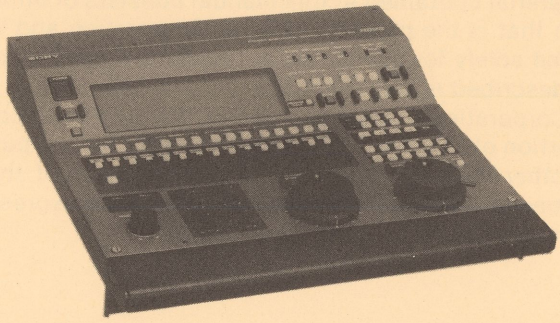
SONY

HD CAMERA OPERATIONAL CONTROL UNIT

HDCO-300



HDVS

MAINTENANCE MANUAL

Volume 2 1st Edition (Revised 3)

Serial No. 10001 and Higher

SAFETY RELATED COMPONENT WARNING

Components identified by shading and ⚠ marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

For the customers in the U.S.A.

Warning—This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Important—To insure that the complete system (including this peripheral) is capable of complying with the FCC requirements, it is recommended that the user make sure that the individual equipment of the complete system has a label with one of the following statements.
"This equipment has been tested with a Class A Computing Device and has been found to comply with Part 15 of FCC Rules."
—or—
"This equipment complies with the requirements in Part 15 of FCC Rules for a Class A Computing Device."
—or equivalent.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart J of Part 15 of FCC Rules.

For the customers in Canada

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

Pour les utilisateurs au Canada

Cet appareil est conforme aux normes Classe A pour bruits radioélectriques, spécifiés dans le Règlement sur le brouillage radioélectrique.

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目次
TABLE OF CONTENTS

HDC-300 (J) Volume 1

1. 設置
2. 主要部品の交換方法
3. サービスインフォメーション
4. 調整要項

HDC-300 (E) Volume 1

1. INSTALLATION
2. REPLACEMENT OF MAIN PARTS
3. SERVICE INFORMATION
4. ALIGNMENT

Volume 2

A. BLOCK DIAGRAMS

OVERALL BLOCK ····· A-1
CP-130 (1/2) BLOCK ····· A-5
CP-130 (2/2) BLOCK ····· A-9
SW-284, DP-90, DP-92, DP-93,
PE-18 BLOCK ····· A-13

B. SEMICONDUCTOR PIN ASSIGNMENTS

C. SCHEMATIC DIAGRAMS AND BOARD ILLUSTRATIONS

BOARD LAYOUT ····· C-1
CP-130 ····· C-4
SW-284, DP-93 ····· C-42
DP-90 ····· C-59
FRAME ····· C-66
DP-92, HN-45, PE-18

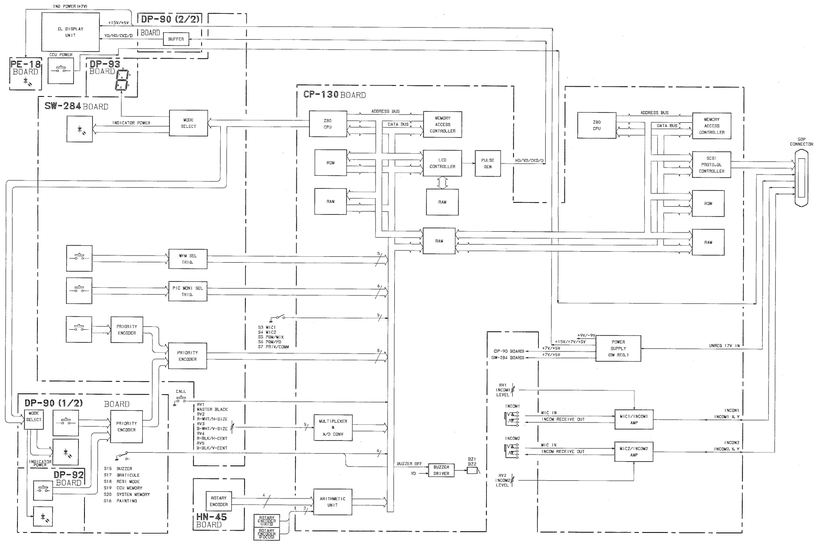
D. SPARE PARTS

PARTS INFORMATION ····· D-1
EXPLODED VIEW ····· D-2
SCREWS ····· D-11
ELECTRICAL PARTS ····· D-13

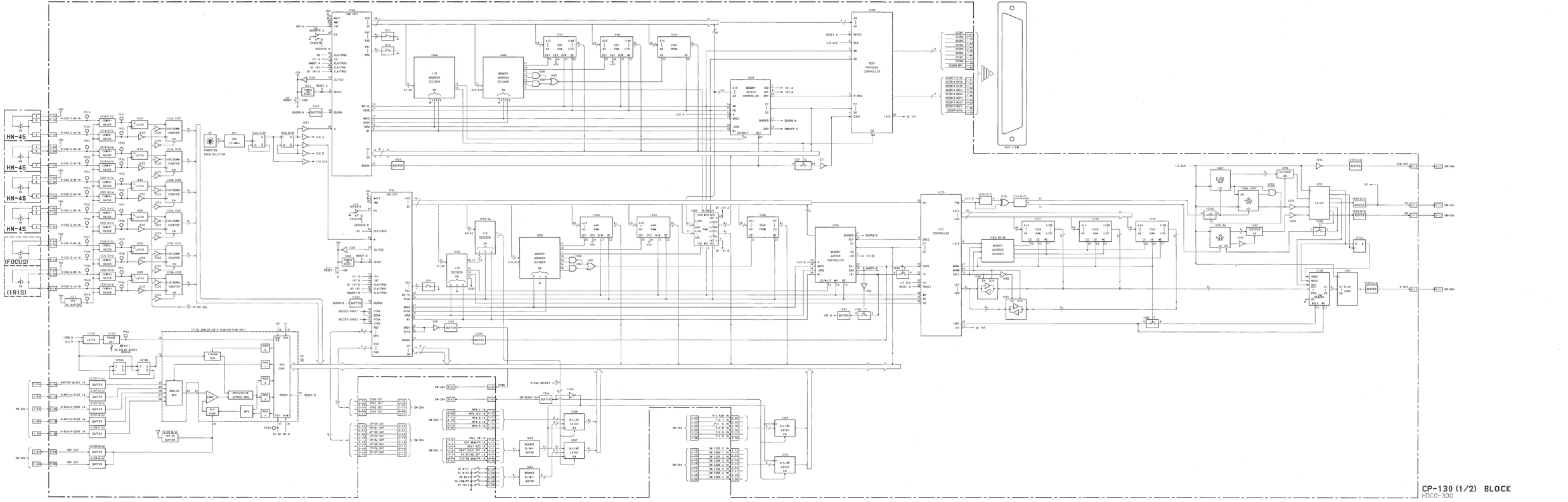
E. CHANGED PARTS

OVERALL BLOCK

OVERALL BLOCK

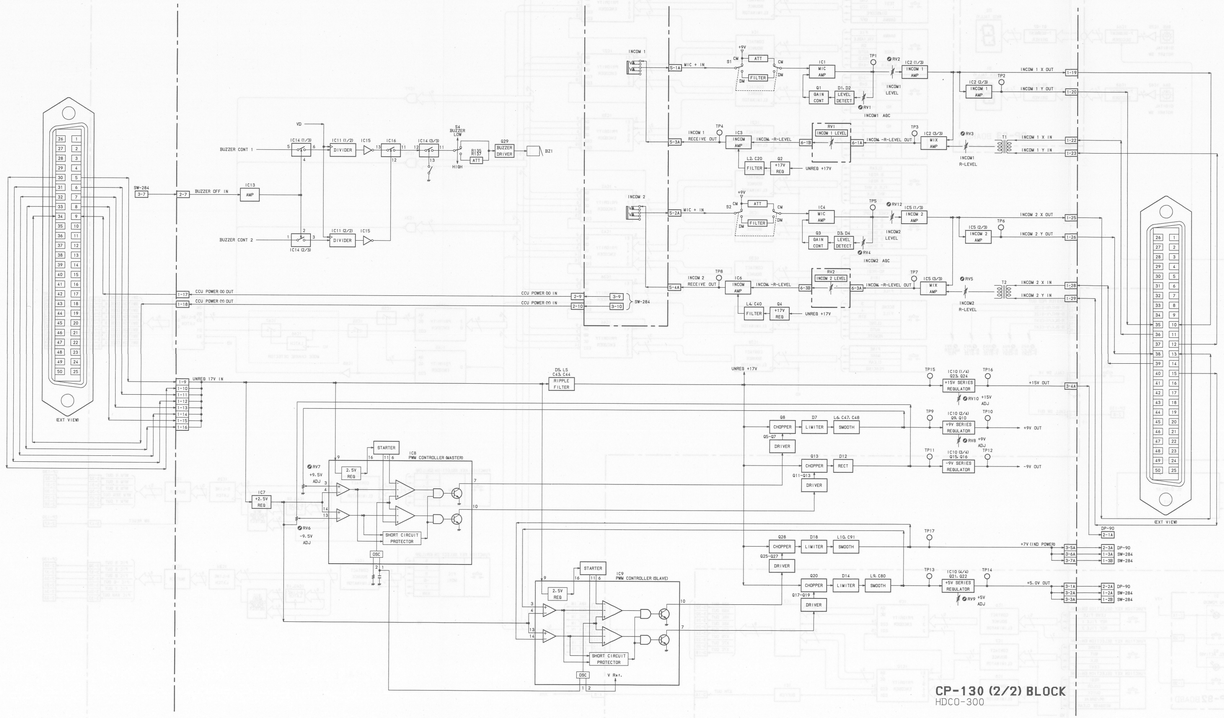


CP-130 (1/2) BLOCK



CP-130 (2/2) BLOCK CP-130 (2/2) BLOCK

CP-130 (2/2) BLOCK



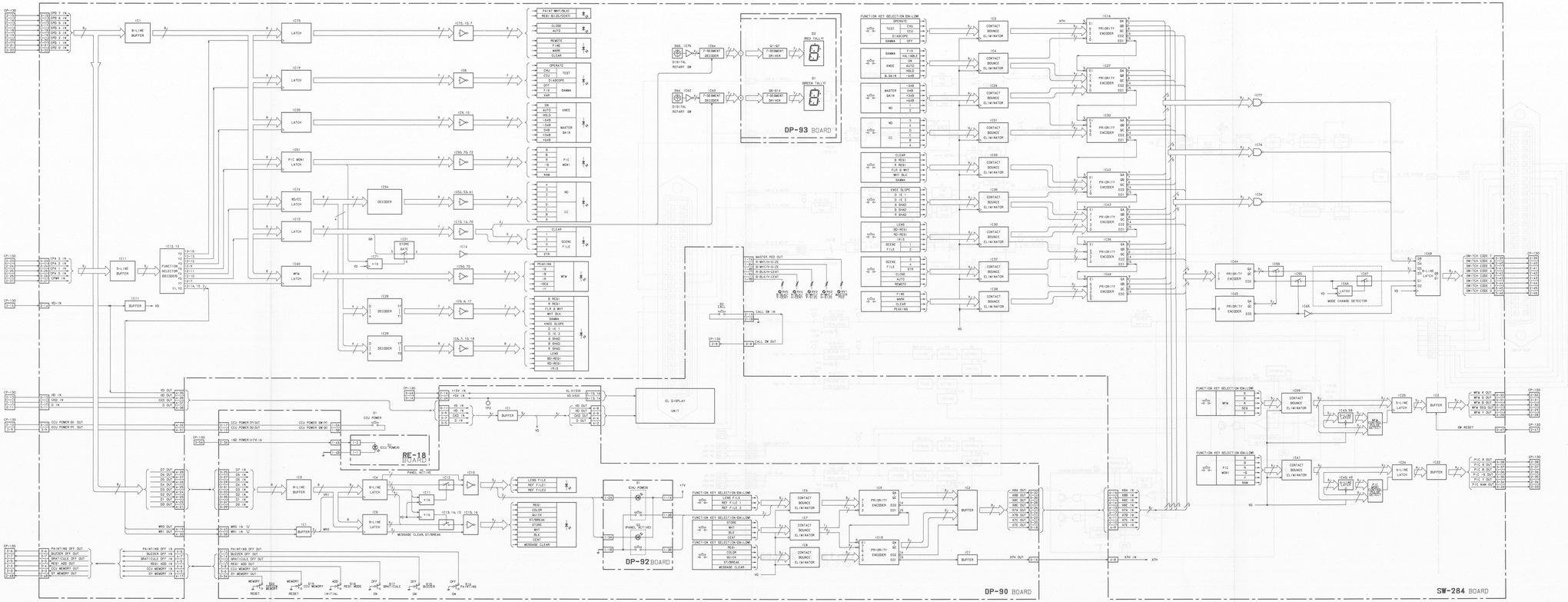
SW-284 DP-90 BLOCK

SW-284 DP-90 BLOCK

SW-284 DP-90 BLOCK

SW-284 DP-90 BLOCK

SW-284 BLOCK
DP-90 BLOCK
DP-92 BLOCK
DP-93 BLOCK
PE-18 BLOCK



A-13 A-14 A-15 A-16

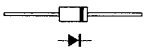
B-HDC0300-SW284/DP90BLOCK

HDCO-300 (W.W)

SECTION B
SEMICONDUCTOR PIN ASSIGNMENTS

The circuit diagram of IC is obtained from the IC data book published by the manufacturer.

TYPE	PAGE
1S1555	B-2
1S2837	B-2
2SA1005	B-2
2SA1175	B-2
2SA1244LB	B-2
2SC1623	B-2
2SC2668	B-2
2SC2785	B-2
2SC3074LB	B-2
2SJ122	B-2
2SK94	B-2
AD580M	B-3
CXK58256MF-15LL	B-3
CXK5864AM-10L	B-3
ERB81-004	B-2
ERC81-004	B-2
GL-9PG2	B-2
HD46508PA	B-4
HM63021P-34	B-4
LA-301ML	B-2
LA-301VL	B-2
LD-603DU	B-2
M54517P	B-5
MB8421-90LP	B-5
MB89352PFQ	B-5
MBM27C256A-20	B-6
MC14025BCP	B-6
MC14050BCP	B-6
MC14490F	B-6
MC14490P	B-6
NJM386BS	B-7
NJM4558M	B-7
SN74HC00NS	B-7
SN74HC02NS	B-7
SN74HC04NS	B-7
SN7407N	B-7
SN74HC133NS	B-7
SN74HC138NS	B-7
SN74HC163NS	B-8
SN74HC166NS	B-8
SN74HC175NS	B-8
SN74HC244NS	B-8
SN74HC245NS	B-8
SN74HC32NS	B-9
SN74HC374NS	B-9
SN74HC74NS	B-9
SN74HC86NS	B-9
TC4025BP	B-6
TC4050BP	B-6
TC40H000F	B-9
TC40H002F	B-9
TC40H004F	B-9
TC40H008F	B-9
TC40H042F	B-10
TC40H074F	B-10
TC40H138F	B-10
TC40H139F	B-10
TC40H148F	B-10
TC40H174F	B-10
TC40H175F	B-10
TC40H244F	B-11
TC40H374F	B-11
TC40H393F	B-11
TC74HC00F	B-7
TC74HC02F	B-7
TC74HC04F	B-7
TC74HC123P	B-11
TC74HC133P	B-7
TC74HC138F	B-7
TC74HC163F	B-8
TC74HC166F	B-8
TC74HC175F	B-8
TC74HC244P	B-8
TC74HC245P	B-8
TC74HC32F	B-9
TC74HC374F	B-9
TC74HC4511F	B-11
TC74HC697P	B-12
TC74HC74F	B-9
TC74HC86F	B-9
TL1451ACNS	B-12
TL7705CP	B-12
TMPZ84C015AF	B-13
TMPZ84C10AF	B-14
U05G	B-2
uPC339C	B-14
uPC4062G2	B-14
uPC4064G	B-14
uPD72030G	B-15



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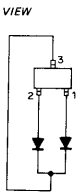

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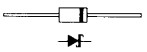
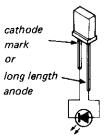
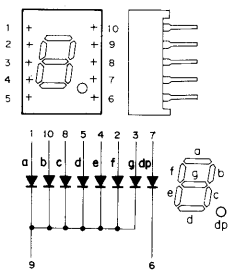


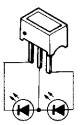
ERB81-004
ERC81-004



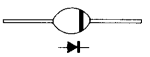
GL-9PG2 ; GREEN



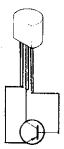
LA-301ML ; GREEN
LA-301VL ; RED



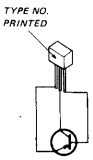
LD-603DU ; ORANGE



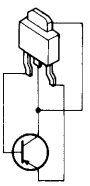
U05G



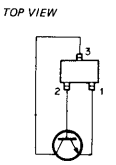
2SA1005



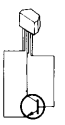
2SA1175



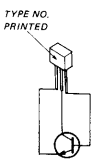
2SA1244LB



2SC1623



2SC2668



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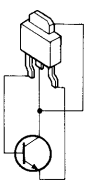
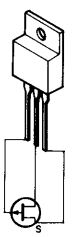
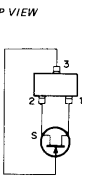


2SC3074LB



2SJ122

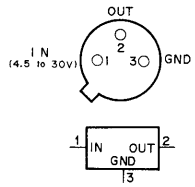


2SK94

AD580M (ANALOG DEVICES)

REFERENCE VOLTAGE GENERATOR (2.5V)

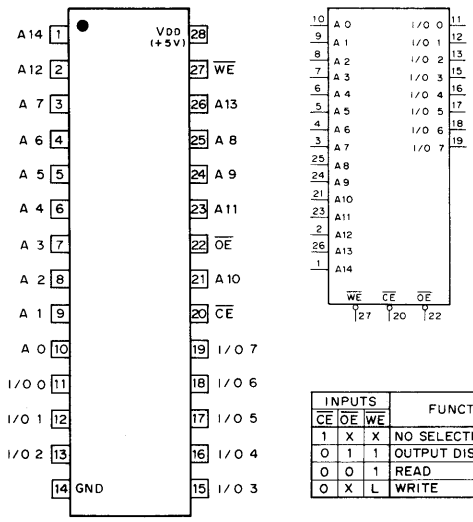
– BOTTOM VIEW –



CXK58256MF-15LL (SONY) (ACCESS TIME = 150nS) FLAT PACKAGE

C-MOS 262144-BIT (64Kx8) STATIC RAM

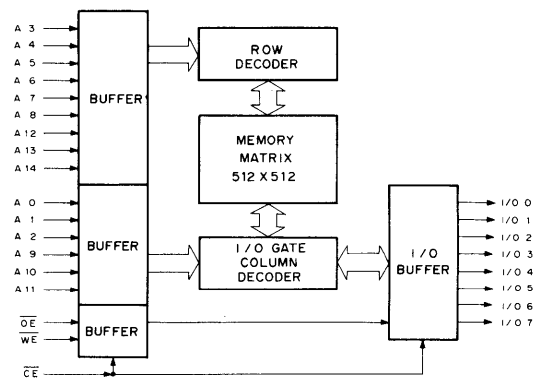
– TOP VIEW –



INPUTS			FUNCTION
$\overline{CE}$	$\overline{OE}$	$\overline{WE}$	
1	X	X	NO SELECTION (HI-Z)
0	1	1	OUTPUT DISABLE (HI-Z)
0	0	1	READ
0	X	L	WRITE

A 0 – A14 ; ADDRESS INPUTS
I/O 0 – I/O 7 ; DATA INPUTS/OUTPUTS
$\overline{OE}$; OUTPUT ENABLE
$\overline{CE}$; CHIP ENABLE
$\overline{WE}$; WRITE ENABLE

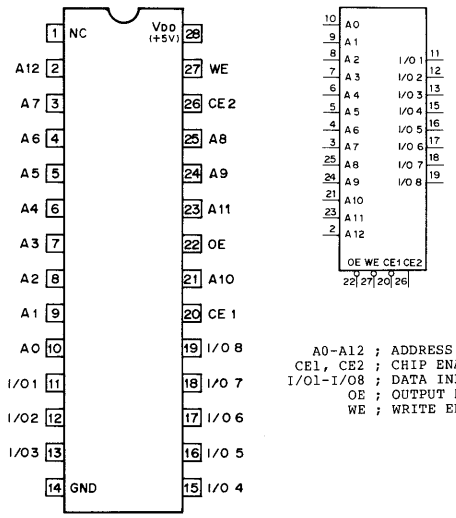
1 ; HIGH LEVEL
0 ; LOW LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE



CXK5864AM-10L (SONY) (ACCESS TIME = 100nS) FLAT PACKAGE

CMOS 8192 WORDx8 BIT STATIC RAM

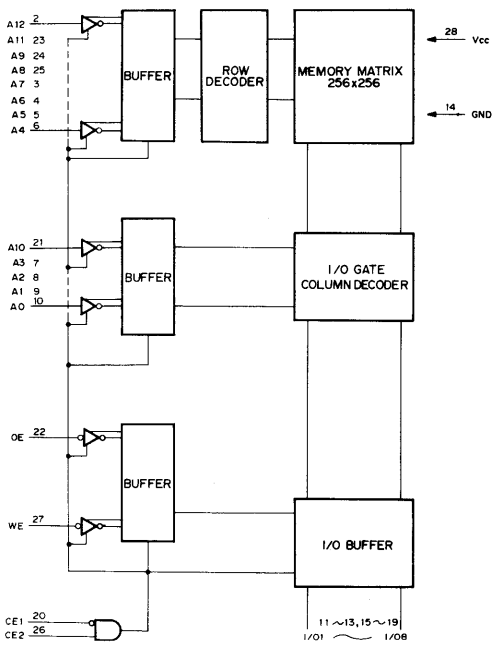
– TOP VIEW –



A0-A12 ; ADDRESS INPUT
CE1, CE2 ; CHIP ENABLE INPUT
I/O1-I/O8 ; DATA INPUT/OUTPUT
OE ; OUTPUT ENABLE INPUT
WE ; WRITE ENABLE INPUT

CE1	CE2	OE	WE	MODE	I/O TERMINAL
1	X	X	X	NOT SELECT	HIGH IMPEDANCE
X	0	X	X	NOT SELECT	HIGH IMPEDANCE
0	1	1	1	OUTPUT DISABLE	HIGH IMPEDANCE
0	1	0	1	READ	OUTPUT DATA
0	1	X	0	WRITE	INPUT DATA

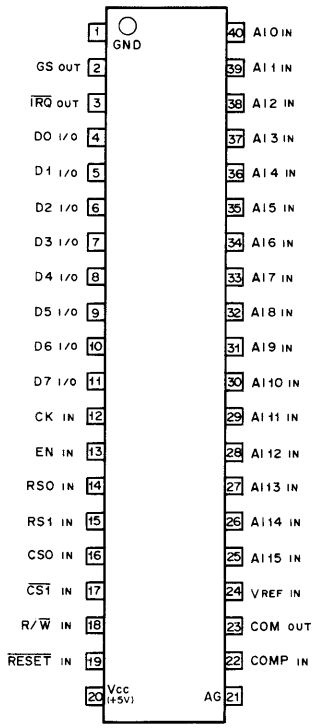
0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

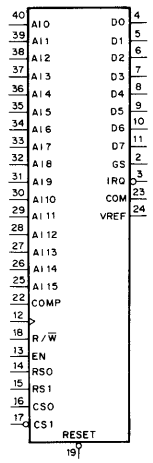


HD46508PA (HITACHI) (ACCESS TIME = 1uS)

ANALOG DATA ACQUISITION UNIT

– TOP VIEW –



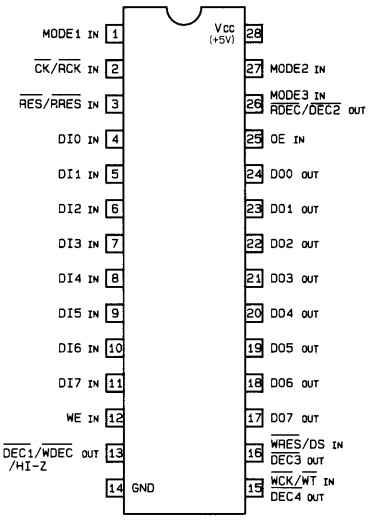


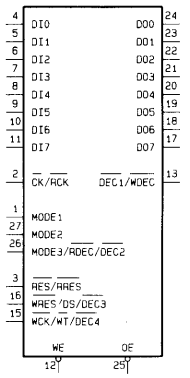
GS ; GAIN SELECT
IRQ ; INTERRUPT REQUEST
DO~D7 ; I/O DATA BUS
CK ; CLOCK
EN ; ENABLE
RS0,1 ; REGISTER SELECT
CS0,1 ; CHIP SELECT
R/$\overline{W}$; READ WRITE ENABLE
COMP ; COMPARATOR INPUT
COM ; MULTIPLEXER COMMON
AI0~15 ; ANALOG INPUT

HM63021P-34 (HITACHI) (ACCESS TIME = 34nS)

2048 WORDx8-BIT LINE MEMORY

– TOP VIEW –

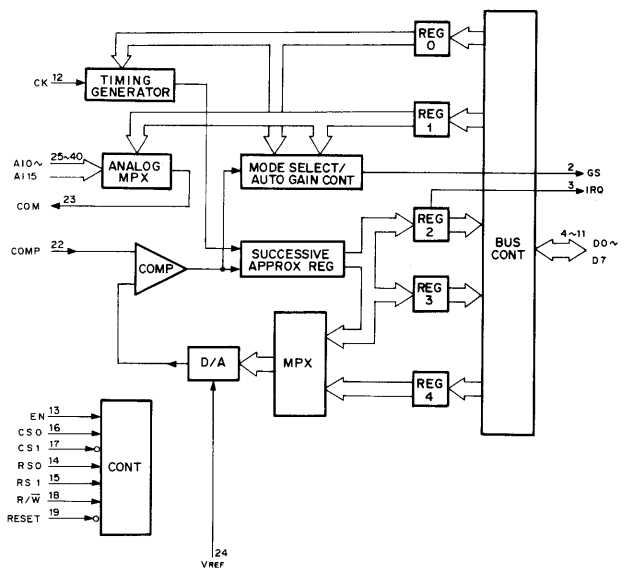




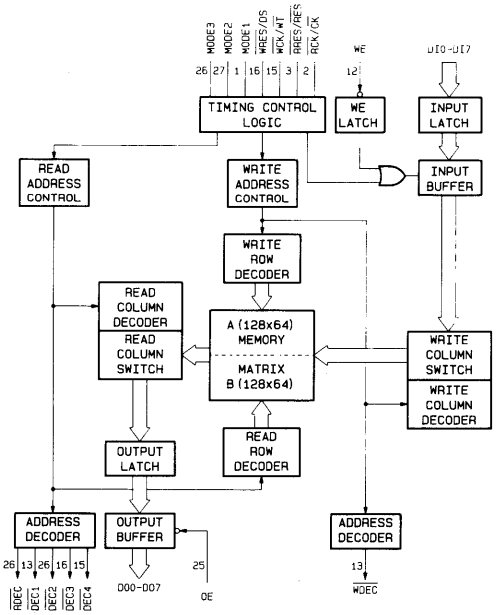
MODE1, 2, 3; MODE SELECT INPUTS
RCK; READ CLOCK INPUT
WCK; WRITE CLOCK INPUT
CK; CLOCK INPUT
RRES; READ RESET INPUT
RES; RESET INPUT
DI0-DI7; DATA INPUTS
WE; WRITE ENABLE INPUT
HI-Z; HIGH IMPEDANCE
WT; WRITE TIMING INPUT
DEC1, 2, 3, 4; DECODE PULSE OUTPUTS
WDEC; WRITE DECODE PULSE OUTPUT
RDEC; READ DECODE PULSE OUTPUT
DS; DELAY SELECT INPUT
DO0-DO7; DATA OUTPUTS
OE; OUTPUT ENABLE INPUT

MODE1	MODE2	MODE3	MODE
1	1	1	TIME BASE COMPRESSING /EXPANDING
1	1	0	DOUBLE SPEED EXCHANGE
1	0	*	TBC
0	1	*	1H/2H DELAY
0	0	*	DELAY LINE

0; LOW LEVEL
1; HIGH LEVEL
*; DEC OUTPUT SIGNAL

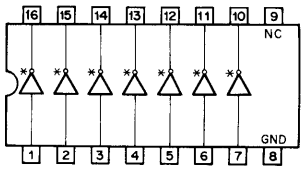


PIN NO.	MODE				
	TIME BASE COMPRESSING /EXPANDING	DOUBLE SPEED EXCHANGE	TBC	1H/2H DELAY	DELAY LINE
1	MODE1				
2	$\overline{RCK}$			$\overline{CK}$	
3	$\overline{RRES}$			$\overline{RES}$	
4-11	DI0-DI7				
12	$\overline{WE}$				
13	HI-Z		$\overline{WDEC}$	$\overline{DEC1}$	
15	$\overline{WCK}$			$\overline{WT}$	$\overline{DEC4}$
16	$\overline{WRES}$			DS	$\overline{DEC3}$
17-24	DO0-DO7				
25	$\overline{OE}$				
26	MODE3		$\overline{RDEC}$	$\overline{DEC2}$	
27	MODE2				



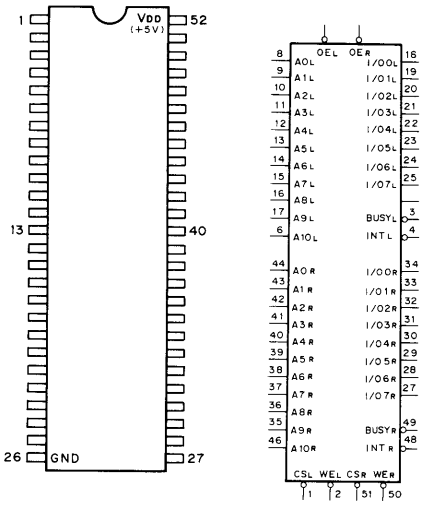
M54517P (MITSUBISHI)

INVERTER WITH OPEN-COLLECTOR
(DARLINGTON-CONNECTED TRANSISTOR ARRAY)
– TOP VIEW –

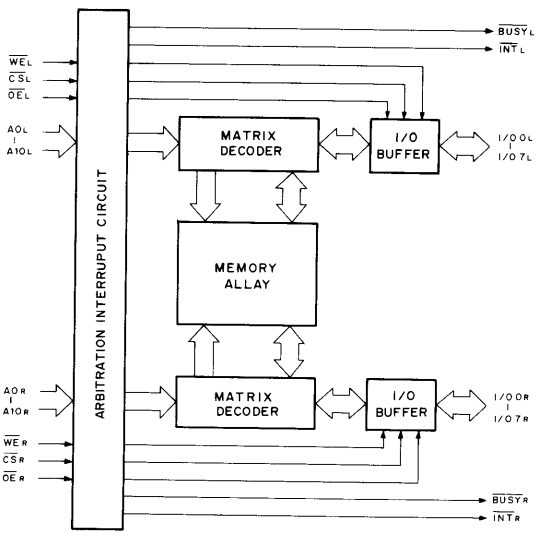


MB8421-90LP (FUJITSU) (ACCESS TIME = 90nS)

C-MOS 16384 (2Kx8) BIT DUAL PORT STATIC RAM
– TOP VIEW –

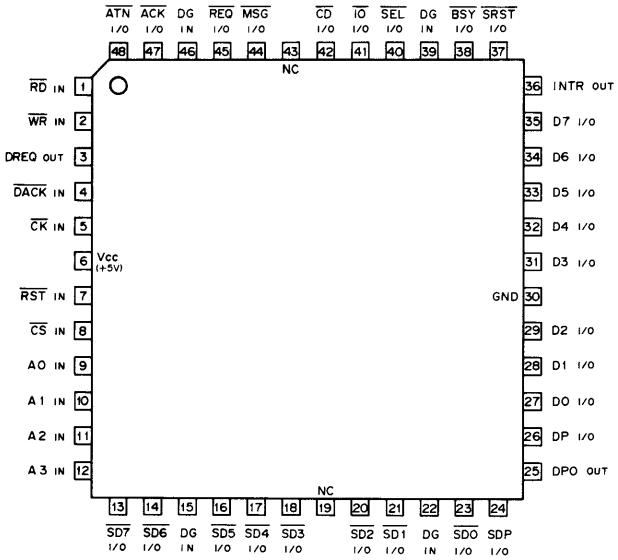


A0L-A10L, A0R-A10R ; ADDRESS INPUTS
I/O0L-I/O7L, I/O0R-I/O7R ; DATA INPUTS/OUTPUTS
$\overline{CSL}$, $\overline{CSR}$; CHIP SELECT INPUT
$\overline{WEL}$, $\overline{WER}$; WRITE ENABLE INPUT
$\overline{OEL}$, $\overline{OER}$; OUTPUT ENABLE INPUT
$\overline{BUSYL}$, $\overline{BUSYR}$; BUSY OUTPUT
$\overline{INTL}$, $\overline{INTR}$; INTERRUPT OUTPUT

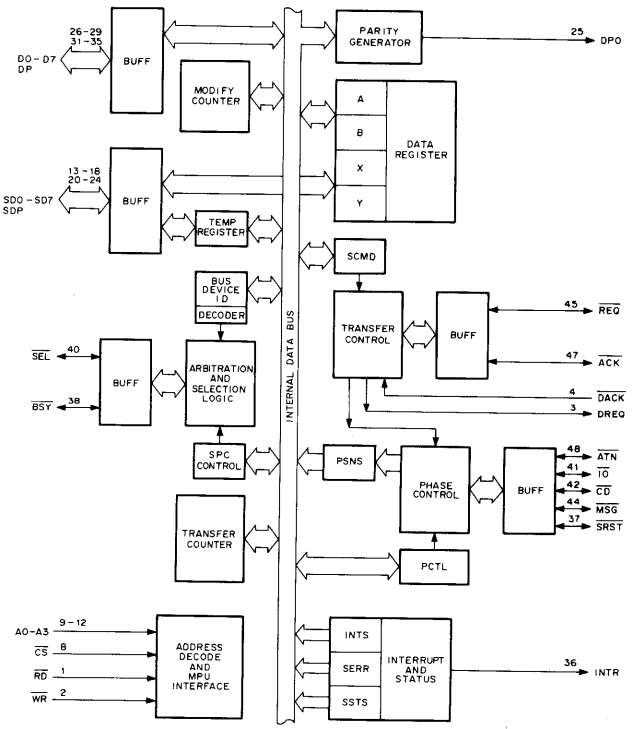


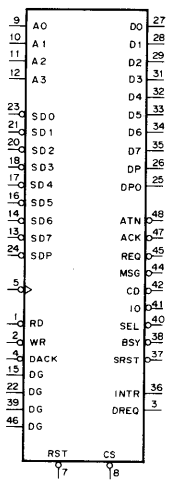
MB89352PFQ (FUJITSU) FLAT PACKAGE

C-MOS SCSI PROTOCOL CONTROLLER
– TOP VIEW –



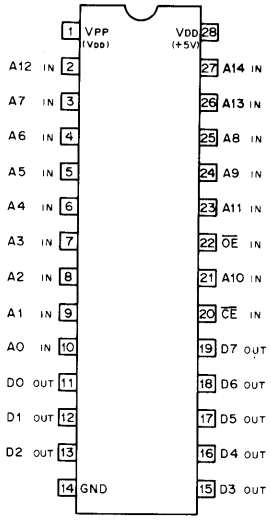
A0-A3 ; ADDRESS INPUTS
D0-D7 ; DATA INPUTS/OUTPUT
DP ; PARITY BIT INPUT
$\overline{SD0}$-$\overline{SD7}$; SCSI DATA INPUTS/OUTPUTS
$\overline{SDP}$; PARITY BIT INPUT
$\overline{RST}$; RESET INPUT
$\overline{CS}$; CHIP SELECT INPUT
$\overline{RD}$; READ INPUTS
$\overline{WR}$; WRITE INPUTS
$\overline{INTR}$; INTERRUPT OUTPUT
$\overline{DACK}$; DATA ACKNOWLEDGE INPUT
$\overline{SRST}$; SCSI RESET INPUT/OUTPUT
DREQ ; DATA REQUEST OUTPUT
DPO ; PARITY OUTPUT
$\overline{SEL}$; SCSI SELECT INPUT/OUTPUT
$\overline{BSY}$; BUSY INPUT/OUTPUT
$\overline{IO}$; DATA DIRECTION INPUT/OUTPUT
$\overline{CD}$; COMMAND INPUT/OUTPUT
$\overline{MSG}$; MESSAGE INPUT/OUTPUT
$\overline{REQ}$; REQUEST INPUT/OUTPUT
$\overline{ACK}$; ACKNOWLEDGE INPUT/OUTPUT
$\overline{ATN}$; ATTENTION CONDITION INPUT/OUTPUT
DG ; DRIVER GROUND

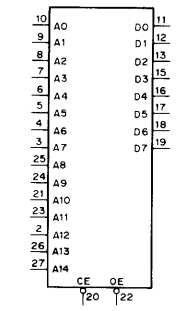


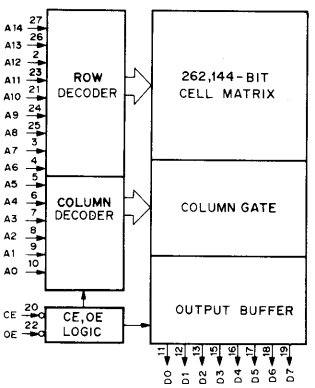


MBM27C256A-20 (FUJITSU) (ACCESS TIME = 200nS)

C-MOS 256K (32K-8) ERASABLE PROM WITH 3-STATE OUTPUTS
– TOP VIEW –







A0-12 ; ADDRESS INPUT
$\overline{CE}$; CHIP ENABLE
D0-7 ; DATA OUTPUT
$\overline{OE}$; OUTPUT ENABLE
Vpp ; PROGRAM POWER SUPPLY

An	$\overline{CE}$	$\overline{OE}$	VDD	Vpp	Dn	FUNCTION
An	0	0	+5V	+5V	DOUT	READ
An	0	1	+5V	+5V	HI-Z	OUTPUT DISABLE
X	1	X	+5V	+5V	HI-Z	STANDBY
An	0	1	+6V	+12.5V	DIN	PGM
An	1	0	+6V	+12.5V	DOUT	PGM VERIFY(1)
An	0	0	+6V	+12.5V	DOUT	PGM VERIFY(2)
X	1	1	+6V	+12.5V	HI-Z	PGM INH
A0	0	0	+5V	+5V	DEVICE CODE	ELECTRONIC SIGNATURE*

*SEE FOLLOWING DESCRIPTION.

0:LOW LEVEL
1:HIGH LEVEL
X:DON'T CARE
HI-Z:HIGH IMPEDANCE

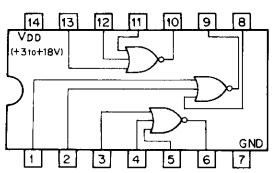
ELECTRONIC SIGNATURE FOR P ROM WRITER
ADDRESS SETTINGS IN READ MODE

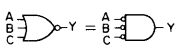
A1 – A8	A9	A10–A13	A14,A15
0	12V	0	1

	CODE DATA								
	A0	D7	D6	D5	D4	D3	D2	D1	DO	
MAKER CODE	0	0	0	0	0	0	1	0	0	04H
DEVICE CODE	1	0	1	1	0	0	0	1	0	62H

MC14025BCP (MOTOROLA)
TC4025BP (TOSHIBA)

C-MOS 3-INPUT NOR GATE
– TOP VIEW –



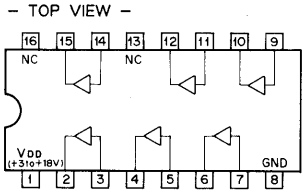


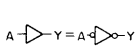
A	B	C	Y
0	0	0	1
X	X	1	0
X	1	X	0
1	X	X	0

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

MC14050BCP (MOTOROLA)
TC4050BP (TOSHIBA)

C-MOS NON-INVERTING TYPE BUFFER/CONVERTER
– TOP VIEW –



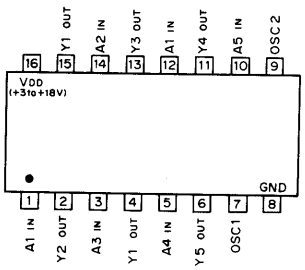


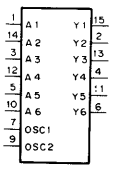
A	Y
0	0
1	1

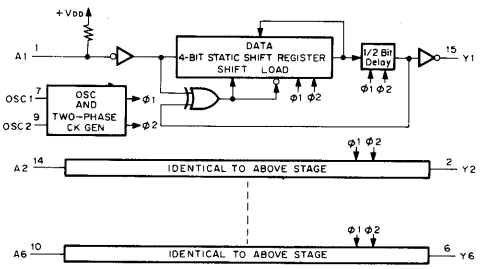
0 ; LOW LEVEL
1 ; HIGH LEVEL

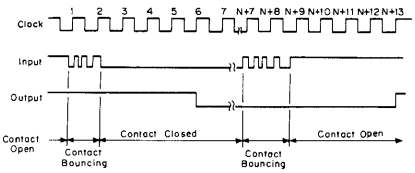
MC14490F (MOTOROLA) FLAT PACKAGE

C-MOS HEX CONTACT BOUNCE ELIMINATOR
– TOP VIEW –



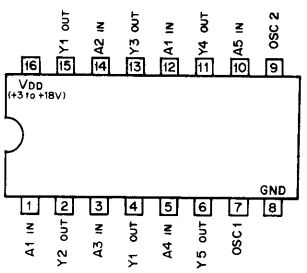


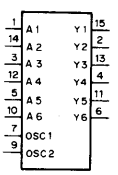


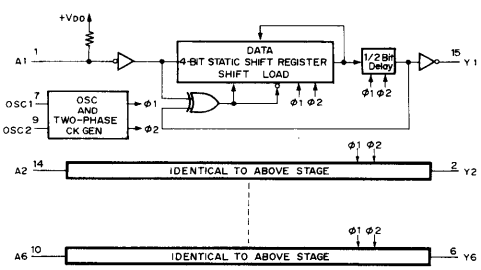


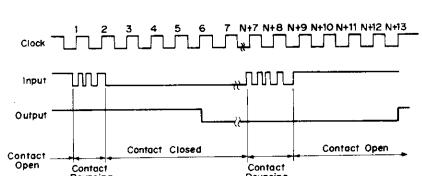
MC14490P (MOTOROLA)

C-MOS HEX CONTACT BOUNCE ELIMINATOR
– TOP VIEW –



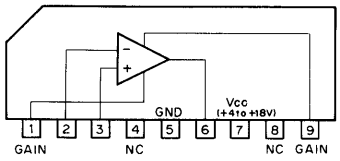






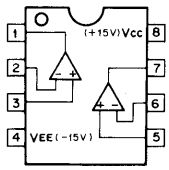
NJM386BS (JRC)

AUDIO POWER AMPLIFIER
– SIDE VIEW –



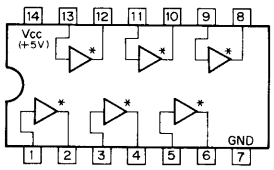
NJM4558M (JRC) FLAT PACKAGE

OPERATIONAL AMPLIFIER
– TOP VIEW –



SN7407N (TI)

TTL BUFFER/DRIVER WITH OPEN-COLLECTOR
– TOP VIEW –

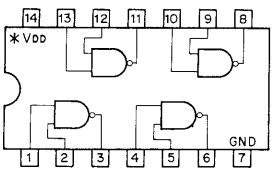


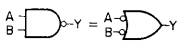
A	Y
0	0
1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
* ; OPEN COLLECTOR

SN74HC00NS (TI) (V_{DD} = +2 to +6V) FLAT PACKAGE
TC74HC00F (TOSHIBA) (V_{DD} = +2 to +6V) FLAT PACKAGE

C-MOS QUAD 2-INPUT NAND GATE
– TOP VIEW –





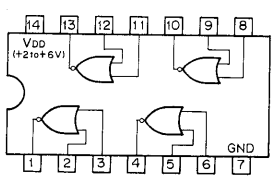
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

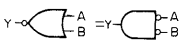
0;LOW LEVEL
1;HIGH LEVEL

*VDD HC;+2to+6V
HCT;+5V

SN74HC02NS (TI) FLAT PACKAGE
TC74HC02F (TOSHIBA) FLAT PACKAGE

C-MOS QUAD 2-INPUT NOR GATE
– TOP VIEW –



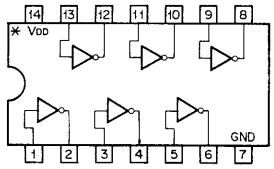


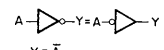
A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0;LOW LEVEL
1;HIGH LEVEL

SN74HC04NS (TI) (V_{DD} = +2 to +6V) FLAT PACKAGE
TC74HC04F (TOSHIBA) (V_{DD} = +2 to +6V) FLAT PACKAGE

C-MOS HEX INVERTER
– TOP VIEW –





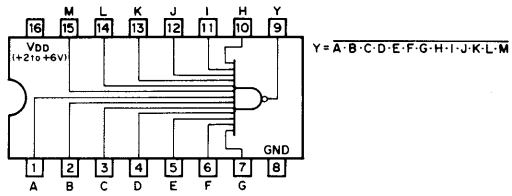
A	Y
0	1
1	0

0;LOW LEVEL
1;HIGH LEVEL

*VDD HC,HCU; +2to+6V
HCT; +5V

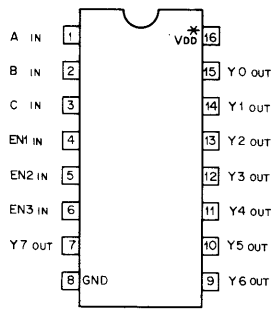
SN74HC133NS (TI) FLAT PACKAGE
TC74HC133P (TOSHIBA)

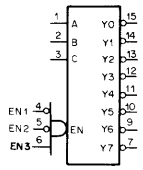
C-MOS 13-INPUT NAND GATE
– TOP VIEW –



SN74HC138NS (TI) (V_{DD} = +2 to +6V) FLAT PACKAGE
TC74HC138F (TOSHIBA) (V_{DD} = +2 to +6V) FLAT PACKAGE

C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER
– TOP VIEW –





INPUT				OUTPUT							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

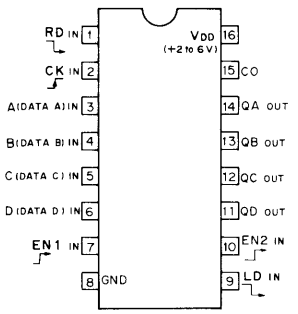
*VDD HC ; +2 to +6V
HCT;+5V

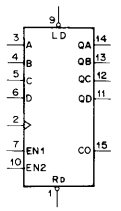
EN = $\overline{EN1}$·$\overline{EN2}$·EN3

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

SN74HC163NS (TI) (V_{DD} = + 2 to + 6V) FLAT PACKAGE
TC74HC163F (TOSHIBA) (V_{DD} = + 2 to + 6V) FLAT PACKAGE

C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
– TOP VIEW –





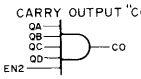
MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

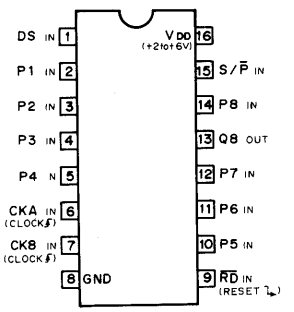
CARRY OUTPUT "CO"

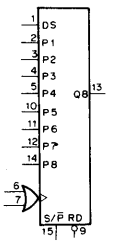


CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

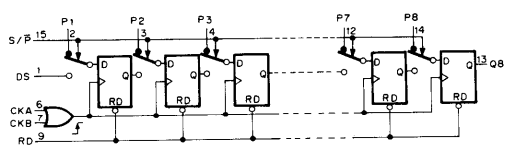
SN74HC166NS (TI) FLAT PACKAGE
TC74HC166F (TOSHIBA) FLAT PACKAGE

C-MOS 8-BIT SHIFT REGISTER
– TOP VIEW –





DS : DATA SERIAL INPUT
PI – P8 : DATA PARALLEL INPUT
CK : CLOCK



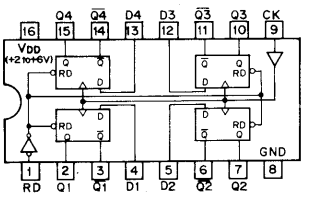
CKA	CKB	CK
0	0	0
X	1	1
1	X	1
1	↓	1
↓	1	1
0	↓	↓
↓	0	↓

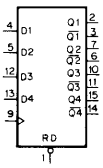
INPUT						OUTPUT
RD	S/P	CK	DS	P1-P8		Q8
0	X	X	X	X		0
1	X	0	X	X		$Q8_0$
1	0	↓	X	1 – 8		8
1	1	↓	1	X		$Q7_n$
1	1	↓	0	X		$Q7_n$
1	X	↓	X	X		$Q8_0$

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

SN74HC175NS (TI) (V_{DD} = + 2 to + 6V) FLAT PACKAGE
TC74HC175F (TOSHIBA) (V_{DD} = + 2 to + 6V) FLAT PACKAGE

C-MOS D-TYPE FLIP-FLOP WITH RESET
– TOP VIEW –



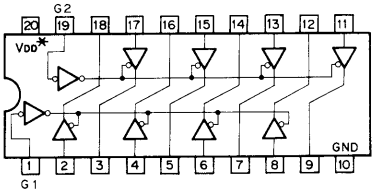


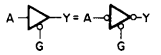
RD	CK	D	Q	$\overline{Q}$
0	X	X	0	1
1	↑	1	1	0
1	↑	0	0	1
1	0	X	Q_0	$\overline{Q}_0$

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

SN74HC244NS (TI) (V_{DD} = + 2 to + 6V) FLAT PACKAGE
TC74HC244P (TOSHIBA) (V_{DD} = + 2 to + 6V)

C-MOS BUS BUFFER WITH 3-STATE OUTPUTS
– TOP VIEW –

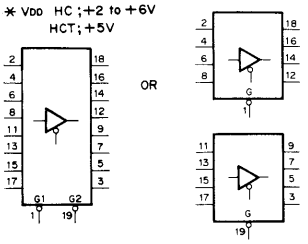




G	A	Y
0	0	0
0	1	1
1	X	HI-Z

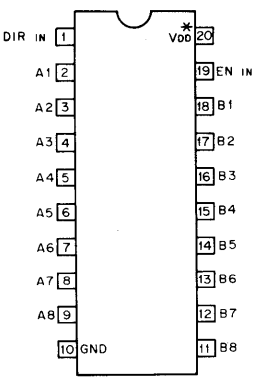
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

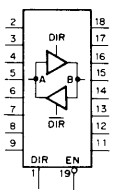
* V_{DD} HC ; + 2 to + 6V
HCT ; + 5V



SN74HC245NS (TI) (V_{DD} = + 2 to + 6V) FLAT PACKAGE
TC74HC245P (TOSHIBA) (V_{DD} = + 2 to + 6V)

C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUTS
– TOP VIEW –

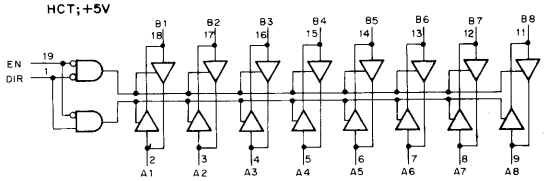




EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI – Z

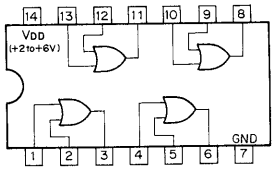
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

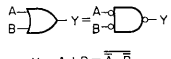
* V_{DD} HC ; + 2 to + 6V
HCT ; + 5V



SN74HC32NS (TI) FLAT PACKAGE
TC74HC32F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT OR GATE
– TOP VIEW –



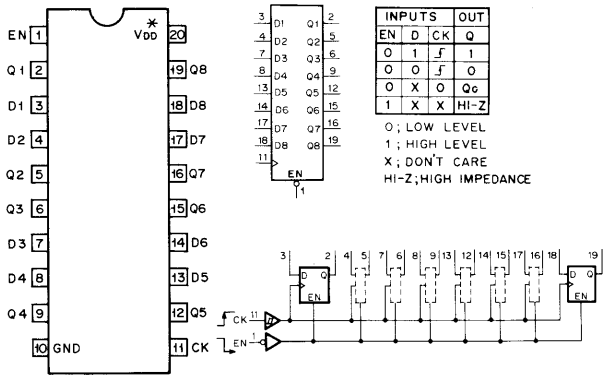


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0; LOW LEVEL
1; HIGH LEVEL

SN74HC374NS (TI) (V_{DD} = + 2 to + 6V) FLAT PACKAGE
TC74HC374F (TOSHIBA) (V_{DD} = + 2 to + 6V) FLAT PACKAGE

C-MOS 3-STATE OCTAL D-TYPE FLIP-FLOP
– TOP VIEW –

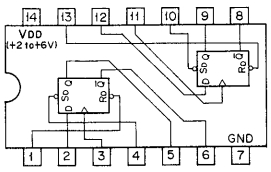


INPUTS			OUT
EN	D	CK	Q
0	1	↑	1
0	0	↑	0
0	X	0	Q_0
1	X	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

SN74HC74NS (TI) FLAT PACKAGE
TC74HC74F (TOSHIBA) FLAT PACKAGE

C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
– TOP VIEW –

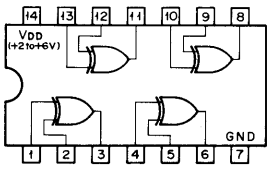


INPUTS				OUTPUTS	
SD	RD	CK	D	Qn+1	$\overline{Qn+1}$
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1*	1*
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Qn	$\overline{Qn}$

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
1*; NONSTABLE

SN74HC86NS (TI) FLAT PACKAGE
TC74HC86F (TOSHIBA) FLAT PACKAGE

C-MOS EXCLUSIVE OR GATE
– TOP VIEW –

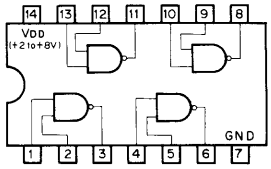


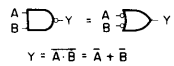
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

TC40H000F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT NAND GATE
– TOP VIEW –



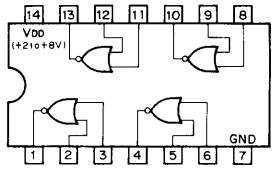


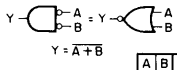
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0, LOW LEVEL
1, HIGH LEVEL

TC40H002F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT NOR GATE
– TOP VIEW –



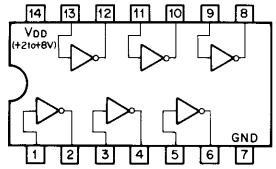


A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0: LOW LEVEL
1: HIGH LEVEL

TC40H004F (TOSHIBA) FLAT PACKAGE

C-MOS INVERTER
– TOP VIEW –

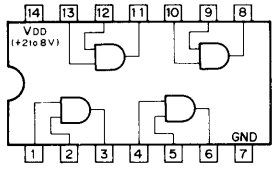


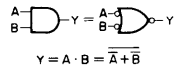
A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL

TC40H008F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT POSITIVE-AND GATE
– TOP VIEW –





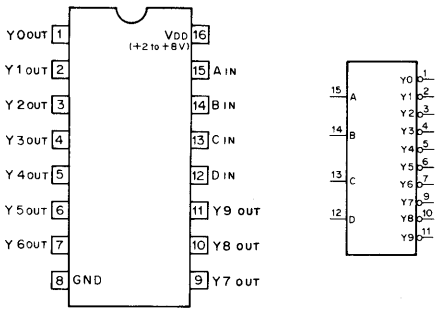
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0; LOW LEVEL
1; HIGH LEVEL

TC40H042F (TOSHIBA) FLAT PACKAGE

C-MOS BCD-TO-DECIMAL DECODER/DRIVER

– TOP VIEW –



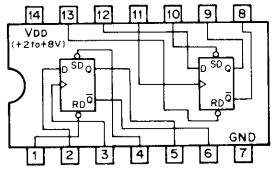
STATE	BCD INPUTS				DECIMAL OUTPUTS									
	D	C	B	A	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
1	0	0	0	1	1	0	1	1	1	1	1	1	1	1
2	0	0	1	0	1	1	0	1	1	1	1	1	1	1
3	0	0	1	1	1	1	1	0	1	1	1	1	1	1
4	0	1	0	0	1	1	1	1	0	1	1	1	1	1
5	0	1	0	1	1	1	1	1	1	0	1	1	1	1
6	0	1	1	0	1	1	1	1	1	1	0	1	1	1
7	0	1	1	1	1	1	1	1	1	1	1	0	1	1
8	1	0	0	0	1	1	1	1	1	1	1	1	0	1
9	1	0	0	1	1	1	1	1	1	1	1	1	1	0
10 ∼ 15	1	X	1	X	1	1	1	1	1	1	1	1	1	1
	1	1	X	X	1	1	1	1	1	1	1	1	1	1

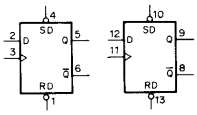
X : DON'T CARE
1 : HIGH LEVEL
0 : LOW LEVEL

TC40H074F (TOSHIBA) FLAT PACKAGE

C-MOS HIGH SPEED D-TYPE FLIP-FLOP WITH DIRECT SET/RESET

– TOP VIEW –





D-MODE

tn	tn + 1
D	Q
0	0
1	1

R-S MODE

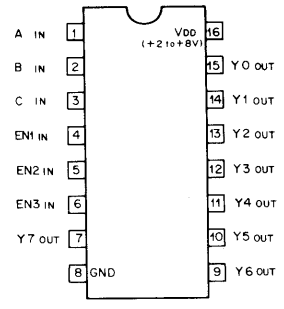
INPUT		OUTPUT	
RD	SD	Q	$\overline{Q}$
0	0	1	1
0	1	0	1
1	0	1	0
1	1	D-MODE	

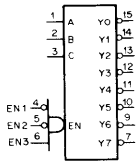
0;LOW LEVEL
1;HIGH LEVEL

TC40H138F (TOSHIBA) FLAT PACKAGE

C-MOS 3-TO-8-LINE DECODER/DEMULTIPLEXER

– TOP VIEW –





INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

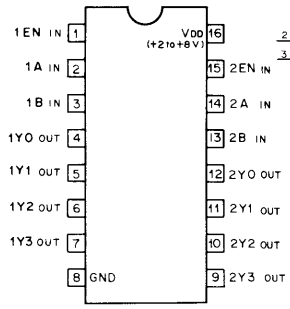
$EN = \overline{EN1} \cdot \overline{EN2} \cdot EN3$

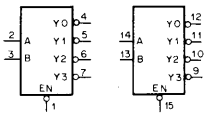
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC40H139F (TOSHIBA) FLAT PACKAGE

C-MOS 2-TO-4-LINE DECODER/DEMULTIPLXER

– TOP VIEW –





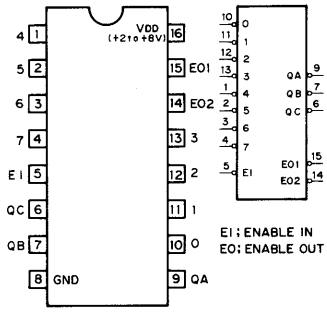
INPUTS			OUTPUTS			
EN	B	A	Y3	Y2	Y1	Y0
0	0	0	1	1	1	0
0	0	1	1	1	0	1
0	1	0	1	0	1	1
0	1	1	0	1	1	1
1	X	X	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC40H148F (TOSHIBA) FLAT PACKAGE

C-MOS 8-TO-3-LINE PRIORITY ENCODER

– TOP VIEW –



EI ; ENABLE IN
EO; ENABLE OUT

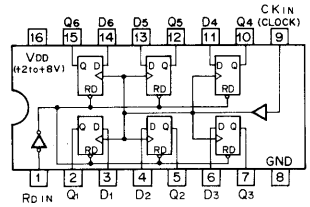
INPUTS								OUTPUTS				
EI	7	6	5	4	3	2	1	0	QC	QB	QA	EO1	EO2
1	X	X	X	X	X	X	X	X	1	1	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	0	1
0	1	1	1	1	1	1	1	0	1	1	1	1	0
0	1	1	1	1	1	1	0	X	1	1	0	1	0
0	1	1	1	1	1	0	X	X	1	0	1	1	0
0	1	1	1	1	0	X	X	X	1	0	0	1	0
0	1	1	1	0	X	X	X	X	0	1	1	1	0
0	1	1	0	X	X	X	X	X	0	1	0	1	0
0	1	0	X	X	X	X	X	X	0	0	1	1	0
0	0	X	X	X	X	X	X	X	0	0	0	1	0

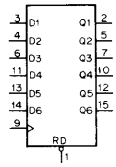
0; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC40H174F (TOSHIBA) FLAT PACKAGE

C-MOS D-TYPE FLIP-FLOP

– TOP VIEW –





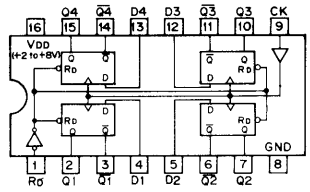
INPUTS			OUTPUT
CK	D	RD	Q
↓	0	1	0
↓	1	1	1
↑	X	1	Qo
X	X	0	0

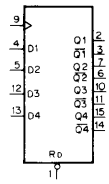
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

TC40H175F (TOSHIBA) FLAT PACKAGE

C-MOS D-TYPE FLIP-FLOP WITH CLEAR

– TOP VIEW –





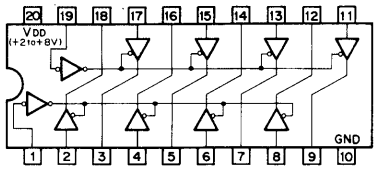
RD	CK	D	Q	$\overline{Q}$
0	X	X	0	1
1	↓	1	1	0
1	↓	0	0	1
1	0	X	Qo	$\overline{Q}o$

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

TC40H244F (TOSHIBA) FLAT PACKAGE

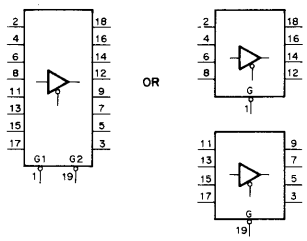
C-MOS 3-STATE BUFFER/DRIVER

– TOP VIEW –



G	A	Y
0	0	0
0	1	1
1	X	HI-Z

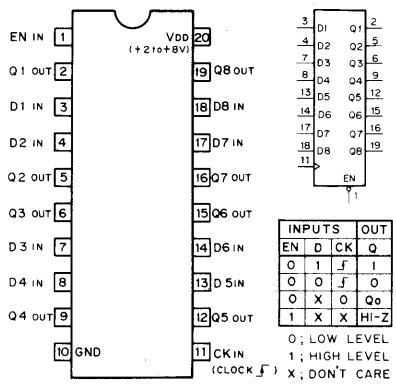
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE



TC40H374F (TOSHIBA) FLAT PACKAGE

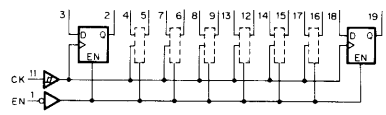
C-MOS 3-STATE OUTPUTS OCTAL D-TYPE FLIP-FLOP

– TOP VIEW –



INPUTS			OUT
EN	D	CK	Q
0	1	↓	1
0	0	↓	0
0	X	0	Qo
1	X	X	HI-Z

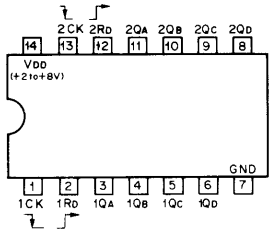
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

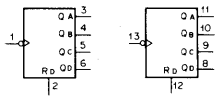


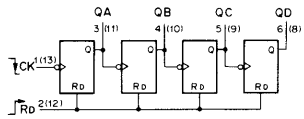
TC40H393F (TOSHIBA) FLAT PACKAGE

C-MOS 4-BIT BINARY COUNTER

– TOP VIEW –







RESET/COUNT FUNCTION

RD	QD	QC	QB	QA
1	0	0	0	0
0	COUNT			

0; LOW LEVEL
1; HIGH LEVEL

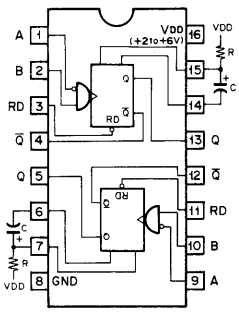
COUNT SEQUENCE

COUNT	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

TC74HC123P (TOSHIBA)

C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR

– TOP VIEW –



INPUT			OUTPUT	
RD	A	B	Q	Q
0	X	X	0	1
1	1	X	0	1
1	X	0	0	1
1	0	↓	↓	↑
1	↑	1	↓	↑
↓	0	1	↓	↑

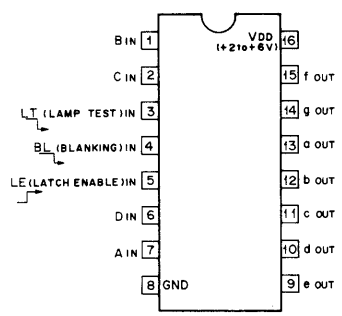
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

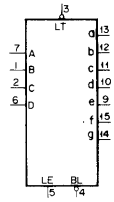
OUTPUT PULSE WIDTH = 0.46CR

TC74HC4511F (TOSHIBA) FLAT PACKAGE

C-MOS BCD TO 7 SEGMENT LATCH/DECODER/DRIVER

– TOP VIEW –





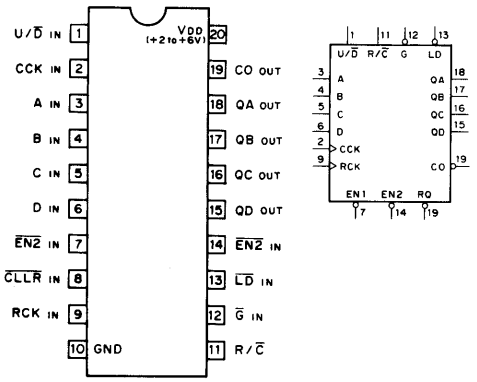
INPUTS							OUTPUTS							DISPLAY
LE	BL	LT	D	C	B	A	a	b	c	d	e	f	g	
X	X	0	X	X	X	X	1	1	1	1	1	1	1	8
X	0	1	X	X	X	X	0	0	0	0	0	0	0	BLANK
0	1	1	0	0	0	0	1	1	1	1	1	1	0	0
0	1	1	0	0	0	1	0	1	1	0	0	0	0	1
0	1	1	0	0	1	0	1	1	0	1	1	0	1	2
0	1	1	0	0	1	1	1	1	1	1	0	0	1	3
0	1	1	0	1	0	0	0	1	1	0	0	1	1	4
0	1	1	0	1	0	1	1	0	1	1	0	1	1	5
0	1	1	0	1	1	0	0	0	1	1	1	1	1	6
0	1	1	0	1	1	1	1	1	1	0	0	0	0	7
0	1	1	1	0	0	0	1	1	1	1	1	1	1	8
0	1	1	1	0	0	1	1	1	1	0	0	1	1	9
0	1	1	1	0	1	0	0	0	0	0	0	0	0	BLANK
0	1	1	1	0	1	1	0	0	0	0	0	0	0	BLANK
0	1	1	1	1	0	0	0	0	0	0	0	0	0	BLANK
0	1	1	1	1	0	1	0	0	0	0	0	0	0	BLANK
0	1	1	1	1	1	0	0	0	0	0	0	0	0	BLANK
0	1	1	1	1	1	1	0	0	0	0	0	0	0	BLANK
1	1	1	X	X	X	X	★							★

0; LOW
1; HIGH
X; LOW OR HIGH

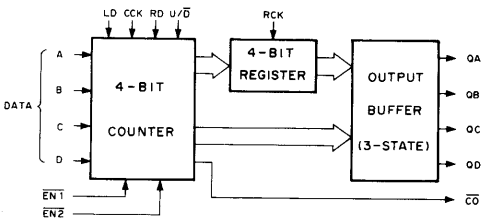
★; DEPEND UPON THE BCD CODE PREVIOUSLY APPLIED WHEN LE = 0.

TC74HC697P (TOSHIBA)

C-MOS UP/DOWN 4-BIT BINARY COUNTER/REGISTER (3-STATE)
- TOP VIEW -



A-D ; DATA INPUTS
CCK ; COUNTER CLOCK
CCR ; REGISTER CLOCK
V/D ; COUNTER VP/DOWN SELECT
R/C ; REGISTER/COUNTER SELECT
G ; GATE INPUT
EN1, EN2 ; COUNT ENABLE
QA-QD ; DATA OUTPUTS



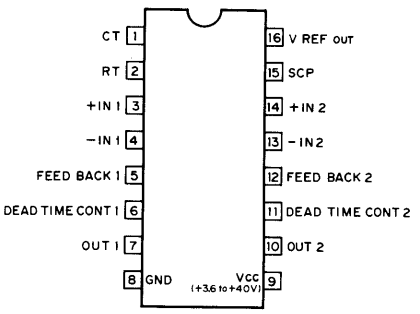
INPUTS									OUTPUTS			
RD	LD	EN1	EN2	CCK	U/D	RCK	R/C	G	QA	QB	QC	QD
X	X	X	X	X	X	X	X	1	HI-Z	HI-Z	HI-Z	HI-Z
0	X	X	X	X	X	X	0	0	0	0	0	0
1	0	X	X	_/‾	X	X	0	0	a	b	c	d
1	1	1	X	_/‾	X	X	0	0	NO CHANGE			
1	1	X	1	_/‾	X	X	0	0				
1	1	0	0	_/‾	1	X	0	0	COUNT UP			
1	1	0	0	_/‾	0	X	0	0	COUNT DOWN			
1	X	X	X	‾_	X	X	0	0	NO CHANGE			
X	X	X	X	X	X	_/‾	1	0	a'	b'	c'	d'
X	X	X	X	X	X	‾_	1	0	NO CHANGE			

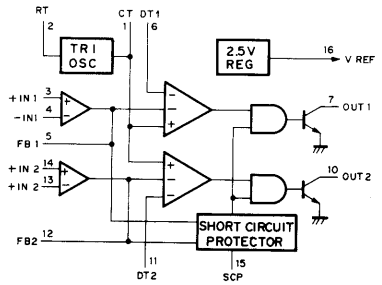
1 ; HIGH LEVEL
0 ; LOW LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE
a-d ; LEVEL OF INPUT A-D
a'-d' ; LEVEL OF A-D BEFORE INDICATED INPUT CONDITIONS WARE ESTABLISHED

* U/D = HIGH ; CO = $\overline{QA \cdot QB \cdot QC \cdot QD \cdot EN2}$
U/D = LOW ; CO = $\overline{QA \cdot QB \cdot QC \cdot QD \cdot EN2}$

TL1451ACNS (TI) FLAT PACKAGE

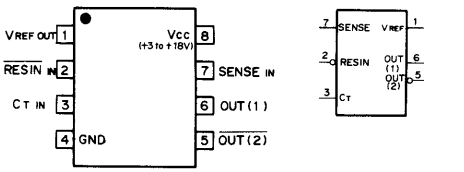
DUAL PWM POWER CONTROLLER
- TOP VIEW -

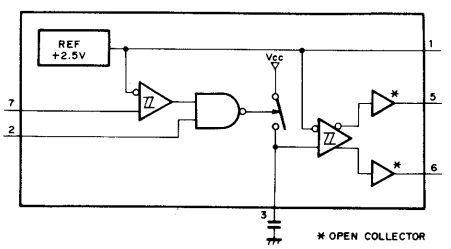




TL7705CP (TI)

POWER VOLTAGE SUPERVISOR
- TOP VIEW -

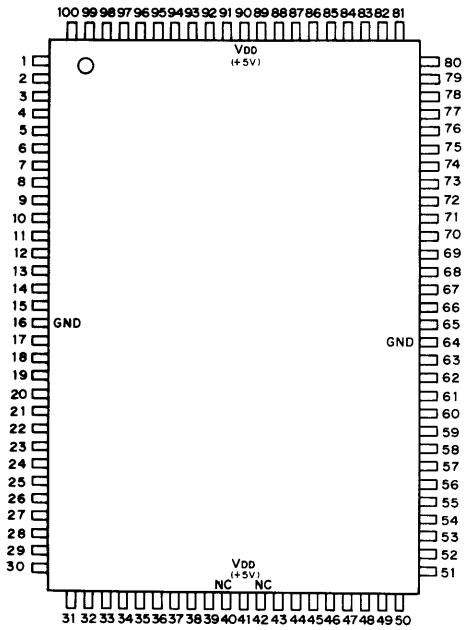


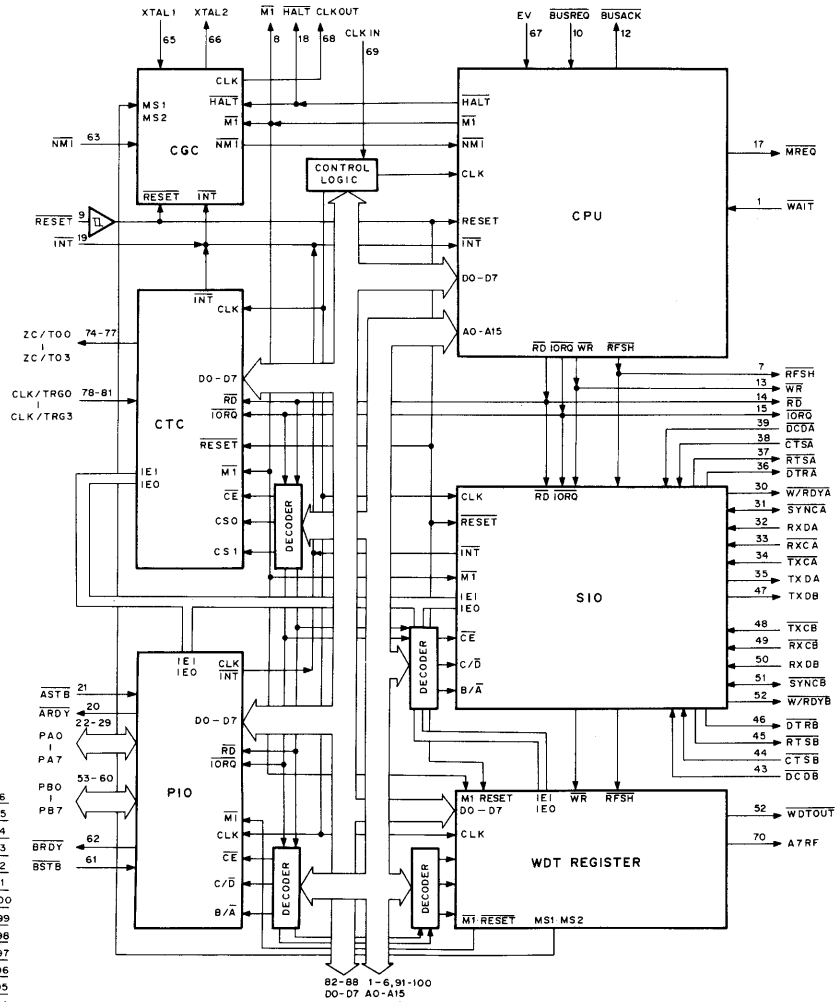


TMPZ84C015AF (TOSHIBA) FLAT PACKAGE

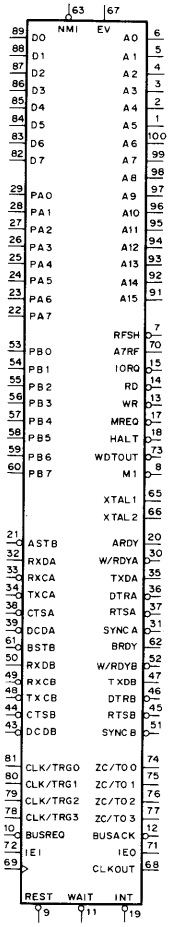
C-MOS 8-BIT MICROPROCCESSOR

– TOP VIEW –





NO.	IN	OUT	SYMBOL	NO.	IN	OUT	SYMBOL
1		O	A5	51	O	O	SYNCB
2		O	A4	52		O	W/RDYB
3		O	A3	53	O	O	PB0
4		O	A2	54	O	O	PB1
5		O	A1	55	O	O	PB2
6		O	A0	56	O	O	PB3
7		O	RFSH	57	O	O	PB4
8		O	M1	58	O	O	PB5
9	O		REST	59	O	O	PB6
10	O		BUSREQ	60	O	O	PB7
11	O		WAIT	61	O		BSTB
12		O	BUSACK	62		O	BRDY
13		O	WR	63	O		NMI
14		O	RD	64			GND
15		O	IORQ	65	O		XTAL1
16			GND	66		O	XTAL2
17		O	MREQ	67	O		EV
18		O	HALT	68		O	CLKOUT
19	O		INT	69	O		CLKIN
20		O	ARDY	70		O	A7RF
21	O		ASTB	71		O	IEO
22	O	O	PA7	72	O		IEI
23	O	O	PA6	73		O	WDTOUT
24	O	O	PA5	74		O	ZC/TO0
25	O	O	PA4	75		O	ZC/TO1
26	O	O	PA3	76		O	ZC/TO2
27	O	O	PA2	77		O	ZC/TO3
28	O	O	PA1	78	O		CLK/TRG3
29	O	O	PA0	79	O		CLK/TRG2
30		O	W/RDYA	80	O		CLK/TRG1
31	O	O	SYNCA	81	O		CLK/TRG0
32	O		RXDA	82	O	O	D7
33	O		RXCA	83	O	O	D6
34	O		TXCA	84	O	O	D5
35		O	TXDA	85	O	O	D4
36		O	DTRA	86	O	O	D3
37		O	RTSA	87	O	O	D2
38	O		CTSA	88	O	O	D1
39	O		DCDA	89	O	O	D0
40			NC	90			VDD
41			VDD	91		O	A15
42			NC	92		O	A14
43	O		DCDB	93		O	A13
44	O		CTSB	94		O	A12
45		O	RTSB	95		O	A11
46		O	DTRB	96		O	A10
47		O	TXDB	97		O	A9
48	O		TXCB	98		O	A8
49	O		RXCB	99		O	A7
50	O		RXDB	100		O	A6

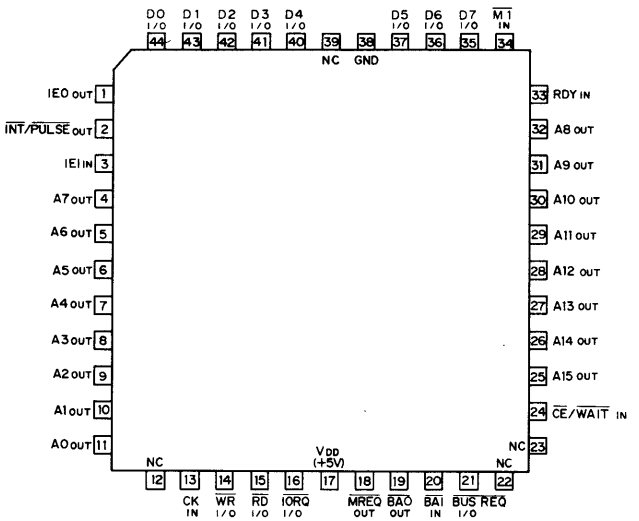


A0-A15 ; 3-STATE ADDRESS BUS OUTPUTS.
BUSACK ; BUS ACKNOWLEDGE OUTPUT
BUSREQ ; BUS REQUEST INPUT
CLK/TRIG0-3 ; EXTERNAL CLOCK/TIMER TRIGGER 0-3 INPUTS
D0-D7 ; 3-STATE DATA BUS INPUTS/OUTPUTS
EV ; EVALUATER INPUT
HALT ; HALT OUTPUT
IEI/IEO ; CTC INTERRUPT ENABLE INPUT/OUTPUT
INT ; MASKABLE INTERRUPT REQUEST/INPUT
IORQ ; 3-STATE I/O REQUEST OUTPUT
M1 ; 3-STATE MACHINE CYCLE 1 OUTPUT
MREQ ; 3-STATE MEMORY REQUEST OUTPUT
NMI ; NON-MASKABLE INTERRUPT REQUEST INPUT
PA0-PA7, PB0-PB7 ; 3-STATE I/O PORT
RD ; 3-STATE READ OUTPUT
REST ; RESET INPUT
RFSH ; REFRESH OUTPUT
WAIT ; WAIT REQUEST INPUT
WR ; 3-STATE WRITE OUTPUT
ZC/TO0-3 ; ZERO COUNT/TIME OUT 0-3 OUTPUTS
ASTB ; PORT A STROBE PULSE INPUT
ARDY ; REGISTER A READY OUTPUT
BSTB ; PORT B STROBE PULSE INPUT
BRDY ; REGISTER B READY OUTPUT
SYNCA, SYNCB ; SYNC INPUT/OUTPUT
W/RADYA, W/RADYB ; WAIT/READY OUTPUT
RXDA, RXDB ; SERIAL DATA INPUT
RXCA, RXCB ; RECEIVE CLOCK INPUT
TXCA, TXCB ; TRANSMISSION CLOCK INPUT
TXDA, TXDB ; SERIAL DATA OUTPUT
DTRA, DTRB ; DATA TERMINAL READY OUTPUT
RTSA, RTSB ; TRANSMISSION REQUEST OUTPUT
CTSA, CTSB ; TRANSMISSION ENABLE INPUT
DCDA, DCDB ; DATA CARRIER DETECT OUTPUT
WDTOUT ; WATCH DOG TIMER OUTPUT

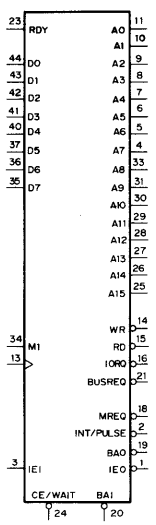
TMPZ84C10AF (TOSHIBA) FLAT PACKAGE

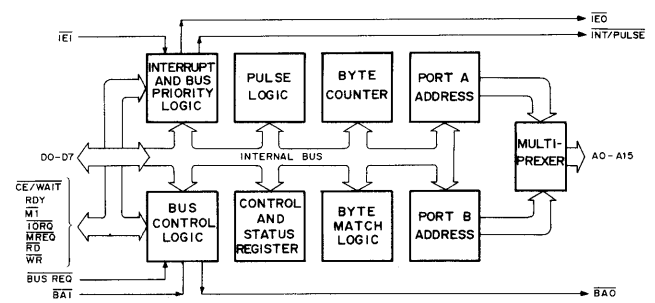
C-MOS DIRECT MEMORY ACCESS CONTROLLER

– TOP VIEW –



A0-A15 ; 3-STATE ADDRESS BUS OUTPUTS
D0-D7 ; 3-STATE DATA INPUTS/OUTPUTS
$\overline{WR}$; 3-STATE WRITE ENABLE INPUT/OUTPUT
$\overline{RD}$; 3-STATE READ ENABLE INPUT/OUTPUT
$\overline{IORQ}$; 3-STATE I/O REQUEST INPUT/OUTPUT
$\overline{MREQ}$; 3-STATE MEMORY REQUEST OUTPUT
$\overline{BAO}$; BUS ENABLE OUTPUT
$\overline{BAI}$; BUS ENABLE INPUT
$\overline{BUSREQ}$; BUS REQUEST INPUT/OUTPUT
$\overline{CE/WAIT}$; CHIP ENABLE/WAIT INPUT
RDY ; READY INPUT
M1 ; MACHINE CYCLE 1 INPUT
IEO ; INTERRUPT ENABLE OUTPUT
IEI ; INTERRUPT ENABLE INPUT
$\overline{INT/PULSE}$; INTERRUPT REQUEST OUTPUT

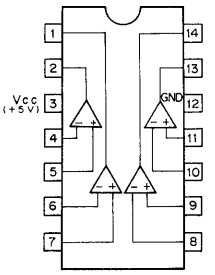




uPC339C (NEC)

COMPARATOR

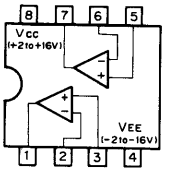
– TOP VIEW –



uPC4062G2 (NEC) FLAT PACKAGE

TTL-DUAL OPERATIONAL AMPLIFIER WITH LOW POWER CONSUMPTION

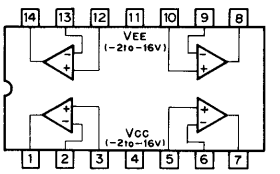
– TOP VIEW –



uPC4064G (NEC) FLAT PACKAGE

TTL-QUAD OPERATIONAL AMPLIFIER WITH LOW POWER CONSUMPTION

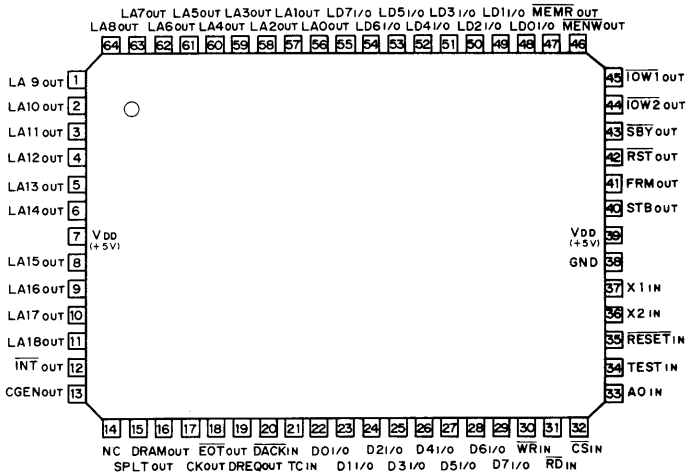
– TOP VIEW –



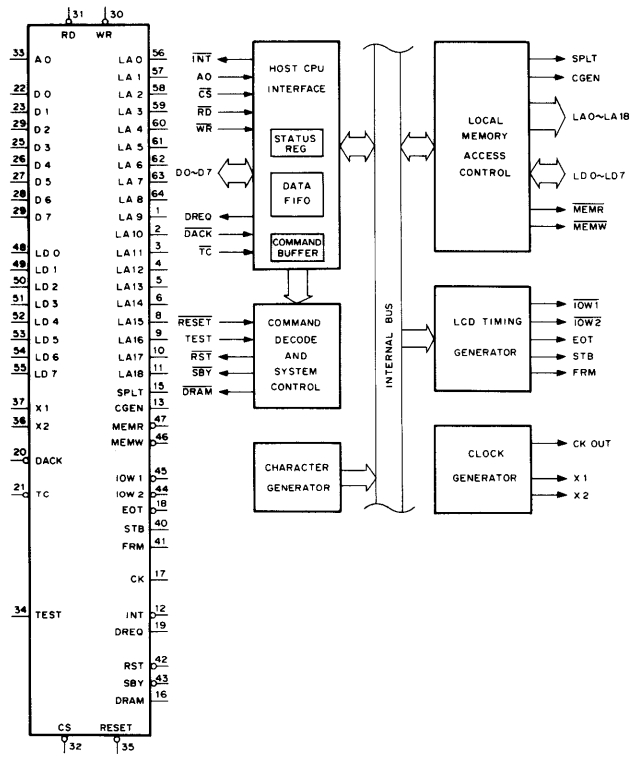
uPD72030G (NEC) FLAT PACKAGE

C-MOS LCD CONTROL UNIT

– TOP VIEW –

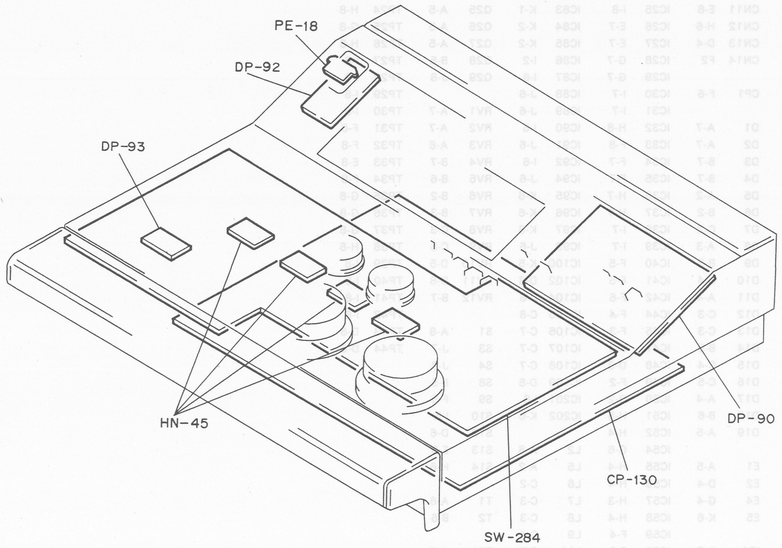


D0-D7 ; DATA INPUTS/OUTPUTS
A0 ; ADDRESS INPUT
$\overline{CS}$; CHIP SELECT INPUT
$\overline{RD}$; READ STROBE INPUT
$\overline{WR}$; WRITE STROBE INPUT
DREQ ; DMA REQUEST OUTPUT
$\overline{DACK}$; DMA ACKNOWLEDGE INPUT
$\overline{TC}$; TERMINAL COUNT INPUT
LD0-LD7 ; LOCAL DATA INPUTS/OUTPUTS
LA0-LA18 ; LOCAL ADDRESS OUTPUTS
CGEN ; CHARACTER GENERATOR ENABLE OUTPUT
SPST ; SPLIT SCREEN SELECT OUTPUT
$\overline{DRAM}$; DRAM RESET ENABLE OUTPUT
$\overline{MEMR}$; LOCAL MEMORY READ OUTPUT
$\overline{MEMW}$; LOCAL MEMORY WRITE OUTPUT
$\overline{IOW1}$, $\overline{IOW2}$; LCD DRIVER WRITE STROBE OUTPUT
STB ; STROBE OUTPUT
FRM ; FRAME OUTPUT
$\overline{EOT}$; END OF TRANSFER OUTPUT
$\overline{RESET}$; LCD DRIVER RESET OUTPUT
$\overline{SBY}$; LCD STAND-BY OUTPUT
$\overline{INT}$; INTERRUPT REQUEST OUTPUT

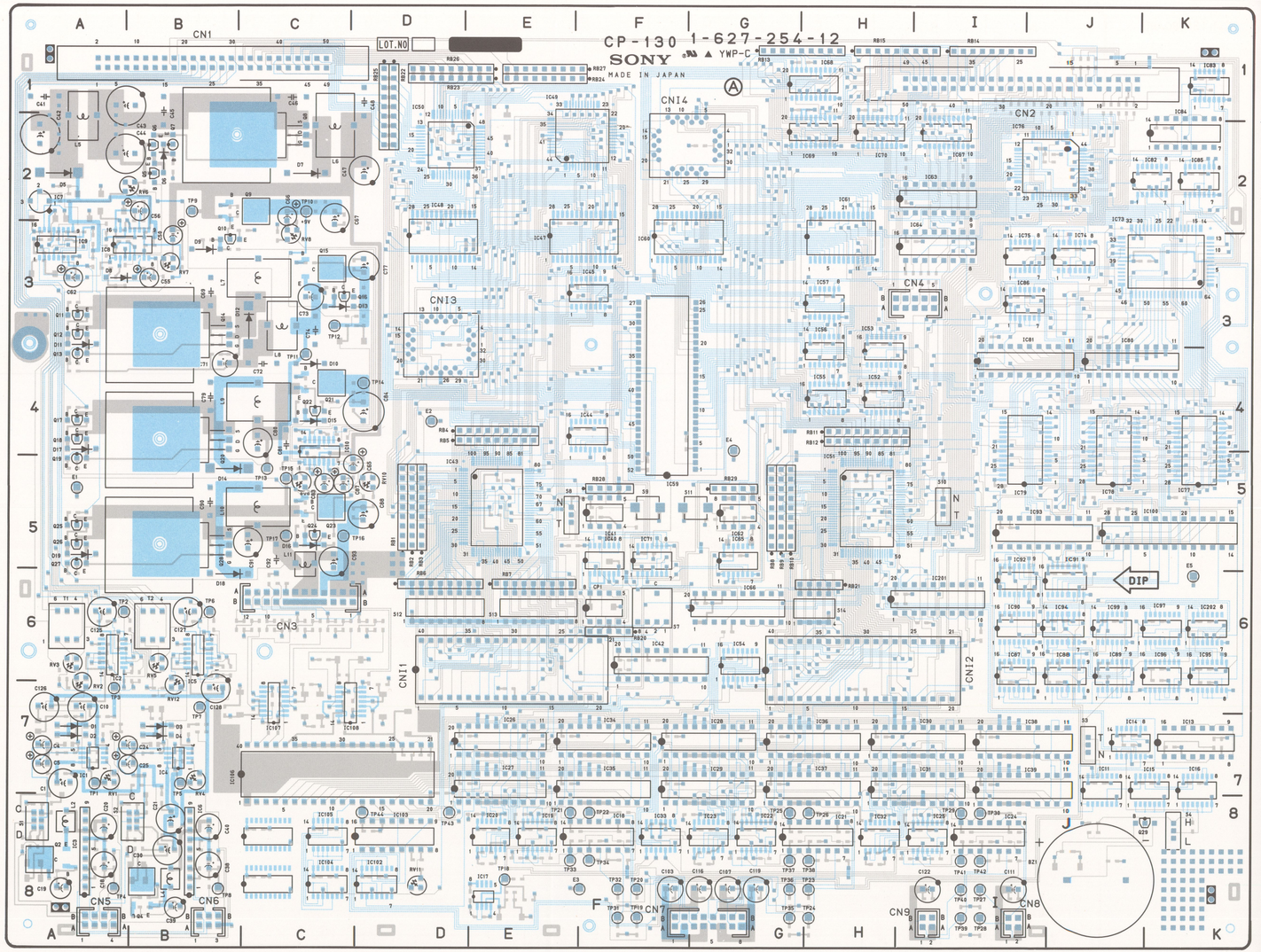


SCHEMATIC DIAGRAMS AND BOARD ILLUSTRATION

BOARD LAYOUT



CP-130 BOARD



C-4 (b)

C-5 (b)

1-627-254-12 COMPONENT SIDE

CP-130

Ser. No. 10101 –

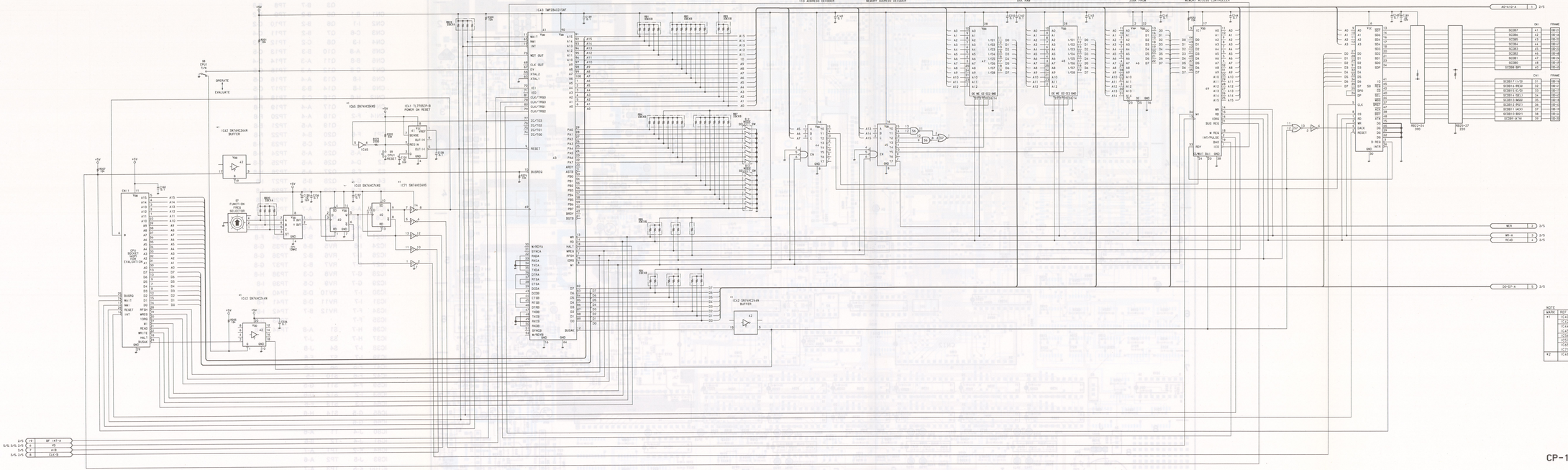
CP-130 1-627-254-12

BZ1	J-8	IC13	K-7	IC70	H-2	Q9	C-2	TP7	B-7
		IC14	J-7	IC71	F-5	Q10	B-3	TP8	B-8
CN1	B-1	IC15	K-7	IC73	K-3	Q11	A-3	TP9	B-2
CN2	I-1	IC16	K-7	IC74	J-3	Q12	A-3	TP10	C-2
CN3	C-6	IC17	E-8	IC75	I-3	Q13	A-4	TP11	C-4
CN4	I-3	IC18	F-8	IC76	J-2	Q14	B-3	TP12	C-3
CN5	A-8	IC19	E-8	IC77	K-5	Q15	C-3	TP13	C-5
CN6	B-8	IC20	E-8	IC78	J-5	Q16	C-3	TP14	D-4
CN7	G-8	IC21	H-8	IC79	I-5	Q17	A-4	TP15	C-5
CN8	I-8	IC22	G-8	IC80	J-4	Q18	A-4	TP16	C-5
CN9	I-8	IC23	G-8	IC81	I-4	Q19	A-5	TP17	C-5
CNI1	E-6	IC24	I-8	IC82	K-2	Q20	B-4	TP18	E-8
CNI2	H-6	IC25	I-8	IC83	K-1	Q21	C-4	TP19	F-8
CNI3	D-3	IC26	E-7	IC84	K-2	Q22	C-4	TP20	F-8
CNI4	F2	IC27	E-7	IC85	K-2	Q23	C-5	TP21	E-8
		IC28	G-7	IC86	I-3	Q24	C-5	TP22	F-8
CP1	F-6	IC29	G-7	IC87	I-6	Q25	A-5	TP23	H-8
		IC30	I-7	IC88	J-6	Q26	A-5	TP24	H-8
D1	A-7	IC31	I-7	IC89	J-6	Q27	A-5	TP25	G-8
D2	A-7	IC32	H-8	IC90	I-6	Q28	B-5	TP26	H-8
D3	B-7	IC33	F-8	IC91	J-6	Q29	J-8	TP27	I-8
D4	B-7	IC34	F-7	IC92	I-6			TP28	I-8
D5	A-2	IC35	F-7	IC93	J-5	RV1	A-7	TP29	I-8
D6	B-2	IC36	H-7	IC94	J-6	RV2	A-7	TP30	I-8
D7	C-2	IC37	H-7	IC95	K-6	RV3	A-6	TP31	F-8
D8	A-3	IC38	I-7	IC96	K-6	RV4	B-7	TP32	F-8
D9	B-3	IC39	I-7	IC97	K-6	RV5	B-6	TP33	E-8
D10	C-4	IC40	F-5	IC99	J-6	RV6	B-2	TP34	F-8
D11	A-3	IC41	F-5	IC100	K-5	RV7	B-3	TP35	G-8
D12	C-3	IC42	F-6	IC102	D-8	RV8	C-3	TP36	G-8
D13	C-3	IC43	E-5	IC103	D-8	RV9	C-5	TP37	G-8
D14	B-5	IC44	F-4	IC104	C-8	RV10	D-5	TP38	H-8
D15	C-4	IC45	F-3	IC105	C-8	RV11	D-8	TP39	I-8
D16	C-5	IC47	F-3	IC106	C-7	RV12	B-7	TP40	I-8
D17	A-4	IC48	D-3	IC107	C-7			TP41	I-8
D18	B-6	IC49	F-2	IC108	C-7	S1	A-8	TP42	I-8
D19	A-5	IC50	D-2	IC201	I-6	S2	B-8	TP43	D-8
		IC51	H-5	IC202	K-6	S3	J-7	TP44	D-8
E1	A-5	IC52	H-4			S4	K-8		
E2	D-4	IC53	H-4	L2	A-8	S8	E-5		
E3	F-8	IC54	G-6	L4	B-8	S9	F-5		
E4	G-4	IC55	H-4	L5	A-2	S10	I-5		
E5	K-6	IC56	H-4	L6	C-2	S12	D-6		
		IC57	H-3	L7	C-3	S13	E-6		
IC1	A-7	IC59	F-4	L8	C-3	S14	H-6		
IC2	A-6	IC60	F-3	L9	C-4				
IC3	A-8	IC61	H-3	L10	C-5	T1	A-6		
IC4	B-7	IC62	G-5	L11	C-5	T2	B-6		
IC5	B-6	IC63	I-2						
IC6	B-8	IC64	I-3	Q2	A-8	TP1	A-7		
IC7	A-2	IC65	G-5	Q4	B-8	TP2	A-6		
IC8	A-3	IC66	G-6	Q5	B-2	TP3	A-7		
IC9	A-3	IC67	I-2	Q6	B-2	TP4	A-8		
IC10	C-4	IC68	H-1	Q7	B-2	TP5	B-7		
IC11	J-7	IC69	H-2	Q8	C-2	TP6	B-6		

C-6 (b)

CP-130 (1/5) CP-130 (1/5)

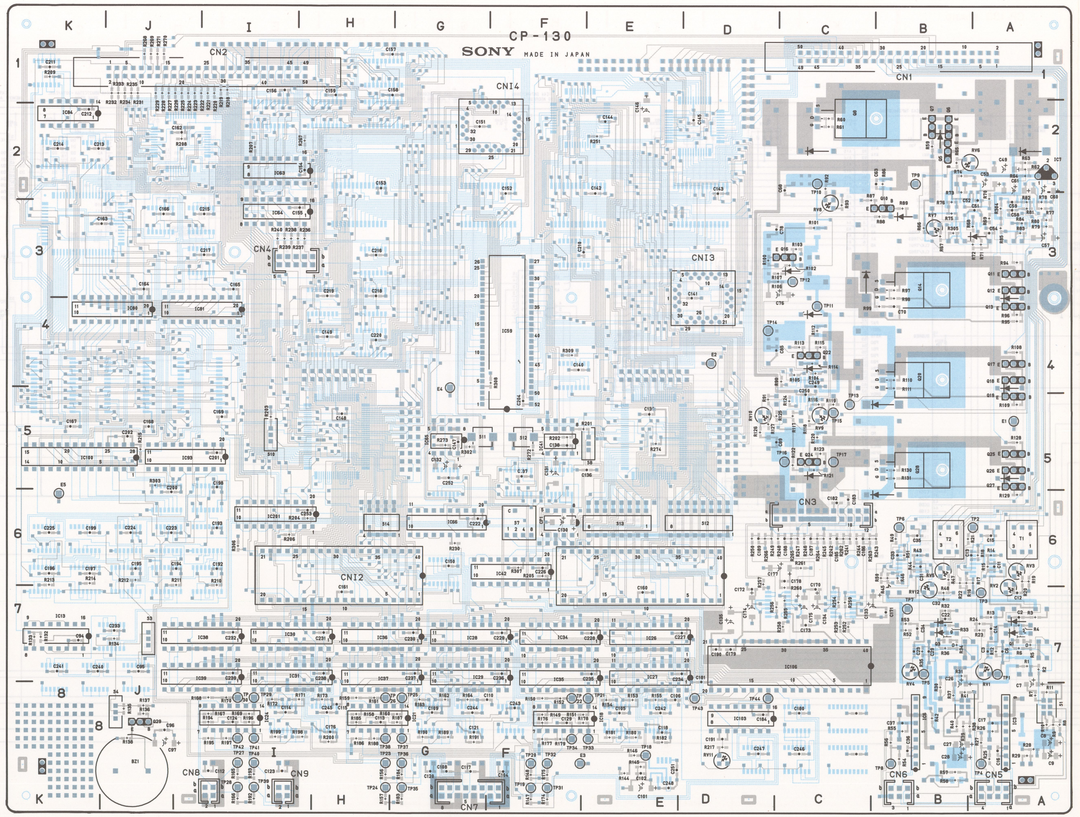
CP-130 (1/5) BOARD



NOTE MARK	REF No.	CHANGE INFORMATION	SER No.
*1	IC40	TC74HC74F → SN74HC74NS	10301 ~
	IC42	TC74HC244F → SN74HC244N	
	IC44	TC74HC138F → SN74HC138NS	
	IC45	TC74HC00F → SN74HC00NS	
	IC46	TC74HC02F → SN74HC02NS	
	IC51	TC74HC04F → SN74HC04NS	
	IC65	TC74HC04AF → SN74HC04ANS	
*2	IC49	M5M27C256A-20TV → M5M27C256-20TV/CAML	10401 ~

CP-130 (1/5) BOARD

CP-130 BOARD



1-627-254-11 SOLDERING SIDE

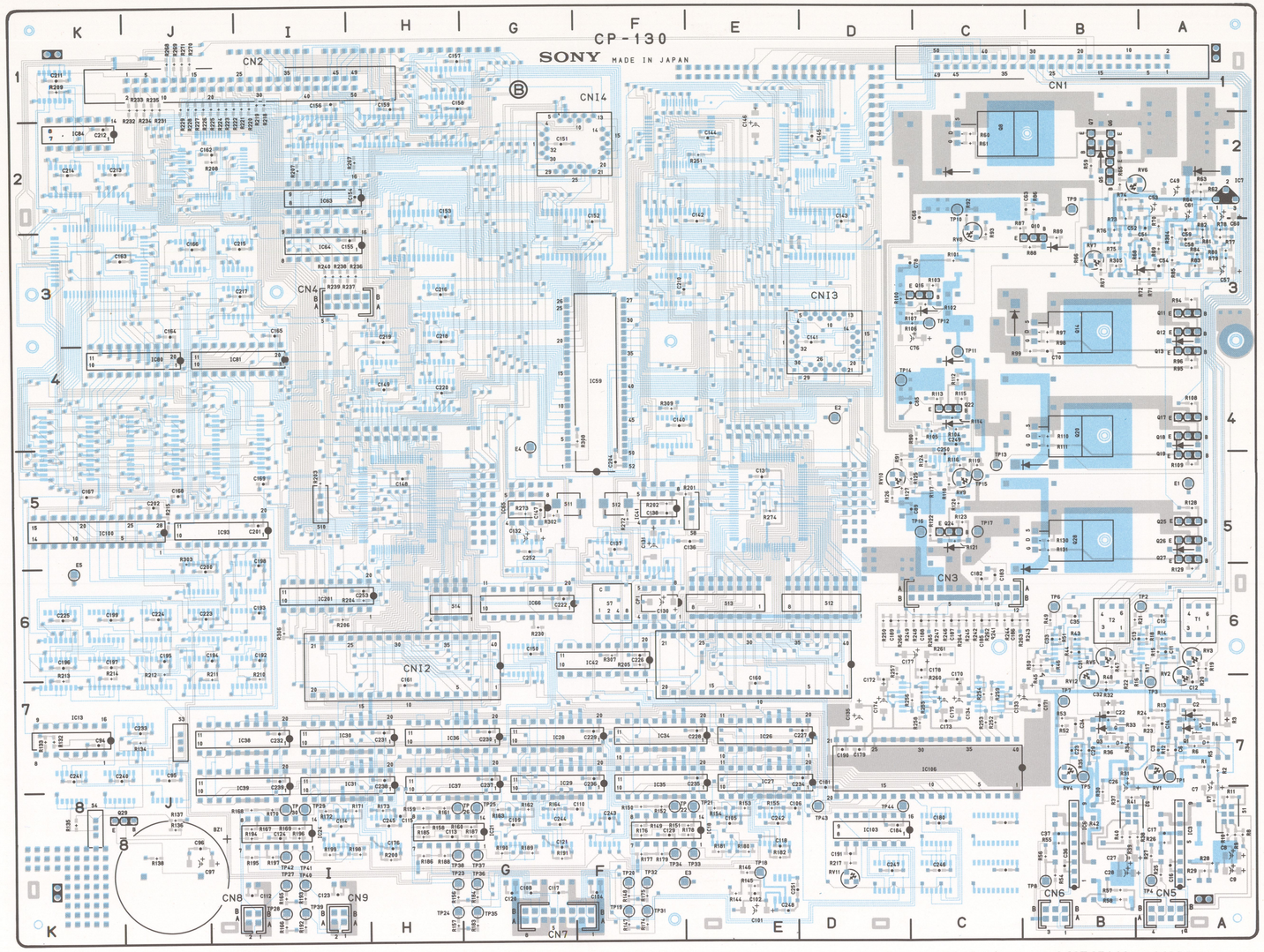
CP-130 CP-130

Ser. No. 10001 – 10009

CP-130 1-627-254-11

BZ1	J-8	Q1	A-7	TP7	B-7
		Q3	B-7	TP8	B-8
CN1	B-1	Q5	B-2	TP9	B-2
CN2	I-1	Q6	B-2	TP10	C-2
CN3	C-6	Q7	B-2	TP11	C-4
CN4	I-3	Q8	C-2	TP12	C-3
CN5	A-8	Q10	B-3	TP13	C-5
CN6	B-8	Q11	A-3	TP14	D-4
CN7	G-8	Q12	A-3	TP15	C-5
CN8	I-8	Q13	A-4	TP16	C-5
CN9	I-8	Q14	B-3	TP17	C-5
CNI2	H-6	Q16	C-3	TP18	E-8
CN13	D-4	Q17	A-4	TP19	F-8
CNI4	F-2	Q18	A-4	TP20	F-8
		Q19	A-5	TP21	E-8
CP1	F-6	Q20	B-4	TP22	F-8
		Q24	C-5	TP23	H-8
E1	A-5	Q25	A-5	TP24	H-8
E2	D-4	Q26	A-5	TP25	G-8
E3	F-8	Q27	A-5	TP26	H-8
E4	G-4	Q28	B-5	TP27	I-8
E5	K-6	Q29	J-8	TP28	I-8
				TP29	I-8
IC3	A-8	RV1	A-7	TP30	I-8
IC6	B-8	RV2	A-6	TP31	F-8
IC7	A-2	RV3	A-6	TP32	F-8
IC21	H-8	RV4	B-7	TP34	F-8
IC24	I-8	RV5	B-6	TP35	G-8
IC26	E-7	RV6	B-2	TP36	G-8
IC27	E-7	RV7	B-3	TP37	G-8
IC28	G-7	RV8	C-3	TP38	H-8
IC29	G-7	RV9	C-5	TP39	I-8
IC30	I-7	RV10	D-5	TP40	I-8
IC31	I-7	RV11	D-8	TP41	I-8
IC34	F-7	RV12	B-7	TP42	I-8
IC35	F-7			TP43	D-8
IC36	H-7	S1	A-8	TP44	D-8
IC37	H-7	S3	J-7		
IC38	I-7	S4	J-8		
IC39	I-7	S7	F-6		
IC41	F-5	S8	E-5		
IC42	F-6	S10	I-5		
IC59	F-4	S11	G-5		
IC63	I-2	S12	D-5		
IC64	I-3	S13	E-6		
IC65	G-5	S14	H-6		
IC66	G-6				
IC80	J-4	T1	A-6		
IC81	J-4	T2	B-6		
IC84	K-2	TP1	A-7		
IC93	J-5	TP2	A-6		
IC100	K-5	TP3	A-7		
IC103	D-8	TP4	A-8		
IC106	C-7	TP5	B-7		
IC201	I-6	TP6	B-6		

CP-130 BOARD



C-12 (b)

C-13 (b)

1-627-254-12 SOLDERING SIDE

Ser. No. 10101 –

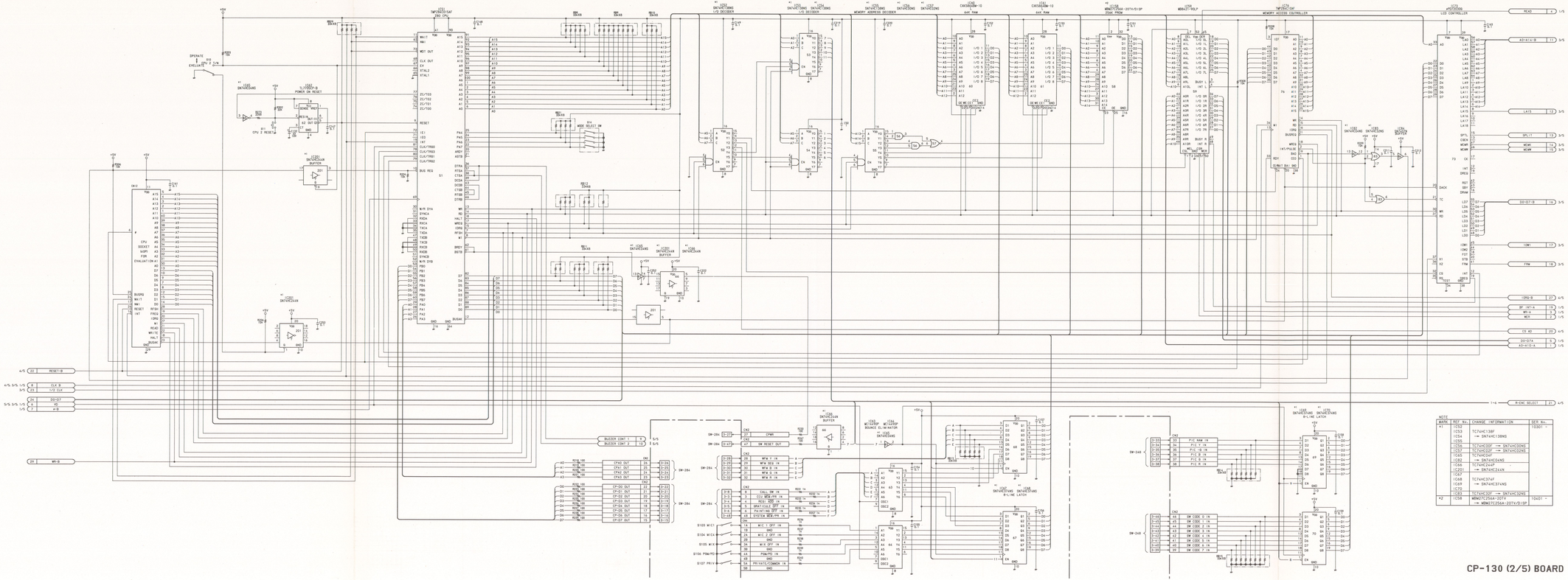
CP-130 1-627-254-12

BZ1	J-8	IC103	D-8	TP1	A-7
		IC106	C-7	TP2	A-6
CN1	B-1	IC201	I-6	TP3	A-7
CN2	I-1			TP4	A-8
CN3	C-6	Q1	A-7	TP5	B-7
CN4	I-3	Q3	B-7	TP6	B-6
CN5	A-8	Q5	B-2	TP7	B-7
CN6	B-8	Q6	B-2	TP8	B-8
CN7	G-8	Q7	B-2	TP9	B-2
CN8	I-8	Q8	C-2	TP10	C-2
CN9	I-8	Q10	B-3	TP11	C-4
CNI1	E-6	Q11	A-3	TP12	C-3
CNI2	H-6	Q12	A-3	TP13	C-5
CNI3	D-3	Q13	A-4	TP14	D-4
CNI4	F-2	Q14	B-3	TP15	C-5
		Q16	C-3	TP16	C-5
CP1	F-6	Q17	A-4	TP17	C-5
		Q18	A-4	TP18	E-8
E1	A-5	Q19	A-5	TP19	F-8
E2	D-4	Q20	B-4	TP20	F-8
E3	F-8	Q22	C-4	TP21	E-8
E4	G-4	Q24	C-5	TP22	F-8
E5	K-6	Q25	A-5	TP23	H-8
		Q26	A-5	TP24	H-8
IC3	A-8	Q27	A-5	TP25	G-8
IC6	B-8	Q28	B-5	TP26	H-8
IC7	A-2	Q29	J-8	TP27	I-8
IC13	K-7			TP28	I-8
IC18	F-8	RV1	A-7	TP29	I-8
IC21	H-8	RV2	A-7	TP30	I-8
IC24	I-8	RV3	A-6	TP31	F-8
IC26	E-7	RV4	B-7	TP33	E-8
IC27	E-7	RV5	B-6	TP32	F-8
IC28	G-7	RV6	B-2	TP34	F-8
IC29	G-7	RV7	B-3	TP35	G-8
IC30	I-7	RV8	C-3	TP36	G-8
IC31	I-7	RV9	C-5	TP37	G-8
IC34	F-7	RV10	D-5	TP38	H-8
IC35	F-7	RV11	D-8	TP39	I-8
IC36	H-7	RV12	B-7	TP40	I-8
IC37	H-7			TP41	I-8
IC38	I-7	S1	A-8	TP42	I-8
IC39	I-7	S3	J-7	TP43	D-8
IC41	F-5	S4	K-8	TP44	D-8
IC42	F-6	S7	F-6		
IC59	F-4	S8	E-5		
IC63	I-2	S9	F-5		
IC64	I-3	S10	I-5		
IC65	G-5	S11	G-5		
IC66	G-6	S12	D-6		
IC80	J-4	S13	E-6		
IC81	I-4	S14	H-6		
IC84	K-2				
IC93	J-5	T1	A-6		
IC100	K-5	T2	B-6		

C-14 (b)

CP-130 (2/5) CP-130 (2/5) CP-130 (2/5) CP-130 (2/5)

CP-130 (2/5) BOARD



CP-130 (2/5) BOARD

NOTE MARK	REF No.	CHANGE INFORMATION	SER No.
*1	IC52		10301 -
	IC53	TC74HC138F	
	IC54	→ SN74HC138NS	
	IC55		
	IC56	TC74HC00F → SN74HC00NS	
	IC57	TC74HC02F → SN74HC02NS	
	IC60	TC74HC04F	
	IC62	→ SN74HC04NS	
	IC66	TC74HC244F	
	IC201	→ SN74HC244N	
	IC67		
	IC68	TC74HC374F	
	IC69	→ SN74HC374NS	
	IC70		
	IC83	TC74HC32F → SN74HC32NS	
*2	IC58	MBM27C256A-20TV → MBM27C256A-20TV/D15P	10401 -

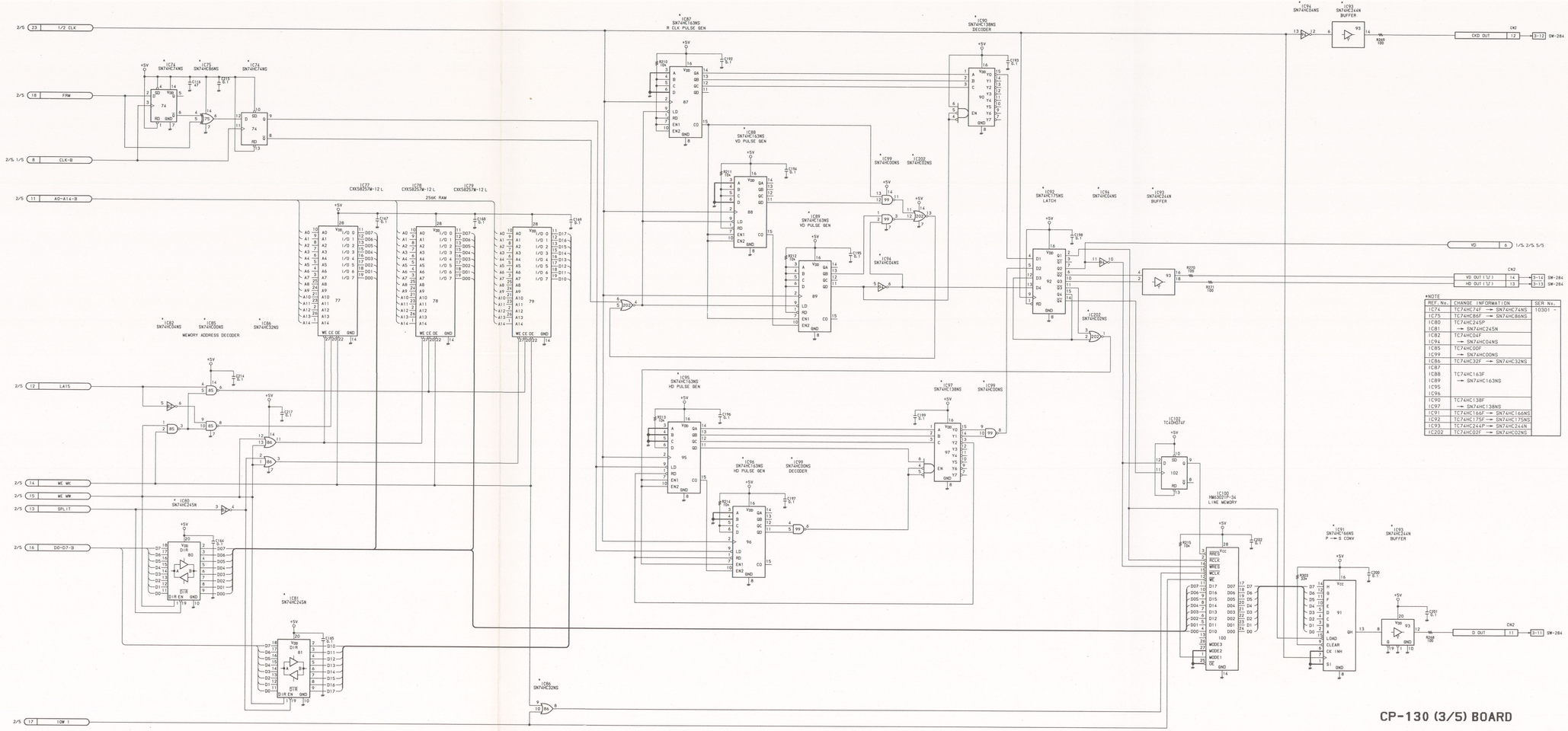
HDCO-300 (J. E)

C-15 C-16 C-17 C-18

A B C D E F G H I J K L M

B-HDCO300-CP130M#2

CP-130 (3/5) BOARD



CP-130 (3/5) BOARD

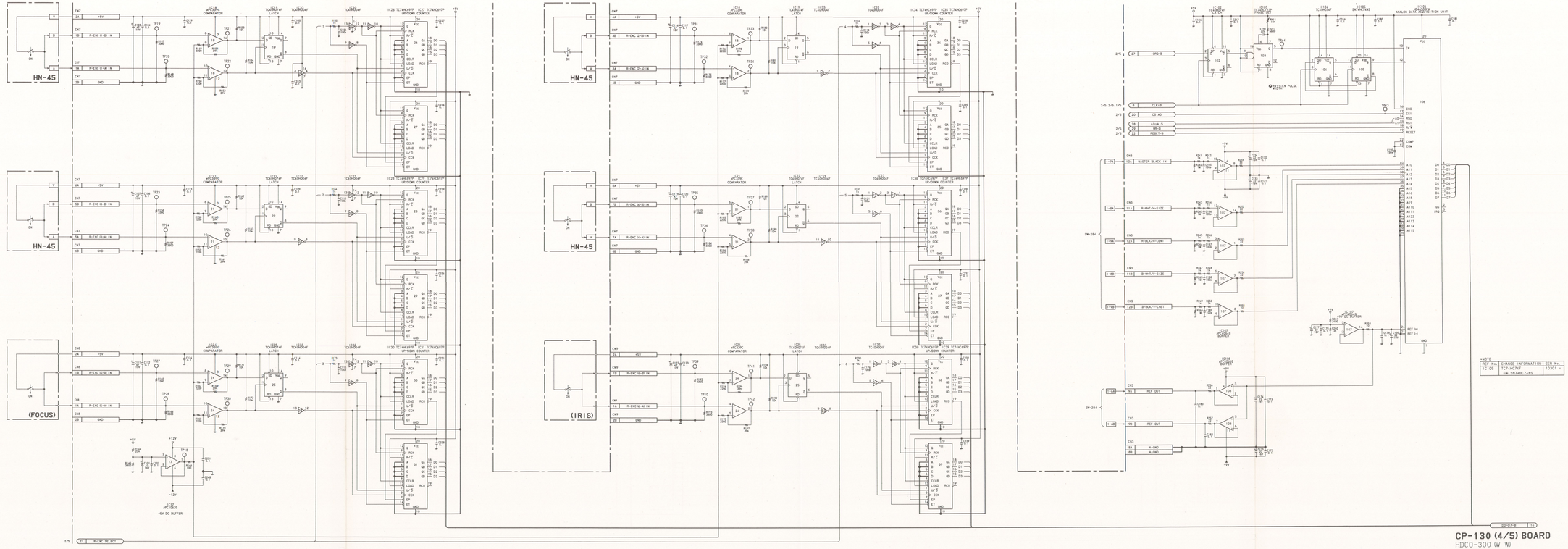
HDCO-300 (J, E)

C-23 C-24 C-25

B-HDC0300-CP130M#3

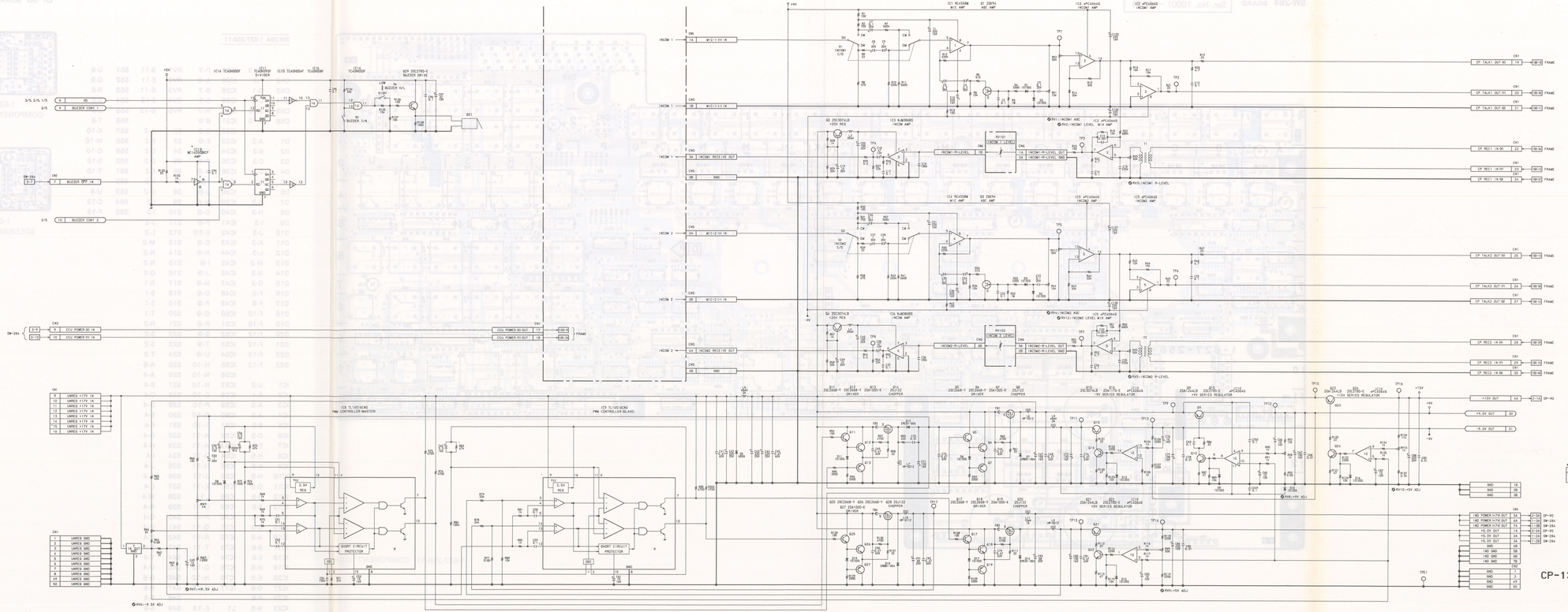
CP-130 (4/5) CP-130 (4/5)

CP-130 (4/5) BOARD



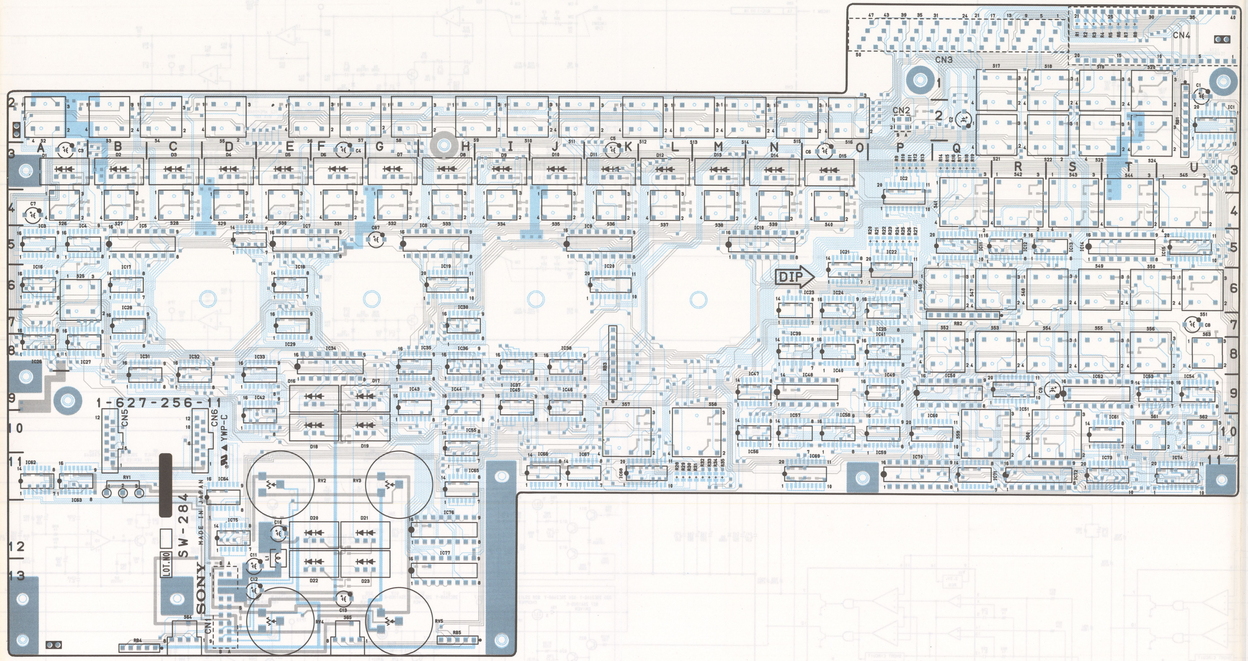
CP-130 (5/5) CP-130 (5/5)

CP-130 (5/5) BOARD



SW-284 BOARD

Ser. No. 10001 – 10009

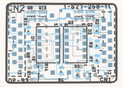


1-627-256-11 COMPONENT SIDE

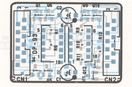
SW-284 1-627-256-11

CN1	D-13	IC25	P-7	RV1	B-11	S51	U-6
CN2	P-2	IC26	A-8	RV2	E-11	S52	Q-8
CN3	Q-1	IC28	B-7	RV3	G-11	S53	R-8
CN4	U-1	IC29	E-7	RV4	E-13	S54	S-8
CN5	B-10	IC30	H-7	RV5	G-13	S55	S-8
CN6	C-10	IC31	B-9			S56	T-8
		IC32	C-9	S2	A-2	S57	K-10
D1	A-3	IC33	E-9	S3	B-2	S58	M-10
D2	B-3	IC34	F-8	S4	C-2	S59	Q-10
D3	C-3	IC35	G-8	S5	D-2	S60	S-10
D4	D-3	IC36	H-8	S6	E-2	S61	T-10
D5	E-3	IC37	I-8	S7	F-2	S62	U-10
D6	F-3	IC38	J-8	S8	G-2	S63	U-8
D7	G-3	IC39	N-8	S9	I-2	S64	C-13
D8	H-3	IC40	O-8	S10	I-2	S65	F-13
D9	I-3	IC41	P-8	S11	J-2		
D10	J-3	IC42	E-10	S12	L-2		
D11	K-3	IC43	G-9	S13	M-2		
D12	L-3	IC44	H-9	S14	N-2		
D13	M-3	IC45	I-9	S15	N-2		
D14	N-3	IC46	J-9	S16	O-2		
D15	O-3	IC47	N-9	S17	R-1		
D16	F-9	IC48	O-9	S18	S-1		
D17	F-9	IC49	P-9	S19	S-1		
D18	F-10	IC50	Q-9	S20	T-1		
D19	F-10	IC51	R-9	S21	R-2		
D20	F-12	IC52	S-9	S22	S-2		
D21	F-12	IC53	T-9	S23	S-2		
D22	F-13	IC54	U-9	S24	T-2		
D23	F-13	IC55	H-10	S25	A-6		
		IC56	N-10	S26	A-4		
IC1	U-2	IC57	N-10	S27	B-4		
IC2	P-4	IC58	O-10	S28	C-4		
IC3	A-5	IC59	P-10	S29	D-4		
IC4	A-5	IC60	Q-10	S30	E-4		
IC5	B-5	IC61	T-10	S31	F-4		
IC6	D-5	IC62	A-11	S32	G-4		
IC7	E-5	IC63	A-11	S33	H-4		
IC8	H-5	IC64	D-11	S34	I-4		
IC9	K-5	IC65	H-11	S35	J-4		
IC10	N-5	IC66	J-11	S36	K-4		
IC11	Q-5	IC67	K-11	S37	L-4		
IC12	R-5	IC68	L11	S38	M-4		
IC13	S-5	IC69	O-11	S39	N-4		
IC14	T-5	IC70	P-11	S40	O-4		
IC15	U-5	IC71	Q-11	S41	Q-4		
IC16	A-6	IC72	R-11	S42	R-4		
IC17	B-6	IC73	T-11	S43	S-4		
IC18	E-6	IC74	U-11	S44	T-4		
IC19	H-6	IC75	D-12	S45	U-4		
IC20	K-6	IC76	H-12	S46	Q-6		
IC21	Q-6	IC77	H-13	S47	R-6		
IC22	P-6			S48	S-6		
IC23	N-6	L1	E-13	S49	S-6		
IC24	O-7			S50	T-6		

DP-93 BOARD



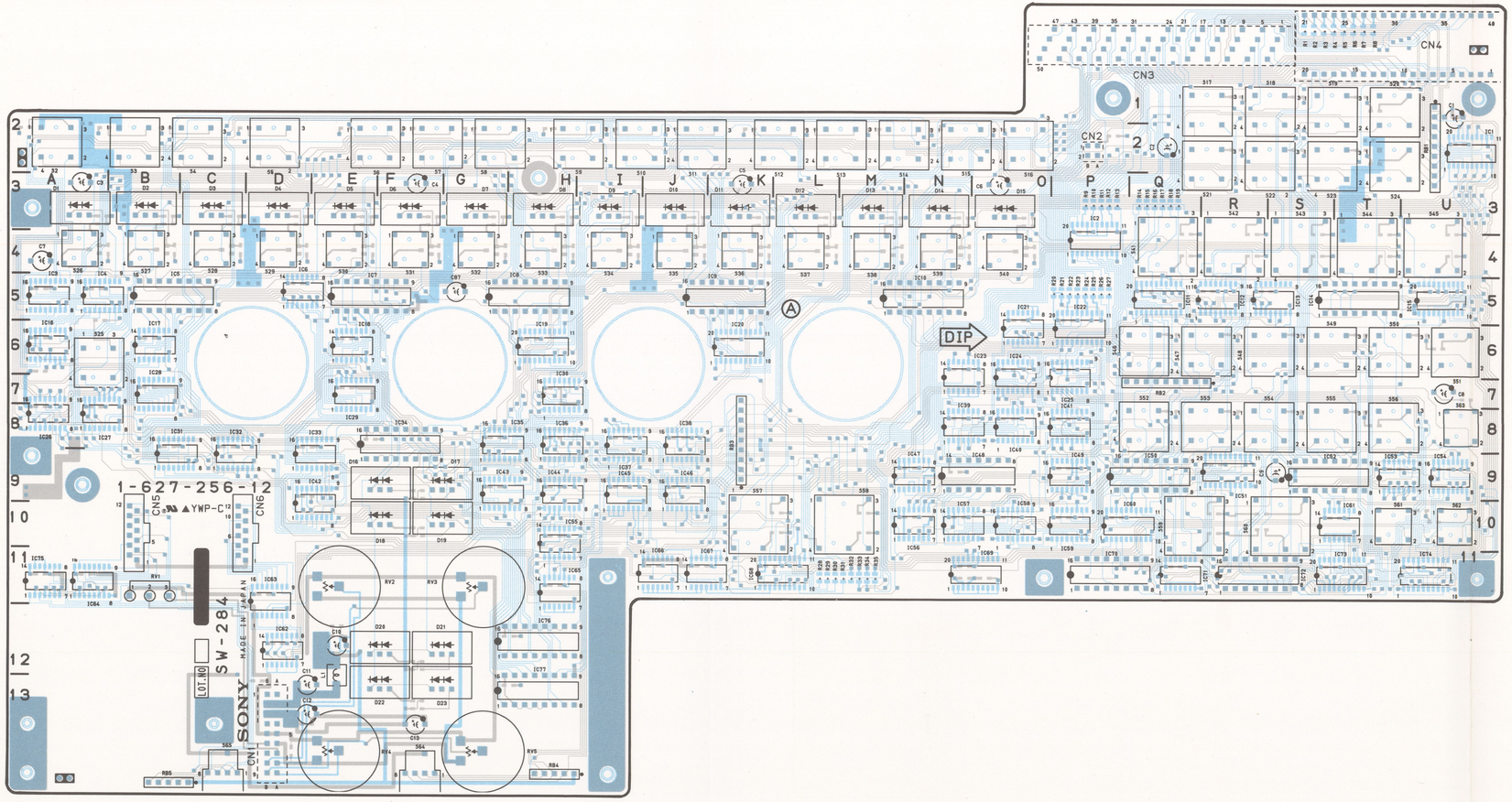
1-627-258-11
COMPONENT SIDE



1-627-258-11
SOLDERING SIDE

SW-284 BOARD

Ser. No. 10101 – 10120

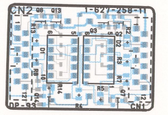


1-627-256-12 COMPONENT SIDE

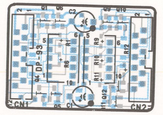
SW-284 1-627-256-12

CN1	D-13	IC25	P-7	RV1	B-11	S51	U-6
CN2	P-2	IC26	A-8	RV2	E-11	S52	Q-8
CN3	Q-1	IC27	A-8	RV3	G-11	S53	R-8
CN4	U-1	IC28	B-7	RV4	E-13	S54	S-8
CN5	B-10	IC29	E-7	RV5	G-13	S55	S-8
CN6	C-10	IC30	H-7			S56	T-8
		IC31	B-9	S2	A-2	S57	K-10
D1	A-3	IC32	C-9	S3	B-2	S58	M-10
D2	B-3	IC33	E-9	S4	C-2	S59	Q-10
D3	C-3	IC34	F-8	S5	D-2	S60	S-10
D4	D-3	IC35	G-8	S6	E-2	S61	T-10
D5	E-3	IC36	H-8	S7	F-2	S62	U-10
D6	F-3	IC37	I-8	S8	G-2	S63	U-8
D7	G-3	IC38	J-8	S9	I-2	S64	F-13
D8	H-3	IC39	N-8	S10	I-2	S65	C-13
D9	I-3	IC40	O-8	S11	J-2		
D10	J-3	IC41	P-8	S12	L-2		
D11	K-3	IC42	E-10	S13	M-2		
D12	L-3	IC43	G-9	S14	N-2		
D13	M-3	IC44	H-9	S15	N-2		
D14	N-3	IC45	I-9	S16	O-2		
D15	O-3	IC46	J-9	S17	R-1		
D16	F-9	IC47	N-9	S18	S-1		
D17	F-9	IC48	O-9	S19	S-1		
D18	F-10	IC49	P-9	S20	T-1		
D19	F-10	IC50	Q-9	S21	R-2		
D20	F-12	IC51	R-9	S22	S-2		
D21	F-12	IC52	S-9	S23	S-2		
D22	F-13	IC53	T-9	S24	T-2		
D23	F-13	IC54	U-9	S25	A-6		
		IC55	H-10	S26	A-4		
IC1	U-2	IC56	N-10	S27	B-4		
IC2	P-4	IC57	N-10	S28	C-4		
IC3	A-5	IC58	O-10	S29	D-4		
IC4	A-5	IC59	P-10	S30	E-4		
IC5	B-5	IC60	Q-10	S31	F-4		
IC6	D-5	IC61	T-10	S32	G-4		
IC7	E-5	IC62	D-12	S33	H-4		
IC8	H-5	IC63	D-11	S34	I-4		
IC9	K-5	IC64	A-11	S35	J-4		
IC10	N-5	IC65	H-11	S36	K-4		
IC11	Q-5	IC66	J-11	S37	L-4		
IC12	R-5	IC67	K-11	S38	M-4		
IC13	S-5	IC68	L-11	S39	N-4		
IC14	T-5	IC69	O-11	S40	O-4		
IC15	U-5	IC70	P-11	S41	Q-4		
IC16	A-6	IC71	Q-11	S42	R-4		
IC17	B-6	IC72	R-11	S43	S-4		
IC18	E-6	IC73	T-11	S44	T-4		
IC19	H-6	IC74	U-11	S45	U-4		
IC20	K-6	IC75	A-11	S46	Q-6		
IC21	O-6	IC76	H-12	S47	R-6		
IC22	P-6	IC77	H-13	S48	S-6		
IC23	N-6			S49	S-6		
IC24	O-7	L1	E-13	S50	T-6		

DP-93 BOARD



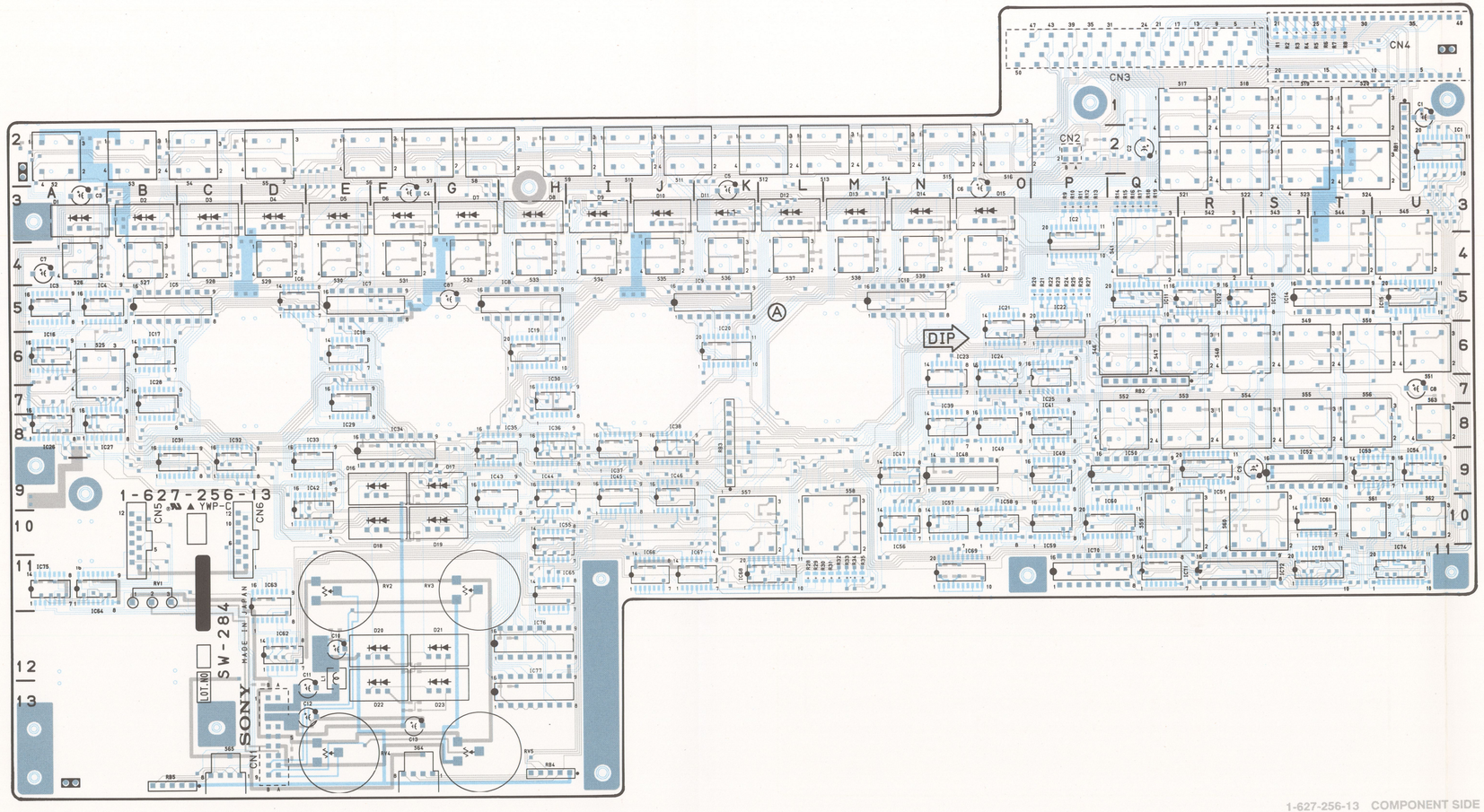
1-627-258-11
COMPONENT SIDE



1-627-258-11
SOLDERING SIDE

SW-284 BOARD

Serial No. 10201 –

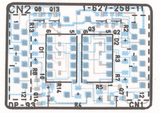


1-627-256-13 COMPONENT SIDE

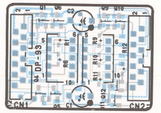
SW-284 1-627-256-13

CN1	D13	IC11	Q5	RB1	U2	S46	P6
CN2	P2	IC12	R5	RB2	Q7	S47	Q6
CN4	U1	IC13	S5	RB3	K8	S48	R6
CN5	B10	IC14	S5	RB4	H13	S49	S6
CN6	D10	IC15	U5	RB5	B13	S50	T5
		IC16	A6			S51	U7
D1	A3	IC17	B6	RV1	B11	S52	Q7
D2	B3	IC18	E6	RV2	F11	S53	R7
D3	C3	IC19	H6	RV3	F11	S54	S7
D4	D3	IC20	K6	RV4	F13	S55	S7
D5	E3	IC21	O5	RV5	H13	S56	T7
D6	F3	IC22	P5			S57	K9
D7	G3	IC23	O6	S3	B2	S58	M9
D8	H3	IC24	O6	S4	C2	S59	Q10
D9	I3	IC25	P7	S5	D2	S60	R10
D10	J3	IC26	A8	S6	E2	S61	T10
D11	K3	IC27	A8	S7	F2	S62	U10
D12	L3	IC28	B7	S8	G2	S63	U7
D13	M3	IC29	E8	S9	H2	S64	F13
D14	N3	IC30	H6	S10	I2	S65	C13
D15	O3	IC31	B9	S11	J2		
D16	E9	IC32	C8	S12	L2		
D17	G9	IC33	E8	S13	M2		
D18	F10	IC34	F8	S14	N2		
D19	F10	IC35	H8	S15	N2		
D20	F12	IC36	H8	S16	O2		
D21	F12	IC37	I9	S17	R1		
D22	F13	IC38	J8	S18	S1		
D23	F13	IC39	N7	S19	S1		
D24	A4	IC40	O8	S20	T1		
D25	B4	IC41	P7	S21	R3		
D26	C4	IC42	E9	S22	S3		
D27	D4	IC43	G9	S23	S3		
D28	E4	IC44	H9	S24	T3		
D29	F4	IC45	I9	S25	A6		
D30	G4	IC60	Q10	S26	A4		
D31	H4	IC61	T10	S27	B4		
D32	I4	IC62	D12	S28	C4		
D33	J4	IC63	D11	S29	D4		
D34	K4	IC64	A11	S30	E4		
D35	L4	IC65	H11	S31	F4		
D36	M4	IC66	J11	S32	G4		
D37	N4	IC67	J11	S33	H4		
D38	O4	IC68	K11	S34	I4		
		IC69	O11	S35	J4		
IC1	U2	IC70	P11	S36	K4		
IC2	P3	IC71	R11	S37	L4		
IC3	A5	IC72	S11	S38	M4		
IC4	A5	IC73	T11	S39	N4		
IC5	B5	IC74	U11	S40	O4		
IC6	D4	IC75	A11	S41	Q4		
IC7	E4	IC76	H12	S42	R3		
IC8	H5	IC77	H12	S43	S3		
IC9	K5			S44	T3		
IC10	N5	L1	E12	S45	U3		

DP-93 BOARD



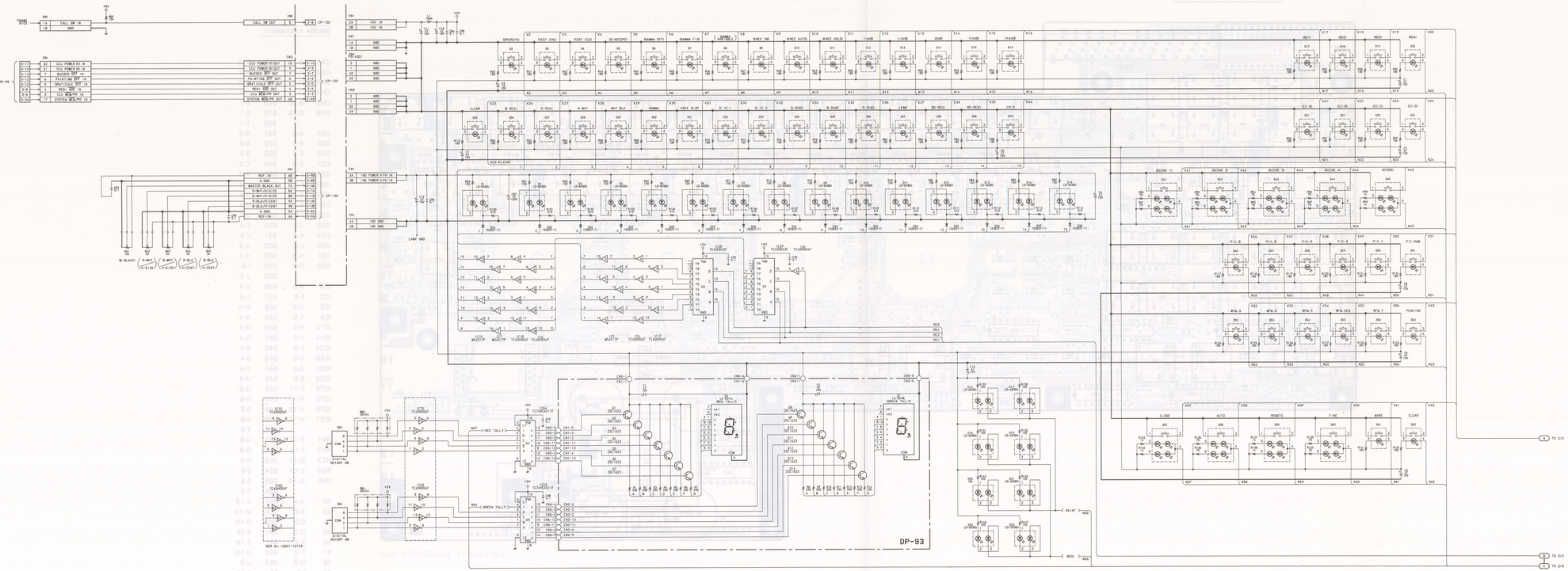
1-627-258-11
COMPONENT SIDE



1-627-258-11
SOLDERING SIDE

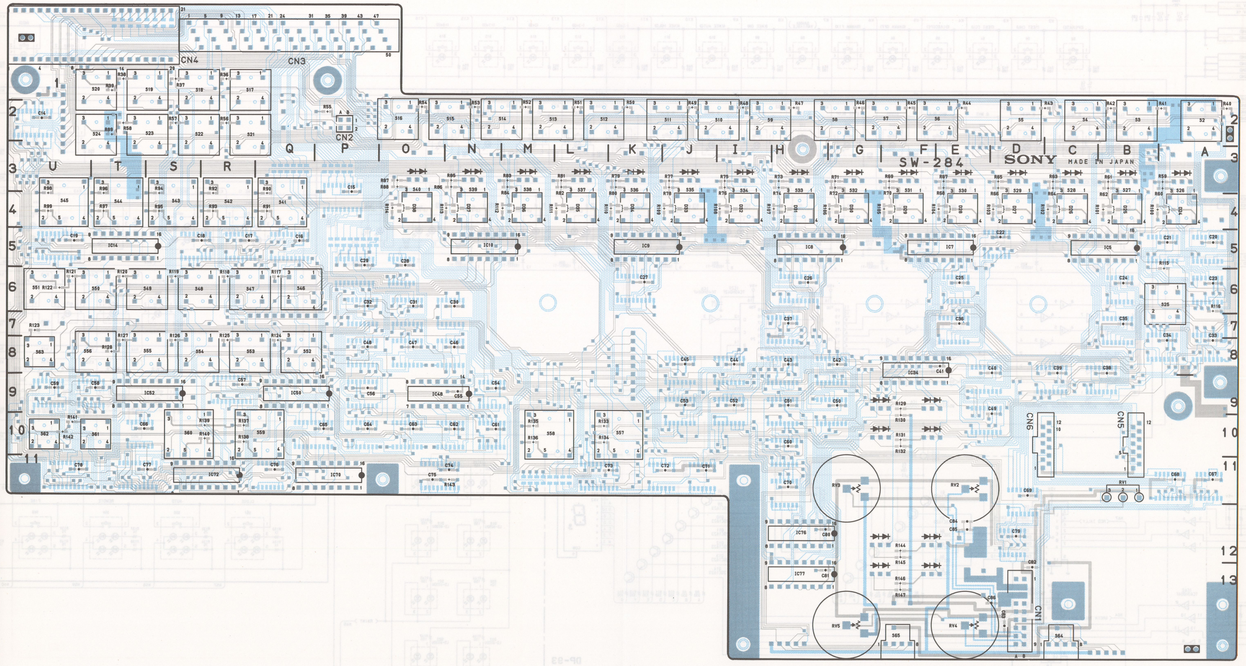
SW-284 (1/2) DP-93 SW-284 (1/2) DP-93

SW-284 (1/2) BOARD
DP-93 BOARD



SW-284 BOARD

Ser. No. 10001 – 10009



1-627-256-11 SOLDERING SIDE

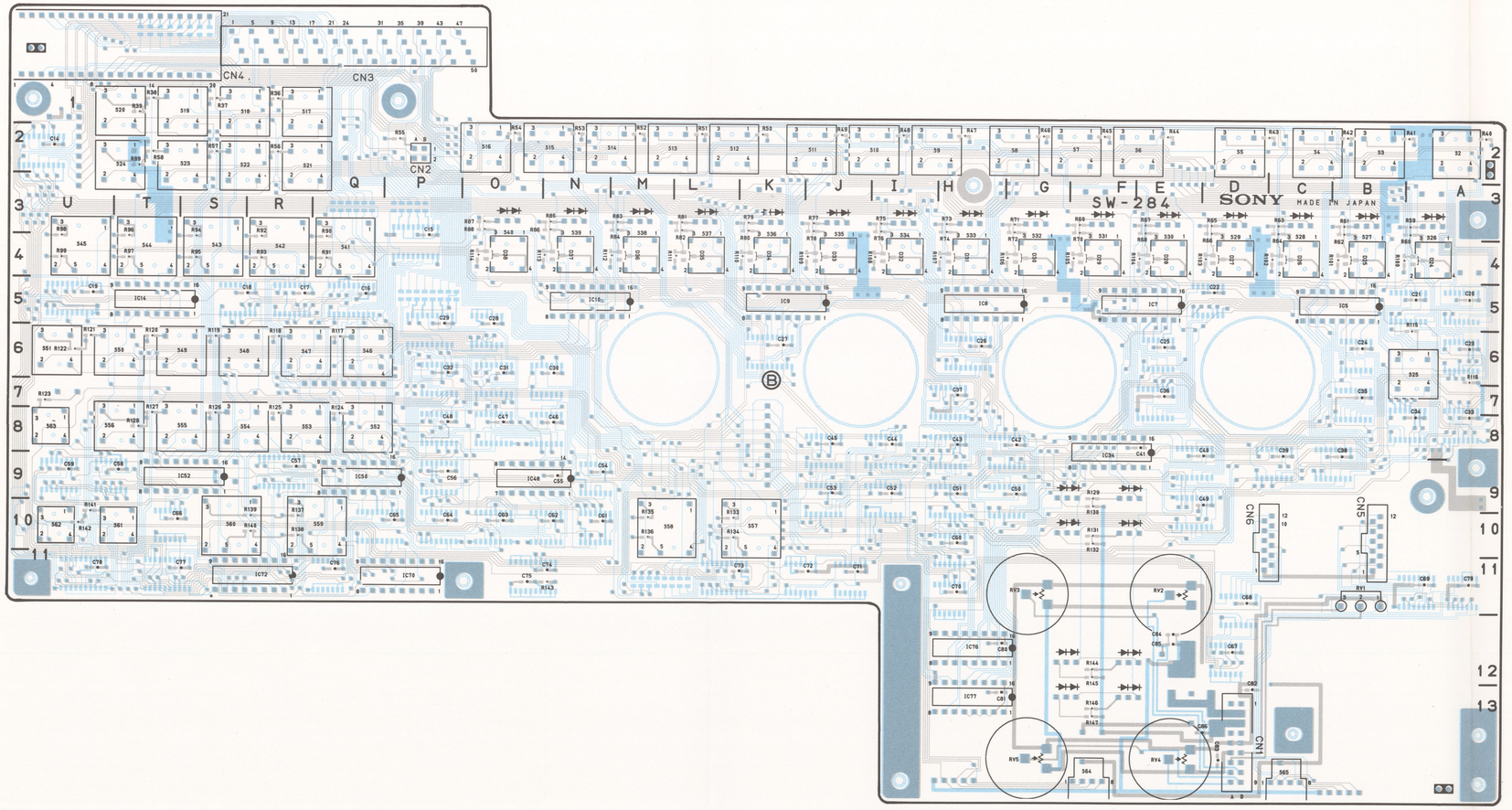
SW-284 1-627-256-11

CN1	D-13	S14	N-2
CN2	P-2	S15	N-2
CN3	Q-1	S16	O-2
CN4	U-1	S17	R-1
CN5	B-10	S18	S-1
CN6	C-10	S19	S-1
		S20	T-1
D24	A-3	S21	R-2
D25	B-3	S22	S-2
D26	C-3	S23	S-2
D27	D-3	S24	T-2
D28	E-3	S25	A-6
D29	F-3	S26	A-4
D30	G-3	S27	B-4
D31	H-3	S28	C-4
D32	I-3	S29	D-4
D33	J-3	S30	E-4
D34	K-3	S31	F-4
D35	L-3	S32	G-4
D37	N-3	S33	H-4
D38	O-3	S34	I-4
		S35	J-4
IC5	B-5	S36	K-4
IC7	E-5	S37	L-4
IC8	H-5	S38	M-4
IC9	K-5	S39	N-4
IC10	N-5	S40	O-4
IC14	T-5	S41	Q-4
IC34	F-8	S42	R-4
IC48	O-9	S43	S-4
IC50	Q-9	S44	T-4
IC52	S-9	S45	U-4
IC70	P-11	S46	Q-6
IC72	R-11	S47	R-6
IC76	H-12	S48	S-6
IC77	H-13	S49	S-6
		S50	T-6
RV1	B-11	S51	U-6
RV2	E-11	S52	Q-8
RV3	G-11	S53	R-8
RV4	E-13	S54	S-8
RV5	G-13	S55	S-8
		S56	T-8
S2	A-2	S57	K-10
S3	B-2	S58	M-10
S4	C-2	S59	Q-10
S5	D-2	S60	S-10
S6	E-2	S61	T-10
S7	F-2	S62	U-10
S8	G-2	S63	U-8
S9	I-2	S64	C-13
S10	I-2	S65	F-13
S11	J-2		
S12	L-2		
S13	M-2		

SW-284 SW-284

SW-284 BOARD

Ser. No. 10101 – 10120



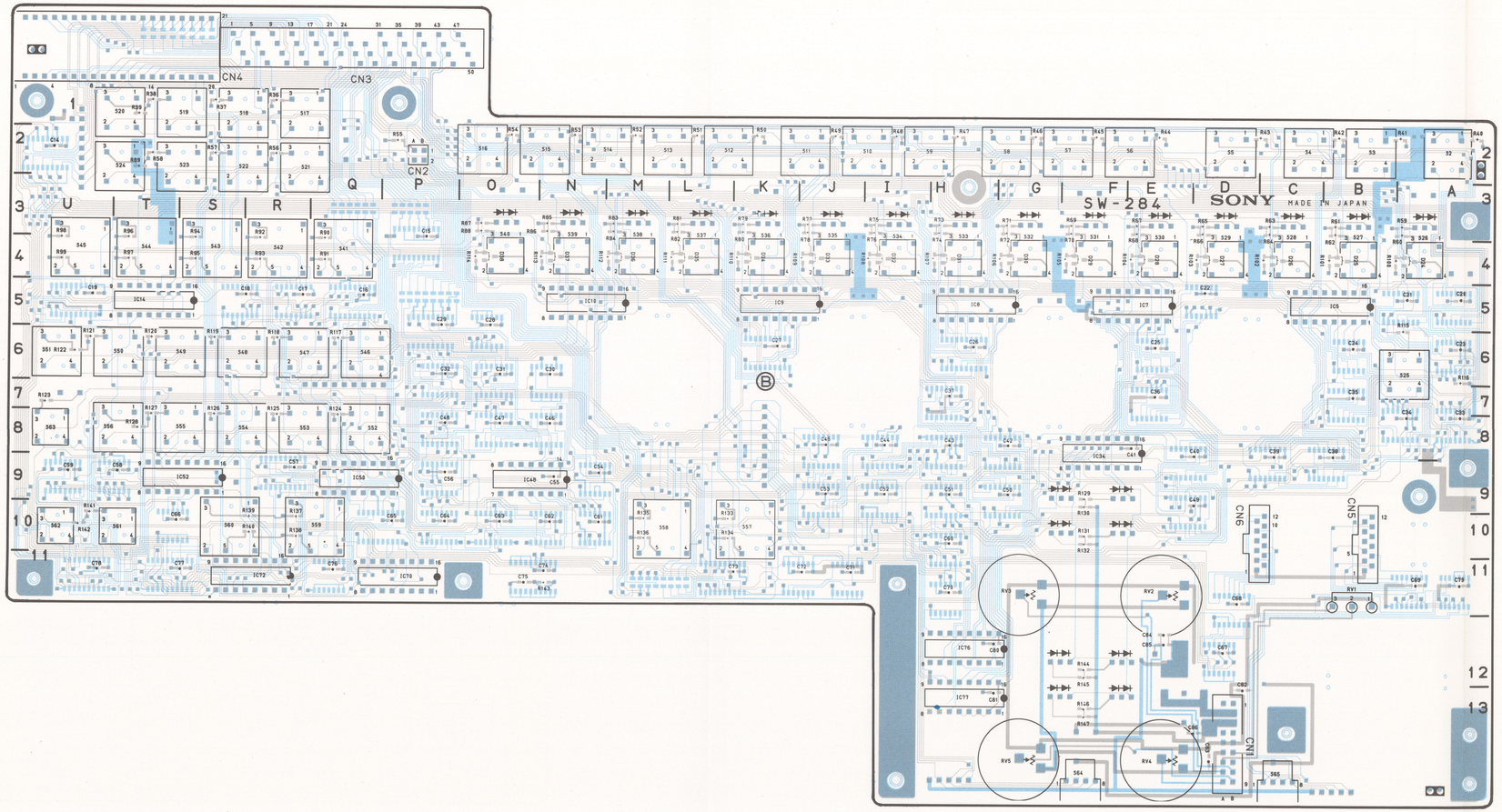
SW-284 1-627-256-12

CN1	D-13	S13	M-2
CN2	P-2	S14	N-2
CN3	Q-1	S15	N-2
CN4	U-1	S16	O-2
CN5	B-10	S17	R-1
CN6	C-10	S18	S-1
		S19	S-1
D24	A-4	S20	T-1
D25	B-4	S21	R-2
D26	C-4	S22	S-2
D27	D-4	S23	S-2
D28	E-4	S24	T-2
D29	F-4	S25	A-6
D30	G-4	S26	A-4
D31	H-4	S27	B-4
D32	I-4	S28	C-4
D33	J-4	S29	D-4
D34	K-4	S30	E-4
D35	L-4	S31	F-4
D36	M-4	S32	G-4
D37	N-4	S33	H-4
D38	O-4	S34	I-4
		S35	J-4
IC5	B-5	S36	K-4
IC7	E-5	S37	L-4
IC8	H-5	S38	M-4
IC9	K-5	S39	N-4
IC10	N-5	S40	O-4
IC14	T-5	S41	Q-4
IC34	F-8	S42	R-4
IC48	O-9	S43	S-4
IC50	Q-9	S44	T-4
IC52	S-9	S45	U-4
IC70	P-11	S46	Q-6
IC72	R-11	S47	R-6
IC76	H-12	S48	S-6
IC77	H-13	S49	S-6
		S50	T-6
RV1	B-11	S51	U-6
RV2	E-11	S52	Q-8
RV3	G-11	S53	R-8
RV4	E-13	S54	S-8
RV5	G-13	S55	S-8
		S56	T-8
S2	A-2	S57	K-10
S3	B-2	S58	M-10
S4	C-2	S59	Q-10
S5	D-2	S60	S-10
S6	E-2	S61	T-10
S7	F-2	S62	U-10
S8	G-2	S63	U-8
S9	I-2	S64	F-13
S10	I-2	S65	C-13
S11	J-2		
S12	L-2		

SW-284 SW-284

SW-284 BOARD

Serial No. 10201 –



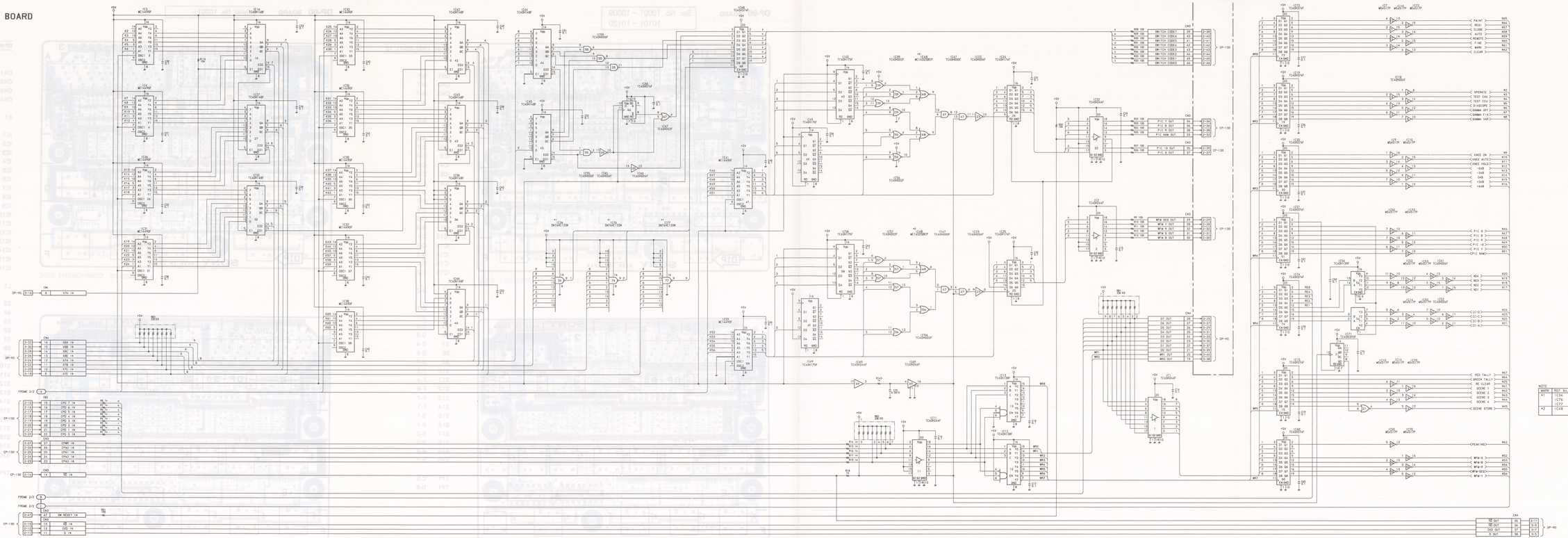
SW-284 1-627-256-13

CN1	D13	IC11	Q5	RB1	U2	S46	P6
CN2	P2	IC12	R5	RB2	Q7	S47	Q6
CN4	U1	IC13	S5	RB3	K8	S48	R6
CN5	B10	IC14	S5	RB4	H13	S49	S6
CN6	D10	IC15	U5	RB5	B13	S50	T5
		IC16	A6			S51	U7
D1	A3	IC17	B6	RV1	B11	S52	Q7
D2	B3	IC18	E6	RV2	F11	S53	R7
D3	C3	IC19	H6	RV3	F11	S54	S7
D4	D3	IC20	K6	RV4	F13	S55	S7
D5	E3	IC21	O5	RV5	H13	S56	T7
D6	F3	IC22	P5			S57	K9
D7	G3	IC23	O6	S3	B2	S58	M9
D8	H3	IC24	O6	S4	C2	S59	Q10
D9	I3	IC25	P7	S5	D2	S60	R10
D10	J3	IC26	A8	S6	E2	S61	T10
D11	K3	IC27	A8	S7	F2	S62	U10
D12	L3	IC28	B7	S8	G2	S63	U7
D13	M3	IC29	E8	S9	H2	S64	F13
D14	N3	IC30	H6	S10	I2	S65	C13
D15	O3	IC31	B9	S11	J2		
D16	E9	IC32	C8	S12	L2		
D17	G9	IC33	E8	S13	M2		
D18	F10	IC34	F8	S14	N2		
D19	F10	IC35	H8	S15	N2		
D20	F12	IC36	H8	S16	O2		
D21	F12	IC37	I9	S17	R1		
D22	F13	IC38	J8	S18	S1		
D23	F13	IC39	N7	S19	S1		
D24	A4	IC40	O8	S20	T1		
D25	B4	IC41	P7	S21	R3		
D26	C4	IC42	E9	S22	S3		
D27	D4	IC43	G9	S23	S3		
D28	E4	IC44	H9	S24	T3		
D29	F4	IC45	I9	S25	A6		
D30	G4	IC60	Q10	S26	A4		
D31	H4	IC61	T10	S27	B4		
D32	I4	IC62	D12	S28	C4		
D33	J4	IC63	D11	S29	D4		
D34	K4	IC64	A11	S30	E4		
D35	L4	IC65	H11	S31	F4		
D36	M4	IC66	J11	S32	G4		
D37	N4	IC67	J11	S33	H4		
D38	O4	IC68	K11	S34	I4		
		IC69	O11	S35	J4		
IC1	U2	IC70	P11	S36	K4		
IC2	P3	IC71	R11	S37	L4		
IC3	A5	IC72	S11	S38	M4		
IC4	A5	IC73	T11	S39	N4		
IC5	B5	IC74	U11	S40	O4		
IC6	D4	IC75	A11	S41	Q4		
IC7	E4	IC76	H12	S42	R3		
IC8	H5	IC77	H12	S43	S3		
IC9	K5			S44	T3		
IC10	N5	L1	E12	S45	U3		

SW-284 (2/2)

SW-284 (2/2)

SW-284 (2/2) BOARD



NOTE			
MARK	REF No.	CHANGE INFORMATION	SER No.
*1	IC34 IC76 IC77	TC74HC133P → SN74HC133N	10301 ~
*2	IC48	TC4025BP → MC14025BCP	10401 ~

HDCD-300 (J,E)

C-53

C-54

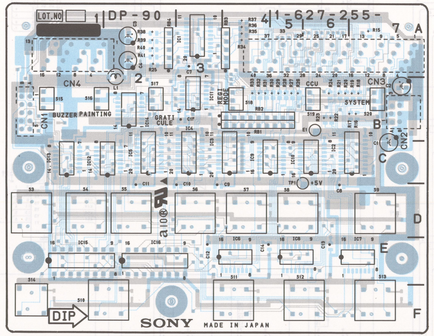
C-55

C-56

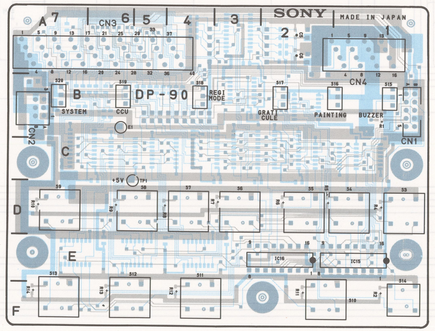
DP-90 DP-90

DP-90 BOARD

Ser. No. 10001 – 10009
10101 – 10120



1-627-255-11, 12 COMPONENT SIDE



1-627-255-11, 12 SOLDERING SIDE

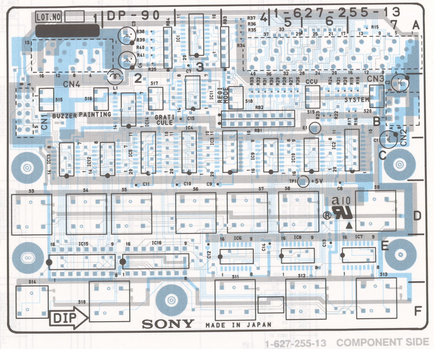
DP-90 1-627-255-11, 12

CN1	B-1
CN2	B-7
CN3	A-7
CN4	A-1
E1	B-6
IC1	A-3
IC2	C-7
IC3	C-4
IC4	C-3
IC5	C-2
IC6	E-4
IC7	E-7
IC8	E-5
IC9	C-5
IC10	C-6
IC11	B-3
IC12	C-1
IC13	C-1
IC14	B-2
IC15	E-1
IC16	E-2
L1	B-2
S3	D-1
S4	D-1
S5	D-2
S6	D-3
S7	D-4
S8	D-5
S9	D-7
S10	F-2
S11	F-4
S12	F-6
S13	F-7
S14	F-1
S15	B-1
S16	B-1
S17	B-2
S18	B-4
S19	B-6
S20	B-7
TP1	C-5
TP1	D-6

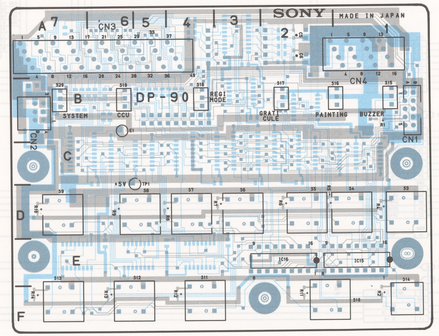
DP-90 DP-90

DP-90 BOARD

Serial No. 10201 –



1-627-255-13 COMPONENT SIDE

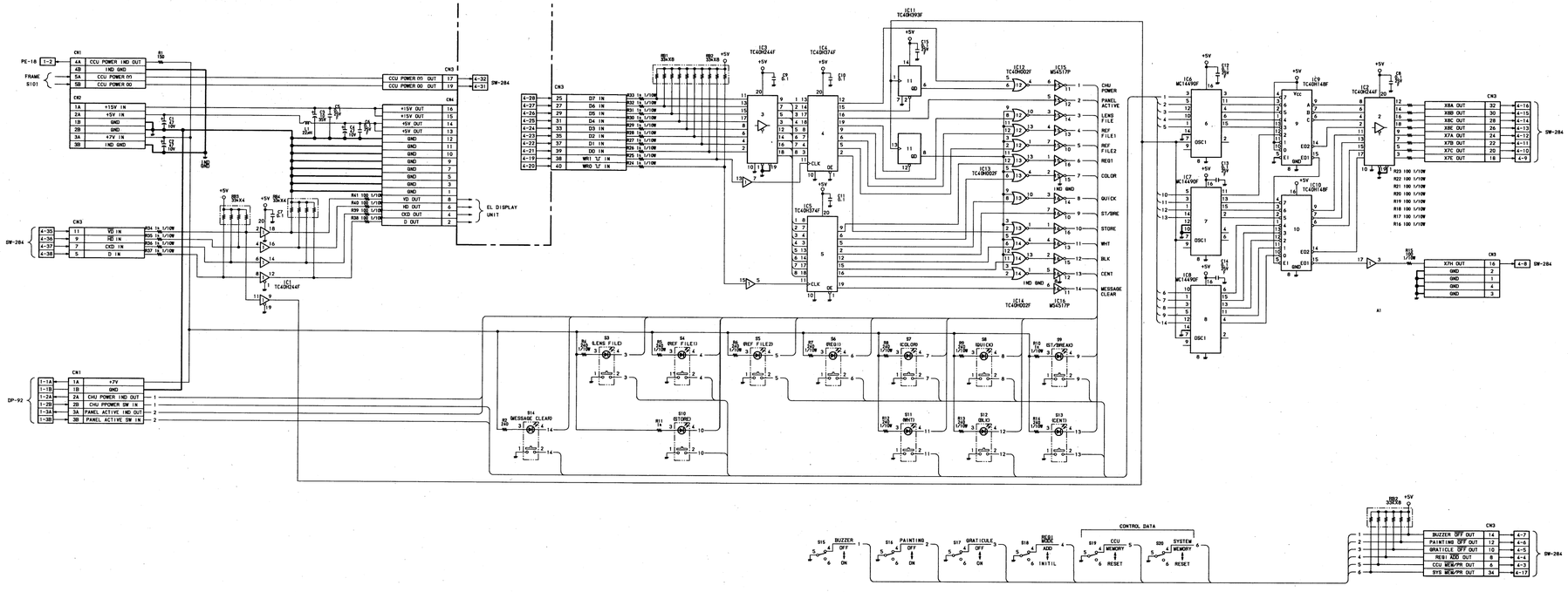


1-627-255-13 SOLDERING SIDE

DP-90 1-627-255-13

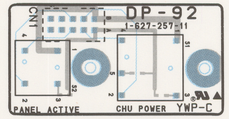
CN1	B-1
CN2	B-7
CN3	A-7
CN4	A-1
E1	B-6
IC1	A-3
IC2	C-7
IC3	C-4
IC4	C-3
IC5	C-2
IC6	E-4
IC7	E-7
IC8	E-5
IC9	C-5
IC10	C-6
IC11	B-3
IC12	C-1
IC13	C-1
IC14	B-2
IC15	E-1
IC16	E-2
L1	B-2
S3	D-1
S4	D-1
S5	D-2
S6	D-3
S7	D-4
S8	D-5
S9	D-7
S10	F-2
S11	F-4
S12	F-6
S13	F-7
S14	F-1
S15	B-1
S16	B-1
S17	B-2
S18	B-4
S19	B-6
S20	B-7
TP1	C-5

DP-90 BOARD

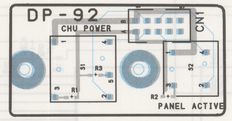

CN1
CCU POWER IND OUT
IND GND
CCU POWER P0
CCU POWER 00
CN2
+15V IN
+5V IN
GND
GND
+7V IN
IND GND
CN3
CCU POWER P0 OUT
CCU POWER 00 OUT
CN4
+15V OUT
+15V OUT
+5V OUT
+5V OUT
GND
GND
GND
GND
GND
GND
VD OUT
HD OUT
CKD OUT
D OUT
EL DISPLAY UNIT
SW-284
VD IN
HD IN
CKD IN
D IN
DP-92
+7V
GND
CHU POWER IND OUT
CHU PPOWER SW IN
PANEL ACTIVE IND OUT
PANEL ACTIVE SW IN
D7 IN
D6 IN
D5 IN
D4 IN
D3 IN
D2 IN
D1 IN
D0 IN
WR1 'L' IN
WR0 'L' IN
IC1 TC40H244F
IC2 TC40H244F
IC3 TC40H574F
IC4 TC40H574F
IC5 TC40H574F
IC10 TC40H148F
IC11 TC40H393F
IC12 TC40H002F
IC13 TC40H002F
IC14 TC40H002F
IC15 MC14490F
IC16 MC14490F
IC17 MC14490F
IC18 MC14490F
CHU POWER
PANEL ACTIVE
LENS FILE
REF FILE1
REF FILE2
REG1
COLOR
QUICK
ST/BRE
STORE
WHT
BLK
CENT
MESSAGE CLEAR
S3 LENS FILE
S4 REF FILE1
S5 REF FILE2
S6 REG1
S7 COLOR
S8 QUICK
S9 ST/BREAD
S10 STORE
S11 WHT
S12 BLK
S13 CENT
S14 MESSAGE CLEAR
CONTROL DATA
S15 BUZZER
S16 PAINTING
S17 GRATICULE
S18 REG1 ADD
S19 CCU MEMORY
S20 SYSTEM MEMORY
RESET
INITIL
ADD
ON
OFF
CN3
X8A OUT
X8B OUT
X8C OUT
X8E OUT
X7A OUT
X7B OUT
X7C OUT
X7E OUT
X7H OUT
BUZZER OFF OUT
PAINTING OFF OUT
GRATICLE OFF OUT
REG1 ADD OUT
CCU MEM/PM OUT
SYS MEM/PM OUT

FRAME DP-92, PE-18 HN-47

DP-92 BOARD

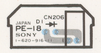


1-627-257-11 COMPONENT SIDE



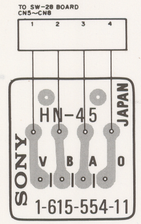
1-627-257-11 SOLDERING SIDE

PE-18 BOARD



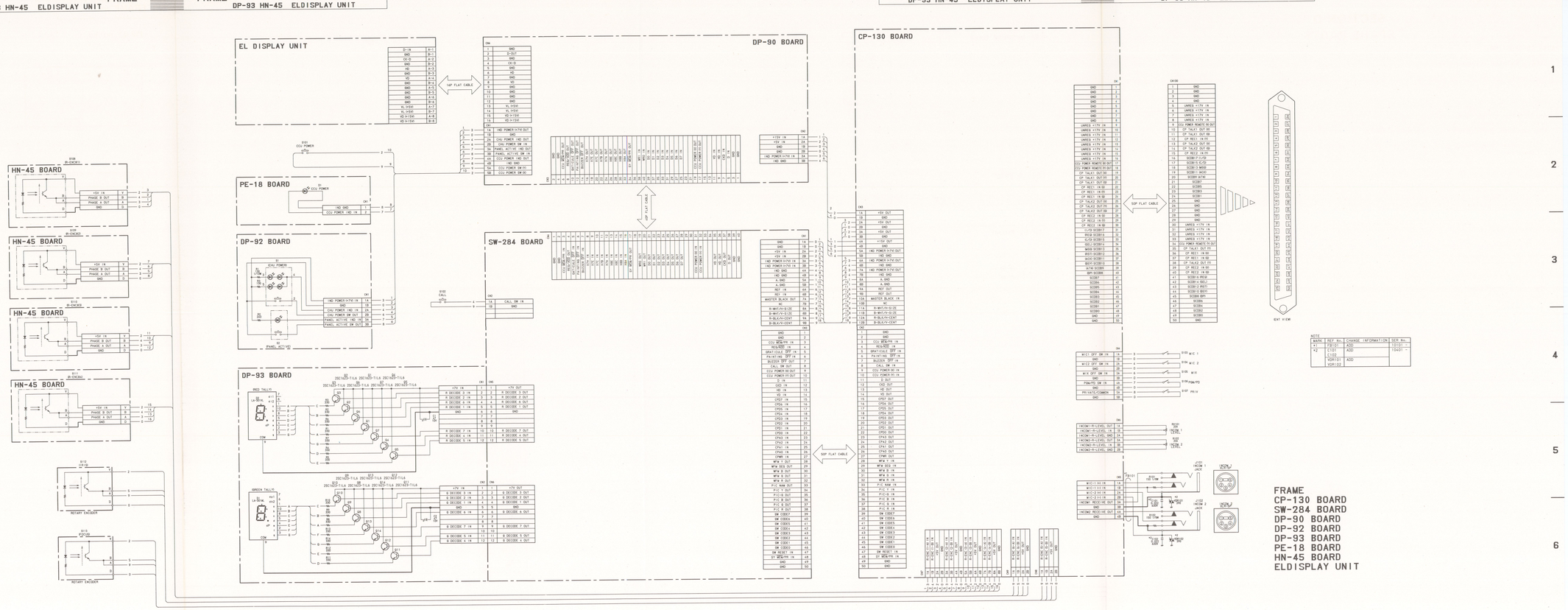
1-620-916-11
SOLDERING SIDE

HN-45 BOARD



1-615-554-11
SOLDERING SIDE

FRAME
CP-130 BOARD
SW-284 BOARD
DP-90 BOARD
DP-92 BOARD
DP-93 BOARD
PE-18 BOARD
HN-45 BOARD
ELDISPLAY UNIT



HDCO-300 (J.E)

SECTION D
SPARE PARTS

PARTS INFORMATION

1. **Safety Related Component Warning**

   Components identified by shading marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose parts numbers appear as shown in this manual or in service manual supplements published by Sony.

2. Replace Parts that are supplied from Sony Parts Center can sometimes have different shape and external appearance than what are actually used in equipment. This is due to "**accommodating the improved parts and/or engineering changes**" or "**standardization of genuine parts.**"

   .This manual's exploded view and electrical spare parts lists are indicating the parts numbers of "the standardized genuine parts at present."

   .Regarding engineering parts and diagrams changes in our engineering department, refer to Sony service bulletins and service manual supplements.

3. **The parts marked with "S" in the SP column** of the exploded views and electical spare parts list are nomally required for routine service work. Orders for parts marked with "O" will be processed, but allow for additional delivery time.

4. Item with no parts number and/or no description are not stocked because they are seldom required for routine service.

5. **Abbreviation**

REF.No.	DESCRIPTION	REF.No.	DESCRIPTION	REF.No.	DESCRIPTION
BT	BATTERY	**FB**	FERRITE BEAD	**RB**	RESISTOR BLOCK
BZ	BUZZER	**FL**	FILTER	**RV**	VARIABLE RESISTOR
C	CAPACITORT	**IC**	IC	**S**	SWITCH
CN	CONNECTOR	**L**	INDUCTOR	**T**	TRANSFORMER
CP	COMBINATION PARTS	**LY**	RYLAY	**TH**	THERMISTOR
CV	VARIABLE CAPACITOR	**LV**	VARIABLE INDUCTOR	**TM**	TIMER
D	DIODE	**Q**	TRANSISTOR	**VDR**	VARISTOR
DL	DELAY LINE	**R**	RESISTOR	**X**	OSCILLATOR

All capacitors are in micro farads unless otherwise specified.
All inductors are in micro henries unless otherwise specifjed.
All resistors are in ohms.

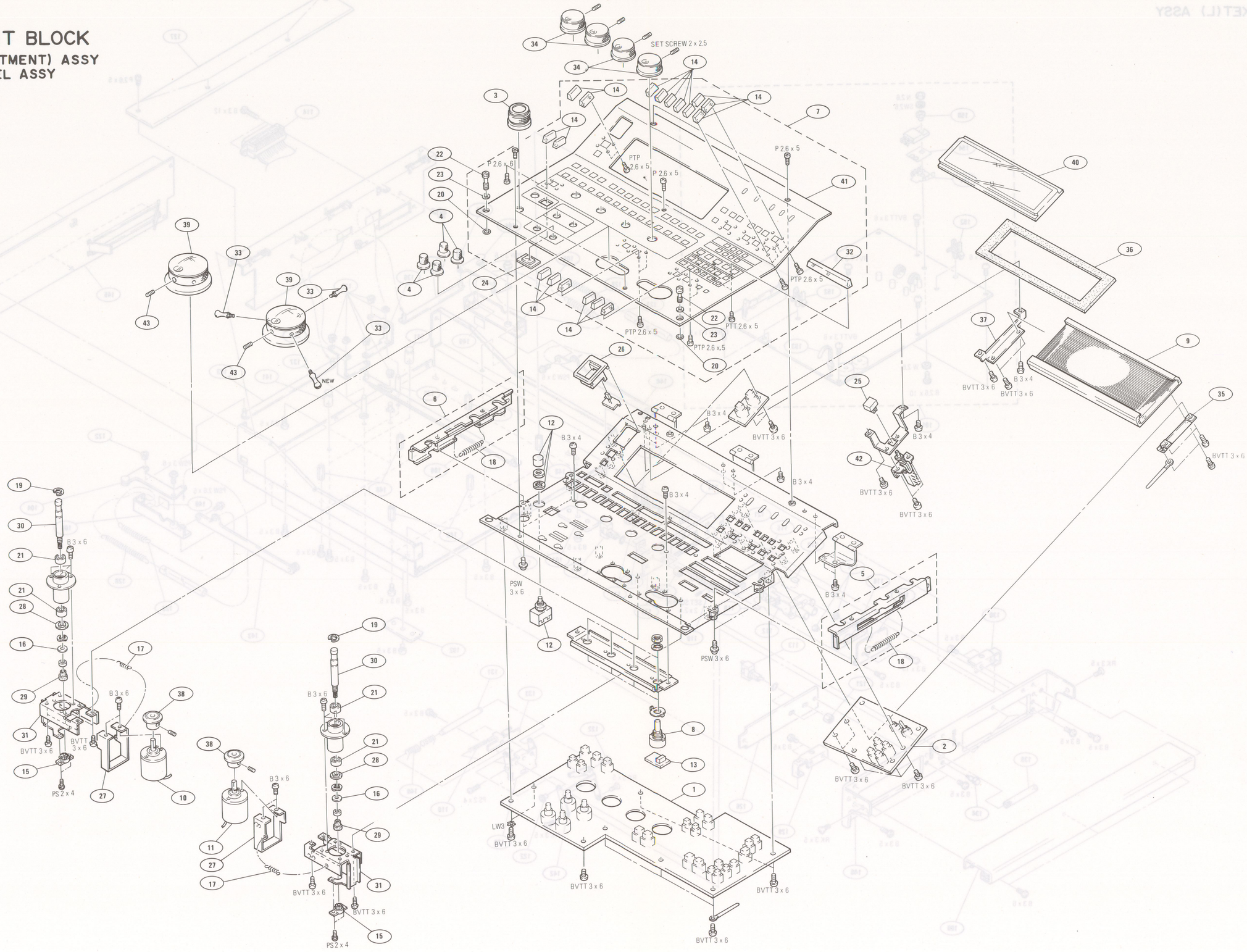
EXPLODED VIEW

PANEL UNIT BLOCK

No.	Part No.	SP	Description
1	A-7513-794-A	o	MOUNTED CIRCUIT BOARD, SW-284
2	A-7513-795-A	o	MOUNTED CIRCUIT BOARD, DP-90
3	X-3691-415-2	s	KNOB (INNER) ASSY
4	X-3673-635-0	s	KNOB (1) ASSY, CONTROL
5	X-3693-534-1	o	GUIDE (RIGHT) ASSY, STAY
6	X-3693-535-1	o	GUIDE (LEFT) ASSY, STAY
7	X-3693-561-1	o	PANEL ASSY, CONTROL
8	1-464-485-11	s	ENCODER, ROTALY
9	1-464-765-12	s	DISPLAY UNIT, EL
10	1-466-031-21	s	ENCODER, ROTARY
11	1-466-031-31	s	ENCODER, ROTARY
12	1-570-172-11	s	SWITCH, PUSH (1 KEY) "CALL"
13	1-615-554-11	o	PRINTED CIRCUIT BOARD, HN-45
14	2-295-991-00	o	GUARD, SWITCH
15	3-319-224-21	s	DAMPER, SMALL
16	3-451-162-00	s	WASHER
17	3-564-736-00	s	SPRING, TENSION
18	3-583-501-00	s	SPRING, TENSION
19	3-618-078-00	s	RING, RETAINING, CE TYPE
20	3-653-573-00	o	RING, O
21	3-656-948-00	s	BEARING, BALL
22	3-693-677-31	s	SCREW (M4X12), LID
23	3-701-442-11	s	WASHER, 4.5
24	3-712-704-21	o	PLATE (SMALL), TRANSPARENT
25	3-715-610-01	s	KNOB, PS
26	3-715-611-03	o	GUARD, PS
27	3-733-054-02	o	BRACKET, RE
28	3-733-056-02	o	SPACER
29	3-733-057-01	o	TUBE, JOINT
30	3-733-058-02	o	SHAFT
31	3-733-059-01	o	BRACKET (A)
32	3-733-120-01	o	GUARD (LONG)
33	3-733-121-01	s	PIN, FOCUS
34	3-733-122-01	s	KNOB (B)
35	3-733-124-03	o	BRACKET (A), EL DISPLAY
36	3-733-127-01	s	CUSHION
37	3-733-128-01	o	BRACKET (B), EL DISPLAY
38	3-733-129-01	o	PLATE (B), CLUTCH
39	3-733-132-01	s	KNOB (A)
40	3-733-134-01	o	FILTER, EL
41	3-733-135-01	o	PANEL, CONTROL
42	1-552-926-21	s	SWITCH, PUSH "CCU POWER"
43	3-701-511-00	s	SET SCREW, DOUBLE POINT 4X6

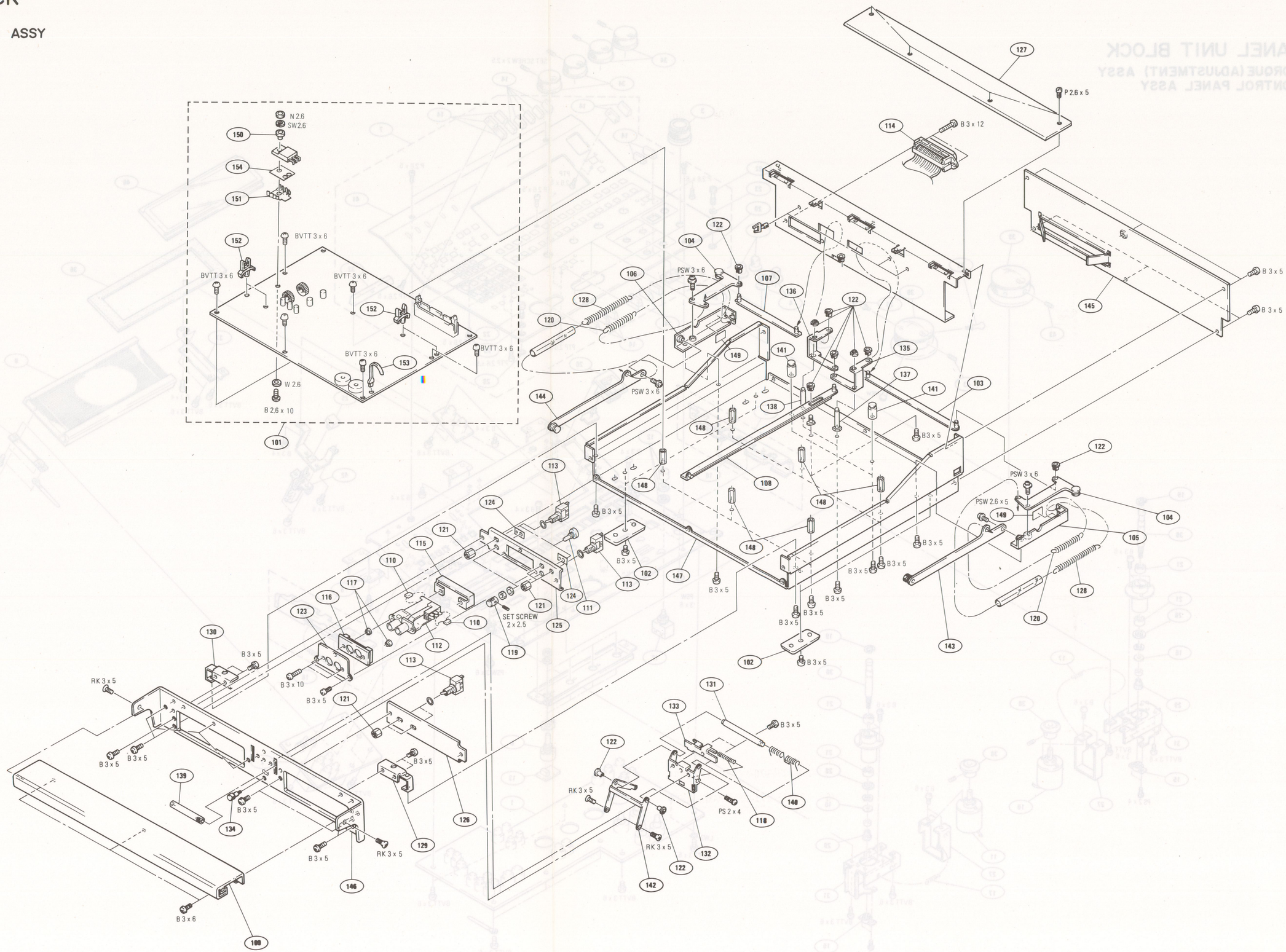
PANEL UNIT BLOCK

TORQUE (ADJUSTMENT) ASSY
CONTROL PANEL ASSY



CABINET BLOCK

CABINET ASSY
INCOME BRACKET(L) ASSY



CABINET BLOCK

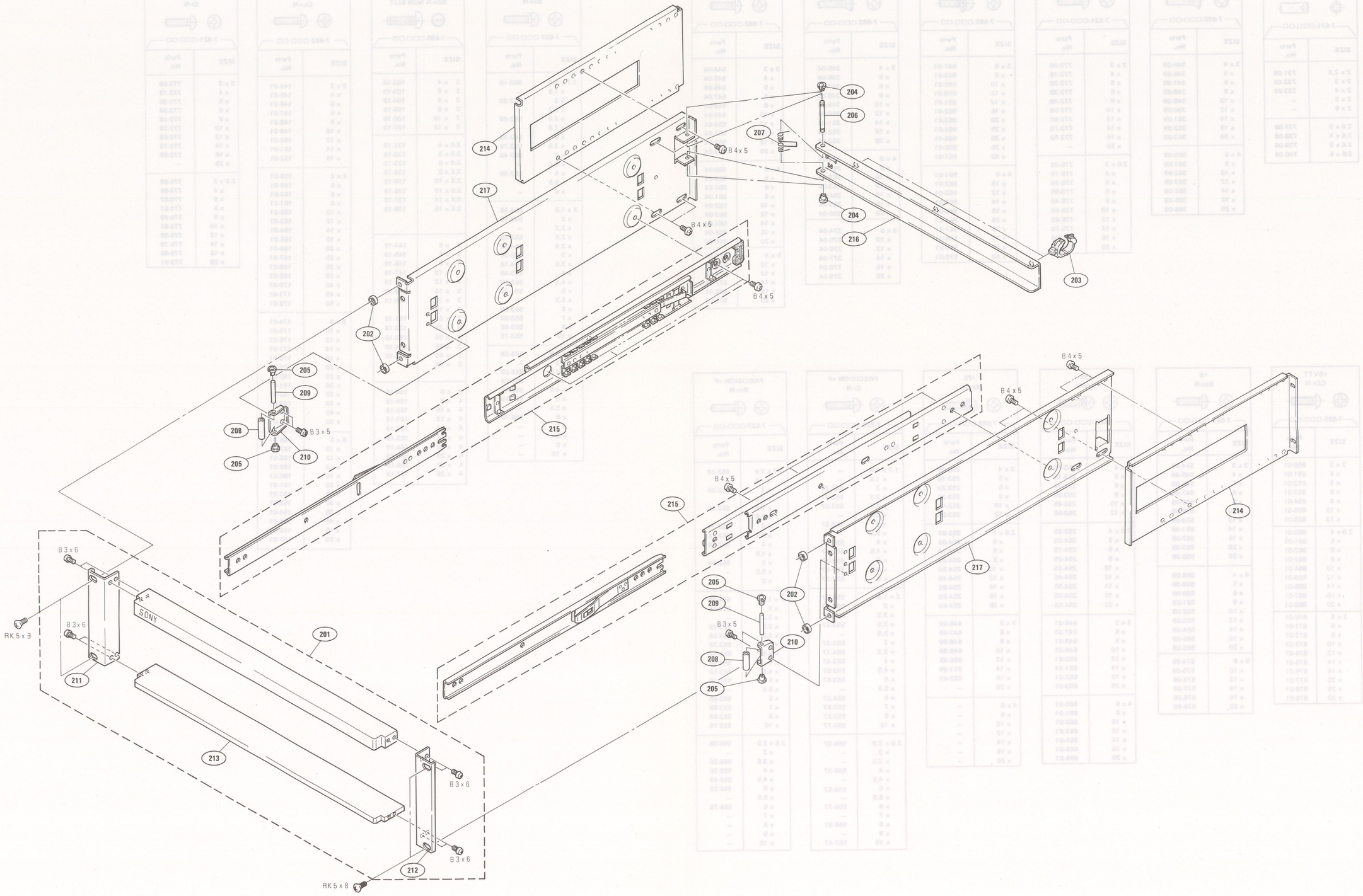
No.	Part No.	SP	Description
101	A-7513-798-A	o	MOUNTED CIRCUIT BOARD, CP-130
102	X-3565-417-0	s	LEG ASSY
103	X-3693-562-1	o	LINK (R) ASSY
104	X-3693-563-1	o	LEVER ASSY, STOPPER
105	X-3693-564-1	o	PLATE (RIGHT) ASSY, INDICATION
106	X-3693-565-1	o	PLATE (LEFT) ASSY, INDICATION
107	X-3693-566-1	o	LINK (L) ASSY
108	X-3693-567-1	o	LINK (C) ASSY
109	X-3693-568-1	o	REST ASSY, PERM
110	1-214-537-00	s	RES, METAL FILM 150
111	1-237-981-11	s	RES, VAR, CARBON 20K
112	1-507-676-00	s	JACK
113	1-571-070-11	s	SWITCH, TOGGLE
114	1-942-314-11	o	HARNESS (CCU)
115	2-270-663-00	s	BRACKET, JACK
116	2-270-664-00	o	PLATE, JACK, W
117	2-832-003-00	s	BUSH, INSULATING
118	3-465-047-00	s	SPRING, COMPRESSION
119	3-657-627-11	s	KNOB (2)
120	3-660-428-00	s	SPRING, TENSION
121	3-672-267-00	s	NUT, CONTROL
122	3-703-074-00	s	CAP 3, SHAFT
123	3-733-048-01	o	PANEL (A), INCOME
124	3-733-049-01	o	SPACER, RV
125	3-733-050-01	o	BRACKET (LEFT), INCOME
126	3-733-051-01	o	BRACKET (RIGHT), INCOME
127	3-733-102-01	o	PLATE, ORNAMENTAL
128	3-733-146-01	o	SPRING, TENSION
129	3-733-150-01	o	BRACKET (RIGHT), PANEL
130	3-733-151-01	o	BRACKET (LEFT), PANEL
131	3-733-152-01	o	SHAFT (A), LEVER
132	3-733-153-01	o	HOLDER, RELEASE STAY
133	3-733-154-01	o	PLATE, SLIDE, LOCK
134	3-733-155-01	o	LEVER, LOCK
135	3-733-156-01	o	LEVER (RIGHT), LINK
136	3-733-157-01	o	LEVER (LEFT), LINK
137	3-733-158-01	o	SHAFT (RIGHT), LINK
138	3-733-159-01	o	SHAFT (LEFT), LINK
139	3-733-160-01	o	LEVER, RELEASE
140	3-733-161-01	o	SPRING
141	3-733-162-01	o	HOLDER, PC BOARD
142	3-733-164-01	o	STAY, RELEASE
143	3-733-165-01	o	STAY (RIGHT)
144	3-733-166-01	o	STAY (LEFT)
145	3-733-170-01	o	PANEL, REAR
146	3-733-171-01	o	PANEL, FRONT
147	3-733-173-01	o	CABINET
148	4-876-607-21	o	COLLAR (E), PLATE, JACK
149	9-911-839-XX	s	RUBBER, FRONT CUSHION
150	2-832-007-00	s	BUSHING(K), INSULATING
151	2-990-404-01	o	HEAT SINK(PH291-H-9-M)
152	3-644-407-00	o	CLIP, AC WIRE E
153	3-683-631-01	o	CLAMP
154	3-703-207-11	s	INSULATOR, TO-220

RACK MOUNT BLOCK

No.	Part No.	SP	Description
201	A-7405-101-A	o	MOUNTED CIRCUIT BOARD, RACK(F)
202	2-297-913-00	s	WASHER(DIA.5), ORNAMENTAL
203	3-697-707-01	o	CLAMP (A), HARNESS
204	3-703-074-00	s	CAP 3, SHAFT
205	3-703-075-00	s	CAP 2, SHAFT
206	3-733-107-01	s	SHAFT, CABLE CLAMP
207	3-733-108-01	o	SPRING
208	3-733-109-01	o	ROLLER (B)
209	3-733-110-01	o	SHAFT (B), ROLLER
210	3-733-111-01	o	BRACKET, STOPPER
211	3-733-112-01	s	PANEL (LEFT), BLANK
212	3-733-113-01	o	PANEL (RIGHT), BLANK
213	3-733-114-01	o	PANEL (B), BLANK
214	3-733-116-01	s	BRACKET (REAR), RACK MOUNT
215	3-733-117-01	o	RAIL, SLIDE
216	3-733-118-01	s	CLAMP, CABLE
217	3-733-119-01	o	BRACKET, RAIL

RACK MOUNT BLOCK RACK MOUNT BLOCK

RACK MOUNT BLOCK



SCREW

HEXAGON SET SCREW (FLAT) SNCM6-PD

7-621-□□□-□□

SIZE	Parts No.
2 x 2.5	731-08
2 x 3	732-08
2 x 4	733-08
2 x 5	–
2 x 6	–
2.6 x 3	737-08
2.6 x 4	738-08
2.6 x 5	739-08
2.6 x 6	740-08

+RK Bzn-N

7-682-□□□-□□

SIZE	Parts No.
3 x 4	345-09
x 5	346-09
x 6	347-09
x 8	348-09
x 10	349-09
x 12	350-09
x 14	351-09
x 16	352-09
x 20	353-09
4 x 6	360-09
x 8	361-09
x 10	362-09
x 12	363-09
x 14	364-09
x 16	365-09
x 20	366-09

+B Bzn-N

7-621-□□□-□□

SIZE	Parts No.
2 x 3	772-00
x 4	772-10
x 5	772-20
x 6	772-30
x 8	772-40
x 10	772-50
x 12	772-60
x 14	772-70
x 16	772-80
x 20	–
2.6 x 3	775-00
x 4	775-10
x 5	775-20
x 6	773-95
x 8	775-40
x 10	775-50
x 12	775-60
x 14	775-70
x 16	775-80
x 20	775-90

+PSW Czn-N

7-682-□□□-□□

SIZE	Parts No.
3 x 6	947-01
x 8	948-01
x 10	949-01
x 12	950-01
x 14	951-01
x 16	952-01
x 20	953-01
x 25	954-01
x 30	955-01
x 35	956-01
x 40	957-01
4 x 8	961-01
x 10	962-01
x 12	963-01
x 14	964-01
x 16	965-01
x 20	966-01
x 25	967-01
x 30	968-01
x 35	969-01
x 40	970-01

+RK Cr-N

7-682-□□□-□□

SIZE	Parts No.
3 x 4	245-04
x 5	246-04
x 6	347-04
x 8	348-04
x 10	349-04
x 12	350-04
x 14	351-04
x 16	352-04
x 20	353-04
4 x 6	360-04
x 8	361-04
x 10	362-04
x 12	363-04
x 14	364-04
x 16	365-04
x 20	366-04
5 x 8	374-04
x 10	375-04
x 12	376-04
x 14	377-04
x 16	778-04
x 20	379-04

+B Cr-N

7-682-□□□-□□

SIZE	Parts No.
3 x 3	544-04
x 4	545-04
x 5	546-04
x 6	547-04
x 8	548-04
x 10	549-04
x 12	550-04
x 14	551-04
x 16	552-04
x 20	553-04
4 x 4	558-04
x 5	559-04
x 6	560-04
x 8	561-04
x 10	562-04
x 12	563-04
x 14	564-04
x 16	565-04
x 20	566-04
5 x 8	574-04
x 10	575-04
x 12	576-04
x 14	577-04
x 16	578-04
x 20	579-04

+BVTT CZn-N

7-685-□□□-□□

SIZE	Parts No.
2 x 3	850-01
x 4	851-01
x 5	852-01
x 6	853-01
x 8	854-01
x 10	855-01
x 12	856-01
2.6 x 4	860-01
x 5	861-01
x 6	862-01
x 8	863-01
x 10	864-01
x 12	865-01
x 14	866-01
x 16	867-01
x 20	868-01
3 x 5	870-01
x 6	871-01
x 8	872-01
x 10	873-01
x 12	874-01
x 14	875-01
x 16	876-01
x 20	877-01
x 25	878-01
x 30	879-01

+B Bzn-N

7-682-□□□-□□

SIZE	Parts No.
3 x 3	544-09
x 4	545-09
x 5	546-09
x 6	547-09
x 8	548-09
x 10	549-09
x 12	550-09
x 14	551-09
x 16	552-09
x 20	553-09
x 30	555-09
4 x 4	558-09
x 5	559-09
x 6	560-09
x 8	561-09
x 10	562-09
x 12	563-09
x 14	564-09
x 16	565-09
x 20	566-09
5 x 8	574-09
x 10	575-09
x 12	576-09
x 14	577-09
x 16	578-09
x 20	579-09

+PS Czn-N

7-682-□□□-□□

SIZE	Parts No.
2 x 4	253-05
x 5	253-15
x 6	253-25
x 8	253-35
x 10	253-45
x 12	253-55
2.6 x 4	253-95
x 5	254-05
x 6	254-15
x 8	254-25
x 10	254-35
x 12	254-45
x 14	254-95
x 16	254-55
x 20	254-65
3 x 5	646-01
x 6	647-01
x 8	648-01
x 10	649-01
x 12	650-01
x 14	651-01
x 16	652-01
x 20	653-01
4 x 6	660-01
x 8	661-01
x 10	662-01
x 12	663-01
x 14	664-01
x 16	665-01
x 20	666-01

+PS Bzn-N

7-682-□□□-□□

SIZE	Parts No.
2 x 4	253-00
x 5	253-10
x 6	253-20
x 8	253-30
x 10	253-40
x 12	253-50
2.6 x 4	253-90
x 5	254-00
x 6	254-10
x 8	254-20
x 10	254-30
x 12	254-40
x 14	254-90
x 16	254-50
x 20	254-60
3 x 5	646-09
x 6	647-09
x 8	648-09
x 10	649-09
x 12	650-09
x 14	651-09
x 16	652-09
x 20	–
4 x 6	–
x 8	–
x 10	–
x 12	–
x 14	–
x 16	–
x 20	–

PRECISION +P Cr-N

7-627-□□□-□□

SIZE	Parts No.
1.7 x 1.6	–
x 1.8	–
x 2	552-27
x 2.2	552-87
x 2.5	552-07
x 2.8	–
x 3	552-37
x 3.5	–
x 4	552-47
x 4.5	552-67
x 5	552-57
x 5.5	557-07
x 6	552-77
2 x 1.8	554-37
x 2	553-17
x 2.2	554-07
x 2.5	553-27
x 2.8	–
x 3	553-37
x 3.5	554-17
x 4	553-47
x 4.5	553-57
x 5	553-67
x 5.5	–
x 6	554-27
x 7	553-87
x 8	553-97
x 10	553-77
2.6 x 2.8	556-07
x 3	–
x 3.5	–
x 4	556-37
x 4.5	–
x 5	556-57
x 5.5	–
x 6	556-77
x 7	–
x 8	556-97
x 9	–
x 10	557-47

PRECISION +P Bzn-N

7-627-□□□-□□

SIZE	Parts No.
1.7 x 1.6	552-18
x 1.8	–
x 2	552-28
x 2.2	–
x 2.5	552-08
x 2.8	–
x 3	552-38
x 3.5	552-78
x 4	552-48
x 4.5	–
x 5	552-58
x 5.5	–
x 6	–
2 x 1.8	554-38
x 2	553-18
x 2.2	–
x 2.5	553-28
x 2.8	554-58
x 3	553-38
x 3.5	554-18
x 4	553-48
x 4.5	553-58
x 5	554-28
x 5.5	–
x 6	553-68
x 7	553-88
x 8	553-98
x 10	553-78
2.6 x 2.8	556-08
x 3	–
x 3.5	556-28
x 4	556-38
x 4.5	556-48
x 5	556-58
x 5.5	–
x 6	556-78
x 7	–
x 8	–
x 9	–
x 10	–

TOTSU P BZn-N NON SLIT

7-685-□□□-□□

SIZE	Parts No.
2 x 4	102-19
2 x 5	103-19
2 x 6	104-19
2 x 8	105-19
2 x 10	106-19
2 x 12	107-19
2.6 x 4	131-19
2.6 x 5	132-19
2.6 x 6	133-19
2.6 x 8	134-19
2.6 x 10	135-19
2.6 x 12	136-19
2.6 x 14	137-19
2.6 x 16	138-19
3 x 5	144-19
3 x 6	145-19
3 x 8	146-19
3 x 10	147-19
3 x 12	148-19
3 x 14	149-19
3 x 16	150-19
3 x 18	
3 x 20	151-19
3 x 25	152-19
3 x 30	153-19
3 x 35	154-19
3 x 40	155-19
3 x 58	
4 x 6	158-19
4 x 8	159-19
4 x 10	160-19
4 x 12	161-19
4 x 14	162-19
4 x 16	163-19
4 x 20	164-19
4 x 25	165-19
4 x 30	166-19
4 x 35	167-19

+P Czn-N

7-682-□□□-□□

SIZE	Parts No.
3 x 3	144-01
x 4	145-01
x 5	146-01
x 6	147-01
x 8	148-01
x 10	149-01
x 12	150-01
x 14	151-01
x 16	152-01
4 x 4	158-01
x 5	159-01
x 6	160-01
x 8	161-01
x 10	162-01
x 12	163-01
x 14	164-01
x 16	165-01
x 20	166-01
x 25	167-01
x 30	168-01
x 35	169-01
x 40	170-01
x 45	171-01
x 50	172-01
5 x 8	174-01
x 10	175-01
x 12	176-01
x 14	177-01
x 16	178-01
x 20	179-01
x 25	180-01
x 30	181-01
x 35	182-01
x 40	183-01
x 45	184-01
x 50	185-01
6 x 8	186-01
x 10	187-01
x 12	188-01
x 14	189-01
x 16	190-01
x 20	191-01
x 25	192-01
x 30	193-01
x 35	194-01
x 40	195-01
x 45	196-01
x 50	197-01

+B Cr-N

7-621-□□□-□□

SIZE	Parts No.
2 x 3	772-08
x 4	772-18
x 5	771-06
x 6	772-38
x 8	772-48
x 10	772-58
x 12	772-68
x 14	772-78
x 16	772-88
x 20	–
2.6 x 3	775-08
x 4	773-86
x 5	770-87
x 6	770-67
x 8	770-99
x 10	773-87
x 12	775-68
x 14	775-78
x 16	775-88
x 20	773-91

RESISTOR, CHIP

Part No.	SP	Description
1-216-295-00	s	S, CHIP 0 5% 1/10W
1-216-298-00	s	S, CHIP 2.2 5% 1/10W
1-216-302-00	s	S, CHIP 2.7 5% 1/10W
1-216-304-00	s	S, CHIP 3.3 5% 1/10W
1-216-306-00	s	S, CHIP 3.9 5% 1/10W
1-216-308-00	s	S, CHIP 4.7 5% 1/10W
1-216-309-00	s	S, CHIP 5.6 5% 1/10W
1-216-311-00	s	S, CHIP 6.8 5% 1/10W
1-216-313-00	s	S, CHIP 8.2 5% 1/10W
1-216-001-00	s	S, CHIP 10 5% 1/10W
1-216-003-00	s	S, CHIP 12 5% 1/10W
1-216-005-00	s	S, CHIP 15 5% 1/10W
1-216-007-00	s	S, CHIP 18 5% 1/10W
1-216-009-00	s	S, CHIP 22 5% 1/10W
1-216-011-00	s	S, CHIP 27 5% 1/10W
1-216-013-00	s	S, CHIP 33 5% 1/10W
1-216-015-00	s	S, CHIP 39 5% 1/10W
1-216-017-00	s	S, CHIP 47 5% 1/10W
1-216-019-00	s	S, CHIP 56 5% 1/10W
1-216-021-00	s	S, CHIP 68 5% 1/10W
1-216-023-00	s	S, CHIP 82 5% 1/10W
1-216-025-00	s	S, CHIP 100 5% 1/10W
1-216-027-00	s	S, CHIP 120 5% 1/10W
1-216-029-00	s	S, CHIP 150 5% 1/10W
1-216-031-00	s	S, CHIP 180 5% 1/10W
1-216-033-00	s	S, CHIP 220 5% 1/10W
1-216-035-00	s	S, CHIP 270 5% 1/10W
1-216-037-00	s	S, CHIP 330 5% 1/10W
1-216-039-00	s	S, CHIP 390 5% 1/10W
1-216-041-00	s	S, CHIP 470 5% 1/10W
1-216-043-00	s	S, CHIP 560 5% 1/10W
1-216-045-00	s	S, CHIP 680 5% 1/10W
1-216-047-00	s	S, CHIP 820 5% 1/10W
1-216-049-00	s	S, CHIP 1k 5% 1/10W
1-216-051-00	s	S, CHIP 1.2k 5% 1/10W
1-216-053-00	s	S, CHIP 1.5k 5% 1/10W
1-216-055-00	s	S, CHIP 1.8k 5% 1/10W
1-216-057-00	s	S, CHIP 2.2k 5% 1/10W
1-216-059-00	s	S, CHIP 2.7k 5% 1/10W
1-216-061-00	s	S, CHIP 3.3k 5% 1/10W
1-216-063-00	s	S, CHIP 3.9k 5% 1/10W
1-216-065-00	s	S, CHIP 4.7k 5% 1/10W
1-216-067-00	s	S, CHIP 5.6k 5% 1/10W
1-216-069-00	s	S, CHIP 6.8k 5% 1/10W
1-216-071-00	s	S, CHIP 8.2k 5% 1/10W
1-216-073-00	s	S, CHIP 10k 5% 1/10W
1-216-075-00	s	S, CHIP 12k 5% 1/10W
1-216-077-00	s	S, CHIP 15k 5% 1/10W
1-216-079-00	s	S, CHIP 18k 5% 1/10W
1-216-081-00	s	S, CHIP 22k 5% 1/10W
1-216-083-00	s	S, CHIP 27k 5% 1/10W
1-216-085-00	s	S, CHIP 33k 5% 1/10W
1-216-087-00	s	S, CHIP 39k 5% 1/10W
1-216-089-00	s	S, CHIP 47k 5% 1/10W
1-216-091-00	s	S, CHIP 56k 5% 1/10W

RESISTOR, CHIP

Part No.	SP	Description
1-216-093-00	s	S, CHIP 68k 5% 1/10W
1-216-095-00	s	S, CHIP 82k 5% 1/10W
1-216-097-00	s	S, CHIP 100k 5% 1/10W
1-216-099-00	s	S, CHIP 120k 5% 1/10W
1-216-101-00	s	S, CHIP 150k 5% 1/10W
1-216-103-00	s	S, CHIP 180k 5% 1/10W
1-216-105-00	s	S, CHIP 220k 5% 1/10W
1-216-107-00	s	S, CHIP 270k 5% 1/10W
1-216-109-00	s	S, CHIP 330k 5% 1/10W
1-216-111-00	s	S, CHIP 390k 5% 1/10W
1-216-113-00	s	S, CHIP 470k 5% 1/10W
1-216-115-00	s	S, CHIP 560k 5% 1/10W
1-216-117-00	s	S, CHIP 680k 5% 1/10W
1-216-119-00	s	S, CHIP 820k 5% 1/10W
1-216-121-00	s	S, CHIP 1.0M 5% 1/10W
1-216-123-00	s	S, CHIP 1.2M 5% 1/10W
1-216-125-00	s	S, CHIP 1.5M 5% 1/10W
1-216-127-00	s	S, CHIP 1.8M 5% 1/10W
1-216-129-00	s	S, CHIP 2.2M 5% 1/10W
1-216-131-00	s	S, CHIP 2.7M 5% 1/10W
1-216-133-00	s	S, CHIP 3.3M 5% 1/10W

CAPACITOR, CHIP CERAMIC

Part No.	SP	Description			
1-163-083-00	s	P, CHIP CERAMIC	1pF	+-0.25pF	50V
1-163-085-00	s	P, CHIP CERAMIC	2pF	+-0.25pF	50V
1-163-087-00	s	P, CHIP CERAMIC	4pF	+-0.25pF	50V
1-163-089-00	s	P, CHIP CERAMIC	6pF	+-0.5pF	50V
1-163-091-00	s	P, CHIP CERAMIC	8pF	+-0.5pF	50V
1-163-093-00	s	P, CHIP CERAMIC	10pF	5%	50V
1-163-097-00	s	P, CHIP CERAMIC	15pF	5%	50V
1-163-101-00	s	P, CHIP CERAMIC	22pF	5%	50V
1-163-105-00	s	P, CHIP CERAMIC	33pF	5%	50V
1-163-109-00	s	P, CHIP CERAMIC	47pF	5%	50V
1-163-113-00	s	P, CHIP CERAMIC	68pF	5%	50V
1-163-117-00	s	P, CHIP CERAMIC	100pF	5%	50V
1-163-121-00	s	P, CHIP CERAMIC	150pF	5%	50V
1-163-125-00	s	P, CHIP CERAMIC	220pF	5%	50V
1-163-129-00	s	P, CHIP CERAMIC	330pF	5%	50V
1-163-133-00	s	P, CHIP CERAMIC	470pF	5%	50V
1-163-137-00	s	P, CHIP CERAMIC	680pF	5%	50V
1-163-141-00	s	P, CHIP CERAMIC	1000pF	5%	50V
1-163-145-00	s	P, CHIP CERAMIC	1500pF	10%	50V
1-164-161-11	s	P, CHIP CERAMIC	2200pF	10%	100V
1-164-182-11	s	P, CHIP CERAMIC	3300pF	10%	100V
1-163-017-00	s	P, CHIP CERAMIC	4700pF	10%	50V
1-163-019-00	s	P, CHIP CERAMIC	6800pF	10%	50V
1-164-232-11	s	P, CHIP CERAMIC	0.01	20%	100V
1-163-023-00	s	P, CHIP CERAMIC	0.015	10%	50V
1-163-034-00	s	P, CHIP CERAMIC	0.033		50V
1-163-035-00	s	P, CHIP CERAMIC	0.047		50V
1-163-036-00	s	P, CHIP CERAMIC	0.068		50V
1-163-038-00	s	P, CHIP CERAMIC	0.1		50V

CP-130 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-7513-798-A	o	MOUNTED CIRCUIT BOARD, CP-130
4pcs	2-832-007-00	s	BUSHING (K), INSULATING
4pcs	2-990-404-01	o	HEAT SINK (PH291-H-9-M)
4pcs	3-644-407-00	o	CLIP, AC WIRE E
8pcs	3-683-631-01	o	CLAMP
4pcs	3-703-207-11	s	INSULATOR, TO-220
4pcs	7-622-207-05	l	N 2.6, TYPE 2
BZ1	1-529-037-11	s	BUZZER
C1	1-124-120-11	s	ELECT 220MF 20% 25V
C4	1-131-349-00	s	TANTALUM 2.2MF 10% 35V
C5	1-131-349-00	s	TANTALUM 2.2MF 10% 35V
C7	1-135-070-00	s	TANTALUM CHIP 0.1MF 20% 35V
C8	1-135-076-21	s	TANTALUM CHIP 1uF 10% 35V
C9	1-135-076-21	s	TANTALUM CHIP 1uF 10% 35V
C10	1-124-120-11	s	ELECT 220MF 20% 25V
C18	1-124-589-11	s	ELECT 47MF 20% 10V
C19	1-126-096-11	s	ELECT 10MF 20% 35V
C20	1-124-478-11	s	ELECT 100MF 20% 25V
C21	1-124-120-11	s	ELECT 220MF 20% 25V
C24	1-131-349-00	s	TANTALUM 2.2MF 10% 35V
C25	1-131-349-00	s	TANTALUM 2.2MF 10% 35V
C26	1-135-070-00	s	TANTALUM CHIP 0.1MF 20% 35V
C27	1-135-076-21	s	TANTALUM CHIP 1uF 10% 35V
C28	1-135-076-21	s	TANTALUM CHIP 1uF 10% 35V
C30	1-124-120-11	s	ELECT 220MF 20% 25V
C38	1-124-589-11	s	ELECT 47MF 20% 10V
C39	1-126-096-11	s	ELECT 10MF 20% 35V
C40	1-124-478-11	s	ELECT 100MF 20% 25V
C41	1-130-776-00	s	FILM 0.47MF 5% 63V
C42	1-126-517-11	s	ELECT 220MF 20% 25V
C43	1-126-517-11	s	ELECT 220MF 20% 25V
C44	1-126-517-11	s	ELECT 220MF 20% 25V
C45	1-130-776-00	s	FILM 0.47MF 5% 63V
C46	1-130-776-00	s	FILM 0.47MF 5% 63V
C47	1-127-518-11	s	ELECT(SOLID) 100MF 20% 16V
C48	1-130-776-00	s	FILM 0.47MF 5% 63V
C49	1-135-159-21	s	TANTALUM CHIP 10MF 20% 16V
C50	1-131-347-00	s	TANTALUM 1MF 10% 35V
C53	1-135-159-21	s	TANTALUM CHIP 10MF 20% 16V
C55	1-131-368-00	s	TANTALUM 3.3MF 10% 16V
C56	1-131-368-00	s	TANTALUM 3.3MF 10% 16V
C61	1-135-159-21	s	TANTALUM CHIP 10MF 20% 16V
C62	1-131-368-00	s	TANTALUM 3.3MF 10% 16V
C65	1-131-377-00	s	TANTALUM 10MF 10% 10V
C66	1-131-377-00	s	TANTALUM 10MF 10% 10V
C67	1-127-518-11	s	ELECT(SOLID) 100MF 20% 16V
C69	1-130-776-00	s	FILM 0.47MF 5% 63V
C71	1-126-516-11	s	ELECT 120MF 20% 16V
C72	1-130-776-00	s	FILM 0.47MF 5% 63V
C73	1-126-516-11	s	ELECT 120MF 20% 16V
C74	1-130-776-00	s	FILM 0.47MF 5% 63V
C76	1-135-159-21	s	TANTALUM CHIP 10MF 20% 16V
C77	1-127-518-11	s	ELECT(SOLID) 100MF 20% 16V
C79	1-130-776-00	s	FILM 0.47MF 5% 63V
C80	1-127-518-11	s	ELECT(SOLID) 100MF 20% 16V
C81	1-130-776-00	s	FILM 0.47MF 5% 63V
C83	1-131-377-00	s	TANTALUM 10MF 10% 10V
C84	1-127-516-11	s	ELECT(SOLID) 220MF 20% 10V

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

(CP-130 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C87	1-131-377-00	s	TANTALUM 10MF 10% 10V
C88	1-124-120-11	s	ELECT 220MF 20% 25V
C90	1-130-776-00	s	FILM 0.47MF 5% 63V
C91	1-127-520-11	s	ELECT(SOLID) 68MF 20% 20V
C92	1-130-776-00	s	FILM 0.47MF 5% 63V
C93	1-127-520-11	s	ELECT(SOLID) 68MF 20% 20V
C97	1-135-164-21	s	TANTALUM CHIP 22uF 20% 10V
C101	1-135-159-21	s	TANTALUM CHIP 10MF 20% 16V
C103	1-124-589-11	s	ELECT 47MF 20% 10V
C107	1-124-589-11	s	ELECT 47MF 20% 10V
C111	1-124-589-11	s	ELECT 47MF 20% 10V
C116	1-124-589-11	s	ELECT 47MF 20% 10V
C119	1-124-589-11	s	ELECT 47MF 20% 10V
C122	1-124-589-11	s	ELECT 47MF 20% 10V
C125	1-124-120-11	s	ELECT 220MF 20% 25V
C126	1-124-120-11	s	ELECT 220MF 20% 25V
C127	1-124-120-11	s	ELECT 220MF 20% 25V
C128	1-124-120-11	s	ELECT 220MF 20% 25V
C130	1-135-159-21	s	TANTALUM CHIP 10MF 20% 16V
C131	1-135-159-21	s	TANTALUM CHIP 10MF 20% 16V
C132	1-135-125-21	s	TANTALUM CHIP 33MF 20% 10V
C133	1-135-164-21	s	TANTALUM CHIP 22uF 20% 10V
C134	1-135-164-21	s	TANTALUM CHIP 22uF 20% 10V
C135	1-135-164-21	s	TANTALUM CHIP 22uF 20% 10V
C146	1-135-164-21	s	TANTALUM CHIP 22uF 20% 10V
C174	1-135-164-21	s	TANTALUM CHIP 22uF 20% 10V
C175	1-135-164-21	s	TANTALUM CHIP 22uF 20% 10V
C177	1-135-164-21	s	TANTALUM CHIP 22uF 20% 10V
CN3	1-506-641-11	o	CONNECTOR, 24P MALE
CN4	1-506-634-11	o	CONNECTOR, 10P MALE
CN5	1-506-633-11	o	CONNECTOR, 8P MALE
CN6	1-506-632-11	o	CONNECTOR, 6P MALE
CN7	1-506-637-11	o	CONNECTOR, 16P MALE
CN8	1-506-631-11	o	CONNECTOR, 4P MALE
CN9	1-506-631-11	o	CONNECTOR, 4P MALE
CNI3	1-540-024-12	o	SOCKET, IC
CNI4	1-540-024-12	o	SOCKET, IC
CP1	1-567-990-11	s	12MHz
D1	8-719-911-19	s	DIODE 1SS119
D2	8-719-911-19	s	DIODE 1SS119
D3	8-719-911-19	s	DIODE 1SS119
D4	8-719-911-19	s	DIODE 1SS119
D5	8-719-911-55	s	DIODE U05G
D6	8-719-911-19	s	DIODE 1SS119
D7	8-719-981-00	s	DIODE ERB81-004
D8	8-719-911-19	s	DIODE 1SS119
D9	8-719-911-19	s	DIODE 1SS119
D10	8-719-911-19	s	DIODE 1SS119
D11	8-719-911-19	s	DIODE 1SS119
D14	8-719-981-00	s	DIODE ERB81-004
D13	8-719-911-19	s	DIODE 1SS119
D15	8-719-911-19	s	DIODE 1SS119
D16	8-719-911-19	s	DIODE 1SS119
D17	8-719-911-19	s	DIODE 1SS119
D18	8-719-981-00	s	DIODE ERB81-004
D19	8-719-911-19	s	DIODE 1SS119

(CP-130 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
FB1	1-543-602-11	s	BEAD, FERRITE
FB2	1-543-602-11	s	BEAD, FERRITE
FB3	1-543-602-11	s	BEAD, FERRITE
FB4	1-543-602-11	s	BEAD, FERRITE
IC1	8-759-981-92	s	IC RC4558M
IC2	8-759-142-19	s	IC UPC4064G
IC3	8-759-702-01	s	IC NJM386BS
IC4	8-759-981-92	s	IC RC4558M
IC5	8-759-142-19	s	IC UPC4064G
IC6	8-759-702-01	s	IC NJM386BS
IC7	8-759-905-80	s	IC AD580M
IC8	8-759-937-36	s	IC TL1451ACNS
IC9	8-759-937-36	s	IC TL1451ACNS
IC10	8-759-142-19	s	IC UPC4064G
IC11	8-759-203-93	s	IC TC40H393F
IC13	8-759-000-46	s	IC MC14050BCP
IC14	8-759-201-53	s	IC TC40H000F
IC15	8-759-201-61	s	IC TC40H004F
IC16	8-759-204-51	s	IC TC40H008F
IC17	8-759-142-20	s	IC UPG4062G2
IC18	8-759-133-90	s	IC UPC339C
IC19	8-759-201-64	s	IC TC40H074F
IC20	8-759-201-61	s	IC TC40H004F
IC21	8-759-133-90	s	IC UPC339C
IC22	8-759-201-64	s	IC TC40H074F
IC23	8-759-201-61	s	IC TC40H004F
IC24	8-759-133-90	s	IC UPC339C
IC25	8-759-201-64	s	IC TC40H074F
IC26	8-759-230-84	s	IC TC74HC697P
IC27	8-759-230-84	s	IC TC74HC697P
IC28	8-759-230-84	s	IC TC74HC697P
IC29	8-759-230-84	s	IC TC74HC697P
IC30	8-759-230-84	s	IC TC74HC697P
IC31	8-759-230-84	s	IC TC74HC697P
IC32	8-759-201-61	s	IC TC40H004F
IC33	8-759-201-61	s	IC TC40H004F
IC34	8-759-230-84	s	IC TC74HC697P
IC35	8-759-230-84	s	IC TC74HC697P
IC36	8-759-230-84	s	IC TC74HC697P
IC37	8-759-230-84	s	IC TC74HC697P
IC38	8-759-230-84	s	IC TC74HC697P
IC39	8-759-230-84	s	IC TC74HC697P
IC40	8-759-925-90	s	IC SN74HC74NS
IC41	8-759-908-35	s	IC TL7705CP
IC42	8-759-916-71	s	IC SN74HC244N
IC43	8-759-234-54	s	IC TMPZ84C015AF-6
IC44	8-759-926-11	s	IC SN74HC138NS
IC45	8-759-926-11	s	IC SN74HC138NS
IC46	8-759-733-51	s	IC MBM27C256A-20TV/CANL
IC47	8-752-328-19	s	IC CXK5864BM-10L
IC48	8-752-328-19	s	IC CXK5864BM-10L
IC49	8-759-230-85	s	IC TMPZ84C10AF
IC50	8-759-973-63	s	IC MB89352PFQ
IC51	8-759-234-54	s	IC TMPZ84C015AF-6
IC52	8-759-926-11	s	IC SN74HC138NS
IC53	8-759-926-11	s	IC SN74HC138NS
IC54	8-759-926-11	s	IC SN74HC138NS
IC55	8-759-926-11	s	IC SN74HC138NS

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

(CP-130 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
IC56	8-759-927-46	s	IC SN74HC00NS
IC57	8-759-925-72	s	IC SN74HC02NS
IC58	8-759-733-52	s	IC MBM27C256A-20TV/DISP
IC59	8-759-970-04	s	IC MB8421-90LP
IC60	8-752-328-19	s	IC CXK5864BM-10L
IC61	8-752-328-19	s	IC CXK5864BM-10L
IC62	8-759-908-35	s	IC TL7705CP
IC63	8-759-004-97	s	IC MC14490P
IC64	8-759-004-97	s	IC MC14490P
IC65	8-759-925-74	s	IC SN74HC04NS
IC66	8-759-916-71	s	IC SN74HC244N
IC67	8-759-926-67	s	IC SN74HC374NS
IC68	8-759-926-67	s	IC SN74HC374NS
IC69	8-759-926-67	s	IC SN74HC374NS
IC70	8-759-926-67	s	IC SN74HC374NS
IC71	8-759-925-74	s	IC SN74HC04NS
IC73	8-759-142-25	s	IC UPD72030G
IC74	8-759-925-90	s	IC SN74HC74NS
IC75	8-759-925-97	s	IC SN74HC86NS
IC76	8-759-230-85	s	IC TMPZ84C10AF
IC77	8-752-326-24	s	IC CXK58257M-12L
IC78	8-752-326-24	s	IC CXK58257M-12L
IC79	8-752-326-24	s	IC CXK58257M-12L
IC80	8-759-921-34	s	IC SN74HC245N
IC81	8-759-921-34	s	IC SN74HC245N
IC82	8-759-925-74	s	IC SN74HC04NS
IC83	8-759-925-85	s	IC SN74HC32NS
IC84	8-759-974-07	s	IC SN7407N
IC85	8-759-927-46	s	IC SN74HC00NS
IC86	8-759-925-85	s	IC SN74HC32NS
IC87	8-759-926-23	s	IC SN74HC163NS
IC88	8-759-926-23	s	IC SN74HC163NS
IC89	8-759-926-23	s	IC SN74HC163NS
IC90	8-759-926-11	s	IC SN74HC138NS
IC91	8-759-926-26	s	IC SN74HC166NS
IC92	8-759-926-29	s	IC SN74HC175NS
IC93	8-759-916-71	s	IC SN74HC244N
IC94	8-759-925-74	s	IC SN74HC04NS
IC95	8-759-926-23	s	IC SN74HC163NS
IC96	8-759-926-23	s	IC SN74HC163NS
IC97	8-759-926-11	s	IC SN74HC138NS
IC99	8-759-927-46	s	IC SN74HC00NS
IC100	8-759-320-34	s	IC HM63021P-34
IC102	8-759-201-64	s	IC TC40H074F
IC103	8-759-202-86	s	IC TC74HC123P
IC104	8-759-201-64	s	IC TC40H074F
IC105	8-759-925-90	s	IC SN74HC74NS
IC106	8-759-303-20	s	IC HD46508PA
IC107	8-759-142-19	s	IC UPC4064G
IC108	8-759-142-19	s	IC UPC4064G
IC201	8-759-916-71	s	IC SN74HC244N
IC202	8-759-925-72	s	IC SN74HC02NS
L2	1-408-416-00	s	39uH
L4	1-408-416-00	s	39uH
L5	1-410-283-11	s	48uH (WITH CORE)
L6	1-412-048-11	s	CHOKE 65uH
L7	1-412-048-11	s	CHOKE 65uH
L8	1-410-283-11	s	48uH (WITH CORE)

(CP-130 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
L9	1-412-048-11	s	CHOKE 65uH
L10	1-412-049-11	s	CHOKE 200uH
L11	1-410-284-11	s	10uH (WITH CORE)
Q1	8-729-109-44	s	TRANSISTOR 2SK94
Q2	8-729-230-31	s	TRANSISTOR 2SC3074LB
Q3	8-729-109-44	s	TRANSISTOR 2SK94
Q4	8-729-230-31	s	TRANSISTOR 2SC3074LB
Q5	8-729-266-83	s	TRANSISTOR 2SC2668
Q6	8-729-266-83	s	TRANSISTOR 2SC2668
Q7	8-729-110-53	s	TRANSISTOR 2SA1005
Q8	8-729-304-35	s	TRANSISTOR 2SJ122
Q9	8-729-230-32	s	TRANSISTOR 2SA1244LB
Q10	8-729-178-55	s	TRANSISTOR 2SC2785-E
Q11	8-729-266-83	s	TRANSISTOR 2SC2668
Q12	8-729-266-83	s	TRANSISTOR 2SC2668
Q13	8-729-110-53	s	TRANSISTOR 2SA1005
Q14	8-729-304-35	s	TRANSISTOR 2SJ122
Q15	8-729-230-31	s	TRANSISTOR 2SC3074LB
Q16	8-729-119-76	s	TRANSISTOR 2SA1175-E
Q17	8-729-266-83	s	TRANSISTOR 2SC2668
Q18	8-729-266-83	s	TRANSISTOR 2SC2668
Q19	8-729-110-53	s	TRANSISTOR 2SA1005
Q20	8-729-304-35	s	TRANSISTOR 2SJ122
Q21	8-729-230-32	s	TRANSISTOR 2SA1244LB
Q22	8-729-178-55	s	TRANSISTOR 2SC2785-E
Q23	8-729-230-32	s	TRANSISTOR 2SA1244LB
Q24	8-729-178-55	s	TRANSISTOR 2SC2785-E
Q25	8-729-266-83	s	TRANSISTOR 2SC2668
Q26	8-729-266-83	s	TRANSISTOR 2SC2668
Q27	8-729-110-53	s	TRANSISTOR 2SA1005
Q28	8-729-304-35	s	TRANSISTOR 2SJ122
Q29	8-729-178-55	s	TRANSISTOR 2SC2785-E
R2	1-216-648-11	s	METAL CHIP 750 0.50% 1/10W
R3	1-216-270-00	s	METAL CHIP 1M 5% 1/8W
R5	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R9	1-216-611-11	s	METAL CHIP 22 0.5% 1/10W
R19	1-216-611-11	s	METAL CHIP 22 0.5% 1/10W
R21	1-216-611-11	s	METAL CHIP 22 0.5% 1/10W
R31	1-216-648-11	s	METAL CHIP 750 0.50% 1/10W
R32	1-216-270-00	s	METAL CHIP 1M 5% 1/8W
R34	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R62	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R63	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R64	1-216-668-11	s	METAL CHIP 5.1K 0.50% 1/10W
R65	1-216-690-11	s	METAL CHIP 43K 0.50% 1/10W
R66	1-216-675-11	s	METAL CHIP 10K 0.50% 1/10W
R67	1-216-653-11	s	METAL CHIP 1.2K 0.50% 1/10W
R77	1-216-668-11	s	METAL CHIP 5.1K 0.50% 1/10W
R78	1-216-684-11	s	METAL CHIP 24K 0.50% 1/10W
R79	1-216-687-11	s	METAL CHIP 33K 0.50% 1/10W
R80	1-216-675-11	s	METAL CHIP 10K 0.50% 1/10W
R92	1-216-678-11	s	METAL CHIP 13K 0.50% 1/10W
R93	1-216-668-11	s	METAL CHIP 5.1K 0.50% 1/10W
R106	1-216-659-11	s	METAL CHIP 2.2K 0.50% 1/10W
R107	1-216-659-11	s	METAL CHIP 2.2K 0.50% 1/10W
R118	1-216-659-11	s	METAL CHIP 2.2K 0.50% 1/10W
R119	1-216-659-11	s	METAL CHIP 2.2K 0.50% 1/10W
R126	1-216-676-11	s	METAL CHIP 11K 0.50% 1/10W

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

(CP-130 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R127	1-216-659-11	s	METAL CHIP 2.2K 0.50% 1/10W
R144	1-216-683-11	s	METAL CHIP 22K 0.50% 1/10W
R145	1-216-663-11	s	METAL CHIP 3.3K 0.50% 1/10W
R151	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R152	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R160	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R161	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R169	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R170	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R178	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R179	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R187	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R188	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R196	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R197	1-216-748-11	s	METAL CHIP 39K 5% 1/10W
R260	1-216-662-11	s	METAL CHIP 3K 0.50% 1/10W
R261	1-216-660-11	s	METAL CHIP 2.4K 0.50% 1/10W
R303	1-216-687-11	s	METAL CHIP 33K 0.50% 1/10W
R305	1-216-096-00	s	METAL CHIP 91K 5% 1/10W
RB1	1-235-052-00	s	BLOCK 33K
RB2	1-235-052-00	s	BLOCK 33K
RB3	1-235-052-00	s	BLOCK 33K
RB4	1-235-052-00	s	BLOCK 33K
RB5	1-235-052-00	s	BLOCK 33K
RB6	1-235-052-00	s	BLOCK 33K
RB7	1-235-052-00	s	BLOCK 33K
RB8	1-235-052-00	s	BLOCK 33K
RB9	1-235-052-00	s	BLOCK 33K
RB10	1-235-052-00	s	BLOCK 33K
RB11	1-235-052-00	s	BLOCK 33K
RB12	1-235-052-00	s	BLOCK 33K
RB13	1-235-052-00	s	BLOCK 33K
RB14	1-235-052-00	s	BLOCK 33K
RB15	1-235-052-00	s	BLOCK 33K
RB20	1-231-545-00	s	BLOCK, RESISTOR 33KX4
RB21	1-231-545-00	s	BLOCK, RESISTOR 33KX4
RB22	1-231-400-00	s	RESISTOR BLOCK 390x8
RB23	1-231-400-00	s	RESISTOR BLOCK 390x8
RB24	1-231-400-00	s	RESISTOR BLOCK 390x8
RB25	1-235-127-00	s	RESISTOR BLOCK 220x8
RB26	1-235-127-00	s	RESISTOR BLOCK 220x8
RB27	1-235-127-00	s	RESISTOR BLOCK 220x8
RB28	1-231-545-00	s	BLOCK, RESISTOR 33KX4
RB29	1-231-545-00	s	BLOCK, RESISTOR 33KX4
RV1	1-228-459-00	s	METAL 10K
RV2	1-228-461-00	s	METAL 50K
RV3	1-228-461-00	s	METAL 50K
RV4	1-228-459-00	s	METAL 10K
RV5	1-228-461-00	s	METAL 50K
RV6	1-228-457-00	s	METAL 2K
RV7	1-228-456-00	s	METAL 1K
RV8	1-228-456-00	s	METAL 1K
RV9	1-228-455-00	s	METAL 500
RV10	1-228-456-00	s	METAL 1K
RV11	1-228-459-00	s	METAL 10K
RV12	1-228-461-00	s	METAL 50K
S1	1-570-375-12	s	SLIDE
S2	1-570-375-12	s	SLIDE

(CP-130 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
S3	1-570-373-12	s	SLIDE
S4	1-570-373-12	s	SLIDE
S7	1-553-925-00	s	ROTARY
S8	1-570-373-12	s	SLIDE
S9	1-553-542-00	s	KEY
S10	1-570-373-12	s	SLIDE
S11	1-553-542-00	s	KEY
S12	1-570-623-11	s	DIP
S13	1-570-623-11	s	DIP
S14	1-570-598-11	s	DIP
T1	1-426-038-21	s	TRANSFORMER
T2	1-426-038-21	s	TRANSFORMER

DP-90 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-7513-795-A	o	MOUNTED CIRCUIT BOARD, DP-90
1pc	1-560-865-00	o	CONNECTOR, DIP TYPE 40P
1pc	1-560-997-00	o	CONNECTOR, DIP TYPE 16P
1pc	1-942-315-11	o	HARNESS (EL)
1pc	1-942-316-11	o	HARNESS (DP)
C1	1-124-446-11	s	ELECT 47uF 20% 10V
C2	1-124-446-11	s	ELECT 47uF 20% 10V
C3	1-126-096-11	s	ELECT 10MF 20% 35V
C4	1-124-446-11	s	ELECT 47uF 20% 10V
CN1	1-506-634-11	o	CONNECTOR, 10P MALE
CN2	1-506-618-11	o	CONNECTOR, PS 6P, MALE
IC1	8-759-204-82	s	IC TC40H244F
IC2	8-759-204-82	s	IC TC40H244F
IC3	8-759-204-82	s	IC TC40H244F
IC4	8-759-204-90	s	IC TC40H374F
IC5	8-759-204-90	s	IC TC40H374F
IC6	8-759-030-50	s	IC MC14490F
IC7	8-759-030-50	s	IC MC14490F
IC8	8-759-030-50	s	IC MC14490F
IC9	8-759-204-62	s	IC TC40H148F
IC10	8-759-204-62	s	IC TC40H148F
IC11	8-759-203-93	s	IC TC40H393F
IC12	8-759-201-60	s	IC TC40H002F
IC13	8-759-201-60	s	IC TC40H002F
IC14	8-759-201-60	s	IC TC40H002F
IC15	8-759-645-17	s	IC M54517P
IC16	8-759-645-17	s	IC M54517P
L1	1-408-413-00	s	22uH
R1	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R2	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R4	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R5	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R6	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R7	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R8	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R9	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R12	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R13	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R14	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R15	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R16	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R17	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R18	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R19	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R20	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R21	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R22	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R23	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R24	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R25	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R26	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R27	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R28	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R29	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R30	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R31	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R32	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

(DP-90 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R33	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R34	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R35	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R36	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R37	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R38	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R39	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R40	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R41	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
RB1	1-235-052-00	s	BLOCK 33K
RB2	1-235-052-00	s	BLOCK 33K
RB3	1-231-545-00	s	BLOCK, RESISTOR 33KX4
RB4	1-231-545-00	s	BLOCK, RESISTOR 33KX4
S3	1-554-041-11	s	PUSH
S4	1-554-041-11	s	PUSH
S5	1-554-041-11	s	PUSH
S6	1-554-041-11	s	PUSH
S7	1-554-041-11	s	PUSH
S8	1-554-041-11	s	PUSH
S9	1-554-043-00	s	PUSH
S10	1-554-043-00	s	PUSH
S11	1-554-041-11	s	PUSH
S12	1-554-041-11	s	PUSH
S13	1-554-041-11	s	PUSH
S14	1-570-211-11	s	PUSH
S15	1-554-502-00	s	TOGGLE
S16	1-554-502-00	s	TOGGLE
S17	1-554-502-00	s	TOGGLE
S18	1-554-502-00	s	TOGGLE
S19	1-554-502-00	s	TOGGLE
S20	1-554-502-00	s	TOGGLE

DP-92 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-627-257-11	o	PRINTED CIRCUIT BOARD, DP-92
CN1	1-506-634-11	o	CONNECTOR, 10P MALE
R1	1-216-630-11	s	METAL CHIP 130 0.50% 1/10W
R2	1-216-636-11	s	METAL CHIP 240 0.5% 1/10W
R3	1-216-630-11	s	METAL CHIP 130 0.50% 1/10W
S1	1-570-142-11	s	PUSH
S2	1-570-221-11	s	PUSH

HN-45 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
	1-615-554-11	o	PRINTED CIRCUIT BOARD, HN-45
	1-464-485-11	s	ENCODER, ROTALY

PE-18 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-620-916-11	o	PRINTED CIRCUIT BOARD, PE-18
CN206	1-506-481-11	o	CONNECTOR, 2P, MALE
D1	8-719-955-32	s	DIODE GL-9PG2

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

SW-284 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-7513-794-A	o	MOUNTED CIRCUIT BOARD, SW-284
1pc	1-560-866-00	o	CONNECTOR, DIP TYPE 50P
1pc	1-627-258-11	o	PRINTED CIRCUIT BOARD, DP-93
1pc	1-942-317-11	o	HARNESS (SW) (* FOR DP-93)
C1 *	1-124-589-11	s	ELECT 47MF 20% 10V
C1	1-124-589-11	s	ELECT 47MF 20% 10V
C2 *	1-124-589-11	s	ELECT 47MF 20% 10V
C2	1-124-589-11	s	ELECT 47MF 20% 10V
C3	1-124-589-11	s	ELECT 47MF 20% 10V
C4	1-126-157-11	s	ELECT 10MF 20% 16V
C5	1-124-589-11	s	ELECT 47MF 20% 10V
C6	1-124-589-11	s	ELECT 47MF 20% 10V
C7	1-124-589-11	s	ELECT 47MF 20% 10V
C8	1-124-589-11	s	ELECT 47MF 20% 10V
C9	1-124-589-11	s	ELECT 47MF 20% 10V
C10	1-124-589-11	s	ELECT 47MF 20% 10V
C11	1-124-589-11	s	ELECT 47MF 20% 10V
C12	1-124-589-11	s	ELECT 47MF 20% 10V
C13	1-124-589-11	s	ELECT 47MF 20% 10V
C75	1-163-011-11	s	CERAMIC CHIP 0.0015uF 10% 50V
C87	1-124-589-11	s	ELECT 47MF 20% 10V
CN1	1-506-638-11	o	CONNECTOR, 18P MALE
CN1 *	1-564-849-11	o	CONNECTOR, 12P, MALE
CN2	1-506-631-11	o	CONNECTOR, 4P MALE
CN2 *	1-564-849-11	o	CONNECTOR, 12P, MALE
CN4	1-526-662-21	s	SOCKET, IC (DP) 40P
CN5	1-562-772-11	o	CONNECTOR, 12P, FEMALE
CN6	1-562-772-11	o	CONNECTOR, 12P, FEMALE
D1 *	8-719-939-52	s	DIODE LA-301ML
D1	8-719-948-10	s	DIODE LD-603DU
D2 *	8-719-913-53	s	DIODE LA-301VL
D2	8-719-948-10	s	DIODE LD-603DU
D3	8-719-948-10	s	DIODE LD-603DU
D4	8-719-948-10	s	DIODE LD-603DU
D5	8-719-948-10	s	DIODE LD-603DU
D6	8-719-948-10	s	DIODE LD-603DU
D7	8-719-948-10	s	DIODE LD-603DU
D8	8-719-948-10	s	DIODE LD-603DU
D9	8-719-948-10	s	DIODE LD-603DU
D10	8-719-948-10	s	DIODE LD-603DU
D11	8-719-948-10	s	DIODE LD-603DU
D12	8-719-948-10	s	DIODE LD-603DU
D13	8-719-948-10	s	DIODE LD-603DU
D14	8-719-948-10	s	DIODE LD-603DU
D15	8-719-948-10	s	DIODE LD-603DU
D16	8-719-948-10	s	DIODE LD-603DU
D17	8-719-948-10	s	DIODE LD-603DU
D18	8-719-948-10	s	DIODE LD-603DU
D19	8-719-948-10	s	DIODE LD-603DU
D20	8-719-948-10	s	DIODE LD-603DU
D21	8-719-948-10	s	DIODE LD-603DU
D22	8-719-948-10	s	DIODE LD-603DU
D23	8-719-948-10	s	DIODE LD-603DU
D24	8-719-104-31	s	DIODE 1S2838
D25	8-719-104-31	s	DIODE 1S2838
D26	8-719-104-31	s	DIODE 1S2838
D27	8-719-104-31	s	DIODE 1S2838
D28	8-719-104-31	s	DIODE 1S2838

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

(SW-284 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
D29	8-719-104-31	s	DIODE 1S2838
D30	8-719-104-31	s	DIODE 1S2838
D31	8-719-104-31	s	DIODE 1S2838
D32	8-719-104-31	s	DIODE 1S2838
D33	8-719-104-31	s	DIODE 1S2838
D34	8-719-104-31	s	DIODE 1S2838
D35	8-719-104-31	s	DIODE 1S2838
D36	8-719-104-31	s	DIODE 1S2838
D37	8-719-104-31	s	DIODE 1S2838
D38	8-719-104-31	s	DIODE 1S2838
IC1	8-759-204-82	s	IC TC40H244F
IC2	8-759-204-82	s	IC TC40H244F
IC3	8-759-030-50	s	IC MC14490F
IC4	8-759-030-50	s	IC MC14490F
IC5	8-759-645-17	s	IC M54517P
IC6	8-759-201-61	s	IC TC40H004F
IC7	8-759-645-17	s	IC M54517P
IC8	8-759-645-17	s	IC M54517P
IC9	8-759-645-17	s	IC M54517P
IC10	8-759-645-17	s	IC M54517P
IC11	8-759-204-82	s	IC TC40H244F
IC12	8-759-204-59	s	IC TC40H138F
IC13	8-759-204-59	s	IC TC40H138F
IC14	8-759-645-17	s	IC M54517P
IC15	8-759-204-90	s	IC TC40H374F
IC16	8-759-204-62	s	IC TC40H148F
IC17	8-759-201-61	s	IC TC40H004F
IC18	8-759-201-61	s	IC TC40H004F
IC19	8-759-204-90	s	IC TC40H374F
IC20	8-759-204-90	s	IC TC40H374F
IC21	8-759-201-60	s	IC TC40H002F
IC22	8-759-204-82	s	IC TC40H244F
IC23	8-759-201-61	s	IC TC40H004F
IC24	8-759-204-74	s	IC TC40H174F
IC25	8-759-204-74	s	IC TC40H174F
IC26	8-759-030-50	s	IC MC14490F
IC27	8-759-204-62	s	IC TC40H148F
IC28	8-759-204-54	s	IC TC40H042F
IC29	8-759-204-54	s	IC TC40H042F
IC30	8-759-030-50	s	IC MC14490F
IC31	8-759-030-50	s	IC MC14490F
IC32	8-759-204-62	s	IC TC40H148F
IC33	8-759-030-50	s	IC MC14490F
IC34	8-759-916-42	s	IC SN74HC133N
IC35	8-759-030-50	s	IC MC14490F
IC36	8-759-204-62	s	IC TC40H148F
IC37	8-759-030-50	s	IC MC14490F
IC38	8-759-030-50	s	IC MC14490F
IC39	8-759-201-60	s	IC TC40H002F
IC40	8-759-204-75	s	IC TC40H175F
IC41	8-759-030-50	s	IC MC14490F
IC42	8-759-204-62	s	IC TC40H148F
IC43	8-759-204-62	s	IC TC40H148F
IC44	8-759-204-62	s	IC TC40H148F
IC45	8-759-204-62	s	IC TC40H148F
IC46	8-759-204-62	s	IC TC40H148F
IC47	8-759-201-53	s	IC TC40H000F
IC48	8-759-000-34	s	IC MC14025BCP
IC49	8-759-204-75	s	IC TC40H175F

(SW-284 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
IC50	8-759-645-17	s	IC M54517P
IC51	8-759-204-90	s	IC TC40H374F
IC52	8-759-645-17	s	IC M54517P
IC53	8-759-201-61	s	IC TC40H004F
IC54	8-759-204-60	s	IC TC40H139F
IC55	8-759-201-53	s	IC TC40H000F
IC56	8-759-201-60	s	IC TC40H002F
IC57	8-759-201-60	s	IC TC40H002F
IC58	8-759-204-75	s	IC TC40H175F
IC59	8-759-030-50	s	IC MC14490F
IC60	8-759-204-90	s	IC TC40H374F
IC61	8-759-201-61	s	IC TC40H004F
IC62	8-759-201-61	s	IC TC40H004F
IC63	8-759-230-78	s	IC TC74HC4511F
IC64	8-759-230-78	s	IC TC74HC4511F
IC65	8-759-201-61	s	IC TC40H004F
IC66	8-759-201-64	s	IC TC40H074F
IC67	8-759-201-60	s	IC TC40H002F
IC68	8-759-204-90	s	IC TC40H374F
IC69	8-759-204-82	s	IC TC40H244F
IC70	8-759-645-17	s	IC M54517P
IC71	8-759-203-93	s	IC TC40H393F
IC72	8-759-645-17	s	IC M54517P
IC73	8-759-204-90	s	IC TC40H374F
IC74	8-759-204-90	s	IC TC40H374F
IC75	8-759-201-61	s	IC TC40H004F
IC76	8-759-916-42	s	IC SN74HC133N
IC77	8-759-916-42	s	IC SN74HC133N
L1	1-408-409-00	s	10uH
Q1 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q2 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q3 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q4 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q5 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q6 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q7 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q8 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q9 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q10 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q11 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q12 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q13 *	8-729-100-66	s	TRANSISTOR 2SC1623
Q14 *	8-729-100-66	s	TRANSISTOR 2SC1623
R1 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R1	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R2 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R2	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R3 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R3	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R4 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R4	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R5 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R5	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R6 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R6	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R7 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R7	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R8 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W

(SW-284 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R8	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R9	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R9 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R10	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R10 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R11	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R11 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R12	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R12 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R13	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R13 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R14 *	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R14	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R15	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R16	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R17	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R18	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R19	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R21	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R22	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R23	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R24	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R25	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R26	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R27	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R28	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R29	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R30	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R31	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R32	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R33	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R34	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R35	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R36	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R37	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R38	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R39	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R40	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R41	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R42	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R43	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R44	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R45	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R46	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R47	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R48	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R49	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R50	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R51	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R52	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R53	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R54	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R56	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R57	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R58	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R59	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R60	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R61	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R62	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

(SW-284 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R63	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R64	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R65	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R66	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R67	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R68	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R69	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R70	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R71	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R72	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R73	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R74	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R75	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R76	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R77	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R78	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R79	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R80	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R81	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R82	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R83	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R84	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R85	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R86	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R87	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R88	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R89	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R90	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R91	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R92	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R93	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R94	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R95	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R96	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R97	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R100	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R101	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R102	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R103	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R104	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R105	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R106	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R107	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R108	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R109	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R110	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R111	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R112	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R113	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R114	1-216-042-00	s	METAL CHIP 510 5% 1/10W
R115	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R117	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R118	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R119	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R120	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R121	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R122	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R123	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R124	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W

(SW-284 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R125	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R126	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R127	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R128	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R129	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R130	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R131	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R132	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R135	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R136	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R139	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R140	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R141	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R142	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W
R143	1-216-651-11	s	METAL CHIP 1K 0.50% 1/10W
R144	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R145	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R146	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R147	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
RB1	1-235-052-00	s	BLOCK 33K
RB2	1-235-052-00	s	BLOCK 33K
RB3	1-235-052-00	s	BLOCK 33K
RB4	1-231-545-00	s	BLOCK, RESISTOR 33KX4
RB5	1-231-545-00	s	BLOCK, RESISTOR 33KX4
RV1	1-226-786-21	s	METAL 10K
RV2	1-224-981-21	s	METAL 5K
RV3	1-224-981-21	s	METAL 5K
RV4	1-224-981-21	s	METAL 5K
RV5	1-224-981-21	s	METAL 5K
S2	1-554-041-11	s	PUSH
S3	1-554-041-11	s	PUSH
S4	1-554-041-11	s	PUSH
S5	1-554-041-11	s	PUSH
S6	1-554-041-11	s	PUSH
S7	1-554-041-11	s	PUSH
S8	1-554-041-11	s	PUSH
S9	1-554-041-11	s	PUSH
S10	1-554-041-11	s	PUSH
S11	1-554-041-11	s	PUSH
S12	1-571-569-21	s	PUSH
S13	1-570-214-11	s	PUSH
S14	1-570-214-21	s	PUSH
S15	1-570-214-31	s	PUSH
S16	1-570-214-41	s	PUSH
S17	1-570-212-11	s	PUSH
S18	1-570-212-21	s	PUSH
S19	1-570-212-31	s	PUSH
S20	1-570-212-41	s	PUSH
S21	1-570-807-11	s	PUSH
S22	1-570-807-21	s	PUSH
S23	1-570-807-31	s	PUSH
S24	1-570-807-41	s	PUSH
S25	1-554-041-11	s	PUSH
S26	1-554-048-00	s	PUSH
S27	1-554-048-00	s	PUSH
S28	1-554-048-00	s	PUSH
S29	1-554-048-00	s	PUSH
S30	1-554-048-00	s	PUSH
S31	1-554-048-00	s	PUSH

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

(SW-284 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
S32	1-554-048-00	s	PUSH
S33	1-554-048-00	s	PUSH
S34	1-554-048-00	s	PUSH
S35	1-554-048-00	s	PUSH
S36	1-554-048-00	s	PUSH
S37	1-554-048-00	s	PUSH
S38	1-554-048-00	s	PUSH
S39	1-554-048-00	s	PUSH
S40	1-554-048-00	s	PUSH
S41	1-570-222-11	s	PUSH
S42	1-570-222-21	s	PUSH
S43	1-570-222-31	s	PUSH
S44	1-570-222-41	s	PUSH
S45	1-554-040-31	s	PUSH
S46	1-570-218-11	s	PUSH
S47	1-570-219-11	s	PUSH
S48	1-570-217-11	s	PUSH
S49	1-570-213-61	s	PUSH
S50	1-570-213-71	s	PUSH
S51	1-571-569-11	s	PUSH
S52	1-570-218-11	s	PUSH
S53	1-570-219-11	s	PUSH
S54	1-570-217-11	s	PUSH
S55	1-570-213-51	s	PUSH
S56	1-570-213-71	s	PUSH
S57	1-554-040-11	s	PUSH
S58	1-554-039-11	s	PUSH
S59	1-554-040-11	s	PUSH
S60	1-554-039-11	s	PUSH
S61	1-554-048-00	s	PUSH
S62	1-554-048-00	s	PUSH
S63	1-554-048-00	s	PUSH
S64	1-571-289-11	s	DIGITAL ROTARY (DIP)
S65	1-571-289-11	s	DIGITAL ROTARY (DIP)

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
	1-464-765-12	s	DISPLAY UNIT, EL
C101	1-136-205-11	s	FILM 0.0022MF 10% 630V
C102	1-136-205-11	s	FILM 0.0022MF 10% 630V
CN1F(to DP-90 BOARD)			
	1-563-119-11	o	HOUSING, 10P
	1-563-115-21	o	CONTACT, AWG24-28
CN1F(to PE-18 BOARD)			
	1-562-147-11	o	HOUSING, 2P
	1-563-088-11	o	CONTACT, AWG24-30
CN1F(to SW-284 BOARD)			
	1-563-123-11	o	HOUSING, 18P
	1-563-115-11	o	CONTACT, AWG24-28
CN2F(to DP-90 BOARD)			
	1-563-117-11	o	HOUSING, 6P
	1-563-115-11	o	CONTACT, AWG24-28
CN2F(to SW-282 BOARD)			
	1-563-116-11	o	HOUSING, 4P
	1-563-115-11	o	CONTACT, AWG24-28
CN3F(to CP-130 BOARD)			
	1-563-126-11	o	HOUSING, 24P
	1-563-115-11	o	CONTACT, AWG24-28
CN4F(to CP-130 BOARD)			
	1-563-119-11	o	HOUSING, 10P
	1-563-115-11	o	CONTACT, AWG24-28
CN5F(to CP-130 BOARD)			
	1-563-118-11	o	HOUSING, 8P
	1-563-115-11	o	CONTACT, AWG24-28
CN6F(to CP-130 BOARD)			
	1-563-117-11	o	HOUSING, 6P
	1-563-115-11	o	CONTACT, AWG24-28
CN7F(to CP-130 BOARD)			
	1-563-122-11	o	HOUSING, 16P
	1-563-115-11	o	CONTACT, AWG24-28
CN100	1-942-314-11	o	HARNESS (CCU)
FB101	1-543-609-11	s	CORE, FERRITE
J101	1-507-676-00	s	JACK, PHONE "INCOM-1"
J102	1-507-676-00	s	JACK, PHONE "INCOM-2"
R101	1-214-537-00	s	METAL 150 1% 1/8W
R102	1-214-537-00	s	METAL 150 1% 1/8W
RV101	1-237-981-11	s	CARBON 20K "IMCOM-1 LEVEL"
RV102	1-237-981-11	s	CARBON 20K "INCOM-2 LEVEL"
S101	1-552-926-21	s	SWITCH, PUSH "CCU POWER"
S102	1-570-172-11	s	SWITCH, PUSH (1 KEY) "CALL"
S103	1-571-070-11	s	SWITCH, TOGGLE "MIC 1"
S104	1-571-070-11	s	SWITCH, TOGGLE "MIC 2"
S105	1-571-070-11	s	SWITCH, TOGGLE "MIX"
S106	1-571-070-11	s	SWITCH, TOGGLE "PGM/PD"
S107	1-571-070-11	s	SWITCH, TOGGLE "PRIV"
S112	1-466-031-21	s	ENCODER, ROTARY "IRIS"
S113	1-466-031-31	s	ENCODER, ROTARY "FOCUS"

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

(FRAME)

Ref. No. or Q'ty	Part No.	SP	Description
VDR101	1-806-500-11	s	VARISTOR ERZ-C05DK390
VDR102	1-806-500-11	s	VARISTOR ERZ-C05DK390

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP	Description
	1-563-115-21	o	CONTACT
	1-563-118-11	o	HOUSING, 8P
	1-563-159-11	s	CONNECTOR, 5P FEMALE
	2-297-913-00	s	WASHER(DIA.5), ORNAMENTAL
	3-648-847-01	s	SHEET, PROTECTION
	3-733-047-01	o	PANEL (B), INCOME
	3-733-100-01	o	ANGLE (10U), RACK
	4-885-834-00	s	SHEET, PROTECTION
	7-627-556-37	s	SCREW, PRECISION +P2.6X4
	7-682-374-04	s	SCREW +RK5X8
	7-682-377-04	s	SCREW +RK5X14
	7-682-561-09	s	SCREW +B4X8
	7-682-575-09	s	SCREW +B 5X10

Please see pages D-13 to D-14 for the part numbers of capacitors and resistors that are not listed in the parts list.

SECTION E
CHANGED PARTS

NOTE: The numbers identified by making with) are matching with each serial numbers.

904) Serial No. 10301 and higher
908) Serial No. 10401 and higher

CP-130 BOARD

OLD)	IC13	8-759-240-50 s	IC TC4050BP
908)	IC13	8-759-000-46 s	IC MC14050BCP
OLD)	IC40	8-759-205-06 s	IC TC74HC74F
904)	IC40	8-759-925-90 s	IC SN74HC74NS
OLD)	IC42	8-759-202-55 s	IC TC74HC244P
904)	IC42	8-759-916-71 s	IC SN74HC244N
OLD)	IC44	8-759-205-09 s	IC TC74HC138F
904)	IC44	8-759-926-11 s	IC SN74HC138NS
OLD)	IC45	8-759-205-09 s	IC TC74HC138F
904)	IC45	8-759-926-11 s	IC SN74HC138NS
OLD)	IC46	8-759-748-02 s	IC MBM27C256A-20TV
908)	IC46	8-759-733-51 s	IC MBM27C256A-20TV/CANL
OLD)	IC52	8-759-205-09 s	IC TC74HC138F
904)	IC52	8-759-926-11 s	IC SN74HC138NS
OLD)	IC53	8-759-205-09 s	IC TC74HC138F
904)	IC53	8-759-926-11 s	IC SN74HC138NS
OLD)	IC54	8-759-205-09 s	IC TC74HC138F
904)	IC54	8-759-926-11 s	IC SN74HC138NS
OLD)	IC55	8-759-205-09 s	IC TC74HC138F
904)	IC55	8-759-926-11 s	IC SN74HC138NS
OLD)	IC56	8-759-204-94 s	IC TC74HC00F
904)	IC56	8-759-927-46 s	IC SN74HC00NS
OLD)	IC57	8-759-204-95 s	IC TC74HC02F
904)	IC57	8-759-925-72 s	IC SN74HC02NS
OLD)	IC58	8-759-748-02 s	IC MBM27C256A-20TV
908)	IC58	8-759-733-52 s	IC MBM27C256A-20TV/DISP
OLD)	IC65	8-759-204-96 s	IC TC74HC04F
904)	IC65	8-759-925-74 s	IC SN74HC04NS
OLD)	IC66	8-759-202-55 s	IC TC74HC244P
904)	IC66	8-759-916-71 s	IC SN74HC244N
OLD)	IC67	8-759-205-32 s	IC TC74HC374F
904)	IC67	8-759-926-67 s	IC SN74HC374NS
OLD)	IC68	8-759-205-32 s	IC TC74HC374F
904)	IC68	8-759-926-67 s	IC SN74HC374NS
OLD)	IC69	8-759-205-32 s	IC TC74HC374F
904)	IC69	8-759-926-67 s	IC SN74HC374NS
OLD)	IC70	8-759-205-32 s	IC TC74HC374F
904)	IC70	8-759-926-67 s	IC SN74HC374NS
OLD)	IC71	8-759-204-96 s	IC TC74HC04F
904)	IC71	8-759-925-74 s	IC SN74HC04NS
OLD)	IC74	8-759-205-06 s	IC TC74HC74F
904)	IC74	8-759-925-90 s	IC SN74HC74NS
OLD)	IC75	8-759-205-08 s	IC TC74HC86F
904)	IC75	8-759-925-97 s	IC SN74HC86NS
OLD)	IC80	8-759-202-56 s	IC TC74HC245P
904)	IC80	8-759-921-34 s	IC SN74HC245N
OLD)	IC81	8-759-202-56 s	IC TC74HC245P
904)	IC81	8-759-921-34 s	IC SN74HC245N
OLD)	IC82	8-759-202-96 s	IC TC74HC04F
904)	IC82	8-759-925-74 s	IC SN74HC04NS
OLD)	IC83	8-759-205-05 s	IC TC74HC32F
904)	IC83	8-759-925-85 s	IC SN74HC32NS
OLD)	IC85	8-759-204-94 s	IC TC74HC00F
904)	IC85	8-759-927-46 s	IC SN74HC00NS

(CP-130 BOARD)

OLD)	IC86	8-759-205-05 s	IC TC74HC32F
904)	IC86	8-759-925-85 s	IC SN74HC32NS
OLD)	IC87	8-759-207-25 s	IC TC74HC163F
904)	IC87	8-759-926-23 s	IC SN74HC163NS
OLD)	IC88	8-759-207-25 s	IC TC74HC163F
904)	IC88	8-759-926-23 s	IC SN74HC163NS
OLD)	IC89	8-759-207-25 s	IC TC74HC163F
904)	IC89	8-759-926-23 s	IC SN74HC163NS
OLD)	IC90	8-759-205-09 s	IC TC74HC138F
904)	IC90	8-759-926-11 s	IC SN74HC138NS
OLD)	IC91	8-759-230-79 s	IC TC74HC166F
904)	IC91	8-759-926-26 s	IC SN74HC166NS
OLD)	IC92	8-759-205-18 s	IC TC74HC175F
904)	IC92	8-759-926-29 s	IC SN74HC175NS
OLD)	IC93	8-759-202-55 s	IC TC74HC244P
904)	IC93	8-759-916-71 s	IC SN74HC244N
OLD)	IC94	8-759-204-96 s	IC TC74HC04F
904)	IC94	8-759-925-74 s	IC SN74HC04NS
OLD)	IC95	8-759-207-25 s	IC TC74HC163F
904)	IC95	8-759-926-23 s	IC SN74HC163NS
OLD)	IC96	8-759-207-25 s	IC TC74HC163F
904)	IC96	8-759-926-23 s	IC SN74HC163NS
OLD)	IC97	8-759-205-09 s	IC TC74HC138F
904)	IC97	8-759-926-11 s	IC SN74HC138NS
OLD)	IC99	8-759-204-94 s	IC TC74HC00F
904)	IC99	8-759-927-46 s	IC SN74HC00NS
OLD)	IC105	8-759-205-06 s	IC TC74HC74F
904)	IC105	8-759-925-90 s	IC SN74HC74NS
OLD)	IC201	8-759-202-55 s	IC TC74HC244P
904)	IC201	8-759-916-71 s	IC SN74HC244N
OLD)	IC202	8-759-204-95 s	IC TC74HC02F
904)	IC202	8-759-925-72 s	IC SN74HC02NS
OLD)	R4	1-216-105-00 s	METAL CHIP 220K 5% 1/10W
904)	R4	1-216-061-00 s	METAL CHIP 3.3K 5% 1/10W
OLD)	R33	1-216-105-00 s	METAL CHIP 220K 5% 1/10W
904)	R33	1-216-061-00 s	METAL CHIP 3.3K 5% 1/10W

FRAME

OLD)	C101		NOT IN USE.
908)	C101	1-136-205-11 s	FILM 0.022MF 10% 630V
OLD)	C102		NOT IN USE.
908)	C102	1-136-205-11 s	FILM 0.022MF 10% 630V
OLD)	FB101		NOT IN USE.
904)	FB101	1-543-609-11 s	CORE, FERRITE
OLD)	VDR101		NOT IN USE.
908)	VDR101	1-806-500-11 s	VARISTOR ERZ-C05DK390
OLD)	VDR102		NOT IN USE.
908)	VDR102	1-806-500-11 s	VARISTOR ERZ-C05DK390

PACKING MATERIALS & SUPPLIED ACCESSORIES

OLD) 4pcs NOT IN USE.
908) 4pcs 7-682-377-04 s SCREW +RK5x14

SW-284 BOARD

OLD) IC34 8-759-202-25 s IC TC74HC133P
904) IC34 8-759-916-42 s IC SN74HC133N
OLD) IC48 8-759-240-25 s IC TC4025BP
908) IC48 8-759-000-34 s IC MC14025BCP
OLD) IC76 8-759-202-25 s IC TC74HC133P
904) IC76 8-759-916-42 s IC SN74HC133N

OLD) IC77 8-759-202-25 s IC TC74HC133P
904) IC77 8-759-916-42 s IC SN74HC133N

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