

Service Manual

ORDER NO.
RRV1355

CD-ROM DRIVE UNIT

DR-U124X-7

DR-US124X-6

- Refer to the service manual RRV1273 for DR-UA124X-3/ZUC/WL.

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	Remarks
	DR-U124X-7	DR-US124X-6		
ZUC/WL	○	○	DC power supplied from other system component	

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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES :

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10¹ → 561 RD1/8PM $\begin{matrix} 5 & 6 & 1 \\ \square & \square & \square \end{matrix}$ J
 47kΩ → 47 × 10³ → 473 RD1/4PS $\begin{matrix} 4 & 7 & 3 \\ \square & \square & \square \end{matrix}$ J
 0.5Ω → 0R5 RN2H $\begin{matrix} 0 & R & 5 \\ \square & \square & \square \end{matrix}$ K
 1Ω → 010 RS1P $\begin{matrix} 0 & 1 & 0 \\ \square & \square & \square \end{matrix}$ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10¹ → 5621 RM1/4PC $\begin{matrix} 5 & 6 & 2 & 1 \\ \square & \square & \square & \square \end{matrix}$ F

DR-U124X-7/ZUC/WL, DR-US124X-6/ZUC/WL and DR-UA124X-3/ZUC/WL have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		DR-UA124X-3/ ZUC/WL	DR-U124X-7/ ZUC/WL	DR-US124X-6/ ZUC/WL	
NSP	MAINB ASSY	DWM1490	DWM1489	DWM1495	
NSP	MOTHER BOARD ASSY (ATAPI)	DWX1574	Not used	Not used	
NSP	MOTHER BOARD ASSY (SCSI)	Not used	DWX1573	DWX1592	
	EP-ROM (IC702)	DYW1418	DYW1401	DYW1424	
	Label	DRW1649	DRW1647	DRW1680	
	Packing case	DHG1647	DHG1663	DHG1662	
	Operating instructions (English/French)	DRC1021	DRC1025	DRC1024	

● **MOTHER BOARD ASSY (SCSI) (DWX1592)**

DWX1592 and DWX1573 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		DWX1573	DWX1592	
	S702	DSG1047	Not used	
	L301	DTL1015	Not used	
	L302	Not used	OTL1040	
	C314	CCSRCH100D50	Not used	
	C315	CKSRBY102K50	Not used	
	C316	CCSRCH220J50	Not used	
	C323	Not used	CCSRCH180J50	
	C809	CCSRCH180J50	CCSRCH220J50	
	R311	RS1/16S511J	Not used	
	R326	Not used	RS1/16S000J	
	R327	RS1/10S000J	Not used	
	X301 (33.8688MHz)	ASS7000	Not used	
	X801 (37.2557MHz)	DSS1063	Not used	
	X801 (33.8688MHz)	Not used	ASS7000	

PCB PARTS LIST

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
MOTHER BOARD ASSY (SCSI) (DWX1573)							
SEMICONDUCTORS							
	IC203		BA10393F		C227, C230, C304-C307, C320		CKSRYB103K50
	IC401		BA6797FP		C711, C712		CKSRYB103K50
	IC501		BA6840FP		C309, C310, C414, C415, C512		CKSRYB153K50
	IC803		BH9590FP-Y		C426		CKSRYB223K25
	IC804		ICP-S1.0		C506, C508		CKSRYB822K50
	IC802		KM681000BLG-5		C101, C103, C112, C201, C202		CKSRYF104Z25
	IC801		LC89512W-V79		C238, C242, C243, C245, C246		CKSRYF104Z25
	IC713		M51953BFP		C301, C303, C308, C312		CKSRYF104Z25
	IC602		M5218AFP		C321, C322, C390, C403, C416		CKSRYF104Z25
	IC701		MB90T678		C419, C423, C425, C504, C505		CKSRYF104Z25
	IC204		TA2066F		C511, C611, C612, C615, C616		CKSRYF104Z25
	IC404		TC4W53F		C618, C701-C704, C715, C718		CKSRYF104Z25
	IC707		TC74HC138AF		C721, C801-C803, C806, C831		CKSRYF104Z25
	IC708, IC709		TC74HC573AF		C405, C417, C418, C710		CKSRYF473Z25
	IC703		TC7S04F		C311		CKSYF154Z25
	IC301		TC9405F		C239 (47 μ F/6.3V)		DCH1074
	IC205, IC402, IC405, IC601		XRA4558F-P	RESISTORS			
	IC202		XRA4560F		VR601 (47k Ω)		DCS1029
	Q401		2SA1576A		VR201 (1k Ω)		PCP1024
	Q206		2SB1189		R253 (22 Ω)		DCN1050
	Q602, Q603, Q619, Q620		2SC4081		R403 (1.0 Ω)		DCN1051
	Q402, Q403, Q601		DTA124EU		R506, R507 (0.47 Ω)		OCN1024
	Q701, Q702		DTC124EU		R327		RS1/10S000J
	D801		RB160L-40		Other Resistors		RS1/16S□□□J
	D702		SLB-25YYTB7	OTHERS			
COILS AND FILTERS					CN601	CONNECTOR	103672-3
	F301, F601, F602, F801		DTH1122		CN201	FLEXIBLE CONNECTOR	52207-1690
	L301, L801 (1.2 μ H)		DTL1015		CN706	PIN HEADER (14P)	9022B-14C
	L104, L601 (22mH)		OTL1009		CN101	SCSI/POWER SUPPLY CONNECTOR	9047B-54
	L602, L603		OTL1040		CN501	CONNECTOR (11P)	B11B-ZR-SM3
	F101, F103 (10000p)		VTH1033		CN401	KR CONNECTOR IC SOCKET	B4B-PH-K-S DKH1016
SWITCHES AND RELAYS					JA601	MINI JACK	DKN1123
	S701, S702		DSG1047		CN703	CONNECTOR (3P)	S3B-ZR-SM3A
CAPACITORS					X701	CERAMIC OSCILLATOR (4MHz)	CSAC4.00MGCM
	C314, C807		CCSRCH100D50		X301	CRYSTAL RESONATOR (33.8688MHz)	ASS7000
	C302		CCSRCH101J50		X801	CRYSTAL RESONATOR (37.2557MHz)	DSS1063
	C427		CCSRCH151J50				
	C809		CCSRCH180J50				
	C316		CCSRCH220J50				
	C428		CCSRCH271J50				
	C601, C604		CCSRCH330J50				
	C222, C228, C713, C714		CCSRCH390J50				
	C244		CCSRCH470J50				
	C602, C603, C605, C606		CCSRCH820J50				
	C501-C503		CEAL100M16				
	C607, C608		CEAL100M6R3				
	C105, C609, C610		CEAL101M6R3				
	C424, C805		CEAL220M16				
	C510		CEAL470M16				
	C231, C617, C804		CEAL470M6R3				
	C107		CEAS101M16				
	C404		CEV470M16				
	C241, C407		CEV470M6R3				
	C315, C720, C808		CKSRYB102K50				

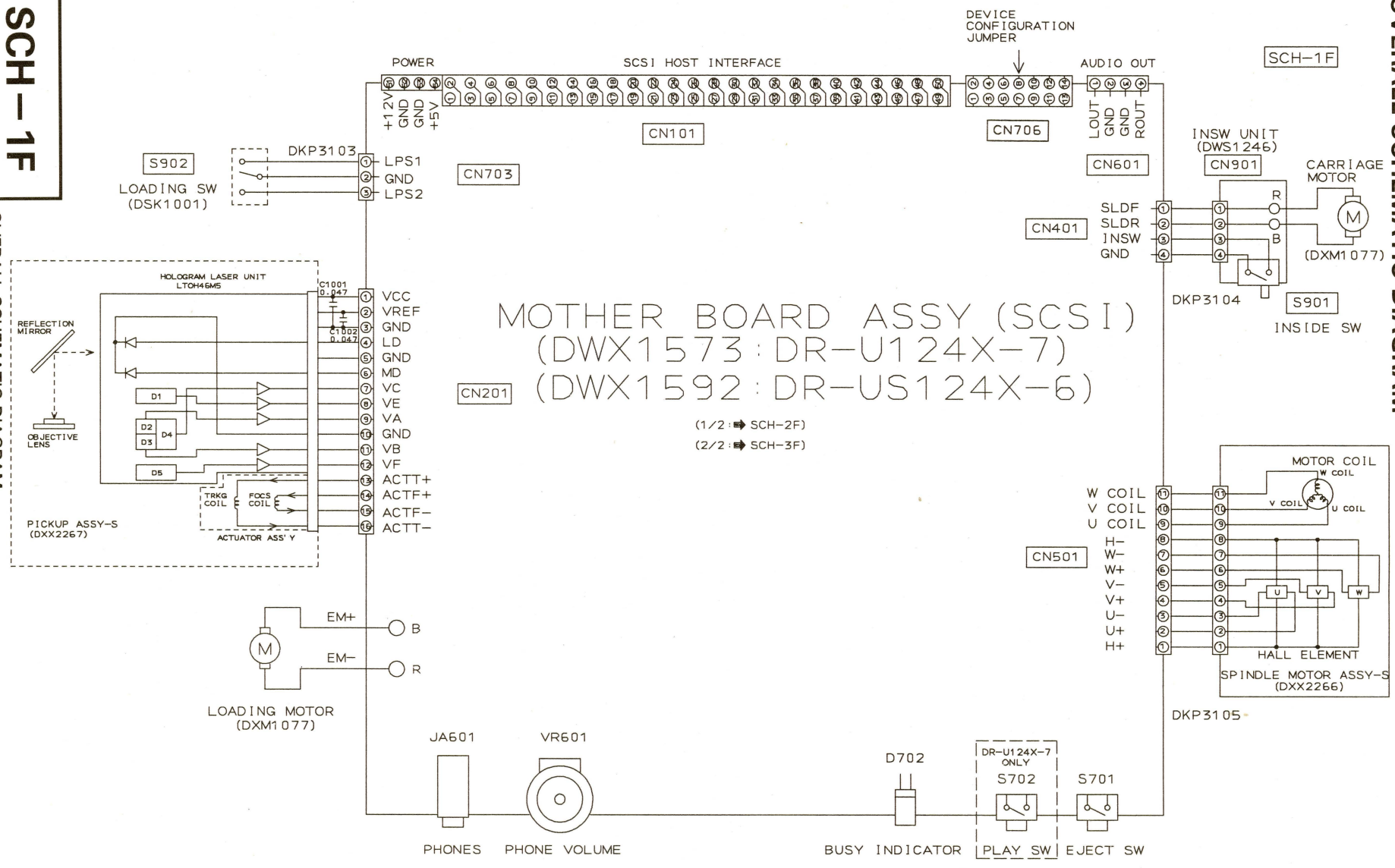
2. SCHEMATIC AND PCB DIAGRAMS

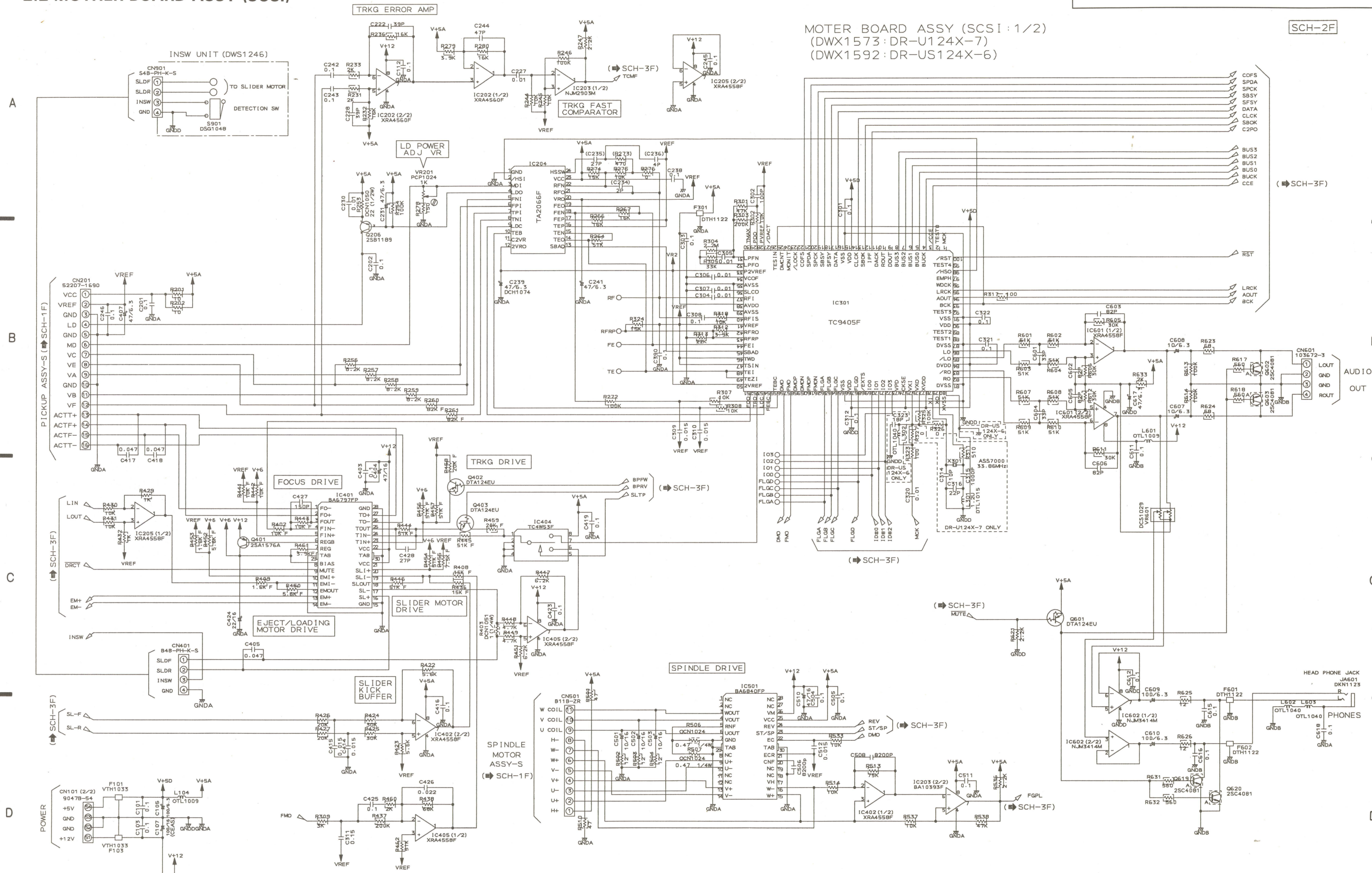
2.1 OVERALL SCHEMATIC DIAGRAM

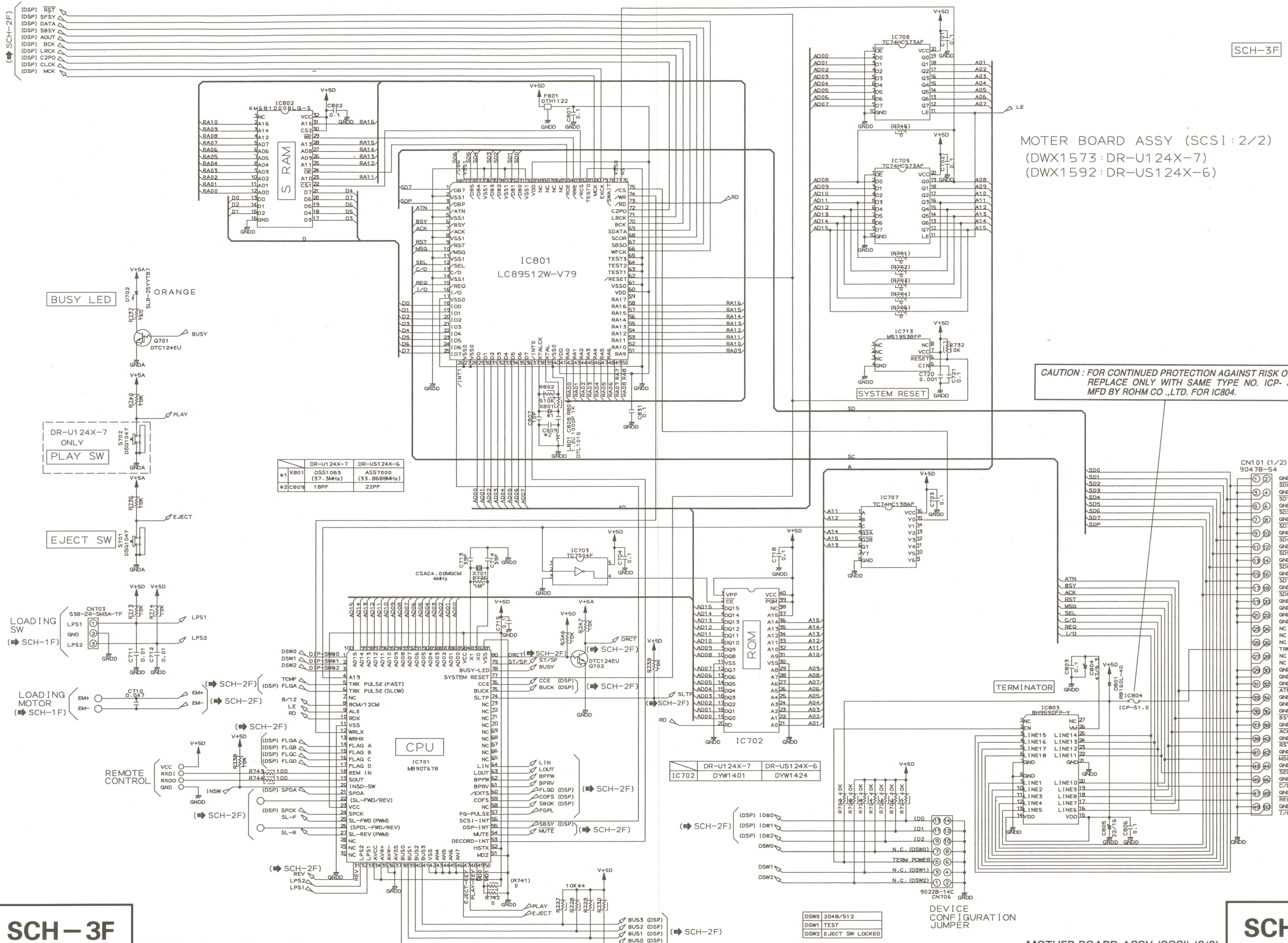
SCH-1F

OVERALL SCHEMATIC DIAGRAM

4
1
2
3







SCH-3F

MOTER BOARD ASSY (SCSI:2/2)
 (DWX1573:DR-U124X-7)
 (DWX1592:DR-US124X-6)

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
 REPLACE ONLY WITH SAME TYPE NO. ICP-S1.0,
 MFD BY ROHM CO.,LTD. FOR IC804.

	DR-U124X-7	DR-US124X-6
#1 X801	DS51063 (37.3MHz)	ASS7000 (33.868MHz)
#2 C809	1BPF	22PF

	DR-U124X-7	DR-US124X-6
IC702	DYW1401	DYW1424

DSW0	2048/512
DSW1	TEST
DSW2	EJECT SW LOCKED

SCH-3F

MOTHER BOARD ASSY (SCSI) (2/2)

SCH-3F

MOTHER BOARD ASSY (SCSI) (2/2)

DEVICE CONFIGURATION JUMPER

SCSI BUS

(SCH-2F)
 (DSP) RST
 (DSP) SFSY
 (DSP) DATA
 (DSP) SBSY
 (DSP) ADUT
 (DSP) BCK
 (DSP) LRCK
 (DSP) C2PO
 (DSP) CLCK
 (DSP) MCK

BUSY LED

DR-U124X-7 ONLY
 PLAY SW

EJECT SW

LOADING SW
 (SCH-1F)

LOADING MOTOR
 (SCH-1F)

REMOTE CONTROL

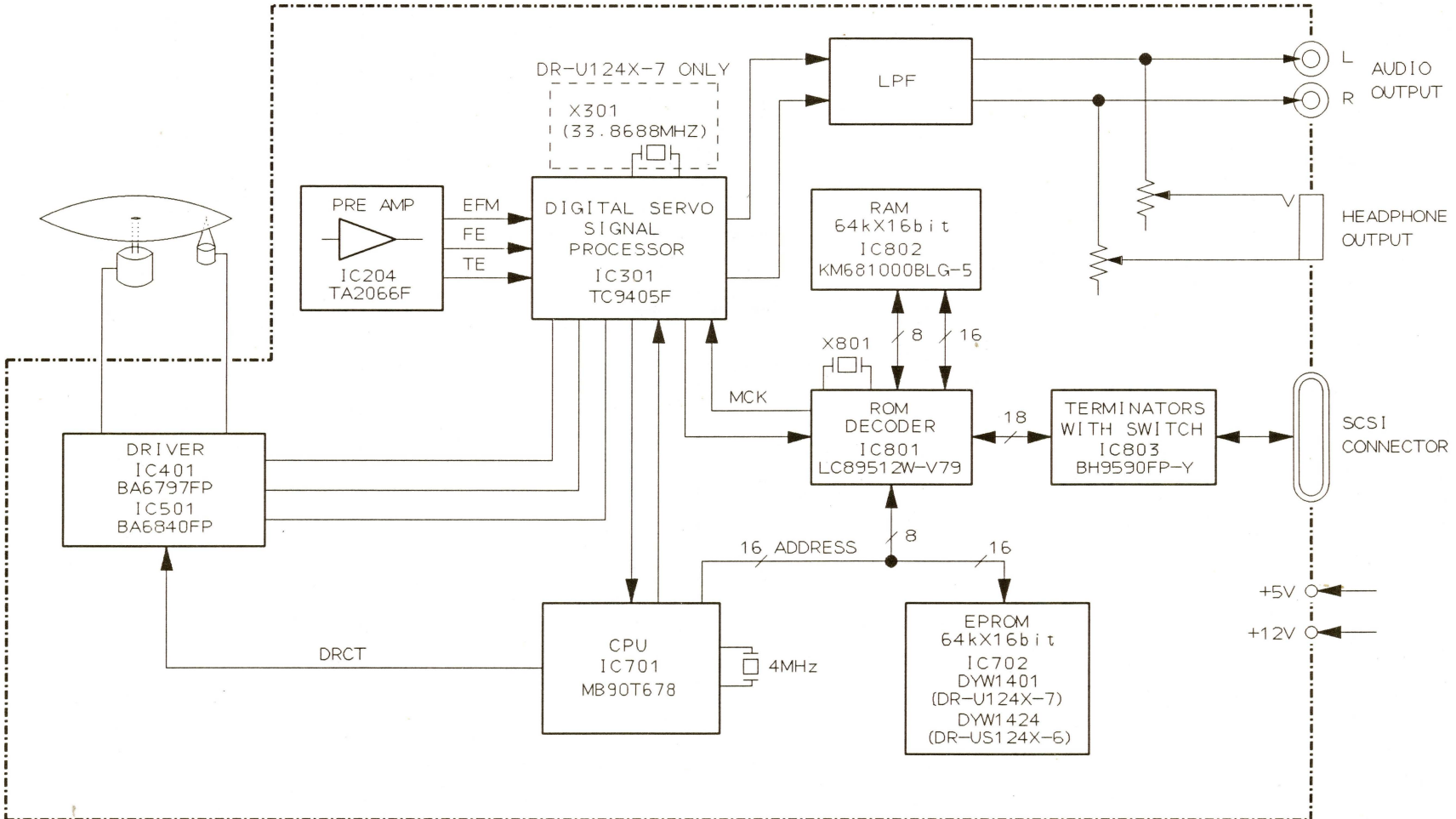
CPU
 IC701 MB90T678

ROM
 IC702

TERMINATOR

SCH-3F

3. BLOCK DIAGRAM



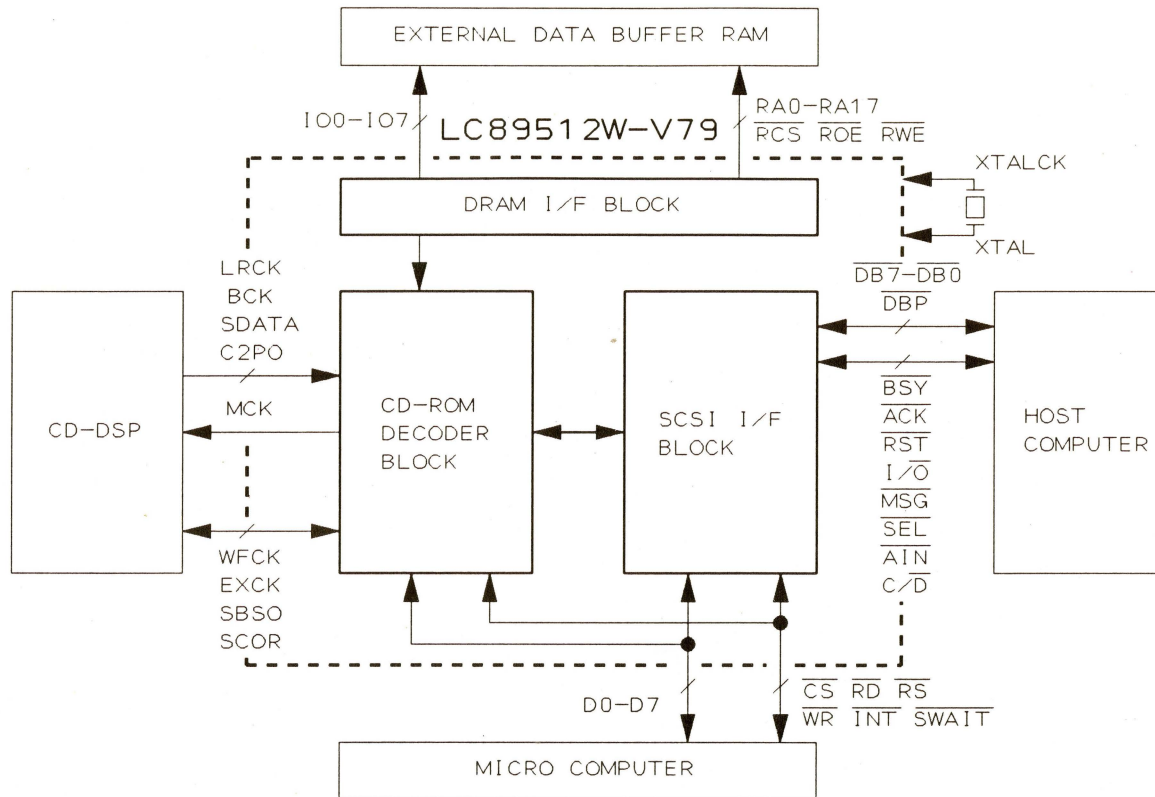
DR-U124X-7, DR-US124X-6

4. IC INFORMATION

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

■ LC89512W-V79 [IC801: MOTHER BOARD ASSY (SCSI)]

- ROM Decoder
- Block Diagram



● Pin Function

No.	Pin Name	I/O	Description
1	$\overline{DB7}$	I/O	SCSI terminal
2	Vss1	-	GND for SCSI I/F driver
3	\overline{DBP}	I/O	SCSI terminal
4	\overline{ATN}		
5	Vss1	-	GND for SCSI I/F driver
6	\overline{BSY}	I/O	SCSI terminal
7	\overline{ACK}		
8	Vss1	-	GND for SCSI I/F driver

No.	Pin Name	I/O	Description
9	\overline{RST}	I/O	SCSI terminal
10	\overline{MSG}		
11	Vss1	-	GND for SCSI I/F driver
12	\overline{SEL}	I/O	SCSI terminal
13	C/D		
14	Vss1	-	GND for SCSI I/F driver
15	\overline{REQ}	I/O	SCSI terminal
16	I/O		

No.	Pin Name	I/O	Description
17	Vsso	—	GND (Logic part)
18 25	IO0 IO7	I/O	Data buffer RAM data signal (built-in pull-up resistor)
26	$\overline{\text{INT1}}$	O	SCSI block interrupt/request signal output (setting at register)
27	Vsso	—	GND (Logic part)
28	Vsso	—	GND (Logic part)
29 36	D0 D7	I/O	Micro-computer data signal (Built-in pull-up resistor)
37	$\overline{\text{INT0}}$	O	Interrupt/request signal output to micro-computer
38	XTALCK	I	X'tal oscillation circuit input
39	XTAL	O	X'tal oscillation circuit output
40	Vsso	—	GND (Logic part)
41	VDD	—	Power supply
42 59	RA0 RA17	O	Address signal output to data buffer RAM (built-in pull-up resistor)
60	VDD	—	Power supply
61	Vsso	—	GND (Logic part)
62	$\overline{\text{RESET}}$	I	Reset terminal
63	TEST1	I	Input terminal for test (Vsso)
64	TEST2		
65	TEST3		
66	WFCK	I	SUB-CODE input (connected to CD-DSP)
67	SBSO		
68	SCOR		
69	SDATA	I	CD-ROM, CD-DA serial data input
70	BCK	I	CD-ROM, CD-DA serial data input clock
71	LRCK	I	44.1 (88.2) kHz strobe signal input
72	C2PO	I	C2 pointer input

No.	Pin Name	I/O	Description
73	$\overline{\text{RD}}$	I	Data read signal input of micro-computer
74	$\overline{\text{WR}}$	I	Data write signal input of micro-computer
75	$\overline{\text{CS}}$	I	Chip select signal input from micro-computer
76	RS	I	Register select signal
77	Vsso	—	GND (Logic part)
78	$\overline{\text{SWAIT}}$	O	SUB-CPU wait signal
79	EXCK	O	SUB-CODE output (connected to CD-DSP)
80	MCK	O	Oscillation frequency output of XTALCK
81	TEST0	I	Input terminal for test (Vsso)
82	$\overline{\text{RCS}}$	O	Chip select signal to RAM
83	$\overline{\text{RWE}}$	O	Data write signal to RAM
84	$\overline{\text{ROE}}$	O	Data read signal from RAM
85 88	NC	NC	Not connect
89	VDD	—	Power supply
90	Vss1	—	GND for SCSI I/F driver
91	$\overline{\text{DB0}}$	I/O	SCSI terminal
92	$\overline{\text{DB1}}$		
93	Vss1	—	GND for SCSI I/F driver
94	$\overline{\text{DB2}}$	I/O	SCSI terminal
95	$\overline{\text{DB3}}$		
96	Vss1	—	GND for SCSI I/F driver
97	$\overline{\text{DB4}}$	I/O	SCSI terminal
98	$\overline{\text{DB5}}$		
99	Vss1	—	GND for SCSI I/F driver
100	$\overline{\text{DB6}}$	I/O	SCSI terminal