (sustain, sostenuto, soft, rhythm start/stop) |
| MIDI terminals: | IN, OUT |
| Auto power off: | Approximately 6 minutes after the last operation |
| Power source: | 2-way AC or DC source AC: AC adaptor DC: 6D size dry batteries |
| Power consumption: | 18 W |
| Dimensions (HWD): | 116.1 × 30.2 × 11.0 mm (45-3/4 × 11-7/8 × 4-5/16 inches) |
| Weight: | 6.8 kg (15.0 lbs) excluding batteries |

ELECTRICAL

| | |
|---|----------------------------|
| Current drain with 9 V DC: | |
| No sound output | 480 mA ± 20% |
| Maximum volume | |
| with 10 polyphonic notes in tone No. 081 | 1720 mA ± 20% |
| Volume; maximum | |
| Phone output level (Vrms with 8 load each channel): | Left channel 175 mV ± 20% |
| with key C2 pressed in tone No. 042 | |
| Line output level (Vrms with 47 k load each channel): | Left channel 1420 mV ± 20% |
| with key C2 pressed in tone No. 042 | |
| Minimum operating voltage: | 12.0 V |

BLOCK DIAGRAM

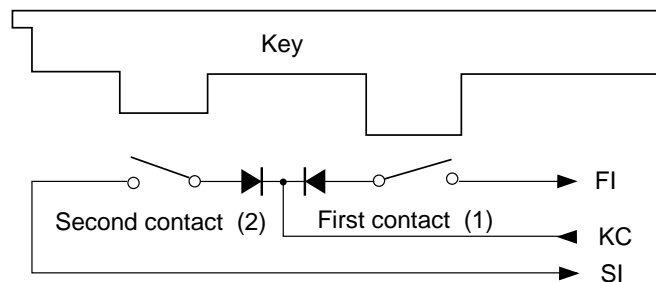


CIRCUIT DESCRIPTION

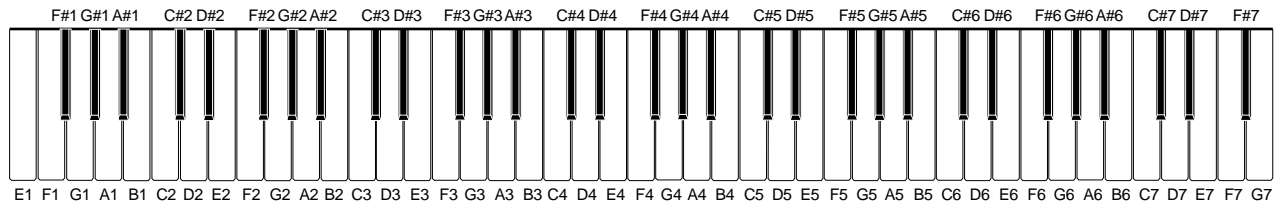
KEY MATRIX

| | KC0 | KC1 | KC2 | KC3 | KC4 | KC5 | KC6 | KC7 |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|
| FI0 | | E1 (1) | F1 (1) | F#1 (1) | G1 (1) | G#1 (1) | A1 (1) | A#1 (1) |
| SI0 | | E1 (2) | F1 (2) | F#1 (2) | G1 (2) | G#1 (2) | A1 (2) | A#1 (2) |
| FI1 | B1 (1) | C2 (1) | C#2 (1) | D2 (1) | D#2 (1) | E2 (1) | F2 (1) | F#2 (1) |
| SI1 | B1 (2) | C2 (2) | C#2 (2) | D2 (2) | D#2 (2) | E2 (2) | F2 (2) | F#2 (2) |
| FI2 | G2 (1) | G#2 (1) | A2 (1) | A#2 (1) | B2 (1) | C3 (1) | C#3 (1) | D3 (1) |
| SI2 | G2 (2) | G#2 (2) | A2 (2) | A#2 (2) | B2 (2) | C3 (2) | C#3 (2) | D3 (2) |
| FI3 | D#3 (1) | E3 (1) | F3 (1) | F#3 (1) | G3 (1) | G#3 (1) | A3 (1) | A#3 (1) |
| SI3 | D#3 (2) | E3 (2) | F3 (2) | F#3 (2) | G3 (2) | G#3 (2) | A3 (2) | A#3 (2) |
| FI4 | B3 (1) | C4 (1) | C#4 (1) | D4 (1) | D#4 (1) | E4 (1) | F4 (1) | F#4 (1) |
| SI4 | B3 (2) | C4 (2) | C#4 (2) | D4 (2) | D#4 (2) | E4 (2) | F4 (2) | F#4 (2) |
| FI5 | G4 (1) | G#4 (1) | A4 (1) | A#4 (1) | B4 (1) | C5 (1) | C#5 (1) | D5 (1) |
| SI5 | G4 (2) | G#4 (2) | A4 (2) | A#4 (2) | B4 (2) | C5 (2) | C#5 (2) | D5 (2) |
| FI6 | D#5 (1) | E5 (1) | F5 (1) | F#5 (1) | G5 (1) | G#5 (1) | A5 (1) | A#5 (1) |
| SI6 | D#5 (2) | E5 (2) | F5 (2) | F#5 (2) | G5 (2) | G#5 (2) | A5 (2) | A#5 (2) |
| FI7 | B5 (1) | C6 (1) | C#6 (1) | D6 (1) | D#6 (1) | E6 (1) | F6 (1) | F#6 (1) |
| SI7 | B5 (2) | C6 (2) | C#6 (2) | D6 (2) | D#6 (2) | E6 (2) | F6 (2) | F#6 (2) |
| FI8 | G6 (1) | G#6 (1) | A6 (1) | A#6 (1) | B6 (1) | C7 (1) | C#7 (1) | D7 (1) |
| SI8 | G6 (2) | G#6 (2) | A6 (2) | A#6 (2) | B6 (2) | C7 (2) | C#7 (2) | D7 (2) |
| FI9 | D#7 (1) | E7 (1) | F7 (1) | F#7 (1) | G7 (1) | | | |
| SI9 | D#7 (2) | E7 (2) | F7 (2) | F#7 (2) | G7 (2) | | | |

Note: Each key has two contacts, the first contact (1) and second contact (2).



NOMENCLATURE OF KEYS



BUTTON MATRIX

| | KI1 | KI2 | KI3 | KI4 | KI5 | KI6 | KI7 |
|-----|-------------------|-------------------|--------------------|----------------|-------------------|-------------------|----------------|
| KO0 | SPLIT | LAYER | CH7/CHORD2 | CH8/ CHORD3 | CH9/BASS | CH10/ RHYTHM | |
| KO1 | TRANPOSE /TUNE | MAGICAL PRESET | MIDI | | RHYTHM | TOUR | PAD |
| KO2 | | | CH4/LOWER2 | CH5/PAD | CH6/ CHORD1 | CH2/ UPPER2 | CH3/ LOWER1 |
| KO3 | 3 | 6 | 9 | DEMO | TOUCH RESPONSE | DIGITAL EFFECT | |
| KO4 | 2 | 5 | 8 | CH1/ UPPER1 | 1 | 4 | 7 |
| KO5 | ACM VOLUME | SONG MEMORY | MODULATION | MIXER | 0 | - | + |
| KO6 | SYNCH/ ENDING | VAR./FILL-IN | NORMAL/ FILL-IN | INTRO | F | E | D |
| KO7 | MODE | A | B | C | START/ STOP | TEMPO DOWN | TEMPO UP |
| KO8 | CH11/TR1 | CH12/TR2 | CH13/TR3 | CH14/TR4 | CH15/TR5 | CH16/TR6 | |
| KO9 | BANK SELECT | A | B | C | D | E | STORE |

POWER SUPPLY CIRCUIT

The power supply circuit generates six voltages as shown in the following table. VDD voltage is always generated. The others are controlled by APO signal output from the CPU.

| Name | Voltage | For operation of |
|------|---------|---|
| VDD | +5.2 V | CPU, Reset IC, Working storage RAM, KO signal generator |
| DVDD | +5.3 V | DSP, Key touch LSI, Sound source ROM, Effect RAM |
| AVDD | +5.1 V | DAC, Filter |
| LVDD | +5.2 V | LED Driver |
| VCC | +12 V | Pilot lamp |
| VC | +12 V | Power amplifier |

CPU (LSI14: HD6433294A19F)

The 16-bit CPU contains a 32k-bit ROM, a 1k-bit RAM, seven 8-bit I/O ports, an A/D convertor and MIDI interfaces. The CPU accesses to the working storage RAM, the DSP and the key touch LSI. The CPU interprets MIDI message using the working storage RAM. The CPU also controls buttons and LEDs. The following table shows the pin functions of LSI14.

| Pin No. | Terminal | In/Out | Function |
|---------|-------------|--------|--|
| 1 | P50/TXD | Out | MIDI signal output |
| 2 | P51/RXD | In | MIDI signal input |
| 3 | P52/SCK | Out | Reset signal output |
| 4 | -RESET | In | Reset signal input |
| 5 | -NMI | In | Power ON trigger signal input |
| 6 | VCC | In | +5 V source |
| 7 | -STBY | In | Standby signal input. Connected to +5 V. |
| 8 | VSS | In | Ground (0 V) source |
| 9, 10 | XTAL, EXTAL | In | 20 MHz clock input |
| 11, 12 | MD1, MD0 | In | Mode selection input |
| 13 | AVSS | In | Ground (0 V) source |
| 14 | P70 | In | Analog input terminal for the pitch bend wheel |
| 15 ~ 21 | P71 ~ P77 | Out | Input terminals from keys (KI1 ~ KI7) |
| 22 | AVCC | In | +5 V source |
| 23 ~ 30 | P60 ~ P67 | Out | LED drive signal output |
| 31 | VCC | In | +5 V source |
| 32 ~ 48 | A0 ~ A15 | Out | Address bus |
| 40 | VSS | In | Ground (0 V) source |
| 49 ~ 56 | D0 ~ D7 | In/Out | Data bus |
| 57 | P40 | Out | Clock for KO signal generator |
| 58 | P41 | Out | KO signal data |
| 59 | P42 | Out | APO signal output |
| 60 | P43 | Out | Read enable signal output |
| 61 | P44 | In | Write enable signal output |
| 62 | P45 | — | Not used |
| 63 | P46 | Out | 10 MHz clock output |
| 64 | P47 | — | Not used. Connected to +5 V source. |

DIGITAL SIGNAL PROCESSOR (LSI11: HG51B155FD-1)

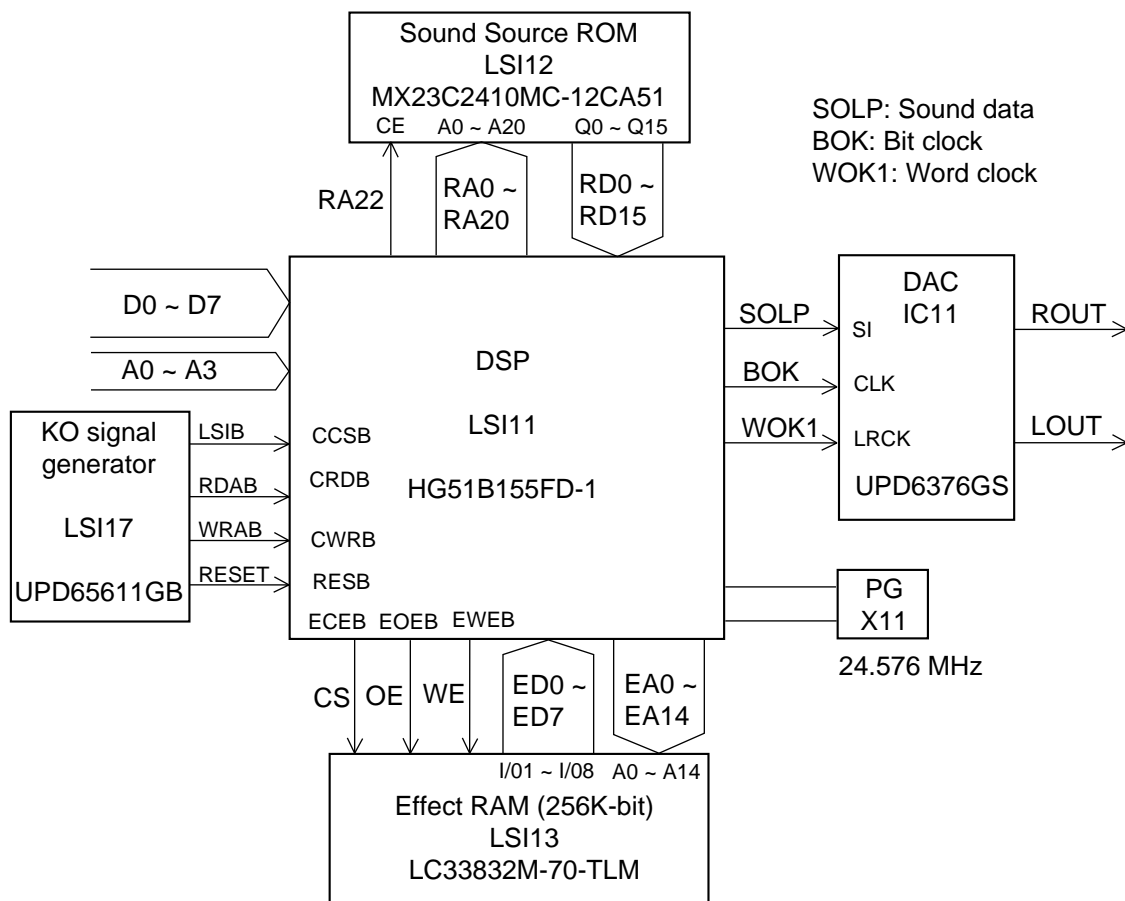
Upon receipt of note numbers and their velocities, the DSP reads sound and velocity data from the sound source ROM in accordance with the selected tone; the DSP can read rhythm data simultaneously when a rhythm pattern is selected. Then it provides 16-bit serial signal containing data of the melody, chord, bass, and percussion to the DAC. When an effect selected, the DSP adds the effect to the sound data using a 256k-bit RAM.

The following table shows the pin functions of LSI11.

| Pin No. | Terminal | In/Out | Function |
|--|------------|--------|---|
| 1 ~ 8 | CD0 ~ CD7 | In/Out | Data bus |
| 9, 10 | CE1, TRSB | — | Not used |
| 11 | GND7 | In | Ground (0 V) source |
| 12 | CK16 | Out | Terminal for 24.576 MHz clock check point |
| 13 | VCC6 | In | +5 V source |
| 14 | CK0 | In | Clock input. Connected to terminal CK16. |
| 15 | TCKB | — | Not used |
| 16 | VCC1 | In | +5 V source |
| 17 | GND1 | In | Ground (0 V) source |
| 18, 19 | XT0, XT1 | In/Out | 24.576 MHz clock input/output |
| 20 | SGL | In | System control terminal. Single chip system: Open |
| 21 | CCSB | In | Chip select signal input |
| 22 ~ 25 | CA0 ~ CA3 | In | Address bus |
| 26 | CE0 | In | Not used. Connected to ground. |
| 27 | CWRB | In | Write enable signal |
| 28 | CRDB | In | Read enable signal |
| 29 ~ 32 | — | — | Not used |
| 33 | RESB | In | Reset signal input |
| 34 | TESB | In | Not used. Connected to +5 V. |
| 35 ~ 39 | — | — | Not used |
| 40 ~ 49 52 ~ 57 | RD0 ~ RD15 | In | Data bus for the sound source ROM |
| 50 | VCC2 | In | +5 V source |
| 51 | GND2 | In | Ground (0 V) source |
| 58 | RA23 | Out | Not used |
| 59 | RA22 | Out | Chip select signal for the sound source ROM |
| 60 | RA21 | Out | Not used |
| 61 ~ 73 75 ~ 82 | RA0 ~ RA20 | Out | Address bus for the sound source ROM |
| 74 | GND5 | In | Ground (0 V) source |
| 83 | WOK2 | Out | Not used |
| 84 | VCC3 | In | +5 V source |
| 85 | GND3 | In | Ground (0 V) source |
| 86 | WOK1 | Out | Word clock for the DAC |
| 87 | SOLM | Out | Not used |
| 88 | SOLP | Out | Serial sound data output |
| 89 | BOK | Out | Bit clock output |
| 90 ~ 92 | — | — | Not used |
| 93 | VCC5 | In | +5 V source |
| 94, 95 97 ~ 105 107, 109 110, 112 | EA0 ~ EA14 | Out | Address bus for the effect RAM |
| 96 | EWEB | Out | Write enable signal for the effect RAM |

| Pin No. | Terminal | In/Out | Function |
|-----------|-------------|--------|--|
| 106 | EOEB | Out | Read enable signal output for the effect RAM |
| 108 | VCC7 | In | +5 V source |
| 111 | ECEB | Out | Chip select signal output for the effect RAM |
| 113 ~ 117 | ED11 ~ ED15 | — | Not used |
| 118 | VCC4 | In | +5 V source |
| 119 | GND4 | In | Ground (0 V) source |
| 120 ~ 122 | ED8 ~ ED10 | — | Not used |
| 123 ~ 130 | ED0 ~ ED7 | In/Out | Data bus for the effect RAM |
| 131 | GND6 | In | Ground (0 V) source |
| 132 ~ 134 | — | — | Not used. Connected to ground. |
| 135, 136 | — | — | Not used |

Block diagram of DSP and DAC circuit



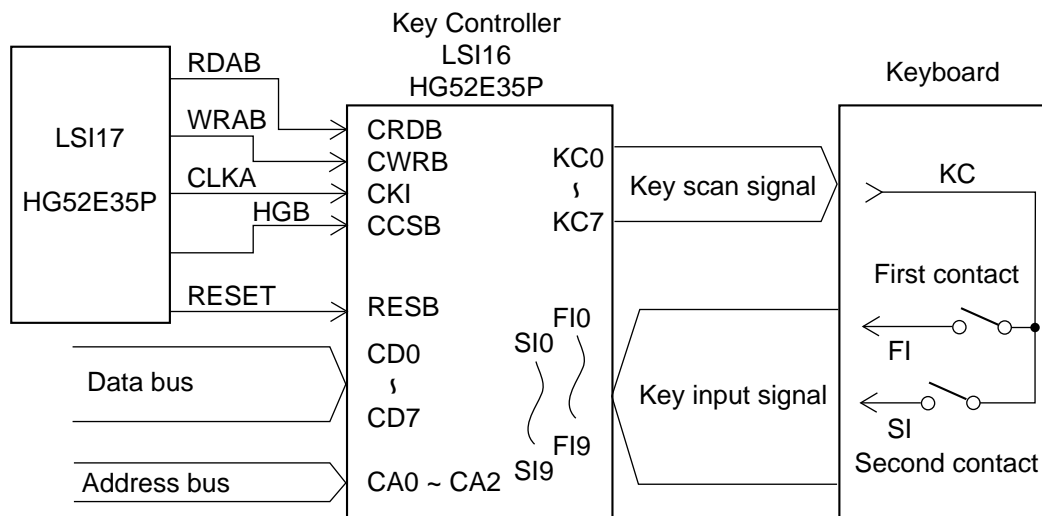
DAC (IC11: UPD6376GS)

The DAC receives 16-bit serial data output from the DSP. The data contains digital sound data of the melody, chord, bass, and percussion for the right and left channels. The DAC converts the data into analog waveforms by each channel and output them separately. The following table shows the pin functions of IC11.

| Pin No. | Terminal | In/Out | Function |
|---------|----------|--------|--|
| 1 | SEL | In | Mode selection terminal. Connected to ground. |
| 2 | D.GND | In | Ground (0 V) source for the internal digit circuit |
| 3 | NC | — | Not used. |
| 4 | DVDD | In | +5 V source for the internal digital circuit |
| 5 | A.GND | In | Ground (0 V) source for the right channel |
| 6 | R.OUT | Out | Right channel sound waveform output |
| 7, 8 | A.VDD | In | +5 V source for the internal analog circuit |
| 9 | R.REF | In | Right channel reference voltage terminal |
| 10 | L.REF | In | Left channel reference voltage terminal |
| 11 | L.OUT | Out | Left channel sound waveform output |
| 12 | A.GND | In | Ground (0 V) source for the left channel |
| 13 | LRCK | In | Word clock input |
| 14 | LRSEL | In | Not used. Connected to ground. |
| 15 | SI | In | Sound data input |
| 16 | CLK | In | Bit clock input |

KEY CONTROLLER (LSI16: HG52E35P)

The key controller generates key scan signals and provides them to the keyboard. By counting the time between first-key input signal FI and second-key SI from the keyboard, the key controller detects key velocity. The note number and its velocity data are read at regular intervals by the CPU.

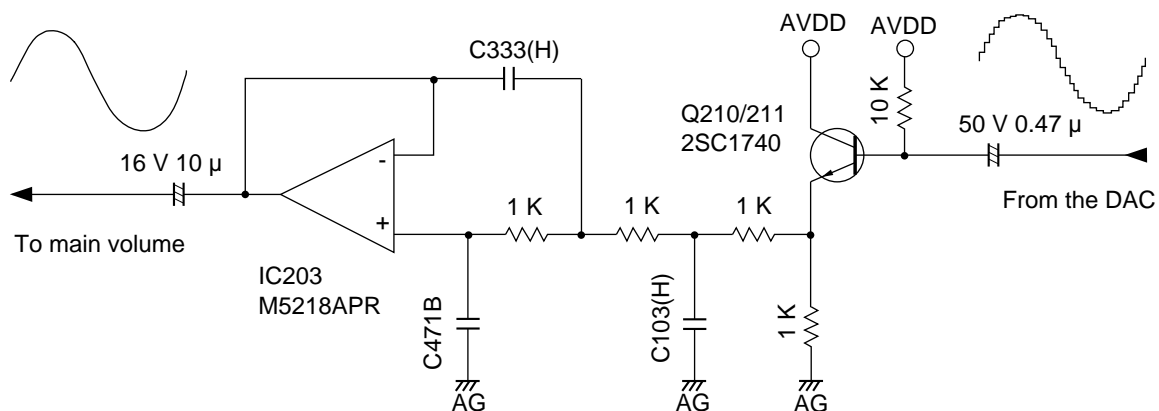


The following table shows the pin functions of LSI16.

| Pin No. | Terminal | In/Out | Function |
|---------------------------------------|---------------------------|--------|--------------------------------|
| 1 | REQB | Out | Not used. |
| 2, 3, 60 ~ 63 | FI8 ~ FI10, SI8 ~ SI10 | In | Not used. Connected to +5 V. |
| 4 | VCC | In | +5 V source |
| 5 | CRDB | In | Read enable signal input |
| 6 | CWRB | In | Write enable signal input |
| 7 | CCSB | In | Chip select signal input |
| 8, 9, 11 | T, STBY, W | In | Not used. Connected to +5 V. |
| 10 | RESB | In | Reset signal input |
| 12 | CKI | In | 10 MHz clock input |
| 13, 14 | TMD, TST | In | Not used. Connected to ground. |
| 15 | CKO | Out | Not used. |
| 16 | GND | In | Ground (0 V) source |
| 17 | XIN | In | Not used. Connected to ground. |
| 18 | XOUT | Out | Not used. |
| 19 | TRES | In | Not used. Connected to ground. |
| 20 ~ 23, 25 ~ 28 | CD0 ~ CD7 | In/Out | Data bus |
| 24 | GND | In | Ground (0 V) source |
| 29 ~ 31 | CA0 ~ CA2 | In | Address bus |
| 32 | VCC | In | +5 V source |
| 33 ~ 39, 41 ~ 43, 53 ~ 55, 57 ~ 63 | FI0 ~ FI9, SI0 ~ SI9 | In | Key input signal input |
| 40 | VCC | In | +5 V source |
| 44 ~ 47, 49 ~ 52 | KC0 ~ KC7 | Out | Key scan signal |
| 48, 56 | GND | In | Ground (0 V) source |
| 64 | VCC | In | +5 V source |

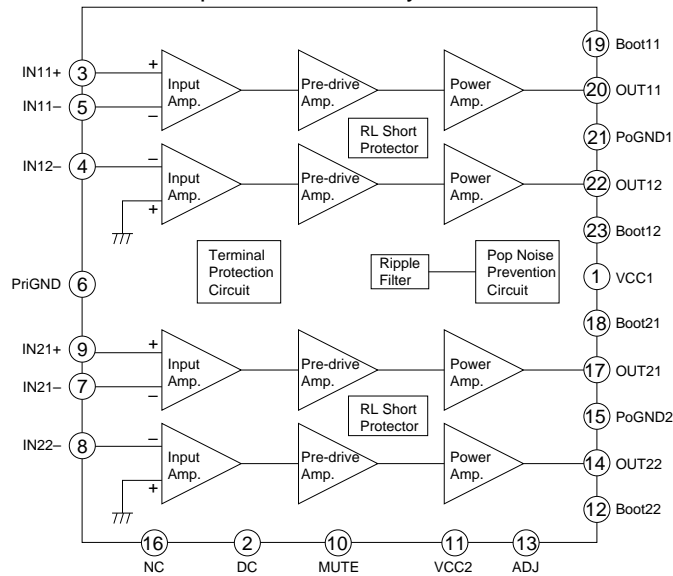
FILTER BLOCK

Since the sound signals from the DAC are stepped waveforms, the filter block is added to smooth the waveforms.

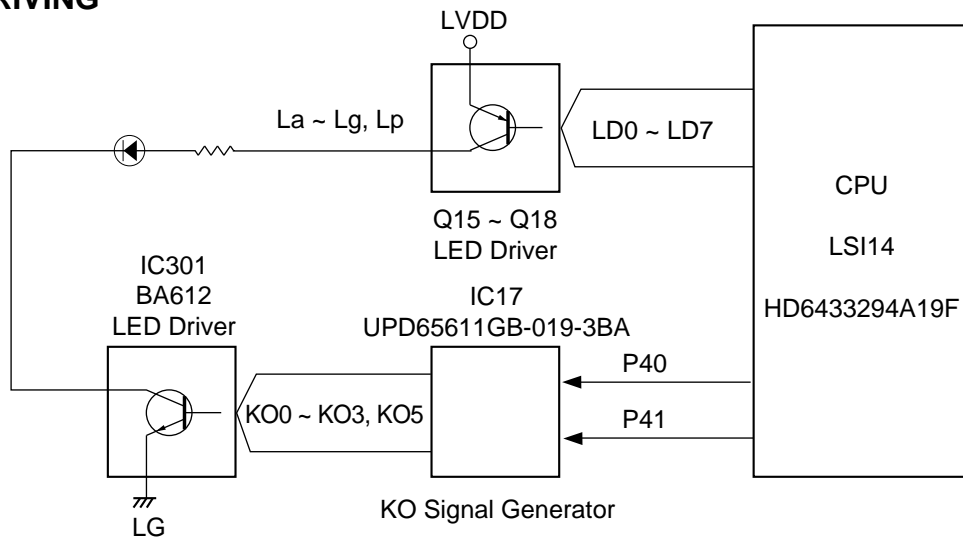


POWER AMPLIFIER (IC201: LA4620)

The power amplifier is a two-channel amplifier with standby switch.



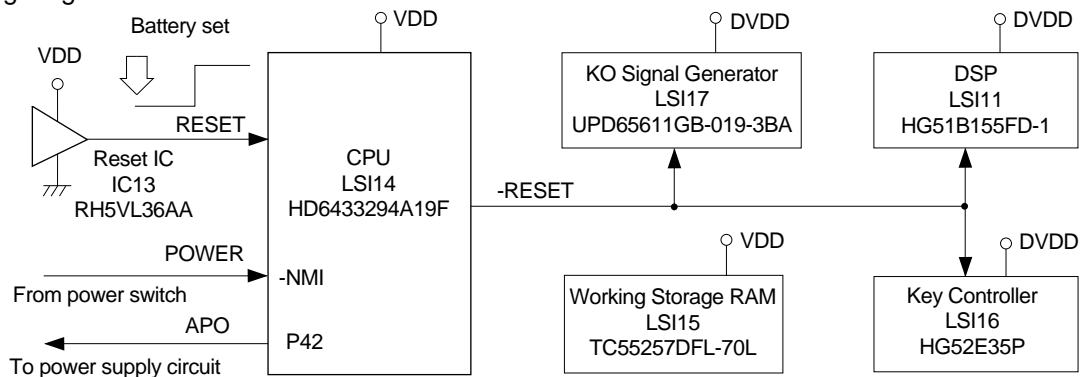
LED DRIVING



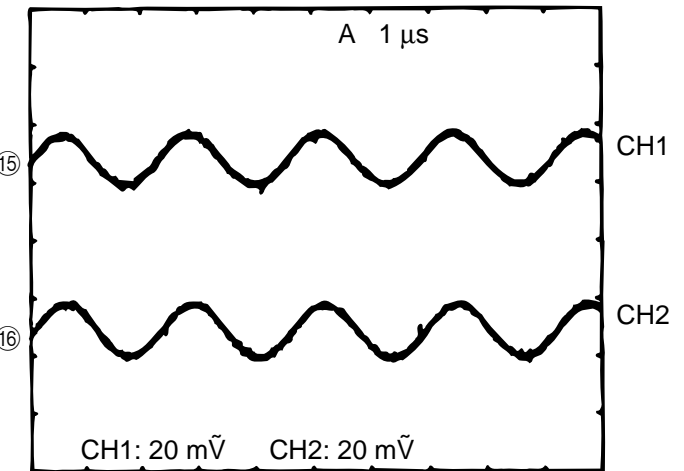
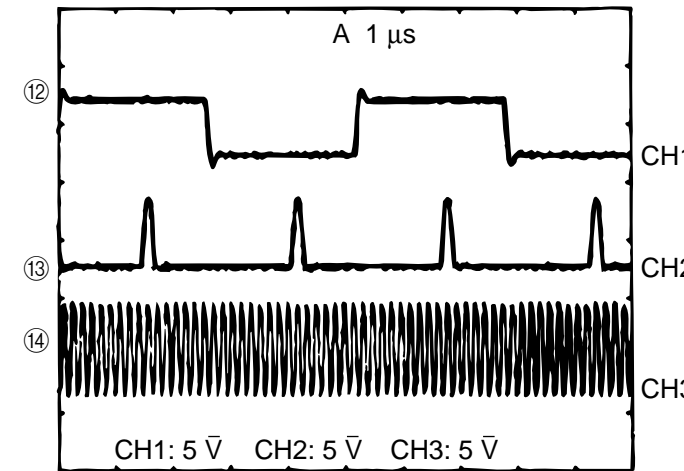
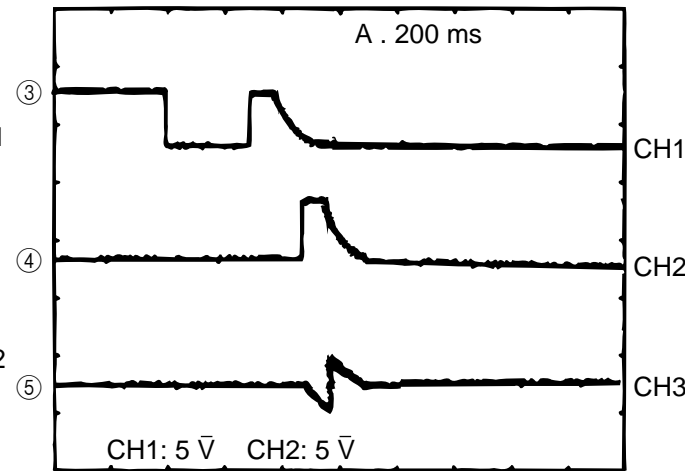
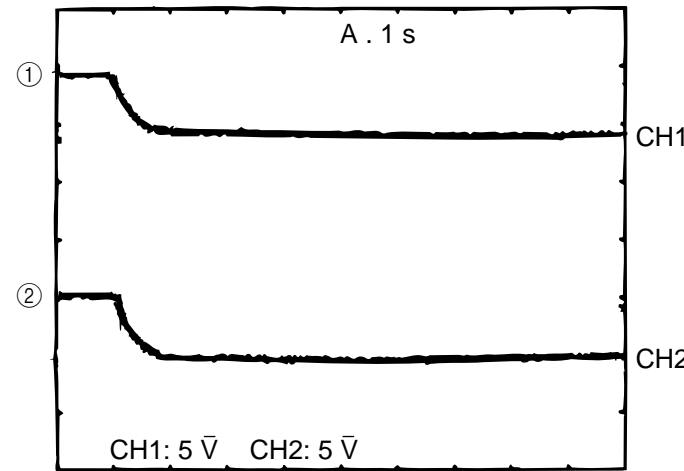
RESET CIRCUIT

When batteries are set or an AC adapter is connected, the reset IC provides a low pulse to the CPU. The CPU then initializes its internal circuit and clears the working storage RAM.

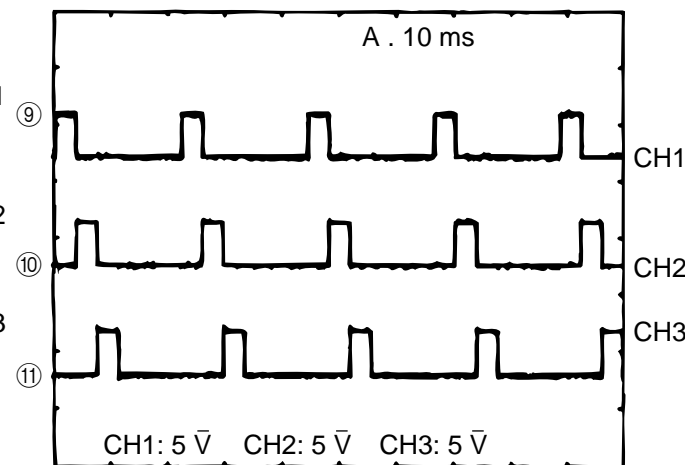
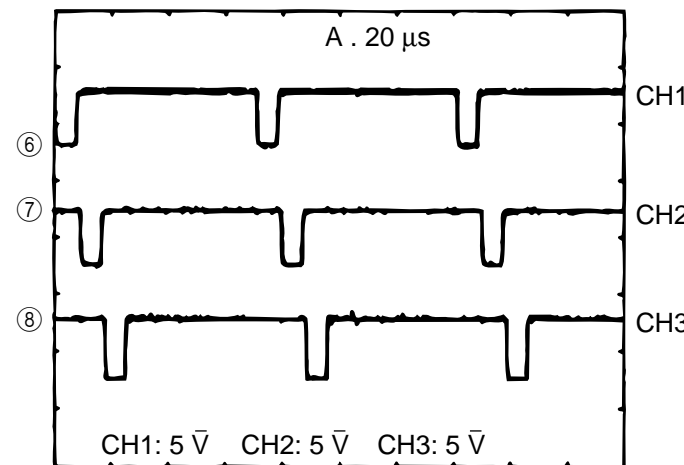
When the power switch is pressed, the CPU receives a low pulse of POWER signal. The CPU provides APO signal to the power supply circuit and raises RESET signal to +5 V to reset the DSP, the key controller and the KO signal generator.



MAJOR WAVEFORMS

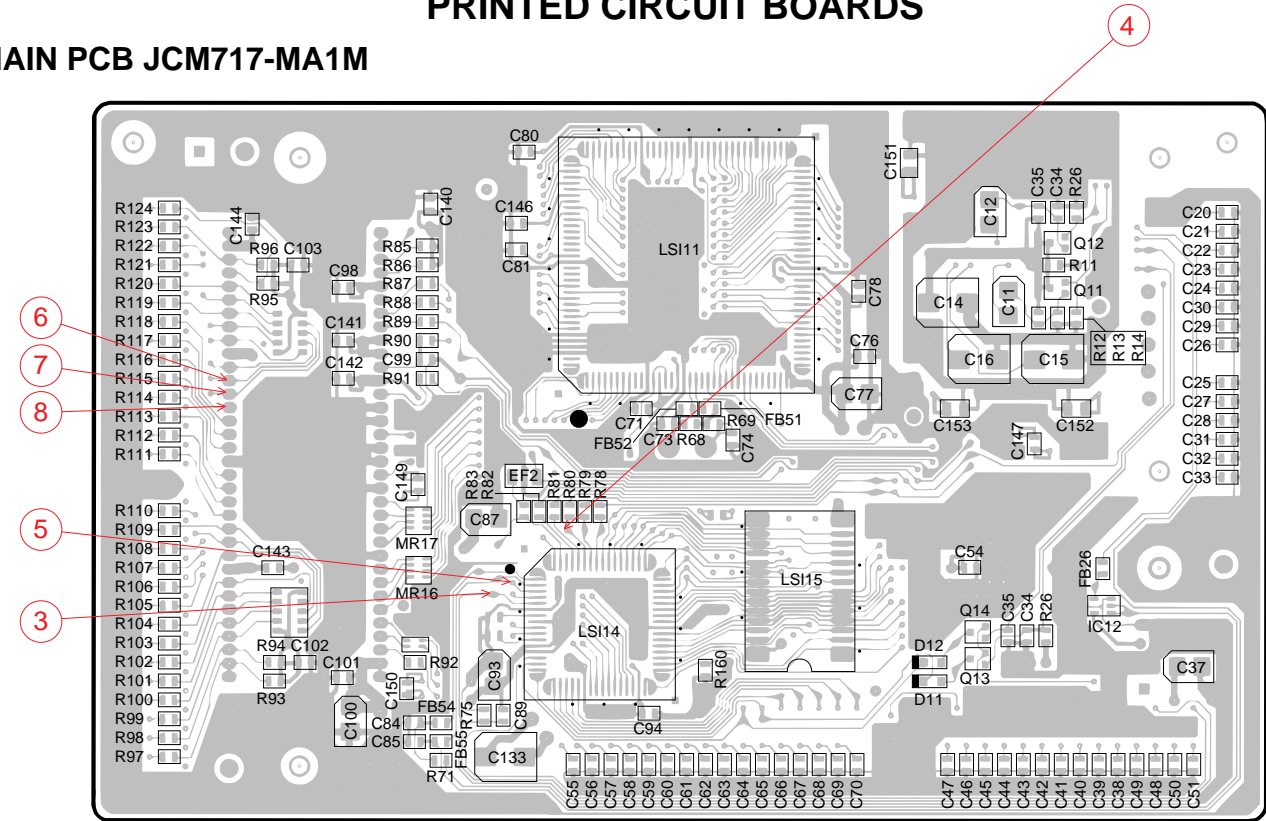


Tone: Whistle (No. 078)
Key: A4
Touch response: OFF

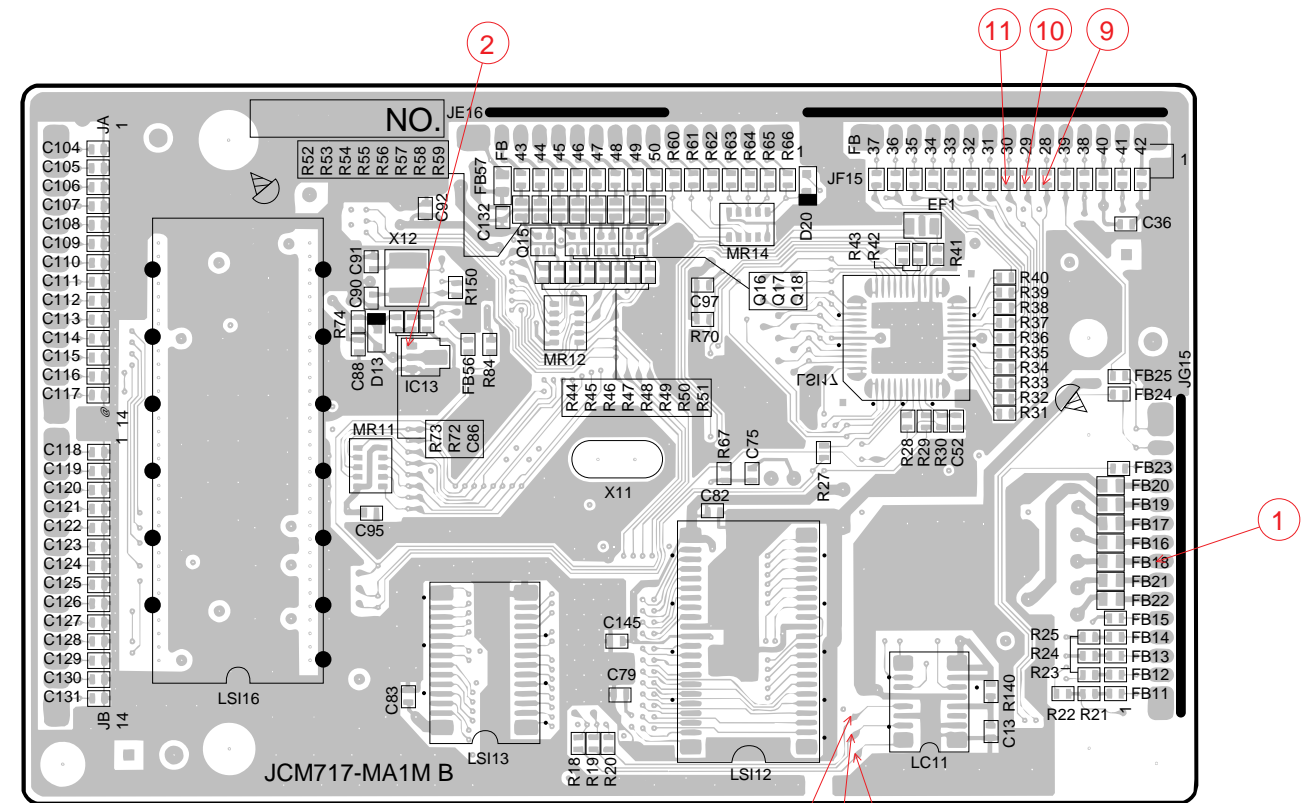


PRINTED CIRCUIT BOARDS

MAIN PCB JCM717-MA1M



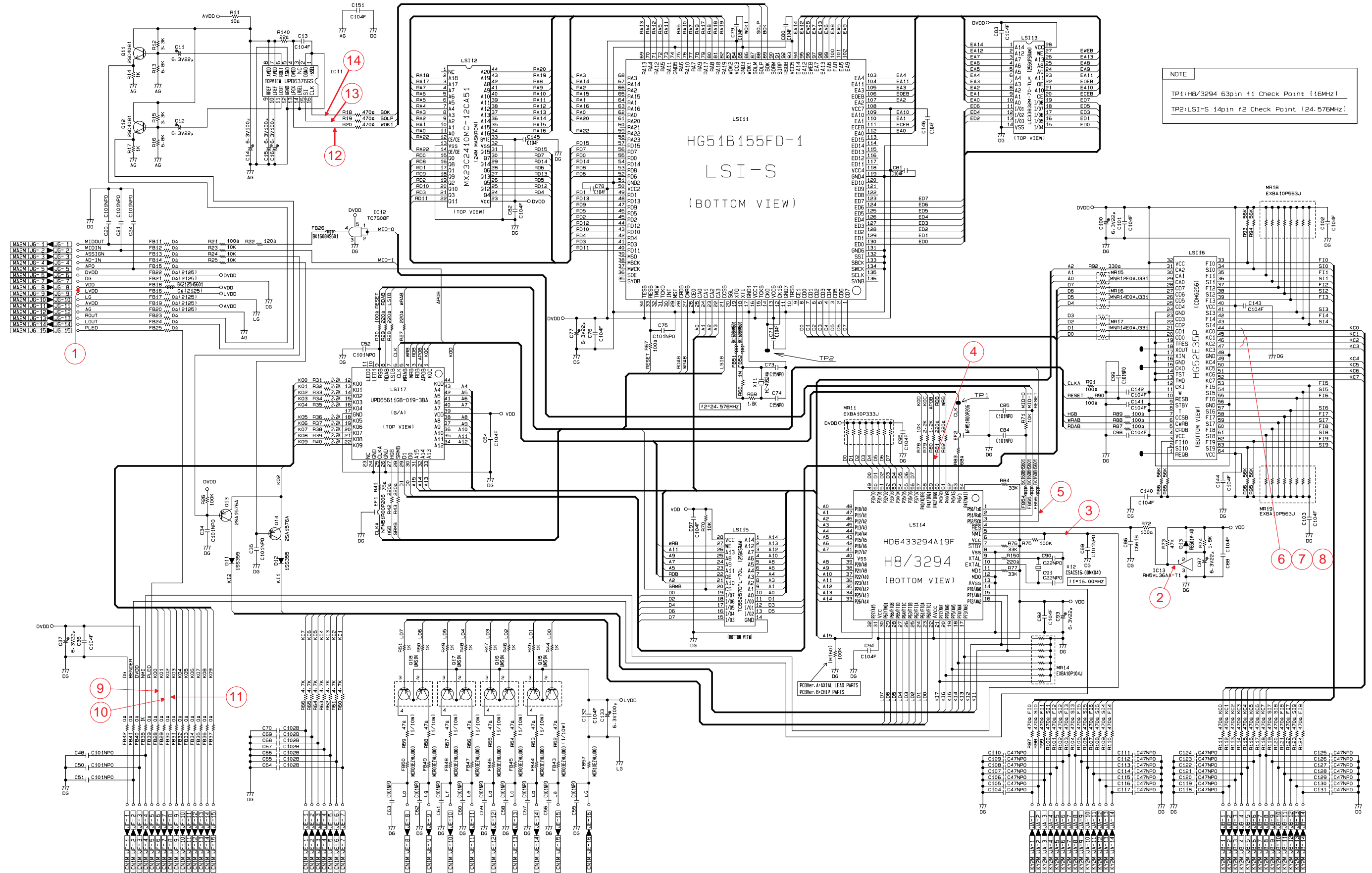
Top view



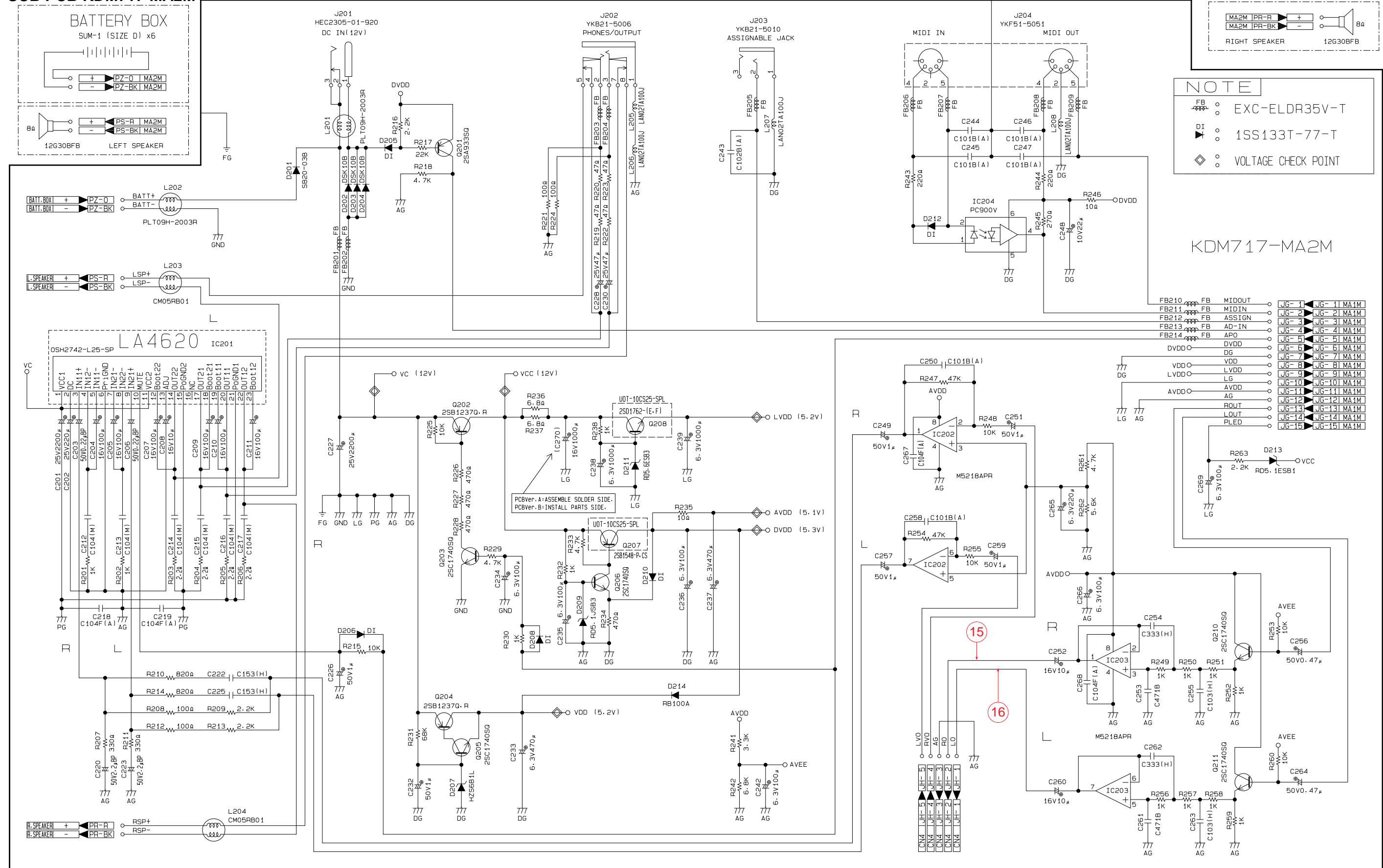
Bottom view

SCHEMATIC DIAGRAMS

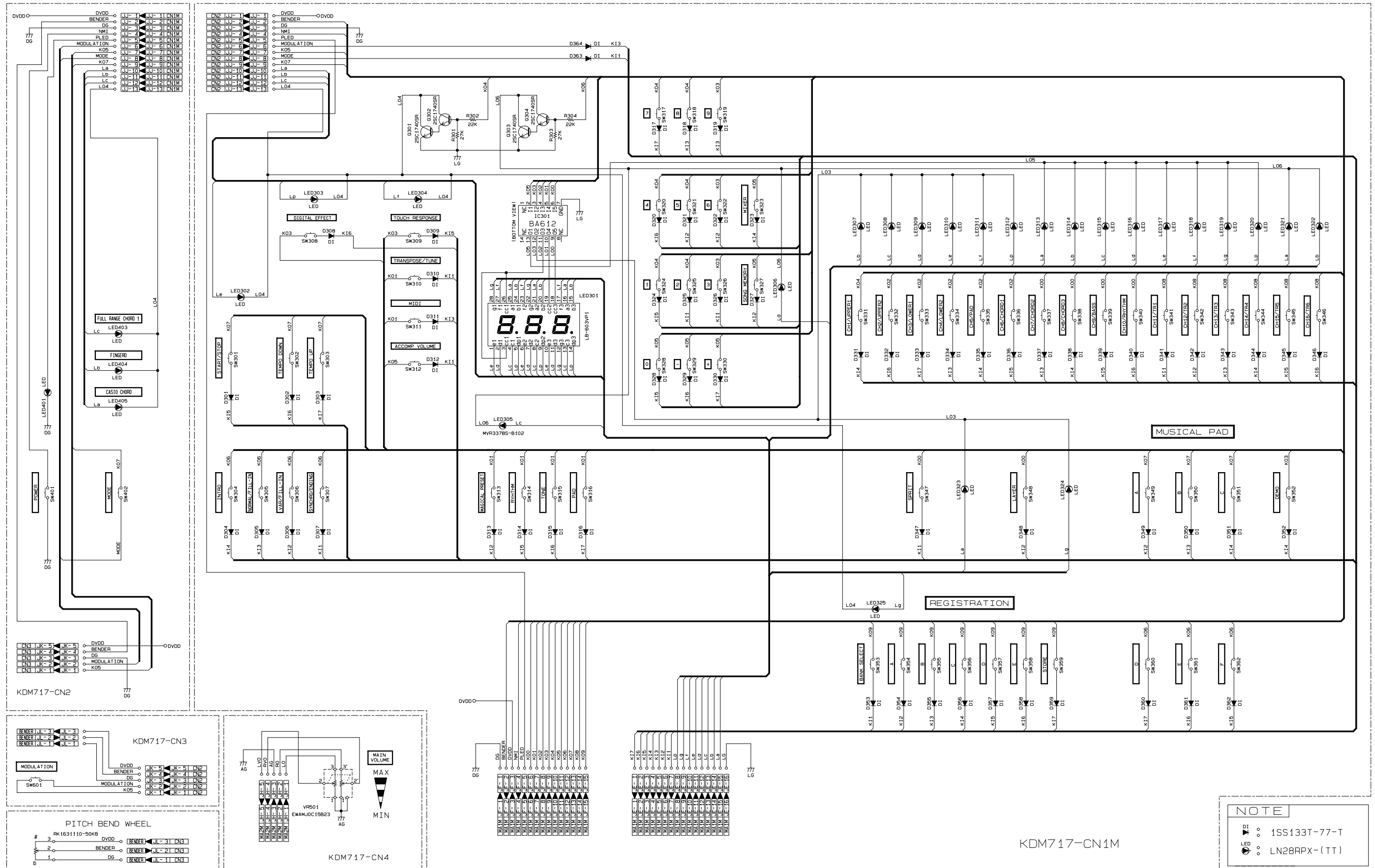
MAIN PCB JCM717-MA1M



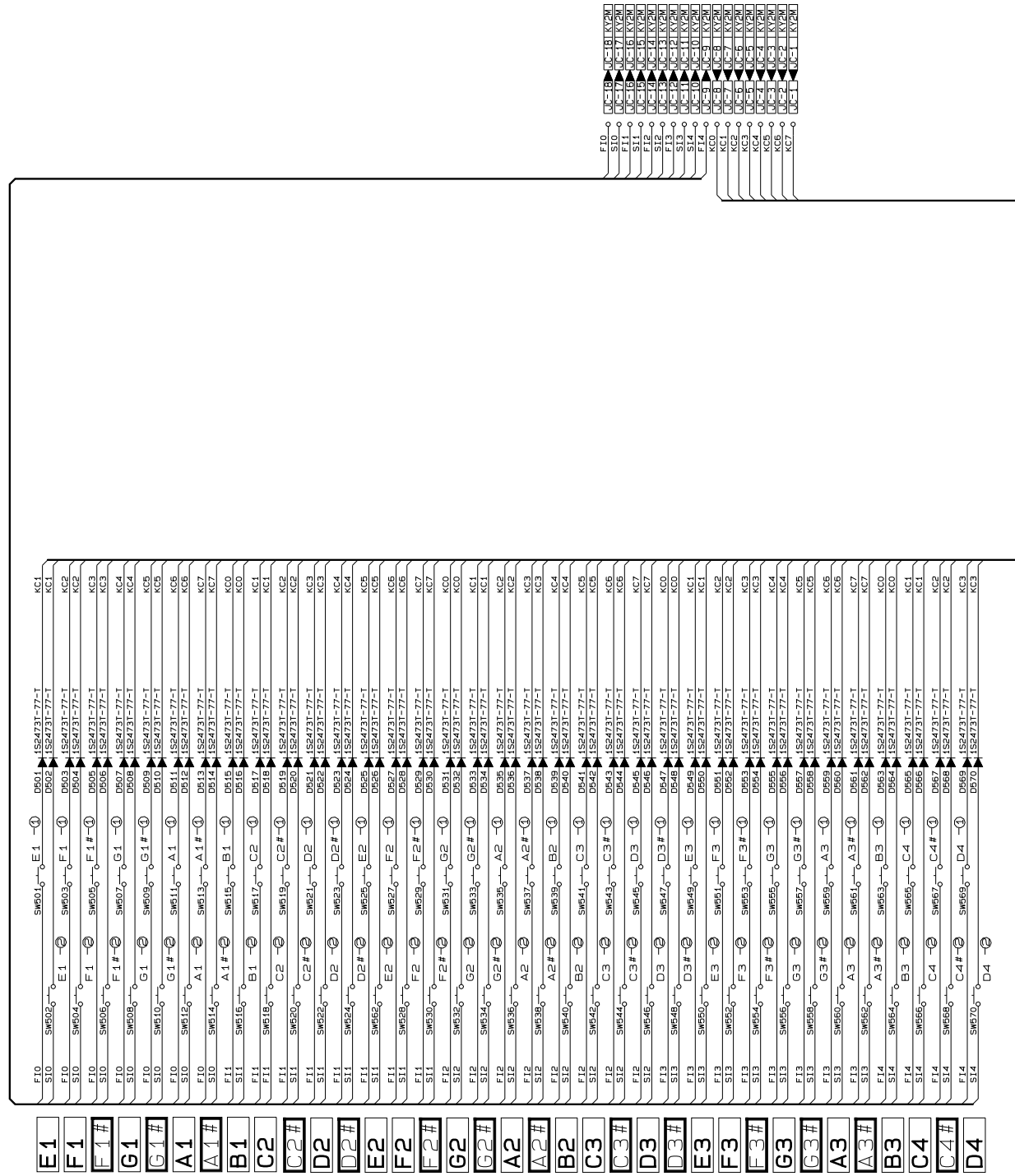
SUB PCB KDM717-MA2M



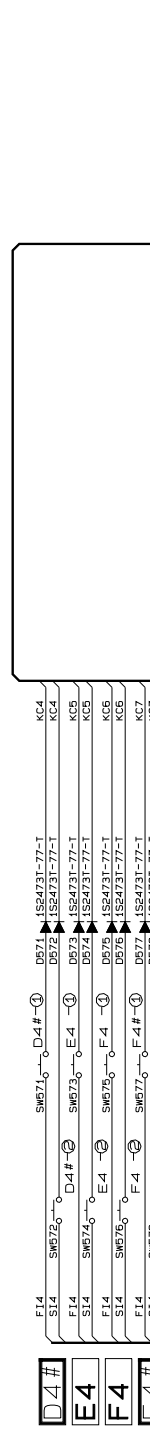
CONSOLE PCBs KDM717-CN1M/CN2/CN3/CN4



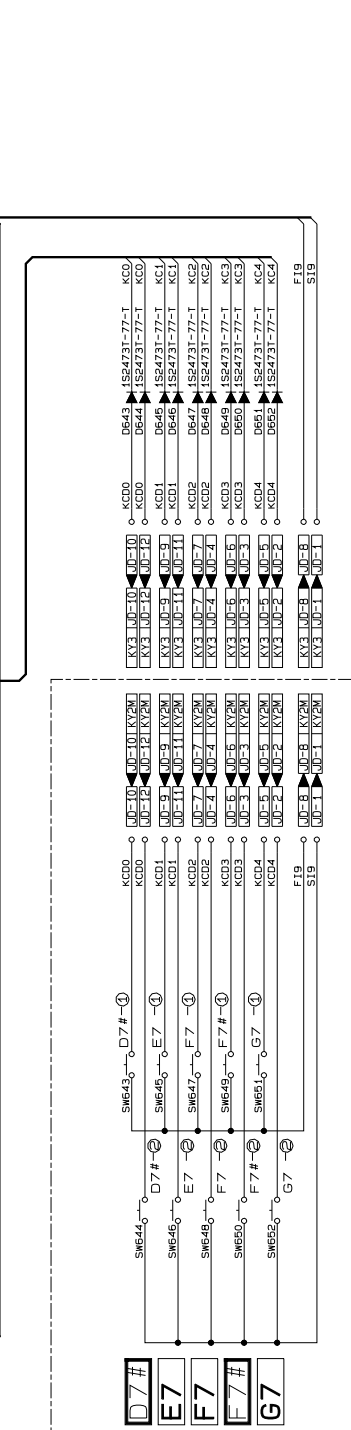
KEYBOARD PCBs JCM762T-KY1M/KY2M/KY3



JCM762T-KY1M

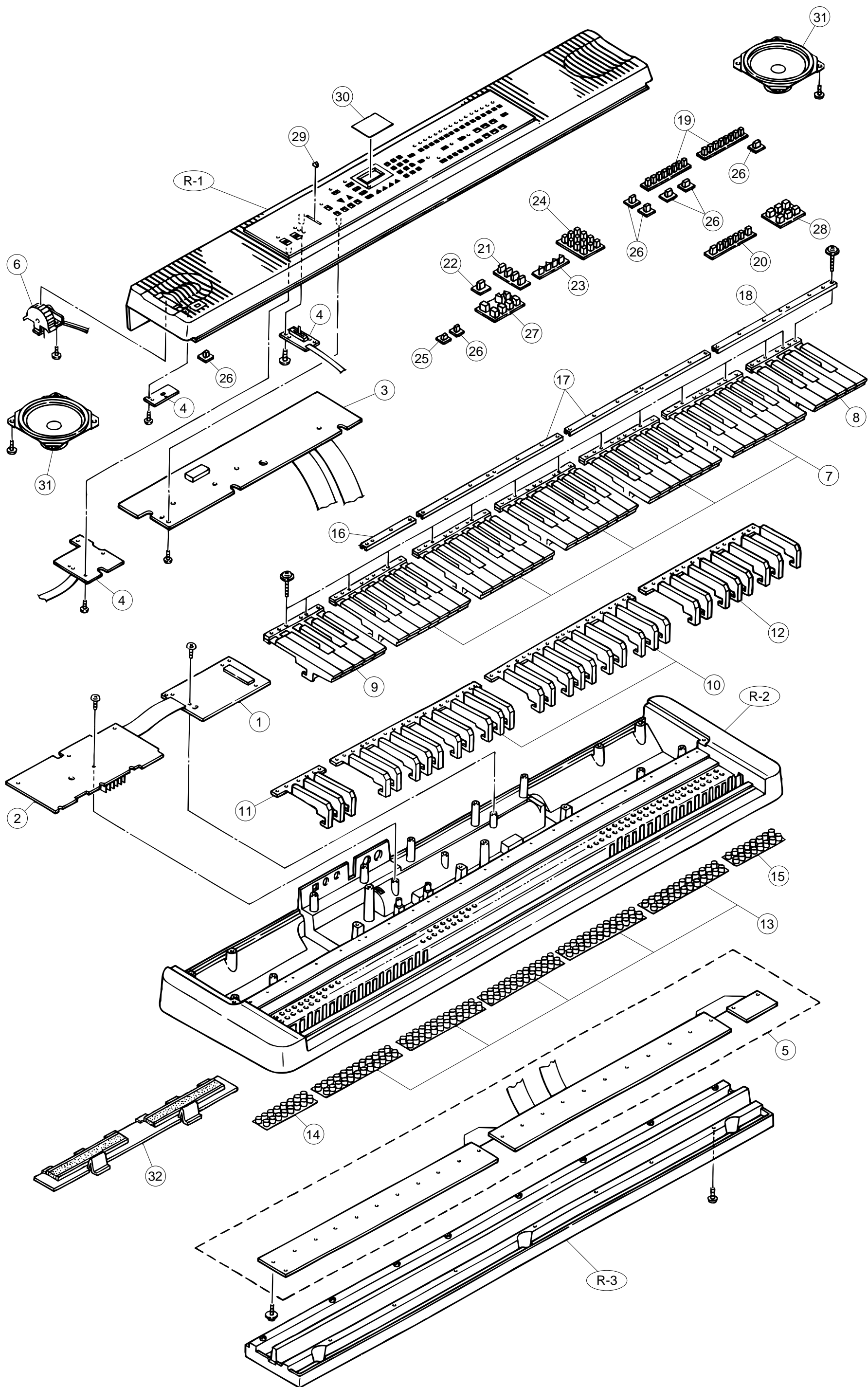


JCM762T-KY2M



JCM762T-KY3

EXPLODED VIEW



PARTS LIST

WK-1500

- Notes:
1. Prices and specifications are subject to change without prior notice.
 2. As for spare parts order and supply, refer to the "GUIDEBOOK for Spare parts Supply", published separately.
 3. The numbers in item column correspond to the same numbers in drawing.

| Item | Code No. | Parts Name | Specification | Q | R |
|----------------------|-----------|---------------------------|--------------------|-----|---|
| Main PCB | | | | | |
| 1 | 6925 3130 | Main PCB ass'y, M717-MA1M | M140443*1 | 1 | B |
| LSI2 | 2012 4536 | LSI, ROM | MX23C2410MC-12CA51 | 1 | A |
| LSI3 | 2012 0777 | LSI, RAM | LC33832M-70-TLM | 1 | A |
| LSI7 | 2012 4298 | LSI, | UPD65611GB-019-3BA | 1 | A |
| LSI11 | 2012 1316 | LSI, DSP | HG51B155FD-1 | 1 | A |
| LSI14 | 2012 4550 | LSI, CPU | HD6433294A19F | 1 | A |
| LSI15 | 2012 4291 | LSI, RAM | HM62256BLFP-7T | 1 | A |
| LSI16 | 2011 5194 | LSI, Key controller | HG52E35P | 1 | A |
| IC11 | 2114 4221 | IC | UPD6376GS-E1 | 1 | A |
| IC12 | 2105 1120 | IC | TC7S08F-TE85R | 1 | A |
| IC13 | 2105 4536 | IC | RH5VL36AA-T1 | 1 | A |
| Q11, Q12 | 2252 1169 | Transistor, Chip | 2SC4081-T106S | 2 | B |
| Q13, Q14 | 2250 1169 | Transistor, Chip | 2SA1576AT106S | 2 | B |
| Q15 - Q18 | 2259 2562 | Transistor, Chip | UMS1NTL | 4 | B |
| D11, D12 | 2390 1820 | Diode, Chip | 1SS355TE-17 | 2 | C |
| D13 | 2390 2576 | Diode, Chip | RB501V-40TE-17 | 1 | C |
| X11 | 2590 2107 | Oscillator, Crystal | HC-49S24A | 1 | B |
| X12 | 2590 2079 | Oscillator, Ceramic | CSACS16.00MX040-TC | 1 | B |
| Sub PCB ass'y | | | | | |
| 2 | 6925 3150 | Sub PCB ass'y M717-MA2M | M140445*1 | 1 | B |
| IC201 | 2114 1883 | IC | LA4620 | 1 | A |
| IC202, IC203 | 2114 1799 | IC | M5218APR | 2 | A |
| IC204 | 2114 1421 | IC | PC900V | 1 | B |
| Q201 | 2200 4409 | Transistor | 2SA933-SQ-TP-T | 1 | A |
| Q202, Q204 | 2251 0469 | Transistor | 2SB1237Q,R-TV6-T | 2 | A |
| | 2220 1387 | Transistor | 2SC1740SQ-TP-T | 5 | A |
| Q207 | 2251 0672 | Transistor | 2SB1548-P.CS | 1 | A |
| Q208 | 2253 0455 | Transistor | 2SD1762E,F | 1 | A |
| D201 | 2390 1463 | Diode, Schottky | SB20-03B | 1 | B |
| D202 - D204 | 2390 0371 | Diode | DSK10B-BT-T | 3 | B |
| | 2390 1344 | Diode | 1SS133T-77-T | 5 | C |
| D207 | 2360 1085 | Diode, Zener | HZS6B1LTD-T | 1 | B |
| D209 | 2360 2261 | Diode, Zener | RD5.1JSB3-T1-T | 1 | B |
| D211 | 2310 7775 | Diode, Zener | RD5.6ESB3-T1-T | 1 | B |
| D213 | 2360 1134 | Diode, Zener | RD5.1ESB1-T1-T | 1 | B |
| D214 | 2390 1323 | Diode | RB100A-T32-T | 1 | B |
| J201 | 3501 5012 | Jack, Power | HEC2305-01-920 | 1 | A |
| J202 | 3612 0665 | Jack, Phone | YKB21-5006 | 1 | B |
| J203 | 3612 0789 | Jack | YKB21-5010 | 1 | B |
| J204 | 3501 4816 | Jack, DIN | YKFB1-5051 | 1 | B |
| Console PCBs | | | | | |
| 3 | 6925 3190 | PCB ass'y M717-CN1M | M140444*1 | 1 | B |
| IC301 | 2114 3318 | IC | BA612 | 1 | B |
| Q301 - Q304 | 2220 1387 | Transistor | 2SC1740SQ-TP-T | 4 | B |
| D301 - D364 | 2390 1344 | Diode | 1SS133T-77-T | 64 | C |
| LED301 | 2370 0952 | LED, 7-segment | LB-603VP1 | 1 | B |
| | 2370 0343 | LED | LN28RPX-(TT) | 23 | C |
| LED305 | 2370 1197 | LED | MVR3378S-B102 | 1 | C |
| 4 | 6925 3180 | PCB ass'y M717-CN2,3,4 | M240469*1 | 1 | B |
| LED401 - LED405 | 2370 0343 | LED | LN28RPX-(TT) | 5 | C |
| VR501 | 2765 2128 | Volume | EWAMJ0C15B23 | 1 | B |
| Keyboard PCBs | | | | | |
| 5 | 6923 7630 | Keyboard PCB ass'y | M140251*2 | 1 | B |
| D501 - D652 | 2390 0252 | Diode | 1S2473T-77-T | 152 | C |

Notes: Q – Quantity per unit

R – Rank

| Item | Code No. | Parts Name | Specification | Q | R |
|----------------------|-----------|---------------------------|----------------|---|---|
| 6 | 2765 1141 | Volume | RK1631110-50KB | 1 | B |
| | 6925 3570 | Knob, Bender | M31488-3 | 1 | C |
| Keyboard unit | | | | | |
| 7 | 6922 2720 | White key set, LT | M312118*1 | 5 | A |
| 8 | 6923 7900 | White key set, LT76R | M340231*1 | 1 | A |
| 9 | 6923 7910 | White key set, LT76L | M340230*1 | 1 | A |
| 10 | 6922 2740 | Black key set, LT10P | M111726-1 | 2 | A |
| 11 | 6923 7930 | Black key set, LT-76-3P | M111726-3 | 1 | A |
| 12 | 6923 7940 | Black key set, LT-79-8P | M111726-4 | 1 | A |
| 13 | 6922 2760 | Key contact rubber, LT-CB | M211704-1 | 5 | A |
| 14 | 6923 7970 | Key contact rubber, LT-EB | M240181-1 | 1 | A |
| 15 | 6923 8000 | Key contact rubber, LT-CG | M240182-1 | 1 | A |
| 16 | 6925 3540 | Gasket, 717L | M240455-1 | 1 | C |
| 17 | 6925 3550 | Gasket, 717C | M240454-1 | 2 | C |
| 18 | 6925 3560 | Gasket, 717R | M240453-1 | 1 | C |
| Panel unit | | | | | |
| 19 | 6925 3350 | Button, Rubber | M240452-1 | 2 | B |
| 20 | 6925 3360 | Button, Rubber | M340497-1 | 1 | B |
| 21 | 6925 3370 | Button, Rubber | M340498-1 | 1 | B |
| 22 | 6925 3380 | Button, Rubber | M340499-1 | 1 | B |
| 23 | 6925 2510 | Button, Rubber | M312081-4 | 1 | B |
| 24 | 6922 2660 | Button, Rubber | M312088-1 | 1 | B |
| 25 | 6923 4980 | Button, Rubber | M312122-2 | 1 | B |
| 26 | 6923 4990 | Button, Rubber | M312123-2 | 7 | B |
| 27 | 6925 3390 | Button, Rubber | M211727-4 | 1 | B |
| 28 | 6925 3400 | Button, Rubber | M312131-2 | 1 | B |
| 29 | 6921 5030 | Knob, Slide | M311859-1 | 1 | B |
| 30 | 6925 3330 | Plate, Display | M340500-1 | 1 | C |
| 31 | 3831 0672 | Speaker | 12G30BFB | 2 | B |
| Others | | | | | |
| 32 | 6925 4120 | Cover, Battery | M311164*10 | 1 | B |
| | 6925 3310 | Music stand | M340523*1 | 1 | B |

Notes: Q – Quantity per unit

R – Rank

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