

**SERVICE / RECONSTRUCTION
MANUAL**

EXK-M1/M1R

REVISED EDITION V. 2.0

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1. SPECIFICATIONS

EXK-M1/M1R is the kit that is possible to put into the great deal of PCM data memory without losing characteristics of M1/M1R

	M1 / M1R	EXK-M1/M1R
PCM waveform ROM	16 bit 2M word	16 bit 4M word
MULTI SOUND	100 (00~100)	190 (00~189)
DRUM SOUND	44 (01~44)	85 (01~85)

Before you start the reconstruction :

When this reconstruction is done, **all the data of M1 (M1R) will be initialized !!!**

Please save your important data like the user data into a RAM card or to a computer **before** you start this reconstruction !

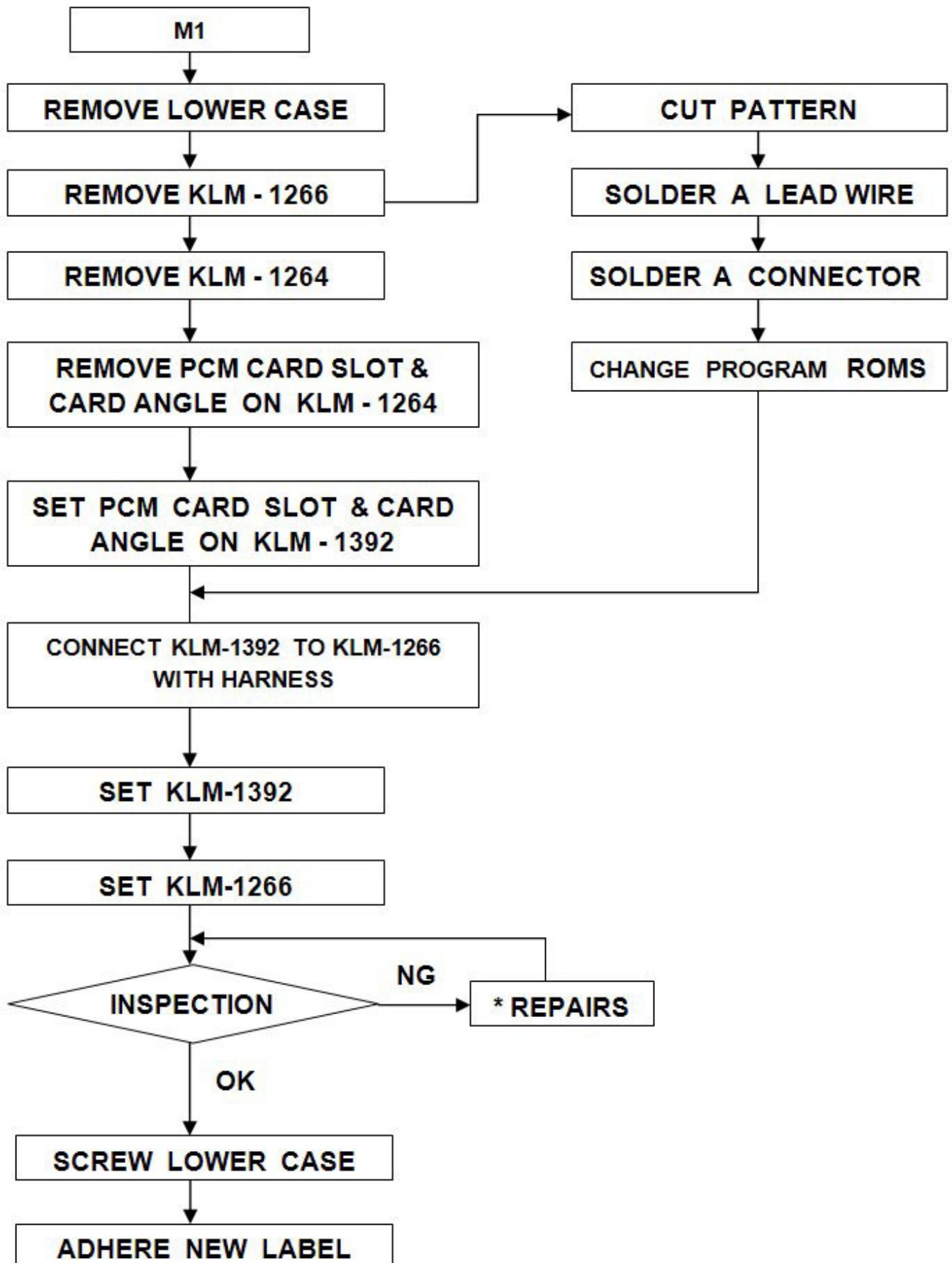
MULTI SOUND LIST

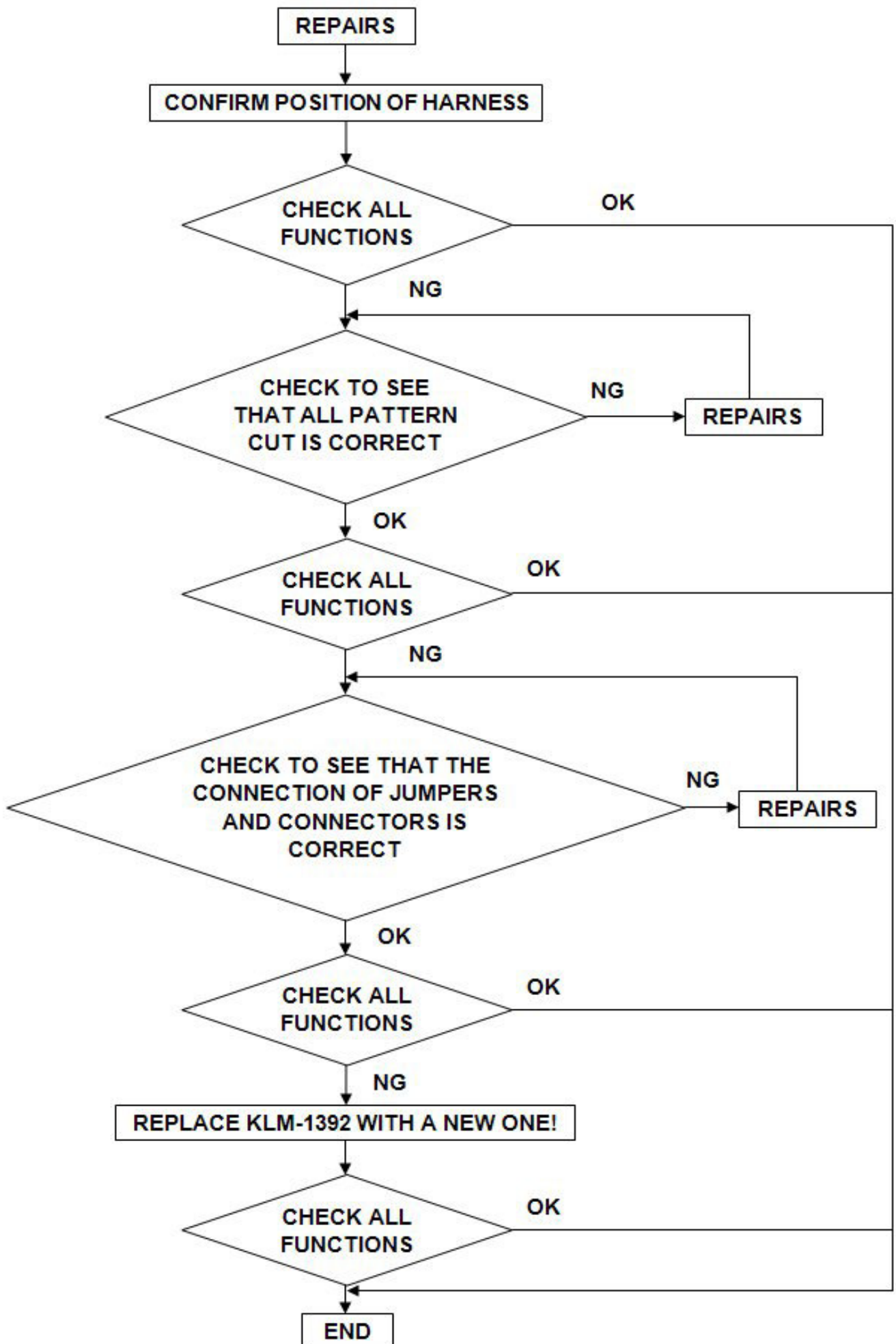
000 Piano	050 FingerSnap	100 Piano 2	150 Bell Hit
001 E. Piano 1	051 Pop	101 Soft E.P.	151 BellHit NT
002 E. Piano 2	052 Drop	102 Hard E.P.	152 Clang Hit
003 Clav	053 Drop NT	103 Clav 3	153 ClangHitNT
004 Harpsicord	054 Breath	104 Organ 3	154 Stick Hit
005 Organ 1	055 Breath NT	105 Organ 4	155 StickHitNT
006 Organ 2	056 Pluck	106 PipeOrgan1	156 Block 2
007 MagicOrgan	057 Pluck NT	107 Pipe Org1A	157 Block 2 NT
008 Guitar 1	058 Vibe Hit	108 PipeOrgan2	158 Cabasa
009 Guitar 2	059 VibeHit NT	109 E. Guitar 2	159 Cabasa NT
010 E. Guitar	060 Hammer	110 Harmonics	160 Choriana
011 Sitar 1	061 Metal Hit	111 E. Bass 2	161 Analog
012 Sitar 2	062 MetalHitNT	112 Slap Bass	162 Piano Pad
013 A. Bass	063 Pick	113 Round Bass	163 PianoPad A
014 Pick Bass	064 Distortion	114 Synth Bass3	164 WaveSweep1
015 E. Bass	065 Dist NT	115 Mandolin	165 WvSweep 1A
016 Fretless	066 Bass Thumb	116 Banjo	166 WvSweep 1B
017 SynthBass1	067 BasThumNT1	117 Harp	167 WaveSweep2
018 SynthBass2	068 BasThumNT2	118 Koto	168 WvSweep 2A
019 Vibes	069 Wire	119 Pick Piano	169 WvSweep 2B
020 Bell	070 PanWave	120 PicPianoNT	170 MouthHarp1
021 Tubular	071 PingWave	121 Stick	171 MouthHrp1A
022 BellRing	072 Fv Wave	122 Marimba	172 MouthHarp2
023 Karimba	073 Mv Wave	123 Gamelan	173 MouthHrp2A
024 KarimbaNT	074 Voice Wave	124 Pot Covers	174 Zawinul
025 SynMallet	075 VoiceWvNT1	125 PotCoverNT	175 Spectrum 1
026 Flute	076 VoiceWvNT2	126 Music Box	176 Spectrum 2
027 Pan Flute	077 DWGS E.P.1	127 Toy Piano	177 Spectrum 4
028 Bottles	078 DWGS E.P.2	128 Cymbell	178 Spctrum4NT
029 Voices	079 DWGS E.P.3	129 Bellsynth	179 Noise
030 Choir	080 DWGS Piano	130 BellsynthA	180 Noise NT
031 Strings	081 DWGS Clav	131 Timpani	181 Perc. Wave
032 Brass 1	082 DWGS Vibe	132 Vocoder	182 Wire 2
033 Brass 2	083 DWGS Bass1	133 Da Voice	183 Prosync
034 Tenor Sax	084 DWGS Bass2	134 Cha Voice	184 2% Pulse
035 Mute TP	085 DWGS Bell	135 Strings 2	185 4% Pulse
036 Trumpet	086 DWGS Orgn1	136 Strings 3	186 6% Pulse
037 TubaFlugel	087 DWGS Orgn2	137 SoloString	187 8% Pulse
038 DoubleReed	088 DWGS Voice	138 Hard Flute	188 16% Pulse
039 Koto Trem	089 SquareWave	139 Clarinet	189 Saw Wave 2
040 BambooTrem	090 Digital 1	140 Alto Sax	
041 Rhythm	091 Saw Wave	141 Hard Sax	
042 Lore	092 Digital 2	142 BaritonSax	
043 Lore NT	093 25% Pulse	143 Trombone	
044 FlexaTone	094 10% Pulse	144 FrenchHorn	
045 WindBells	095 Digital 3	145 Harmonica	
046 Pole	096 Digital 4	146 Accordion	
047 Pole NT	097 Digital 5	147 Clicker	
048 Block	098 DWGS Tri	148 Clicker NT	
049 Block NT	099 DWGS Sine	149 Waterphone	

DRUM SOUND LIST

000 Kick 1	025 Whip	050 Tight SD	075 Potcover
001 Kick 2	026 Shaker	051 Ambient SD	076 Cymbell
002 Kick 3	027 Pole	052 Synth SD	077 Timpani
003 Snare 1	028 Block	053 Rim Shot	078 Clicker 1
004 Snare 2	029 FingerSnap	054 Stick Hit	079 Clicker 2
005 Snare 3	030 Drop	055 Ambient Tom	080 Spectrum4L
006 Snare 4	031 Vibe Hit	056 Closed HH3	081 Spectrum4H
007 Side Stick	032 Hammer	057 Open HH3	082 Noise
008 Tom 1	033 Metal Hit	058 Pedal HH	083 Perc. WaveL
009 Tom 2	034 Pluck	059 Clang Hit	084 Perc. WaveH
010 Closed HH1	035 FlexaTone	060 Bell Ride	
011 Open HH 1	036 Wind Bell	061 Ping Ride	
012 Closed HH2	037 Tubular 1	062 Bongo Low	
013 Open HH 2	038 Tubular 2	063 Bongo High	
014 Crash	039 Tubular 3	064 Bongo Slap	
015 Conga 1	040 Tubular 4	065 Claps 2	
016 Conga 2	041 Bell Ring	066 Maracas 1	
017 Timbales 1	042 Metronome1	067 Maracas 2	
018 Timbales 2	043 Metronome2	068 Cabasa	
019 Cowbell	044 Pro BD	069 Block 2	
020 Claps	045 Tight BD	070 Bell Hit	
021 Tambourine	046 Punch BD	071 Techno Zap	
022 E. Tom	047 Synth BD	072 Marimba	
023 Ride	048 Pro SD 1	073 Gamelan 1	
024 Rap	049 Pro SD 2	074 Gamelan 2	

2. RECONSTRUCTION PROCEDURE FOR M1





Explanation for M1 Reconstruction

Remove the Lower case and KLM-1266 P.C.Board (Fig. 1)

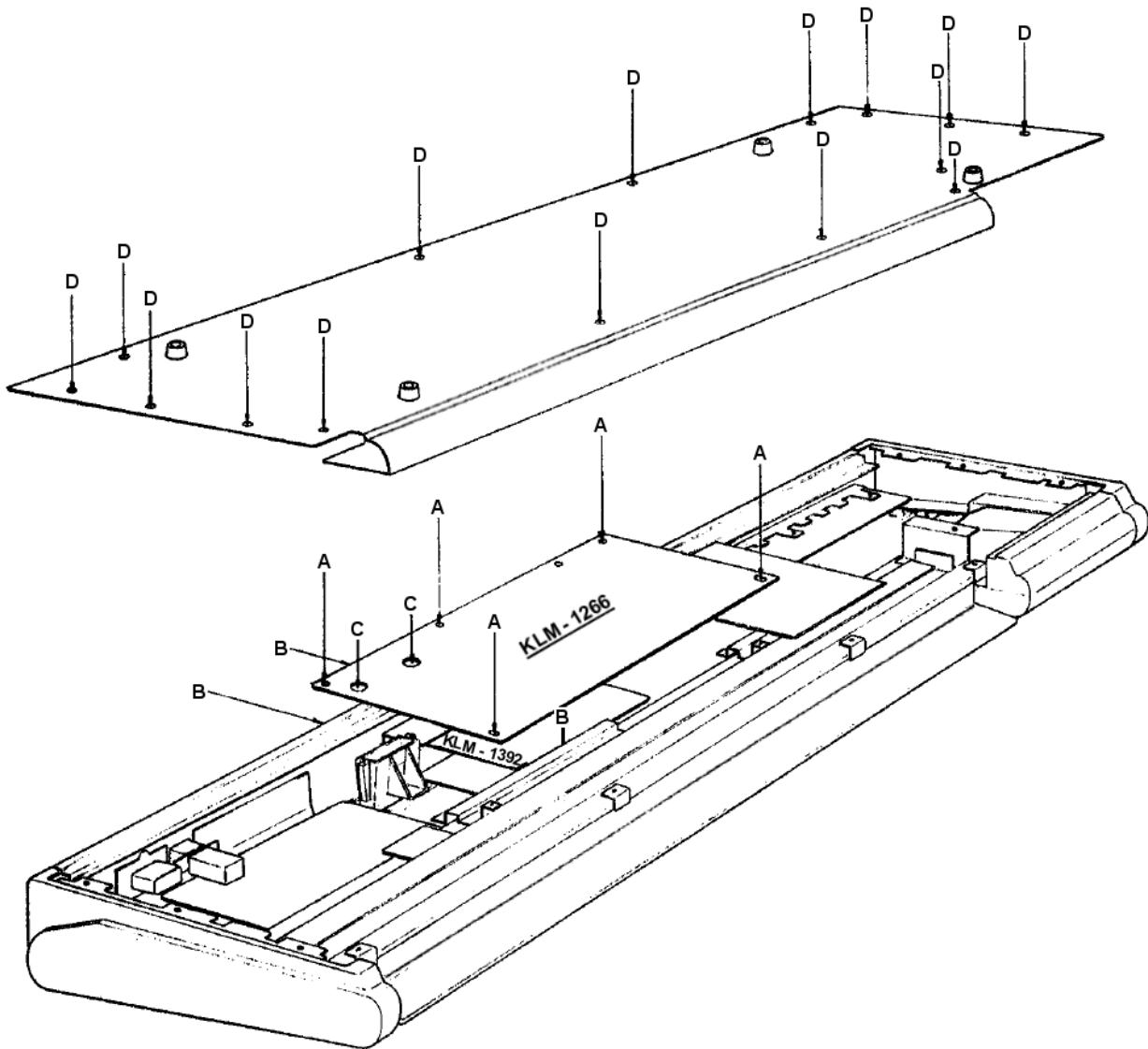


Fig. 1

Soldering instructions (please see corresponding pictures below) :

TOP = component side, BOTTOM = solder side of KLM-1266

1. Cut the two traces leading to pins 39 and 40 of CN15A on the BOTTOM
2. Cut the short trace leading from ground rail to pin 5 of IC35 (74LS138) on the BOTTOM
3. Solder 3 jumper wires on BOTTOM:
 - * between pin 8 of RA13 (or pin 2 of IC35) and pin 40 of CN15A
 - * between pin 7 of RA13 (or pin 1 of IC35) and pin 39 of CN15A
 - * between pin 10 of IC34 (isolated via on bottom) and pin 5 of IC35
4. Solder the two unterminated wires for connector CN23B, directly to two of IC35's legs on TOP:
 - * CN23B pin 2 (yellow) to IC35 pin 3
 - * CN23B pin 1 (red) to IC35 pin 5

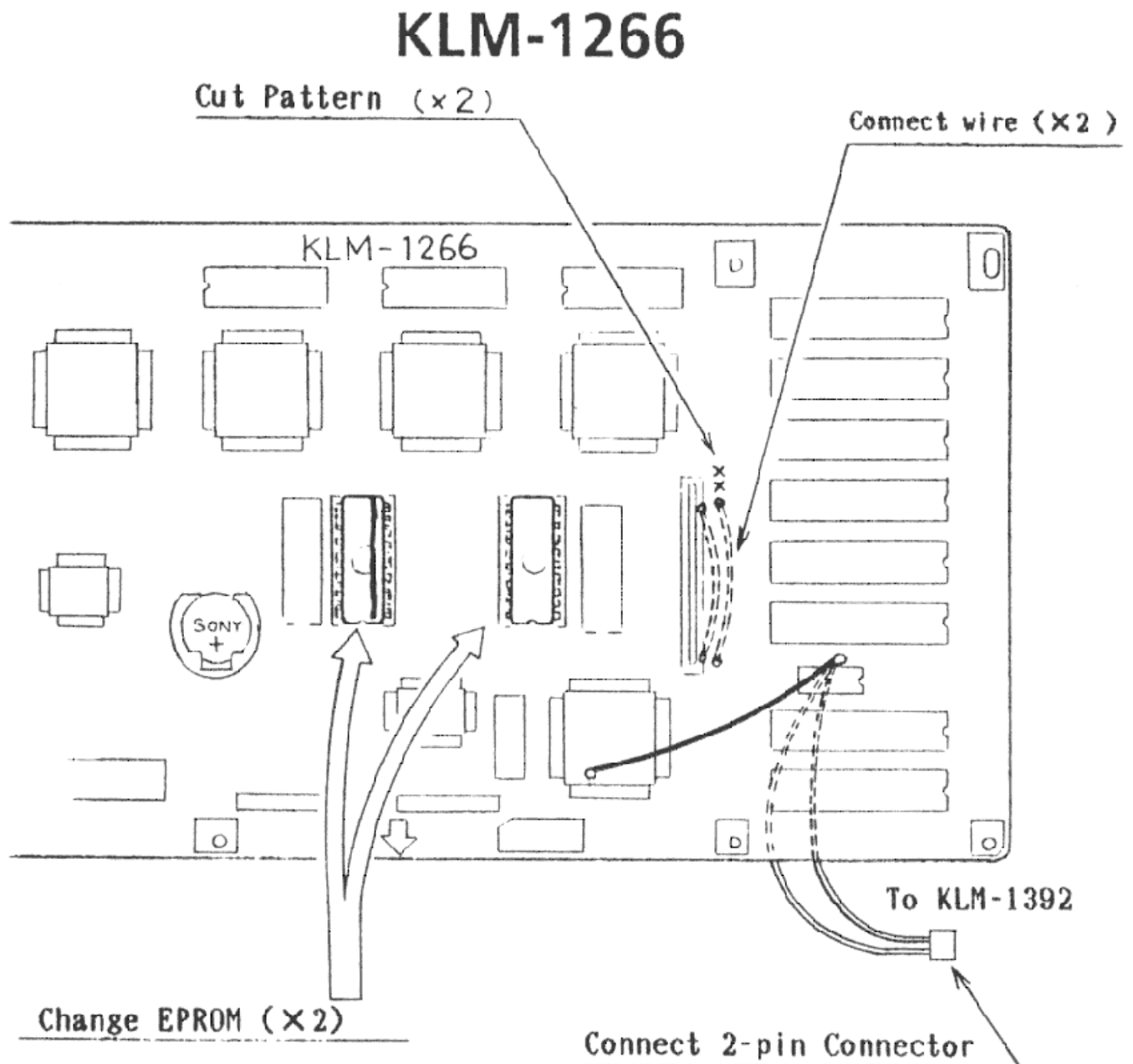
5. Replace IC32 and IC23 on TOP with the new OS ROM ICs.

* Do not remove any label if it is covering a window, as this may cause unintentional slow erasing of EPROM by UV exposure!

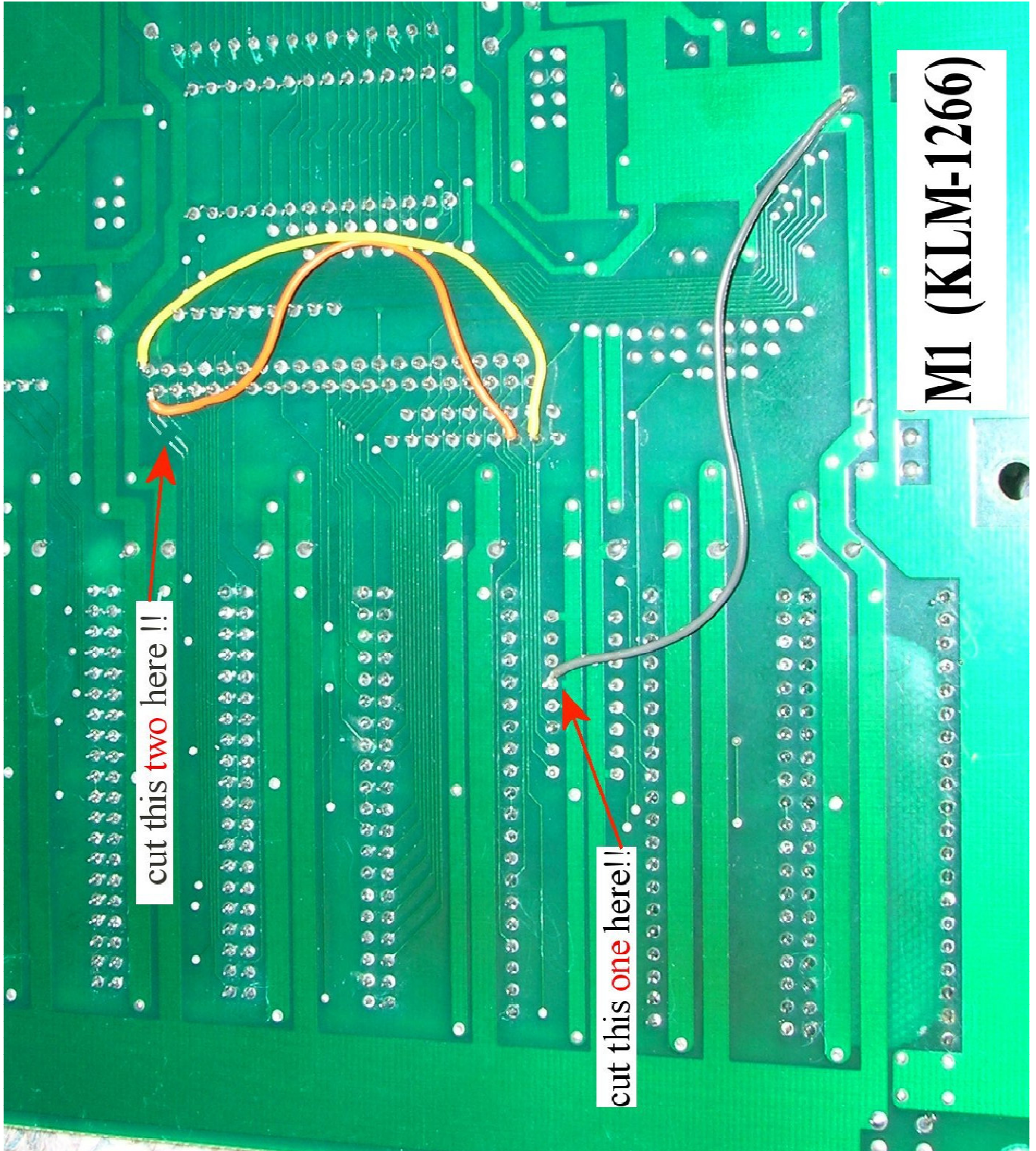
* IC23 is high byte (MSB) typically labeled with number 8802XX

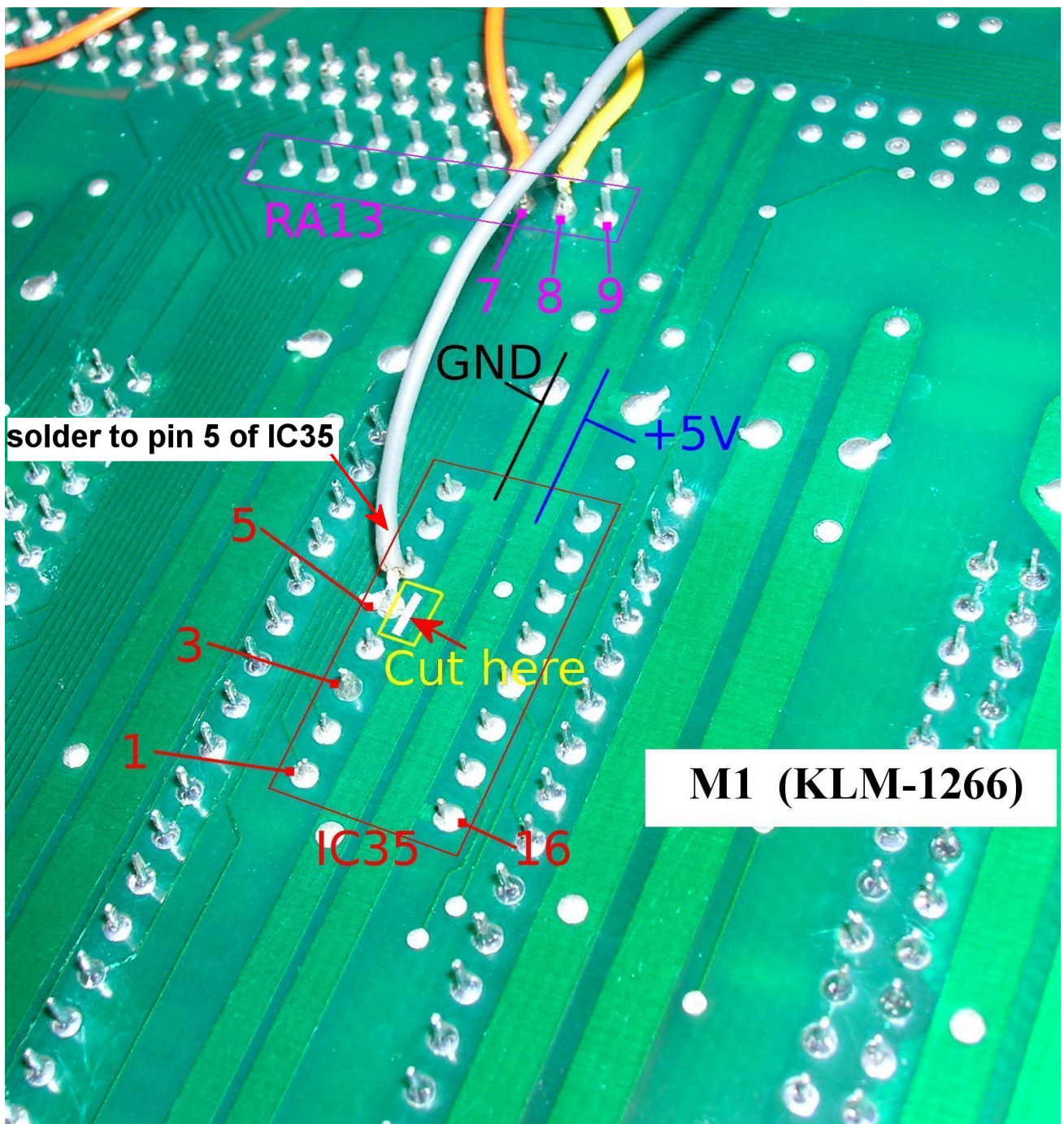
* IC32 is low byte (LSB) typically labeled with number 8803XX

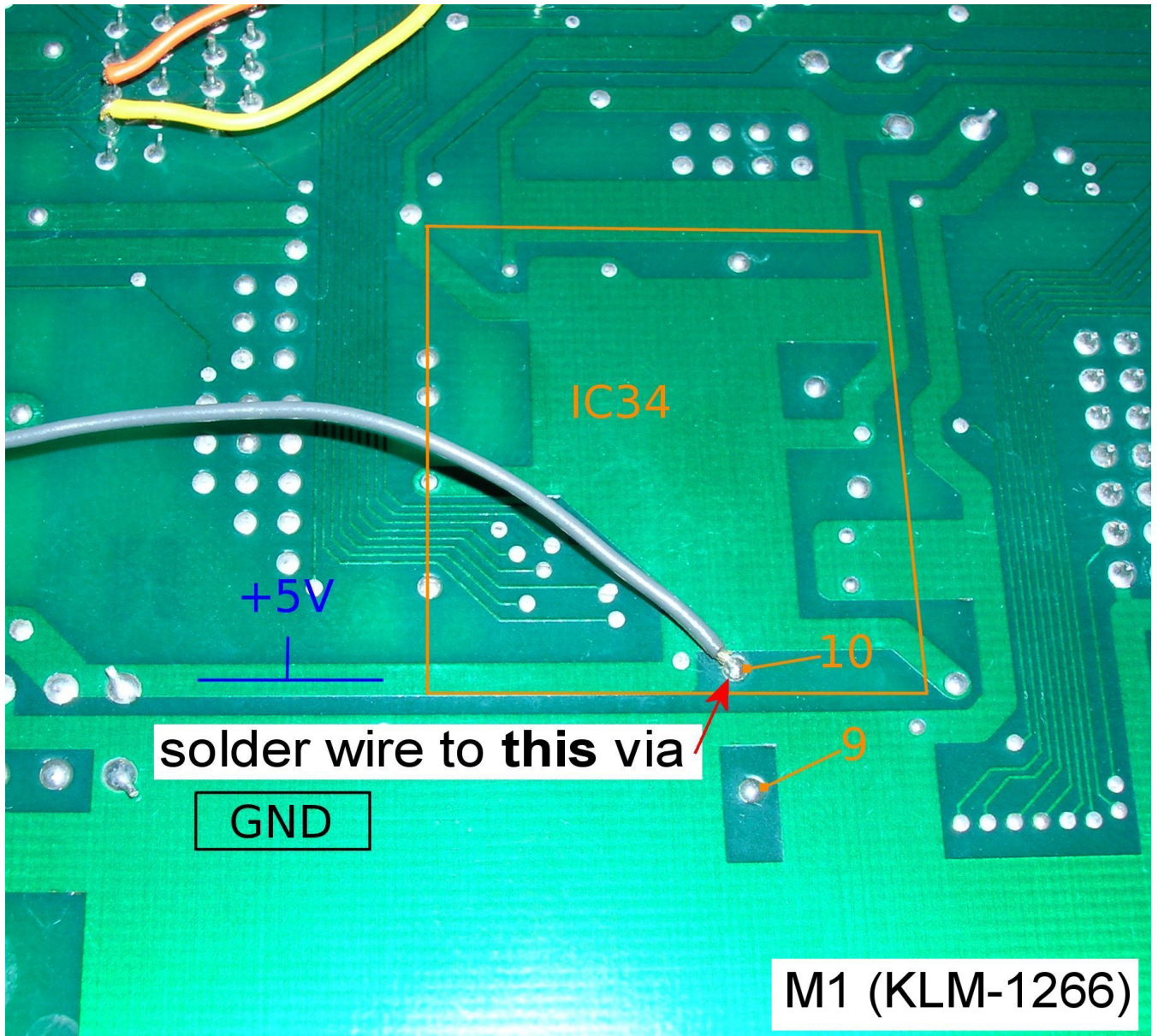
XX corresponds to the two-digit OS version.

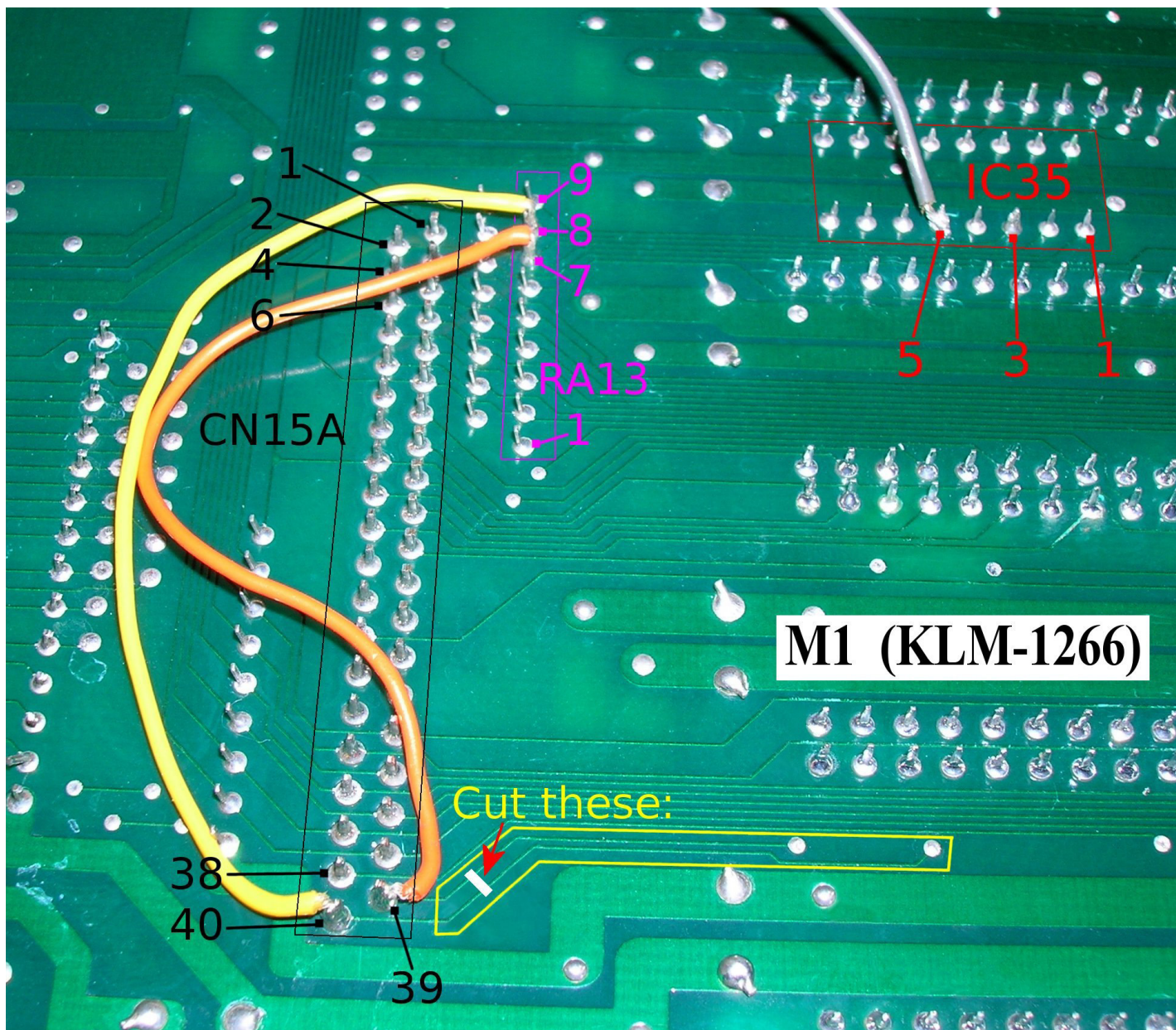


For details see following pictures !!











KLM-1392 (Fig.2, 3, 4)

1. Attach the PCM CARD SLOT and the CARD ANGLE which are removed from KLM-1264 to KLM-1392.
2. Connect the 40 pin harness (SMCD 40X395BDX) which has the same board as the connector attached to KLM-1266. Also connect the 2-pin harness to the connector CN14A of KLM-1392.
3. Connect the 2-pin harness attached to KLM-1266 to the connector of KLM-1392.

Take off CARD guide & plate from KLM-1264 P.C. Board and put them on **New** P.C. Board

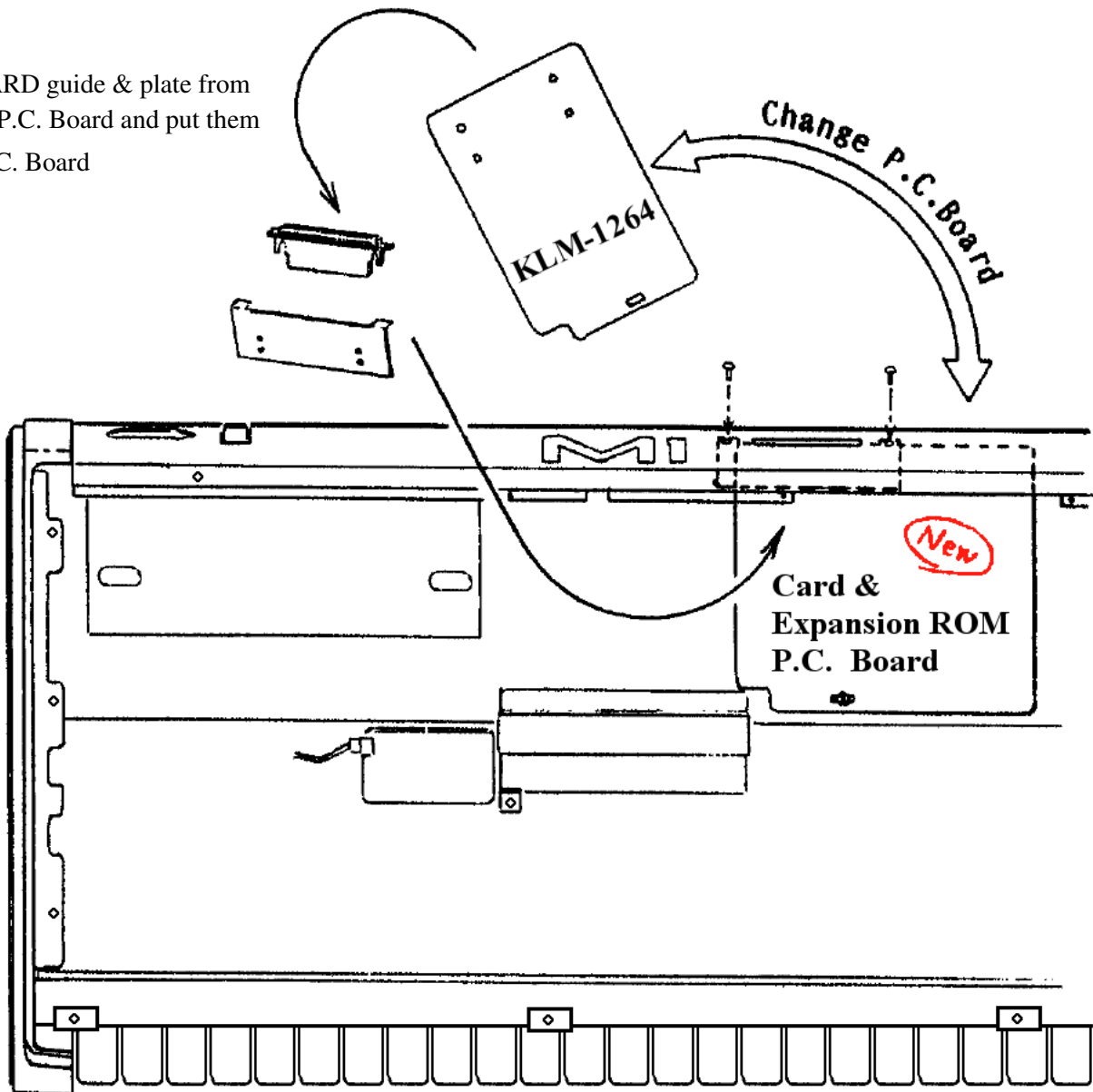


Fig. 2

KLM-1392

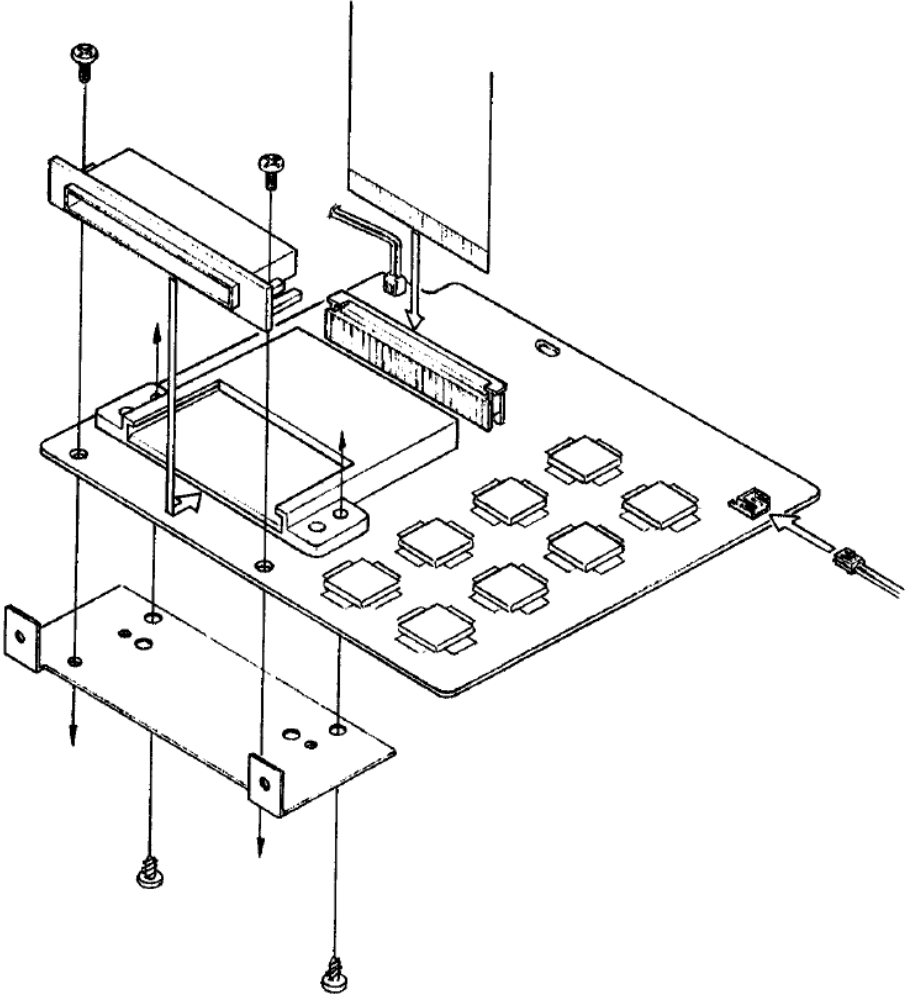


Fig. 3

KLM-1392

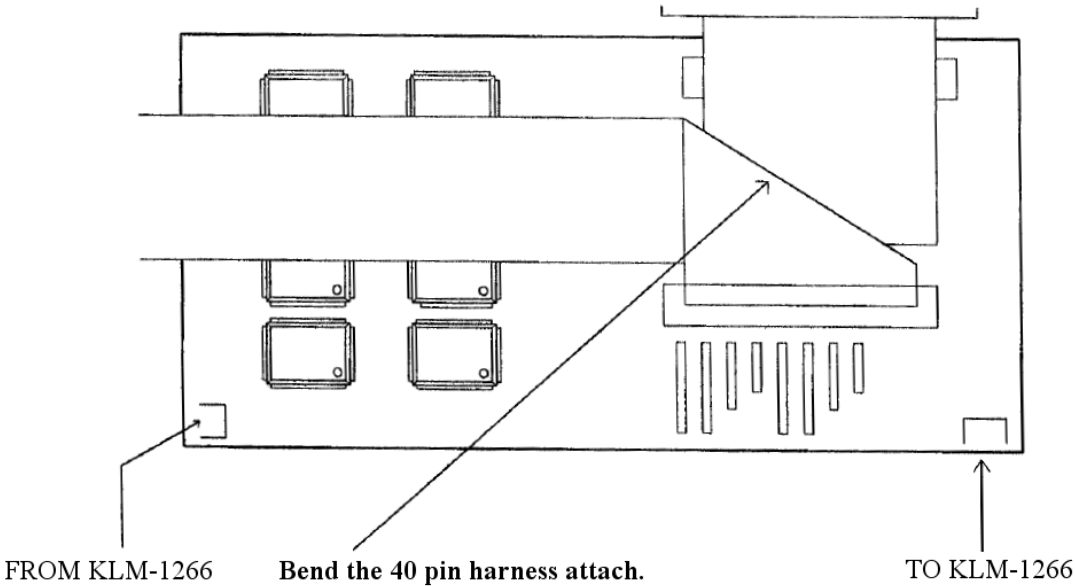


Fig. 4
15

The checks after reconstruction:

1. When the power is switched ON while pressing and holding the switches [INT], [CARD] and [COMBI] the ROM version is indicated on the LCD screen and ALL data in M1 are initialized. XX shows the version No.



KORG MUSIC WORKSTATION M1 #XX

2. Load the attached program card and confirm the new Multi Sound (100~189).

Adhere EX label (Fig. 5)

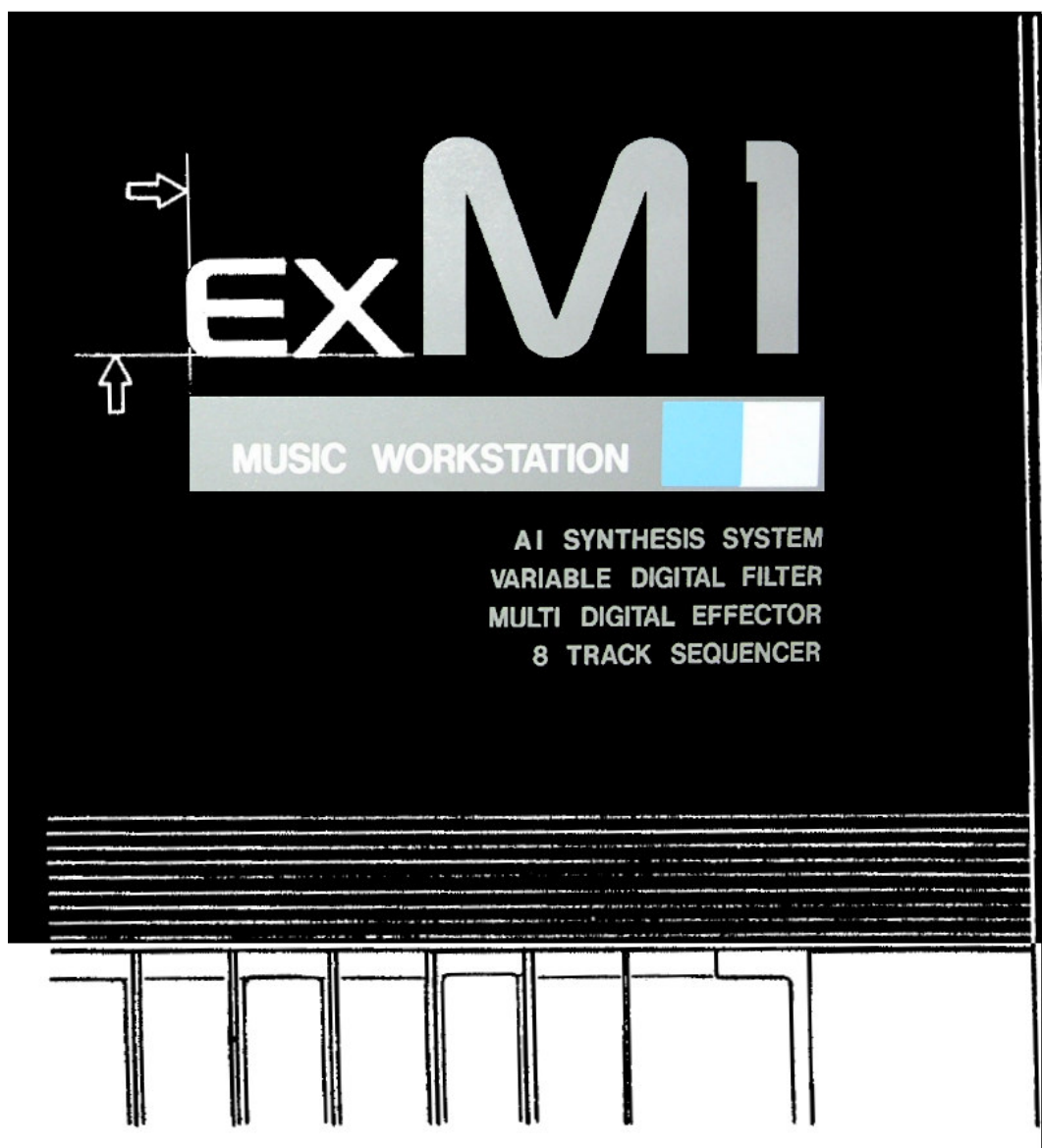
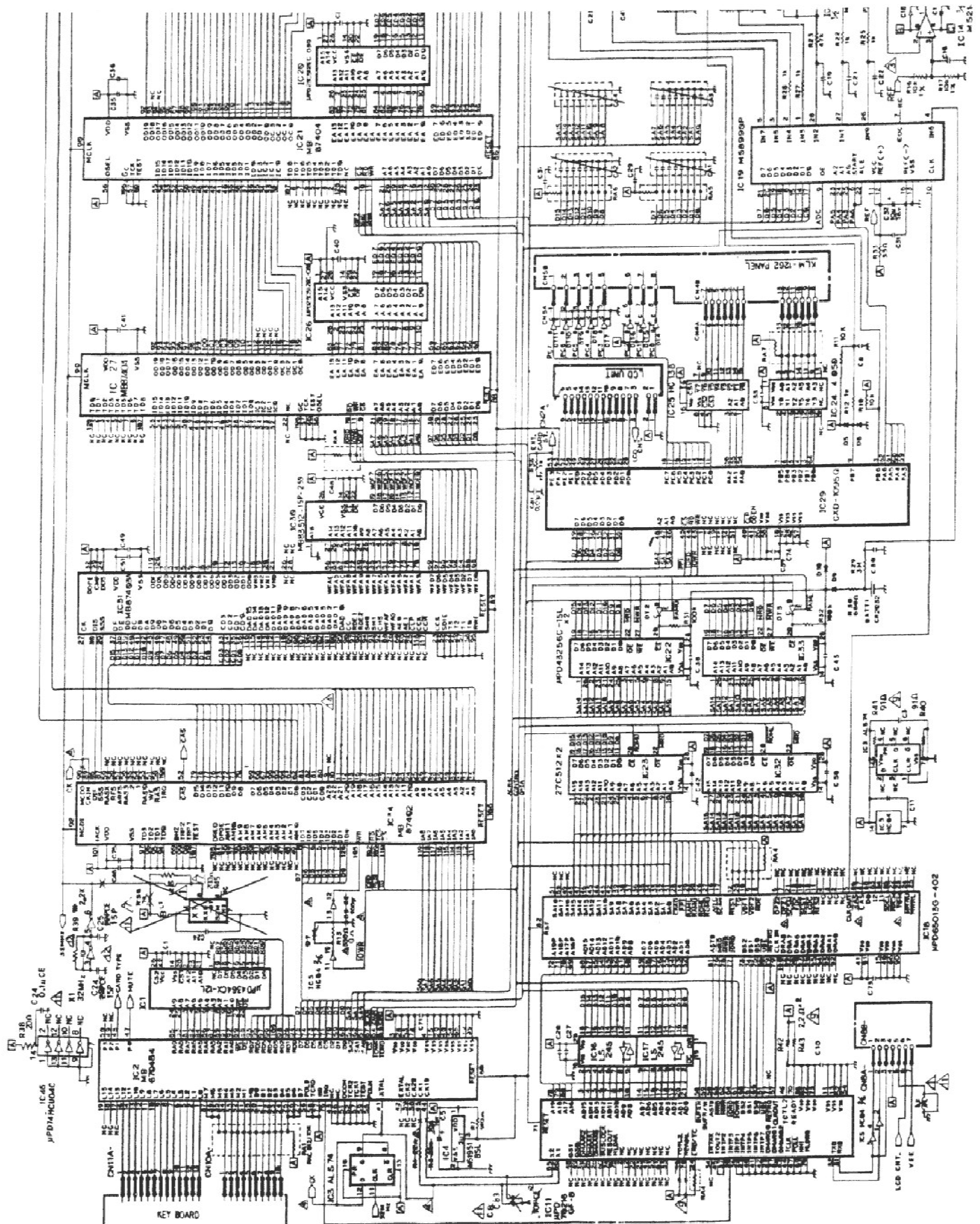
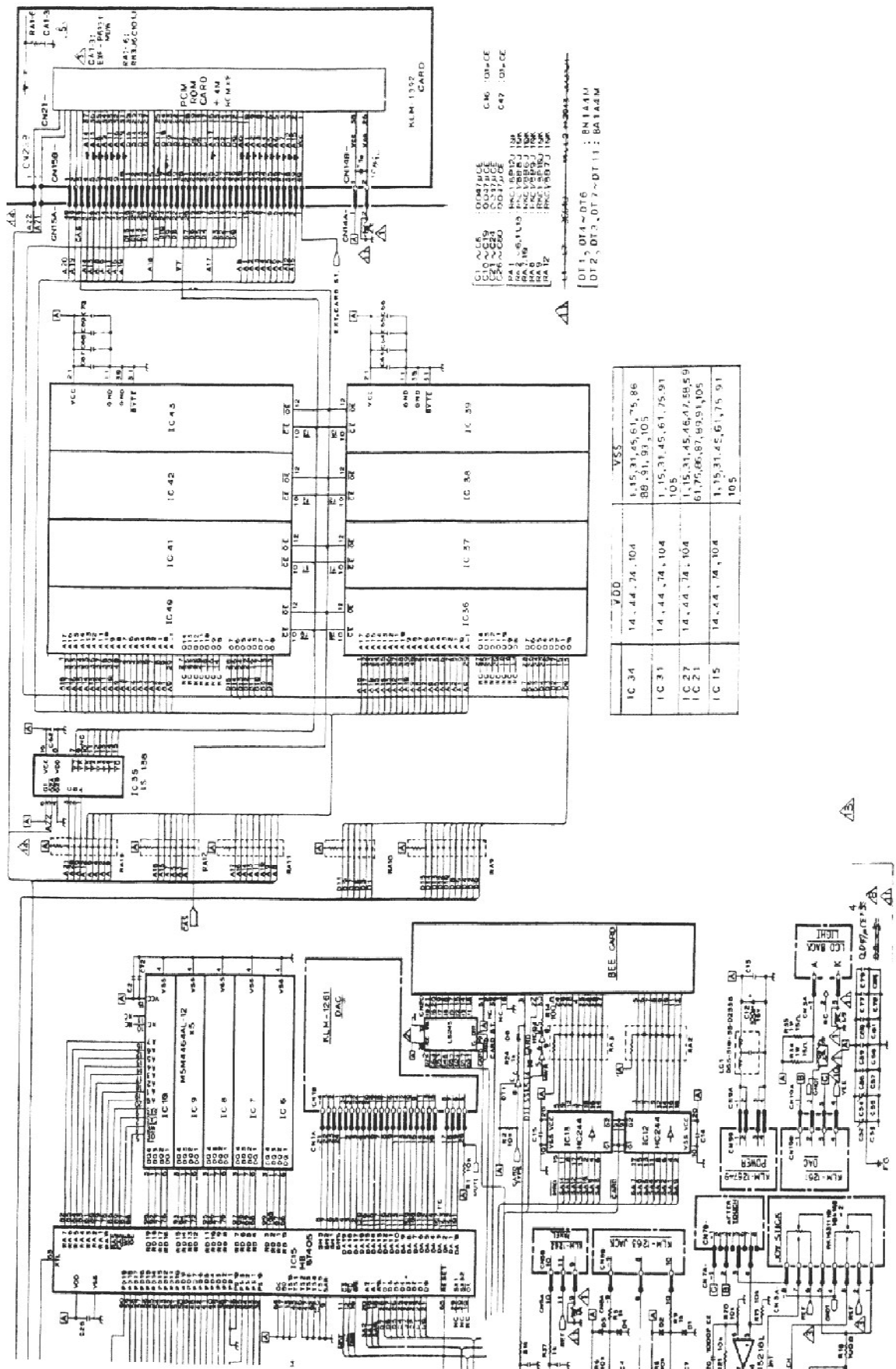


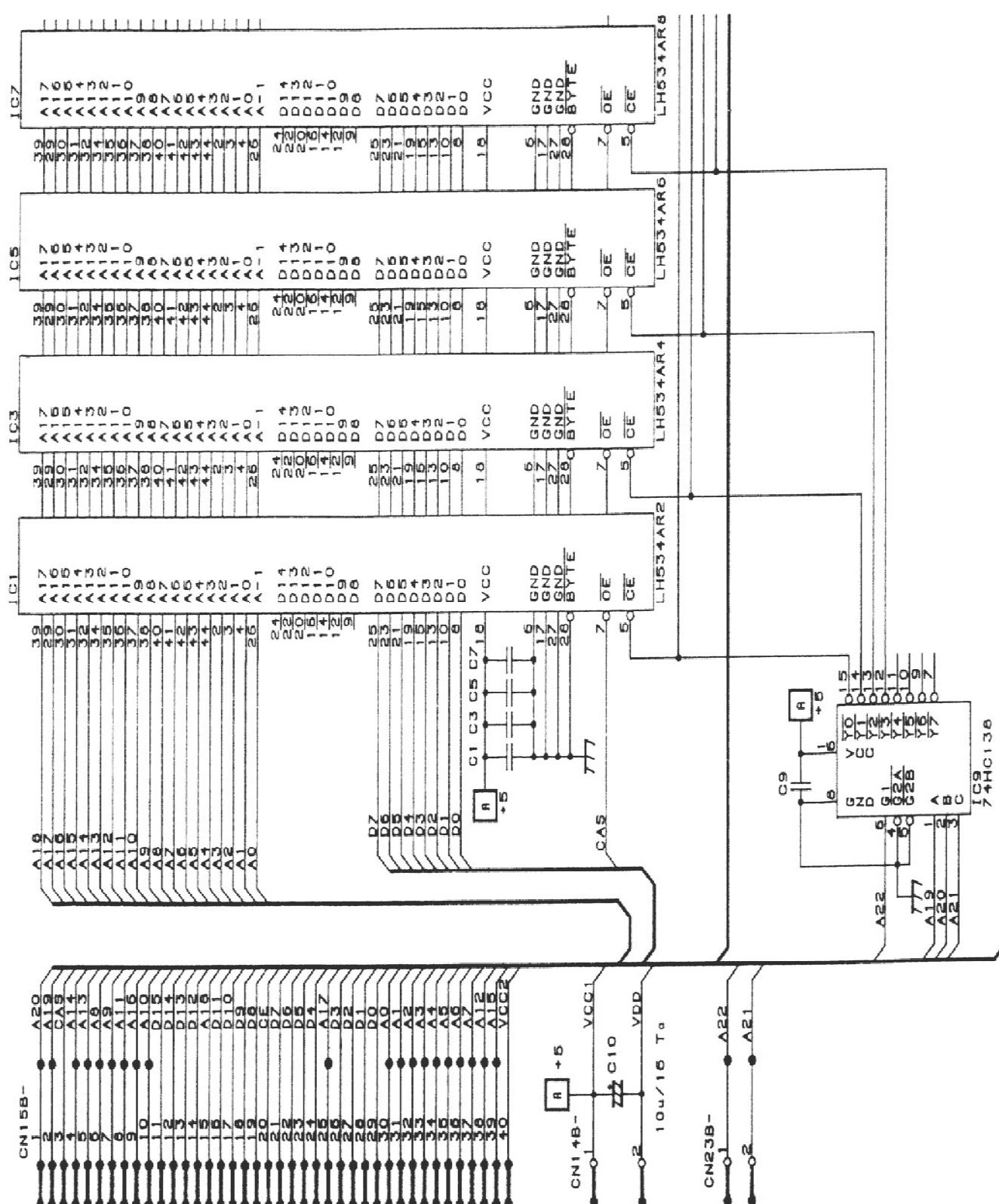
Fig. 5

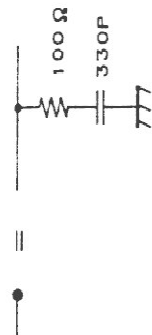
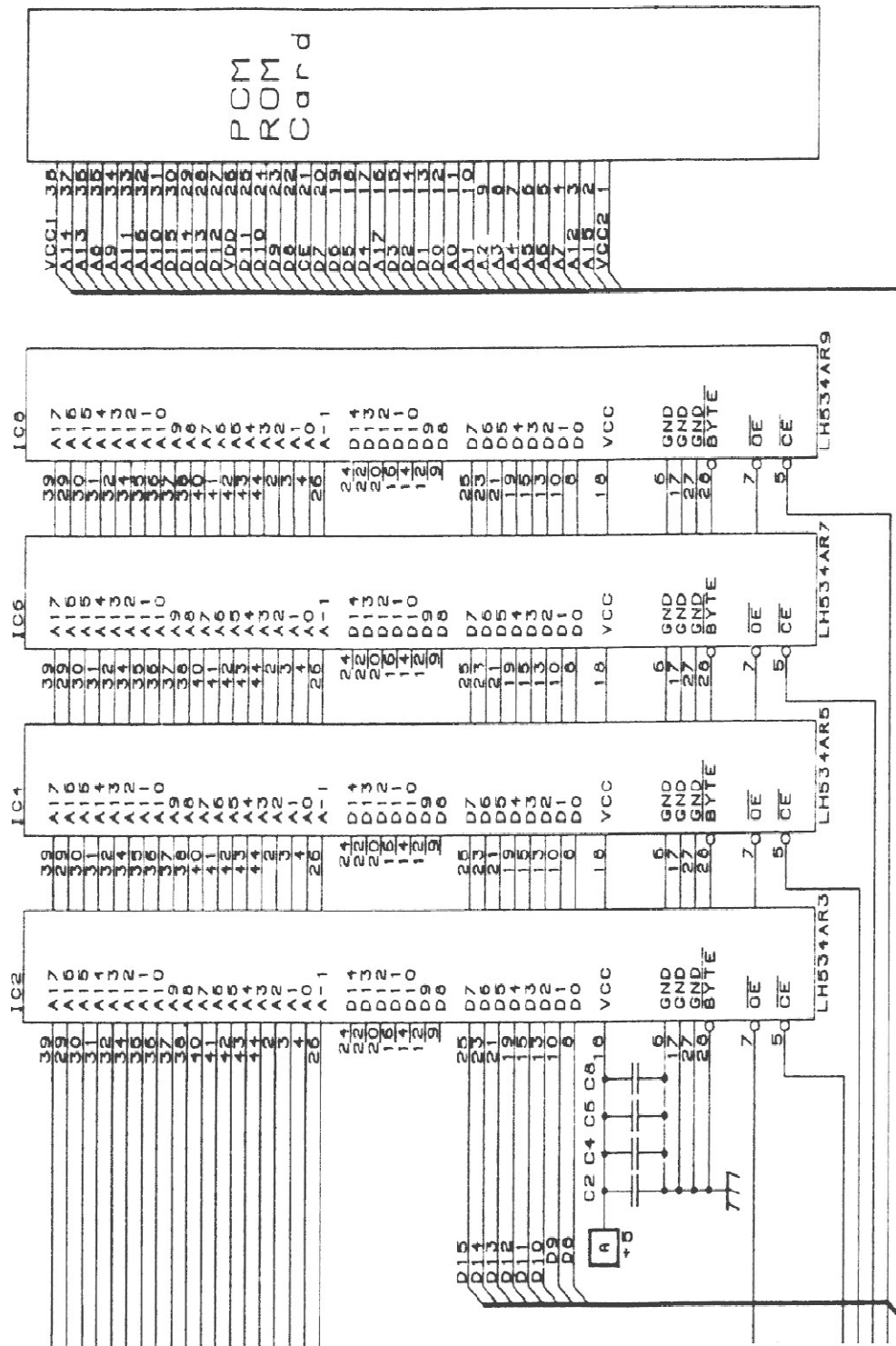
3. CIRCUIT DIAGRAM M1 (KLM-1266)





Circuit Diagram EXK-M1 (KLM-1392)

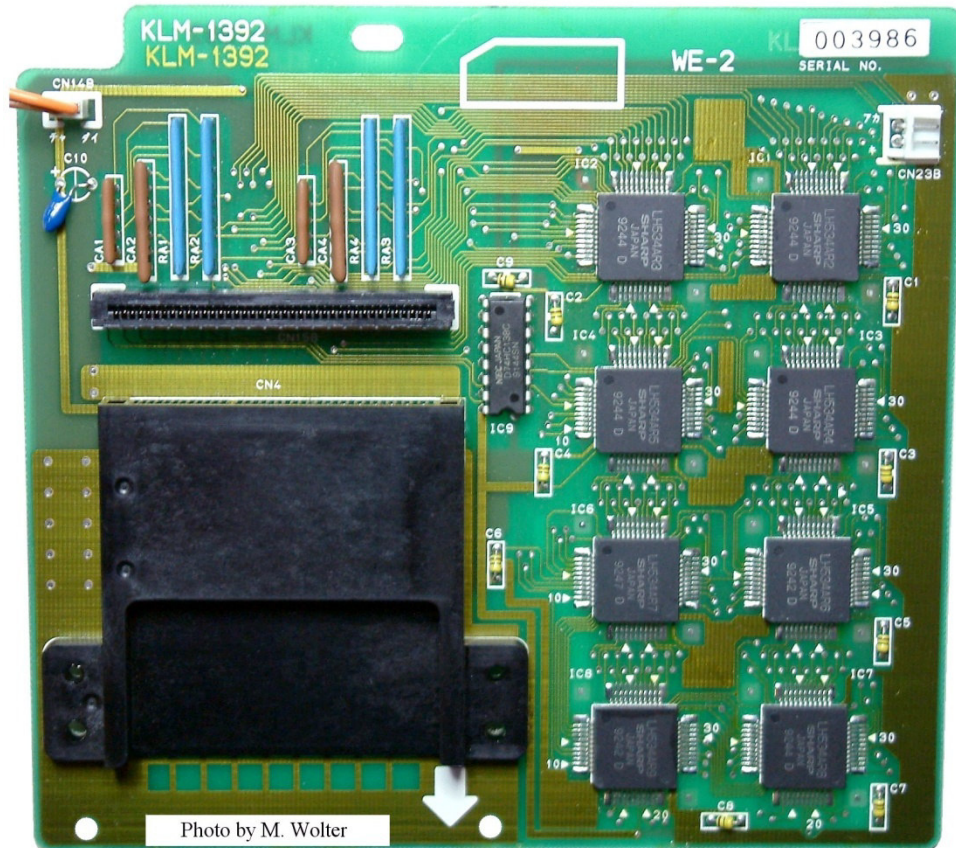




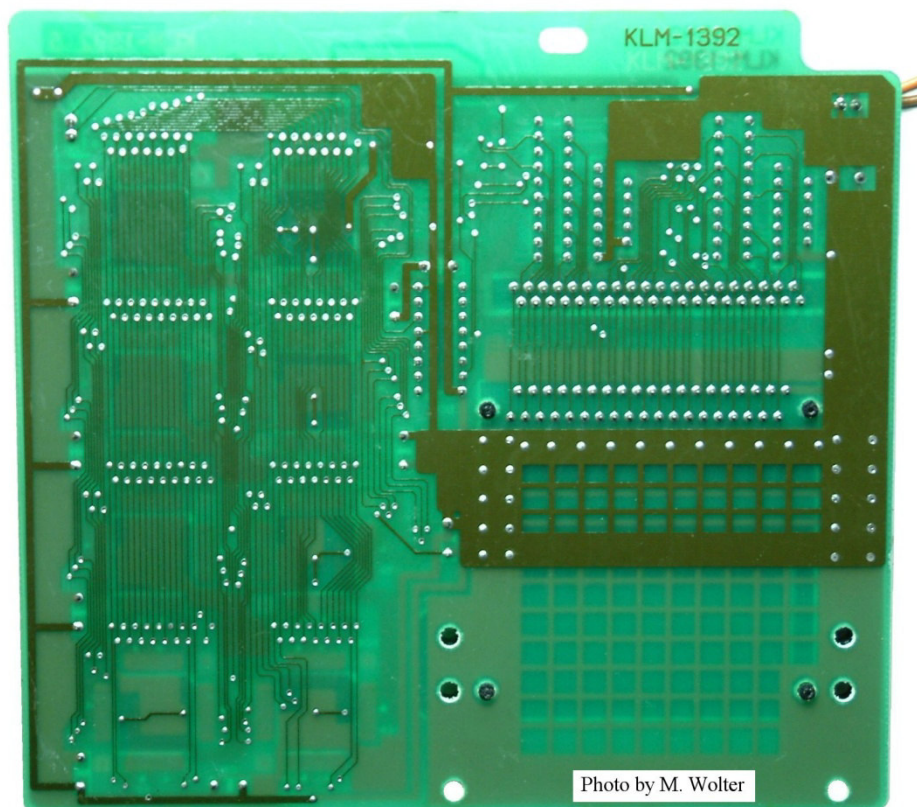
RN3EAC101J x 4 ; RA1-RA4
EXF-P4331 MDV x 2 ; CA1,CA3
EXF-P6331 MDV x 2 ; CA2,CA4

4. P.C.BOARD

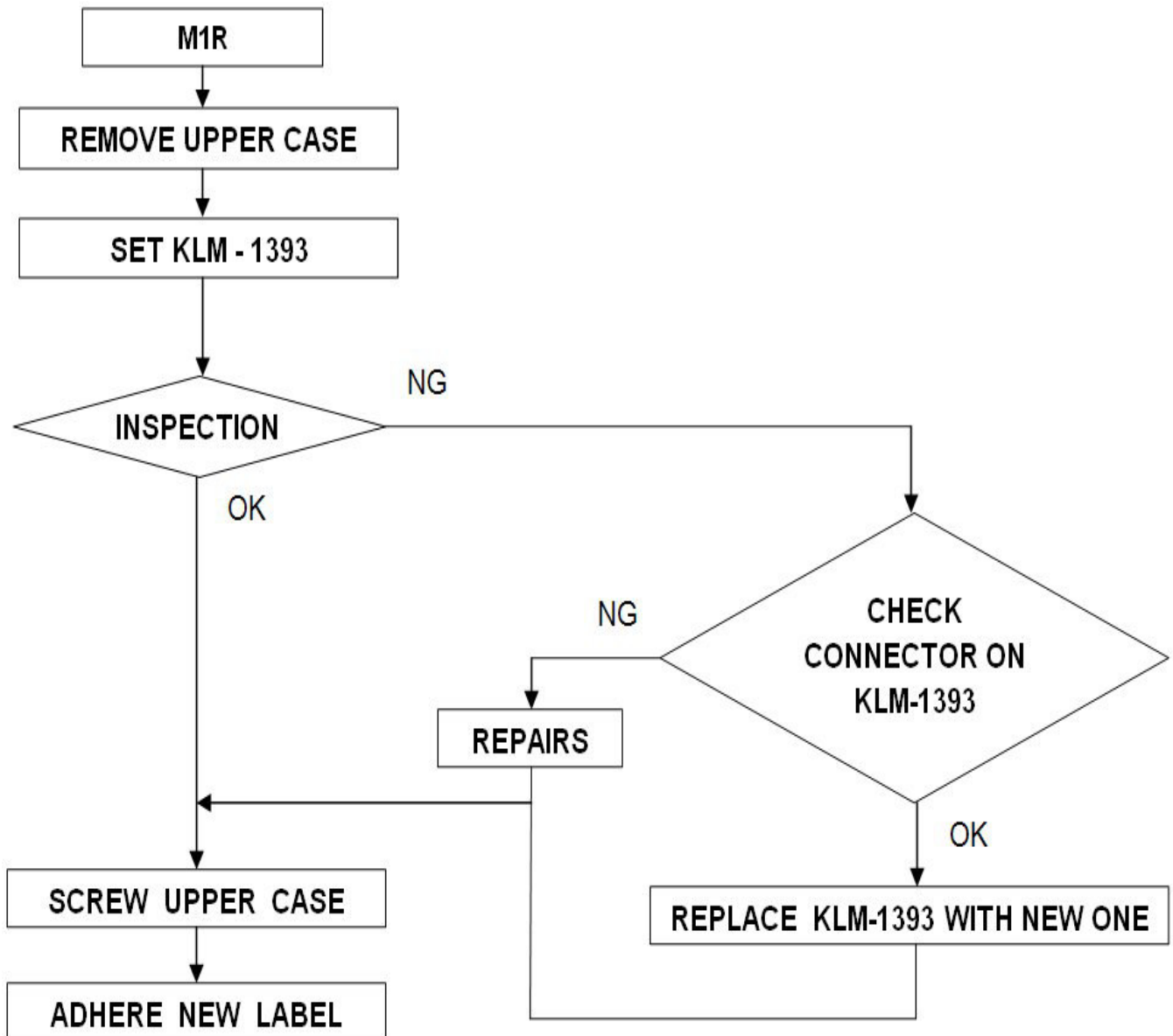
EXK-M1 (KLM-1392) - Component Side



EXK-M1 (KLM-1392) - Solder Side



5. RECONSTRUCTION PROCEDURE FOR M1R



Explanation for M1R Reconstruction

1. Remove the upper case
2. Attach KLM-1393 P.C.Board with the stud and the spacer. Pay attention to the angle of the attachment of this P.C.Board at this time.
3. Change the ROMs of IC23 and IC32 on KLM-1300 P.C.Board to the new ROMs (IC23 ***8805XX, IC32 ***8806XX).

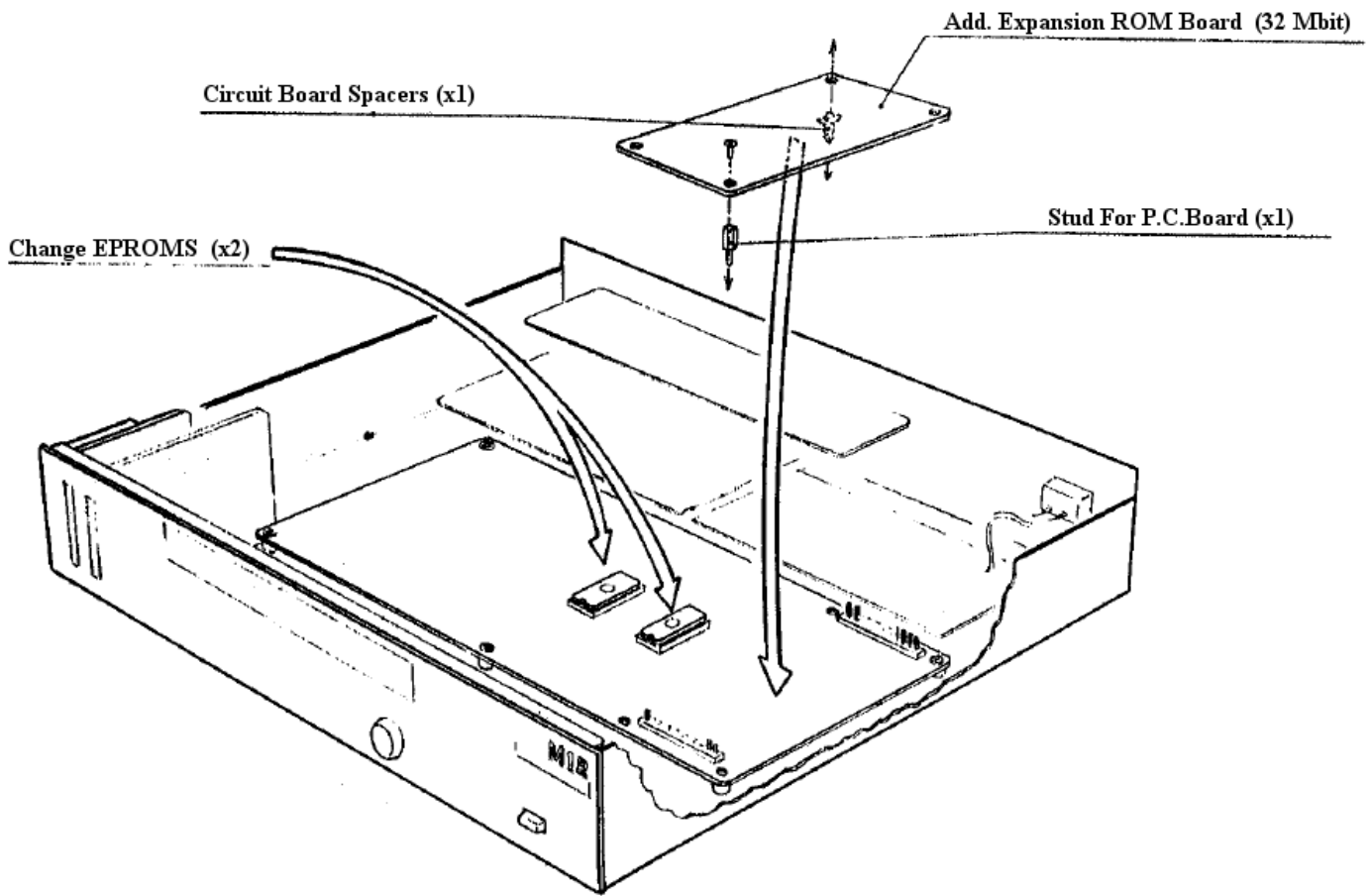


Fig. 6

Attach KLM-1393 on KLM-1300. (Fig. 7)

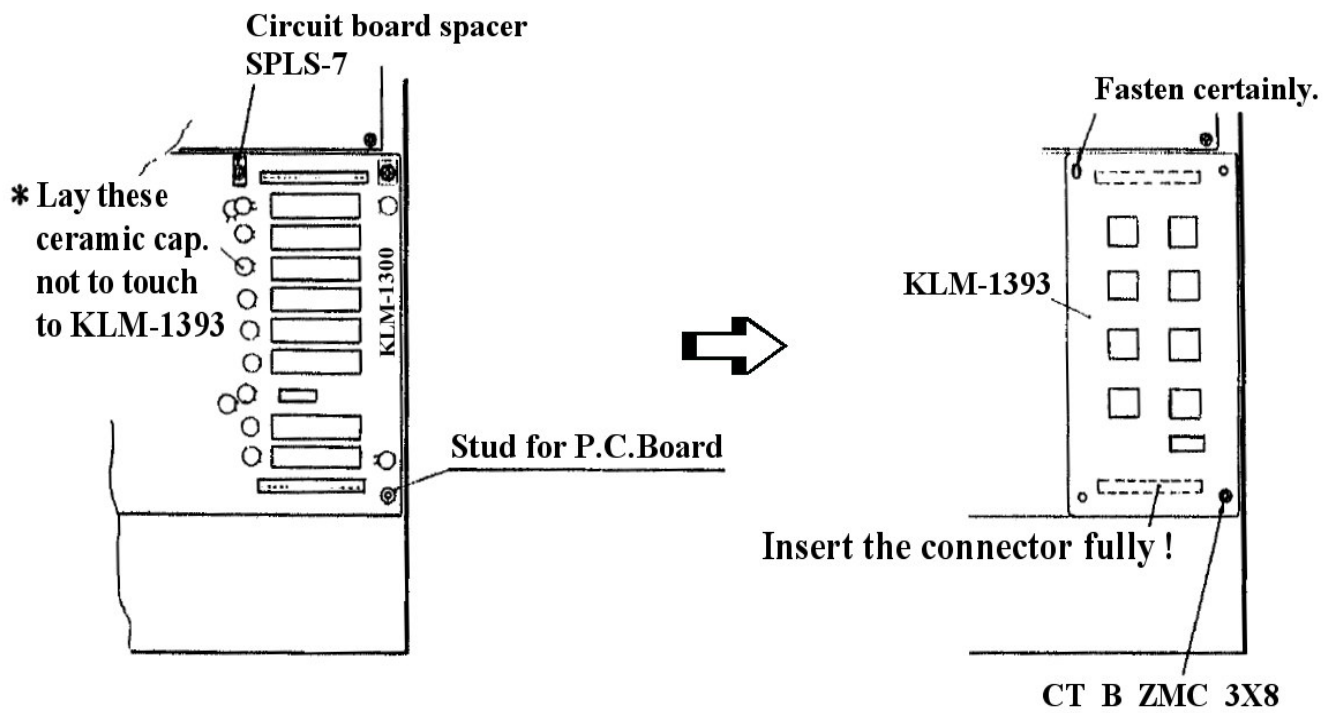


Fig. 7

The checks after reconstruction:

1. When the power is switched ON while pressing and holding the switches [INT], [CARD] and [COMBI] the ROM version is indicated on the LCD screen and ALL data in M1R are initialized. XX shows the version No.

KORG MUSIC WORKSTATION M1 #XX

2. Load the attached program card and confirm the new Multi Sound (100~189).

Adhere EX label (Fig. 8)

Attach the EX label (small) to the panel.

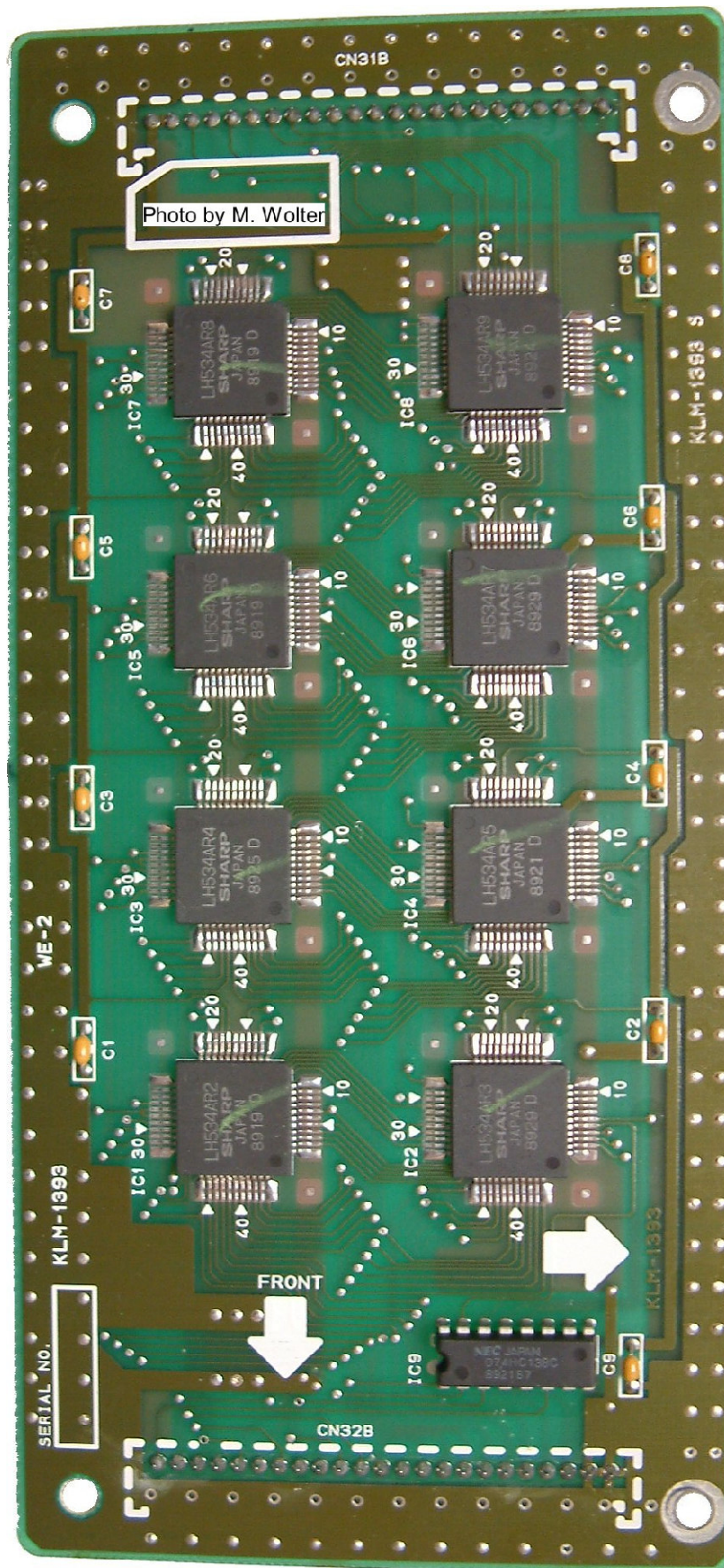
Attach the end of the label adjusting with the line.

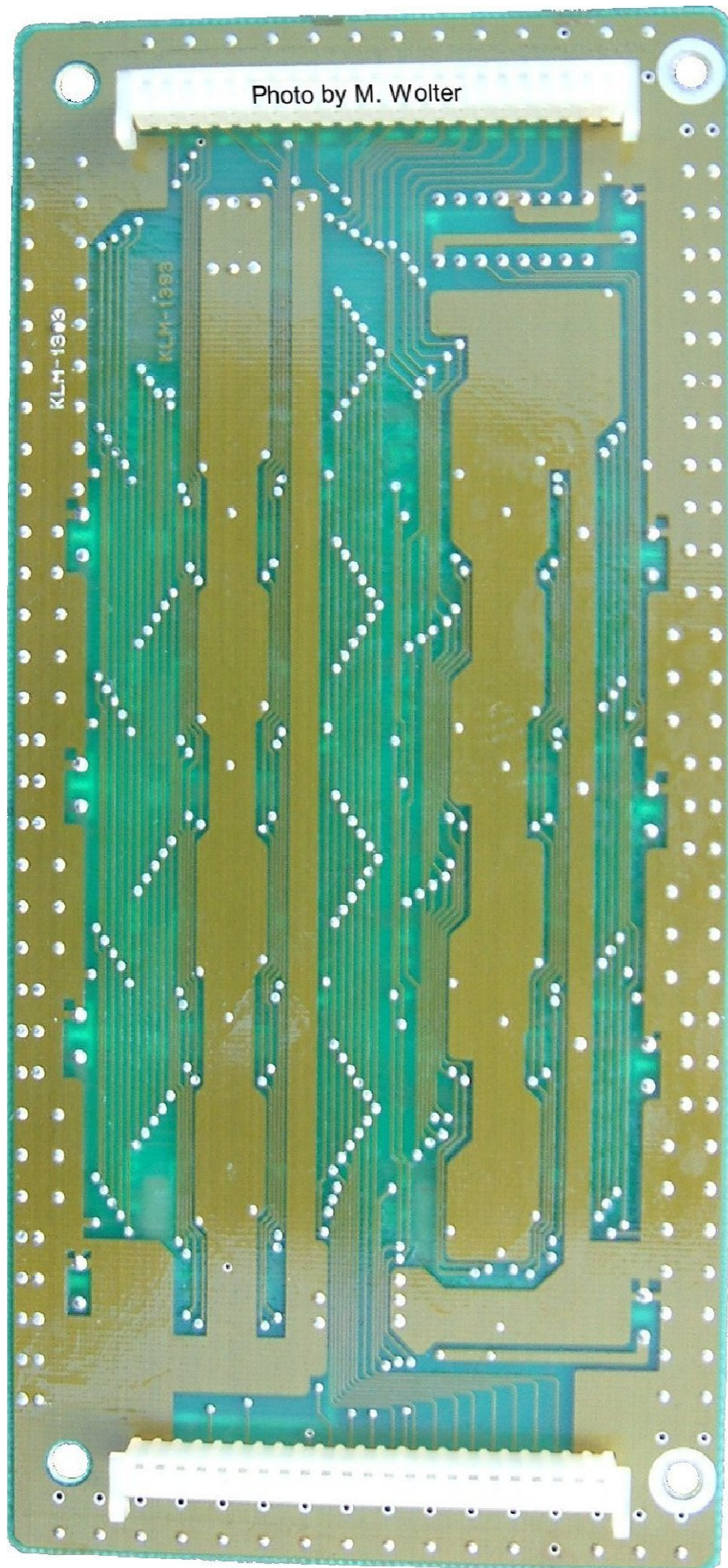


Fig. 8

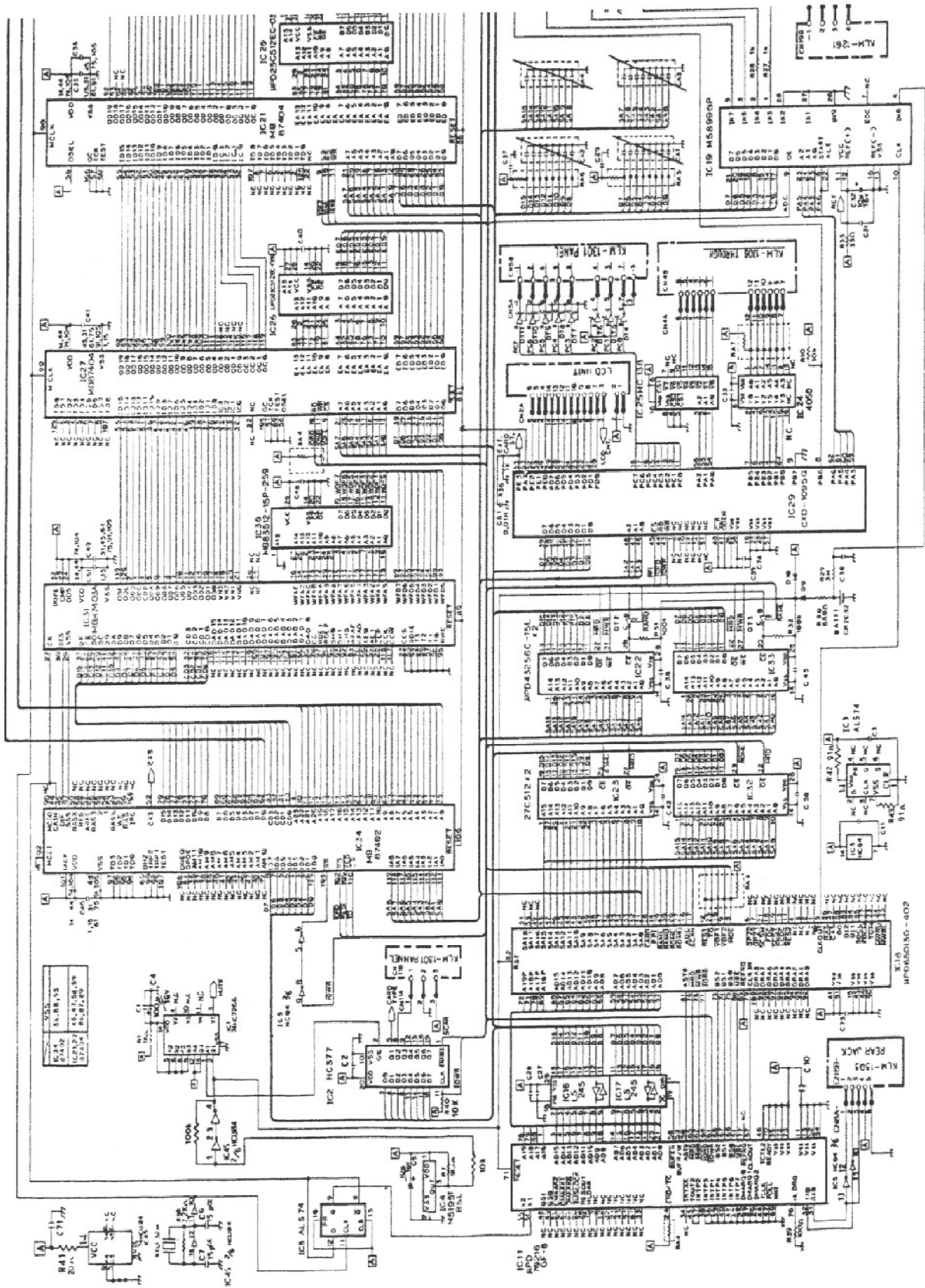
6. P.C.BOARD

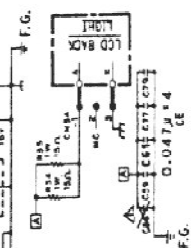
KLM-1393 (Component Side)



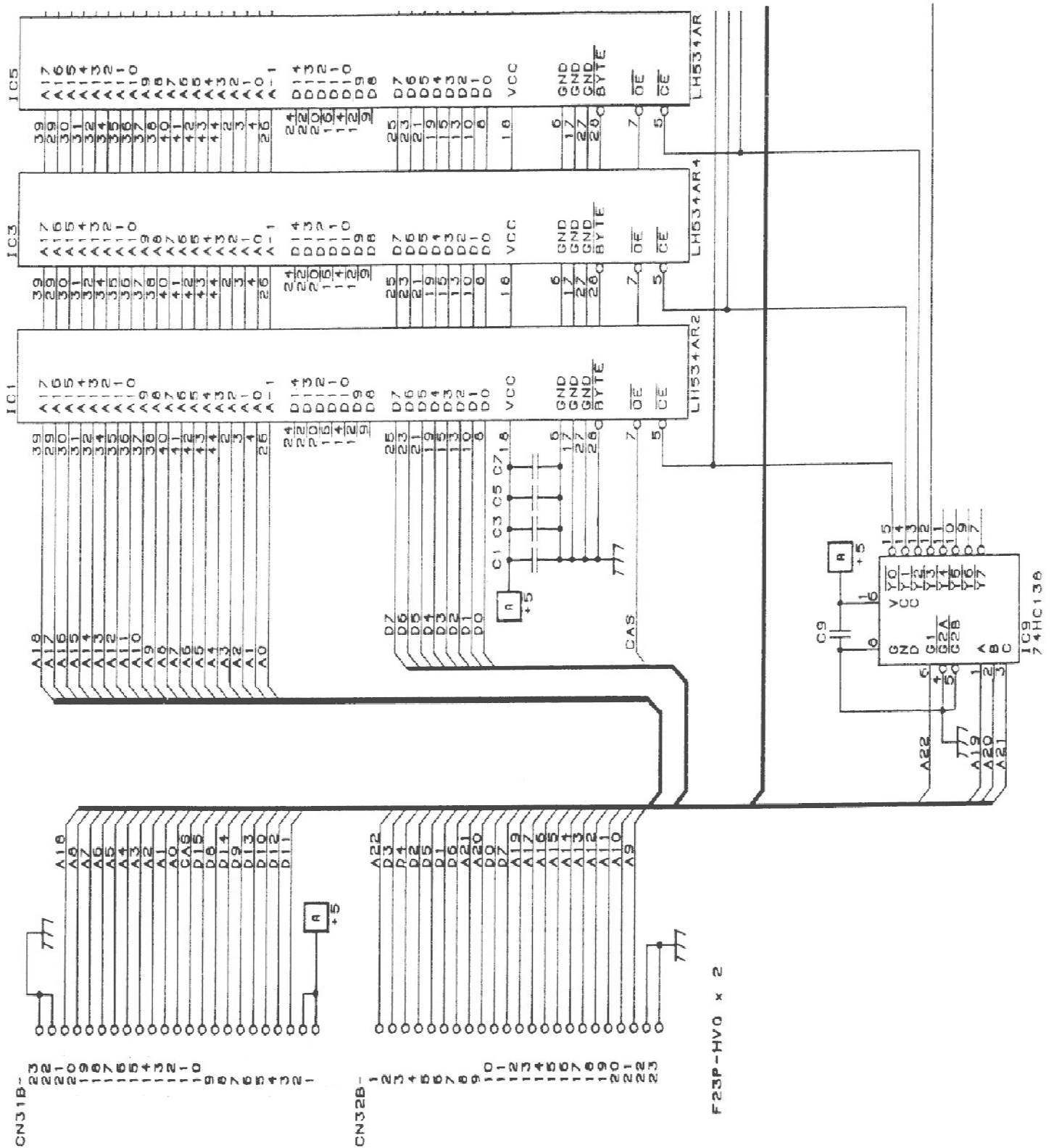


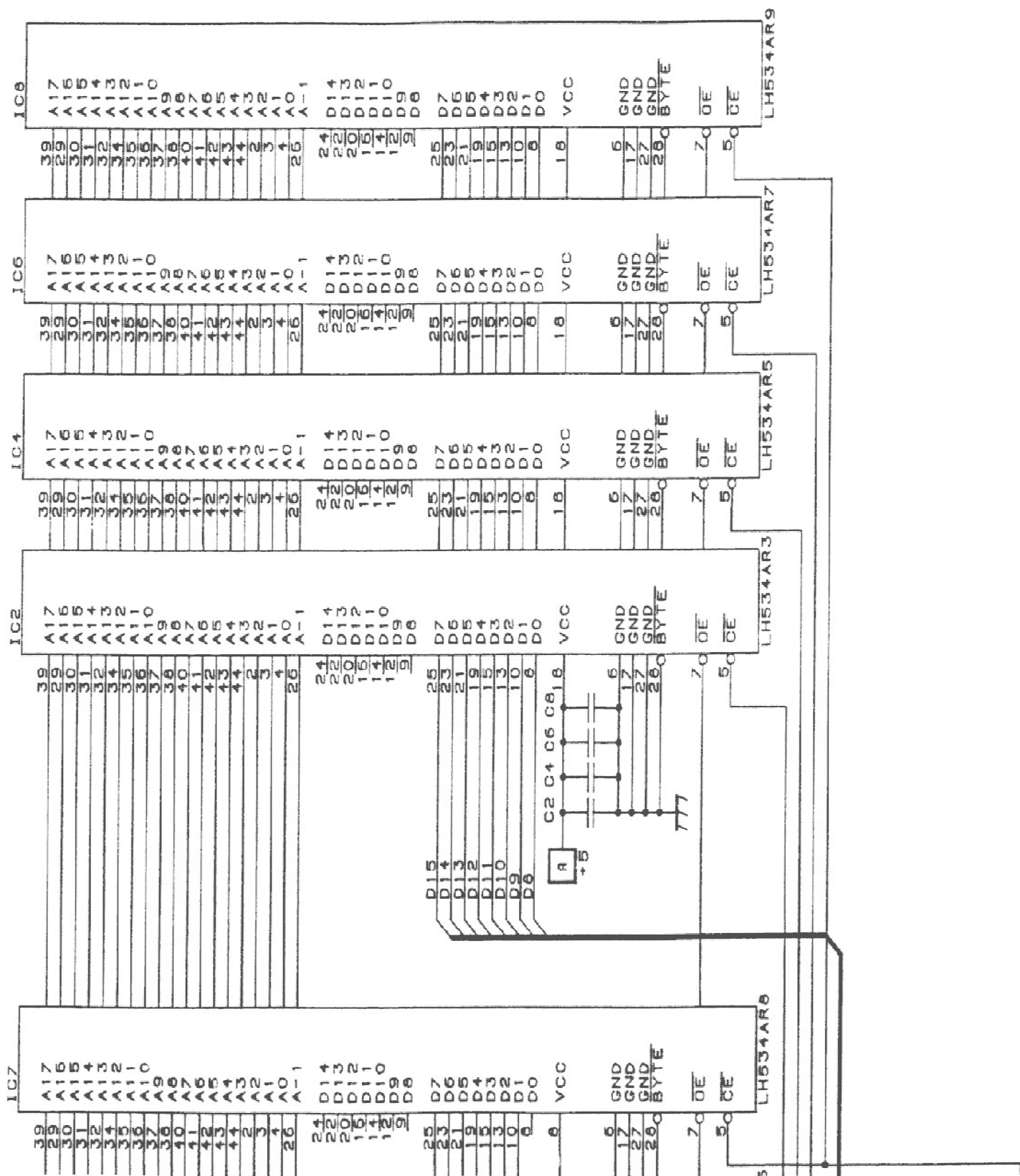
7. Circuit Diagram M1R (KLM-1300)





Circuit Diagram EXK-M1R (KLM-1393)





8. Parts List for EXK-M1

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C BOARD	IDENTIFICATION NO. FUNCTION	Q TY
BLOCK RESISTOR				
138015020	RN3EAC101J 100 OHM	1392		4
CERAMIC CAPACITOR				
214016101	0.1 μ F/50V	1392		9
TANTALUM CAPACITOR				
224007210	10 μ F/16V	1392		1
BLOCK CAPACITORS				
248015333	330Pf/50V x4	1392		2
248016333	330Pf/50V x6	1392		2
ICs				
320001071	UPD74HC138C	1392		1
320001129	UPD27C512D-15	1392		2
320013019	LH534AR 2	1392		1
320013020	LH534AR 3	1392		1
320013021	LH534AR 4	1392		1
320013022	LH534AR 5	1392		1
320013023	LH534AR 6	1392		1
320013024	LH534AR 7	1392		1
320013025	LH534AR 8	1392		1
320013028	LH534AR 9	1392		1
P.C. BOARD				
343013920	KLM-1392	1392		1
CONNECTOR SIDE				
472060200	S2B-EH	1392		1
CARD FIT CONNECTOR				
474004721	ZC-040	1392		1
CARD CONNECTOR				
474011300	HGC0338-01-010	1392		1
HARNESS				
475001375	HNS 1375 2P	1392		1
475001376	HNS 1376 2P	1392		1

Parts List for EXK-M1R

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C BOARD	IDENTIFICATION NO. FUNCTION	QTY
CERAMIC CAPACITOR				
214016101	0.1 μ F/50V	1393		9
ICs				
320001071	UPD74HC138C	1393		1
320001129	UPD27C512D-15	1393		2
320013019	LH534AR 2	1393		1
320013020	LH534AR 3	1393		1
320013021	LH534AR 4	1393		1
320013022	LH534AR 5	1393		1
320013023	LH534AR 6	1393		1
320013024	LH534AR 7	1393		1
320013025	LH534AR 8	1393		1
320013028	LH534AR 9	1393		1
P.C. BOARD				
343013930	KLM-1393	1393		1
CONNECTOR TOP				
471052300	F23P-HVQ	1393		2

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