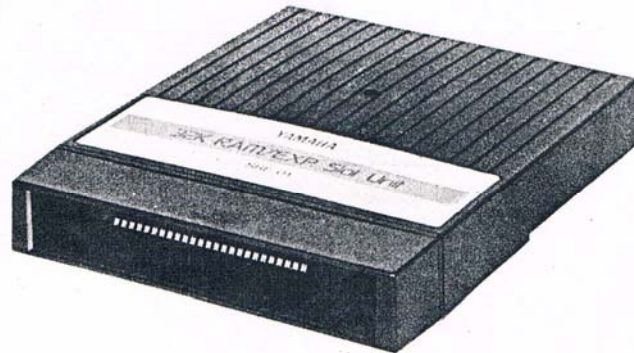
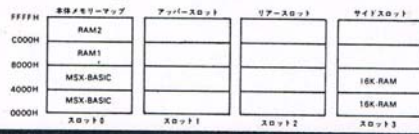


YAMAHA EXPAND SLOT/RAM Unit

SRE-01

SERVICE MANUAL

●メモリーマップ図



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008501

SINCE 1887



YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

0.2K-882 Ⓢ Printed in Japan '85.1

SPECIFICATIONS

POWER SUPPLY

+ 5V ± 0.5% : 480 mA
 +12V ± 10% : 50 mA
 -12V ± 10% : 50 mA

MEASUREMENT

126 (W) x 172 (D) x 27 (H)

WEIGHT

390 g

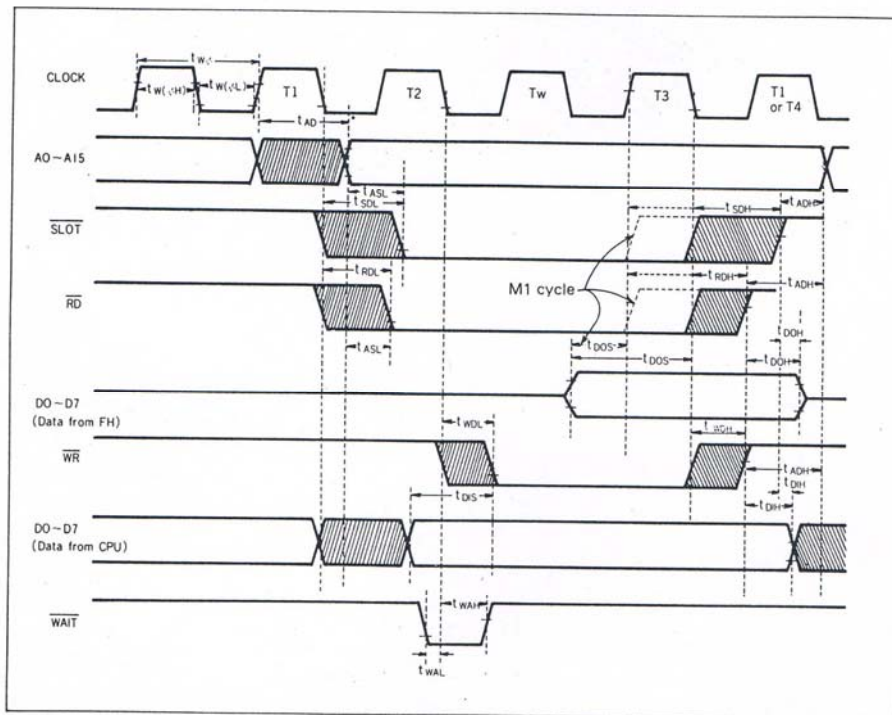
RAH AREA

0000H ~ 7FFFH (32K BYTE)
 SLOT3 EXTENDED AREA (EXPAND SLOT #3-0)

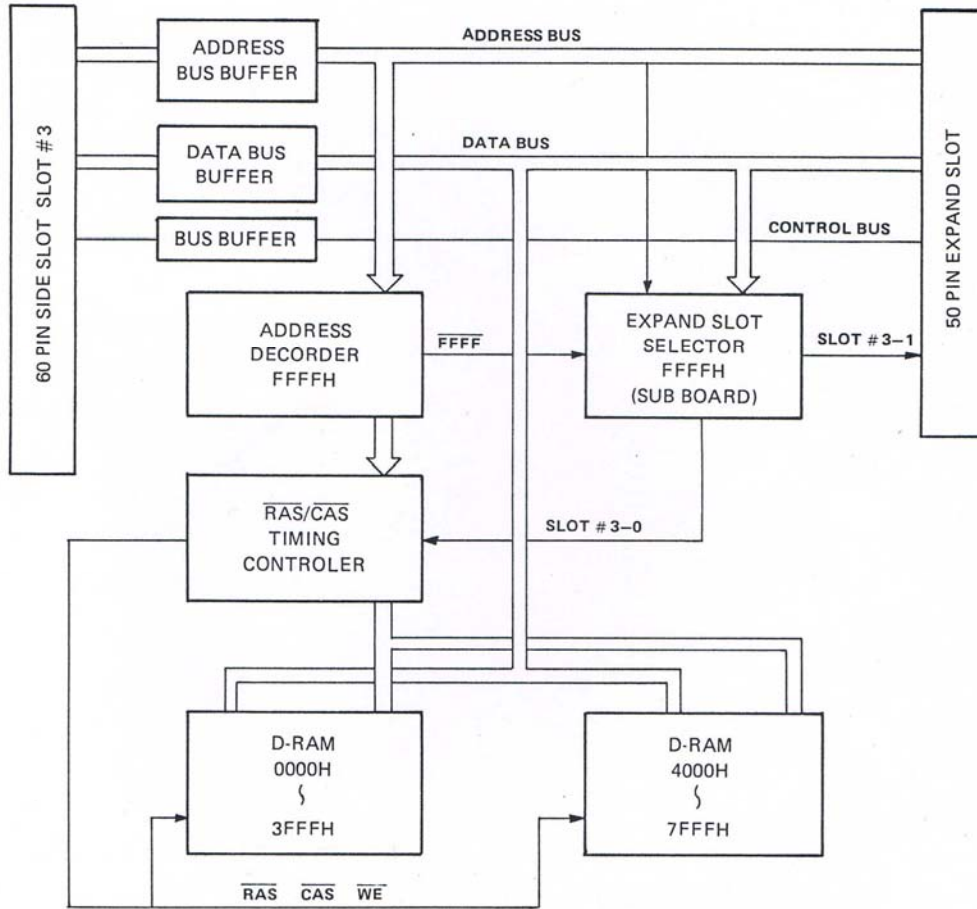
50 PIN CONNECTOR AREA

SLOT3 (EXPAND SLOT #3-1)

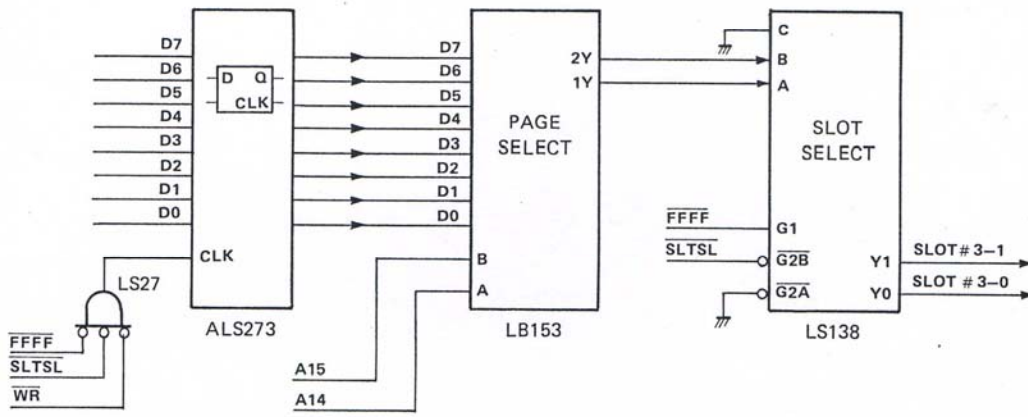
TIMING CHART



■ BLOCK DIAGRAM(SRE-01)



■ EXPAND SLOT SELECTOR



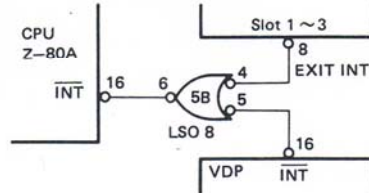
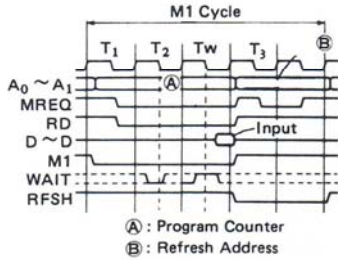
FFFFH ADDRESS (EXPAND SLOT REGISTER)

● MSX DESCRIPTION OF OPERATION

CPU (Z80A)

A 3.579545 MHz system clock is fed to the CPU from clock card. Thus one machine cycle is approximately 279 ns. Address bus (16 bits), data bus (8 bits), control bus (6 bits) and other control lines are connected to peripheral devices and units.

The one machine cycle WAIT is inserted per each M1 cycle (instruction fetch cycle). WAIT can be inserted through slots 1 ~ 3 are logically ORed and led to INT line. 50 Hz interrupt signal in output from VDP to initiate each 1/50 second for the screen control or keyboard scan.

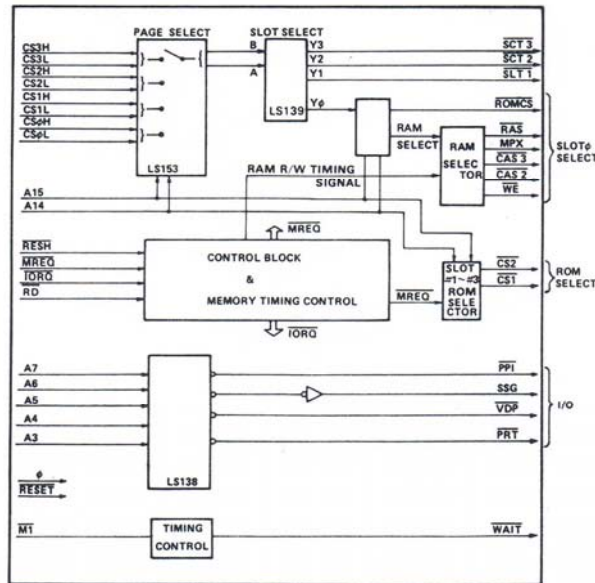


MMC (YM-5214)

It is a dedicated LSI for MSX and developed by YAMAHA.

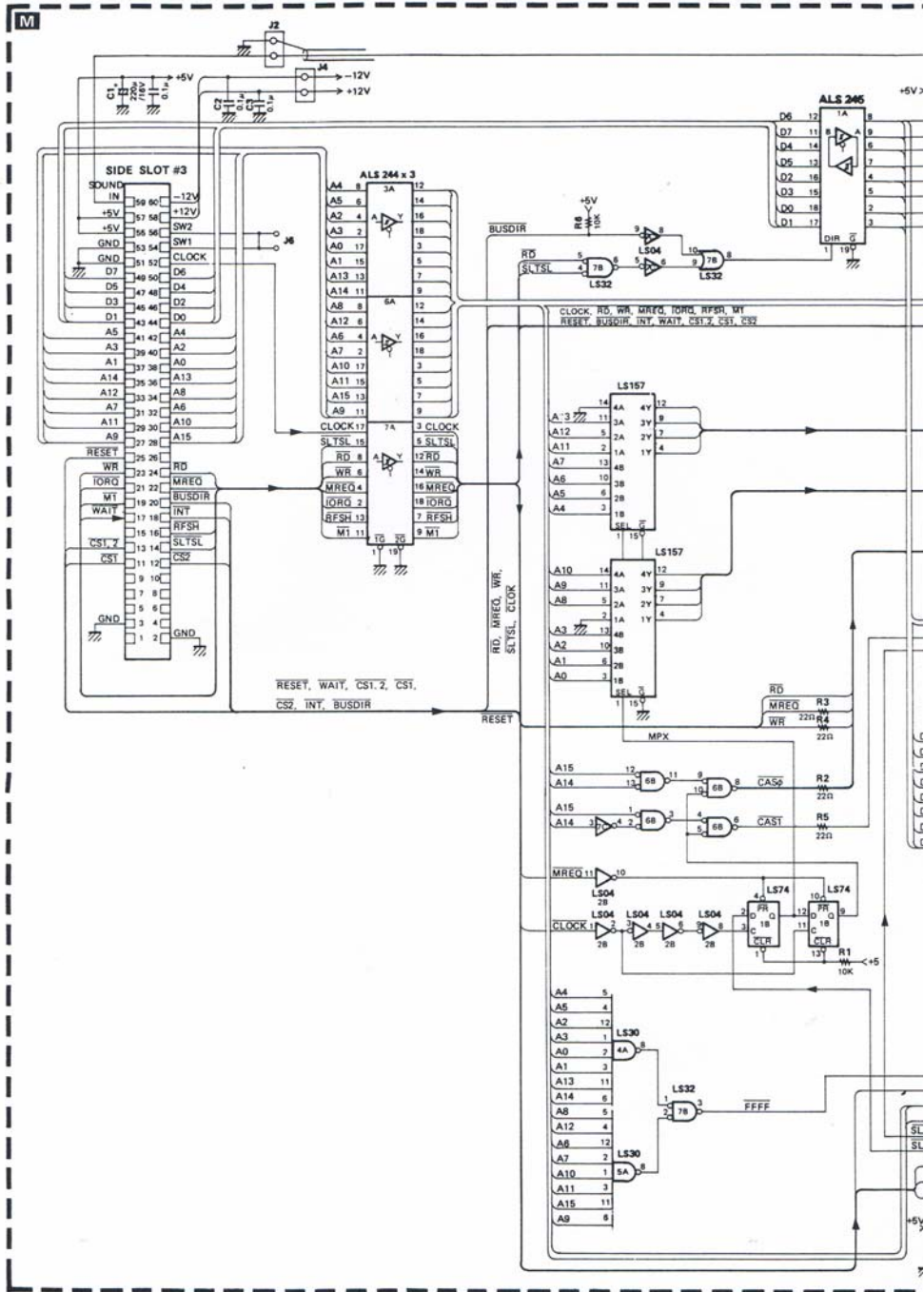
Based on the MSX specifications it handles the memory bank select, standard I/O control, various access timing generation for ROM and RAM or M1 WAIT instruction generation.

MMC BLOCK DIAGRAM



YM5214 BLOCK DIAGRAM

SCHEMATIC DIAGRAM



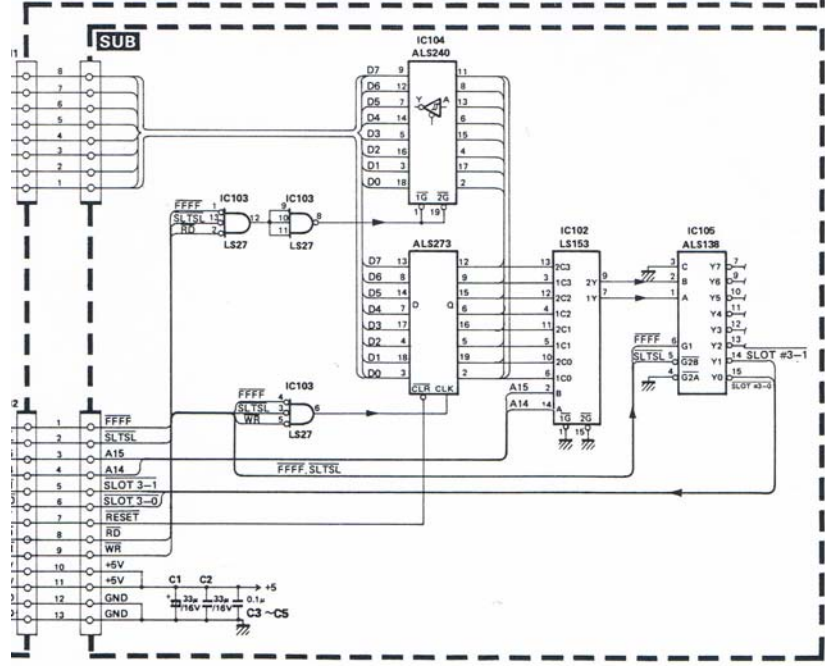
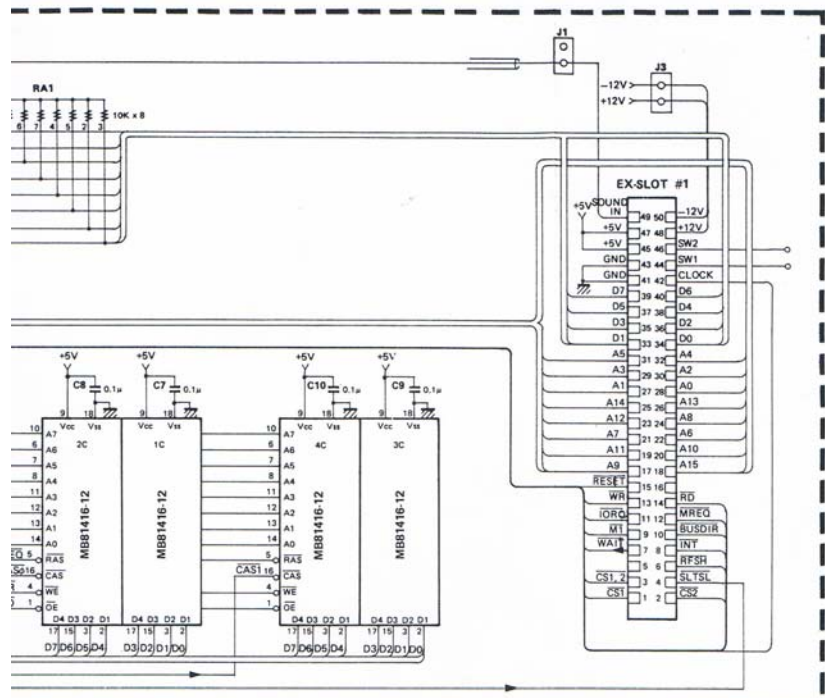
E

F

G

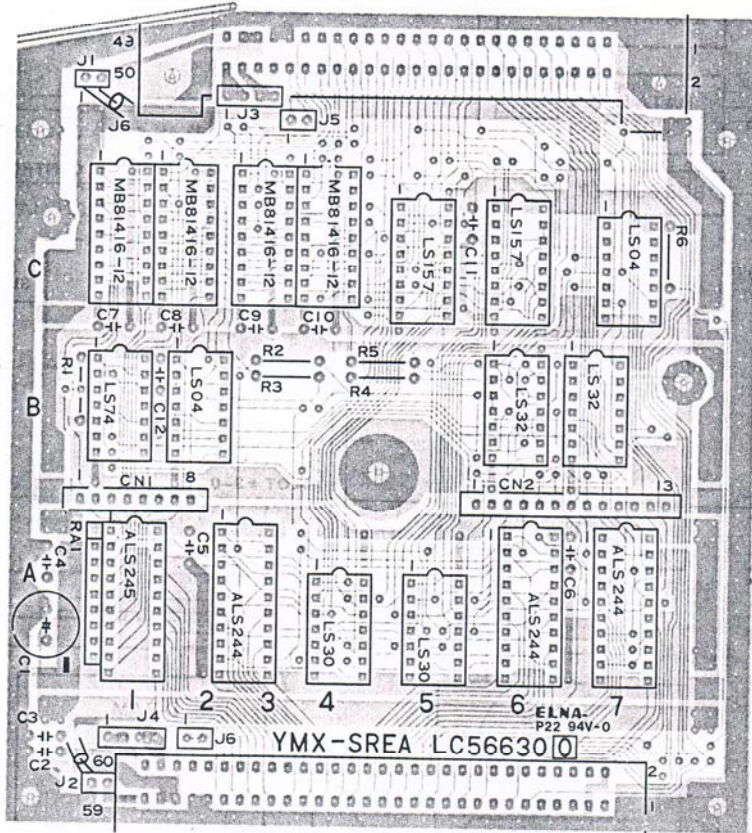
H

SRE-01

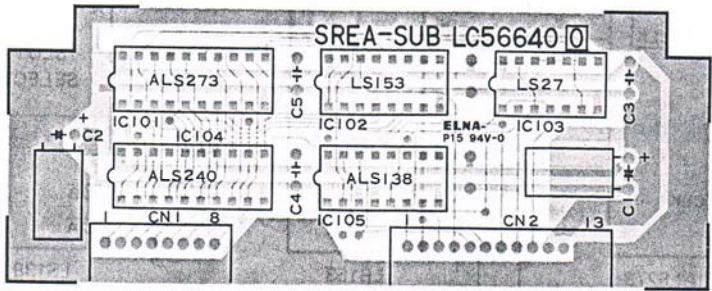


PRINTED CIRCUIT BOARD

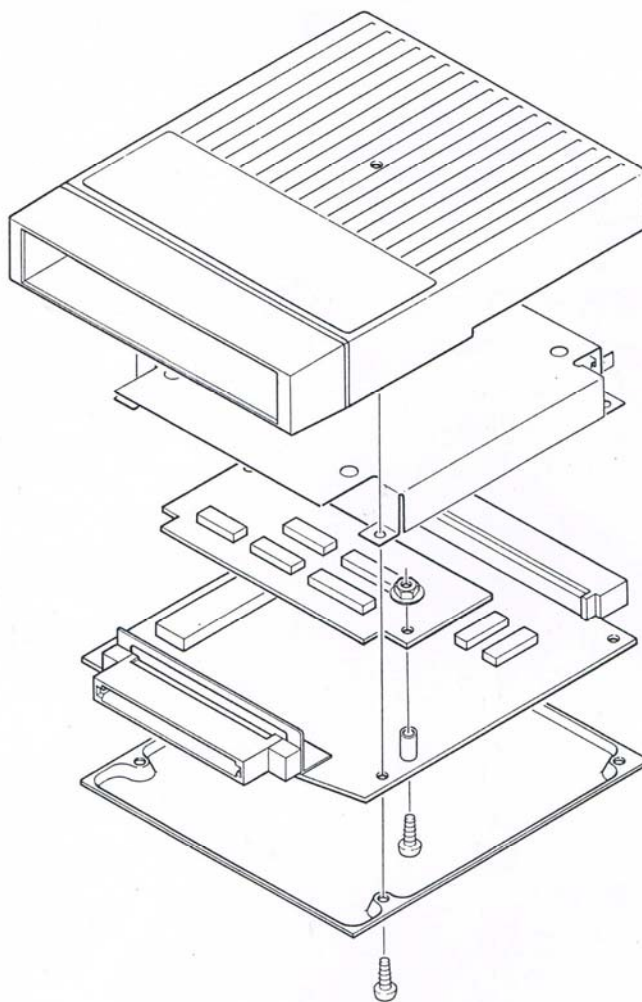
● Main Circuit Board



● Sub Circuit Board



EXPLODE VIEW



MECHANISM PARTS

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
*	NB 55 25 50	Case Upper Ass'y	上 ケ ー ス	SRE-01			
	AA 55 32 20	Case Bottom	ケ ー ス ボ タ ン				
	AA 55 32 30	Shield Plate	シ ー ル ド 板				
	EJ 33 00 86	Pan Head Tapping Screw	ZMC2-BL				
*	CA 55 17 10	Label Upper	上 ラ ベ ル	SRE-01			
*	CA 55 17 20	Label Bottom	下 ラ ベ ル	SRE-01			
*	CA 55 40 70	Label "CAUTION"	注 意 ラ ベ ル	SRE-01			
*	NA 55 18 90	Circuit Board Sub	サ ブ 基 板	SRE-01			
*	NA 55 18 80	Circuit Board Main	メ イ ン 基 板	SRE-01			
*	CB 10 04 30	Support for Board	M3.1 L = 8mm 基 板 支 え	SRE-01			

* New Parts (新規部品)