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8410/11

nstallation Guide

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Keywords:

Local Net Adapter for RC8000, RC8410/11

Abstract:

This manual contains information for installing RC8410/11 Local Net Adapter

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TABLE OF CONTENT PAGE

1. INTRODUCTION

This manual describes the installation procedure for the RC8000 LAN (Local Area Network) connection.
The LAN can be of 2 types , either Micronet, RC8410, or Ethernet, RC8411.

2. IDENTIFICATION OF ITEMS

The list below describes all single items belonging to the Localnet Adapter:

ITEM	REFERENCE NO.		DESCRIPTION
1	IFP802		Interface Processor
2	KBL666		Internal signal cable, 0.7 m.
3	KBL785		External signal cable, 5.0 m.
4	F173		4 slots Multibus Chassis
5	POW733		+-12 Volt Power Module
6	MBA602		Multibus Adapter
7	ETC611		Ethernet Controller
8	MSI601	RC8410	Micronet Serial Interface
or		RC8411	SEEQ DQ8023 Ethernet Serial Interface
9	PGR633		Boot/Test proms for ETC611
10	KBL786		Int. MBA cable
11	KBL787		Int. Diagnostic cable
12	KBL788		Int. LAN cable
13	DDM154		RC8410/11 Device Manual
14	SDO178		RC8000 ADP

3. POWER SPECIFICATIONS

	IFP802	ETC611	MEX601	MSI601	MBA602
+5 volt +-5 %	7,2 A	6,0 A	0,4 A	0,3 A	2,1 A
+12 volt +-5 %	0,05 A	0,06 A			
-12 volt +-5 %	0,05 A	0,05 A			

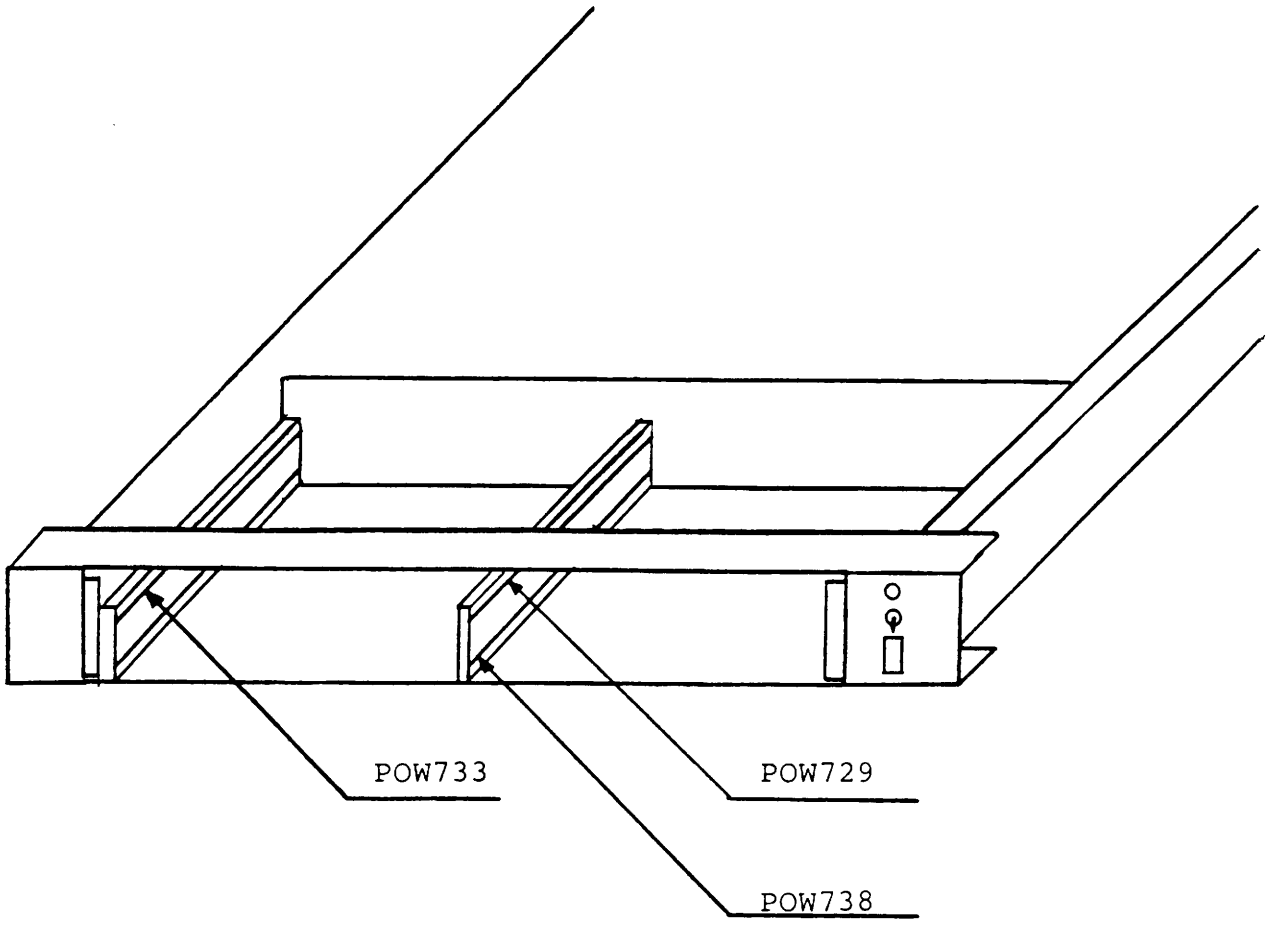


Fig. 1 Installation of power modules in MBC601

4. INSTALLATION

4.1 MECHANICAL INSTALLATION

4.1.1 The RC8000 Part

The IFP802 must be installed in a free slot in a RC8000 controller chassis.
Before installation the on-board switches must be set according to the list in section 3.2
The internal signal cable, KBL666, must be installed in the RC8000 controller chassis with connections to IFP802 J1004 side-connector.

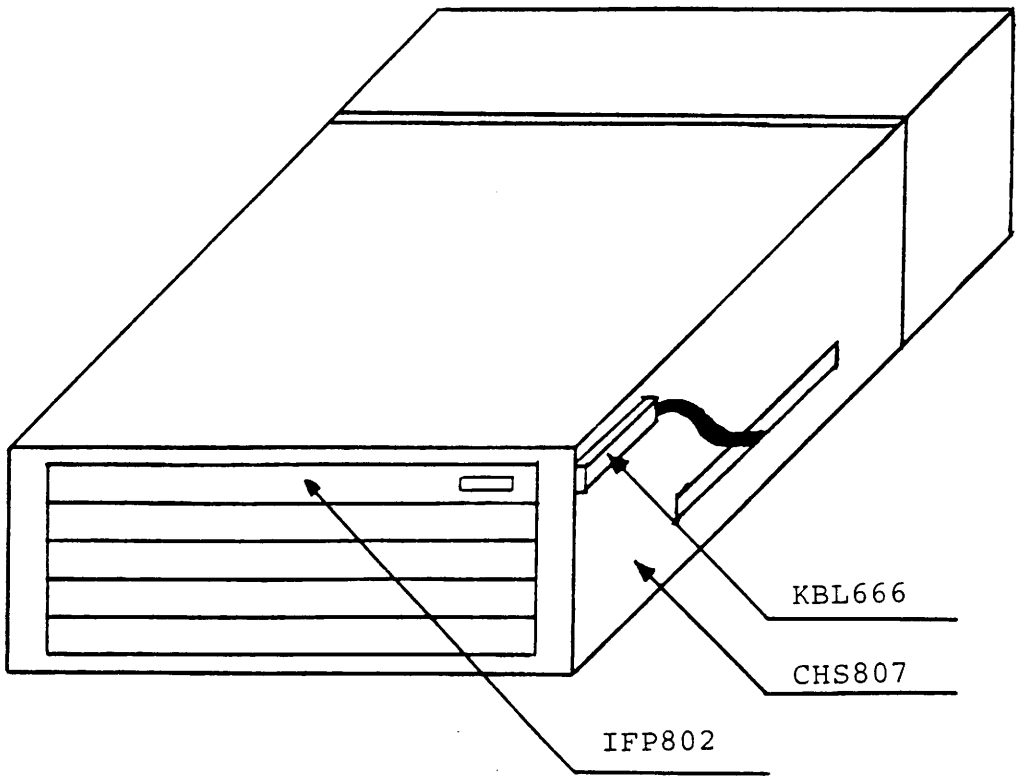


Fig. 2 RC8000 controller chassis installation

Interconnection between MBC601 and RC8000 Controller chassis is made via KBL785, 5 m. signal cable.

4.1.2 The Multibus Part

ETC611 with MSI601 (RC8410) or SEEQ DQ8023 (RC8411) is installed in the 2. slot, J3, in MBC601.
For details about the mounting of LAN interface refer to ETC601/611 Hardware Reference Manual sec.2.3 RCSL 99000772

MBA602 is installed in 3. slot, J4, in MBC601

Straps and switches must be set according to the list in sec. 3.2 before installation in MBC601

MBC601 cable connections

KBL786 to MBA602, J1
KBL787 to ETC611, J3
KBL788 to ETC611, J5

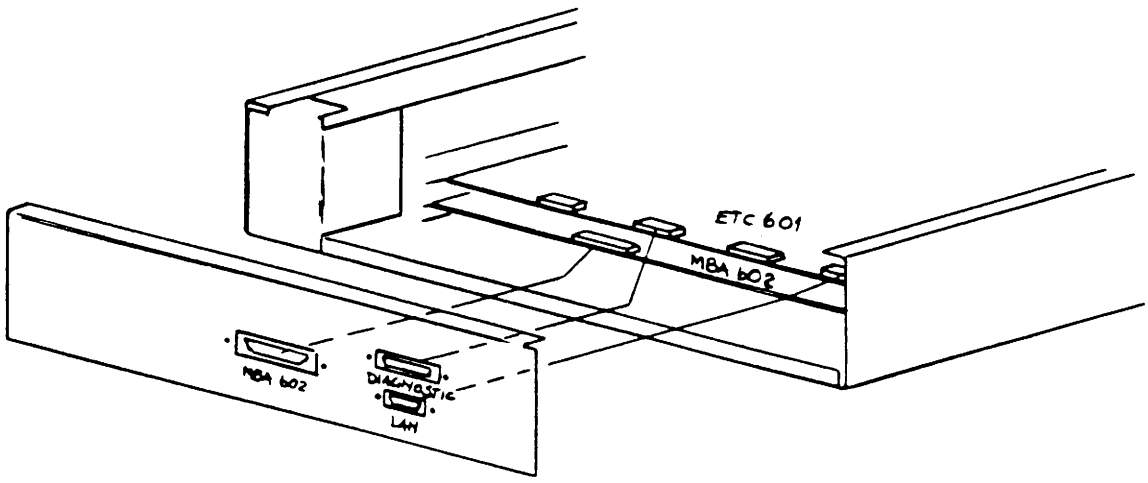


Fig. 3 MBC601 installation

4.2 STRAPS, SWITCHES AND PROMs

4.2.1 IFP802

IFP802 Device Address

The device Address is selectable by means of 3 x 2 switches on the PCB. Address bits (16:20) and parity are selectable, whereas the remaining address-bits are fixed. The parity switch must be set to form an even number of one's in the switch row.

Red dot visible =0
(If no red dot in switch:
white dot =0)

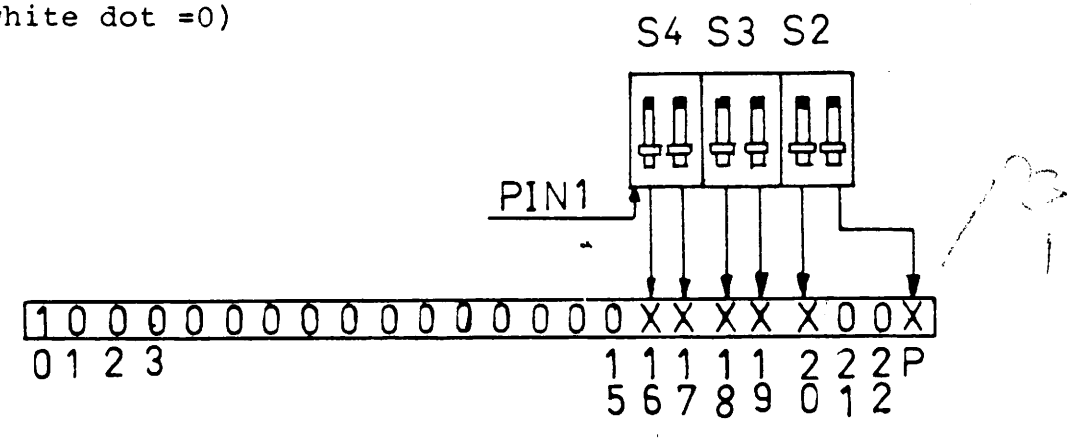


Fig. 4 IFP802 Device Address switch, position 154

Deskew adjust switch

Switch in pos. 94 must be set in inactive posistion
= red dot visible.
(For deskew adjustment procedure, refer to IFP802 General Information, RCSL 99110585)

PROMs

ROD162 in pos. 128
ROD163 in pos. 118

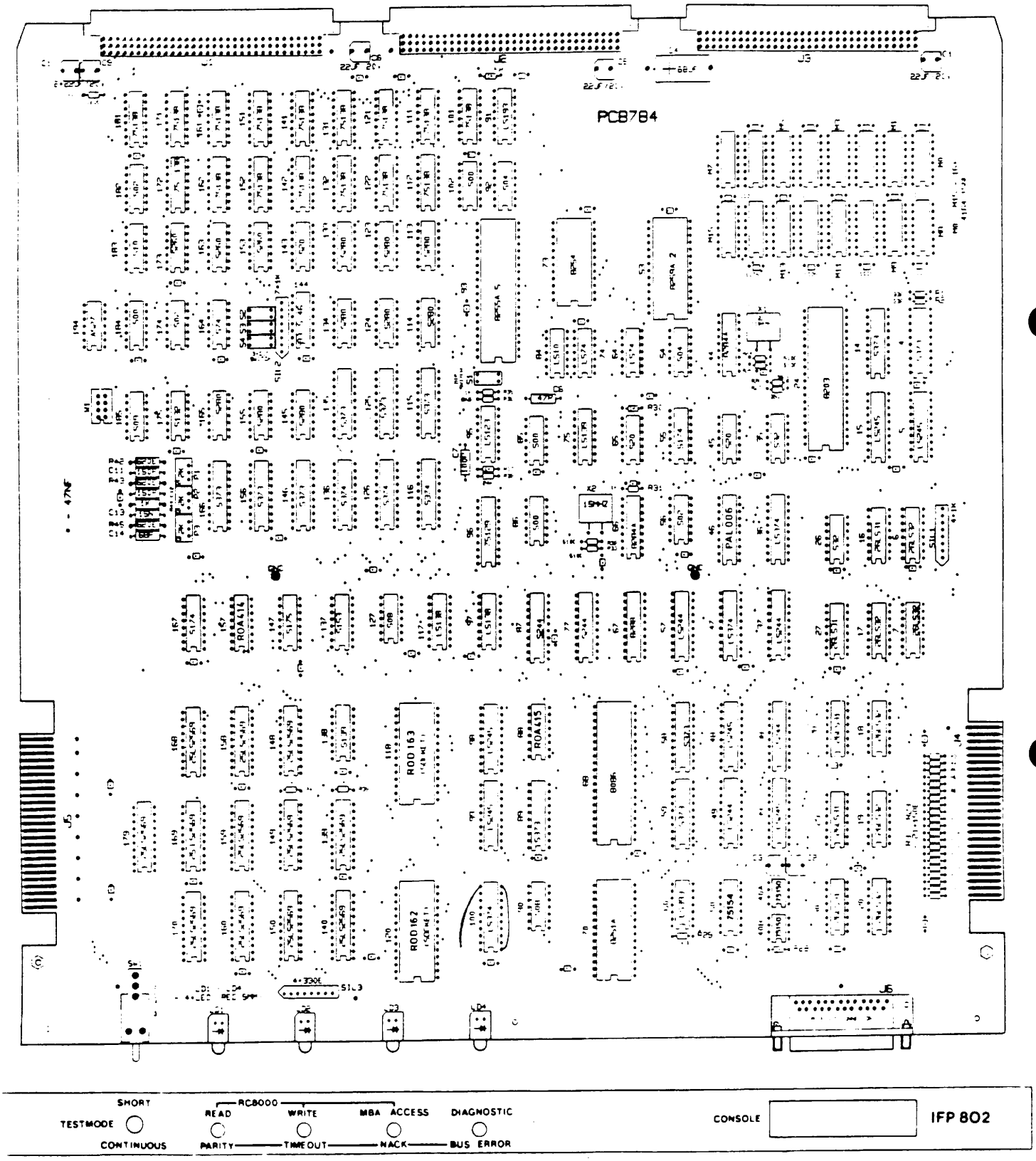

PCB784
SHORT
TESTMODE
CONTINUOUS
RC8000
READ
WRITE
MBA ACCESS
DIAGNOSTIC
PARITY
TIMEOUT
NACK
BUS ERROR
CONSOLE
IFP 802

Fig. 5 IFP802

4.2.2 MBA602

Memory addresses

PIN	TO	PIN	ADDRESS RANGE	
1		16	00000 TO 1FFFF	
2		15	20000 - 3FFFF	
3		14	40000 - 5FFFF	
4		13	60000 - 7FFFF	
5		12	80000 - 9FFFF	
6		11	A0000 - BFFFF	strap from 6 to 11
7		10	C0000 - DFFFF	
8		9	E0000 - FFFFF	

Segment Address, pos. 2

MULTIBUS			IFP802 MULTIPORT MEMORY		
BLOCK NO.	PIN	PIN	ADDRESS RANGE	strap from	to
0	1	16	00000 TO 03FFF	1	15
1	2	15	04000 - 07FFF	2	14
2	3	14	08000 - 0BFFF	3	13
3	4	13	0C000 - 0FFFF	4	12
4	5	12	10000 - 13FFF		
5	6	11	14000 - 17FFF		
6	7				
7	8				

Multibus to IFP802 Multiport Address Mapping, pos. 12

PIN	TO	PIN	INTERRUPT NO.	
1		16	0	
2		15	1	
3		14	2	
4		13	3	
5		12	4	
6		11	5	strap from 6 to 11
7		10	6	
8		9	7	

Multibus Interrupt, pos. 21

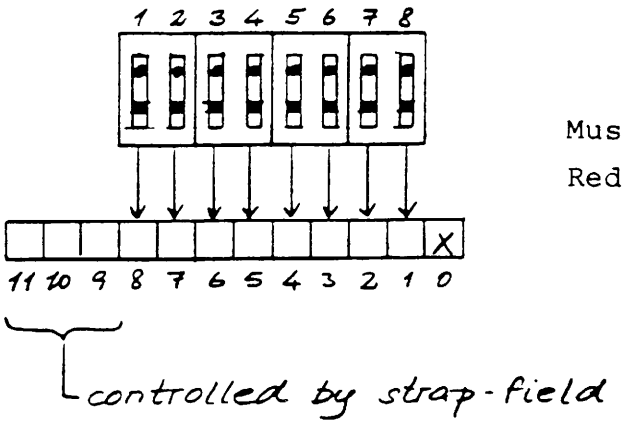
I/O Address

The MBA602 recognizes 2 I/O addresses on the Multibus. These addresses are selectable by means of a strap-field in position 91 and 8 switches in pos. 72

The strap-field selects 1 of 8 blocks of 512 addresses. The switches in pos. 72 selects 2 of these addresses.

PIN	TO	PIN	ADDRESS RANGE	
1		16	000 TO 1FF	
2		15	200 - 3FF	
3		14	400 - 5FF	strap from 3 to 14
4		13	600 - 7FF	
5		12	800 - 9FF	
6		11	A00 - BFF	
7		10	COO - DFF	
8		9	E00 - FFF	

Strap-field, pos. 91



Must all be set to 0
Red dot = 0

Fig. 6 I/O Address Switches, pos. 72

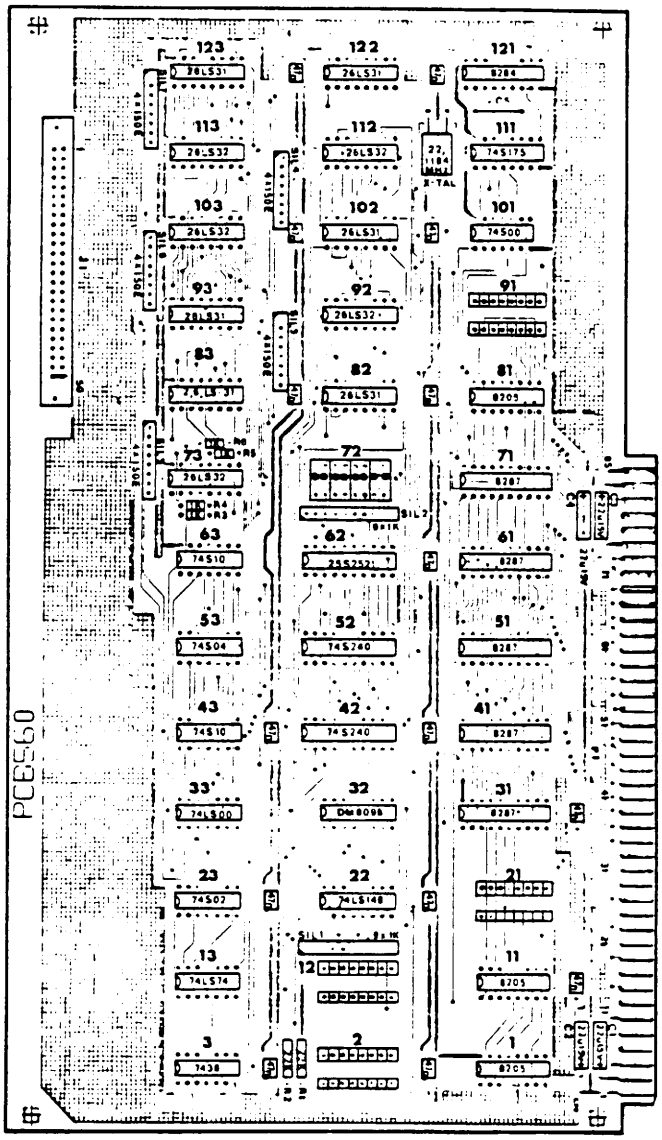


Fig. 7 MBA602

4.2.3 ETC611

STRAPS

The ETC611 board is provided with a number of jumpers which must be set acording to the list below:

S1	OPEN	
S2	1 - 2	
S3	OPEN	
S4	2 - 11	
	3 - 10	
	4 - 9	
S5	1 - 12	
S6	4 - 23	
	5 - 22	
	6 - 21	
	7 - 20	
	11 - 19	(wire-wrap)
	12 - 24	(wire-wrap)
	13 - 18	(wire-wrap)
	25 - 26	
S7	2 - 3	
S8	2 - 3	
S9	1 - 2	
S10	1 - 2	
S11	1 - 2	
S12	1 - 2	
S13	OPEN	
S14	3 - 12	
S15	OPEN	
S16	1 - 4	
	2 - 3	
S17	1 - 2	
S18	1 - 2	
S19	1 - 2	
S20	1 - 2	
S21	1 - 2	
S22	OPEN	
S23	2 - 9	
	3 - 8	
	5 - 6	
S24	1 - 2	
S25	1 - 2	
S26	1 - 6	
S27	OPEN	

Straps on ETC611

PROMS

ROD134 in pos. 34

ROD135 in pos. 35

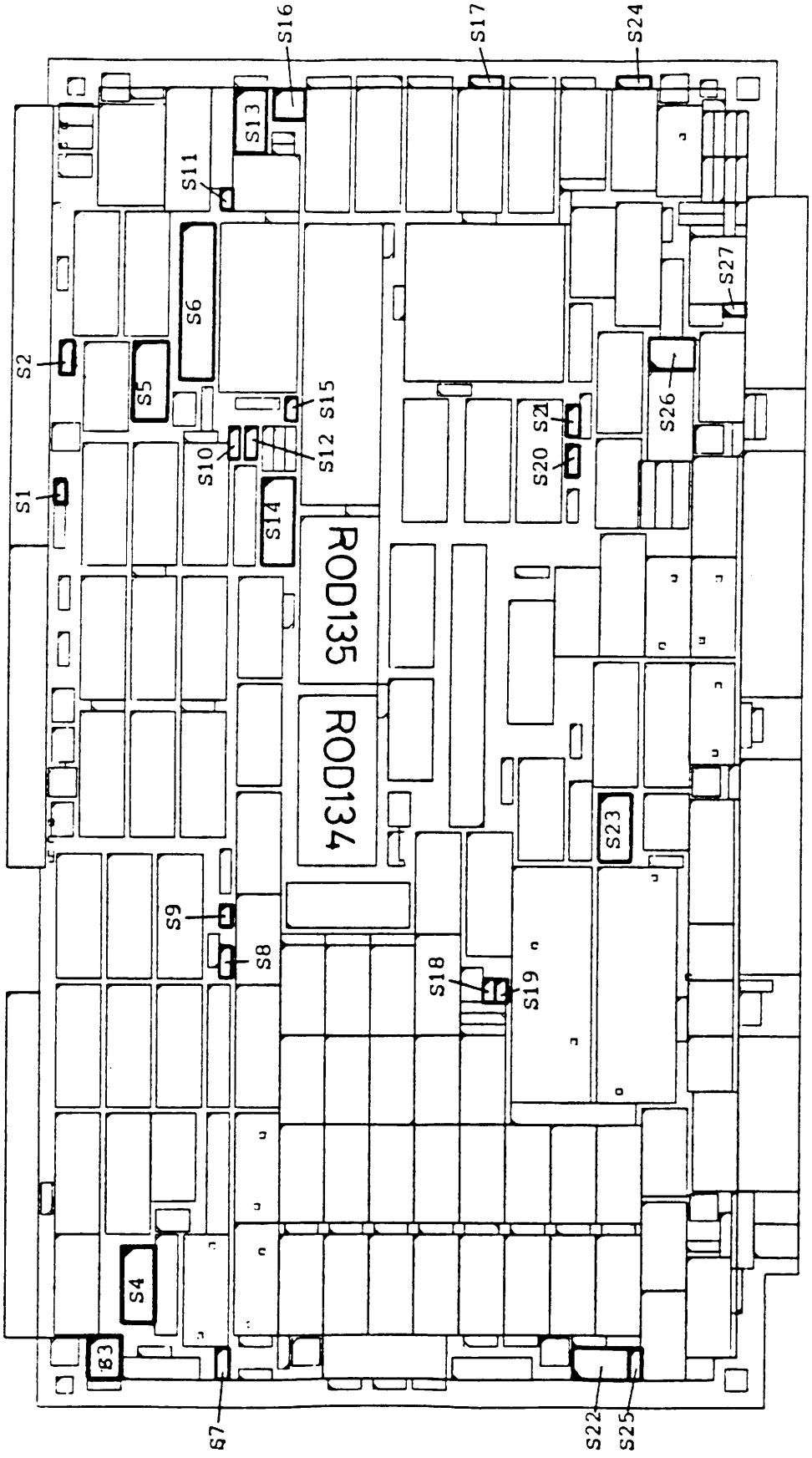

S16
S17
S24
S13
S11
S27
S6
S2
S5
S15
S12
S21
S26
S10
S20
S1
S14
ROD135
ROD134
S23
S9
S8
S18
S19
S4
S3
S7
S22
S25

Fig. 8 ETC611

4.3. CARDCAGE SBC604

Due to the serial priority resolution scheme and the unused connector J2 on the Multibus Backplane, the Bus Priority In signal on J3 must be connected to GND.
This is done with a strap from pin "C" to pin "M" on the backplane.

	(COMPONENT SIDE)			(CIRCUIT SIDE)		
	PIN	MNEMONIC	DESCRIPTION	PIN	MNEMONIC	DESCRIPTION
POWER SUPPLIES	1	GND	Signal GND	2	GND	Signal GND
	3	+5V	+5Vdc	4	+5V	+5Vdc
	5	+5V	+5Vdc	6	+5V	+5Vdc
	7	+12V	+12Vdc	8	+12V	+12Vdc
	9	-5V	-5Vdc	10	-5V	-5Vdc
	11	GND	Signal GND	12	GND	Signal GND
BUS CONTROLS	13	BCLK/	Bus Clock	14	INIT/	Initialize
	15	BPRN/	Bus Pri In	16	BPRO/	Bus Pri Out
	17	BUSY/	Bus Busy	18	BREQ/	Bus Request
	19	MRDC/	Mem Read Cmd	20	MWTC/	Mem Write Cmd
	21	IORC/	I/O Read Cmd	22	IOWC/	I/O Write Cmd
	23	XACK/	XFER Acknowledge	24	INH1/	Inhibit 1 disable RAM
BUS CONTROLS AND ADDRESS	25		Reserved	26	INH2/	Inhibit 2 disable PROM or ROM
	27	BHEN/	Byte High Enable	28	AD10/	
	29	CBRQ/	Common Bus Request	30	AD11/	Address
	31	CCLK/	Constant Clk	32	AD12/	Bus
	33	INTA/	Intr Acknowledge	34	AD13/	
INTERRUPTS	35	INT6/	Parallel	36	INT7/	Parallel
	37	INT4/	Interrupt	38	INT5/	Interrupt
	39	INT2/	Requests	40	INT3/	Requests
	41	INT0/		42	INT1/	
ADDRESS	43	ADRE/		44	ADRF/	
	45	ADRC/		46	ADRD/	
	47	ADRA/	Address	48	ADRB/	Address
	49	ADR8/	Bus	50	ADR9/	Bus
	51	ADR6/		52	ADR7/	
	53	ADR4/		54	ADR5/	
	55	ADR2/		56	ADR3/	
	57	ADR0/		58	ADR1/	
DATA	59	DATE/		60	DATF/	
	61	DATC/		62	DATD/	
	63	DATA/	Data	64	DATB/	Data
	65	DAT8/	Bus	66	DAT9/	Bus
	67	DAT6/		68	DAT7/	
	69	DAT4/		70	DAT5/	
	71	DAT2/		72	DAT3/	
	73	DAT0/		74	DAT1/	
POWER SUPPLIES	75	GND	Signal GND	76	GND	Signal GND
	77		Reserved	78		Reserved
	79	-12V	-12Vdc	80	-12V	-12Vdc
	81	+5V	+5Vdc	82	+5V	+5Vdc
	83	+5V	+5Vdc	84	+5V	+5Vdc
	85	GND	Signal GND	86	GND	Signal GND

Fig. 9 Pin assignment of Multibus Board P1 connector.

4.4 CABLES

1004	IFP802	CONN.2
A1	----------	1
B1	----------	34
A2	----------	18
B2	----------	2
A3	----------	35
B3	----------	19
A4	----------	3
B4	----------	36
A5	----------	20
B5	----------	4
A6	----------	37
B6	----------	21
A7	----------	5
B7	----------	38
A8	----------	22
B8	----------	6
A9	----------	39
B9	----------	23
A10	----------	7
B10	----------	40
A11	----------	24
B11	----------	8
A12	----------	41
B12	----------	25
A13	----------	9
B13	----------	42
A14	----------	26
B14	----------	10
A15	----------	43
B15	----------	27
A16	----------	11
B16	----------	44
A17	----------	28
B17	----------	12
A18	----------	45
B18	----------	29
A19	----------	13
B19	----------	46
A20	----------	30
B20	----------	14

1004	IFP802	CONN.2
A21	----------	47
B21	----------	31
A22	----------	15
B22	----------	48
A23	----------	32
B23	----------	16
A24	----------	49
B24	----------	33
A25	----------	17
B25	----------	50

KBL666 internal IFP802 MBA-interface cable

MBA602		IFP802
17	----------	34
50	----------	1
33	----------	2
16	----------	18
49	----------	19
32	----------	35
15	----------	36
48	----------	3
31	----------	4
14	----------	20
47	----------	21
30	----------	37
13	----------	38
46	----------	5
29	----------	6
12	----------	22
45	----------	23
28	----------	39
11	----------	40
44	----------	7
27	----------	8
10	----------	24
43	----------	25
26	----------	41
9	----------	42
42	----------	9
25	----------	10
8	----------	26
41	----------	27
24	----------	43
7	----------	44
40	----------	11
23	----------	12
6	----------	28
39	----------	29
22	----------	45
5	----------	46
38	----------	13
21	----------	14
4	----------	30
37	----------	31
20	----------	47
3	----------	48
36	----------	15
19	----------	16
2	----------	32
35	----------	33
18	----------	49
1	----------	50
34	----------	17

KBL785 IFP to MBA interconnect cable

MBA602		BACKPANEL
1	----------	17
2	----------	50
3	----------	33
4	----------	16
5	----------	49
6	----------	32
7	----------	15
8	----------	48
9	----------	31
10	----------	14
11	----------	47
12	----------	30
13	----------	13
14	----------	46
15	----------	29
16	----------	12
17	----------	45
18	----------	28
19	----------	11
20	----------	44
21	----------	27
22	----------	10
23	----------	43
24	----------	26
25	----------	9
26	----------	42
27	----------	25
28	----------	8
29	----------	41
30	----------	24
31	----------	7
32	----------	40
33	----------	23
34	----------	6
35	----------	39
36	----------	22
37	----------	5
38	----------	38
39	----------	21
40	----------	4
41	----------	37
42	----------	20
43	----------	3
44	----------	36
45	----------	19
46	----------	2
47	----------	35
48	----------	18
49	----------	1
50	----------	34

KBL786 internal MBA602 cable

ETC611		BACKPANEL
2	----------	2
9	----------	9
3	----------	3
10	----------	10
5	----------	5
12	----------	12
13	----------	13
6	----------	6

KBL788 LAN internal cable

ETC611		BACKPANEL
20	----------	2
19	----------	7
18	----------	3
17	----------	7
16	----------	4
14	----------	5
12	----------	6
10	----------	20
8	----------	8
7	----------	22
6	----------	24
5	----------	7
4	----------	15
3	----------	7
2	----------	17
1	----------	7

KBL787 Diagnostic cable

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