

# SERVICE MANUAL

## MODEL : MPC500 (AKAI)



### Specification

#### ■ General

|                    |                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------|
| Display:           | 2 x 16 charatec LCD w/back light                                                               |
| Memory card slot:  | Compact Flash (The size of the compact flash card that MPC500 can handle if from 32MB to 2 GB) |
| Dimensions:        | 266mm x 175mm x 44mm                                                                           |
| Weight:            | 1.34kg                                                                                         |
| Power requiremntn: | 12v DC 600mA (negative tip)                                                                    |
| Battery life:      | Approximately 4.5 hour of continuous use with LCD backlight                                    |

#### ■ Sound Generator

|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| Sampling rate:         | 44.1kHz                                                      |
| Memory capacity:       | 16MB standard (11.5MB for sound memory), expandable to 128MB |
| Recording time:        | 136sec. (16MB, MONO) ; 24M28sec. (128MB, MONO)               |
| Memory expansion slot: | 1 x for optional EXM128                                      |
| Data format:           | 16-bit linear                                                |
| Polyphony:             | up to 32 (dependent on processing)                           |
| Dynamic filtering:     | 2-pole lowpass filter per voice                              |
| Preset sound memory:   | 5MB                                                          |
| Number of programs:    | 24                                                           |

#### ■ Effects

|                |                                                                                                        |
|----------------|--------------------------------------------------------------------------------------------------------|
| Effects:       | 2 stereo effects and Master effect                                                                     |
| Effect type:   | Chorus, Flanger, Bit grunger, 4 band EQ, Compressor, phase shifter, Tremolo, Flying pan, Reverb, Delay |
| Master effect: | 4 band EQ, Compressor                                                                                  |

#### ■ Sequencer

|                       |                                      |
|-----------------------|--------------------------------------|
| Maximum events:       | 100,000 notes                        |
| Resolution:           | 96 parts per 1/4-note                |
| Sequences:            | 99                                   |
| Tracks per sequence:  | 48                                   |
| MIDI output channels: | 16                                   |
| Song mode:            | 20 songs, 250 steps per song         |
| Drum pad:             | 12 (velocity and pressure sensitive) |
| Drum pad banks:       | 4                                    |
| Sync mode:            | MIDI clock                           |

#### ■ Inputs/Outputs

|                          |                                                                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Record input (L and R):  | 1/4-inch stereo phone x 2, pseudo balanced + 11dBu, input impedance 9k ohm                                                        |
| Max. Input level:        | +10dBu                                                                                                                            |
| Stereo output (L and R): | 1/4-inch phone x 2 pseudo balanced + 11dBu, output impedance 1k Ohms,                                                             |
| Max. Output level:       | +5 dBu                                                                                                                            |
| Phones output:           | 1/4-inch stereo phone x 1, 200mW / 100 ohms                                                                                       |
| MIDI inputs:             | 1 x 5-pin DIN                                                                                                                     |
| MIDI outputs:            | 1 x 5-pin DIN                                                                                                                     |
| USB:                     | Slave connector x 1, USB MASS STORAGE CLASS support<br>(Windows 2000/ME/XP or later version, or Mac OS 9.x/10.x or later version) |

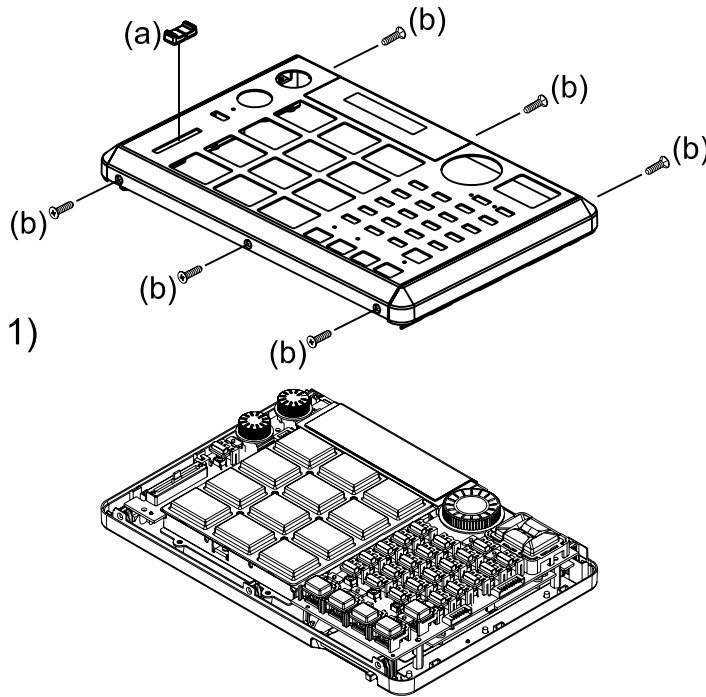
#### ■ Data Compatibility

|                 |                                                                         |
|-----------------|-------------------------------------------------------------------------|
| MPC1000:        | SEQ, WAV, PGM                                                           |
| MPC2000/2000XL: | SEQ, WAV, SND, PGM (Most parameters of PGM file can be loaded)          |
| MPC2500:        | SEQ, WAV, PGM                                                           |
| MPC4000:        | SEQ, WAV, PGM (DRUM program only. Only note assign and tune are loaded) |
| MPC3000:        | SND (THRU Computer)                                                     |
| Z4/Z8:          | WAV, PGM (DRUM program only. Only note assign and tune are loaded)      |
| S5000/6000:     | WAV only (THRU Computer)                                                |

## DISASSEMBLY PROCEDURES

### 1. REMOVAL OF METAL TOP COVER/BOTTOM COVER (Fig. 1)

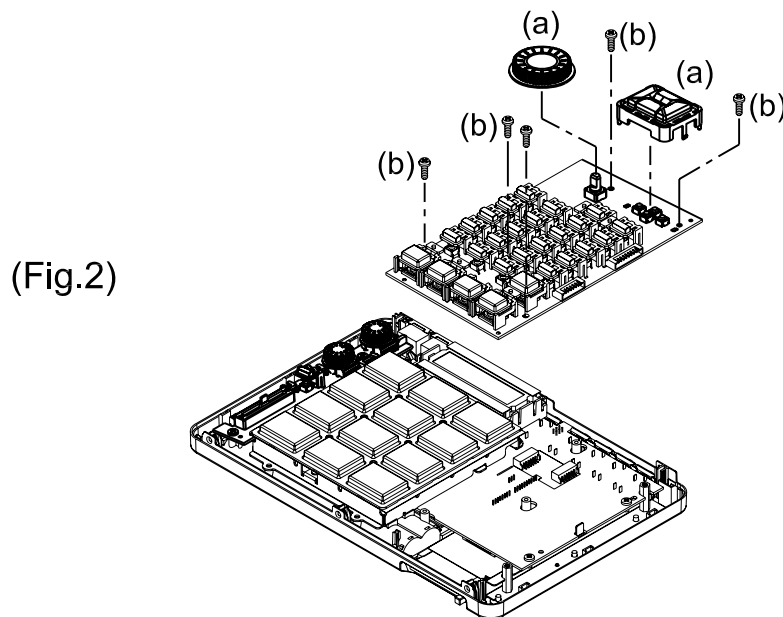
- (a) Take off knob slide from the top panel.
- (b) Unscrew and remove 6 pcs of screw from the bottom cover.



(Fig. 1)

### 2. REMOVAL OF SW PCB ASS'Y/BOTTOM COVER (Fig. 2)

- (a) Remove knob jog and cursor button from PCB.
- (b) Unscrew and remove 5 pcs of screw from bottom cover.



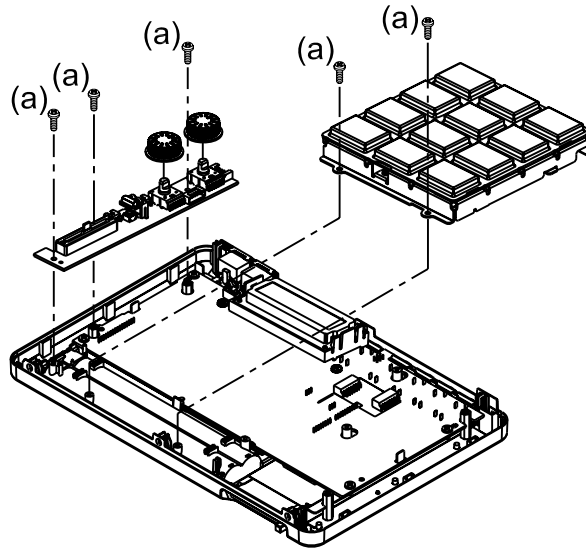
(Fig.2)

## DISASSEMBLY PROCEDURES

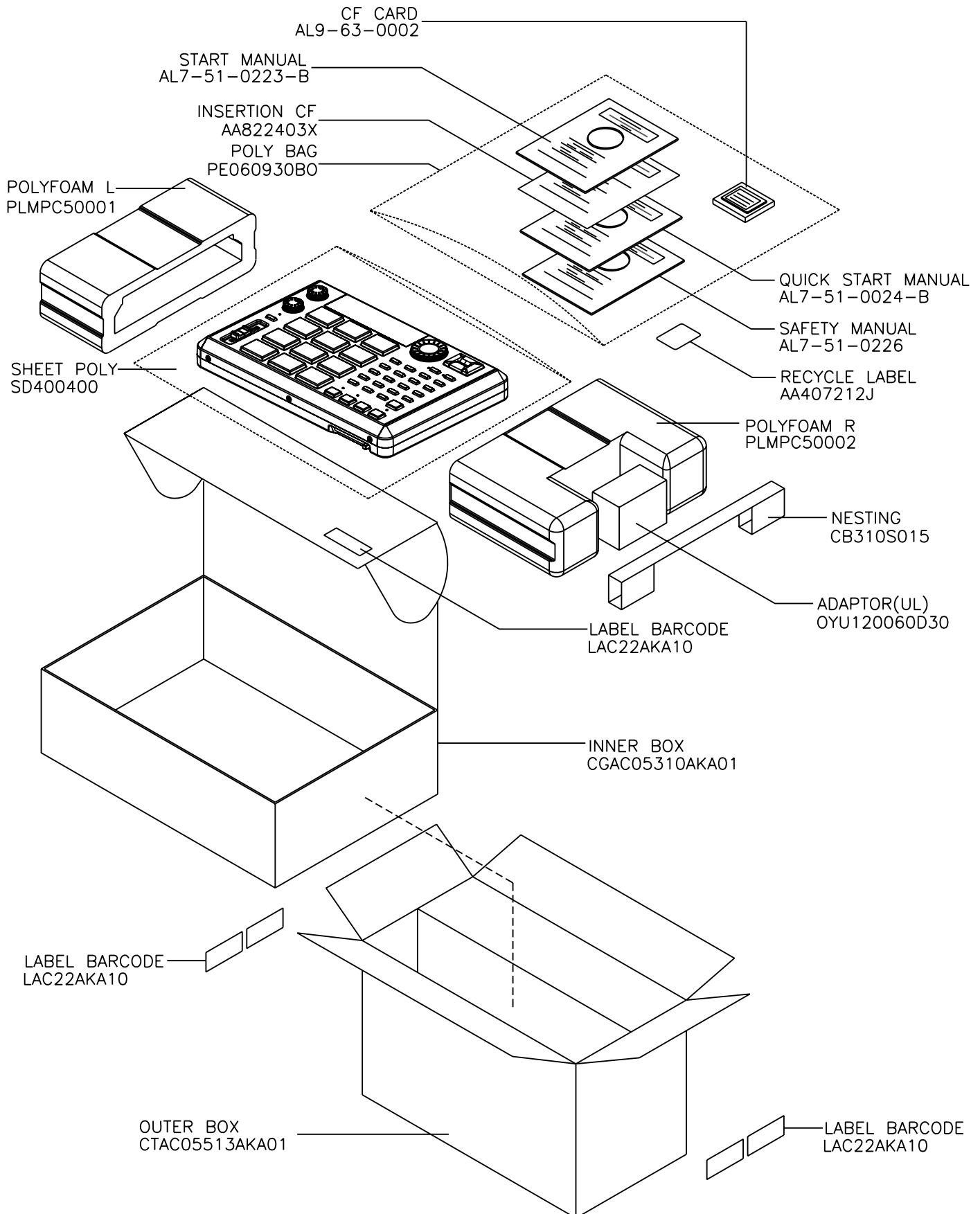
### 3. REMOVAL OF POT PCB ASS'Y AND HOLDER PAD (Fig. 3)

(a) Unscrew and remove 5 pcs of screw from bottom cover.

(Fig. 3)

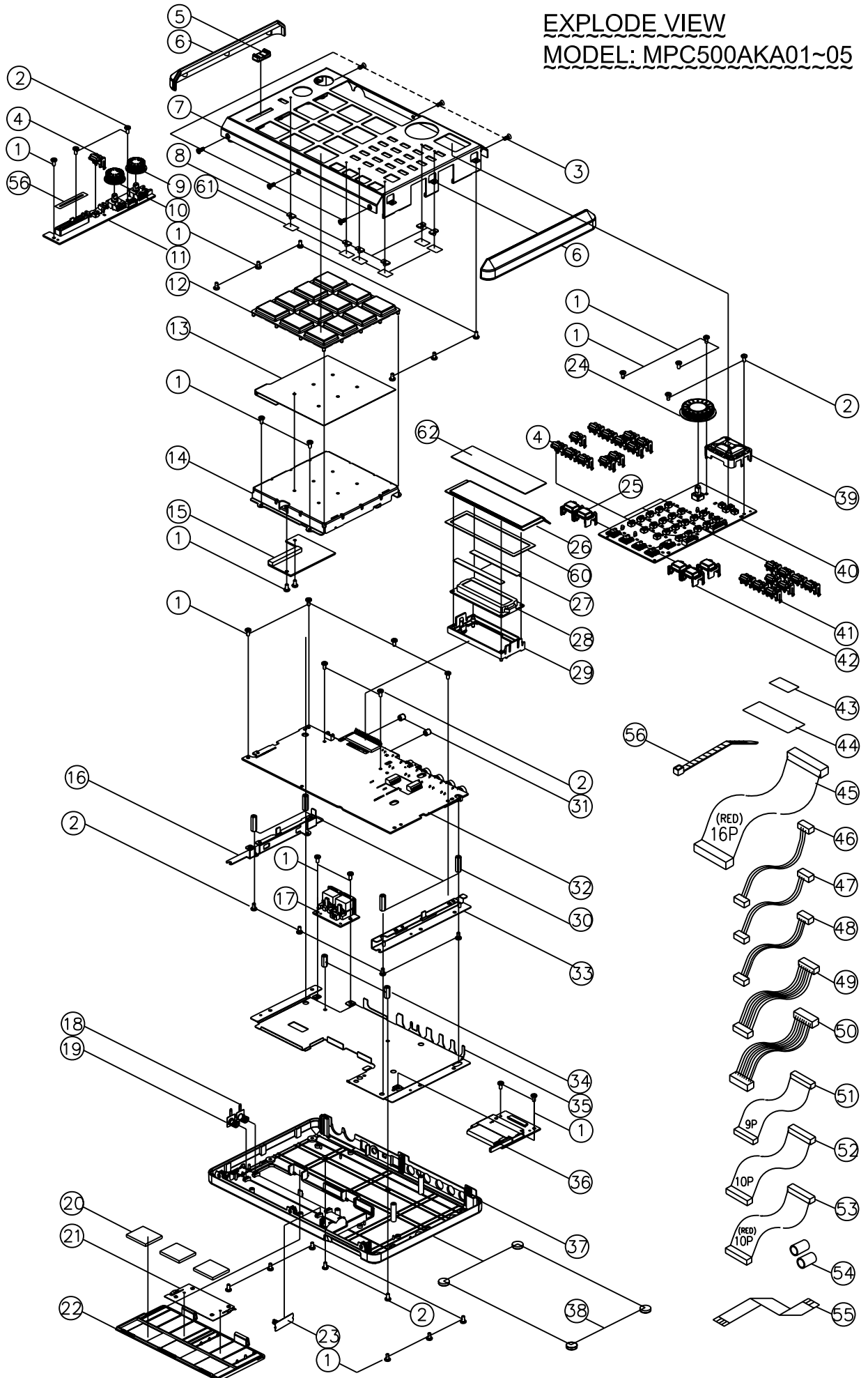


# MPC500 PACKING DRAWING



1 CARTON = 2 UNIT

# EXPLODE VIEW MODEL: MPC500AKA01~05



P:\MECHA\IP.SPEC\MPC500\EXPLODE-MPC500

YA HORNG  
Electronic Co.,Ltd

APPROVED  
ANDREW

CHECKED  
CHARLES

PREPARED  
李靜怡 5/03 '06

CODE NO.  
MPC500AKA01

PAGE

# MPC500 (AKAI) BOM

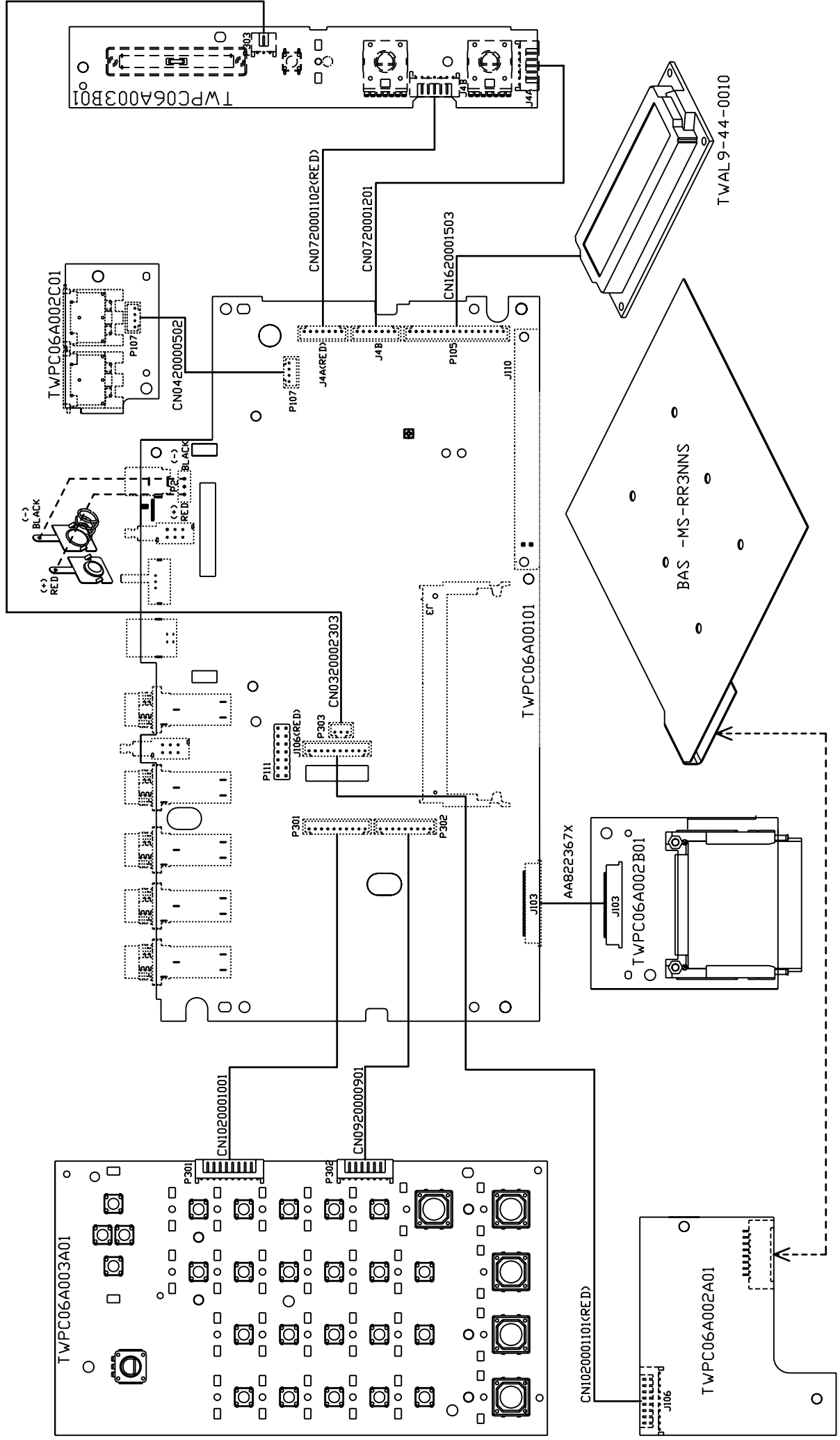
| LEVEL | PART NUMBER    | DESCRIPTION                                        | QTY    | REF |
|-------|----------------|----------------------------------------------------|--------|-----|
| .1    | AA406633J      | PE BAG 370X280X.03 PRINTING                        | 0.006  |     |
| .1    | AA407212J      | LABEL RECYCLE PE04                                 | 1.000  |     |
| .1    | AA810353J      | LENS LED                                           | 6.000  | 8   |
| .1    | AA811571J      | CAUTION LABEL                                      | 1.000  | 44  |
| .1    | AA821339X      | SHEET POLY 0450X0450                               | 1.000  |     |
| .1    | AA821858X      | EVA                                                | 1.000  | 56  |
| .1    | AA822124X      | LABEL FCC-S                                        | 1.000  | 43  |
| .1    | AA822330X      | BUTTON PUSH (B)-7                                  | 13.000 | 4   |
| .1    | AA822331X      | BUTTON PUSH (B)-8                                  | 9.000  | 41  |
| .1    | AA822367X      | 42P FLAT WIRE 60MM                                 | 1.000  | 55  |
| .1    | AA822403X      | INSERTION CF MPC                                   | 1.000  |     |
| .1    | AL7-40-0052    | ADAPTOR 12VDC 600MA MPC500-UL                      | 1.000  |     |
| .1    | AL7-51-0223-B  | START MANUAL (MPC500)                              | 1.000  |     |
| .1    | AL7-51-0224-B  | QUICK START MANUAL (MPC500)                        | 1.000  |     |
| .1    | AL7-51-0226    | SAFETY INSTRUCTION                                 | 1.000  |     |
| .1    | AL9-63-0002    | CF CARD 128MB                                      | 1.000  |     |
| .1    | BA71028-130    | BATTERY TERMINAL 71028-130                         | 1.000  | 18  |
| .1    | BA71209-130    | BATTERY TERMINAL 71029-130                         | 1.000  | 19  |
| .1    | BA71228-130    | BATTERY TERMINAL 71228-130                         | 1.000  | 23  |
| .1    | BAAR-291       | FOOT                                               | 4.000  | 38  |
| .1    | BAS-MS-RR3NNS  | PAD SENSOR                                         | 1.000  | 13  |
| .1    | CB310S015      | NESTING                                            | 1.000  |     |
| .1    | CGAC05310AKA01 | INNER CARTON (CARTON CASE MPC50)                   | 1.000  |     |
| .1    | CN0320002005   | 3P CONNECTOR WIRE 200MM (L4040 W901)               | 1.000  | 46  |
| .1    | CN0320002303   | 3P CONNECTOR WIRE 230MM (L4040 W303)               | 1.000  | 47  |
| .1    | CN0420000502   | 4P CONNECTOR WIRE 50MM (L4040 W107)                | 1.000  | 48  |
| .1    | CN0720001101   | 7P CONNECTOR WIRE 110MM (L4040 J4B )               | 1.000  | 49  |
| .1    | CN0720001201   | 7P CONNECTOR WIRE 120MM (L4040 J4A)                | 1.000  | 50  |
| .1    | CN0920000901   | 9P CONNECTOR WIRE 90MM (L4040 W302 )               | 1.000  | 51  |
| .1    | CN1020001002   | 10P CONNECTOR WIRE 100MM (L4040 W301)              | 1.000  | 52  |
| .1    | CN1020001102   | 10P CONNECTOR WIRE 110MM (L4040 J106 )             | 1.000  | 53  |
| .1    | CTAC05513AKA01 | OUTER CARTON (CARTON MASTER MPC)                   | 0.500  |     |
| .1    | EVA1504401     | SHIELD LCD EVA01                                   | 2.000  | 27  |
| .1    | EVA1504402     | BATTERY CUSHION                                    | 3.000  | 20  |
| .1    | HST030012BUL   | HEAT SHRINKABLE TUBE 3X12MM                        | 2.000  | 54  |
| .1    | K46-1          | CABLE TIE                                          | 1.000  | 59  |
| .1    | LAC22AKA11     | LABEL BARCODE-B MPC500(A)                          | 1.000  |     |
| .1    | LAC67YAH261    | LABEL (GREEN MARKING)                              | 1.000  |     |
| .1    | LAM67AKA01     | DOUBLE SIDE TAPE (SEKON) 45MM X 122MM              | 1.000  | 60  |
| .1    | LAM67AKA02     | DOUBLE SIDE TAPE (SEKON) 10MM X 3MM                | 6.000  | 61  |
| .1    | LAM67AKA03     | PROTECTION TAPE (SEKON) (ID-S040) 111.5MM X 37.5MM | 1.000  | 62  |
| .1    | LAM67AKA04     | LABEL STICKER FOR CF CARD                          | 1.000  |     |
| .1    | MT1504308      | COPPER L=18.2                                      | 4.000  | 30  |
| .1    | MT1504309      | COPPER L=13                                        | 2.000  | 34  |
| .1    | MT1504310      | ANGLE PCB L                                        | 1.000  | 16  |
| .1    | MT1504311      | ANGLE PCB R                                        | 1.000  | 33  |
| .1    | MT1504406      | HOLDER PAD                                         | 1.000  | 14  |
| .1    | MT1512201      | SHIELD MEMORY                                      | 1.000  | 21  |
| .1    | MT1512202      | SHIELD PCB                                         | 1.000  | 35  |
| .1    | MT153000301    | METAL TOP MPC500                                   | 1.000  | 7   |
| ..2   | MT1530003      | METAL TOP MPC500 (R)                               | 1.000  |     |
| .1    | PLMPC50001     | POLY FOAM-L                                        | 1.000  |     |
| .1    | PLMPC50002     | POLY FOAM-R                                        | 1.000  |     |
| .1    | PT150140301    | LENS TOP                                           | 1.000  | 26  |
| ..2   | PT1501403      | LENS TOP (R)                                       | 1.000  |     |
| .1    | PT1504304      | HOLDER LCD                                         | 1.000  | 29  |
| .1    | PT151060301    | BUTTON CURSOR (AA822307X)                          | 1.000  | 39  |
| ..2   | PT1510603      | BUTTON CURSOR (AA822307X)                          | 1.000  |     |
| .1    | PT151060801    | KNOB JOG                                           | 1.000  | 24  |

| LEVEL     | PART NUMBER          | DESCRIPTION                                        | QTY          | REF                           |
|-----------|----------------------|----------------------------------------------------|--------------|-------------------------------|
| ..2       | PT1510608            | KNOB JOG (R)                                       | 1.000        |                               |
| .1        | PT151060901          | KNOB VOLUME (A) ADD RED                            | 1.000        | 9                             |
| ..2       | PT1510609            | KNOB VOLUME (A) (R)                                | 1.000        |                               |
| .1        | PT151060902          | KNOB VOLUME (B) ADD WHITE                          | 1.000        | 10                            |
| ..2       | PT1510609            | KNOB VOLUME (A) (R)                                | 1.000        |                               |
| .1        | PT151061101          | KNOB SLIDE SMALL (ADD WHITE LINE)                  | 1.000        | 5                             |
| ..2       | PT1510611            | KNOB SLIDE SMALL                                   | 1.000        |                               |
| .1        | PT1510612            | BUTTON TRANSPORT (A)                               | 2.000        | 25                            |
| .1        | PT1510613            | BUTTON TRANSPORT (B)                               | 3.000        | 42                            |
| .1        | PT1510615            | SWITCH BUTTON                                      | 2.000        | 31                            |
| .1        | PT152060101          | SIDE CAP (SPRAYING)                                | 2.000        | 6                             |
| ..2       | PT1520601            | SIDE CAP (R)                                       | 1.000        |                               |
| .1        | PT153010601          | BATTERY DOOR (SPRAYING)                            | 1.000        | 22                            |
| ..2       | PT1530106            | BATTERY DOOR (R)                                   | 1.000        |                               |
| .1        | PT153030201          | BOTTOM (SPRAYING)                                  | 1.000        | 37                            |
| ..2       | PT1530302            | BOTTOM (R)                                         | 1.000        |                               |
| .1        | RU1504303            | SILICON PAD                                        | 1.000        | 12                            |
| .1        | SC0306PBB1           | SCREW                                              | 22.000       | 1                             |
| .1        | SC0306RIB1           | SCREW (BLACK)                                      | 2.000        | 2                             |
| .1        | SC0306RIN1           | SCREW                                              | 10.000       | 58                            |
| .1        | SC0308FBB1           | SCREW                                              | 6.000        | 3                             |
| .1        | SC0308PBB1           | SCREW                                              | 6.000        | 57                            |
| .1        | SD870530             | LAMIN SHEET                                        | 1.000        |                               |
|           |                      |                                                    |              |                               |
| <b>.1</b> | <b>TWAL9-44-0010</b> | <b>LCD ASS'Y</b>                                   | <b>1.000</b> | <b>28</b>                     |
| ..2       | BC1602CHBWAJB        | IND LCD BC-1602C-HBWA-J-B                          | 1.000        |                               |
| ..2       | CN1620001501         | 16P CONNECTOR WIRE 150MM (L4040 W105)              | 1.000        | 45                            |
| ..2       | TE522501601          | 16P CONNECTOR SOCKET 90°                           | 1.000        |                               |
|           |                      |                                                    |              |                               |
| <b>.1</b> | <b>TWPC06A00101</b>  | <b>MAIN PCB ASS'Y (MPC500)</b>                     | <b>1.000</b> | <b>32</b>                     |
| ..2       | EC10550TM            | E. CAPACITOR 1UF/50V                               | 2.000        | C40,41                        |
| ..2       | EC10716TM            | E. CAPACITOR 100UF/16V                             | 3.000        | C907,908,909                  |
| ..2       | EC22716TM            | E. CAP 220UF/16V                                   | 5.000        | C403,404,910,911,912          |
| ..2       | EC47616TM            | E. CAP 47UF/16V                                    | 2.000        | C303,304                      |
| ..2       | AA428998J            | D SILICON C.1SS355TE-17 T08E                       | 1.000        | D1                            |
| ..2       | AA812979J            | IC HD74LVC245ATELL                                 | 3.000        | IC5,6,7                       |
| ..2       | AA821781X            | SOCKET DMM3-RS144A2B-13 144P                       | 1.000        | J3                            |
| ..2       | AA821788X            | TR FET CHIP 2SK3065T100 T12E                       | 4.000        | TR1,2,3,4                     |
| ..2       | AA821789X            | TR CHIP DTB113ZKT146 T08E                          | 3.000        | Q1,TR5,6                      |
| ..2       | AA821831X            | IC DS1811R-10                                      | 1.000        | IC13                          |
| ..2       | AA821836X            | IC SI9706DY                                        | 1.000        | IC8                           |
| ..2       | AA821874X            | DETECTOR HCPL-0701                                 | 1.000        | PH1                           |
| ..2       | AA822373X            | SOCKET BL112-42RL 42P                              | 1.000        | J103                          |
| ..2       | AA822757X            | TRANSISTOR 2SC3326                                 | 2.000        | TR301,302                     |
| ..2       | AAHD6417727F         | IC HD6417727F100CV QFTY                            | 1.000        | IC1                           |
| ..2       | AALM2674M            | IC LM2674M-ADJ                                     | 3.000        | IC901,902,903                 |
| ..2       | AL0-17-0330          | RES CHIP ARRAY 4 X 33 OHM 1/16W 5% C-C=0.8MM       | 1.000        | IB1                           |
| ..2       | AL0-20-1103          | POT TRIM SMD 10KB SING-TURN RH03ADC14X             | 1.000        | VR1                           |
| ..2       | AL2-51-0220          | DIODE POWER SCHOTTKY B240-A 20V 2A SMA             | 5.000        | D901,902,903,904              |
| ..2       | AL2-51-4403          | TRANSISTOR PNP 2N4403 40V 800MA SOT-23             | 1.000        | TR901                         |
| ..2       | AL2-52-5228          | DIODE ZENER MMBZ5230BLT1 SOT-23 SMD                | 1.000        | D2                            |
| ..2       | AL2-61-0431          | REG ADJ-SHUNT LM431 2.5V-37V 100mA 2% SOT-23       | 1.000        | IC18                          |
| ..2       | AL2-64-2541          | IC 74HCT541 OCTAL BUFFERS/DRIVERS W/TRI-STATE OUTS | 1.000        | IC9                           |
| ..2       | AL2-64-8032          | IC 74AUP1G32 SINGLE 2-IN POS OR SOT23-5            | 1.000        | IC12                          |
| ..2       | AL2-65-0014          | IC 74LVC1G14 SINGLE INVERTER SOT-23                | 1.000        | IC14                          |
| ..2       | AL2-71-0914          | IC TS914 OP-AMP SOP-14                             | 1.000        | IC19                          |
| ..2       | AL2-71-2084          | IC TLC084 4-OP AMP (SMD)                           | 1.000        | IC11                          |
| ..2       | AL2-75-0320          | IC CODEC TLV320AIC23 STEREO TSSOP-28               | 1.000        | IC101                         |
| ..2       | AL7-20-0077          | INDUCTOR FERRITE BEAD 330 OHM @ 100MHZ 0805        | 4.000        | FL1,2,3,4                     |
| ..2       | AL7-20-0078          | INDUCTOR FERRITE BEAD 30 OHM @ 100MHZ 0805         | 11.000       | FL5,6,7,8,9,10,11,12,13,14,15 |
| ..2       | AL7-20-1039          | INDUCTOR 39UH PE-53814SNL SMD LCI-30               | 3.000        | L901,902,903                  |
| ..2       | CS103K5005X7R        | C.CAP 0.010UF 50V X7R,±10% SMD 0805                | 8.000        | C53,54,59,904,905,906,913,914 |

| LEVEL | PART NUMBER    | DESCRIPTION                                     | QTY    | REF                                                                                                                                                        |
|-------|----------------|-------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ..2   | CS104K5005X7R  | CHIP CAP 0.1UF ±10% 50V 0805                    | 47.000 | C1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,<br>C18,20,21,22,23,24,25,26,27,28,29,30,31,<br>C32,33,34,35,36,37,39,46,90,91,101,102,<br>C103,104,888,915,916 |
| ..2   | CS220J5005COG  | C.CAP 22PF/50V/+ -5% (0805 SMD)                 | 2.000  | C61,62                                                                                                                                                     |
| ..2   | CS470J5005COG  | CAPACITOR 47PF NPO 50V 0805                     | 2.000  | C201,202                                                                                                                                                   |
| ..2   | CS471J5005COG  | CAPACITOR 470PF 5% NPO 50V 0805 (SMD)           | 2.000  | C301,302                                                                                                                                                   |
| ..2   | CS471K5005X7R  | CAP 470PF CER X7R 50V                           | 2.000  | C51,52                                                                                                                                                     |
| ..2   | CS472K5005X7R  | CAPACITOR (SMD)                                 | 2.000  | C401,402                                                                                                                                                   |
| ..2   | CS473K5005X7R  | CAPACITOR (SMD) 47000PF                         | 5.000  | C56,58,901,902,903                                                                                                                                         |
| ..2   | ICK4S641632E   | IC (SDRAM) 64MB SDRAM                           | 2.000  | IC3,4                                                                                                                                                      |
| ..2   | ICSN74LVCC3245 | IC 74LVCC3245 (ADWR)-DR39                       | 1.000  | IC10                                                                                                                                                       |
| ..2   | PC06A001       | PCB BOARD (MAIN)                                | 1.000  |                                                                                                                                                            |
| ..2   | RS00018J05     | CHIP RES. 0 OHM,1/8W,±5%,0805                   | 1.000  | R37                                                                                                                                                        |
| ..2   | RS10118J05     | CHIP RES. 100 OHM,1/8W,±5%,0805                 | 1.000  | R3                                                                                                                                                         |
| ..2   | RS10218J05     | CHIP RES. 1K OHM,1/8W,±5%,0805                  | 4.000  | R1,6,22,907                                                                                                                                                |
| ..2   | RS10318J05     | CHIP RES. 10K OHM,1/8W,±5%,0805                 | 6.000  | R16,28,42,307,308,913                                                                                                                                      |
| ..2   | RS10418J05     | CHIP RES. 100K OHM,1/8W,±5%,0805                | 6.000  | R18,19,30,32,34,911                                                                                                                                        |
| ..2   | RS15218J05     | CHIP RES. 1.5K OHM,1/8W,±5%,0805                | 3.000  | R11,17,23                                                                                                                                                  |
| ..2   | RS15318J05     | CHIP RES. 15K OHM,1/8W,±5%,0805                 | 1.000  | R9                                                                                                                                                         |
| ..2   | RS16318J05     | CHIP RES. 16K (0805) SMD                        | 1.000  | R4                                                                                                                                                         |
| ..2   | RS20118J05     | CHIP RES. 200 OHM,1/8W,±5%,0805                 | 2.000  | R24,35                                                                                                                                                     |
| ..2   | RS22118J05     | CHIP RES. 220 OHM,1/8W,±5%,0805                 | 1.000  | R2                                                                                                                                                         |
| ..2   | RS22218J05     | CHIP RES. 2.2K OHM,1/8W,±5%,0805                | 1.000  | R29                                                                                                                                                        |
| ..2   | RS22318J05     | CHIP RES. 22K OHM,1/8W,±5%,0805                 | 4.000  | R305,306,403,404                                                                                                                                           |
| ..2   | RS24118J05     | CHIP RES. 240 OHM,1/8W,±5%,0805                 | 3.000  | R901,902,906                                                                                                                                               |
| ..2   | RS24218J05     | CHIP RES. 2.4K OHM,1/8W,±5%,0805                | 1.000  | R909                                                                                                                                                       |
| ..2   | RS27018J05     | CHIP RES. 27 OHM,1/8W,±5%,0805                  | 3.000  | R7,8,12                                                                                                                                                    |
| ..2   | RS30410J05     | CHIP RES. 300K OHM,1/10W,±5%,0805               | 1.000  | R31                                                                                                                                                        |
| ..2   | RS33018J05     | CHIP RES. 33 OHM,1/8W,±5%,0805                  | 6.000  | R20,21,26,27,401,402                                                                                                                                       |
| ..2   | RS33118J05     | CHIP RES. 330 OHM,1/8W,±5%,0805                 | 4.000  | R43,44,301,302                                                                                                                                             |
| ..2   | RS33218J05     | CHIP RES. 3.3K OHM,1/8W,±5%,0805                | 2.000  | R13,14                                                                                                                                                     |
| ..2   | RS33318J05     | CHIP RES. 33K OHM,1/8W,±5%,0805                 | 1.000  | R10                                                                                                                                                        |
| ..2   | RS39318J05     | CHIP RES. 39K OHM,1/8W,±5%,0805                 | 1.000  | R912                                                                                                                                                       |
| ..2   | RS43018J05     | CHIP RESISTOR 43 OHM 1/8W, ±5%, 0805            | 2.000  | R45,46                                                                                                                                                     |
| ..2   | RS43118J05     | CHIP RES. 430 OHM,1/8W,±5%,0805                 | 1.000  | R905                                                                                                                                                       |
| ..2   | RS43318J05     | CHIP RES. 43K OHM,1/8W,±5%,0805                 | 2.000  | R38,41                                                                                                                                                     |
| ..2   | RS47218J05     | CHIP RES. 4.7K OHM,1/8W,±5%,0805                | 7.000  | R25,33,36,39,40,201,202                                                                                                                                    |
| ..2   | RS47318J05     | CHIP RES. 47K OHM,1/8W,±5%,0805                 | 1.000  | R101                                                                                                                                                       |
| ..2   | RS51118J05     | CHIP RES. 510 OHM,1/8W,±5%,0805                 | 1.000  | R903                                                                                                                                                       |
| ..2   | RS51218J05     | CHIP RES. 5.1K OHM,1/8W,±5%,0805                | 1.000  | R908                                                                                                                                                       |
| ..2   | RS51318J05     | CHIP RES. 51K OHM.1/8W,±5%,0805                 | 1.000  | R15                                                                                                                                                        |
| ..2   | RS68118J05     | CHIP RES. 680 OHM,1/8W,±5%,0805                 | 2.000  | R303,304                                                                                                                                                   |
| ..2   | RS75018J05     | CHIP RES. 75 OHM,1/10W,±5%,0805                 | 1.000  | R910                                                                                                                                                       |
| ..2   | RS75118J05     | CHIP RES. 750 OHM,1/8W,±5%,0805                 | 1.000  | R904                                                                                                                                                       |
| ..2   | RS82118J05     | CHIP RES. 820 OHM,1/8W,±5%,0805                 | 1.000  | R5                                                                                                                                                         |
| ..2   | RS91218J05     | CHIP RES. 9.1K OHM,1/8W,±5%,0805                | 2.000  | R203,204                                                                                                                                                   |
| ..2   | TCS106M1006    | TAN-CAP 10UF/10V (A CASE )SND A CASE            | 9.000  | C70,71,72,73,74,75,105,108,175                                                                                                                             |
| ..2   | TWAA822384X    | IC AM29LV641DL90REI                             | 1.000  | IC2                                                                                                                                                        |
| ...3  | AA822384X      | IC S29GL064A90TFIR70 (PROGRAM BY PE)            | 1.000  |                                                                                                                                                            |
| ..2   | XTM11289X      | 11.2896MHZ 5X7X1.75MM OSCILLATOR,FRE STAB 50PPM | 1.000  | X2                                                                                                                                                         |
| ..2   | XTM12000XSMD   | OSCILLATOR 12.000MHZ 3.3V SMD                   | 1.000  | X1                                                                                                                                                         |
| ..2   | AA419246J      | SOCKET 128A-050S2A-S14A 50P                     | 1.000  | J110                                                                                                                                                       |
| ..2   | AA820568X      | 20P IC SOCKET                                   | 1.000  | (IC17)                                                                                                                                                     |
| ..2   | AA820569X      | 24P IC SOCKET                                   | 2.000  | (IC15,16)                                                                                                                                                  |
| ..2   | AA821000X      | PHONE J YKB26-5264 S.NUT 6.3                    | 5.000  | J201,202,301,302,401                                                                                                                                       |
| ..2   | AL1-08-0222    | E.CAP. 22UF 16V 20%(PANASONIC)                  | 8.000  | C19,38,42,43,48,49,203,204                                                                                                                                 |
| ..2   | AL4-08-0402    | CON USB SOCKET 4 PIN FEMALE PC-MNT HORIZONTAL   | 1.000  | J2                                                                                                                                                         |
| ..2   | AL6-01-0012    | SWITCH (OPEN/CLOSE) SSSF122NB1-YN2              | 1.000  | SW2                                                                                                                                                        |
| ..2   | AL6-02-0059    | SWITCH PUSH DPDT 2.5MM SPPJ32NE01               | 2.000  | SW1,3                                                                                                                                                      |
| ..2   | AL9-61-0151    | IC (PROGRAMMED AL2-33-0010)                     | 1.000  | IC15                                                                                                                                                       |
| ...3  | AL2-33-0010    | IC GAL GAL20V8 24-PIN DIP (PROGRAM BY PE)       | 1.000  |                                                                                                                                                            |

| LEVEL      | PART NUMBER          | DESCRIPTION                                       | QTY          | REF                                                                                                               |
|------------|----------------------|---------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------|
| ..2        | AL9-61-0152          | IC (PROGRAMMED AL2-33-0010)                       | 1.000        | IC16                                                                                                              |
| ...3       | AL2-33-0010          | IC GAL GAL20V8 24-PIN DIP (PROGRAM BY PE)         | 1.000        |                                                                                                                   |
| ..2        | AL9-61-0153          | IC (PROGRAMMED AL2-33-0009)                       | 1.000        | IC17                                                                                                              |
| ...3       | AL2-33-0009          | IC GAL GAL16V8D-15QP 20-PIN DIP ( PROGRAM BY PE)  | 1.000        |                                                                                                                   |
| ..2        | JKDJ-0702B-025       | DC SOCKET                                         | 1.000        | J1                                                                                                                |
| ..2        | TE10200702           | 7P CONNECTOR SOCKET                               | 1.000        | J4B                                                                                                               |
| ..2        | TE10201002           | 10P CONNECTOR SOCKET                              | 1.000        | P301                                                                                                              |
| ..2        | TE612000301          | 3P CONNETOR SOCKET                                | 2.000        | P2,303                                                                                                            |
| ..2        | TE612000402          | 4P CONNECTOR SOCKET                               | 1.000        | P107                                                                                                              |
| ..2        | TE612000702          | 7P CONNECTOR SOCKET (RED)                         | 1.000        | J4A                                                                                                               |
| ..2        | TE612000901          | 9P CONNECTOR SOCKET                               | 1.000        | P302                                                                                                              |
| ..2        | TE612001002          | 10P CONNECTOR SOCKET 180° (RED)                   | 1.000        | J106                                                                                                              |
| ..2        | TE612001602          | 16P CONNECTOR SOCKET                              | 1.000        | P105                                                                                                              |
| ..2        | TE962541401          | 14P CONNECTOR SOCKET                              | 1.000        | P111                                                                                                              |
|            |                      |                                                   |              |                                                                                                                   |
| <b>.1</b>  | <b>TWPC06A00201</b>  | <b>FUNCTION PCB ASS'Y</b>                         | <b>1.000</b> |                                                                                                                   |
| ..2        | PC06A002             | PCB BOARD (FUNCTION)                              | 1.000        |                                                                                                                   |
| <b>..2</b> | <b>TWPC06A002A01</b> | <b>PAD PCB ASS'Y</b>                              | <b>1.000</b> | <b>15</b>                                                                                                         |
| ...3       | CS104K5005X7R        | CHIP CAP 0.1UF ±10% 50V 0805                      | 2.000        | C401,402                                                                                                          |
| ...3       | IC4051BFN            | IC (TC4051BFN)                                    | 2.000        | IC401,402                                                                                                         |
| ...3       | RS47218J05           | CHIP RES. 4.7K OHM,1/8W,±5%,0805                  | 2.000        | R401,402                                                                                                          |
| ...3       | AL4-15-3116          | HEADER 16-PIN SIL ZIF FMZ                         | 1.000        | J1                                                                                                                |
| ...3       | TE622001002          | 10P CONNECTOR SOCKET 90° (RED)                    | 1.000        | J106                                                                                                              |
| <b>..2</b> | <b>TWPC06A002B01</b> | <b>CF PCB ASS'Y</b>                               | <b>1.000</b> | <b>36</b>                                                                                                         |
| ...3       | AA822373X            | SOCKET BL112-42RL 42P                             | 1.000        | J103                                                                                                              |
| ...3       | AA822374X            | SOCKET CFHD-19-0034 50P                           | 1.000        | J104                                                                                                              |
| ...3       | CS104K5005X7R        | CHIP CAP 0.1UF ±10% 50V 0805                      | 2.000        | C801,802                                                                                                          |
| ...3       | AA822406X            | CF CARD CONNECTOR EJECTOR                         | 1.000        | (J104)                                                                                                            |
| ...3       | NUT0102IID           | N20STL N13                                        | 2.000        |                                                                                                                   |
| ...3       | SC0206RINI           | SCREW                                             | 2.000        |                                                                                                                   |
| <b>..2</b> | <b>TWPC06A002C01</b> | <b>MIDI PCB ASS'Y</b>                             | <b>1.000</b> | <b>17</b>                                                                                                         |
| ...3       | AL7-20-0078          | INDUCTOR FERRITE BEAD 30 OHM @ 100MHZ 0805        | 4.000        | FL501,502,503,504                                                                                                 |
| ...3       | CS471J5005COG        | CAPACITOR 470PF 5% NPO 50V 0805 (SMD)             | 4.000        | C503,504,505,506                                                                                                  |
| ...3       | CS473K5005X7R        | CAPACITOR (SMD) 47000PF                           | 1.000        | C501                                                                                                              |
| ...3       | RS47018J05           | CHIP RES. 47 OHM,1/8W,±5%,0805                    | 2.000        | R3,4                                                                                                              |
| ...3       | AL4-00-0002          | JACK DIN 5 PIN MIDI PCB MOUNT 180° W/SHIELD SOCKE | 2.000        | J501,502                                                                                                          |
| ...3       | TE612000402          | 4P CONNECTOR SOCKET                               | 1.000        | P107                                                                                                              |
|            |                      |                                                   |              |                                                                                                                   |
| <b>.1</b>  | <b>TWPC06A00301</b>  | <b>OPERATION PCB ASS'Y</b>                        | <b>1.000</b> |                                                                                                                   |
| ..2        | PC06A003             | PCB BOARD (OPERATION)                             | 1.000        |                                                                                                                   |
| <b>..2</b> | <b>TWPC06A003A01</b> | <b>SW PCB ASS'Y</b>                               | <b>1.000</b> | <b>40</b>                                                                                                         |
| ...3       | AA415015J            | SW TACT SKQEAD                                    | 5.000        | SW301,302,303,304,308                                                                                             |
| ...3       | AA812086J            | LED 3MM GREEN (EVERYLIGHT) 264-10GD               | 1.000        | D4                                                                                                                |
| ...3       | AA812087J            | LED 3MM RED (KINGBRIGHT) L-934SRD-G               | 4.000        | D5,6,304,305                                                                                                      |
| ...3       | AL6-00-0016          | ENCODER 24-POSITION 10MM SC12F2420406             | 1.000        | SW2                                                                                                               |
| ...3       | AL6-02-0033          | SWITCH (OPEN/CLOSE)5MM                            | 25.000       | SW305,306,307,309,310,311,312,313,314,<br>SW315,316,317,318,319,320,321,322,323,<br>SW324,325,326,327,328,329,330 |
| ...3       | CS103K5005X7R        | C.CAP 0.010UF 50V X7R,±10% SMD 0805               | 2.000        | C203,204                                                                                                          |
| ...3       | TE622000901          | 9P CONNECTOR SOCKET                               | 1.000        | P302                                                                                                              |
| ...3       | TE622001001          | 10P CONNECTOR SOCKET                              | 1.000        | P301                                                                                                              |
| <b>..2</b> | <b>TWPC06A003B01</b> | <b>POT PCB ASS'Y</b>                              | <b>1.000</b> | <b>11</b>                                                                                                         |
| ...3       | AA812086J            | LED 3MM GREEN (EVERYLIGHT) 264-10GD               | 1.000        | D3                                                                                                                |
| ...3       | AL0-09-0056          | VARIABLE RESISTOR SLIDE 10KB                      | 1.000        | R1                                                                                                                |
| ...3       | AL0-09-0058          | VR RK14K1230005-10K15AX2 10KA DUAL VERT 15MM      | 2.000        | P1,2                                                                                                              |
| ...3       | AL6-02-0033          | SWITCH (OPEN/CLOSE)5MM                            | 1.000        | SW331                                                                                                             |
| ...3       | CS103K5005X7R        | C.CAP 0.010UF 50V X7R,±10% SMD 0805               | 2.000        | C201,202                                                                                                          |
| ...3       | JW5206T              | JUMPER WIRE (A.I.) 52MM                           | 1.000        | J3                                                                                                                |
| ...3       | TE622000302          | 3P CONNECTOR SOCKET                               | 1.000        | P303                                                                                                              |
| ...3       | TE622000701          | 7P CONNECTOR SOCKET                               | 1.000        | J4B                                                                                                               |
| ...3       | TE622000702          | 7P CONNECTOR SOCKET (RED)                         | 1.000        | J4A                                                                                                               |

# MPC500 WIRING DIAGRAM



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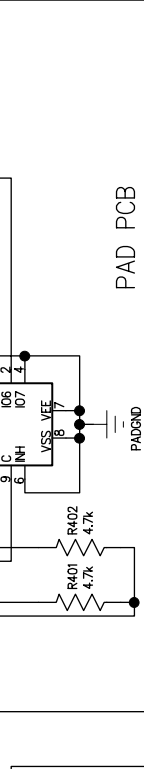
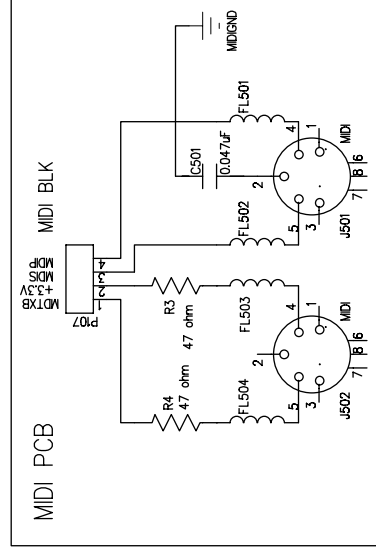
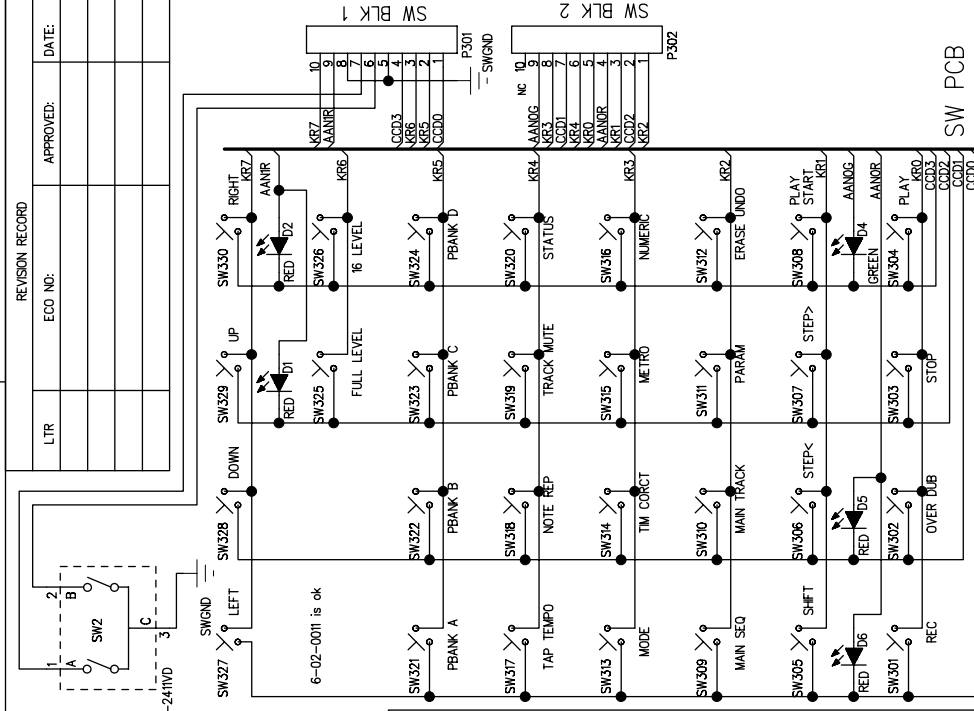
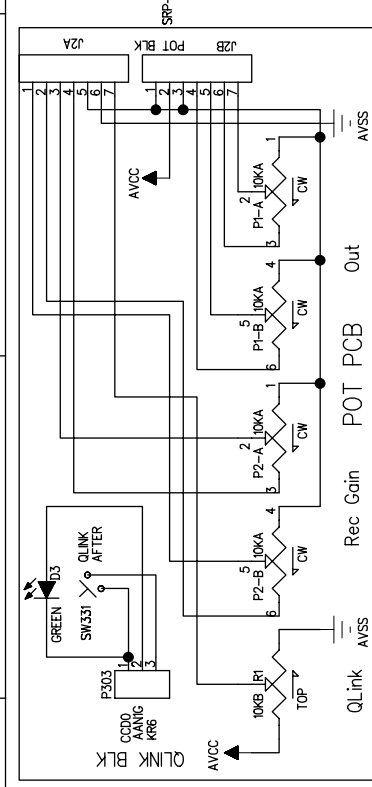
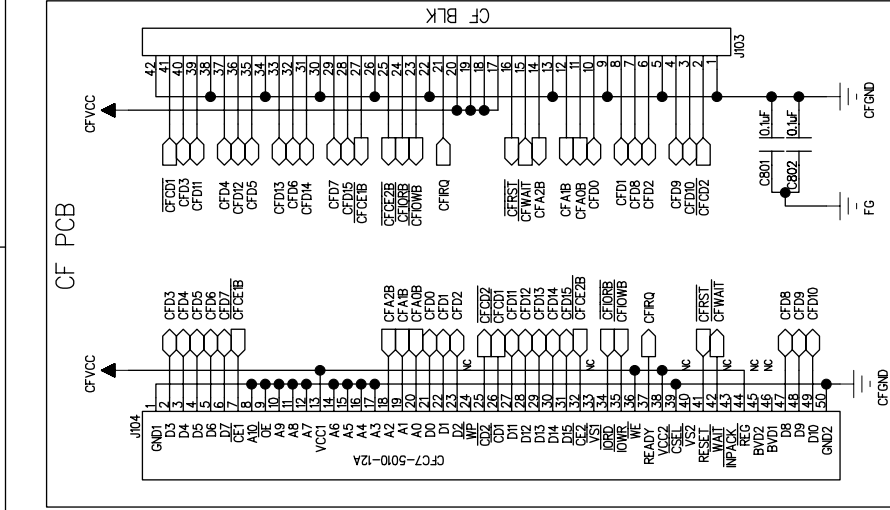
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AKAI PROFESSIONAL

COMPANY:

TITLE: AC05 Peripheral PCBs  
PP version

PART NUMBER: 9-40-0409-2

ASSY NUMBER:

FLENAME: AC09FE204asch

SCALE:

REVISION RECORD

| LTR | ECO NO. | APPROVED: | DATE: |
|-----|---------|-----------|-------|
|     |         |           |       |
|     |         |           |       |
|     |         |           |       |

REV: 1

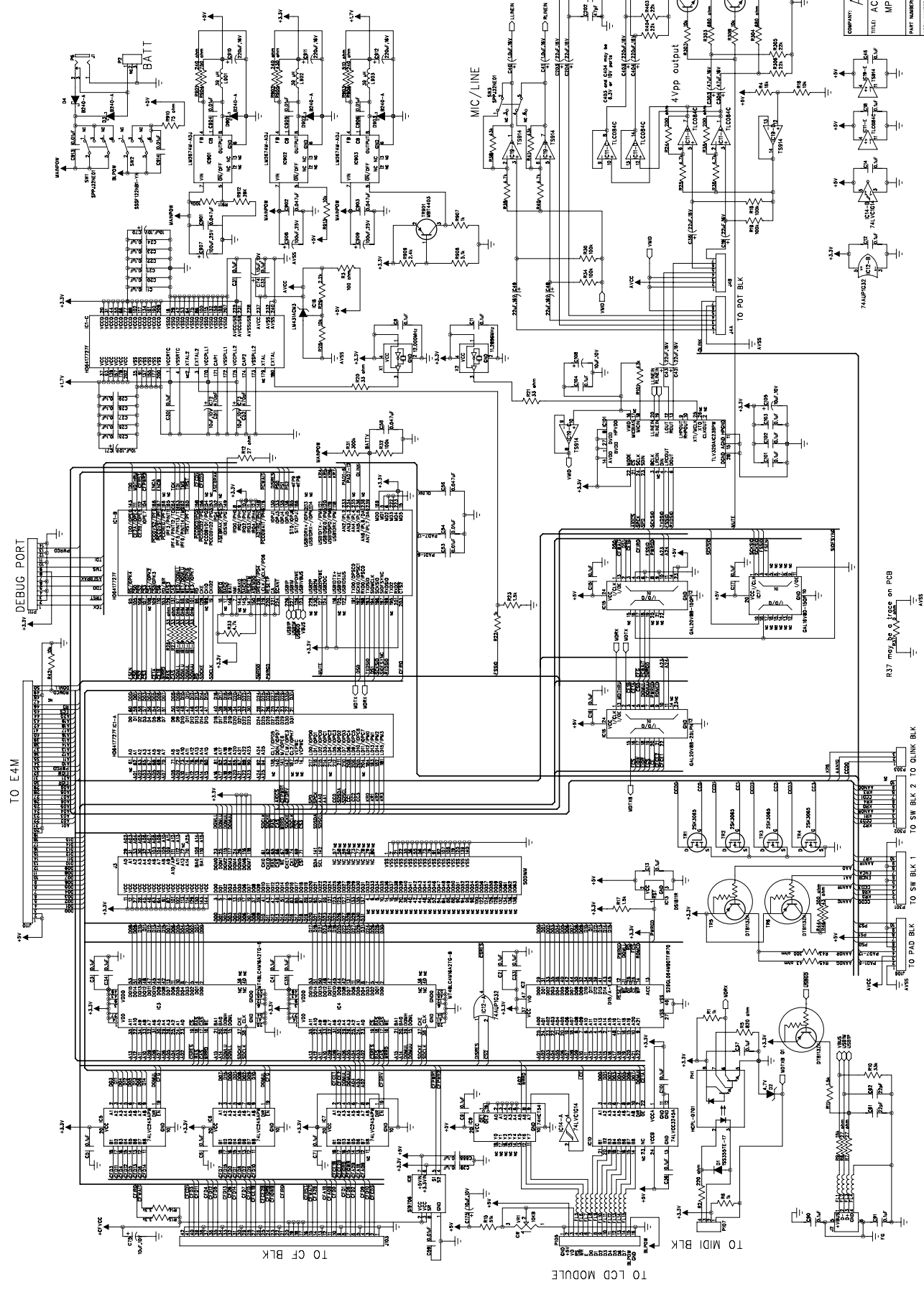
SIZE: B

SHEET: 1 OF 1

Yohjuro may substitute alternate connectors for J104, J103, J102, J101, J100, J103, J102, J101, and J100 to optimize manufacturability.

| REV | DES. NO. | APP'D. DATE |
|-----|----------|-------------|
|     |          |             |
|     |          |             |
|     |          |             |

D  
You may substitute alternate connectors  
For J03, J07, J08, J301, J302, J303, and P2  
To optimize manufacturability



|             |                   |
|-------------|-------------------|
| COMPANY     | AKAI PROFESSIONAL |
| TITLE       | AC05 Main PCB     |
| MP version  |                   |
| PART NUMBER | 8-00-040-A        |
| REV         | 1                 |
| DESIGNED    | FLANNERY, ADAM    |
| DATE        |                   |
| SCALE       | 1 OF 1            |

