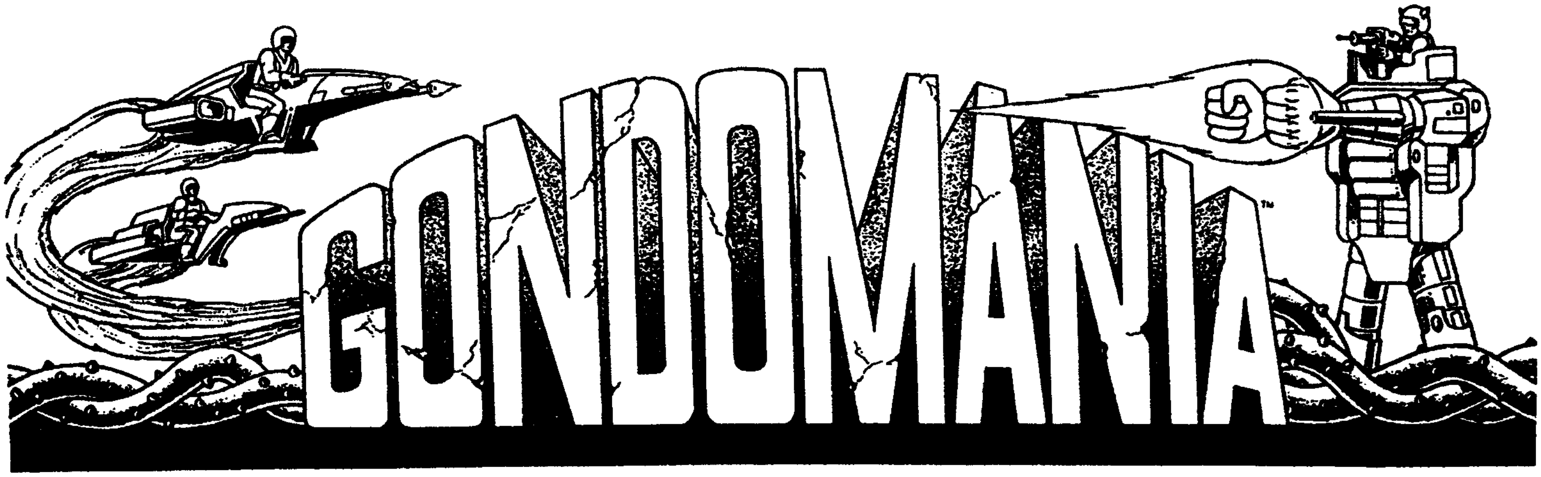
GONDOMANIA™

operation & service manual

DATA EAST USA, INC.
470 Needles Drive
San Jose, California 95112

780-0063-00
May, 1987

WARNING

This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instructions manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device persuant 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.

GONDOMANIA

OPERATION AND SERVICE MANUAL

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470 Needles Drive
San Jose, Ca. 95112
(408) 286-7074

1ST PRINTING

MAY 1987

WARNINGS AND DISCLAIMERS

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To obtain replacement parts or technical assistance, contact the Data East distributor in your area. If you require further technical assistance, contact Data East's Service department between the hours of 8:00 am to 5:00 pm Pacific time at (408) 286-7074.

1. WARRANTY INFORMATION

Data East USA, Inc., ("Seller"), warrants only to the initial purchaser of its products that the items listed below are free from defects in material and workmanship under normal use and service for the warranty period specified:

1.	Printed Circuit Boards (game logic)	(90) days
2.	Monitor pcb and CRT	(30) days
3.	Switching Regulator	(30) days

No other parts of Seller's products are warranted.

Warranty periods are effective from the initial date of shipment from Seller to its authorized distributors.

Seller's sole liability shall be, at its option, to repair or replace products which are returned to Seller during the warranty periods specified, provided:

1. Seller is notified promptly upon discovery by buyer that stated products are defective.
2. Such products are properly packaged and then returned, prepaid to Seller's plant.

This warranty does not apply to any parts damaged during shipping and/or handling, or due to improper installation or usage, or alteration. In no event shall the Seller be liable for any anticipated profits, loss of profits, loss of use, accidental or consequential damages or any other losses incurred by the customer in connection with the purchase of a Data East USA, Inc. product.

WARRANTY DISCLAIMER

EXCEPT AS SPECIFICALLY PROVIDED IN A WRITTEN CONTRACT BETWEEN SELLER AND PURCHASER, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

2. GAME SET UP PROCEDURES.

A. Inspecting the game.

Gondomania is shipped from the factory in a padded, reinforced cardboard container. Before signing the delivery receipt, inspect the container for signs of abuse or damage. Do not sign the delivery receipt if you suspect that the game may be damaged. Open the container in the presence of the delivery driver, note any damage on the delivery receipt, and have the driver initial it before signing the receipt.

Inspect the exterior of the game for any damage to the cabinet. Open the coin door with the proper key. You will find the keys for the cashbox door and the rear access door hanging inside the coin door.

Remove the rear access door and check the following items:

- Check that all plug-in connectors are all firmly plugged in. Re-plug any connections found to be loose or unplugged.
- Check for secure mounting of the power supply, monitor, and coin door.
- Remove the power cord from inside the cabinet and insert the strain relief plate into the slot at the power cord opening in the cabinet.

→ DO NOT PLUG IN THE POWER CORD AT THIS TIME ←

B. Game installation.

Place the game in its intended location and stabilize it using the adjustable levelers built into the bottom of the cabinet.

Check the Operator Selectable Options information in section 3c of this manual and switch your game to the desired settings. The game is now ready to power up. Plug the game into a 117 VAC grounded outlet and flip the power switch located on the power supply chassis to the ON position. Allow 2 to 3 minutes for the monitor filaments to warm up and check for proper attract mode video. Insert the proper coinage, start the game, check for proper control operation and audio response. Refer to section 3a for descriptions of control operation and game play.

If you detect any problems at this point, remove power to the game and contact your distributor for further instructions.

3. SPECIFIC INFORMATION

A. Description of controls.

The Gondomania game is equipped with two sets of controls, one each for the left (Blue Air Bike) player and another for the right (Grey Air Bike) player. Each set consists of a 8 way joystick with a 12 position rotary control, two types of fire buttons, and two start buttons. See the control panel layout for control placement.

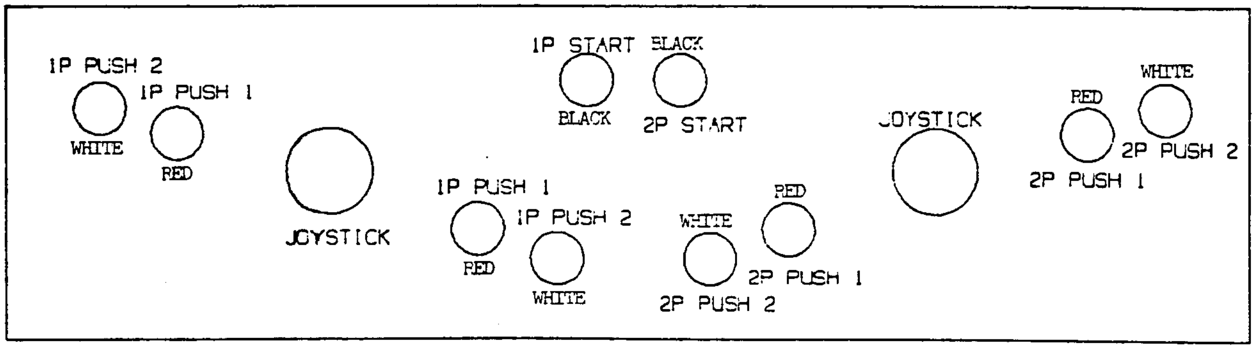

1P PUSH 2
WHITE
1P PUSH 1
RED
JOYSTICK
1P START
BLACK
BLACK
2P START
1P PUSH 1
RED
1P PUSH 2
WHITE
WHITE
2P PUSH 2
RED
2P PUSH 1
JOYSTICK
RED
2P PUSH 1
WHITE
2P PUSH 2

Figure 1

The joystick controls the right, left, up, and down motion of the player image. The 12 position rotary control aims the player image's arm and is used in conjunction with the Push 1 button to fire in the direction the player image's arm is pointing. The Push 2 button causes a shot to be fired in a forward direction only.

The left coin mech credits the Blue Air Bike, and the right coin mech credits the Grey Air Bike. When the proper credits are provided, the left start button is used to begin play for Blue Air Bike, and the right start button will begin play for the Grey Air Bike.

C. Operator selectable options.

The operator selectable options are accessed via two banks of dip-switches located on the DE-0269 pcb. Be certain to remove power to the game when changing the settings of these switches to prevent unwanted electrical shock. Factory settings are noted with an *.

TABLE 1

DIPSWITCH 1		1	2	3	4	5	6	7	8
PLAYER 2 COIN VS CREDIT	1 COIN = 1 CREDIT:*	OFF	OFF						
	1 COIN = 2 CREDIT:	ON	OFF						
	1 COIN = 3 CREDIT:	OFF	ON						
	2 COIN = 1 CREDIT:	ON	ON						
PLAYER 1 COIN VS CREDIT	1 COIN = 1 CREDIT:*			OFF	OFF				
	1 COIN = 2 CREDIT:			ON	OFF				
	1 COIN = 3 CREDIT:			OFF	ON				
	2 COIN = 1 CREDIT:			ON	ON				
NOT USED						OFF			
ATTRACT MODE SOUND	YES:*						OFF		
	NO:						ON		
FLIP SCREEN	NORMAL:*							OFF	
	FLIP:							ON	
NOT USED									OFF

TABLE 2

DIPSWITCH 2		1	2	3	4	5	6	7	8
NUMBER OF LIVES	THREE:*	OFF	OFF						
	FIVE:	ON	OFF						
	ONE:	OFF	ON						
	INFINITE:	ON	ON						
GAME DIFFICULTY	NORMAL:*			OFF	OFF				
	EASY:			ON	OFF				
	HARD:			OFF	ON				
	VERY HARD:			ON	ON				
CONTINUATION MODE	NO:					OFF			
	YES:*					ON			
NOT USED							OFF	OFF	OFF

4. GENERAL INFORMATION

A. Sound volume control.

The sound volume level is adjustable by turning the potentiometer VR1 on the main logic pcb. This can be accessed by opening the Coin Mech door and locating the potentiometer near the upper forward corner of the pcb set (See figure 2). Turn the control clockwise to increase the sound volume.

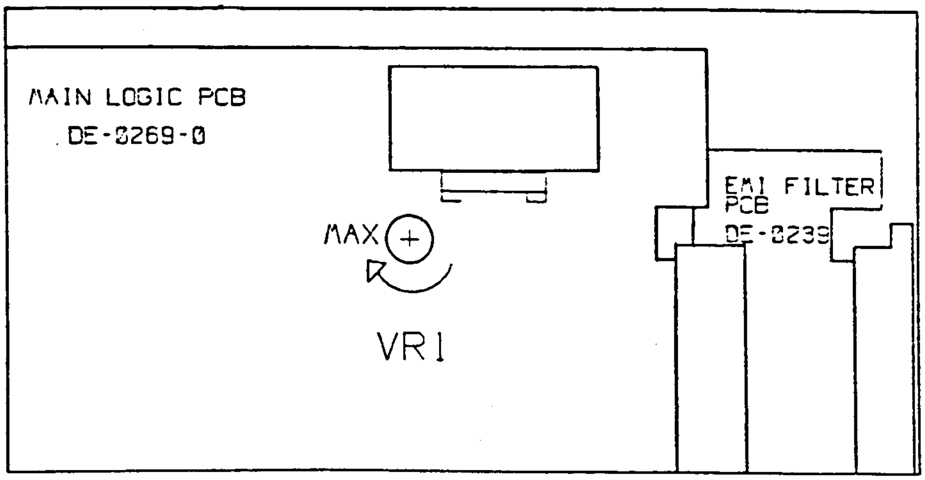


Figure 2

B. Power supply information.

The Power Supply assembly features an ON/OFF switch mounted on the Switch Bracket This switch must be in the OFF position before removing any components of the game or attempting any repairs to prevent unwanted electrical shock. There are also two fuses mounted next to the ON/OFF Switch. They are labeled as to their required ratings. If required, replace these fuses only with FAST BLOW fuses of the same current ratings.

The 3 AMP FAST BLOW fuse is on the 117 VAC Line. In the event that this fuse should blow, this will remove all power to the game. Check all harnessing for proper connections and look for obvious damage to the Monitor, Power Supply, and Logic pcb before replacing the fuse.

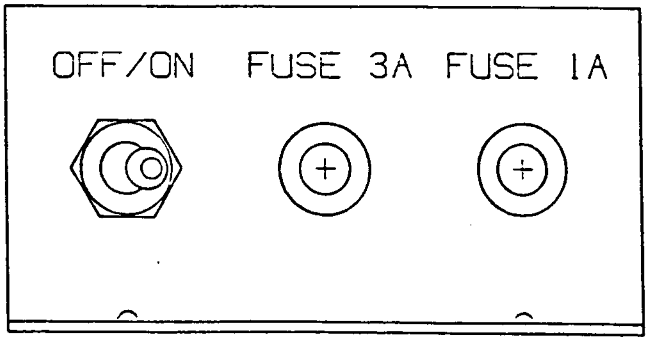


Figure 3

The 1 AMP FAST BLOW fuse is on the +12 VDC line to the Coin Door lamps. In the event that this fuse should blow, the lamps will not illuminate. Check for damaged Coin Door wiring and/or defective Coin Door lamp(s).

The Switching Regulator's DC output level is adjustable by turning the potentiometer VR1. This adjustment should only be made while measuring the +5 volt level with a DIGITAL MULTI-METER at the LOGIC PCB, not at the SWITCHING REGULATOR!

CAUTION: LIFE THREATENING VOLTAGES ARE PRESENT IN AND AROUND THE POWER SUPPLY ASSEMBLY! THIS PROCEDURE SHOULD ONLY BE PERFORMED BY QUALIFIED SERVICE PERSONNEL DUE TO THE EXTREME RISK OF PERSONAL INJURY AND/OR DAMAGE TO THE GAME ELECTRONICS.

C. Monitor adjustment information.

The Data East upright cabinet utilizes a Wells-Gardner 19K7602 RGB monitor display. The monitor adjustments are set at the factory for the optimum display. However, if adjustments are ever required, refer to figure 4 for control placement.

1. **BRIGHTNESS CONTROL VR6.** Adjust this control so that the illumination is just barely extinquished from portions of the display which should be black.

2. **CONTRAST CONTROL VR7.** Adjust the contrast control for the desired picture intensity.

3. **FOCUS CONTROL.** Adjust the focus control, located on the high voltage unit T1, for maximum overall definition and fine picture detail.

4. **HORIZONTAL HOLD CONTROL VR2.** With the monitor being driven with the display signal, connect a jumper between TP1 and TP2 and another jumper between TP3 and TP4. Adjust the horizontal hold control until the picture stops sliding horizontally. Remove the jumpers. Do not use the horizontal hold control for horizontal centering.

5. **HORIZONTAL VIDEO SHIFT CONTROL VR1.** Use this control to center the picture horizontally.

6. **HORIZONTAL RASTER POSITION ADJUSTMENT.** If the picture is off center horizontally, some compensation can be made by moving the horizontal raster position either to positions "R" or "L".

7. **HORIZONTAL SIZE COIL L1.** The horizontal size coil is a hexagonal tuning tool adjustment. This control must be adjusted slowly, if necessary, until the picture or test pattern attains the correct horizontal proportions.

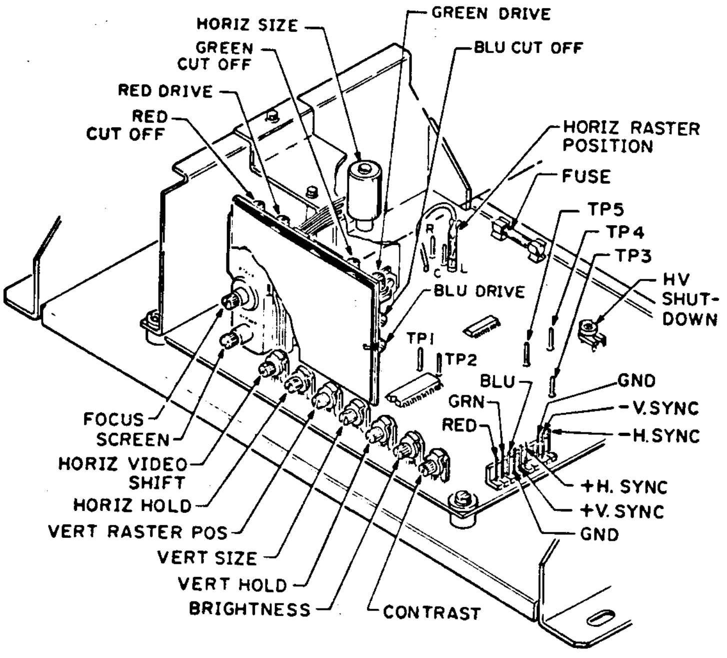
8. **VERTICAL HOLD CONTROL VR5.** Adjust this control until the picture stops rolling and it locks in vertically.

9. **50-60 Hz CONTROL VR9.** This control is used to limit the range of vertical size. This control is preset at the factory and should not require readjustment unless the vertical size or vertical hold controls are readjusted from their original factory settings. In order to set this control, first adjust the vertical size control so that the vertical size is slightly larger than desired. Turn VR9 so that any vertical fold-over which may be present will disappear.

10. **VERTICAL SIZE CONTROL.** This control must be adjusted slowly, if necessary, until the picture or test pattern attains the desired vertical proportions.

11. **VERTICAL RASTER POSITION CONTROL VR3.** If the video is off center vertically, some compensation can be made by turning the vertical position raster control.

12. **CUT OFF AND DRIVE CONTROLS ON NECK BOARD VR201-VR206.** These controls have been preset at the proper grey scale, adjustment of these controls should be avoided.



GREEN DRIVE
HORIZ SIZE
BLU CUT OFF
GREEN CUT OFF
RED DRIVE
RED CUT OFF
HORIZ RASTER POSITION
FUSE
TP5
TP4
TP3
R
C
L
HV SHUT-DOWN
BLU DRIVE
TP1
TP2
BLU
GND
GRN
-V.SYNC
RED
-H.SYNC
FOCUS
SCREEN
HORIZ VIDEO SHIFT
HORIZ HOLD
+H. SYNC
+V. SYNC
VERT RASTER POS
GND
VERT SIZE
VERT HOLD
BRIGHTNESS
CONTRAST

Figure 4

4. REPLACEMENT PARTS BREAKDOWN

The following section lists the replacement parts available for the Gondomania upright game. You should include the Data East Part Numbers when ordering replacement parts from your distributor to help in expediting your orders promptly and accurately.

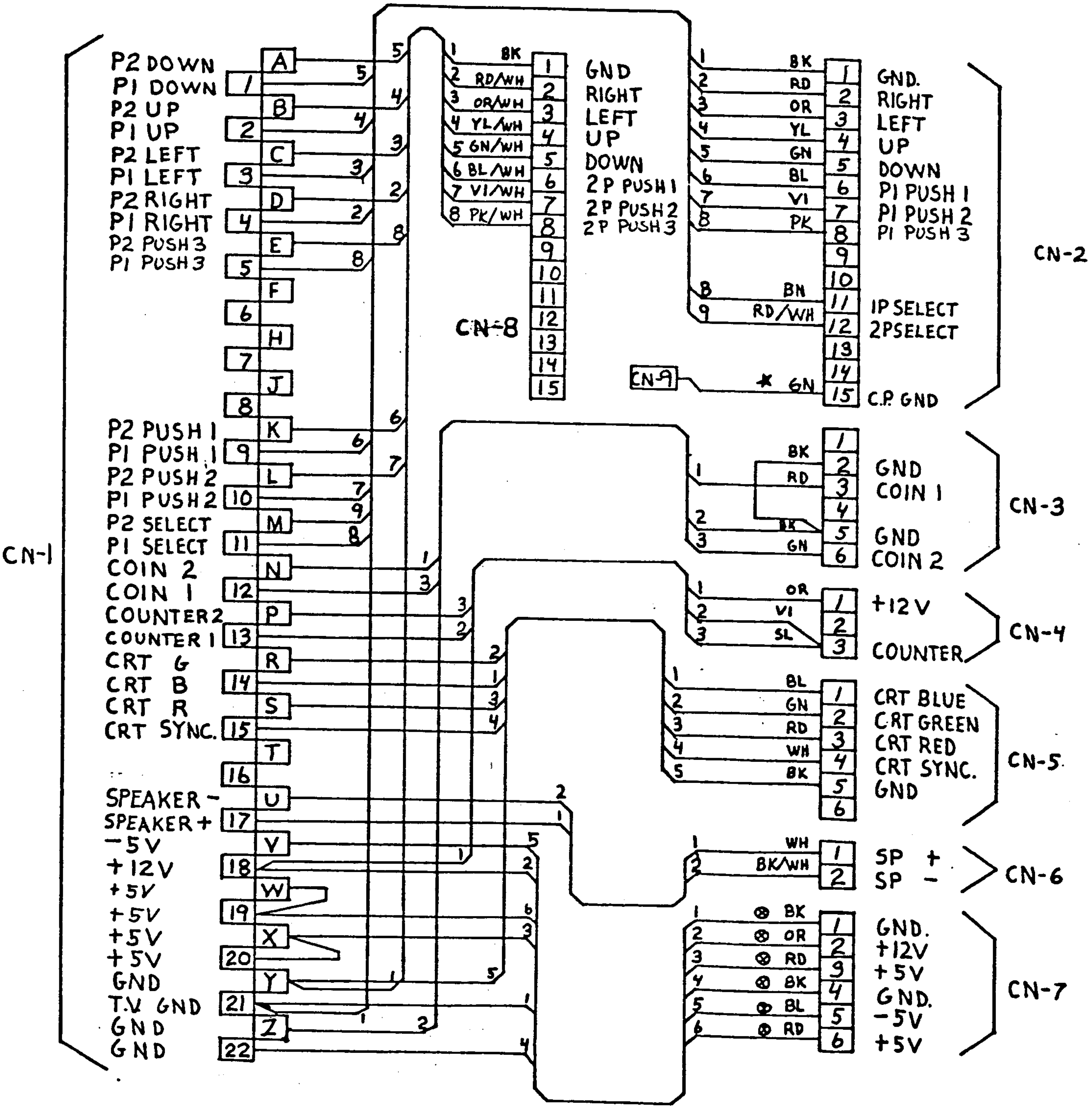
FINAL ASSEMBLY, GONDOMANIA U/R	500-0021-00
CABINET ASSEMBLY, 1US25-STYLE	365-0010-00
CONTROL PANEL ASSEMBLY	510-0111-00
COIN DOOR ASSEMBLY	515-0004-00
MONITOR ASSEMBLY, UNIVERSAL MOUNT	510-0065-00
POWER SUPPLY ASSEMBLY, 7A.	510-0002-00
PCB SET, GONDOMANIA	510-0112-00
PCB ASSY, EMI FILTER, DE-0239	520-0083-00
MAIN HARNESS, STD 2P	036-0117-01
DUAL LAMPHOLDER ASSEMBLY	170-0002-00
LAMP, INCANDESCENT, 40W	165-0004-01
PLEX RETAINER, MARQUEE	535-0009-00
PLEX, MARQUEE, GONDOMANIA	830-0031-00
PLEX, MONITOR, CLEAR, 23.75 X 23.75	660-0001-01
UNDERLAY CARD, GONDOMANIA	810-0025-00
LABEL, INSRUCTION, GONDMOMANIA	406-0064-00
SIDE DECAL, DE GEN. 5-13-87	830-0040-00
SPEAKER, 4" RND.	031-0004-00

CONTROL PANEL ASSEMBLY, GONDOMANIA	510-0111-00
CONTROL PANEL, BARE	535-0061-00
CONTROL PANEL OVERLAY, GONDOMANIA	800-0027-00
JOYSTICK, 8 WAY, ROTARY	450-0012-00
PUSHBUTTON ASSY, RED	350-0001-02
PUSHBUTTON ASSY, WHITE	350-0001-09
PUSHBUTTON ASSY, BLACK	350-0001-00
BUTTON HOLDER W/SWITCH	185-0001-00
PAL NUT	240-0001-00
KNOB, JOYSTICK, ROTARY	455-0047-00
SCREW, HEX, FOR JOYSTICK KNOB	235-0001-10

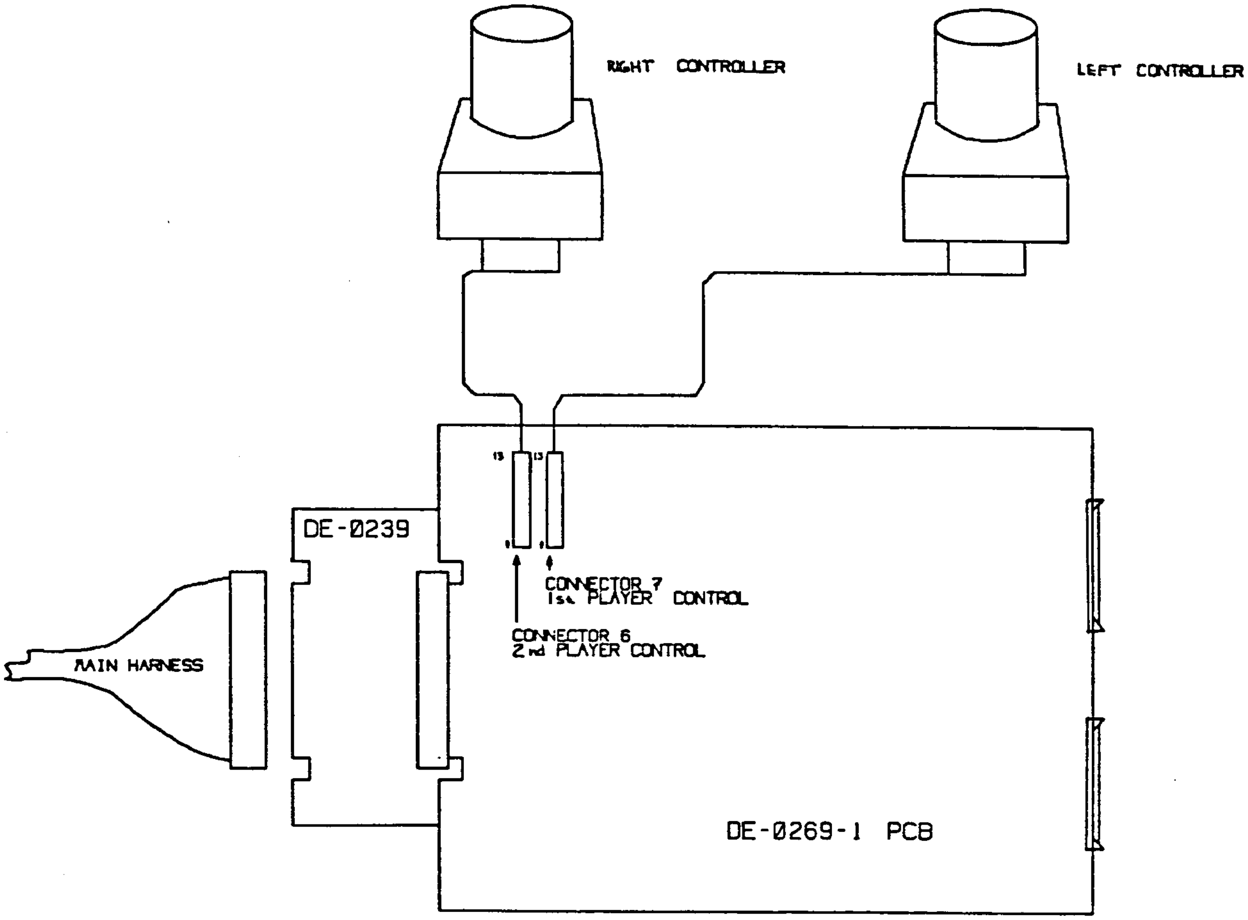
POWER SUPPLY ASSEMBLY, 7A.	510-0002-00
SWITCHING REGULATOR, 7A	001-0001-00
ISOLATION TRANSFORMER	010-0001-00
HARNESS, DC OUT, 7A	036-0031-02
NOISE FILTER	150-0004-00
POWER CORD	515-0002-00
SWITCH BRACKET ASSY.	515-0004-00

5. WIRING DIAGRAM

A. Main Harness diagram.


CN-1
P2 DOWN
P1 DOWN
P2 UP
P1 UP
P2 LEFT
P1 LEFT
P2 RIGHT
P1 RIGHT
P2 PUSH 3
P1 PUSH 3
P2 PUSH 1
P1 PUSH 1
P2 PUSH 2
P1 PUSH 2
P2 SELECT
P1 SELECT
COIN 2
COIN 1
COUNTER 2
COUNTER 1
CRT G
CRT B
CRT R
CRT SYNC.
SPEAKER −
SPEAKER +
−5V
+12V
+5V
+5V
+5V
+5V
GND
T.V GND
GND
GND
A
B
C
D
E
F
H
J
K
L
M
N
P
R
S
T
U
V
W
X
Y
Z
CN-8
BK
RD/WH
OR/WH
YL/WH
GN/WH
BL/WH
VI/WH
PK/WH
GND
RIGHT
LEFT
UP
DOWN
2P PUSH 1
2P PUSH 2
2P PUSH 3
CN-2
BK
RD
OR
YL
GN
BL
VI
PK
BN
RD/WH
GN
GND.
RIGHT
LEFT
UP
DOWN
P1 PUSH 1
P1 PUSH 2
P1 PUSH 3
1P SELECT
2P SELECT
C.P. GND
CN-9
CN-3
BK
RD
BK
GN
GND
COIN 1
GND
COIN 2
CN-4
OR
VI
SL
+12V
COUNTER
CN-5
BL
GN
RD
WH
BK
CRT BLUE
CRT GREEN
CRT RED
CRT SYNC.
GND
CN-6
WH
BK/WH
SP +
SP −
CN-7
BK
OR
RD
BK
BL
RD
GND.
+12V
+5V
GND.
−5V
+5V

B. Joystick rotary control wiring.


RIGHT CONTROLLER
LEFT CONTROLLER
13
13
1
1
DE-0239
CONNECTOR 7
1st PLAYER CONTROL
CONNECTOR 6
2nd PLAYER CONTROL
MAIN HARNESS
DE-0269-1 PCB

CN 6		CN 7	
PIN	SIGNAL	PIN	SIGNAL
1	GROUND	1	GROUND
2	2P SW1	2	1P SW1
3	2P SW2	3	1P SW2
4	2P SW3	4	1P SW3
5	2P SW4	5	1P SW4
6	2P SW5	6	1P SW5
7	2P SW6	7	1P SW6
8	2P SW7	8	1P SW7
9	2P SW8	9	1P SW8
10	2P SW9	10	1P SW9
11	2P SW10	11	1P SW10
12	2P SW11	12	1P SW11
13	2P SW12	13	1P SW12

7. SCHEMATIC DIAGRAM REQUEST FORM

Technical Support Manuals with schematic diagrams are available by US Mail at no charge to owners of the Gondomania game. The Technical Support Manual contains schematic diagrams, pcb layout drawings, and parts lists for the Gondomania pcb set. To obtain your copy, fill out the information card below and mail to:

Data East USA, Inc.
470 Needles Dr.
San Jose, CA. 95112

Attn: Customer Service Dept.

NOTE: Please include the game serial number. No manuals will be mailed without this information. If you would like your company to be added to our mailing list to receive the latest Service Bulletins, check the appropriate box below.

Also, if you have suggestions or comments regarding Data East's product, manuals, or other subjects, please feel free to include them in the comments section below. We count on your feedback to help us serve you better!

GONDOMANIA

TECHNICAL SUPPORT MANUAL REQUEST FORM

CUSTOMER NAME:______________________________ TITLE:______________________

COMPANY NAME:____

STREET ADDRESS:____

CITY:________________________________ STATE:__________________ ZIP:__________

TELEPHONE NUMBER:___(__________)____

GAME SERIAL NUMBER:____________________________ DATE:_________________________

YES! PLEASE ADD MY FIRM TO THE DATA EAST MAILING LIST.

NO! DO NOT ADD MY FIRM TO THE DATA EAST MAILING LIST.

COMMENTS:____

____

____

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GONDOMANIA

TECHNICAL SUPPORT MANUAL

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P.N. 780-0065-00
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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.

TECHNICAL SUPPORT MANUAL

FOR

GONDOMANIA

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PREFACE

This manual is intended to be used by service technicians to aid in the diagnosis and repair of the Gondomania game. The manual presents game play, player control operation, operator selectable options, component lists, schematics, and more.

All programmed devices are listed with their checksums, to simplify verification of a device with a Eprom duplicator. See page Chapter 2c for additional information on using this data.

If you have any questions or suggestions regarding this publication, or if you require assistance with a Data East game, please call our Technical Service department at (408) 286-7074, Monday thru Friday, 8:00 am to 5:00 pm Pacific time. You may mail your comments to:

Data East USA, Inc.
470 Needles Inc.
San Jose, CA. 95112
Attn: Technical Service

1. GENERAL INFORMATION

a. Game Play & Player Control Description.

The Gondomania game is equipped with two sets of controls, one each for the left (Blue Air Bike) player and another for the right (Grey Air Bike) player. Each set consists of a 8 way joystick with a 12 position rotary control, two types of fire buttons, and two start buttons. See the control panel layout for control placement.

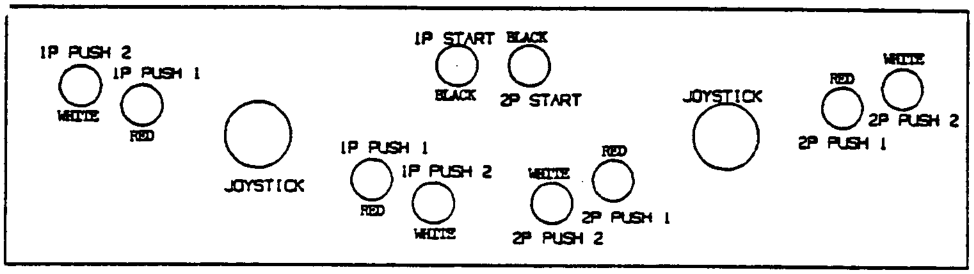

Figure 1

The joystick controls the right, left, up, and down motion of the player image. The 12 position rotary control aims the player image's arm and is used in conjunction with the Push 1 button to fire in the direction the player image's arm is pointing. This weapon has unlimited firepower. The Push 2 button causes a limited (50 shots) amount of firepower to be fired in a forward direction only.

You can pick up additional firepower as the game progresses. Additioanl firepower and optional equipment can be purchased by collecting money received for destroying enemy targets, and flying over the object you desire. The cost of the object will be deducted from your accumulated money. If the object's cost is greater than the total money you have accumulated, you will not pick up the object or gain additional firepower.

The left coin mechanism credits the Blue Air Bike, and the right coin mechanism credits the Grey Air Bike. When the proper credits are provided, the left start button is used to begin play for Blue Air Bike, and the right start button will begin play for the Grey Air Bike.

b. Operator Selectable Options.

The operator selectable options are accessed via two banks of dip-switches located on the DE-0269 pcb. Be certain to remove power to the game when changing the settings of these switches to prevent unwanted electrical shock. Factory settings are noted with an *.

TABLE 1.

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	1 COIN = 2 CREDIT:	ON	OFF						
	1 COIN = 3 CREDIT:	OFF	ON						
	2 COIN = 1 CREDIT:	ON	ON						
PLAYER 1 COIN VS CREDIT	1 COIN = 1 CREDIT:*			OFF	OFF				
	1 COIN = 2 CREDIT:			ON	OFF				
	1 COIN = 3 CREDIT:			OFF	ON				
	2 COIN = 1 CREDIT:			ON	ON				
NOT USED						OFF			
ATTRACT MODE SOUND	YES:*						OFF		
	NO:						ON		
FLIP SCREEN	NORMAL:*							OFF	
	FLIP:							ON	
NOT USED									OFF

TABLE 2

DIPSWITCH 2		1	2	3	4	5	6	7	8
NUMBER OF LIVES	THREE:*	OFF	OFF						
	FIVE:	ON	OFF						
	ONE:	OFF	ON						
	INFINITE:	ON	ON						
GAME DIFFICULTY	NORMAL:*			OFF	OFF				
	EASY:			ON	OFF				
	HARD:			OFF	ON				
	VERY HARD:			ON	ON				
CONTINUATION MODE	NO:					OFF			
	YES:*					ON			
NOT USED							OFF	OFF	OFF

2. COMPONENT LIST

a. DE-0269 PCB

TYPE	DEVICE ID	PART NUMBER	PCB LOCATION
TTL	74LS00	100-0025-00	2E
TTL	74LS02	100-0026-00	6D
TTL	74LS04	100-0027-00	9E,7E,8E
TTL	74LS08	100-0028-00	9D
TTL	74LS10	100-0029-00	15E
TTL	74LS27	100-0032-00	10A
TTL	74LS32	100-0034-00	4D,5E,6E
TTL	74LS74	100-0037-00	11D,1E,3E
TTL	74LS86	100-0039-00	10D,14E
TTL	74LS138	100-0042-00	15D
TTL	74LS139	100-0043-00	2D
TTL	74LS153	100-0045-00	6A,7A,8A,9A,7B
TTL	74LS157	100-0046-00	14 EA. (see pcb layout)
TTL	74LS174	100-0051-00	10C,16C,18C,8D,10E,12E
TTL	74LS194	100-0055-00	3A,6K
TTL	74LS244	100-0057-00	3B,1D
TTL	74LS245	100-0058-00	5C,7C,8C,9C,13C,15C,6J
TTL	74LS257	100-0171-00	8J,9J,10J,12J,13J,15J,16J
TTL	74LS273	100-0022-00	13 EA (see pcb layout)
TTL	74LS283	100-0061-00	11A,13A,14A,10B
TTL	74LS299	100-0220-00	11D,17E,18E,10F,11F,15F,16F
TTL	74LS367	100-0062-00	4E
TTL	74LS374	100-0064-00	1C,2C,3C,4C,6C
CPU	6502A	100-0094-01	5J
CPU	6809E	100-0189-01	1F
CPU	8751H	960-0008-04	1B
RAM	TMM2015-15	105-0083-00	6H
RAM	TMM2018-15	105-0035-00	5B,8B,9B,13E
RAM	HM6264-10	105-0051-02	16B
OPN	YM2203	100-0123-00	3F
DAC	YM3014	100-0179-00	1H,2H
OPL	YM3526	100-0208-00	3H
OP AMP	MPC3403	100-0124-00	1J
PWR AMP	MB3730	100-0081-00	1K
HYBRID	RCDM-I1	100-0185-00	RA4,RA5,RA6-RA13,RA20,RA21
HYBRID	RM-C3	120-0066-00	RA1,RA2
XTAL	8 MHZ	140-0007-00	X1
XISTOR	2SD880	110-0044-00	Q1
RESNET	1K X 8	120-0039-20	RA3
RESNET	3.3K X 8	120-0037-26	RA16,RA17
RESNET	10K X 8	120-0039-32	RA22

b. DE-0259 PCB

TYPE	DEVICE ID	PART NUMBER	PCB LOCATION
TTL	74LS00	100-0025-00	2B,1D,16E,7K
TTL	74LS02	100-0026-00	2A
TTL	7404	100-0007-00	17A
TTL	74LS04	100-0027-00	1C,13C,14C,16C,9E,3L
TTL	74LS08	100-0028-00	3D,12C,15D,10E,9M
TTL	74LS10	100-0029-00	7B
TTL	74LS14	100-0030-00	14A
TTL	74LS20	100-0031-00	7E,9L
TTL	74LS30	100-0033-00	2D,8E
TTL	74LS32	100-0034-00	12E,10K
TTL	74LS74	100-0037-00	11 EA (see pcb layout)
TTL	74LS86	100-0039-00	13A,13B,9C,14D
TTL	74LS138	100-0042-00	12B
TTL	74LS157	100-0046-00	12 EA (see pcb layout)
TTL	74LS158	100-0047-00	6F,7F,8H,8J,14H,14J,
TTL	74LS163	100-0049-00	7A,10A,11A,1D,2E
TTL	74LS174	100-0051-00	15C,3K,1L
TTL	74LS175	100-0052-00	10D,10M
TTL	74LS194	100-0055-00	17C,18C,17D,18D,11D
TTL	74LS244	100-0057-00	14B,7J,13J
TTL	74LS245	100-0058-00	4A,5A,17B,18B,15,16,17,18K
TTL	74LS257	100-0170-00	7J,12J,15J,18J
TTL	74LS273	100-0022-00	2J,6K,8M
TTL	74LS283	100-0061-00	7A,8A,7D,8D
TTL	74LS373	100-0111-00	10J,11J,16J,17J
TTL	74LS374	100-0064-00	26 EA (see pcb layout)
TTL	74LS375	100-0173-00	13D,16D,8L,10L
TTL	74LS669	100-0191-00	7C,8C
CUSTOM IC	HMC-20	100-0159-00	16A
CUSTOM IC	VSC-30	100-0160-00	11B
CUSTOM IC	DRL-40	100-0221-00	6M,12M
RAM	TMM2018-55	105-0035-00	10 EA (see pcb layout)
LINEAR	PST-518	110-0065-00	PST518
XTAL	12 MHZ	140-0005-00	XTAL

c. Eprom Checksums.

This section lists the program devices (Eproms) used on the Gondomania pcb set. In addition, we have included the checksum of each device to allow verification of suspect devices with the aid of an Eprom duplicating machine. The checksum is a sum of all the programmed bytes in an Eprom and is unique to each individual program device. These checksums were generated using a Data I/O System 29B.

If you suspect a program device has failed, load its program into the duplicating equipment. Compare the checksum displayed with the data on the following list and verify that they match. In the event that your checksum does not match, check one or two other Eproms in the same manner to be certain that your duplicating equipment computes checksums in the same fashion.

DE-0269 PCB

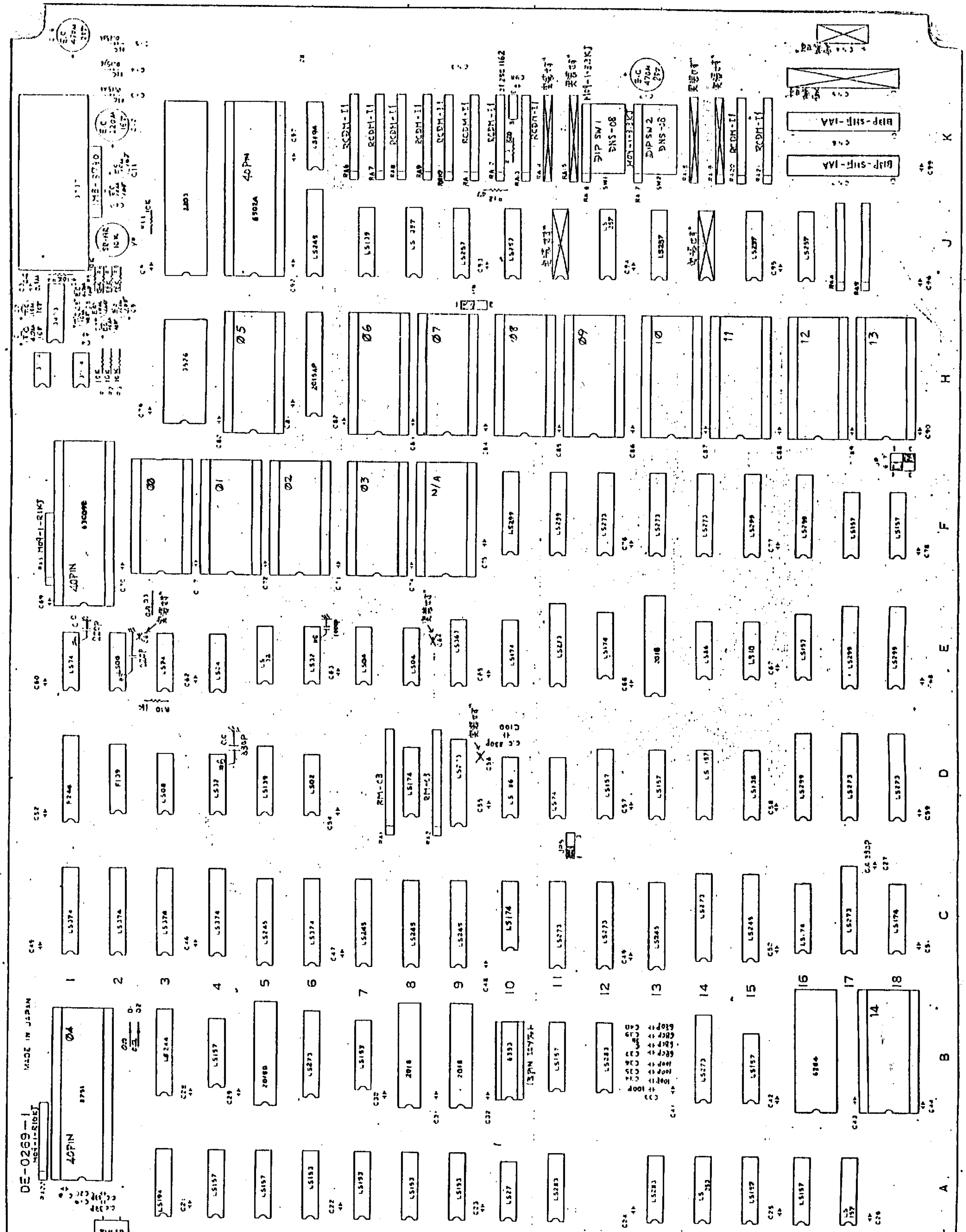
LABEL	DEVICE	SUM	FUNCTION	PART NUMBER
DT-00	27256	E9F2	CPU PROGRAM	960-0008-00
DT-01	27512	068E	CPU PROGRAM	960-0008-01
DT-02	27512	62AA	CPU PROGRAM	960-0008-02
DT-03	27512	2424	CPU PROGRAM	960-0008-03
DT-04	8751H	N/A	SECURITY CHIP	960-0008-04
DT-05	27256	9EF5	AUDIO PROGRAM	960-0008-05
DT-06	27512	2C79	BACKGROUND GRAPHICS	960-0008-06
DT-07	27256	E196	BACKGROUND GRAPHICS	960-0008-07
DT-08	27512	ED13	BACKGROUND GRAPHICS	960-0008-08
DT-09	27256	DFB8	BACKGROUND GRAPHICS	960-0008-09
DT-10	27512	265C	BACKGROUND GRAPHICS	960-0008-10
DT-11	27256	1835	BACKGROUND GRAPHICS	960-0008-11
DT-12	27512	6F21	BACKGROUND GRAPHICS	960-0008-12
DT-13	27256	75D0	BACKGROUND GRAPHICS	960-0008-13
DT-14	27256	07C6	FOREGROUND COLOR	960-0008-14

DE-0259 PCB

DT-15	27512	8A9F	MOVING OBJECT GRAPHICS	960-0008-15
DT-16	27512	E8D8	MOVING OBJECT GRAPHICS	960-0008-16
DT-17	27256	5F4A	MOVING OBJECT GRAPHICS	960-0008-17
DT-18	27256	F699	MOVING OBJECT GRAPHICS	960-0008-18
DT-19	27512	97F8	MOVING OBJECT GRAPHICS	960-0008-19
DT-20	27256	7402	MOVING OBJECT GRAPHICS	960-0008-20
DT-21	27512	7CE9	MOVING OBJECT GRAPHICS	960-0008-21
DT-22	27256	EFD6	MOVING OBJECT GRAPHICS	960-0008-22

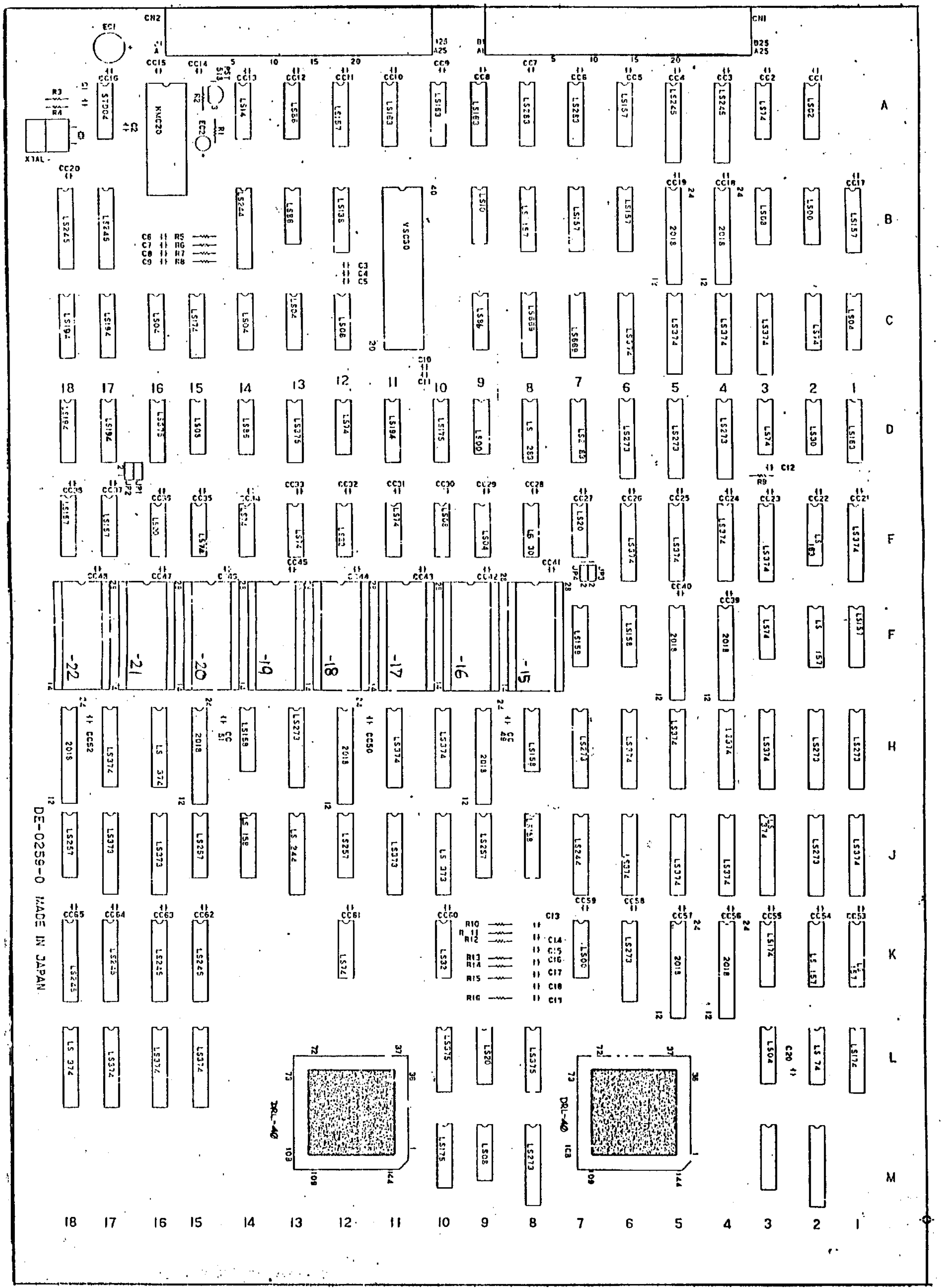
4. PCB LAYOUT DIAGRAMS

a. DE-0269 PCB

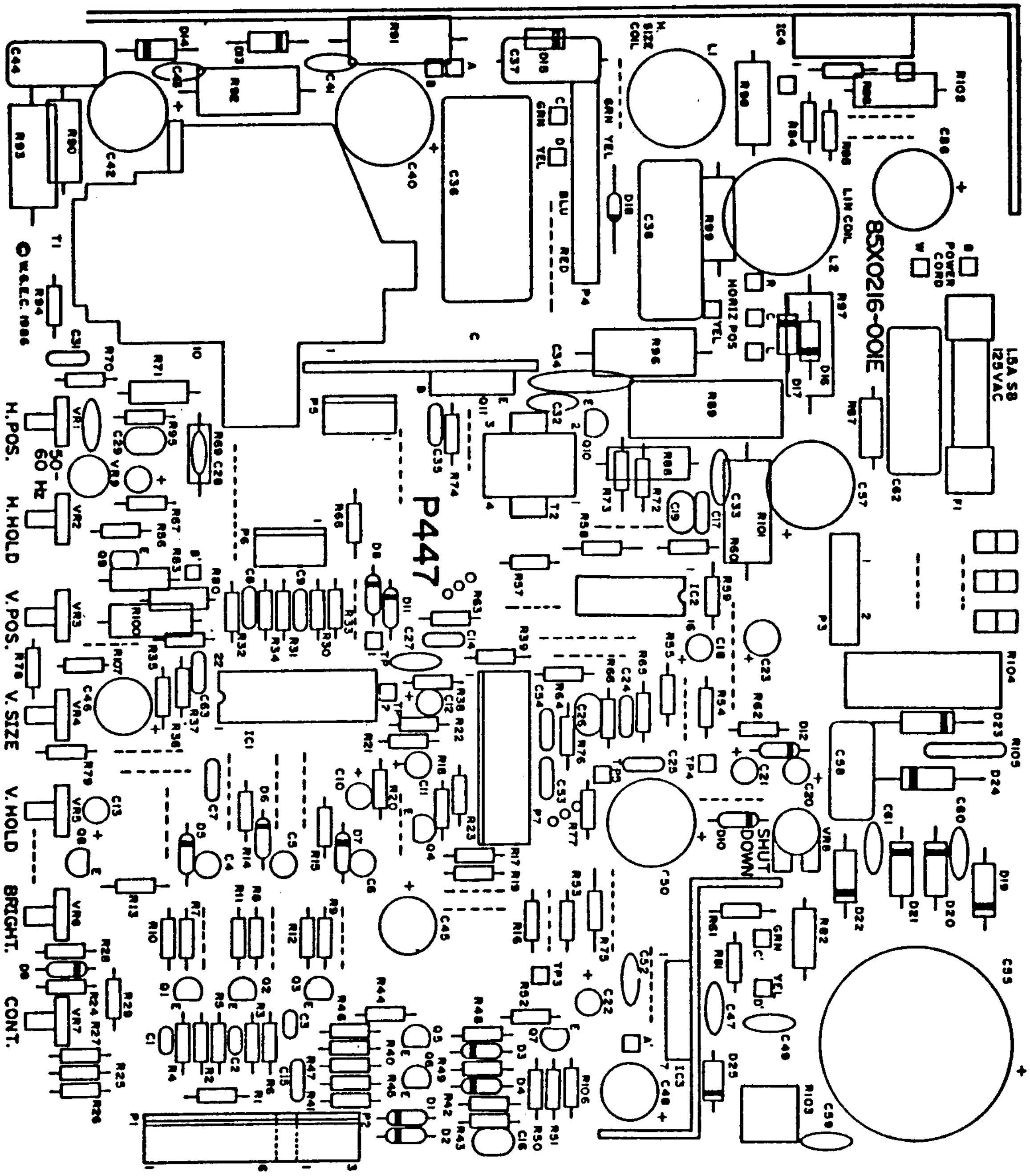


6502A
40PIN
2015AP
63C09E
8751
6284
Ø0
Ø1
Ø2
Ø3
N/A
Ø4
Ø5
Ø6
Ø7
Ø8
Ø9
10
11
12
13
14
RCDM-I1
DIP SW 1
DIP SW 2
DNS-08
BIIP-SHIF-IAA
LS245
LS139
LS257
LS273
LS299
LS157
LS174
LS374
LS74
LS32
LS04
LS367
LS86
LS10
LS08
LS02
LS138
LS283
LS27
LS194
LS153
2018
F244
F139
RM-C3
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
A
B
C
D
E
F
H
J
K
MADE IN JAPAN
DE-0269-1
PS-50PE-D4LT1-LP1
50PIN

b. DE-0259 PCB


CN2
CN1
EC1
EC2
XTAL
VSC30
KNC20
DRL-40
DRL-40
DE-0259-0 MADE IN JAPAN
A
B
C
D
E
F
H
J
K
L
M
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
-22
-21
-20
-19
-18
-17
-16
-15

c. Wells-Gardner 19K7000 Monitor Chassis.


H.POS.
50-60 Hz
H.HOLD
V.POS.
V.SIZE
V.HOLD
BRIGHT.
CONT.
P447
85X0216-001E
SHUT DOWN
LIN COIL
HORIZ POS
POWER CORD
LBA SB 125VAC
H. SIZE COIL
© W.G.E.C. 1986
IC1
IC2
IC3
IC4
T1
T2
P1
P3
P4
P5
P6
P7
F1

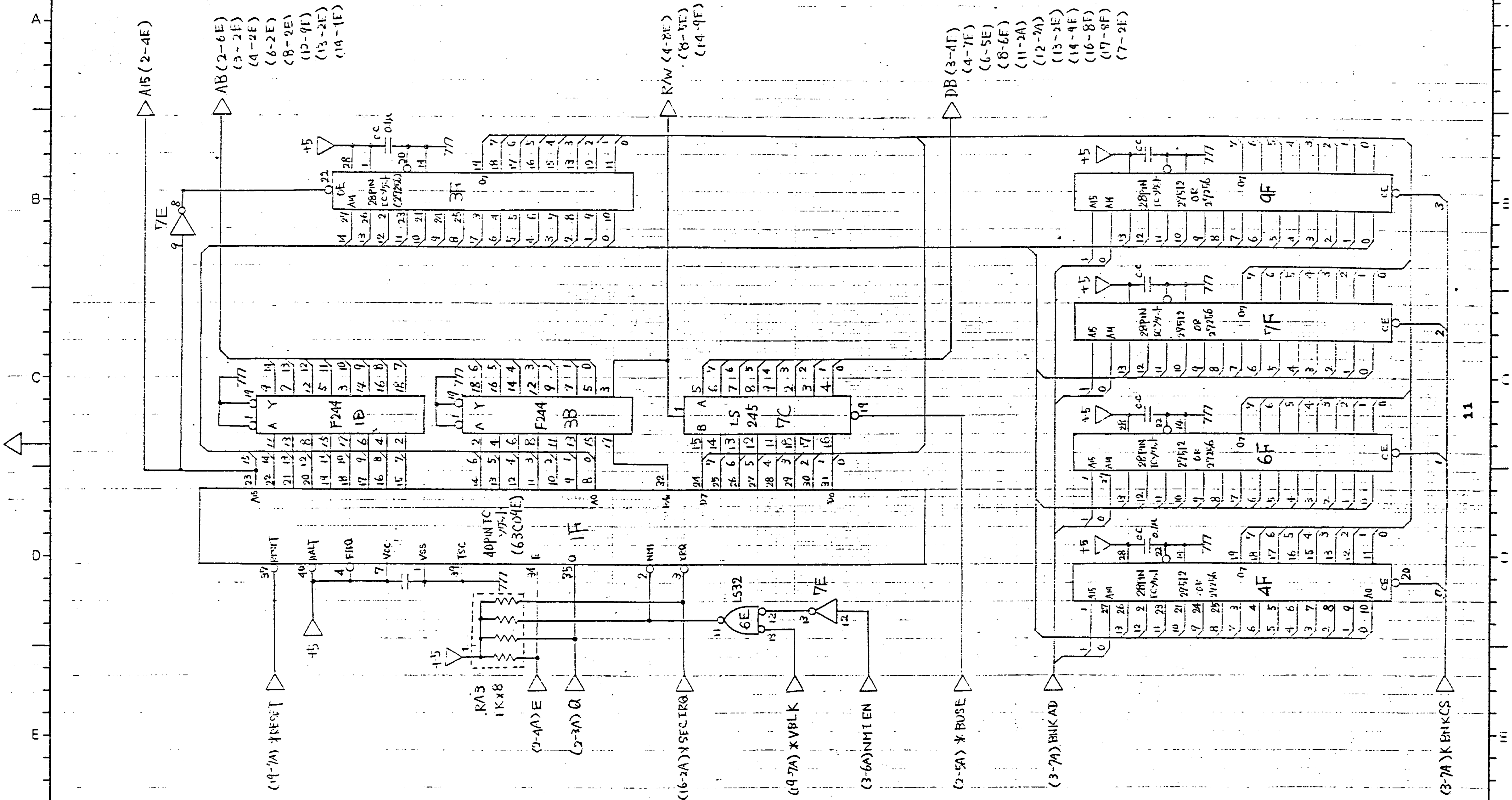
5. SCHEMATIC DIAGRAMS

a. DE-0269 PCB..page 11-30

b. DE-0259 PCB..page 31-47

c. Wells-Gardner K7000 Monitor................................48

関連番号	仕様. 名称



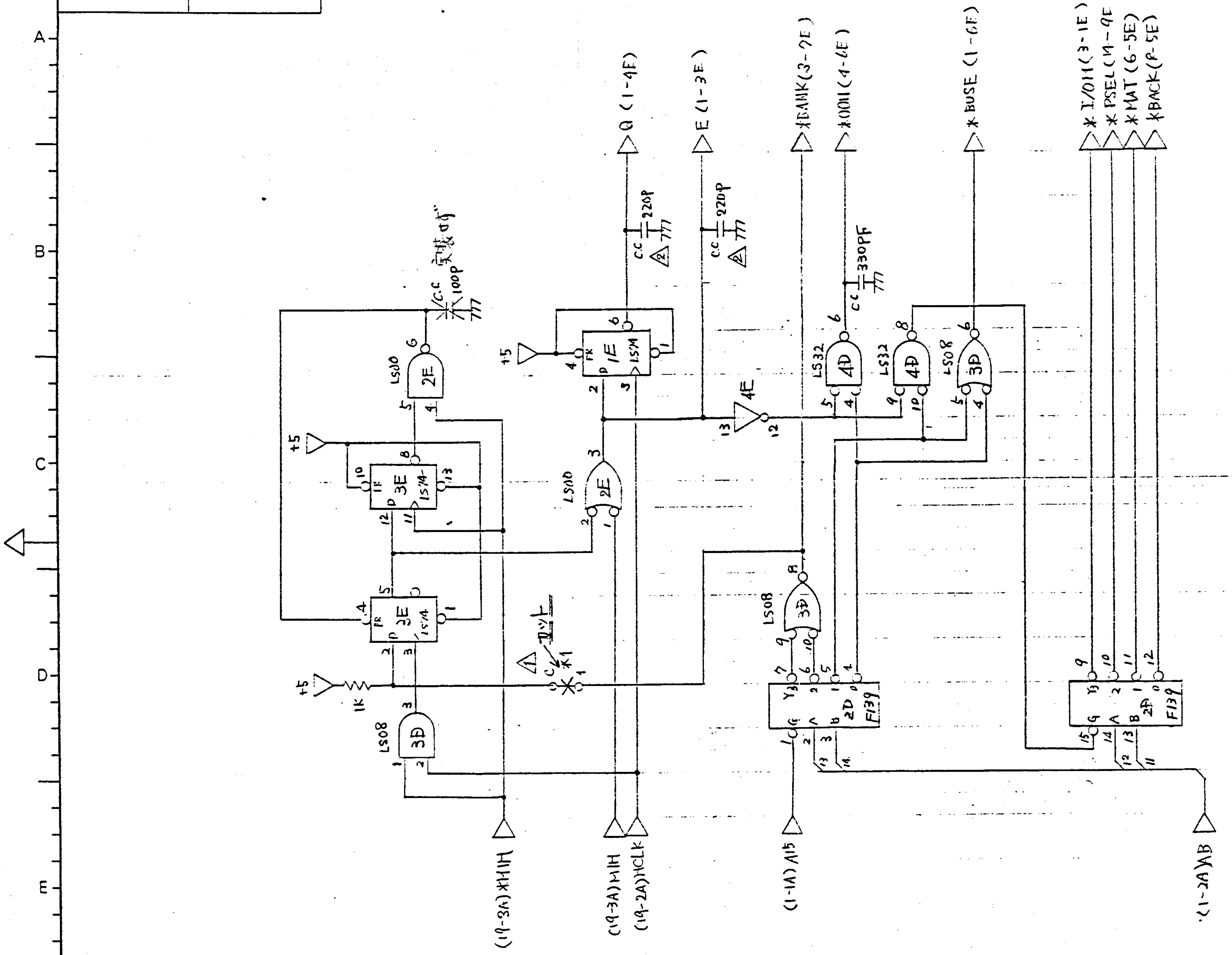
A15 (2-4E)
AB (2-6E) (3-2F) (4-2E) (6-2E) (8-2E) (10-9F) (13-2E) (14-1F)
R/W (4-8E) (8-5E) (14-9F)
DB (3-4F) (4-7E) (6-5E) (8-6E) (11-2A) (12-7A) (13-2E) (14-9E) (16-8F) (17-8F) (7-2E)
+5
CC 0.1μ
28PIN ICソケット (27256)
3F
7E
F244
1B
3B
LS 245
7C
27512 OR 27256
9F
7F
6F
4F
40PIN IC ソケット (63C09E)
1F
RESET
HALT
FIRQ
Vcc
Vss
TSC
NMI
IRQ
LS32
6E
RA3 1K×8
(19-7A) *RESET
(2-4A) E
(2-3A) Q
(16-2A) *SEC IRQ
(19-7A) *VBLK
(3-6A) NMI EN
(2-5A) *BUSE
(3-7A) BNKAD
(3-7A) *BNKCS
11

記号	担当	年月日	改訂個所	符号	部品. 図面番号	名称	仕様. 材質

記事

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当
単位 mm	尺度 /	図番 K-0996	

関連番号	仕様，名称


A
B
C
D
E
Q (1-4E)
E (1-3E)
*BANK (3-7E)
*OOH (4-6E)
*BUSE (1-6F)
* I/OH (3-1E)
* PSEL (11-4E)
* MAT (6-5E)
*BACK (P-5E)
C.C 220P
C.C 220P
C.C 330PF
C.C 100P 実装せず
LS00
2E
3E
LS74
1E
LS74
4E
LS32
4D
LS32
4D
LS08
3D
LS00
2E
LS08
3D
LS08
3D
F139
2D
F139
2D
+5
+5
+5
+5
1K
カット
※1
(19-3A) *HH
(19-3A) MH
(19-2A) HCLK
(1-1A) A15
(1-2A) AB

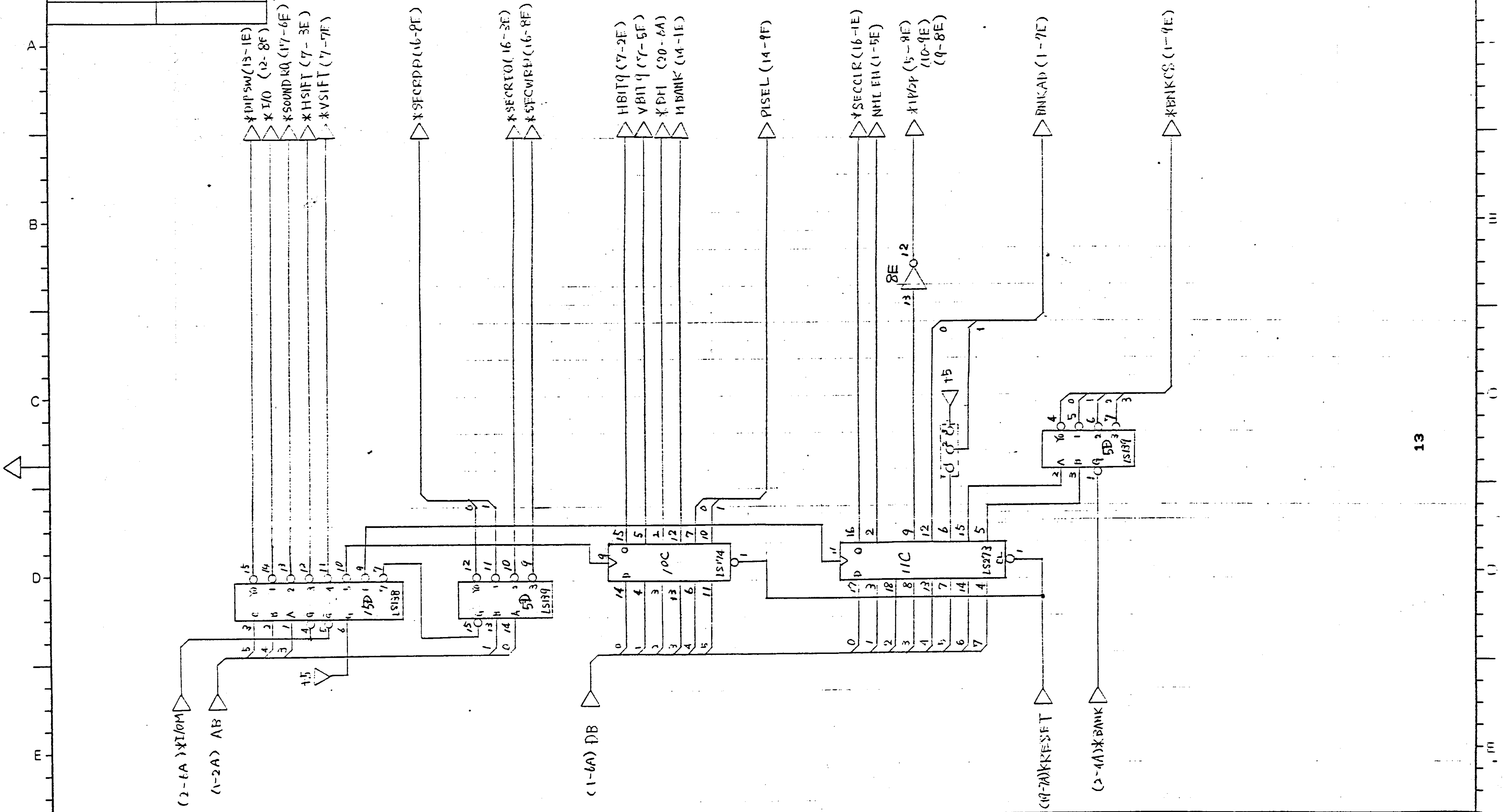
12

記事
※1. カットエリアを示すこと
⚠1 3MHz動作にてカットする (1ケ所)
⚠2 STOPする為のC.C 220PF 2ケ 追加

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質	個/台

材質	処理	公差	名称 CFB-63	
承認	検図	検図	担当 石田 41.6.?	単位 mm 尺度 /	図番 K-10996	2/X

関連番号	仕様、名称

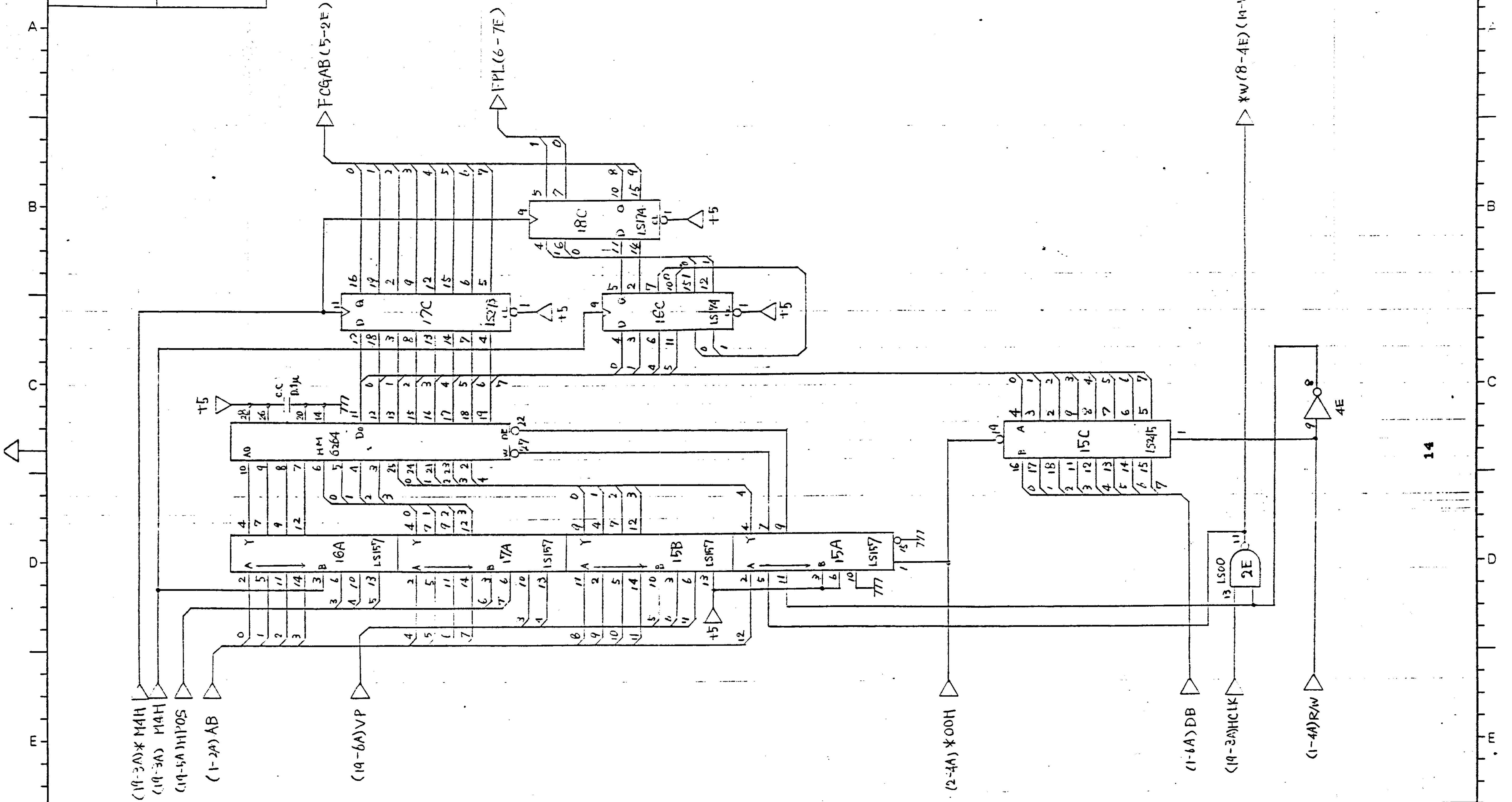

*DIPSW(13-1E)
*I/O (12-8E)
*SOUND RQ(17-6E)
*HSIFT(7-3E)
*VSIFT(7-7E)
*SECRDD(16-8E)
*SECRTO(16-3E)
*SECWRT(16-8E)
HBIT9(7-2E)
VBIT9(7-5E)
*DH1 (20-6A)
H BANK(14-1E)
PLSEL(14-9F)
*SECCLR(16-1E)
NMI EN(1-5E)
*1H/2P(5-8E)
(10-9E)
(9-8E)
BNKAD(1-7E)
*BNKCS(1-9E)
8E
15D
LS138
5D
LS139
10C
LS174
11C
LS273
5D
LS139
+5
(2-6A)*I/OM
(1-2A) AB
(1-6A) DB
(17-7A)*RESET
(2-4A)*BANK
13

記号	担当	年月日	改訂個所	符号	部品、図面番号	名称	仕様、材質	償/言

記事

材質	処理	公差	名称 CEB-63
承認	検図	検図	担当
単位 mm	尺度 /	図番 K-10276	

関連番号	仕様、名称



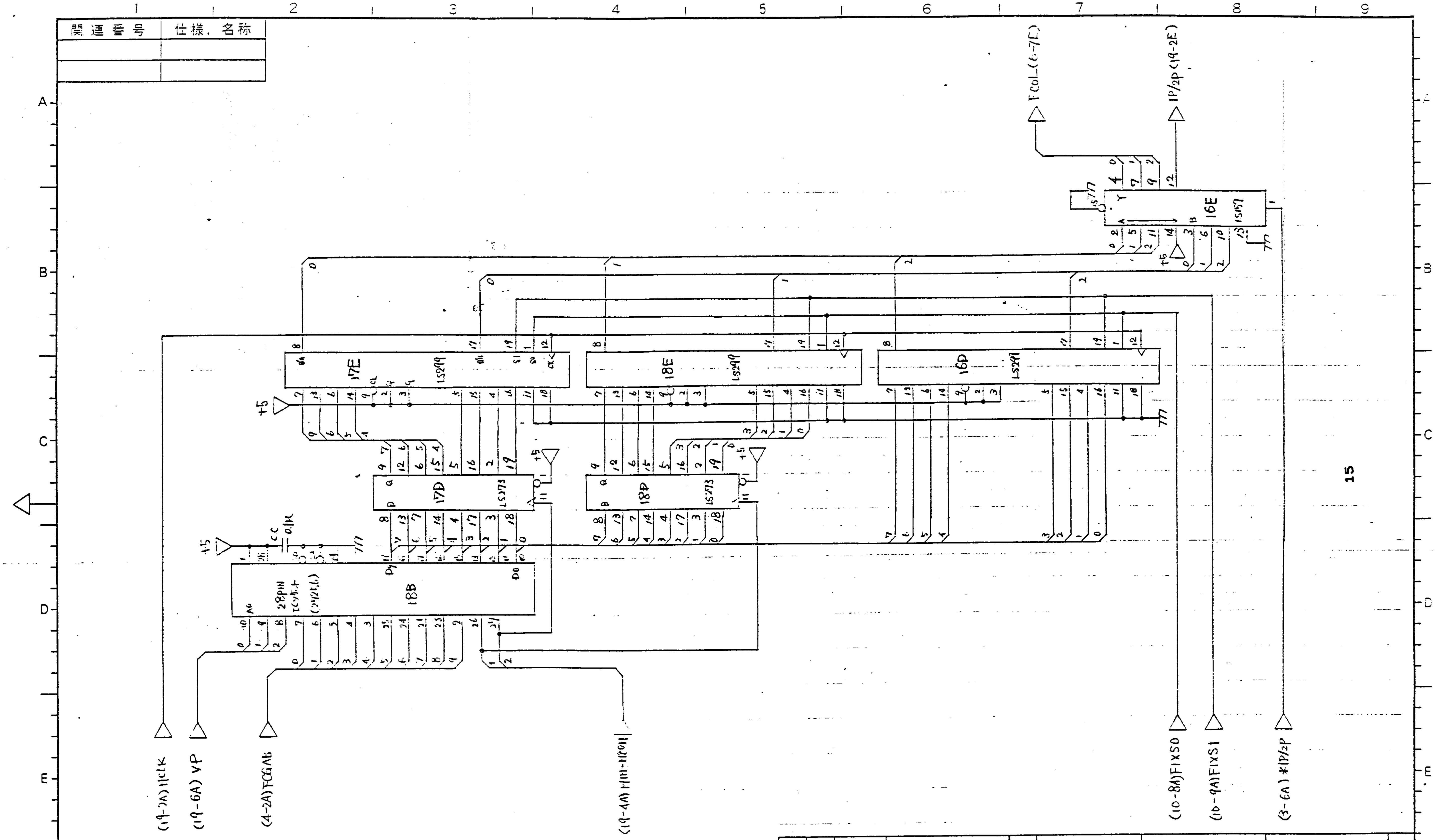
A
B
C
D
E
FCGAB(5-2E)
FPL(6-7E)
*W(8-4E)(14-4E)
18C
LS174
17C
LS273
16C
LS174
+5
C.C
0.1μ
HM6264
A0
D0
OE
WE
15C
LS245
4E
2E
LS00
16A
LS157
17A
LS157
15B
LS157
15A
LS157
(19-3A)*M4H
(19-3A) M4H
(19-5A)H1POS
(1-2A)AB
(19-6A)VP
(2-4A)*00H
(1-6A)DB
(19-3A)HCLK
(1-4A)R/W

記号	担当	年月日	改 訂 個 所	符号	部品、図面番号	名 称	仕様、材質	個/台

記 事

材質	処理	公差	名称 CFB-63	
承認	検図	検図	担当 石田 61.6.27	単位 mm 尺度 /
図番 K-10995	4/20			

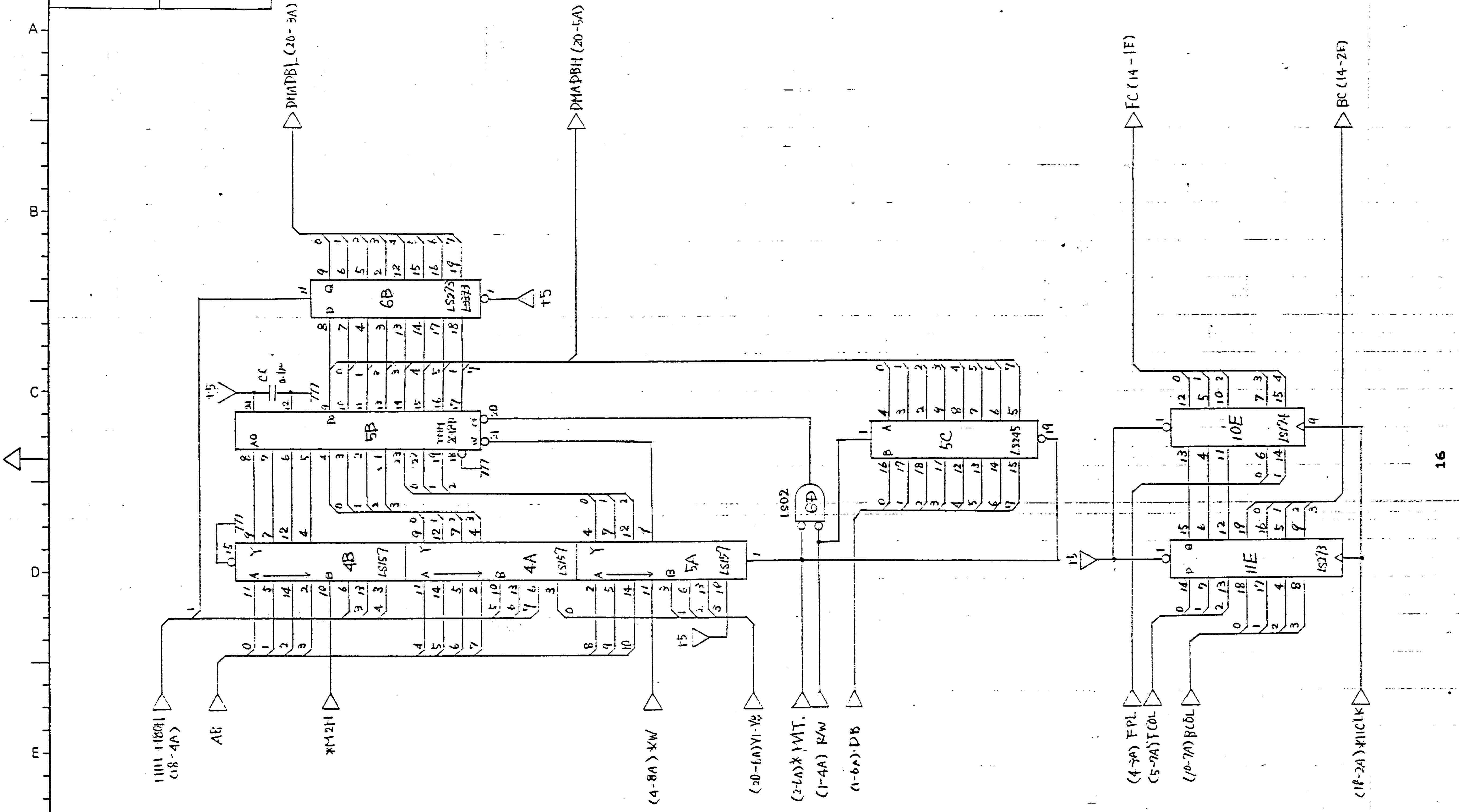
関連番号	仕様，名称


1
2
3
4
5
6
7
8
9
A
B
C
D
E
FCOL (6-7E)
1P/2P (19-2E)
16E
LS157
17E
LS299
18E
LS299
16D
LS299
17D
LS273
18D
LS273
18B
28PIN
ICソケット
+5
0.1μ
(19-2A) HCLK
(19-6A) VP
(4-2A) FCGAB
(19-4A) H1H-H2OH
(10-8A) FIXS0
(10-9A) FIXS1
(3-6A) *1P/2P
15

記号	担当	年月日	改　訂　個　所	符号	部品，図面番号	名　　称	仕様，材質	個/台

記　事

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当 [illegible]
単位 mm	尺度 /	図番 K-10996	


DMATPBL (20-5A)
DMAPBH (20-5A)
FC (14-1E)
BC (14-2F)
6B
LS273
LS373
+5
5B
CC
0.1μ
5C
LS245
10E
LS174
11E
LS273
4B
LS157
4A
LS157
5A
LS157
6D
LS02
(18-4A)
AB
*M2H
(4-8A) *W
(20-6A) Y1-Y8
(2-6A) *INT
(1-4A) R/W
(1-6A) DB
(4-9A) FPL
(5-9A) FCOL
(10-7A) BCOL
(18-2A) *1CLK
A
B
C
D
E

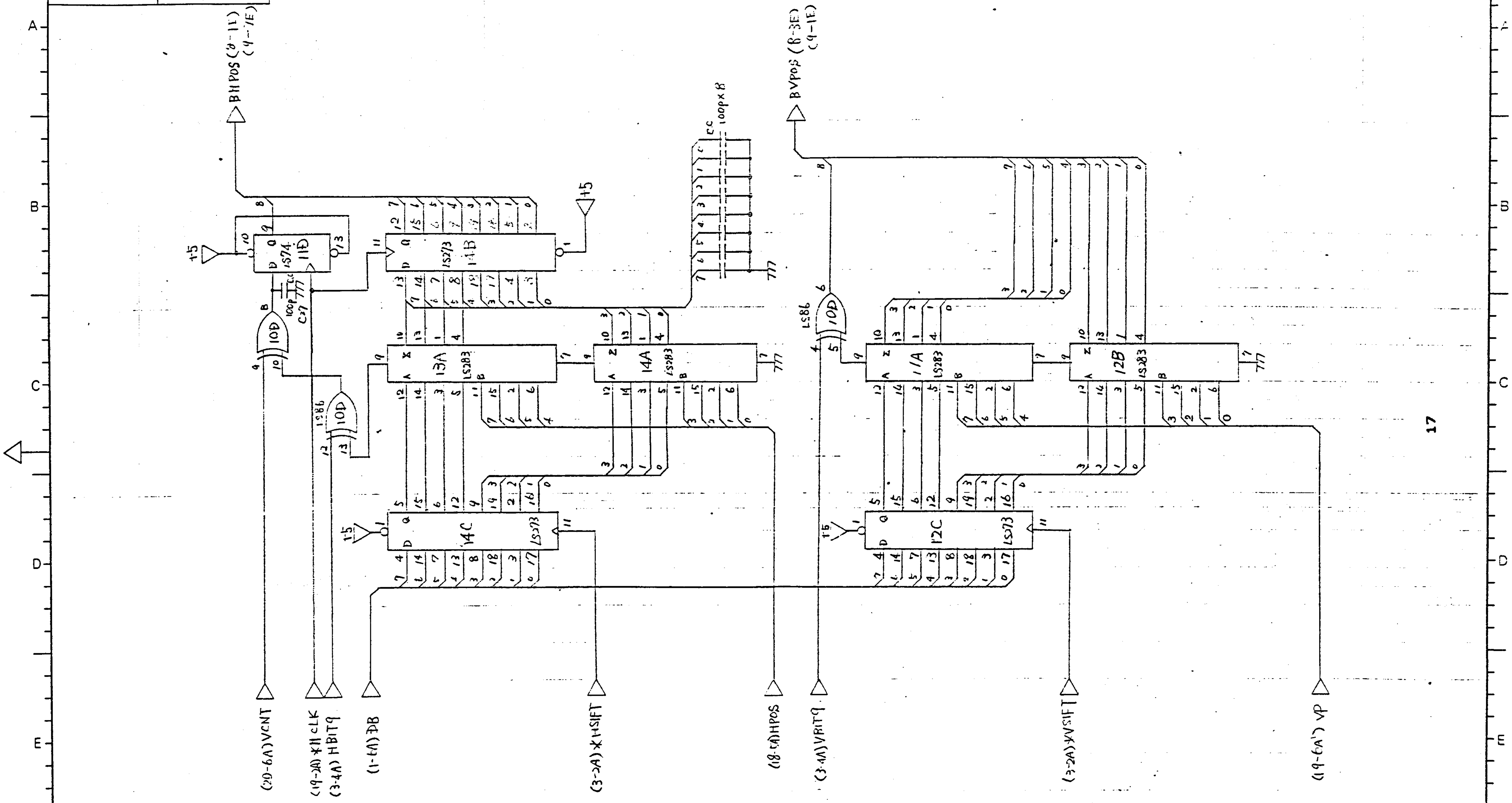
記号	担当	年月日	改 訂 個 所	符号	部品、図面番号	名 称	仕様、材質	個数

記事

材質		処理		公差	名称 CFB-63
承認	検図	検図	担当 吉田 41.5.27	単位 mm 尺度 /	図番 K-10996

第3角法

関連番号	仕様，名称



BHPOS (8-1I) (9-1E)
BVPOS (8-3E) (9-1E)
100p×8
+5
LS74 11D
LS273 14B
LS283 13A
LS283 14A
LS273 14C
LS86 10D
LS283 11A
LS283 12B
LS273 12C
C27 100p
(20-6A) VCNT
(19-2A) *H CLK
(3-4A) HBIT9
(1-6A) DB
(3-2A) *HSIFT
(18-6A) HPOS
(3-4A) VBIT9
(3-2A) *VSIFT
(19-6A') VP
17

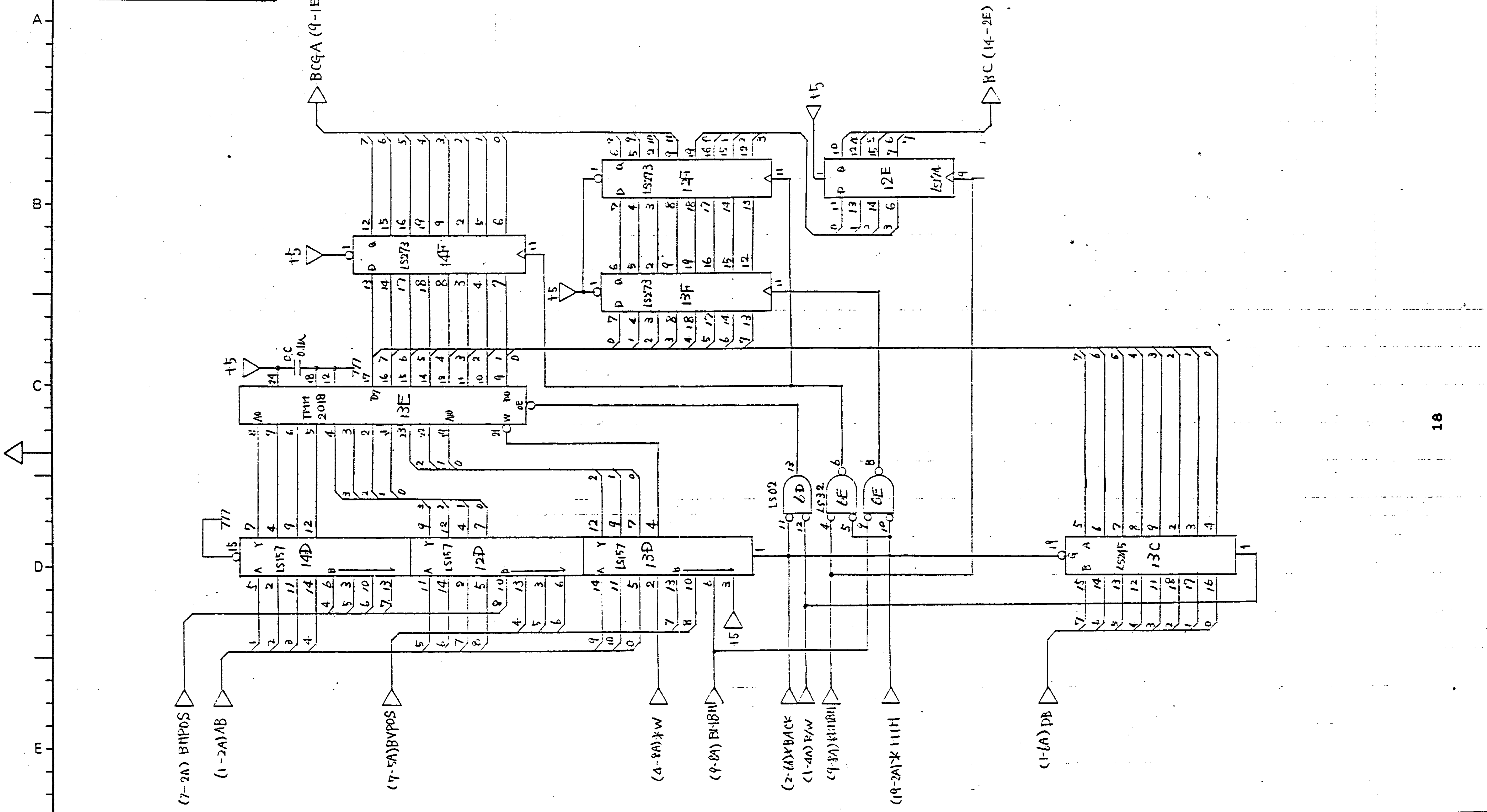
記　事

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質	個/台

材質	処理		公差		名称 CFB-63
承認	検図	検図	担当 石田 H 5.30	単位 mm 尺度 /	図番 K-10996

7/20

関連番号	仕様，名称

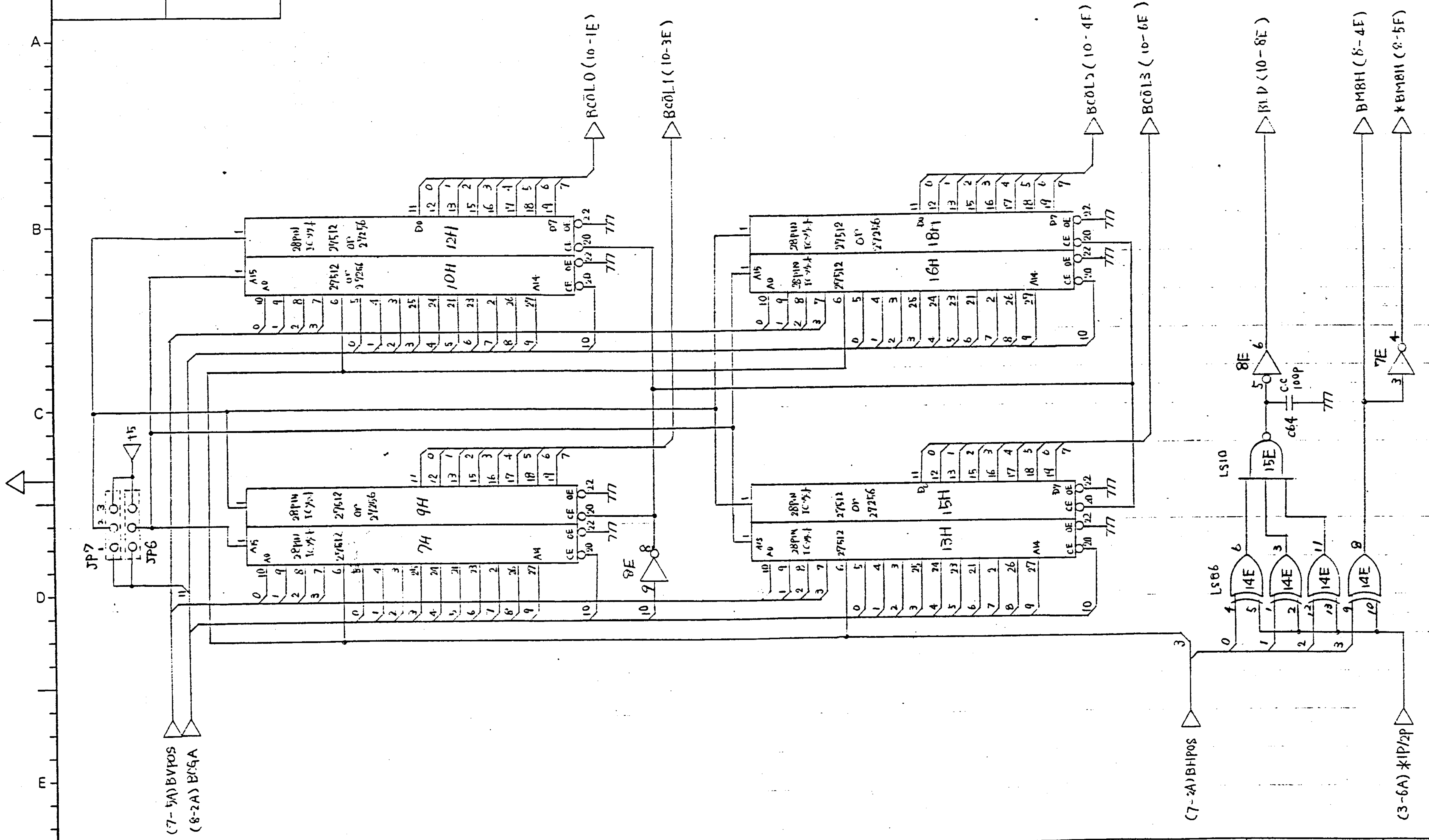

BCGA (9-1E)
BC (14-2E)
+5
LS273
14F
13F
12F
LS174
12E
TMM 2018
13E
0.1μ
LS157
14D
12D
13D
LS245
13C
LS02
6D
LS32
6E
(7-2A) BHPOS
(1-2A) AB
(7-5A) BVPOS
(4-8A) *W
(9-8A) BMBH
(2-6A) *BACK
(1-4A) R/W
(9-8A) *BMBH
(9-2A) *1111
(1-6A) DB
18

記事

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当 長田
単位 mm	尺度 1	図番 K-10996	18/20

関連番号	仕様. 名称

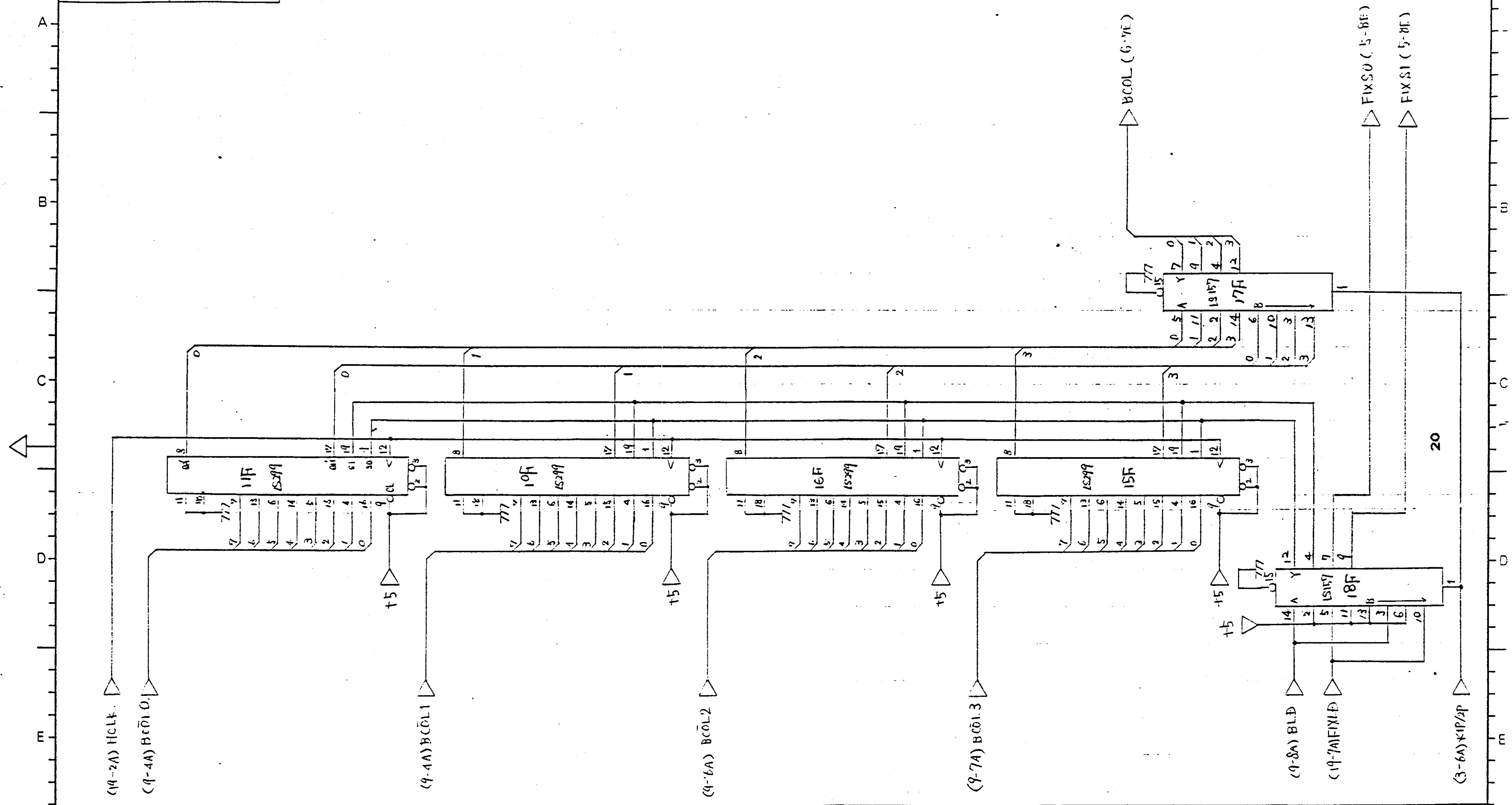

1
2
3
4
5
6
7
8
9
A
B
C
D
E
BCOL0 (10-1E)
BCOL1 (10-3E)
BCOL2 (10-4E)
BCOL3 (10-6E)
BLD (10-8E)
BM8H (8-4E)
*BM8H (9-5F)
12H
10H
9H
7H
18H
16H
15H
13H
28PIN ICソケット
27512 or 27256
A15
A0
A14
D0
D7
CE
OE
777
+5
JP7
JP6
8E
7E
LS10
15E
LS86
14E
C64
100P
(7-5A) BVPOS
(8-2A) BCGA
(7-2A) BHPOS
(3-6A) *1P/2P

記号	担当	年月日	改訂個所	符号	部品. 図面番号	名称	仕様. 材質	個/台

記事

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当 [illegible] H1.6.27
単位 mm	尺度 /	図番 K-10996	9/20

関連番号	仕様. 名称

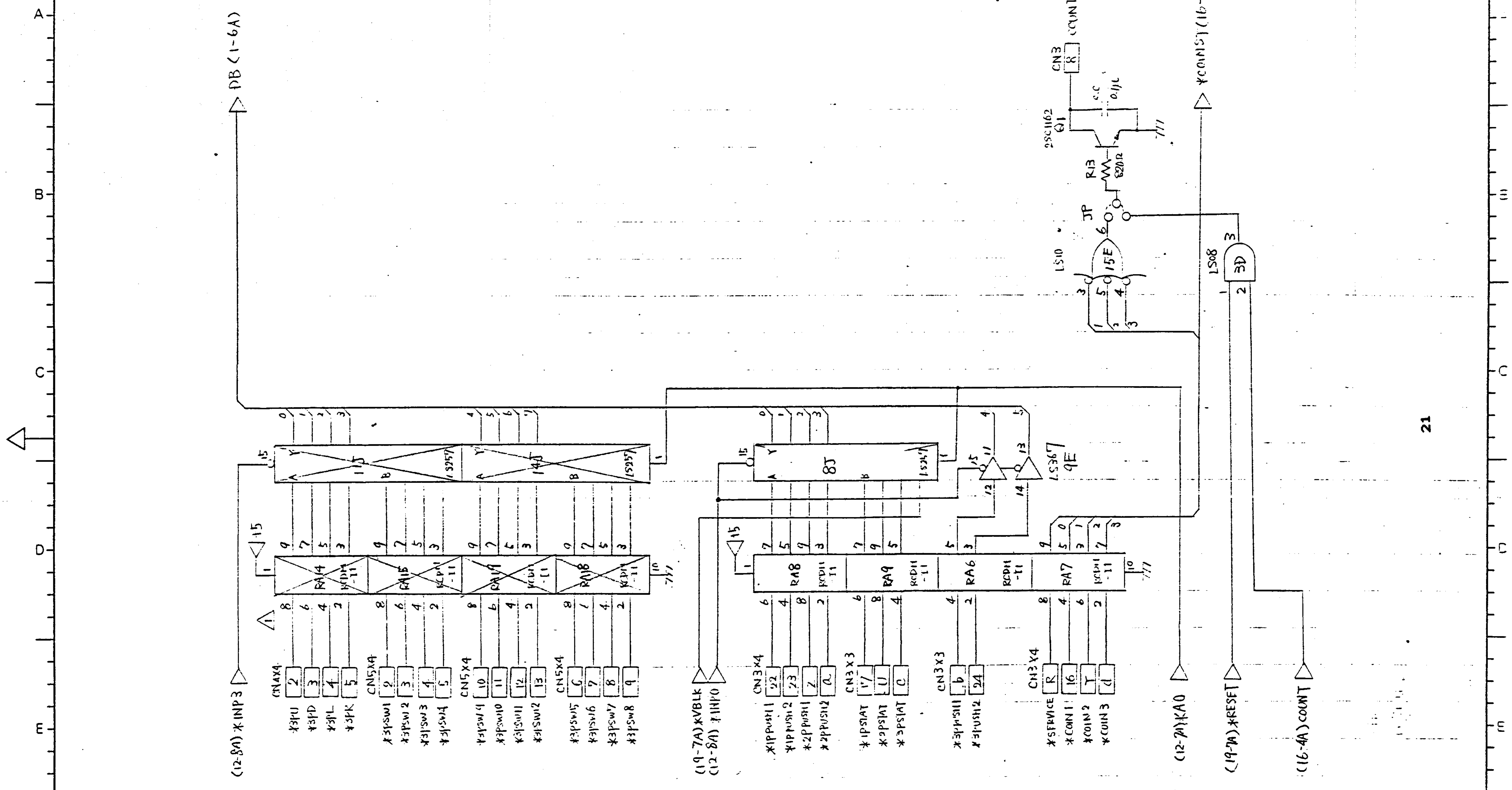

1
2
3
4
5
6
7
8
9
A
B
C
D
E
BCOL (6-7E)
FIXS0 (5-8E)
FIXS1 (5-8E)
17F
LS157
18F
LS157
11F
LS299
10F
LS299
16F
LS299
15F
LS299
20
+5
(9-2A) HCLK.
(9-4A) BCOL0
(9-4A) BCOL1
(9-6A) BCOL2
(9-7A) BCOL3
(9-8A) BLD
(9-7A) FIXLD
(3-6A) X1P/2P

記号	担当	年月日	改 訂 個 所	符号	部品. 図面番号	名 称	仕様. 材質

記 事

材質	処理	公差	名称 CFB-63
承認 検図	検図 担当	単位 mm 尺度 /	図番 K-10996

関連番号	仕様. 名称


DB (1-6A)
(12-8A) *INP3
CN4x4
*3PU
*3PD
*3PL
*3PR
CN5x4
*3PSW1
*3PSW2
*3PSW3
*3PSW4
CN5x4
*3PSW9
*3PSW10
*3PSW11
*3PSW12
CN5x4
*3PSW5
*3PSW6
*3PSW7
*3PSW8
(19-7A)*VBLK
(12-8A) *INP0
CN3x4
*1PPUSH1
*1PPUSH2
*2PPUSH1
*2PPUSH2
CN3x3
*1PSTAT
*2PSTAT
*3PSTAT
CN3x3
*3PPUSH1
*3PPUSH2
CN3x4
*SERVICE
*COIN1
*COIN2
*COIN3
(12-7A)KA0
(19-7A)*RESET
(16-4A)COUNT
*COUNT (16-5E)
CN3
COUNTER1
2SC1162
Q1
0.1μ
RB
820Ω
JP
LS10
15E
LS08
3D
LS367
9E
11J
LS257
14J
LS257
8J
LS257
RA4
RA16
RA17
RA18
RA8
RA9
RA6
RA7
RCDH-11
21

記 事

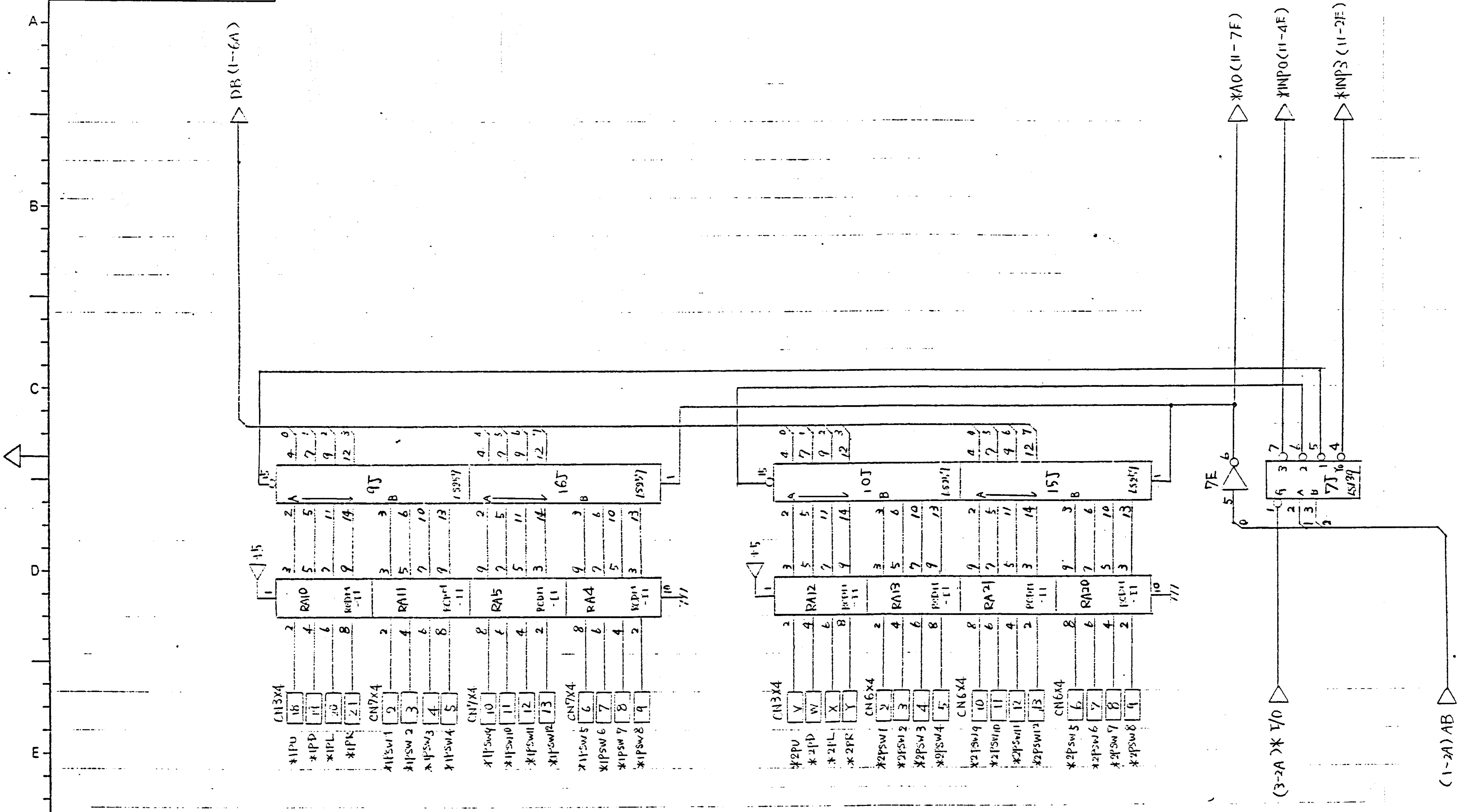
⚠ 量産時コストダウンのため実装せず

記号	担当	年月日	改 訂 個 所	符号	部品. 図面番号	名 称	仕様. 材質	個/数

材質	処理	公差	名称 CFB-63

承認	検図	検図	担当	単位 mm 尺度 /	図番 K-10996	11/20

関連番号	仕様，名称


DB (1-6A)
*A0 (11-7F)
*INP0 (11-4F)
*INP3 (11-2F)
9J
16J
10J
15J
LS257
7E
7J
LS139
+5
RA10
RA11
RA5
RA4
RA12
RA13
RA21
RA20
RCD11-11
CN3X4
CN7X4
CN6X4
*1PU
*1PD
*1PL
*1PR
*1PSW1
*1PSW2
*1PSW3
*1PSW4
*1PSW9
*1PSW10
*1PSW11
*1PSW12
*1PSW5
*1PSW6
*1PSW7
*1PSW8
*2PU
*2PD
*2PL
*2PR
*2PSW1
*2PSW2
*2PSW3
*2PSW4
*2PSW9
*2PSW10
*2PSW11
*2PSW12
*2PSW5
*2PSW6
*2PSW7
*2PSW8
(3-2A) * I/O
(1-2A) AB
A
B
C
D
E

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質	個/台

記事

材質

処理

公差

名称 CFB-63

承認

検図

検図

担当 花田

61.5.27

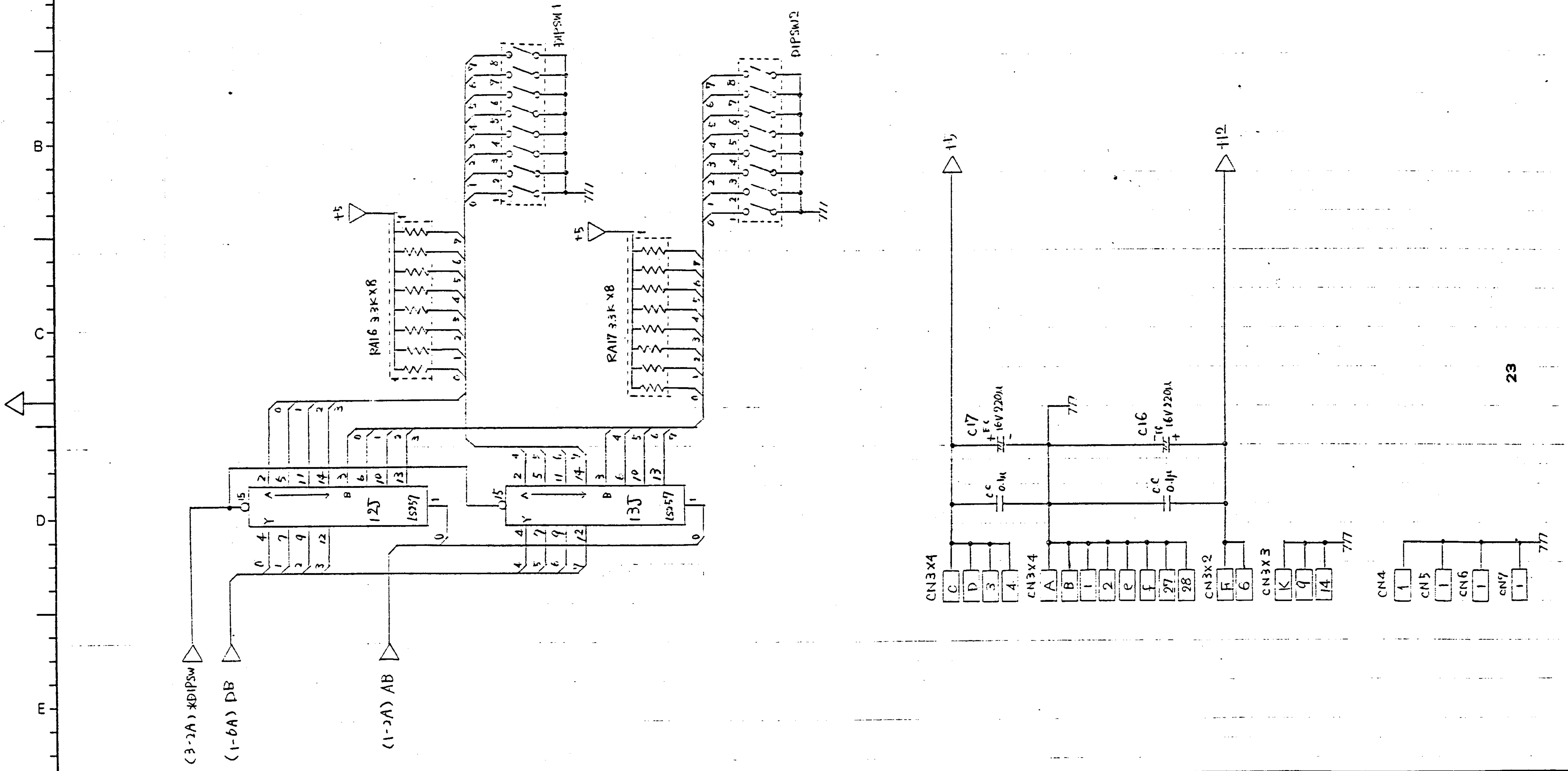
単位 mm

尺度 /

図番 K-10996

12/20

関連番号	仕様．名称

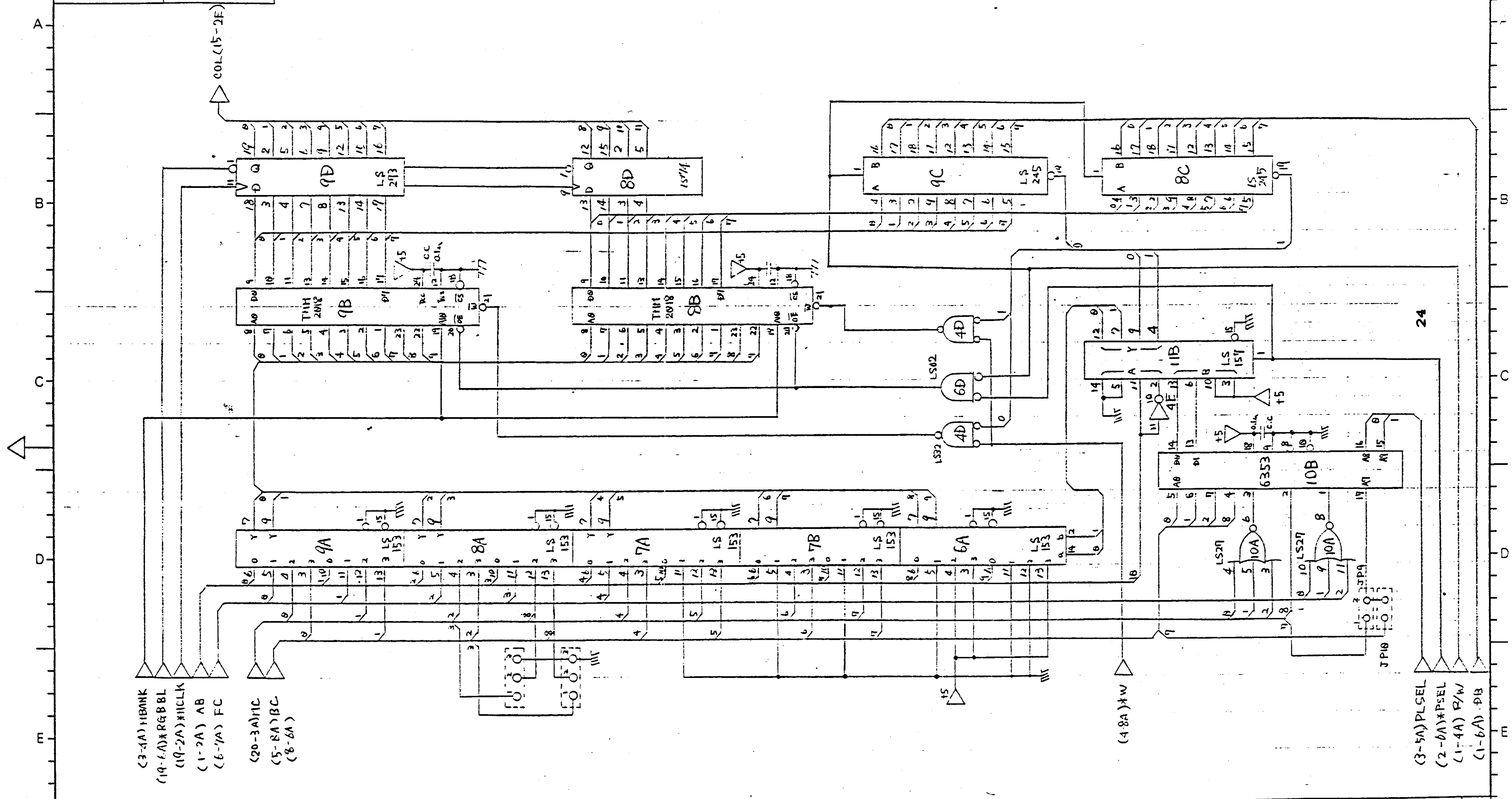

DIPSW1
DIPSW2
+5
+5
RA16 3.3K×8
RA17 3.3K×8
12J
13J
LS257
A
B
Y
15
+5
+12
C17
16V 220μ
C16
16V 220μ
0.1μ
CN3×4
CN3×4
CN3×2
CN3×3
CN4
CN5
CN6
CN7
C D 3 4
A B 1 2 e f 27 28
F 6
K 9 14
1
1
1
1
(3-2A) ＊DIPSW
(1-6A) DB
(1-2A) AB
23

記号	担当	年月日	改　訂　個　所	符号	部品．図面番号	名　称	仕様，材質	個/言

記　事

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当 元田
単位 mm	尺度 /	図番 K-10996	13/20

関連番号	仕様，名称



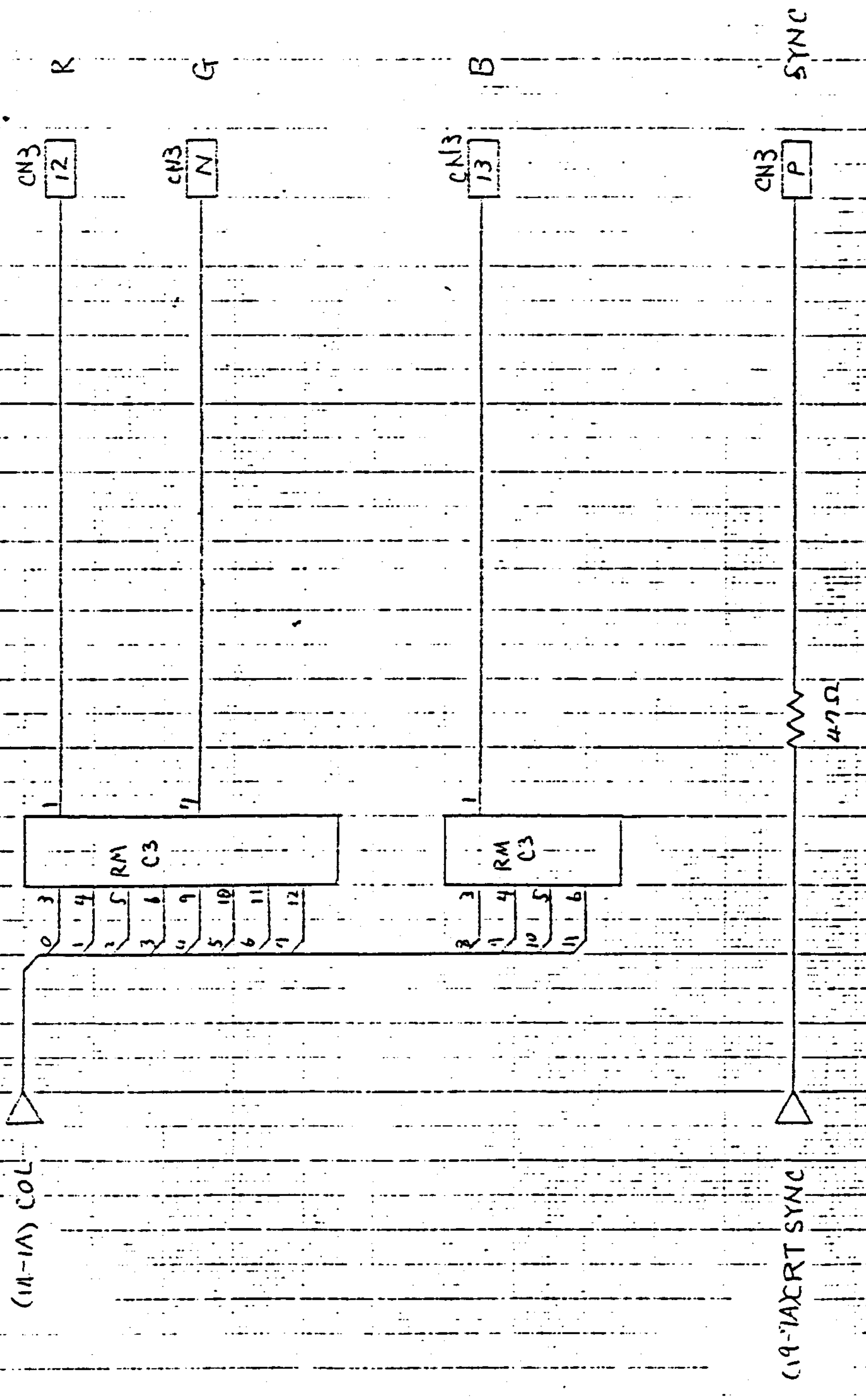
COL(15-2E)
9D
LS 273
8D
LS174
9C
LS 245
8C
LS 245
9B
TMM 2018
8B
TMM 2018
4D
6D
LS02
4D
LS32
11B
LS 157
4E
10B
6353
10A
LS27
9A
LS 153
8A
LS 153
7A
LS 153
7B
LS 153
6A
LS 153
+5
24
JP9
JP10
(3-4A)HBANK
(19-6A)*RGBBL
(19-2A)*HCLK
(1-2A) AB
(6-7A) FC
(20-3A)IC
(5-8A)BC
(8-6A)
(4-8A)*W
(3-5A)PLSEL
(2-6A)*PSEL
(1-4A) R/W
(1-6A) DB

記号	担当	年月日	改 訂 個 所	符号	部品，図面番号	名 称	仕様，材質	個/台

記 事

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当 六田
単位 mm	尺度 /	図番 K-10996	14/20

関連番号	仕様，名称

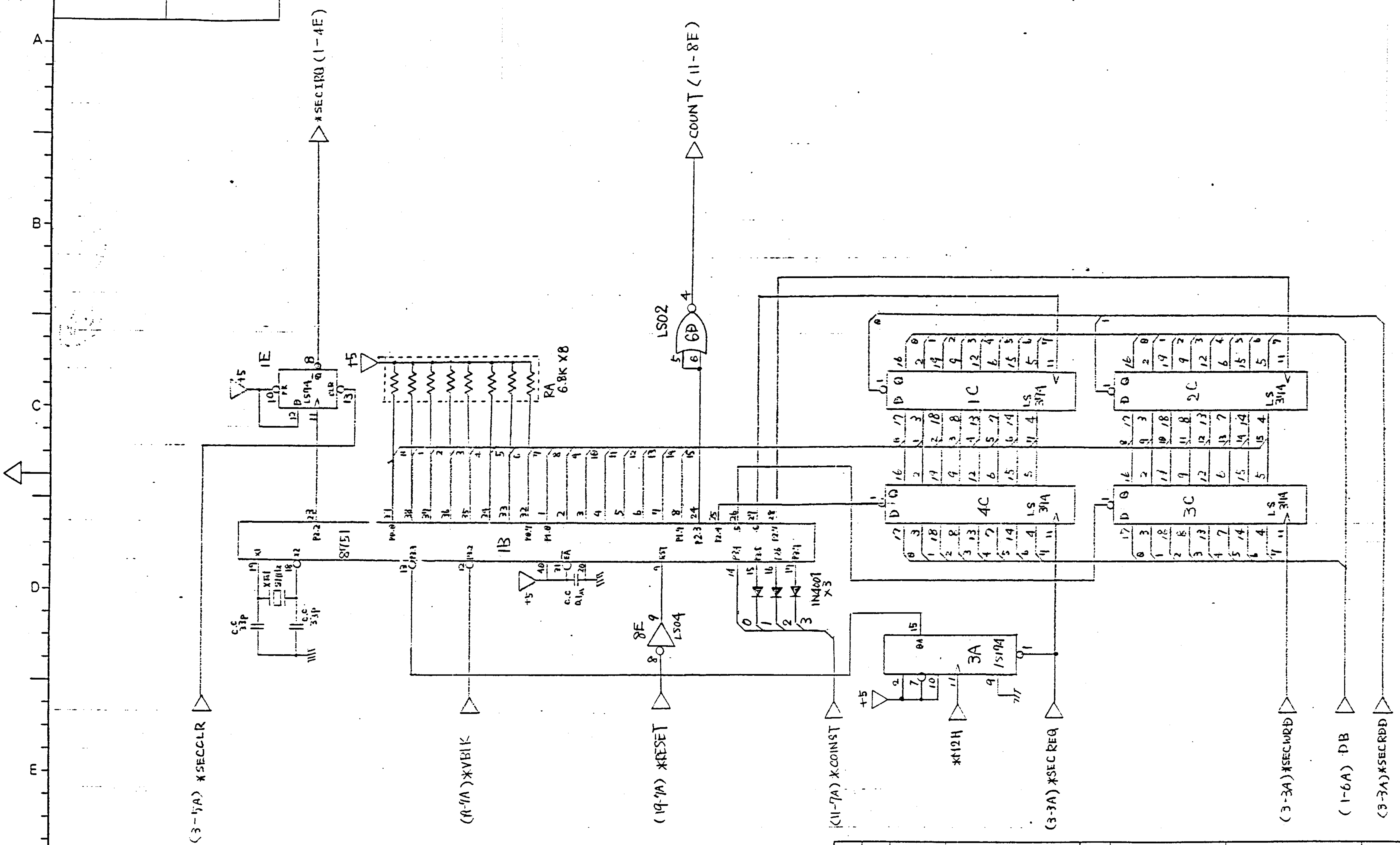

R
G
B
SYNC
CN3 12
CN3 N
CN3 13
CN3 P
47Ω
RM C3
RM C3
1
7
1
3 4 5 6 9 10 11 12
0 1 2 3 4 5 6 7
3 4 5 6
8 9 10 11
(11-1A) COL
(11-1A)CRT SYNC

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質	個/言

記事

材質	処理	公差	名称 CFB-63
承認	検図 杉田 61.6.27	検図 藤崎 61.6.5	担当 長田 61.6.5
単位 mm	尺度 /	図番 K-10996	15/20

関連番号	仕様，名称



1
2
3
4
5
6
7
8
9
A
B
C
D
E
*SECIRQ (1-4E)
COUNT (11-8E)
LS02
6D
1E
LS174
+5
RA
6.8K X8
8751
1B
X1
X2
XTL
C.C
33P
C.C
0.1μ
EA
RST
8E
LS04
1N4001
X3
1C
2C
3C
4C
LS374
3A
LS174
(3-5A) *SECCLR
(18-7A) *VBLK
(19-7A) *RESET
(11-7A) *COINST
*12H
(3-3A) *SEC REQ
(3-3A) *SECWRD
(1-6A) DB
(3-3A) *SECRDD

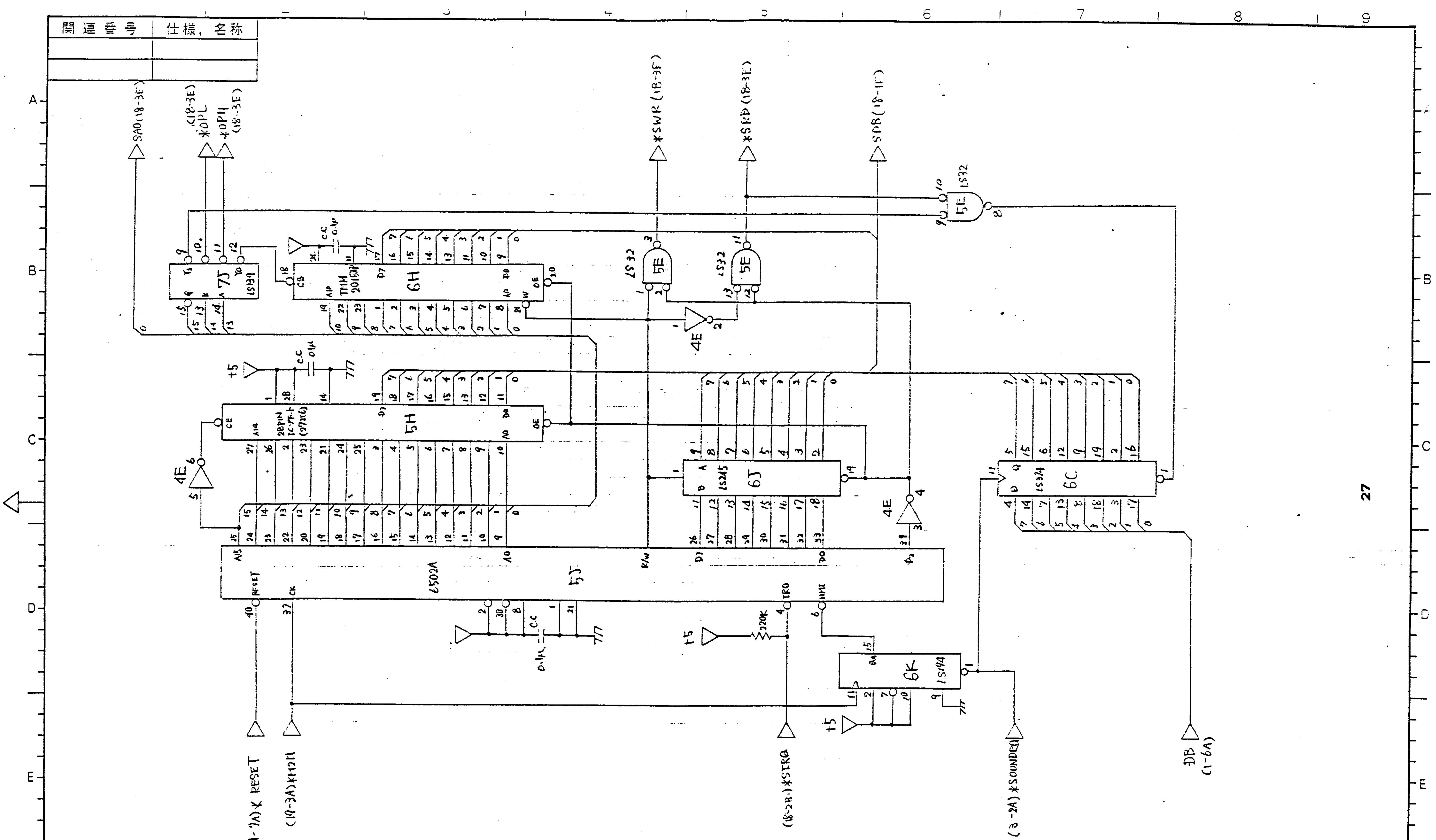
記号	担当	年月日	改訂個所	符号	部品．図面番号	名称	仕様，材質	個/台

材質	処理	公差	名称 CF6-63

承認	検図	検図	担当	単位 mm	図番 K-10996	16/20
	花田	篠崎	長田	尺度 /		
	-.-27	61.6.5	61.6.5			

記事

関連番号	仕様, 名称



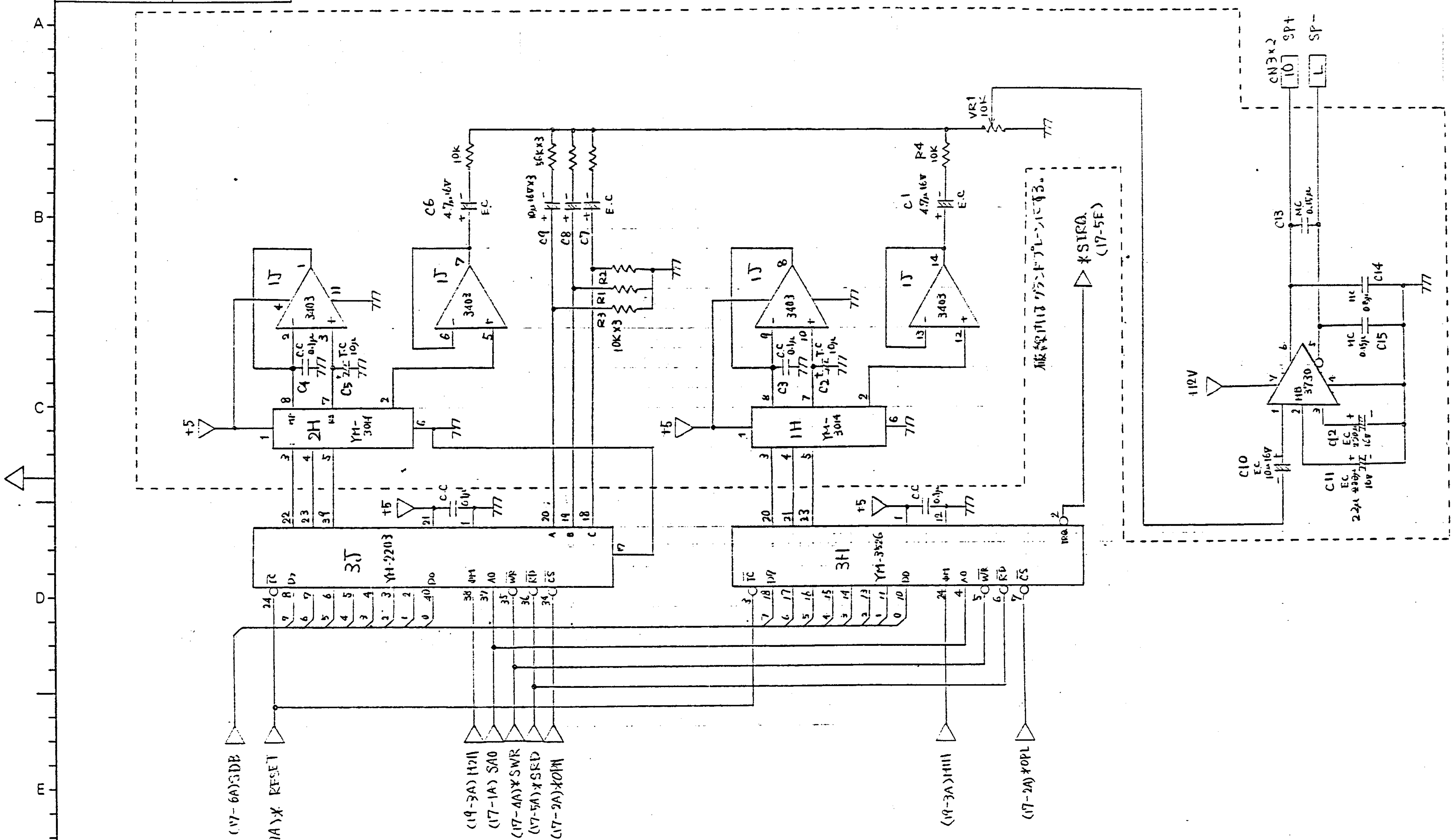
SA0(18-3F)
(18-3E) *OPL
*OPH (18-3E)
*SWR (18-3F)
*SRD (18-3E)
SDB (18-1F)
LS32
5E
7J
LS139
6H
TMM 2016AP
C.C 0.1μ
4E
5H
28PIN TC-57-+ (2716)
6502A
5J
6J
LS245
6C
LS374
6K
LS194
RESET
CK
IRQ
NMI
R/W
A15
A0
D7
D0
+5
220K
C.C 0.1μ
(19-7A) *RESET
(19-3A) *H2H
(18-2B) *STRQ
(3-2A) *SOUNDEQ
DB (1-6A)

記号	担当	年月日	改訂個所	符号	部品. 図面番号	名称	仕様. 材質	個/台

記事

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当
単位 mm	尺度 /	図番 K-10976	17/20

関連番号	仕様，名称

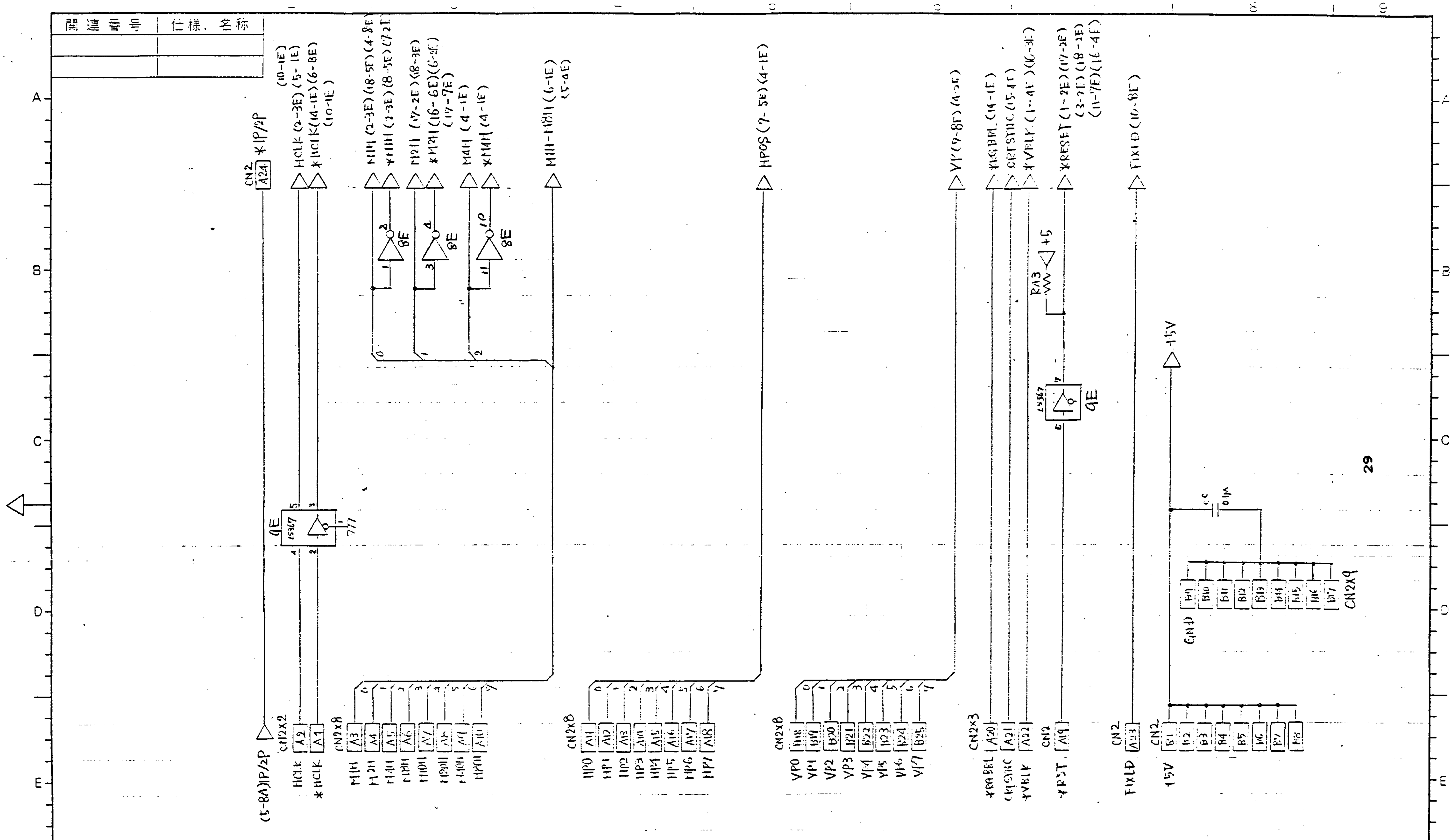

A
B
C
D
E
1J
3403
2H
YM-3014
3J
YM-2203
1H
3H
YM-3526
HA13730
VR1 10K
R4 10K
R1
R2
R3 10KX3
56KX3
C1 4.7μ 16V E.C
C2 2.2μ T.C 10μ
C3 C.C 0.1μ
C4 C.C 0.1μ
C5 2.2μ T.C 10μ
C6 4.7μ 16V E.C
C7
C8
C9 10μ 16V X3 E.C
C10 E.C 10μ 16V
C11 E.C 22μ 16V
C12 E.C 470μ 16V
C13 MC 0.15μ
C14 MC 0.1μ
C15 MC 0.1μ
CN3×2 SP+ SP−
+5
+12V
破線内はグランドプレーンにする。
*STRQ (17-5E)
(17-6A)SDB
(19-7A)*RESET
(19-3A)1MH
(17-1A) SA0
(17-4A)*SWR
(17-5A)*SRD
(17-2A)*OPN
(19-3A)1MH
(17-2A)*OPL

記号	担当	年月日	改訂個所	符号	部品．図面番号	名称	仕様，材質	個/台

記事

材質	処理	公差	名称 CFB-63	
承認	検図	検図	担当	単位 mm 尺度 /	図番 K-10996	19/20

関連番号	仕様．名称

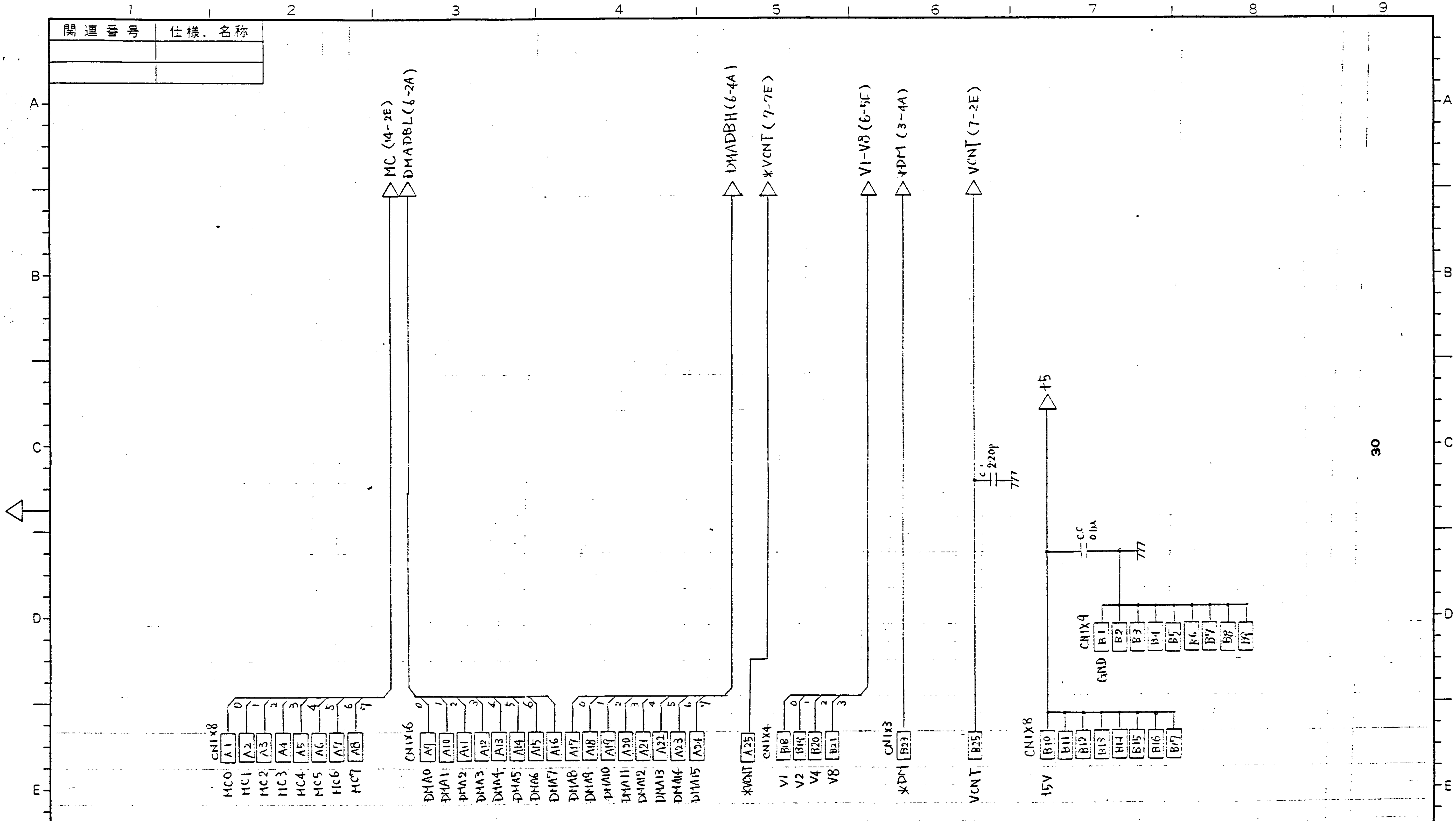

CN2 A24 *IP/2P
HCLK (2-3E)(5-1E)(10-1E)
*HCLK (14-1E)(6-8E)(10-1E)
M1H (2-3E)(8-5E)(4-8E)
*M1H (2-3E)(8-5E)(7-2E)
M2H (17-2E)(8-3E)
*M2H (16-6E)(6-2E)(17-7E)
M4H (4-1E)
*M4H (4-1E)
M1H-M8H (6-1E)(5-4E)
HPOS (7-5E)(4-1E)
VP (7-8E)(4-5E)
*RGBBL (14-1E)
CRTSYNC (15-4E)
*VBLK (1-4E)(6-3E)
*RESET (1-2E)(17-2E)(3-2E)(8-2E)(11-7E)(6-4E)
FIXLD (16-8E)
8E
8E
8E
+5
RA3
LS367
9E
+5V
0.1μ
29
GND
CN2x9
B9 B10 B11 B12 B13 B14 B15 B16 B17
9E
LS367
(5-8A)IP/2P
CN2x2 A2 A1
HCLK
*HCLK
CN2x8 A3 A4 A5 A6 A7 A8 A9 A10
M1H M2H M4H M8H M10H M20H M40H M80H
CN2x8 A11 A12 A13 A14 A15 A16 A17 A18
HP0 HP1 HP2 HP3 HP4 HP5 HP6 HP7
CN2x8 B18 B19 B20 B21 B22 B23 B24 B25
VP0 VP1 VP2 VP3 VP4 VP5 VP6 VP7
CN2x3 A20 A21 A22
*RGBBL
CRTSYNC
*VBLK
CN2 A19
*RST
CN2 A23
FIXLD
CN2 B1 B2 B3 B4 B5 B6 B7 B8
+5V
A B C D E
1 2 3 4 5 6 7 8 9

記号	担当	年月日	改 訂 個 所	符号	部品．図面番号	名　　称	仕様．材質	個/台

記 事

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当
単位 mm	尺度 /	図番 K-10996	19/20

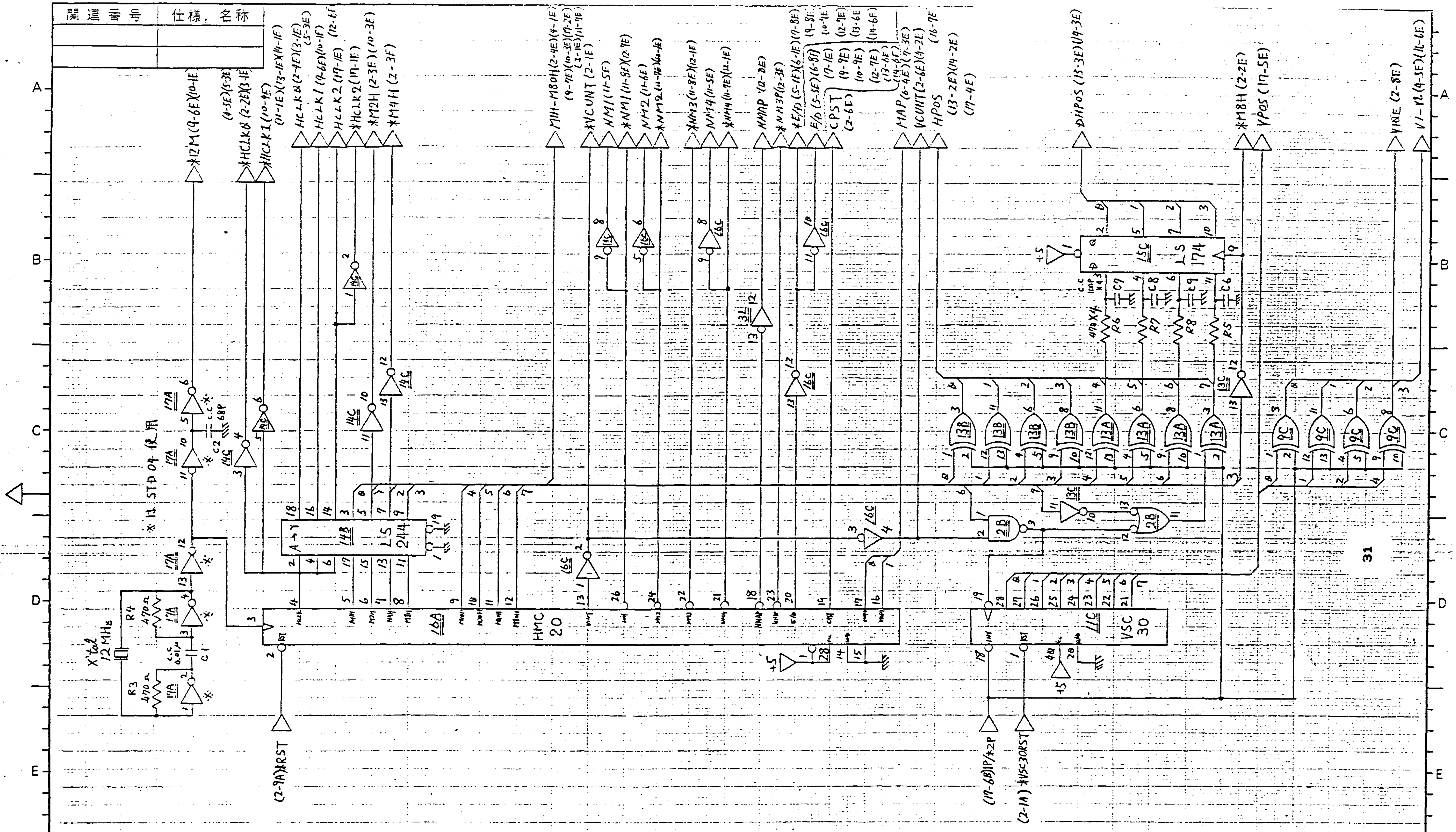
関連番号	仕様. 名称


1
2
3
4
5
6
7
8
9
A
B
C
D
E
MC (14-2E)
DMADBL(6-2A)
DMADBH(6-4A)
*VCNT (7-7E)
V1-V8 (6-5F)
*DM (3-4A)
VCNT (7-2E)
+5
C 220p
C 0.1μ
CN1x8
A1 A2 A3 A4 A5 A6 A7 A8
MC0 MC1 MC2 MC3 MC4 MC5 MC6 MC7
CN1x16
A9 A10 A11 A12 A13 A14 A15 A16 A17 A18 A19 A20 A21 A22 A23 A24
DMA0 DMA1 DMA2 DMA3 DMA4 DMA5 DMA6 DMA7 DMA8 DMA9 DMA10 DMA11 DMA12 DMA13 DMA14 DMA15
A25
*VCNT
CN1x4
B18 B19 B20 B21
V1 V2 V4 V8
CN1x3
B23
*DM
B25
VCNT
CN1x8
B10 B11 B12 B13 B14 B15 B16 B17
+5V
CN1x9
B1 B2 B3 B4 B5 B6 B7 B8 B9
GND
0 1 2 3 4 5 6 7

記号	担当	年月日	改 訂 個 所	符号	部品. 図面番号	名 称	仕様, 材質	個/台

記 事

材質	処理	公差	名称 CFB-63
承認	検図	検図	担当 吉田
単位 mm	尺度 /	図番 K-16996	20/20


*12M (9-6E)(10-1E)
*HCLK0 (2-2E)(3-1E) (4-5E)(5-3E)
*HCLK1 (10-4E) (11-1E)(13-1E)(14-1F)
HCLK0 (2-4E)(3-1E)(5-3E)
HCLK1 (9-6E)(10-1E)
HCLK2 (17-1E) (12-1E)
*HCLK2 (17-1E)
*M2H (2-3E)(10-3E)
*M4H (2-3E)
MIH-M80H (2-4E)(4-1E) (9-7E)(10-3E)(17-2E) (3-1E)(11-1E)
*VCUNT (2-1E)
NM1 (11-5E)
*NM1 (11-8E)(12-4E)
NM2 (11-6E)
*NM2 (11-4E)(12-1E)
*NM3 (11-8E)(12-1E)
NM4 (11-5E)
*NM4 (11-4E)(12-1E)
NMAP (12-8E)
*NM3P (12-3E)
*E/D (5-1E)(6-1E)(17-8E)
E/D (5-5E)(6-8E)
CPST (2-6E)
MAP (6-4E)(13-3E)(14-2E)
VCUNT (2-6E)(4-2E)
HPOS (13-2E)(14-2E) (17-4E)
DHPOS (13-3E)(14-3E)
*M8H (2-2E)
VPOS (17-5E)
VINE (2-8E)
V1-V2 (4-3E)(11-6E)
(2-9A) *RST
(17-6B) IP/*2P
(2-1A) *VSC30RST
X'tal 12MHz
R3 470Ω
R4 470Ω
C1 C.C 0.01μ
C2 C.C 68P
※ は STD 04 使用
17A
14C
16A HMC 20
14B LS 244
A→Y
15C LS 174
470Ω×4 R5 R6 R7 R8
C.C 100P×4 C6 C7 C8 C9
11C VSC 30
6C
3C
13C
2B
13A
13B
9C
+5
31
A
B
C
D
E

関連番号	仕様，名称

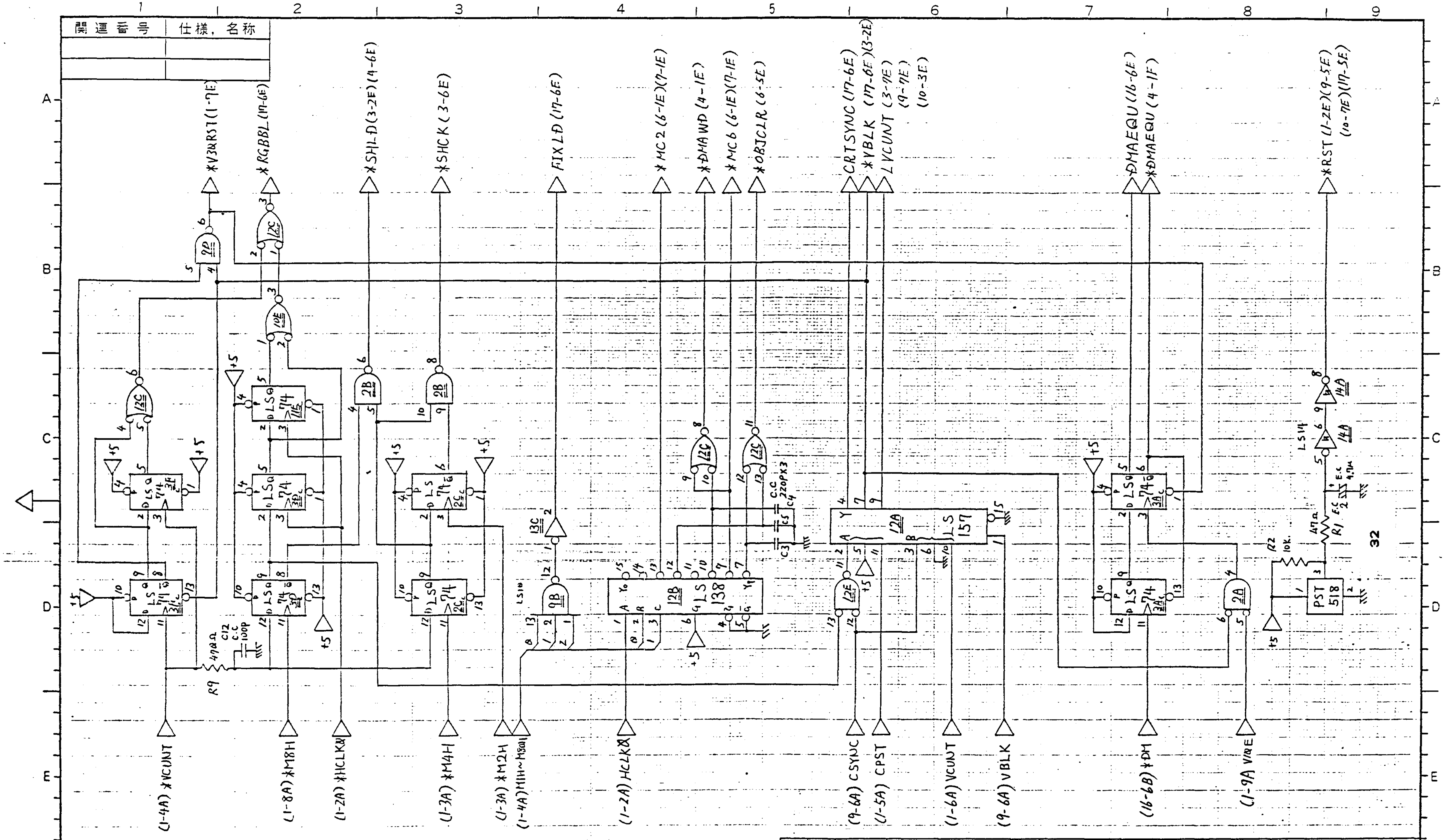
記号	担当	年月日	改　訂　個　所	符号	部品，図面番号	名　　　称	仕様，材質	個/台

記　事

材質	処理	公差	名称 DNOA-01 回路図
承認 62.1.23	検図 加藤 62.1.23	検図 西川 61.5.24	担当 K. Shinozaki 61.5.21

単位 mm
尺度 /
図番 LK-10023
1/17

関連番号	仕様，名称


1
2
3
4
5
6
7
8
9
A
B
C
D
E
*V3RST (1-7E)
*RGBBL (17-6E)
*SHLD (3-2E)(4-6E)
*SHCK (3-6E)
FIXLD (17-6E)
*MC2 (6-1E)(7-1E)
*DMAWD (4-1E)
*MC6 (6-1E)(7-1E)
*OBJCLR (6-5E)
CRTSYNC (17-6E)
*VBLK (17-6E)(3-2E)
LVCUNT (3-7E) (9-7E) (10-3E)
DMAEQU (16-6E)
*DMAEQU (4-1F)
*RST (1-2E)(9-5E) (10-7E)(17-5E)
2D
12C
12E
12C
3F
3E
3D
3C
2B
2C
13C
1B
12B
LS 138
12C
12C
12A
LS 157
12E
3A
2A
14A
LS14
PST 518
LS 74
LS10
+5
C12 C.C 100P
R9 470Ω
C.C 220P×3
C3 C4 C5
R2 10k
R1 47Ω
E.C 4.7μ
32
(1-4A) *VCUNT
(1-8A) *M8H
(1-2A) *HCLK0
(1-3A) *M4H
(1-3A) *M2H
(1-4A) M1H~M801
(1-2A) HCLK0
(9-6A) CSYNC
(1-5A) CPST
(1-6A) VCUNT
(9-6A) VBLK
(16-6B) *DM
(1-9A) V/RE

記事

記号	担当	年月日	改　訂　個　所	符号	部品，図面番号	名　　称	仕様，材質	個/台

材質

処理

公差

名称 DNOF-01 回路図

承認

検図

検図 西川

担当

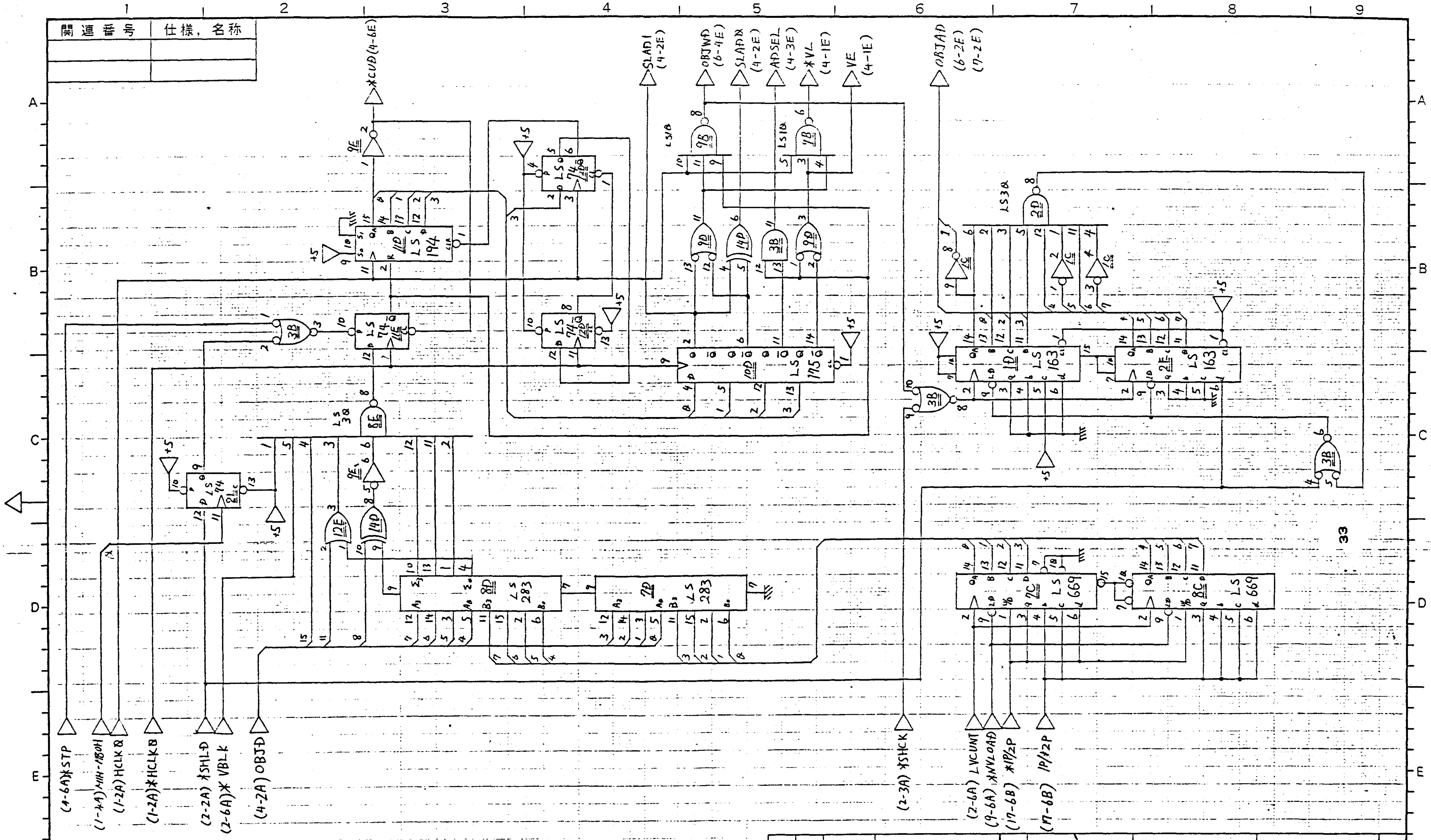
単位 mm

尺度 1

図番 LK-10023

2/17

関連番号	仕様，名称



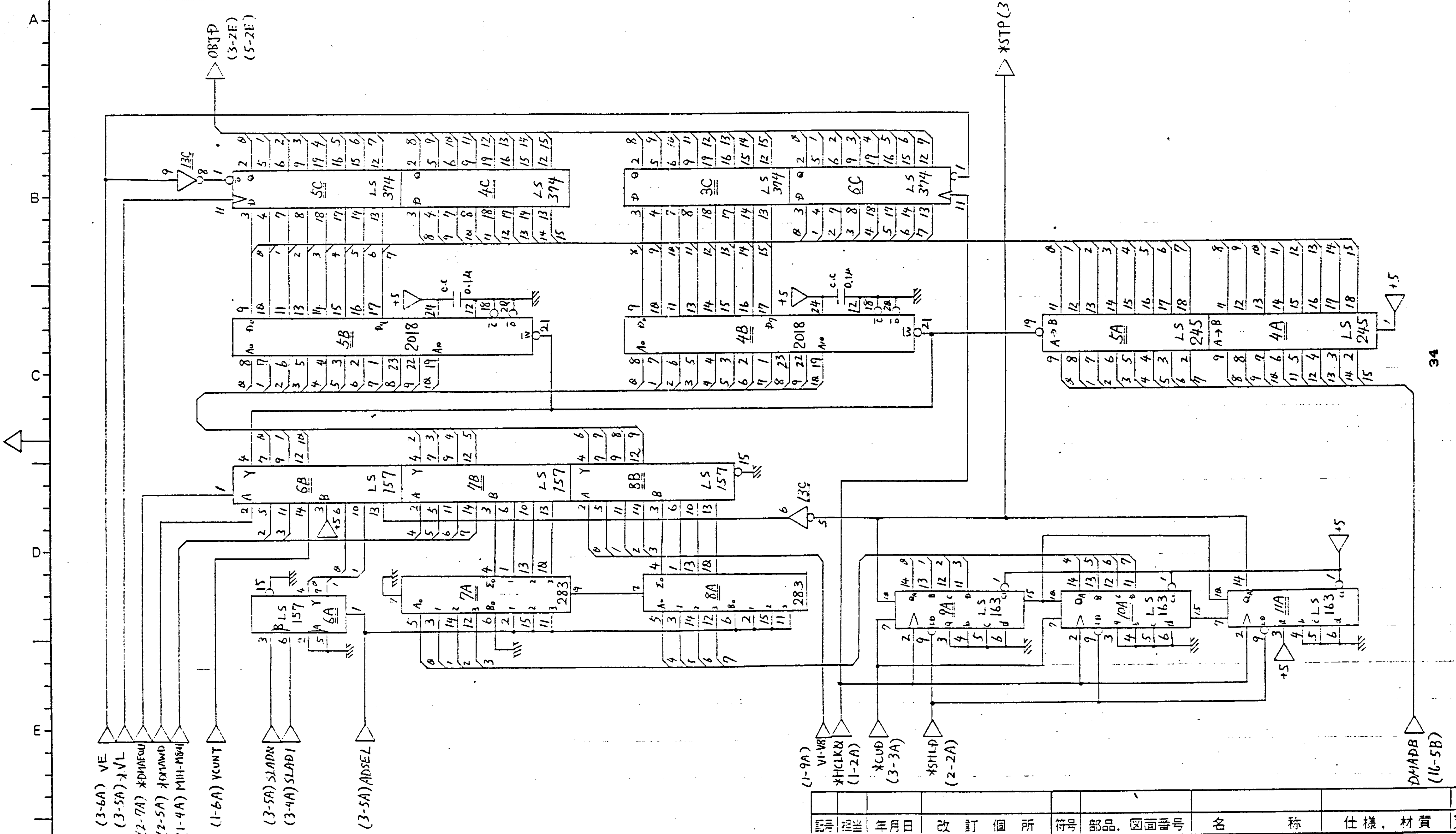
1
2
3
4
5
6
7
8
9
A
B
C
D
E
*CVD(4-6E)
SLAD1 (4-2E)
OBJWD (6-4E)
SLAD0 (4-2E)
ADSEL (4-3E)
*VL (4-1E)
VE (4-1E)
OBJAD (6-2E) (7-2E)
LS 194
LS 74
LS 175
LS 163
LS 283
LS 669
LS 38
LS 10
+5
33
(4-6A)*STP
(1-4A) MH-180H
(1-2A) HCLK0
(1-2A)*HCLK0
(2-2A) *SHLD
(2-6A)* VBLK
(4-2A) OBJD
(2-3A) *SHCK
(2-6A) LVCUNT
(9-6A) *NVLOAD
(17-6B) *1P/2P
(17-6B) 1P/*2P

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質	個/台

記事

材質	処理	公差	名称 DNOF-01 回路図
承認	検図	検図 西川	担当
単位 mm	尺度 /	図番 LK-10823	3/17

関連番号	仕様、名称

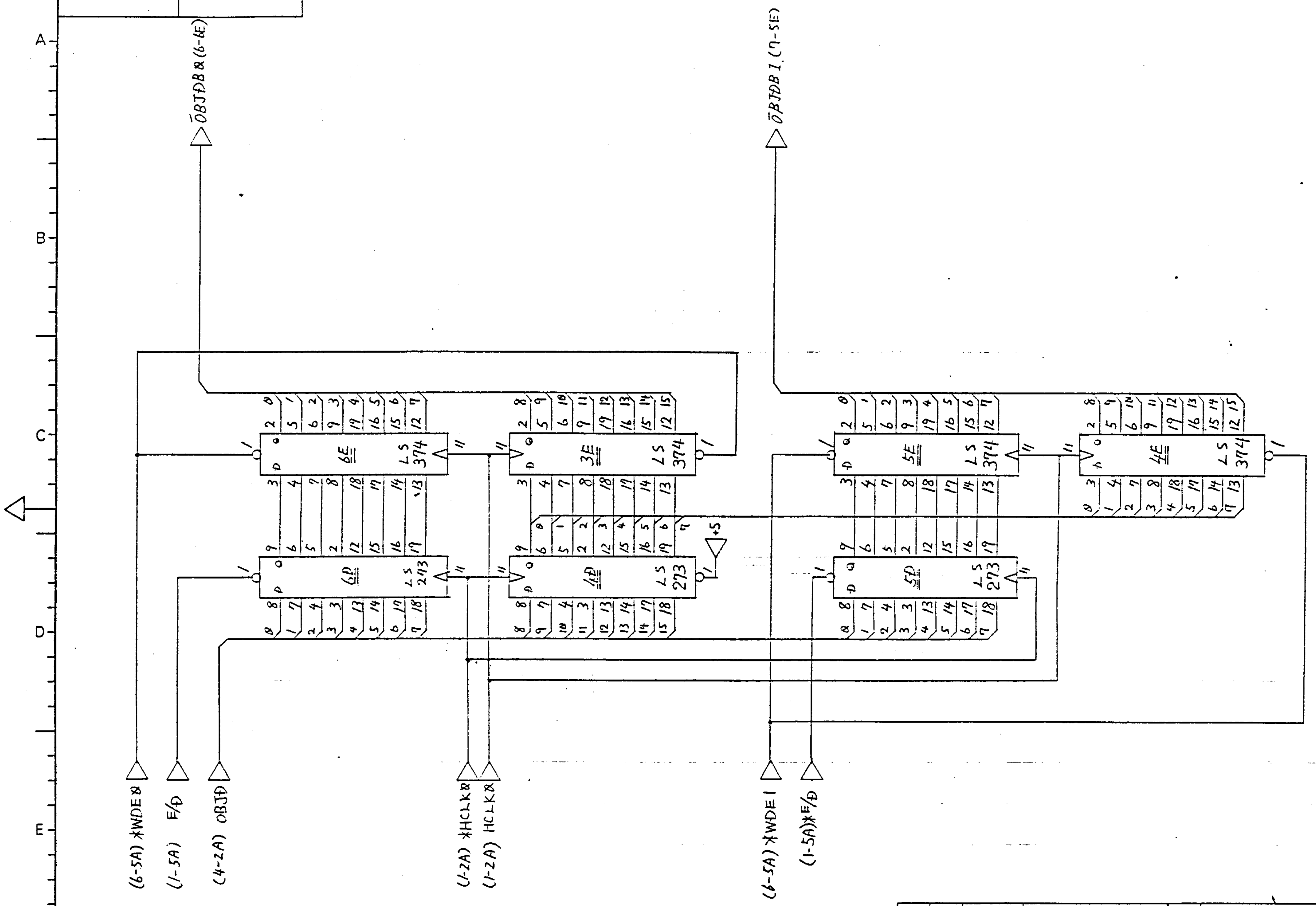

1
2
3
4
5
6
7
8
9
A
B
C
D
E
OBJD (3-2E) (5-2E)
*STP (3-1E)
13C
5C LS374
4C LS374
3C LS374
6C LS374
5B 2018
4B 2018
C.C
0.1μ
+5
5A LS245
4A LS245
A→B
6B LS157
7B LS157
8B LS157
6A LS157
7A 283
8A 283
9A LS163
10A LS163
11A LS163
(3-6A) VE
(3-5A) *VL
(2-7A) *DMAEQU
(2-5A) *DMAWD
(1-4A) M11-M811
(1-6A) VCUNT
(3-5A) SLAD0
(3-4A) SLAD1
(3-5A) ADSEL
(1-9A) V1-V8
*HCLK8 (1-2A)
*CUD (3-3A)
*SHLD (2-2A)
DMADB (16-5B)

記号	担当	年月日	改訂個所	符号	部品、図面番号	名称	仕様、材質	個/台

記事

材質	処理	公差	名称 DNOF-01 回路図
承認 河合	検図 加藤	検図 西川	担当
単位 mm	尺度 1	図番 LK-10Q23	4/17

関連番号	仕様．名称



ŌBJDB0 (6-6E)
ŌBJDB1 (7-5E)
6E LS374
3E LS374
5E LS374
4E LS374
6D LS273
4D LS273
5D LS273
+5
(6-5A) *WDE0
(1-5A) E/D
(4-2A) OBJD
(1-2A) *HCLK0
(1-2A) HCLK0
(6-5A) *WDE1
(1-5A) *E/D

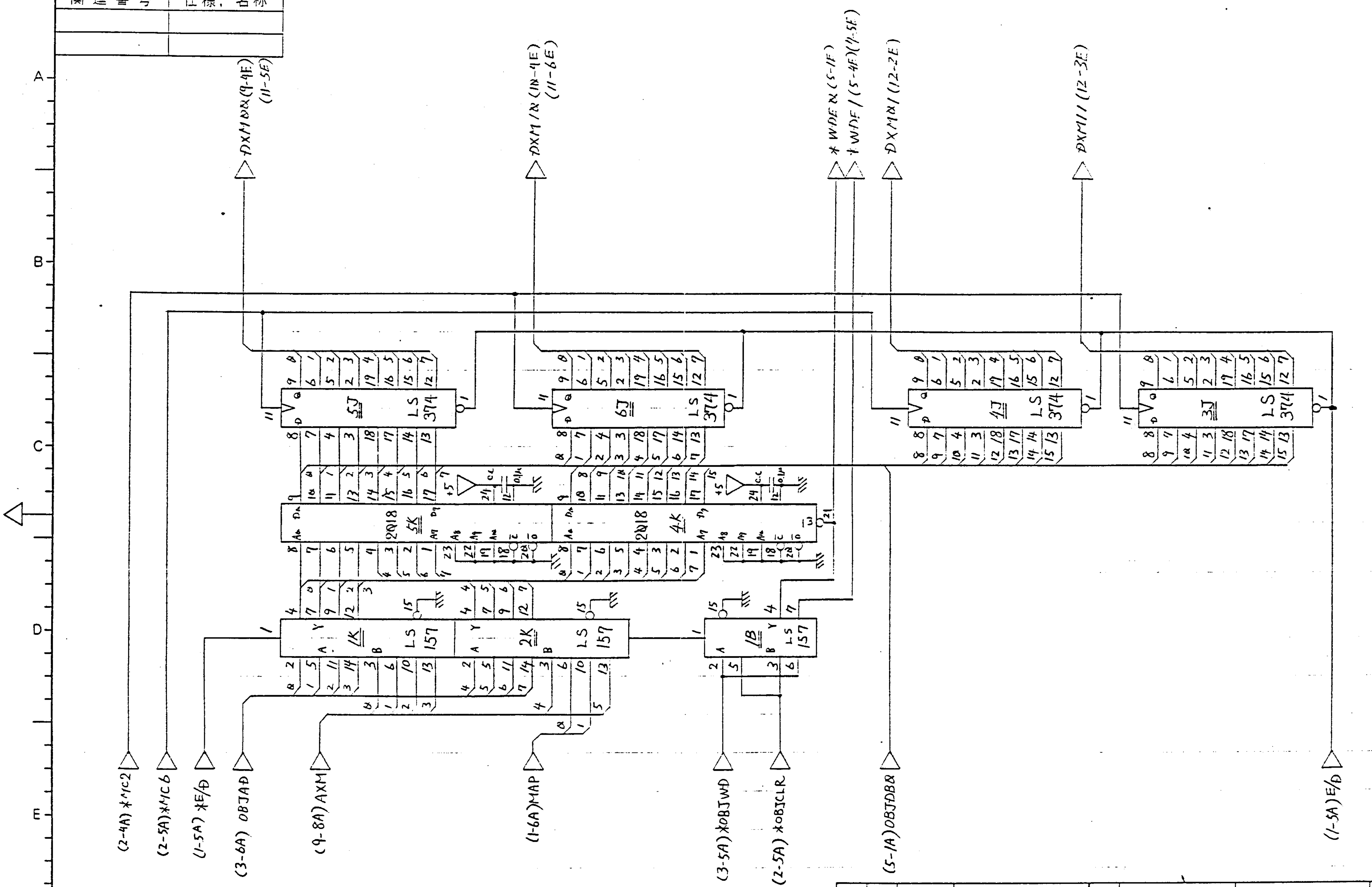
記号	担当	年月日	改訂個所	符号	部品．図面番号	名称	仕様．材質	個/台

記事

材質	処理	公差	名称 DNOF-01 回路図

承認	検図	検図	担当	単位 mm	図番
酒井	加藤	西川	Shimozaki	尺度 /	LK-10023
52.1.2	51.12.3	51.5.24	51.5.13		5/17

関連番号	仕様，名称


1
2
3
4
5
6
7
8
9
A
B
C
D
E
DXM00(9-4E) (11-5E)
DXM10 (1N-4E) (11-6E)
*WDE0(5-1F)
*WDE1(5-4E)(1-5E)
DXM01(12-2E)
DXM11(12-3E)
5J LS374
6J LS374
4J LS374
3J LS374
5K 2018
4K 2018
+5
1K LS157
2K LS157
1B LS157
(2-4A)*MC2
(2-5A)*MC6
(1-5A)*E/D
(3-6A) OBJAD
(9-8A)AXM
(1-6A)MAP
(3-5A)*OBJWD
(2-5A)*OBJCLR
(5-1A)OBJDB8
(1-5A)E/D

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質

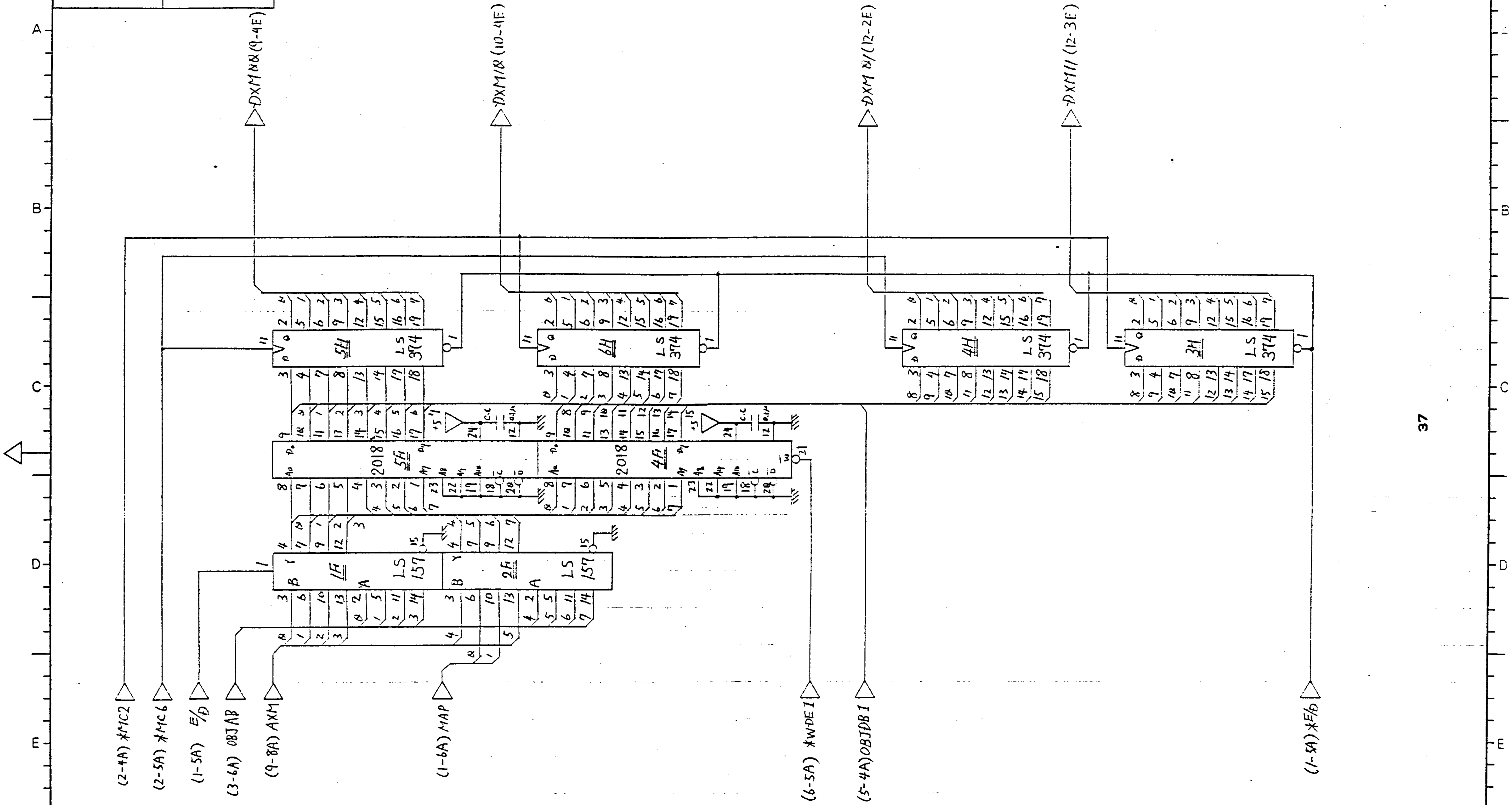
記事

材質	処理	公差	名称 DNOF-01 回路図

承認	検図	検図	担当	単位 mm	図番
河合 62.1.23	加藤 62.1.23	西川 61.6.24	61.5.14	尺度 /	LK-10023

6/17

関連番号	仕様．名称

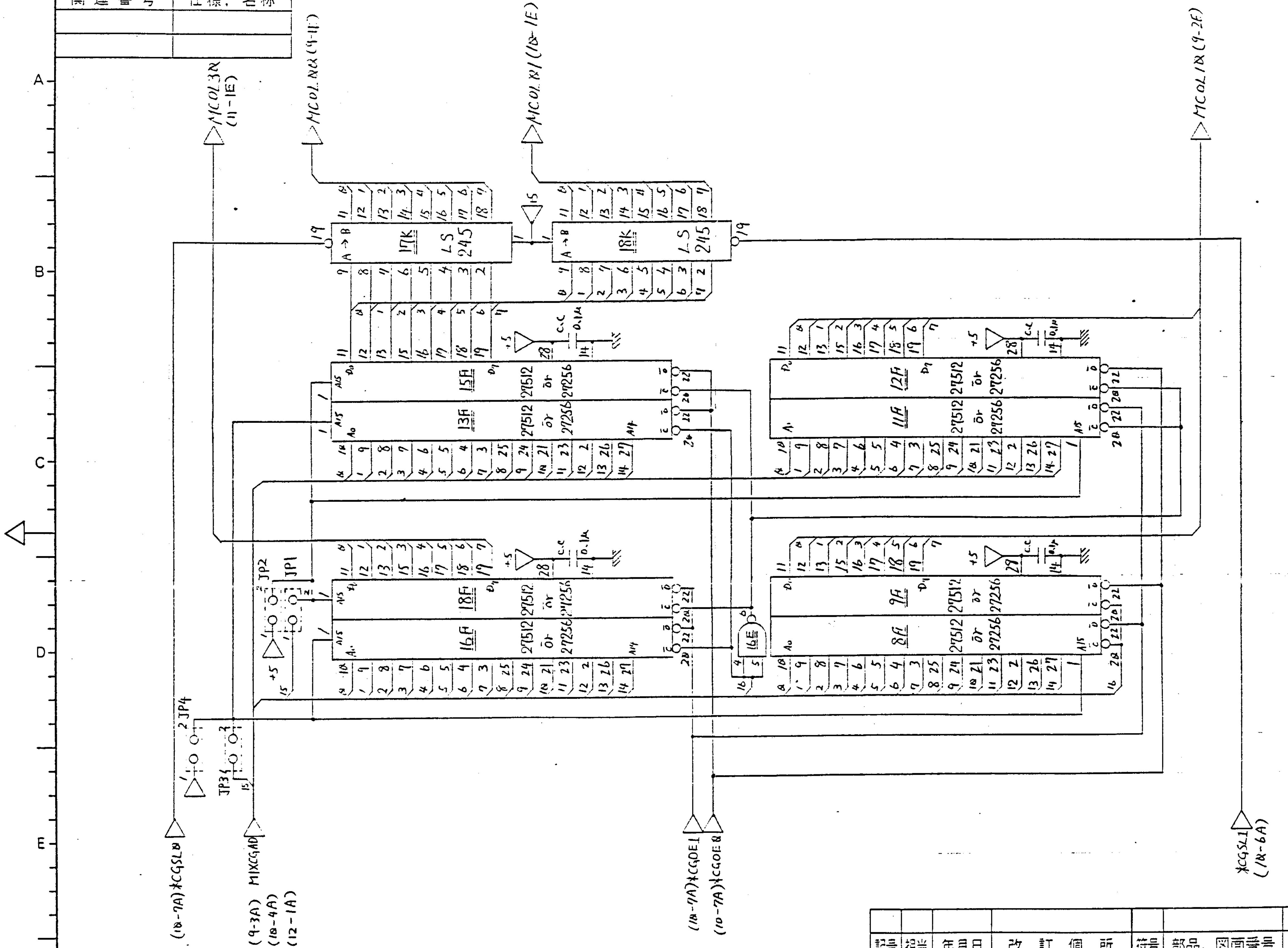

DXM00(9-4E)
DXM10(10-4E)
DXM01(12-2E)
DXM11(12-3E)
5H LS374
6H LS374
4H LS374
3H LS374
2018 5F
2018 4F
1F LS157
2F LS157
+5V
0.1μ
(2-4A) *MC2
(2-5A) *MC6
(1-5A) E/D
(3-6A) OBJAB
(9-8A) AXM
(1-6A) MAP
(6-5A) *WDE1
(5-4A) OBJDB1
(1-5A) *E/D
1 2 3 4 5 6 7 8 9
A B C D E

記号	担当	年月日	改訂個所	符号	部品．図面番号	名称	仕様．材質	個/言

記事

材質	処理	公差	名称 DNOF-X1 回路図
承認 西[illegible] 62.1.23	検図 加藤 62.1.23	検図 西川 61.5.24	担当 [illegible] 61.5.14
単位 mm	尺度 /	図番 LK-10023	7/17

関 連 番 号	仕様, 名称

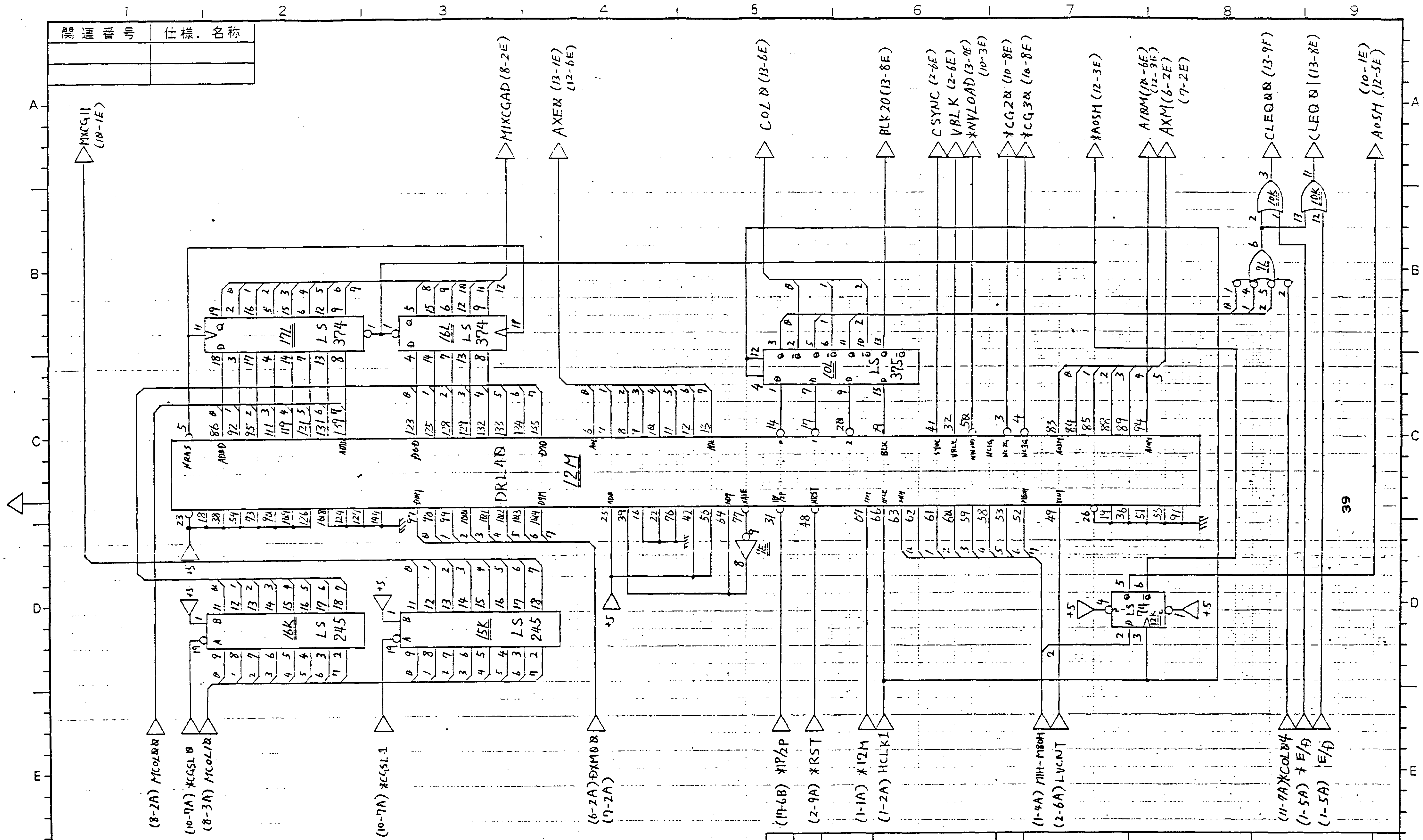

MCOL3N (11-1E)
MCOL.N2 (9-1E)
MCOL.N1 (10-1E)
MCOL1N (9-2E)
17K LS 245
18K LS 245
A→B
+5
C.C 0.1μ
15A 27512 or 27256
13A 27512 or 27256
12A 27512 or 27256
11A 27512 or 27256
18A 27512 or 27256
16A 27512 or 27256
9A 27512 or 27256
8A 27512 or 27256
16E
JP1
JP2
JP3
JP4
(10-7A)*CGSL0
MIXCGAD (9-3A) (10-4A) (12-1A)
(10-7A)*CGOE1
(10-7A)*CGOE0
*CGSL1 (10-6A)

記号	担当	年月日	改 訂 個 所	符号	部品. 図面番号	名 称	仕様, 材質	個数

記 事

材質	処理	公差	名称 DN5F-01 回路図
承認	検図 加藤	検図 西川	担当
単位 mm	尺度 /	図番 LK-10023	8/17

関連番号	仕様．名称


1
2
3
4
5
6
7
8
9
A
B
C
D
E
MXCG11 (10-1E)
MIXCGAD (8-2E)
AXEØ (13-1E) (12-6E)
COLØ (13-6E)
BLK20 (13-8E)
CSYNC (2-6E)
VBLK (2-6E)
*NVLOAD (3-9E) (10-3E)
*CG2Ø (10-8E)
*CG3Ø (10-8E)
*AOSM (12-3E)
A1RM (12-6E) (12-3E)
AXM (6-2E) (7-2E)
CLEQØØ (13-9F)
CLEQØ1 (13-8E)
AOSM (10-1E) (12-5E)
10K
9L
17L LS374
16L LS374
10L LS375
DRL4D
12M
16K LS245
15K LS245
12K LS74
+5
39
(8-2A) MCOLØØ
(10-7A) *CGSLØ
(8-3A) MCOL1Ø
(10-7A) *CGSL1
(6-2A) DYMØØ (7-2A)
(17-6B) *1P/2P
(2-9A) *RST
(1-1A) *12M
(1-2A) HCLK1
(1-4A) M1H-M80H
(2-6A) LVCNT
(11-7A) *COLØ4
(1-5A) *E/D
(1-5A) E/D

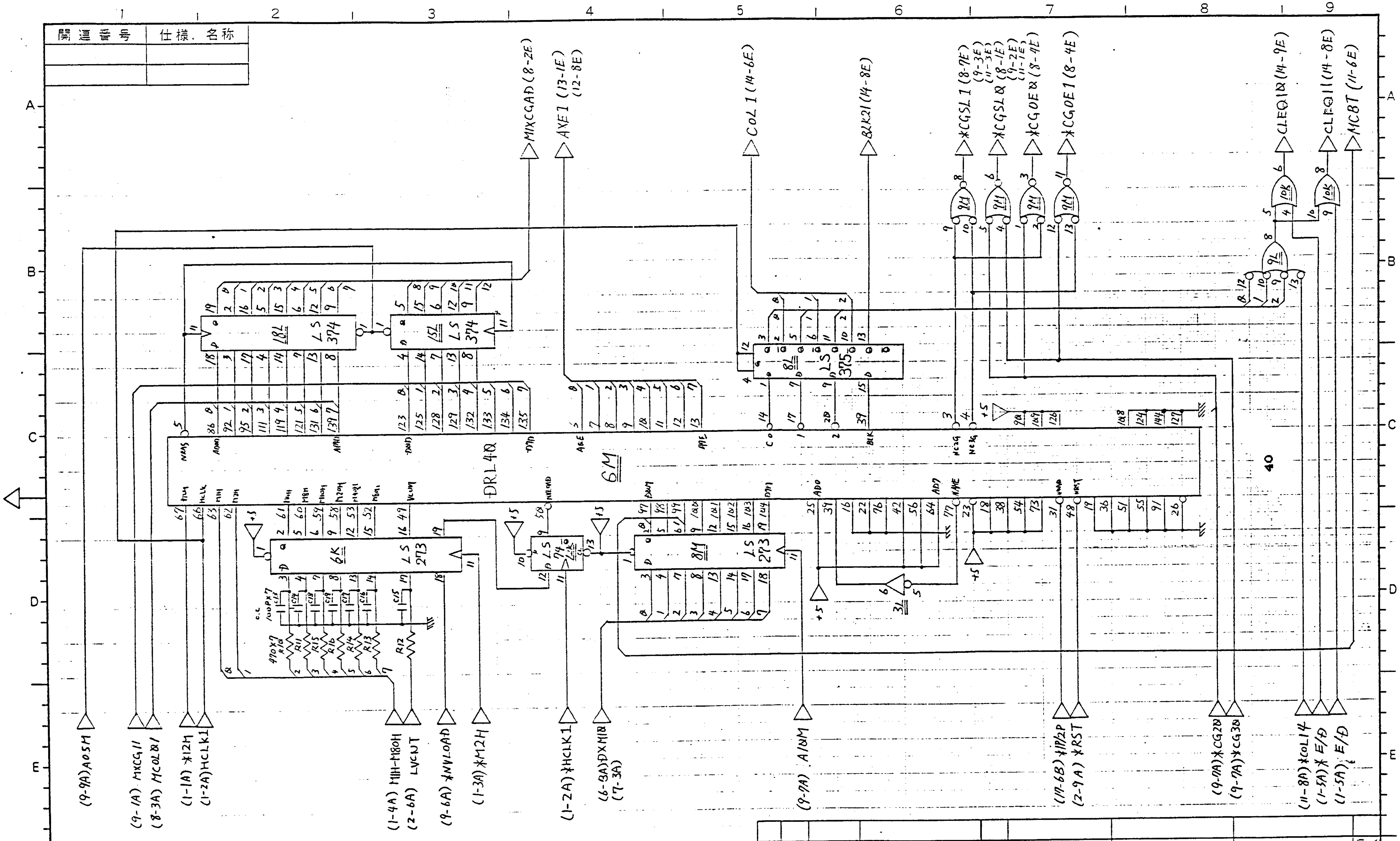
記号	担当	年月日	改 訂 個 所	符号	部品．図面番号	名 称	仕様，材質	個/台

記 事

材質	処理	公差	名称 DNOF-01 回路図

承認	検図	検図	担当	単位 mm	図番 LK-10023
·河合 62.1.23	加藤 62.1.23	西川 61.5.24	K. Hinozaki 61.5.15	尺度 1	9/17

関連番号	仕様．名称



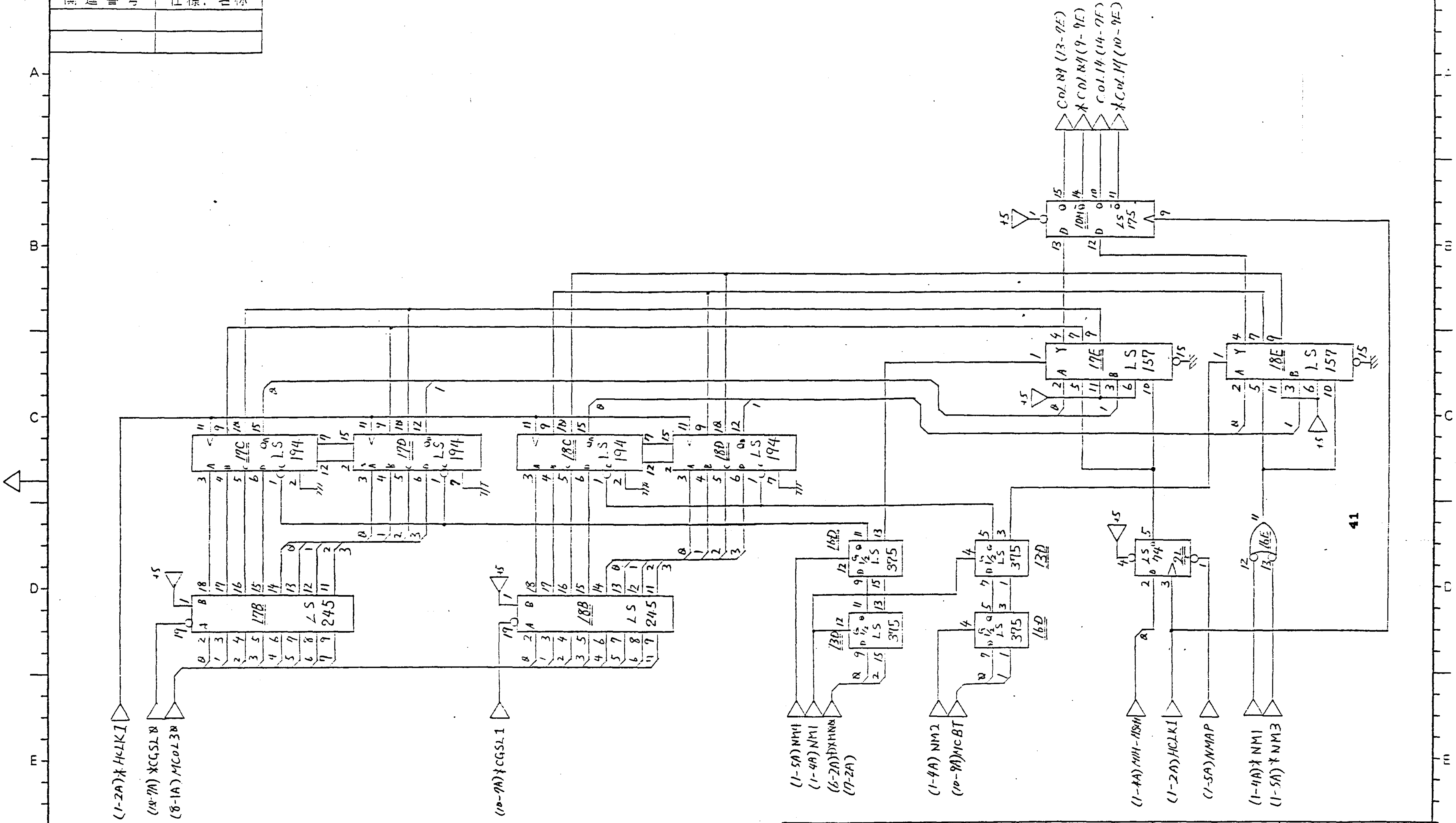
1
2
3
4
5
6
7
8
9
A
B
C
D
E
MIXCGAD (8-2E)
AVE1 (13-1E) (12-8E)
COL1 (14-6E)
BLK21 (14-8E)
*CGSL1 (8-7E) (9-3E) (11-3E)
*CGSL0 (8-1E) (9-2E) (11-1E)
*CGOE0 (8-4E)
*CGOE1 (8-4E)
CLEQ10 (14-9E)
CLEQ11 (14-8E)
MCBT (11-6E)
24
9M
10K
9L
18L LS 374
15L LS 374
8L LS 375
DRL40
6M
40
6K LS 273
7K LS 74
8M LS 273
3L
+5
470×7
R10 R11 R15 R16 R14 R13
R12
C15 C14 C18 C19 C17 C16
(9-9A) A05M
(9-1A) MXCG11
(8-3A) MCOL01
(1-1A) *12M
(1-2A) HCLK1
(1-4A) M1H-M80H
(2-6A) LVCNT
(9-6A) *NVLOAD
(1-3A) *M2H
(1-2A) *HCLK1
(6-3A) DXM10 (7-3A)
(9-7A) A10M
(17-6B) *17/2P
(2-9A) *RST
(9-7A) *CG20
(9-7A) *CG30
(11-8A) *COL14
(1-5A) *E/D
(1-5A) E/D

記号	担当	年月日	改訂個所	符号	部品．図面番号	名称	仕様，材質	個/台

記事

材質	処理	公差	名称 DN0F-01 回路図	
承認 河合	検図 加藤	検図 西川 61.5.28	担当 61.5.15	単位 mm 尺度 1
図番 LK-10023				10/17

関連番号	仕様, 名称



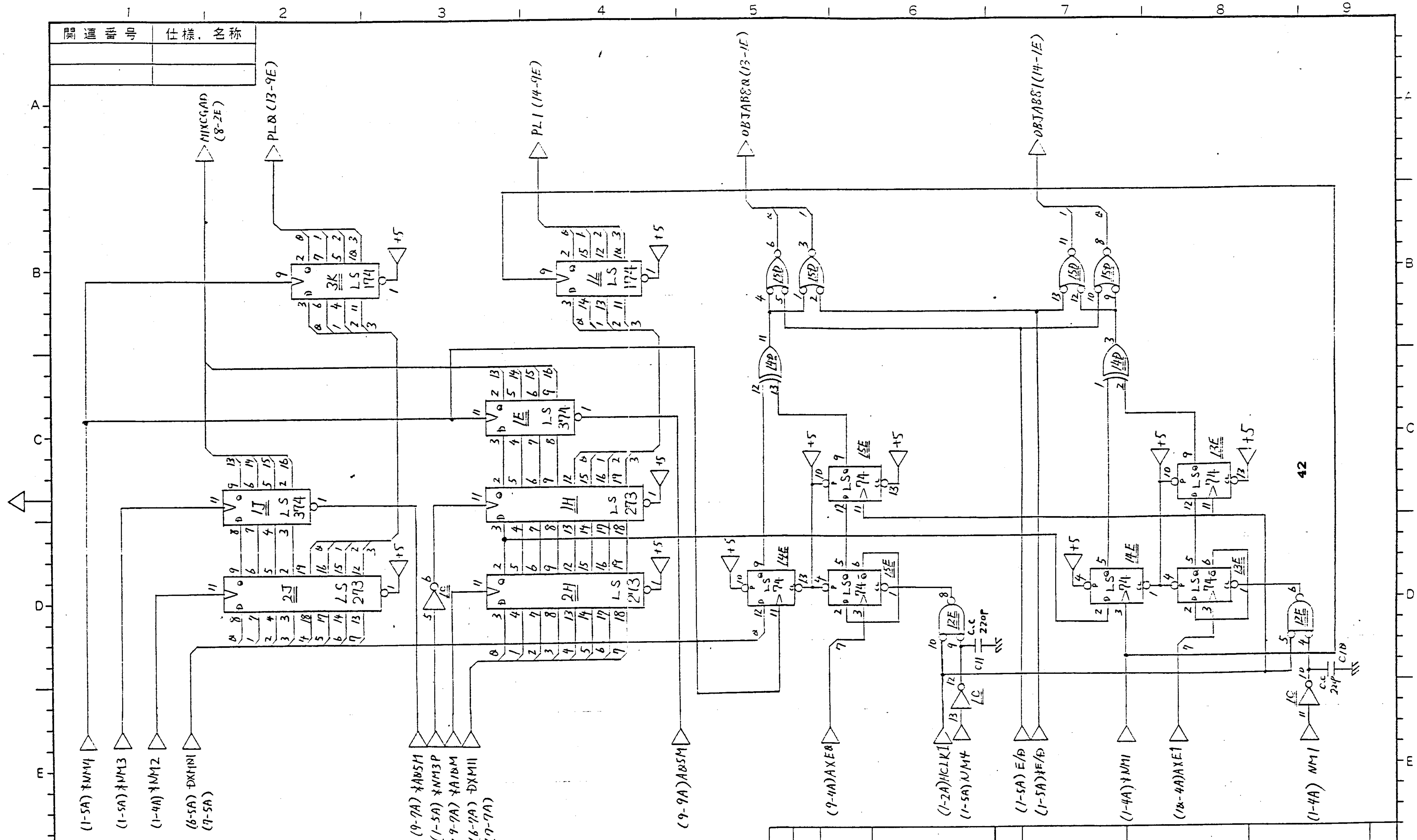
1
2
3
4
5
6
7
8
A
B
C
D
E
COL N4 (13-7E)
*COL N4 (9-7E)
COL 14 (14-7E)
*COL 14 (10-7E)
10M LS 175
17E LS 157
18E LS 157
17C LS 194
17D LS 194
18C LS 194
18D LS 194
17B LS 245
18B LS 245
16D LS 375
13D LS 375
LS 74
16E
41
+5
(1-2A)*HCLK1
(10-7A)*CGSL0
(8-1A)MCOL30
(10-7A)*CGSL1
(1-5A)NM4
(1-4A)NM1
(6-2A)(7-2A)*HNN
(1-4A)NM2
(10-9A)MCBT
(1-4A)MM-18M
(1-2A)HCLK1
(1-5A)NMAP
(1-4A)*NM1
(1-5A)*NM3

記号	担当	年月日	改 訂 個 所	符号	部品, 図面番号	名 称	仕様, 材質	個/台

記 事

材質	処理	公差	名称 DNOF-01 回路図	
承認 小河合 61.1.23	検図 加藤	検図 西川 61.5.28	担当 K. Kuroiwa 61.5.15	単位 mm 尺度 /
図番 LK-10023				11/17

関連番号	仕様，名称



MIXCGAD (8-2E)
PL0 (13-9E)
PL1 (14-9E)
OBJABS0 (13-1E)
OBJABS1 (14-1E)
3K LS 174
1L LS 174
1E LS 374
1J LS 374
2J LS 273
1H LS 273
2H LS 273
15D
14D
15E LS 74
14E LS 74
13E LS 74
12E
1C
C11 C.C 220P
C10 C.C 22P
+5
(1-5A) *NM4
(1-5A) *NM3
(1-4A) *NM2
(6-5A) DXMN1 (7-5A)
(9-7A) *A0SM
(1-5A) *NM3P
(9-7A) *A10M
(6-7A) DXMI1 (7-7A)
(9-9A) A0SM
(9-4A) AXE0
(1-2A) HCLK1
(1-5A) *NM4
(1-5A) E/D
(1-5A) *E/D
(1-4A) *NM1
(10-4A) AXE1
(1-4A) NM1

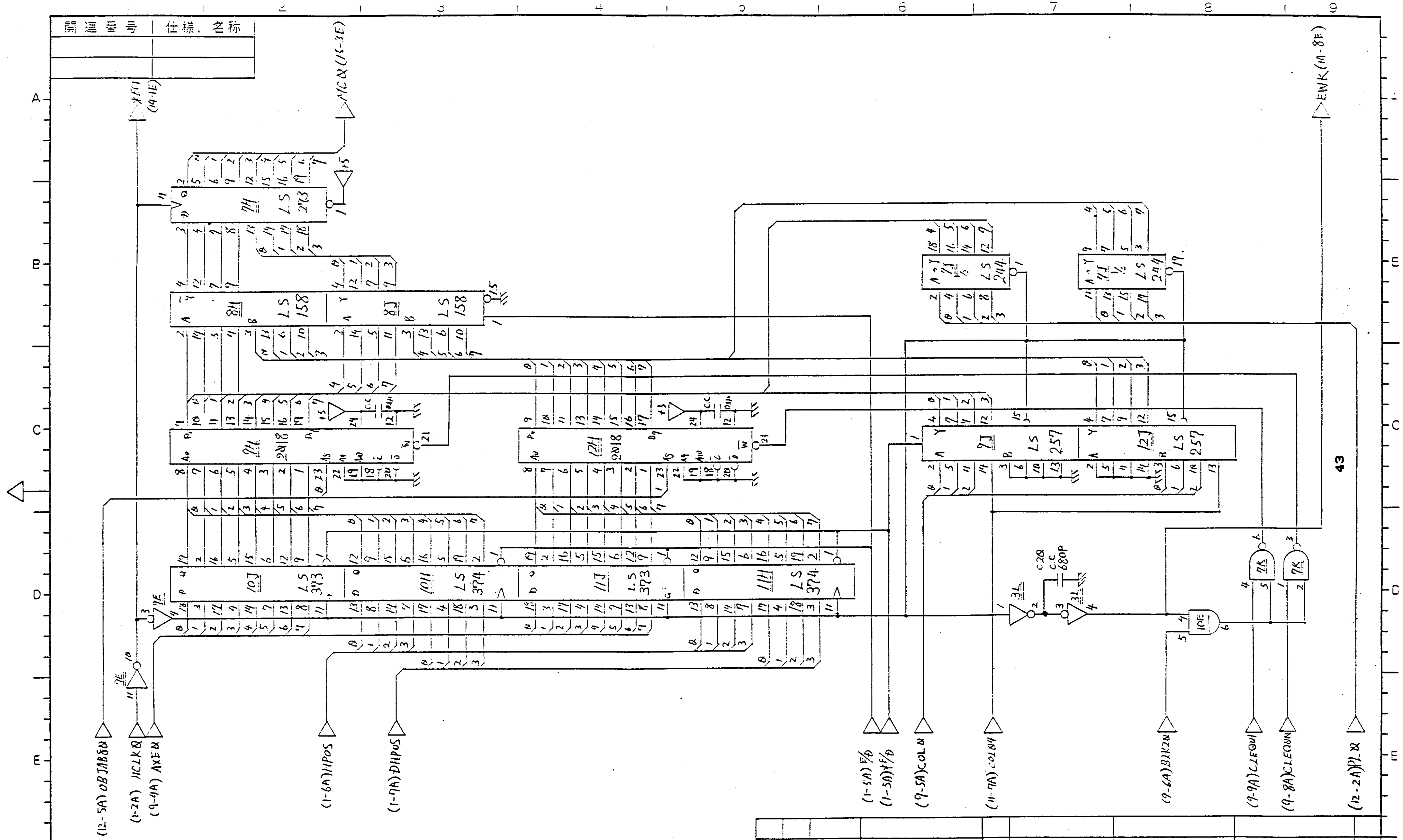
42

記号	担当	年月日	改 訂 個 所	符号	部品，図面番号	名 称	仕様，材質	個/台

記 事

材質		処理		公差	名称 DNOF-01 回路図
承認 河合 62.1.23	検図 加藤 62.1.23	検図 西川 61.5.24	担当 61.5.14	単位 mm 尺度 /	図番 LK-10023 12/17

関連番号	仕様, 名称


XFCl (14-1E)
MCα (15-3E)
EWK (14-8E)
2J LS273
8H LS158
8J LS158
7J LS244
7K LS244
7H 2018
12H 2018
9J LS257
12J LS257
10J LS373
10H LS374
11J LS373
11H LS374
3L
C20 C.C 680P
7K
10E
2E
(12-5A) OBJAB8α
(1-2A) HCLKα
(9-4A) AXEα
(1-6A) HPOS
(1-7A) DHPOS
(1-5A) E/D
(1-5A) E/D
(9-5A) COLα
(11-7A) COLN4
(9-6A) BLK2α
(9-9A) CLEQUI
(9-8A) CLEQUN
(12-2A) PLα
A
B
C
D
E
1
2
3
4
5
6
7
8
9

43

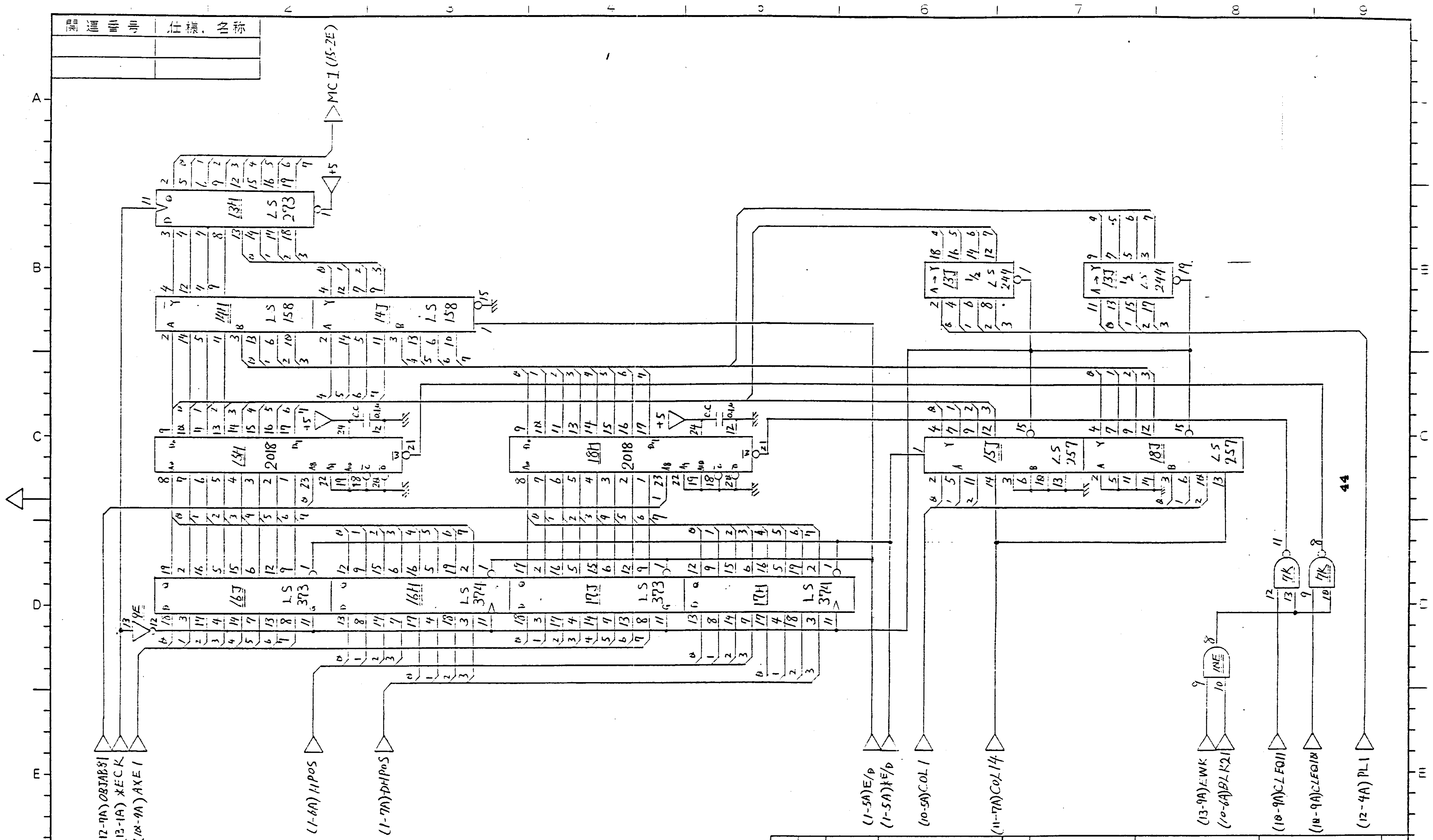
記号	担当	年月日	改 訂 個 所	符号	部品, 図面番号	名 称	仕様, 材質	個/全

記 事

材質	処理	公差	名称 DNOF-01 回路図
承認 河合 62.1.23	検図 加藤 62.1.23	検図 西川 61.5.24	担当 61.5.10

単位 mm
尺度 /
図番 LK-10023
13/17

関連番号	仕様．名称


MC1(15-2E)
+5
13H LS273
14H LS158
14J LS158
15H 2018
18H 2018
13J ½ LS244
13J ½ LS244
15J LS257
18J LS257
16J LS373
16H LS374
17J LS373
17H LS374
7K
7K
1NE
44
(12-7A)OBJABS1
(13-1A) *ECK
(18-9A) AXE1
(1-6A) HPOS
(1-7A) DHPOS
(1-5A) E/D
(1-5A) *E/D
(10-5A) COL1
(11-7A) COL14
(13-9A) EWK
(10-6A) BLK21
(18-9A) CLEQ11
(18-9A) CLEQ18
(12-4A) PL1

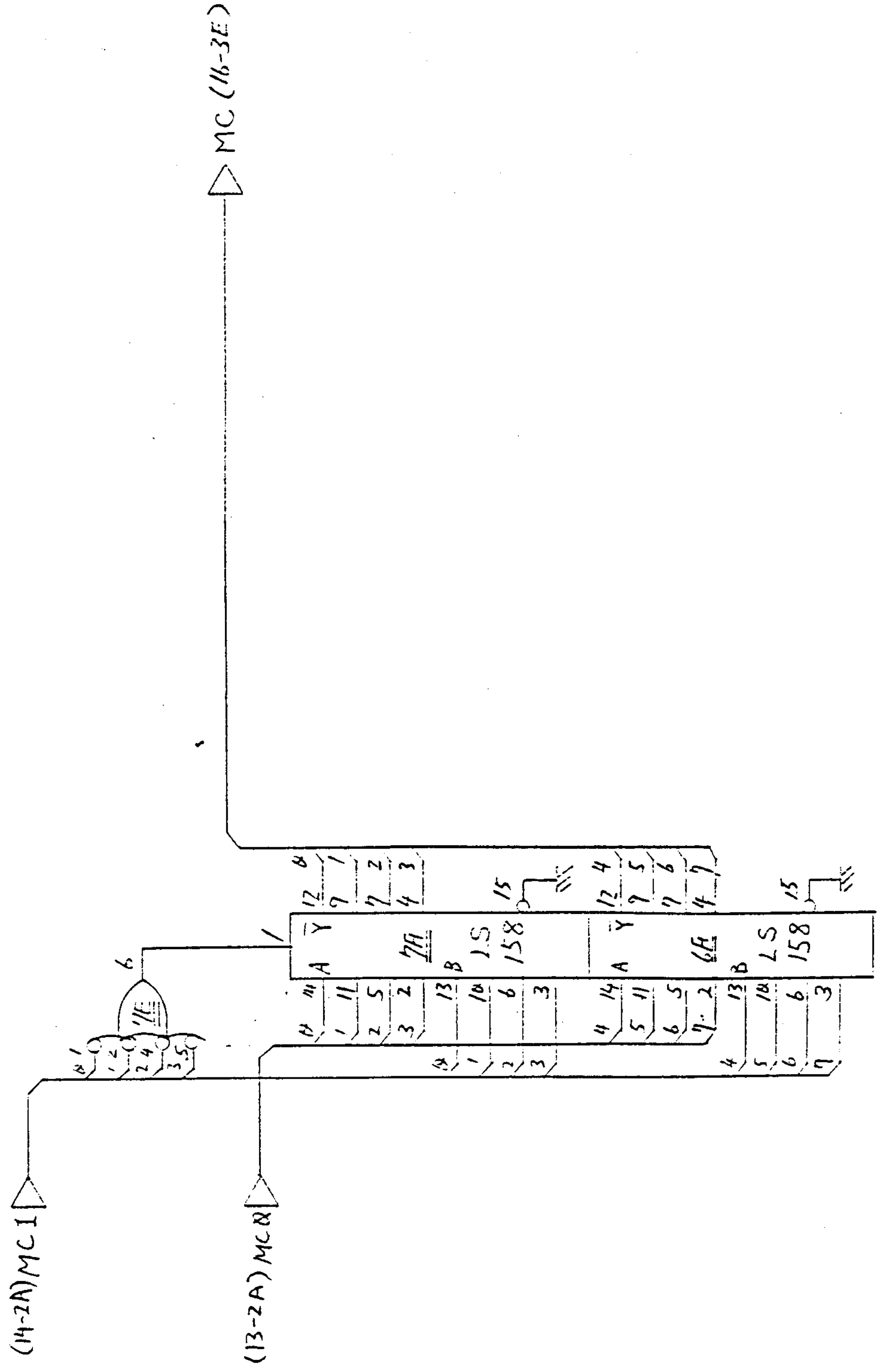
記号	担当	年月日	改訂個所	符号	部品．図面番号	名称	仕様．材質	個/三

記事

材質	処理	公差	名称 DNOF-01 回路図

承認	検図	検図	担当	単位 mm	図番 LK-10023	12/17
河合 62.1.23	加藤 62.1.23	西川 61.5.24	61.5.29	尺度 /		

関連番号	仕様，名称


MC (16-3E)
12 Y 7A LS158
Y 6A LS158
A B
15
7E
(14-2A) MC1
(13-2A) MC0

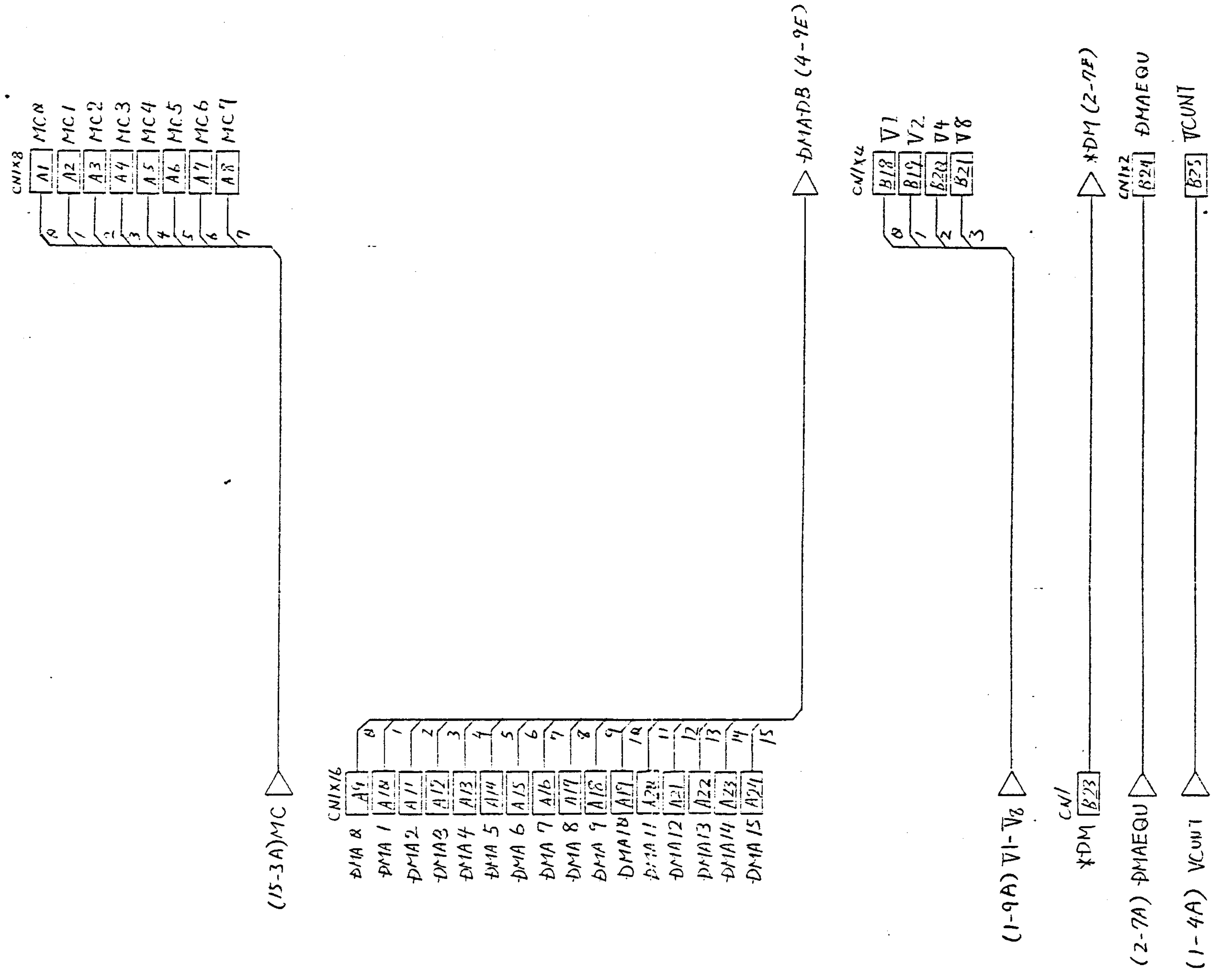
記 事

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質	個/台

材質	処理		公差	名称 DNŌF-01 回路図
承認 河合	検図 加藤	検図 西川	担当	単位 mm 尺度 /
				図番 LK-10023

15/17

関連番号	仕様．名称

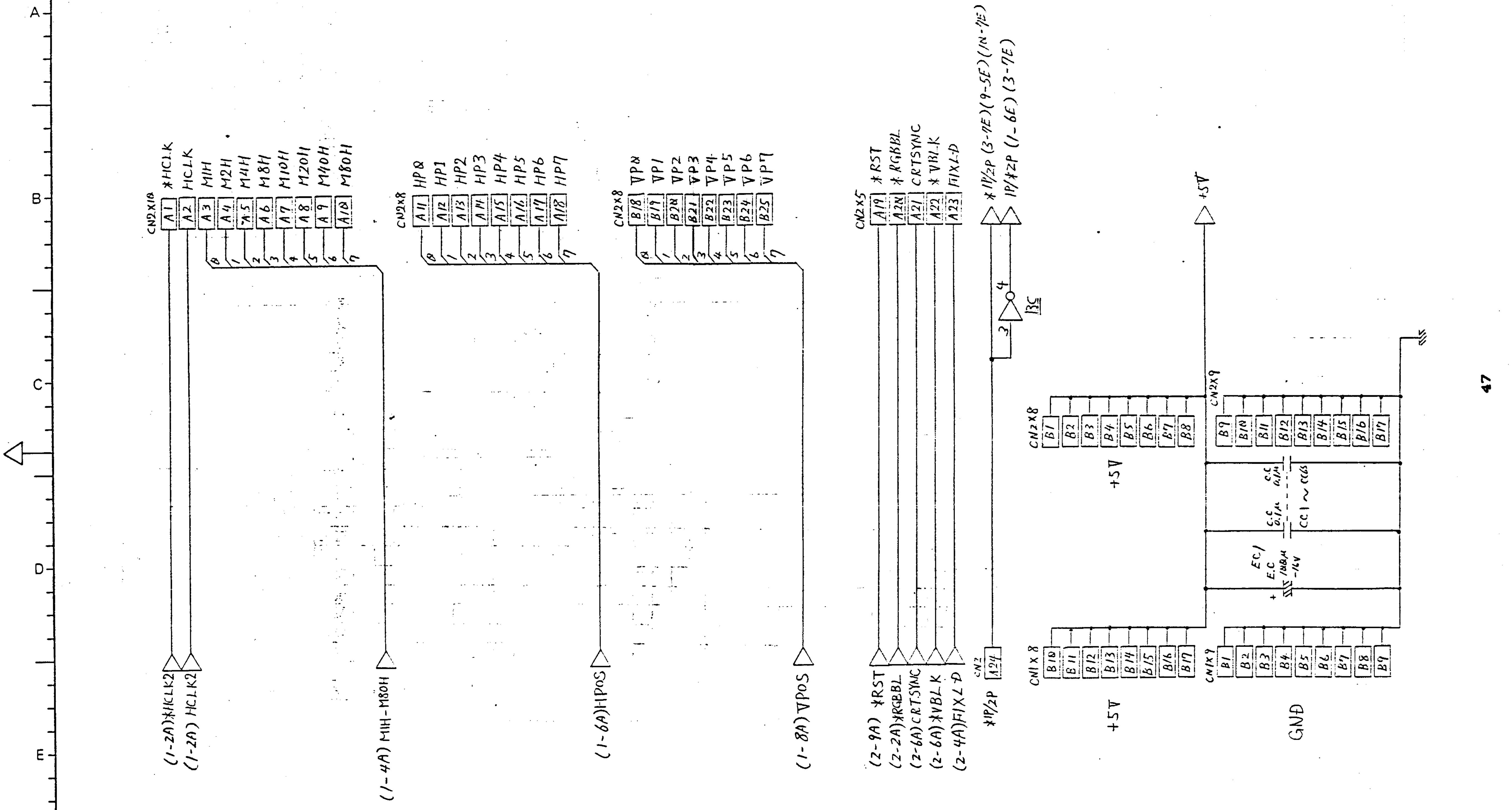

CN1X8
A1
A2
A3
A4
A5
A6
A7
A8
MC0
MC1
MC2
MC3
MC4
MC5
MC6
MC7
0
1
2
3
4
5
6
7
(15-3A)MC
DMADB (4-9E)
CN1X16
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
A20
A21
A22
A23
A24
DMA0
DMA1
DMA2
DMA3
DMA4
DMA5
DMA6
DMA7
DMA8
DMA9
DMA10
DMA11
DMA12
DMA13
DMA14
DMA15
8
9
10
11
12
13
14
15
CN1X4
B18
B19
B20
B21
V1
V2
V4
V8
(1-9A) V1-V8
*DM (2-9F)
CN1
B23
*DM
CN1X2
B24
DMAEQU
(2-7A) DMAEQU
B25
VCUNT
(1-4A) VCUNT

記　事

記号	担当	年月日	改　訂　個　所	符号	部品．図面番号	名　　　称	仕様．材質	個/台

材質	処理	公差	名称 DNOF-01 回路図
承認 河合 62.1.23	検図 加藤 62.1.22	検図 西川 61.5.28	担当 Hiroaki 61.5.28
単位 mm	尺度 /	図番 LK-10023	16/17

関連番号	仕様，名称



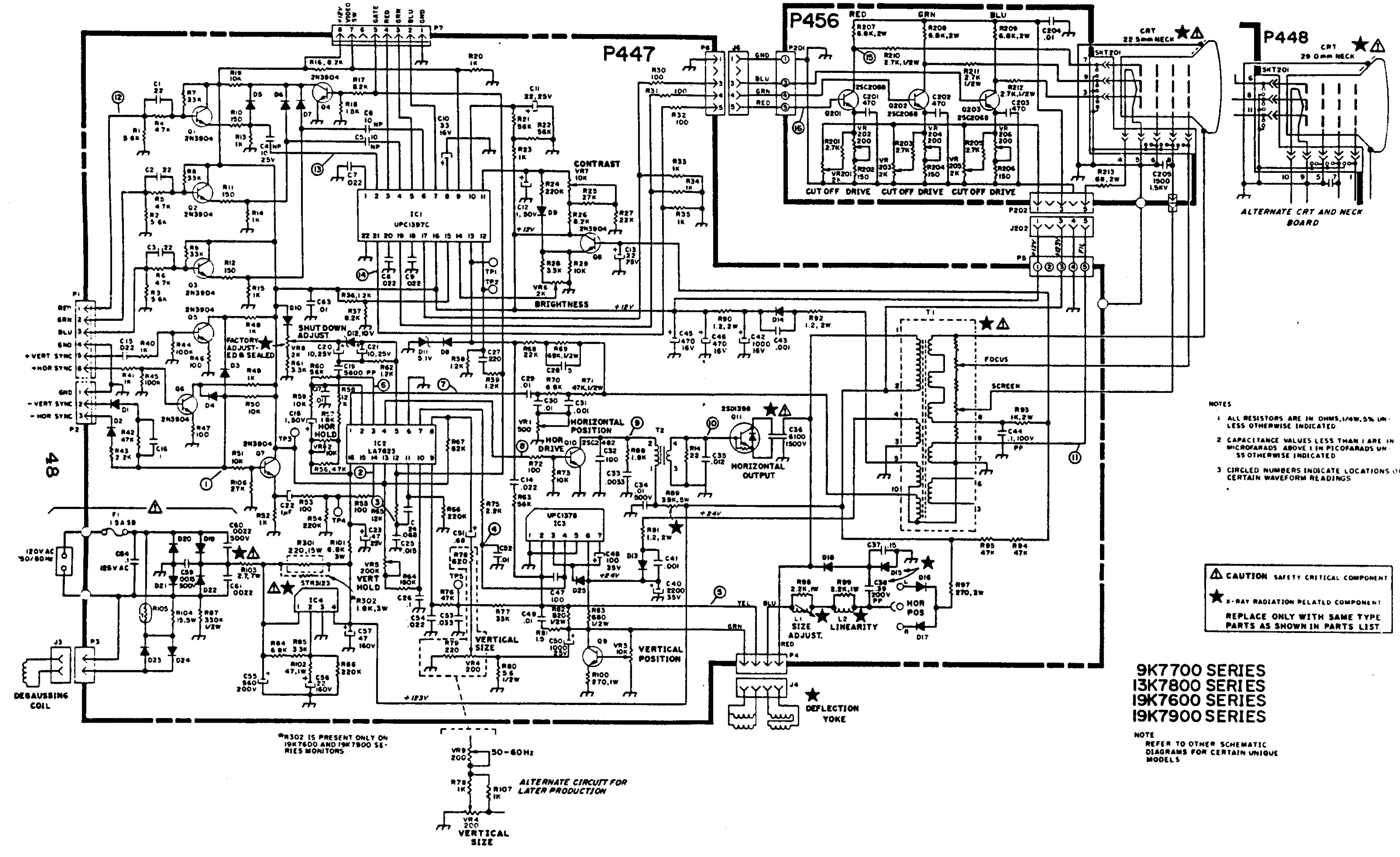
1
2
3
4
5
6
7
8
9
A
B
C
D
E
CN2X10
A1 *HCLK
A2 HCLK
A3 M1H
A4 M2H
A5 M4H
A6 M8H
A7 M10H
A8 M20H
A9 M40H
A10 M80H
CN2X8
A11 HP0
A12 HP1
A13 HP2
A14 HP3
A15 HP4
A16 HP5
A17 HP6
A18 HP7
CN2X8
B18 VP0
B19 VP1
B20 VP2
B21 VP3
B22 VP4
B23 VP5
B24 VP6
B25 VP7
CN2X5
A19 *RST
A20 *RGBBL
A21 CRTSYNC
A22 *VBLK
A23 FIXLD
*1P/2P (3-7E)(9-5E)(10-7E)
1P/*2P (1-6E)(3-7E)
4
3
13C
+5V
CN2X8
B1 B2 B3 B4 B5 B6 B7 B8
CN2X9
B9 B10 B11 B12 B13 B14 B15 B16 B17
+5V
C.C 0.1μ
C.C 0.1μ
CC1 ~ CC6
EC1
E.C 100μ -16V
+
CN1X8
B10 B11 B12 B13 B14 B15 B16 B17
CN1X9
B1 B2 B3 B4 B5 B6 B7 B8 B9
+5V
GND
CN2 A24
*1P/2P
(1-2A) *HCLK2
(1-2A) HCLK2
(1-4A) M1H-M80H
(1-6A) HPOS
(1-8A) VPOS
(2-9A) *RST
(2-2A) *RGBBL
(2-6A) CRTSYNC
(2-6A) *VBLK
(2-4A) FIXLD

記号	担当	年月日	改訂個所	符号	部品，図面番号	名称	仕様，材質	個数

記事

材質	処理	公差	名称 DNOF-01 回路図
承認 河合	検図 加藤	検図 西川	担当
単位 mm	図番	17/	

K7000 COLOR MONITOR SCHEMATIC DIAGRAM


P447
P456
P448
P7
+12V
VIDEO
SW
GATE
RED
GRN
BLU
GND
P1
P2
P3
P4
P5
P6
J3
J4
J6
P201
P202
J202
IC1
UPC1397C
IC2
LA7823
IC3
UPC1378
IC4
STR3123
2N3904
2SC2068
2SD1398
2SC2482
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q201
Q202
Q203
T1
T2
F1
1.5A SB
CONTRAST
VR7
10K
BRIGHTNESS
VR6
2K
SHUT DOWN ADJUST
FACTORY ADJUSTED & SEALED
HOR HOLD
VR2
HOR DRIVE
HORIZONTAL POSITION
VR1
500
HORIZONTAL OUTPUT
VERT HOLD
VR5
200K
VERTICAL SIZE
VR4
200
VERTICAL POSITION
VR3
10K
HOR POS
SIZE ADJUST.
L1
LINEARITY
L2
DEFLECTION YOKE
DEGAUSSING COIL
120VAC 50/60Hz
FOCUS
SCREEN
CUT OFF
DRIVE
VR201
VR202
VR203
VR204
VR205
VR206
CRT 22.5mm NECK
CRT 29.0mm NECK
SKT201
ALTERNATE CRT AND NECK BOARD
RED
GRN
BLU
GND
+VERT SYNC
+HOR SYNC
-VERT SYNC
-HOR SYNC
TP1
TP2
TP3
TP4
TP5
+12V
+24V
+123V
YEL
FIL
VR9
200
50-60Hz
R78
1K
R107
1K
ALTERNATE CIRCUIT FOR LATER PRODUCTION

*R302 IS PRESENT ONLY ON 19K7600 AND 19K7900 SERIES MONITORS

NOTES

1 ALL RESISTORS ARE IN OHMS, 1/4W, 5% UNLESS OTHERWISE INDICATED.

2 CAPACITANCE VALUES LESS THAN 1 ARE IN MICROFARADS ABOVE 1 IN PICOFARADS UNLESS OTHERWISE INDICATED

3 CIRCLED NUMBERS INDICATE LOCATIONS OF CERTAIN WAVEFORM READINGS

⚠ CAUTION SAFETY CRITICAL COMPONENT

★ X-RAY RADIATION RELATED COMPONENT

REPLACE ONLY WITH SAME TYPE PARTS AS SHOWN IN PARTS LIST

9K7700 SERIES
13K7800 SERIES
19K7600 SERIES
19K7900 SERIES

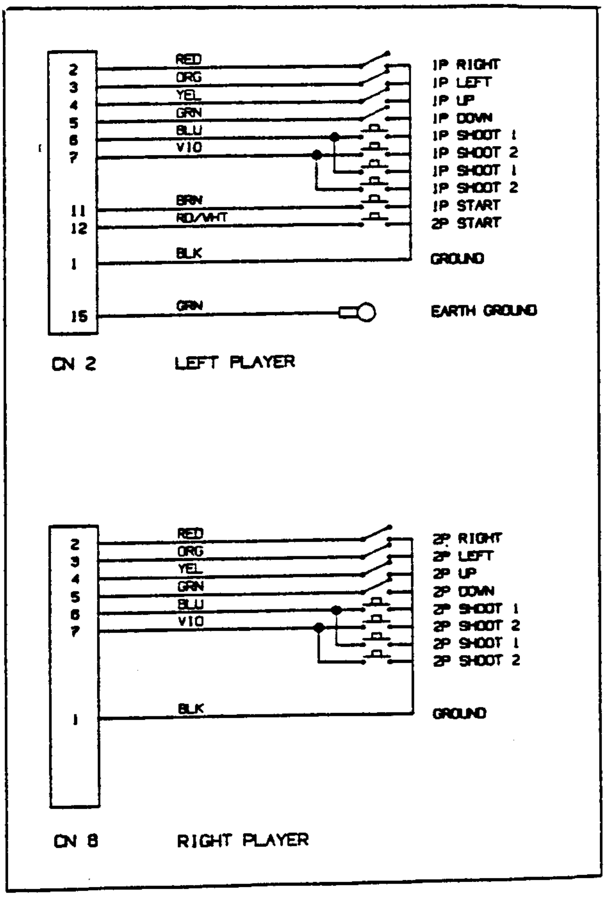
NOTE
REFER TO OTHER SCHEMATIC DIAGRAMS FOR CERTAIN UNIQUE MODELS

6. WIRING DIAGRAM

a. Control Panel..50

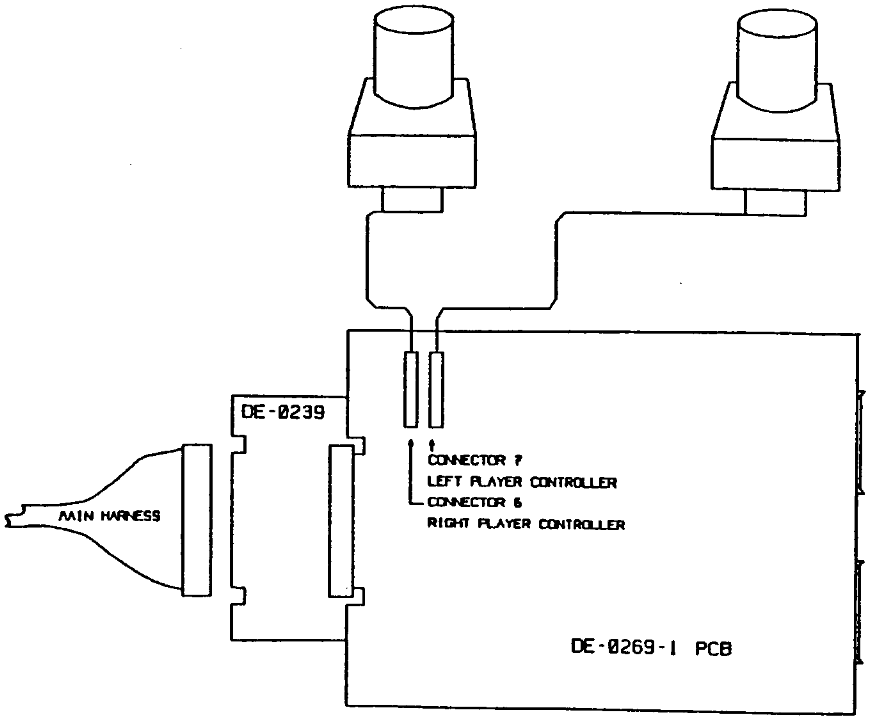
b. Main Harness..51

c. Power Supply..52

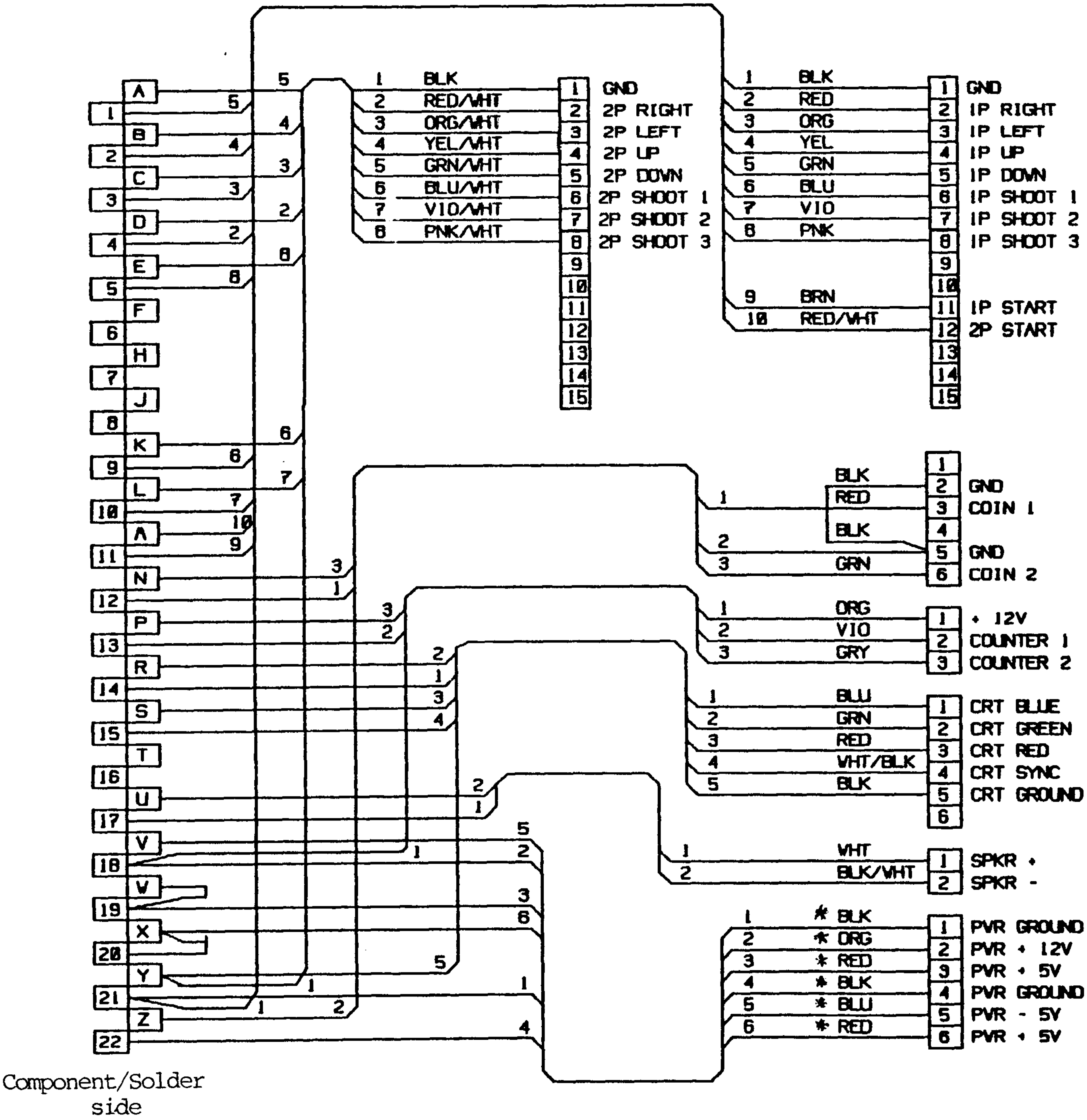

2
3
4
5
6
7
11
12
1
15
RED
ORG
YEL
GRN
BLU
VIO
BRN
RD/WHT
BLK
GRN
1P RIGHT
1P LEFT
1P UP
1P DOWN
1P SHOOT 1
1P SHOOT 2
1P SHOOT 1
1P SHOOT 2
1P START
2P START
GROUND
EARTH GROUND
CN 2
LEFT PLAYER
2
3
4
5
6
7
1
RED
ORG
YEL
GRN
BLU
VIO
BLK
2P RIGHT
2P LEFT
2P UP
2P DOWN
2P SHOOT 1
2P SHOOT 2
2P SHOOT 1
2P SHOOT 2
GROUND
CN 8
RIGHT PLAYER

NOTE: Each joystick assembly has a 360° Rotary Switch mounted to it. The cable from each Rotary Switch must connect to the proper connector on the logic PCB (DE-0269).

The left player side connects to CN-7 on the DE-0269 PCB, and the right player side connects to CN-6.

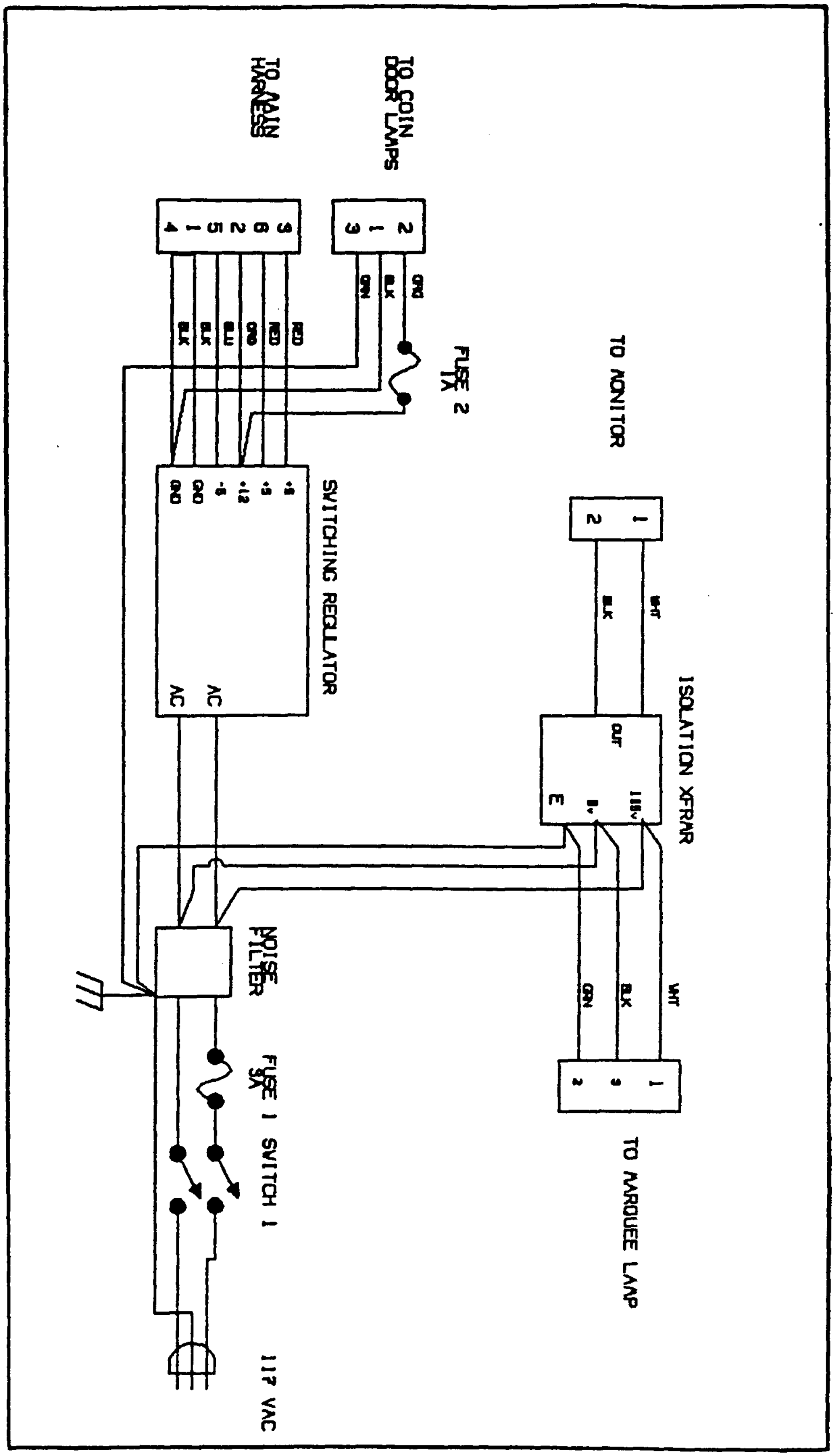

DE-0239
MAIN HARNESS
CONNECTOR 7
LEFT PLAYER CONTROLLER
CONNECTOR 6
RIGHT PLAYER CONTROLLER
DE-0269-1 PCB

Main Harness


A
1
B
2
C
3
D
4
E
5
F
6
H
7
J
8
K
9
L
10
M
11
N
12
P
13
R
14
S
15
T
16
U
17
V
18
W
19
X
20
Y
21
Z
22
1 BLK 1 GND
2 RED/WHT 2 2P RIGHT
3 ORG/WHT 3 2P LEFT
4 YEL/WHT 4 2P UP
5 GRN/WHT 5 2P DOWN
6 BLU/WHT 6 2P SHOOT 1
7 VIO/WHT 7 2P SHOOT 2
8 PNK/WHT 8 2P SHOOT 3
9
10
11
12
13
14
15
1 BLK 1 GND
2 RED 2 1P RIGHT
3 ORG 3 1P LEFT
4 YEL 4 1P UP
5 GRN 5 1P DOWN
6 BLU 6 1P SHOOT 1
7 VIO 7 1P SHOOT 2
8 PNK 8 1P SHOOT 3
9
10
9 BRN 11 1P START
10 RED/WHT 12 2P START
13
14
15
BLK 1
1 RED 2 GND
BLK 3 COIN 1
4
2 5 GND
3 GRN 6 COIN 2
1 ORG 1 + 12V
2 VIO 2 COUNTER 1
3 GRY 3 COUNTER 2
1 BLU 1 CRT BLUE
2 GRN 2 CRT GREEN
3 RED 3 CRT RED
4 WHT/BLK 4 CRT SYNC
5 BLK 5 CRT GROUND
6
1 WHT 1 SPKR +
2 BLK/WHT 2 SPKR -
1 * BLK 1 PWR GROUND
2 * ORG 2 PWR + 12V
3 * RED 3 PWR + 5V
4 * BLK 4 PWR GROUND
5 * BLU 5 PWR - 5V
6 * RED 6 PWR + 5V
Component/Solder side

NOTE: * = 18 awg wire, all other 22 awg.

c. Power Supply


TO COIN DOOR LAMPS
TO MAIN HARNESS
TO MONITOR
2
1
3
ORG
BLK
GRN
3
6
2
5
1
4
RED
RED
ORG
BLU
BLK
BLK
FUSE 2
1A
SWITCHING REGULATOR
+5
+5
+12
-5
GND
GND
AC
AC
1
2
WHT
BLK
ISOLATION XFRMR
OUT
118V
8V
E
NOISE FILTER
WHT
BLK
GRN
1
3
2
TO MARQUEE LAMP
FUSE 1
5A
SWITCH 1
117 VAC

FBI

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