CONTROL DATA® 6601-H
CENTRAL COMPUTER

CABLE TABS

CONTROL DATA CORPORATION

CUSTOMER ENGINEERING MANUAL

60148900

Record of Revisions

REVISION	NOTES
A (10/8/65)	This is the original printing of the manual. Product designation H02.

Address comments concerning this manual to:

Control Data Corporation
Technical Publications Department
4201 North Lexington Avenue
St. Paul, Minnesota 55112

or use Comment Sheet in back of this manual.

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This manual lists connections of the coaxial logic cables in three sections:

1) Chassis location, source and destination, arranged by chassis number;

2) Wire connection, source and destination, arranged by chassis number, chassis location, and color;

3) Wire connection, arranged by chassis, module and pin number.

The Dead Start Panel connections are listed only in parts one and two, by connection to the chassis.

Locations W39 and W40 do not physically exist. These numbers are used for sorting purposes. W39 and W40 are internal chassis connections.

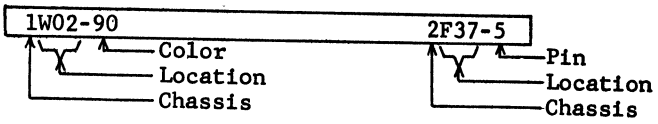
Chassis Locations:

1-16 on Main Frame 6601
30 on Disk File
50 on Display Console
81 on 6681 Data Channel Converter
82 on 6682 Satellite Coupler

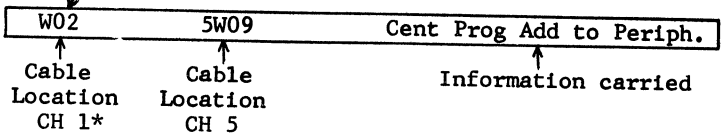
Reference Drawings:

63763600-A	Wire listing - Dead Start Panel
63028800	Chassis Cable Tabs, 6601
63029000	Cable list, inter chassis
63028900	Cable list, inter cabinet
63037300	Cable assembly, wire list, intra chassis

Explanation of Listings

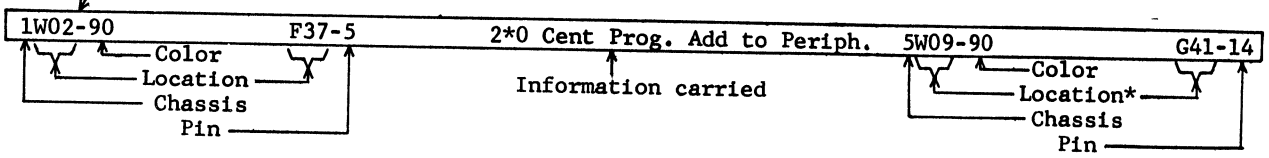


Part 1: Listed by



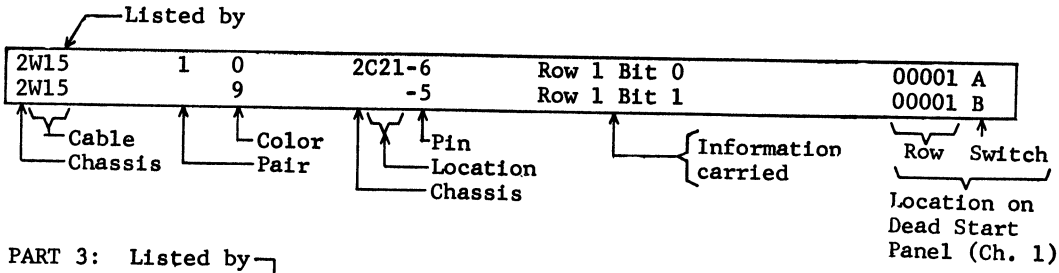
* Chassis number listed at top of each page.

PART 2: Listed by

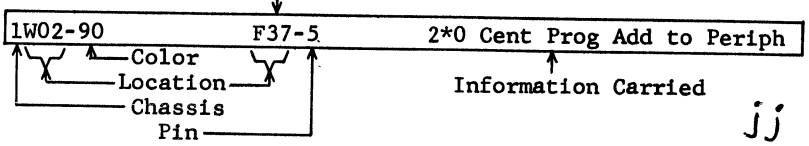


Part 2 (Dead Start)

* Both locations on same chassis



PART 3: Listed by



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CABLE CONNECTIONS FOR 6601 CHASSIS 1

ORIGIN	DEST	REMARKS
W01		
W02	5W09	CENTRAL PROGRAM ADDRESS TO PERIPHERAL
W03	5W24	READ - WRITE EXCHANGE ADDRESS
W04	3W03	CENTRAL MEMORY DATA TO PERIPHERAL
W05	4W07	CENTRAL MEMORY DATA TO PERIPHERAL
W06	9W11	CENTRAL MEMORY DATA TO PERIPHERAL
W07	10W11	CENTRAL MEMORY DATA TO PERIPHERAL
W08	2W01	PERIPHERAL DATA TO MEMORY DISTRIBUTION
W09	2W02	PERIPHERAL DATA TO MEMORY DISTRIBUTION
W10	2W03	PERIPHERAL DATA TO MEMORY DISTRIBUTION
W11	2W04	PERIPHERAL DATA TO MEMORY DISTRIBUTION
W12	5W23	CONTROL TO PERIPHERAL
W13		CHANNEL 0
W14		CHANNEL 0
W15		CHANNEL 1
W16		CHANNEL 1
W17		CHANNEL 2
W18		CHANNEL 2
W19		CHANNEL 3
W20		CHANNEL 3
W21		CHANNEL 4
W22		CHANNEL 4
W23		CHANNEL 5
W24		CHANNEL 5
W25		CHANNEL 6
W26		CHANNEL 6
W27		CHANNEL 7
W28		CHANNEL 7
W29		CHANNEL 10
W30		CHANNEL 10
W31		CHANNEL 11
W32		CHANNEL 11
W33		CHANNEL 12
W34		CHANNEL 12
W35		CHANNEL 13
W36		CHANNEL 13
W37	CABLE 5	DEAD START PANEL (SEE 63763600)
W38		

CABLE CONNECTIONS FOR 6601 CHASSIS 2

ORIGIN	DEST	REMARKS
W01	1W08	PERIPHERAL DATA TO MEMORY DISTRIBUTION
W02	1W09	PERIPHERAL DATA TO MEMORY DISTRIBUTION
W03	1W10	PERIPHERAL DATA TO MEMORY DISTRIBUTION
W04	1W11	PERIPHERAL DATA TO MEMORY DISTRIBUTION
W05	13W10	WRITE BUFFER TO DISTRIBUTOR
W06	14W10	WRITE BUFFER TO DISTRIBUTOR
W07	15W10	WRITE BUFFER TO DISTRIBUTOR
W08	16W10	WRITE BUFFER TO DISTRIBUTOR
W09	7W08	LOWER REGISTER TO MEMORY DISTRIBUTION
W10	7W09	LOWER REGISTER TO MEMORY DISTRIBUTION
W11	8W10	UPPER REGISTER TO MEMORY DISTRIBUTION
W12	8W11	UPPER REGISTER TO MEMORY DISTRIBUTION
W13	5W10	CENTRAL CONTROL TO MEMORY DISTRIBUTION
W14	5W27	CENTRAL CONTROL TO MEMORY DISTRIBUTION
W15	CABLE 1	DEAD START PANEL (SEE 63763600)
W16	CABLE 2	DEAD START PANEL (SEE 63763600)
W17	CABLE 3	DEAD START PANEL (SEE 63763600)
W18	CABLE 4	DEAD START PANEL (SEE 63763600)
W19		DEAD START TO CHANNEL (INPUT)
W20		DEAD START TO CHANNEL (OUTPUT)
W21	5W13	CONTROL TO DIVIDE
W22	8W18	REGISTER TO DIVIDE (EXPONENT XK)
W23	8W19	REGISTER TO DIVIDE (EXPONENT XJ)
W24	6W20	DIVIDE TO MULTIPLY
W25	6W21	DIVIDE TO MULTIPLY
W26	6W22	DIVIDE TO MULTIPLY
W27	6W23	MULTIPLY TO DIVIDE
W28	6W24	MULTIPLY TO DIVIDE
W29	6W25	MULTIPLY TO DIVIDE
W30	6W26	MULTIPLY TO DIVIDE
W31	6W27	MULTIPLY TO DIVIDE
W32	6W28	MULTIPLY TO DIVIDE
W33		
W34		
W35		
W36		
W37		
W38		

CABLE CONNECTIONS FOR 6601 CHASSIS 3

ORIGIN	DEST	REMARKS
W01		
W02	9W13	MEMORY TO READ DISTRIBUTOR
W03	1W04	MEMORY TO PERIPHERAL
W04	10W13	MEMORY TO READ DISTRIBUTOR
W05	4W05	MEMORY TO READ DISTRIBUTOR
W06	4W06	MEMORY TO READ DISTRIBUTOR
W07	9W07	MEMORY TO READ DISTRIBUTOR
W08	10W07	MEMORY TO READ DISTRIBUTOR
W09	13W06	MEMORY TO READ DISTRIBUTOR
W10	14W06	MEMORY TO READ DISTRIBUTOR
W11	15W06	MEMORY TO READ DISTRIBUTOR
W12	7W05	READ DISTRIBUTOR TO LOWER REGISTER
W13	16W06	MEMORY TO READ DISTRIBUTOR
W14	5W02	READ DISTRIBUTOR TO CONTROL
W15	13W13	WRITE DISTRIBUTOR TO MEMORY
W16	14W13	WRITE DISTRIBUTOR TO MEMORY
W17	15W13	WRITE DISTRIBUTOR TO MEMORY
W18	16W13	WRITE DISTRIBUTOR TO MEMORY
W19		
W20	5W29	CONTROL TO MEMORY ADDRESS
W21		
W22		
W23		
W24		
W25		
W26		
W27		
W28		
W29		
W30		
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		
W39	3W39	MEMORY TO READ DISTRIBUTOR

CABLE CONNECTIONS FOR 6601 CHASSIS 4

ORIGIN	DEST	REMARKS
W01		
W02		
W03	13W12	WRITE DISTRIBUTOR TO MEMORY
W04	14W12	WRITE DISTRIBUTOR TO MEMORY
W05	3W05	MEMORY TO READ DISTRIBUTOR
W06	3W06	MEMORY TO READ DISTRIBUTOR
W07	1W05	MEMORY TO PERIPHERAL
W08	9W14	MEMORY TO READ DISTRIBUTOR
W09	15W12	WRITE DISTRIBUTOR TO MEMORY
W10	16W12	WRITE DISTRIBUTOR TO MEMORY
W11	10W14	MEMORY TO READ DISTRIBUTOR
W12	9W08	MEMORY TO READ DISTRIBUTOR
W13	10W08	MEMORY TO READ DISTRIBUTOR
W14	5W01	READ DISTRIBUTOR TO CONTROL
W15	13W07	MEMORY TO READ DISTRIBUTOR
W16	14W07	MEMORY TO READ DISTRIBUTOR
W17	15W07	MEMORY TO READ DISTRIBUTOR
W18	7W06	READ DISTRIBUTOR TO LOWER REGISTER
W19	5W18	READ DISTRIBUTOR TO CONTROL
W20	5W28	CONTROL TO MEMORY ADDRESS
W21	16W07	MEMORY TO READ DISTRIBUTOR
W22		
W23		
W24		DISK SYNC PASS ON (OUTPUT)
W25		DISK SYNC PASS ON (INPUT)
W26		DISK SYNC TO CHANNEL (INPUT)
W27		DISK SYNC TO CHANNEL (OUTPUT)
W28	30W03	DISK SYNC TO DISK FILE (OUTPUT)
W29	30W04	DISK SYNC TO DISK FILE (INPUT)
W30		
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		
W39	4W39	MEMORY TO READ DISTRIBUTOR

CABLE CONNECTIONS FOR 6601 CHASSIS 5

ORIGIN	DEST	REMARKS
W01	4W14	READ DISTRIBUTOR TO CONTROL
W02	3W14	READ DISTRIBUTOR TO CONTROL
W03	10W10	READ DISTRIBUTOR TO CONTROL
W04	9W10	READ DISTRIBUTOR TO CONTROL
W05		
W06		
W07		
W08		
W09	1W02	PROGRAM ADDRESS TO PERIPHERAL
W10	2W13	CENTRAL CONTROL TO MEMORY DISTRIBUTION
W11	8W13	CONTROL TO UPPER REGISTER
W12	8W12	CONTROL TO LONG ADD, ADD, AND SHIFT
W13	2W21	CONTROL TO DIVIDE
W14	6W16	CONTROL TO MULTIPLY
W15	8W20	CONTROL TO UPPER REGISTER
W16	7W17	CONTROL TO LOWER REGISTER
W17	8W21	CONTROL TO UPPER REGISTER
W18	4W19	READ DISTRIBUTOR TO CONTROL
W19	7W18	CONTROL TO LOWER REGISTER
W20	7W19	CONTROL TO LOWER REGISTER
W21	7W21	INCREMENT RESULT
W22	7W16	CONTROL TO LOWER REGISTER
W23	1W12	CONTROL TO PERIPHERAL
W24	1W03	READ-WRITE EXCHANGE ADDRESS
W25	7W20	CONTROL TO LOWER REGISTER
W26	8W22	CONTROL TO UPPER REGISTER
W27	2W14	CONTROL TO MEMORY DISTRIBUTOR
W28	4W20	CONTROL TO MEMORY ADDRESS
W29	3W20	CONTROL TO MEMORY ADDRESS
W30	9W20	CONTROL TO MEMORY ADDRESS
W31	10W20	CONTROL TO MEMORY ADDRESS
W32	13W18	CONTROL TO MEMORY ADDRESS
W33	14W18	CONTROL TO MEMORY ADDRESS
W34	15W18	CONTROL TO MEMORY ADDRESS
W35	16W18	CONTROL TO MEMORY ADDRESS
W36	7W22	INCREMENT OPERAND
W37	7W23	INCREMENT OPERAND
W38		

CABLE CONNECTIONS FOR 6601 CHASSIS 6

ORIGIN	DEST	REMARKS
W01		
W02		
W03		
W04		
W05		
W06		
W07	8W07	REGISTER TO MULTIPLY XK
W08	8W08	MULTIPLY TO REGISTER
W09	8W09	REGISTER TO MULTIPLY XJ
W10	7W10	MULTIPLY TO REGISTER
W11	7W11	MULTIPLY TO REGISTER
W12	7W12	REGISTER TO MULTIPLY XK
W13	7W13	REGISTER TO MULTIPLY XJ
W14	7W14	REGISTER TO MULTIPLY XJ
W15	7W15	REGISTER TO MULTIPLY XK
W16	5W14	CONTROL TO MULTIPLY
W17		
W18		
W19		
W20	2W24	DIVIDE TO MULTIPLY
W21	2W25	DIVIDE TO MULTIPLY
W22	2W26	DIVIDE TO MULTIPLY
W23	2W27	MULTIPLY TO DIVIDE
W24	2W28	MULTIPLY TO DIVIDE
W25	2W29	MULTIPLY TO DIVIDE
W26	2W30	MULTIPLY TO DIVIDE
W27	2W31	MULTIPLY TO DIVIDE
W28	2W32	MULTIPLY TO DIVIDE
W29		
W30		
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		

CABLE CONNECTIONS FOR 6601 CHASSIS 7

ORIGIN	DEST	REMARKS
W01		
W02		
W03		
W04		
W05	3W12	READ DISTRIBUTOR TO LOWER REGISTER
W06	4W18	READ DISTRIBUTOR TO LOWER REGISTER
W07	9W12	READ DISTRIBUTOR TO LOWER REGISTER
W08	2W09	LOWER REGISTER TO MEMORY DISTRIBUTION
W09	2W10	LOWER REGISTER TO MEMORY DISTRIBUTION
W10	6W10	MULTIPLY TO REGISTER
W11	6W11	MULTIPLY TO REGISTER
W12	6W12	REGISTER TO MULTIPLY XK
W13	6W13	REGISTER TO MULTIPLY XJ
W14	6W14	REGISTER TO MULTIPLY XJ
W15	6W15	REGISTER TO MULTIPLY XK
W16	5W22	CONTROL TO LOWER REGISTER
W17	5W16	CONTROL TO LOWER REGISTER
W18	5W19	CONTROL TO LOWER REGISTER
W19	5W20	CONTROL TO LOWER REGISTER
W20	5W25	CONTROL TO LOWER REGISTER
W21	5W21	INCREMENT RESULT
W22	5W36	INCREMENT OPERAND
W23	5W37	INCREMENT OPERAND
W24	8W26	REGISTER TO ADD
W25	8W27	REGISTER TO ADD
W26	8W24	ADD TO REGISTER
W27	8W25	ADD TO REGISTER
W28	8W28	REGISTER TO ADD
W29	8W29	REGISTER TO ADD
W30	8W23	D TO X
W31	8W30	SHIFT TO REGISTER
W32		
W33		
W34		
W35		
W36		
W37		
W38		

CABLE CONNECTIONS FOR 6601 CHASSIS 8

ORIGIN	DEST	REMARKS
W01		
W02		
W03		
W04		
W05	9W21	READ DISTRIBUTOR TO UPPER REGISTER
W06	10W12	READ DISTRIBUTOR TO UPPER REGISTER
W07	6W07	REGISTER TO MULTIPLY XK
W08	6W08	MULTIPLY TO REGISTER
W09	6W09	REGISTER TO MULTIPLY XJ
W10	2W11	UPPER REGISTER TO MEMORY DISTRIBUTION
W11	2W12	UPPER REGISTER TO MEMORY DISTRIBUTION
W12	5W12	CONTROL TO LONG ADD, ADD AND SHIFT
W13	5W11	CONTROL TO UPPER REGISTER
W14		
W15		
W16		
W17		
W18	2W22	REGISTER TO DIVIDE (EXPONENT XK)
W19	2W23	REGISTER TO DIVIDE (EXPONENT XJ)
W20	5W15	CONTROL TO UPPER REGISTER
W21	5W17	CONTROL TO UPPER REGISTER
W22	5W26	CONTROL TO UPPER REGISTER
W23	7W30	D TO X
W24	7W26	ADD TO REGISTER
W25	7W27	ADD TO REGISTER
W26	7W24	REGISTER TO ADD
W27	7W25	REGISTER TO ADD
W28	7W28	REGISTER TO ADD
W29	7W29	REGISTER TO ADD
W30	7W31	SHIFT TO REGISTER
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		

CABLE CONNECTIONS FOR 6601 CHASSIS 9

ORIGIN	DEST	REMARKS
W01		
W02		
W03	13W14	WRITE DISTRIBUTOR TO MEMORY
W04	14W14	WRITE DISTRIBUTOR TO MEMORY
W05	15W14	WRITE DISTRIBUTOR TO MEMORY
W06	16W14	WRITE DISTRIBUTOR TO MEMORY
W07	3W07	MEMORY TO READ DISTRIBUTOR
W08	4W12	MEMORY TO READ DISTRIBUTOR
W09	10W15	MEMORY TO READ DISTRIBUTOR
W10	5W04	READ DISTRIBUTOR TO CONTROL
W11	1W06	MEMORY TO PERIPHERAL
W12	7W07	READ DISTRIBUTOR TO LOWER REGISTER
W13	3W02	MEMORY TO READ DISTRIBUTOR
W14	4W08	MEMORY TO READ DISTRIBUTOR
W15	10W09	MEMORY TO READ DISTRIBUTOR
W16	13W08	MEMORY TO READ DISTRIBUTOR
W17	14W08	MEMORY TO READ DISTRIBUTOR
W18	15W08	MEMORY TO READ DISTRIBUTOR
W19	16W08	MEMORY TO READ DISTRIBUTOR
W20	5W30	CONTROL TO MEMORY ADDRESS
W21	8W05	READ DISTRIBUTOR TO UPPER REGISTER
W22	TUA J11	626 (SEE 63037300)
W23	TUA J09	626 (SEE 63037300)
W24	TUA J10	626 (SEE 63037300)
W25	TUB J11	626 (SEE 63037300)
W26	TUB J09	626 (SEE 63037300)
W27	TUB J10	626 (SEE 63037300)
W28	TUC J11	626 (SEE 63037300)
W29	TUC J09	626 (SEE 63037300)
W30	TUC J10	626 (SEE 63037300)
W31	TUD J11	626 (SEE 63037300)
W32	TUD J09	626 (SEE 63037300)
W33	TUD J10	626 (SEE 63037300)
W34		626 SYNC TO CHANNEL (INPUT)
W35		626 SYNC TO CHANNEL (OUTPUT)
W36		626 SYNC PASS ON (INPUT)
W37		626 SYNC PASS ON (OUTPUT)
W38		
W39	9W39	MEMORY TO READ DISTRIBUTOR

CABLE CONNECTIONS FOR 6601 CHASSIS 10

ORIGIN	DEST	REMARKS
W01		
W02		
W03	13W15	WRITE DISTRIBUTOR
W04	14W15	WRITE DISTRIBUTOR
W05	15W15	WRITE DISTRIBUTOR
W06	16W15	WRITE DISTRIBUTOR
W07	3W08	MEMORY TO READ DISTRIBUTOR
W08	4W13	MEMORY TO READ DISTRIBUTOR
W09	9W15	MEMORY TO READ DISTRIBUTOR
W10	5W03	READ DISTRIBUTOR TO CONTROL
W11	1W07	MEMORY TO PERIPHERAL
W12	8W06	READ DISTRIBUTOR TO UPPER REGISTER
W13	3W04	MEMORY TO READ DISTRIBUTOR
W14	4W11	MEMORY TO READ DISTRIBUTOR
W15	9W09	MEMORY TO READ DISTRIBUTOR
W16	13W09	MEMORY TO READ DISTRIBUTOR
W17	14W09	MEMORY TO READ DISTRIBUTOR
W18	15W09	MEMORY TO READ DISTRIBUTOR
W19	16W09	MEMORY TO READ DISTRIBUTOR
W20	5W31	CONTROL TO MEMORY ADDRESS
W21		
W22		
W23	30W04	DISK SYNC TO DISK FILE (INPUT)
W24	30W03	DISK SYNC TO DISK FILE (OUTPUT)
W25		DISK SYNC PASS ON (OUTPUT)
W26		DISK SYNC PASS ON (INPUT)
W27		DISK SYNC TO CHANNEL (INPUT)
W28		DISK SYNC TO CHANNEL (OUTPUT)
W29		
W30		
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		
W39	10W39	MEMORY TO READ DISTRIBUTOR

CABLE CONNECTIONS FOR 6601 CHASSIS 12

ORIGIN	DEST	REMARKS
W01		DISPLAY SYNC 1 TO CHANNEL (OUTPUT)
W02		DISPLAY SYNC 1 TO CHANNEL (INPUT)
W03		DISPLAY SYNC 1 PASSON (OUTPUT)
W04		DISPLAY SYNC 1 PASSON (INPUT)
W05	50W01	DISPLAY SYNC 1 TO CONSOLE 0 (OUTPUT)
W06	50W02	DISPLAY SYNC 1 TO CONSOLE 0 (INPUT)
W07	50W01	DISPLAY SYNC 1 TO CONSOLE 1 (OUTPUT)
W08	50W02	DISPLAY SYNC 1 TO CONSOLE 1 (INPUT)
W09		
W10		
W11		
W12		
W13		
W14		DISPLAY SYNC 2 TO CHANNEL (OUTPUT)
W15		DISPLAY SYNC 2 TO CHANNEL (INPUT)
W16		DISPLAY SYNC 2 PASSON (OUTPUT)
W17		DISPLAY SYNC 2 PASSON (INPUT)
W18	50W01	DISPLAY SYNC 2 TO CONSOLE 0 (OUTPUT)
W19	50W02	DISPLAY SYNC 2 TO CONSOLE 0 (INPUT)
W20	50W01	DISPLAY SYNC 2 TO CONSOLE 1 (OUTPUT)
W21	50W02	DISPLAY SYNC 2 TO CONSOLE 1 (INPUT)
W22		
W23		
W24		
W25		
W26		
W27		
W28		
W29		
W30		
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		

CABLE CONNECTIONS FOR 6601 CHASSIS 13

ORIGIN	DEST	REMARKS
W01		
W02		
W03	14W11	WRITE DISTRIBUTOR TO MEMORY
W04	15W11	WRITE DISTRIBUTOR TO MEMORY
W05	16W11	WRITE DISTRIBUTOR TO MEMORY
W06	3W09	MEMORY TO READ DISTRIBUTOR
W07	4W15	MEMORY TO READ DISTRIBUTOR
W08	9W16	MEMORY TO READ DISTRIBUTOR
W09	10W16	MEMORY TO READ DISTRIBUTOR
W10	2W05	WRITE BUFFER TO DISTRIBUTOR
W11	14W03	WRITE DISTRIBUTOR TO MEMORY
W12	4W03	WRITE DISTRIBUTOR TO MEMORY
W13	3W15	WRITE DISTRIBUTOR TO MEMORY
W14	9W03	WRITE DISTRIBUTOR TO MEMORY
W15	10W03	WRITE DISTRIBUTOR TO MEMORY
W16	15W03	WRITE DISTRIBUTOR TO MEMORY
W17	16W03	WRITE DISTRIBUTOR TO MEMORY
W18	5W32	CONTROL TO MEMORY ADDRESS
W19		
W20		
W21		
W22	TUA J11	626 (SEE 63037300)
W23	TUA J09	626 (SEE 63037300)
W24	TUA J10	626 (SEE 63037300)
W25	TUB J11	626
W26	TUB J09	626
W27	TUB J10	626
W28	TUC J11	626
W29	TUC J09	626
W30	TUC J10	626
W31	TUD J11	626
W32	TUD J09	626
W33	TUD J10	626
W34		626 SYNC TO CHANNEL (INPUT)
W35		626 SYNC TO CHANNEL (OUTPUT)
W36		626 SYNC PASS ON (INPUT)
W37		626 SYNC PASS ON (OUTPUT)
W38		
W39	13W39	WRITE DISTRIBUTOR TO MEMORY

CABLE CONNECTIONS FOR 6601 CHASSIS 14

ORIGIN	DEST	REMARKS
W01		
W02		
W03	13W11	WRITE DISTRIBUTOR TO MEMORY
W04	15W16	WRITE DISTRIBUTOR TO MEMORY
W05	16W16	WRITE DISTRIBUTOR TO MEMORY
W06	3W10	MEMORY TO READ DISTRIBUTOR
W07	4W16	MEMORY TO READ DISTRIBUTOR
W08	9W17	MEMORY TO READ DISTRIBUTOR
W09	10W17	MEMORY TO READ DISTRIBUTOR
W10	2W06	WRITE BUFFER TO DISTRIBUTOR
W11	13W03	WRITE DISTRIBUTOR TO MEMORY
W12	4W04	WRITE DISTRIBUTOR TO MEMORY
W13	3W16	WRITE DISTRIBUTOR TO MEMORY
W14	9W04	WRITE DISTRIBUTOR TO MEMORY
W15	10W04	WRITE DISTRIBUTOR TO MEMORY
W16	15W04	WRITE DISTRIBUTOR TO MEMORY
W17	16W04	WRITE DISTRIBUTOR TO MEMORY
W18	5W33	CONTROL TO MEMORY ADDRESS
W19		
W20		
W21		
W22		
W23		
W24		
W25		
W26		
W27		
W28		
W29		
W30		
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		
W39	14W39	WRITE DISTRIBUTOR TO MEMORY

CABLE CONNECTIONS FOR 6601 CHASSIS 15

ORIGIN	DEST	REMARKS
W01		
W02		
W03	13W16	WRITE DISTRIBUTOR TO MEMORY
W04	14W16	WRITE DISTRIBUTOR TO MEMORY
W05	16W17	WRITE DISTRIBUTOR TO MEMORY
W06	3W11	MEMORY TO READ DISTRIBUTOR
W07	4W17	MEMORY TO READ DISTRIBUTOR
W08	9W18	MEMORY TO READ DISTRIBUTOR
W09	10W18	MEMORY TO READ DISTRIBUTOR
W10	2W07	WRITE BUFFER TO DISTRIBUTOR
W11	13W04	WRITE DISTRIBUTOR TO MEMORY
W12	4W09	WRITE DISTRIBUTOR TO MEMORY
W13	3W17	WRITE DISTRIBUTOR TO MEMORY
W14	9W05	WRITE DISTRIBUTOR TO MEMORY
W15	10W05	WRITE DISTRIBUTOR TO MEMORY
W16	14W04	WRITE DISTRIBUTOR TO MEMORY
W17	16W05	WRITE DISTRIBUTOR TO MEMORY
W18	5W34	CONTROL TO MEMORY ADDRESS
W19		
W20		
W21		
W22		
W23		
W24		
W25		
W26		
W27		
W28		
W29		
W30		
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		
W39	15W39	WRITE DISTRIBUTOR TO MEMORY

CABLE CONNECTIONS FOR 6601 CHASSIS 16

ORIGIN	DEST	REMARKS
W01		
W02		
W03	13W17	WRITE DISTRIBUTOR TO MEMORY
W04	14W17	WRITE DISTRIBUTOR TO MEMORY
W05	15W17	WRITE DISTRIBUTOR TO MEMORY
W06	3W13	MEMORY TO READ DISTRIBUTOR
W07	4W21	MEMORY TO READ DISTRIBUTOR
W08	9W19	MEMORY TO READ DISTRIBUTOR
W09	10W19	MEMORY TO READ DISTRIBUTOR
W10	2W08	WRITE BUFFER TO DISTRIBUTOR
W11	13W05	WRITE DISTRIBUTOR TO MEMORY
W12	4W10	WRITE DISTRIBUTOR TO MEMORY
W13	3W18	WRITE DISTRIBUTOR TO MEMORY
W14	9W06	WRITE DISTRIBUTOR TO MEMORY
W15	10W06	WRITE DISTRIBUTOR TO MEMORY
W16	14W05	WRITE DISTRIBUTOR TO MEMORY
W17	15W05	WRITE DISTRIBUTOR TO MEMORY
W18	5W35	CONTROL TO MEMORY ADDRESS
W19		
W20		
W21		
W22		
W23		
W24		DISK SYNC PASS ON (OUTPUT)
W25		DISK SYNC PASS ON (INPUT)
W26		DISK SYNC TO CHANNEL (INPUT)
W27		DISK SYNC TO CHANNEL (OUTPUT)
W28	30W03	DISK SYNC TO DISK FILE (OUTPUT)
W29	30W04	DISK SYNC TO DISK FILE (INPUT)
W30		
W31		
W32		
W33		
W34		
W35		
W36		
W37		
W38		
W39	16W39	WRITE DISTRIBUTOR TO MEMORY

1W02	00			PERIPHERAL FROM CENTRAL PROGRAM ADDRESS				
1W02	90	F37	5	2*0 CENTRAL PROGRAM ADDRESS	5W09	90	G41	4
1W02	91	F37	7	2*1 CENTRAL PROGRAM ADDRESS	5W09	91	G41	6
1W02	92	F37	10	2*2 CENTRAL PROGRAM ADDRESS	5W09	92	G41	8
1W02	93	F37	21	2*3 CENTRAL PROGRAM ADDRESS	5W09	93	G41	10
1W02	94	F37	24	2*4 CENTRAL PROGRAM ADDRESS	5W09	94	G41	12
1W02	95	F37	26	2*5 CENTRAL PROGRAM ADDRESS	5W09	95	G41	19
1W02	96	F38	5	2*6 CENTRAL PROGRAM ADDRESS	5W09	96	G41	21
1W02	97	F38	7	2*7 CENTRAL PROGRAM ADDRESS	5W09	97	G41	23
1W02	98	F38	10	2*8 CENTRAL PROGRAM ADDRESS	5W09	98	G41	25
1W02	99	F38	21	2*9 CENTRAL PROGRAM ADDRESS	5W09	99	G41	27
1W02	900	F38	24	2*10 CENTRAL PROGRAM ADDRESS	5W09	900	G42	4
1W02	901	F38	26	2*11 CENTRAL PROGRAM ADDRESS	5W09	901	G42	6
1W02	902	F39	5	2*12 CENTRAL PROGRAM ADDRESS	5W09	902	G42	8
1W02	903	F39	7	2*13 CENTRAL PROGRAM ADDRESS	5W09	903	G42	10
1W02	904	F39	10	2*14 CENTRAL PROGRAM ADDRESS	5W09	904	G42	12
1W02	905	F39	21	2*15 CENTRAL PROGRAM ADDRESS	5W09	905	G42	19
1W02	906	F39	24	2*16 CENTRAL PROGRAM ADDRESS	5W09	906	G42	21
1W02	907	F39	26	2*17 CENTRAL PROGRAM ADDRESS	5W09	907	G42	23
1W02	908				5W09	908		

1W03	90			PERIPHERAL TO STUNT BOX				
1W03	90			READ WRITE-EXCH ADR	5W24	90		
1W03	91	F41	27	BIT 9	5W24	91	N41	21
1W03	92	F41	25	BIT 10	5W24	92	N41	24
1W03	93	F41	23	BIT 11	5W24	93	N41	26
1W03	94	F42	8	BIT 12	5W24	94	N42	5
1W03	95	F42	6	BIT 13	5W24	95	N42	7
1W03	96	G42	4	BIT 14	5W24	96	N42	10
1W03	97	F42	27	BIT 15	5W24	97	N42	21
1W03	98	F42	25	BIT 16	5W24	98	N42	24
1W03	99	F42	23	BIT 17	5W24	99	N42	26
1W03	900	F41	4	BIT 8	5W24	900	N41	10
1W03	901	F40	8	BIT 0	5W24	901	N40	5
1W03	902	F40	6	BIT 1	5W24	902	N40	7
1W03	903	F40	4	BIT 2	5W24	903	N40	10
1W03	904	F40	27	BIT 3	5W24	904	N40	21
1W03	905	F40	25	BIT 4	5W24	905	N40	24
1W03	906	F40	23	BIT 5	5W24	906	N40	26
1W03	907	F41	8	BIT 6	5W24	907	N41	5
1W03	908	F41	6	BIT 7	5W24	908	N41	7

1W04	00			PERIPHERAL FROM CENTRAL MEMORY
1W04	90	G33	5	2*0 CENTRAL TO PERIPHERAL DATA
1W04	91	G33	7	2*1 CENTRAL TO PERIPHERAL DATA
1W04	92	G33	10	2*2 CENTRAL TO PERIPHERAL DATA
1W04	93	G33	21	2*3 CENTRAL TO PERIPHERAL DATA
1W04	94	G33	24	2*4 CENTRAL TO PERIPHERAL DATA
1W04	95	G33	26	2*5 CENTRAL TO PERIPHERAL DATA
1W04	96	G34	5	2*6 CENTRAL TO PERIPHERAL DATA
1W04	97	G34	7	2*7 CENTRAL TO PERIPHERAL DATA
1W04	98	G34	10	2*8 CENTRAL TO PERIPHERAL DATA
1W04	99	G34	21	2*9 CENTRAL TO PERIPHERAL DATA
1W04	900	G34	24	2*10 CENTRAL TO PERIPHERAL DATA
1W04	901	G34	26	2*11 CENTRAL TO PERIPHERAL DATA
1W04	902	G35	5	2*12 CENTRAL TO PERIPHERAL DATA
1W04	903	G35	7	2*13 CENTRAL TO PERIPHERAL DATA
1W04	904	G35	10	2*14 CENTRAL TO PERIPHERAL DATA
1W04	905	H29	20	MEMORY MARGIN
1W04	906			
1W04	907			
1W04	908			

3W03	90	I25	1
3W03	91	I26	1
3W03	92	I27	1
3W03	93	I28	1
3W03	94	I29	1
3W03	95	I32	1
3W03	96	I33	1
3W03	97	I34	1
3W03	98	I35	1
3W03	99	I36	1
3W03	900	I38	1
3W03	901	I39	1
3W03	902	I40	1
3W03	903	I41	1
3W03	904	I42	1
3W03	905	C14	14
3W03	906		
3W03	907		
3W03	908		

1W05	00			PERIPHERAL FROM CENTRAL MEMORY
1W05	90	G35	21	2*15 CENTRAL TO PERIPHERAL DATA
1W05	91	G35	24	2*16 CENTRAL TO PERIPHERAL DATA
1W05	92	G35	26	2*17 CENTRAL TO PERIPHERAL DATA
1W05	93	G36	5	2*18 CENTRAL TO PERIPHERAL DATA
1W05	94	G36	7	2*19 CENTRAL TO PERIPHERAL DATA
1W05	95	G36	10	2*20 CENTRAL TO PERIPHERAL DATA
1W05	96	G36	21	2*21 CENTRAL TO PERIPHERAL DATA
1W05	97	G36	24	2*22 CENTRAL TO PERIPHERAL DATA
1W05	98	G36	26	2*23 CENTRAL TO PERIPHERAL DATA
1W05	99	G37	5	2*24 CENTRAL TO PERIPHERAL DATA
1W05	900	G37	7	2*25 CENTRAL TO PERIPHERAL DATA
1W05	901	G37	10	2*26 CENTRAL TO PERIPHERAL DATA
1W05	902	G37	21	2*27 CENTRAL TO PERIPHERAL DATA
1W05	903	G37	24	2*28 CENTRAL TO PERIPHERAL DATA
1W05	904	G37	26	2*29 CENTRAL TO PERIPHERAL DATA
1W05	905	I25	11	RESUME CENTRAL READ
1W05	906	I29	1	RESUME CENTRAL READ
1W05	907	H29	22	STORAGE MARGIN
1W05	908			

4W07	90	I01	1
4W07	91	I02	1
4W07	92	I03	1
4W07	93	I04	1
4W07	94	I05	1
4W07	95	I08	1
4W07	96	I09	1
4W07	97	I10	1
4W07	98	I11	1
4W07	99	I12	1
4W07	900	I14	1
4W07	901	I15	1
4W07	902	I16	1
4W07	903	I17	1
4W07	904	I18	1
4W07	905	I24	7
4W07	906	I24	9
4W07	907	C14	14
4W07	908		

1W06	00			PERIPHERAL FROM CENTRAL MEMORY					
1W06	90	G39	10	2*38 CENTRAL TO PERIPHERAL DATA	9W11	90	I35	1	
1W06	91	G39	21	2*39 CENTRAL TO PERIPHERAL DATA	9W11	91	I36	1	
1W06	92	G39	24	2*40 CENTRAL TO PERIPHERAL DATA	9W11	92	I38	1	
1W06	93	G39	26	2*41 CENTRAL TO PERIPHERAL DATA	9W11	93	I39	1	
1W06	94	G40	5	2*42 CENTRAL TO PERIPHERAL DATA	9W11	94	I40	1	
1W06	95	G40	7	2*43 CENTRAL TO PERIPHERAL DATA	9W11	95	I41	1	
1W06	96	G40	10	2*44 CENTRAL TO PERIPHERAL DATA	9W11	96	I42	1	
1W06	97	H29	18	MEMORY MARGIN	9W11	97	C14	14	
1W06	98				9W11	98			
1W06	99				9W11	99			
1W06	900	G38	5	2*30 CENTRAL TO PERIPHERAL DATA	9W11	900	I25	1	
1W06	901	G38	7	2*31 CENTRAL TO PERIPHERAL DATA	9W11	901	I26	1	
1W06	902	G38	10	2*32 CENTRAL TO PERIPHERAL DATA	9W11	902	I27	1	
1W06	903	G38	21	2*33 CENTRAL TO PERIPHERAL DATA	9W11	903	I28	1	
1W06	904	G38	24	2*34 CENTRAL TO PERIPHERAL DATA	9W11	904	I29	1	
1W06	905	G38	26	2*35 CENTRAL TO PERIPHERAL DATA	9W11	905	I32	1	
1W06	906	G39	5	2*36 CENTRAL TO PERIPHERAL DATA	9W11	906	I33	1	
1W06	907	G39	7	2*37 CENTRAL TO PERIPHERAL DATA	9W11	907	I34	1	
1W06	908				9W11	908			

1W07	00			PERIPHERAL FROM CENTRAL MEMORY					
1W07	90	G41	26	2*53 CENTRAL TO PERIPHERAL DATA	10W11	90	I11	1	
1W07	91	G42	5	2*54 CENTRAL TO PERIPHERAL DATA	10W11	91	I12	1	
1W07	92	G42	7	2*55 CENTRAL TO PERIPHERAL DATA	10W11	92	I14	1	
1W07	93	G42	10	2*56 CENTRAL TO PERIPHERAL DATA	10W11	93	I15	1	
1W07	94	G42	21	2*57 CENTRAL TO PERIPHERAL DATA	10W11	94	I16	1	
1W07	95	G42	24	2*58 CENTRAL TO PERIPHERAL DATA	10W11	95	I17	1	
1W07	96	G42	26	2*59 CENTRAL TO PERIPHERAL DATA	10W11	96	I18	1	
1W07	97	H29	16	MEMORY MARGIN	10W11	97	C14	14	
1W07	98				10W11	98			
1W07	99				10W11	99			
1W07	900	G40	21	2*45 CENTRAL TO PERIPHERAL DATA	10W11	900	I01	1	
1W07	901	G40	24	2*46 CENTRAL TO PERIPHERAL DATA	10W11	901	I02	1	
1W07	902	G40	26	2*47 CENTRAL TO PERIPHERAL DATA	10W11	902	I03	1	
1W07	903	G41	5	2*48 CENTRAL TO PERIPHERAL DATA	10W11	903	I04	1	
1W07	904	G41	7	2*49 CENTRAL TO PERIPHERAL DATA	10W11	904	I05	1	
1W07	905	G41	10	2*50 CENTRAL TO PERIPHERAL DATA	10W11	905	I08	1	
1W07	906	G41	21	2*51 CENTRAL TO PERIPHERAL DATA	10W11	906	I09	1	
1W07	907	G41	24	2*52 CENTRAL TO PERIPHERAL DATA	10W11	907	I10	1	
1W07	908				10W11	908			

```
1W08   00          PERIPHERAL DATA TO MEMORY DISTRIBUTION

1W08   90  J33  8  2*48 PERIPHERAL TO CENTRAL DATA
1W08   91  J33  6  2*49 PERIPHERAL TO CENTRAL DATA
1W08   92  J33  4  2*50 PERIPHERAL TO CENTRAL DATA
1W08   93  J33 27  2*51 PERIPHERAL TO CENTRAL DATA
1W08   94  J33 25  2*52 PERIPHERAL TO CENTRAL DATA
1W08   95  J33 23  2*53 PERIPHERAL TO CENTRAL DATA
1W08   96  J34  8  2*54 PERIPHERAL TO CENTRAL DATA
1W08   97  J34  6  2*55 PERIPHERAL TO CENTRAL DATA
1W08   98  J34  4  2*56 PERIPHERAL TO CENTRAL DATA
1W08   99  J34 27  2*57 PERIPHERAL TO CENTRAL DATA
1W08  900  J34 25  2*58 PERIPHERAL TO CENTRAL DATA
1W08  901  J34 23  2*59 PERIPHERAL TO CENTRAL DATA
1W08  902  J35  8  2*36 PERIPHERAL TO CENTRAL DATA
1W08  903  J35  6  2*37 PERIPHERAL TO CENTRAL DATA
1W08  904  J35  4  2*38 PERIPHERAL TO CENTRAL DATA
1W08  905  I29 21  RESUME CENTRAL WRITE
1W08  906
1W08  907
1W08  908
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2W01   90  B09  5
2W01   91  B09  7
2W01   92  B09 10
2W01   93  B09 21
2W01   94  B09 24
2W01   95  B09 26
2W01   96  B10  5
2W01   97  B10  7
2W01   98  B10 10
2W01   99  B10 21
2W01  900  B10 24
2W01  901  B10 26
2W01  902  B07  5
2W01  903  B07  7
2W01  904  B07 10
2W01  905  C03  8
2W01  906
2W01  907
2W01  908
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1W09   00          PERIPHERAL DATA TO MEMORY DISTRIBUTION

1W09   90  J35 27  2*39 PERIPHERAL TO CENTRAL DATA
1W09   91  J35 25  2*40 PERIPHERAL TO CENTRAL DATA
1W09   92  J35 23  2*41 PERIPHERAL TO CENTRAL DATA
1W09   93  J36  8  2*42 PERIPHERAL TO CENTRAL DATA
1W09   94  J36  6  2*43 PERIPHERAL TO CENTRAL DATA
1W09   95  J36  4  2*44 PERIPHERAL TO CENTRAL DATA
1W09   96  J36 27  2*45 PERIPHERAL TO CENTRAL DATA
1W09   97  J36 25  2*46 PERIPHERAL TO CENTRAL DATA
1W09   98  J36 23  2*47 PERIPHERAL TO CENTRAL DATA
1W09   99  J37  8  2*24 PERIPHERAL TO CENTRAL DATA
1W09  900  J37  6  2*25 PERIPHERAL TO CENTRAL DATA
1W09  901  J37  4  2*26 PERIPHERAL TO CENTRAL DATA
1W09  902  J37 27  2*27 PERIPHERAL TO CENTRAL DATA
1W09  903  J37 25  2*28 PERIPHERAL TO CENTRAL DATA
1W09  904  J37 23  2*29 PERIPHERAL TO CENTRAL DATA
1W09  905
1W09  906
1W09  907
1W09  908
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2W02   90  B07 21
2W02   91  B07 24
2W02   92  B07 26
2W02   93  B08  5
2W02   94  B08  7
2W02   95  B08 10
2W02   96  B08 21
2W02   97  B08 24
2W02   98  B08 26
2W02   99  B05  5
2W02  900  B05  7
2W02  901  B05 10
2W02  902  B05 21
2W02  903  B05 24
2W02  904  B05 26
2W02  905
2W02  906
2W02  907
2W02  908
```

1W10	00			PERIPHERAL DATA TO MEMORY DISTRIBUTION				
1W10	90	J38	8	2*30 PERIPHERAL TO CENTRAL DATA	2W03	90	B06	5
1W10	91	J38	6	2*31 PERIPHERAL TO CENTRAL DATA	2W03	91	B06	7
1W10	92	J38	4	2*32 PERIPHERAL TO CENTRAL DATA	2W03	92	B06	10
1W10	93	J38	27	2*33 PERIPHERAL TO CENTRAL DATA	2W03	93	B06	21
1W10	94	J38	25	2*34 PERIPHERAL TO CENTRAL DATA	2W03	94	B06	24
1W10	95	J38	23	2*35 PERIPHERAL TO CENTRAL DATA	2W03	95	B06	26
1W10	96	J39	8	2*12 PERIPHERAL TO CENTRAL DATA	2W03	96	B03	5
1W10	97	J39	6	2*13 PERIPHERAL TO CENTRAL DATA	2W03	97	B03	7
1W10	98	J39	4	2*14 PERIPHERAL TO CENTRAL DATA	2W03	98	B03	10
1W10	99	J39	27	2*15 PERIPHERAL TO CENTRAL DATA	2W03	99	B03	21
1W10	900	J39	25	2*16 PERIPHERAL TO CENTRAL DATA	2W03	900	B03	24
1W10	901	J39	23	2*17 PERIPHERAL TO CENTRAL DATA	2W03	901	B03	26
1W10	902	J40	8	2*18 PERIPHERAL TO CENTRAL DATA	2W03	902	B04	5
1W10	903	J40	6	2*19 PERIPHERAL TO CENTRAL DATA	2W03	903	B04	7
1W10	904	J40	4	2*20 PERIPHERAL TO CENTRAL DATA	2W03	904	B04	10
1W10	905				2W03	905		
1W10	906				2W03	906		
1W10	907				2W03	907		
1W10	908				2W03	908		

1W11	00			PERIPHERAL DATA TO MEMORY DISTRIBUTION				
1W11	90	J40	27	2*21 PERIPHERAL TO CENTRAL DATA	2W04	90	B04	21
1W11	91	J40	25	2*22 PERIPHERAL TO CENTRAL DATA	2W04	91	B04	24
1W11	92	J40	23	2*23 PERIPHERAL TO CENTRAL DATA	2W04	92	B04	26
1W11	93	J41	8	2*0 PERIPHERAL TO CENTRAL DATA	2W04	93	B01	5
1W11	94	J41	6	2*1 PERIPHERAL TO CENTRAL DATA	2W04	94	B01	7
1W11	95	J41	4	2*2 PERIPHERAL TO CENTRAL DATA	2W04	95	B01	10
1W11	96	J41	27	2*3 PERIPHERAL TO CENTRAL DATA	2W04	96	B01	21
1W11	97	J41	25	2*4 PERIPHERAL TO CENTRAL DATA	2W04	97	B01	24
1W11	98	J41	23	2*5 PERIPHERAL TO CENTRAL DATA	2W04	98	B01	26
1W11	99	J42	8	2*6 PERIPHERAL TO CENTRAL DATA	2W04	99	B02	5
1W11	900	J42	6	2*7 PERIPHERAL TO CENTRAL DATA	2W04	900	B02	7
1W11	901	J42	4	2*8 PERIPHERAL TO CENTRAL DATA	2W04	901	B02	10
1W11	902	J42	27	2*9 PERIPHERAL TO CENTRAL DATA	2W04	902	B02	21
1W11	903	J42	25	2*10 PERIPHERAL TO CENTRAL DATA	2W04	903	B02	24
1W11	904	J42	23	2*11 PERIPHERAL TO CENTRAL DATA	2W04	904	B02	26
1W11	905				2W04	905		
1W11	906				2W04	906		
1W11	907				2W04	907		
1W11	908				2W04	908		

1W12	00			PERIPHERAL FROM CONTROL
1W12	90			
1W12	91			
1W12	92			
1W12	93			
1W12	94			
1W12	95			
1W12	96			
1W12	97			
1W12	98			
1W12	99			
1W12	900	I29	5	EXCHANGE RESUME OUT
1W12	901	I30	23	MC
1W12	902	I30	4	CLOCK
1W12	903	I30	27	READ GO
1W12	904	I30	25	WRITE GO
1W12	905	I30	8	EXCHANGE GO
1W12	906			
1W12	907			
1W12	908			

1W13	00			CHANNEL 0
1W13	90	M36	6	2*0 INPUT DATA
1W13	91	M36	4	2*1 INPUT DATA
1W13	92	M36	23	2*2 INPUT DATA
1W13	93	M36	27	2*3 INPUT DATA
1W13	94	M37	6	2*4 INPUT DATA
1W13	95	M37	4	2*5 INPUT DATA
1W13	96	M37	23	2*6 INPUT DATA
1W13	97	M37	27	2*7 INPUT DATA
1W13	98	M38	6	2*8 INPUT DATA
1W13	99	M38	4	2*9 INPUT DATA
1W13	900	M38	23	2*10 INPUT DATA
1W13	901	M38	27	2*11 INPUT DATA
1W13	902	M35	25	ACTIVE
1W13	903	M35	14	INACTIVE
1W13	904	M35	15	FULL
1W13	905	M35	8	EMPTY
1W13	906	M36	1	CLOCK (100N SEC)
1W13	907	M37	1	CLOCK (1 US)
1W13	908			

5W23	90			
5W23	91			
5W23	92			
5W23	93			
5W23	94			
5W23	95			
5W23	96			
5W23	97			
5W23	98			
5W23	99			
5W23	900	040	2	
5W23	901	042	26	
5W23	902	I22	12	
5W23	903	041	18	
5W23	904	041	20	
5W23	905	040	15	
5W23	906			
5W23	907			
5W23	908			

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1W14    00              CHANNEL 0

1W14    90   M36  5     2*0 OUTPUT DATA
1W14    91   M36 11     2*1 OUTPUT DATA
1W14    92   M36 28     2*2 OUTPUT DATA
1W14    93   M36 24     2*3 OUTPUT DATA
1W14    94   M37  5     2*4 OUTPUT DATA
1W14    95   M37 11     2*5 OUTPUT DATA
1W14    96   M37 28     2*6 OUTPUT DATA
1W14    97   M37 24     2*7 OUTPUT DATA
1W14    98   M38  5     2*8 OUTPUT DATA
1W14    99   M38 11     2*9 OUTPUT DATA
1W14   900   M38 28     2*10 OUTPUT DATA
1W14   901   M38 24     2*11 OUTPUT DATA
1W14   902   M35 22     ACTIVE
1W14   903   M35 18     INACTIVE
1W14   904   M35 13     FULL
1W14   905   M35  9     EMPTY
1W14   906   M35  3     FUNCTION
1W14   907   M38  1     MASTER CLEAR
1W14   908
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1W15    00              CHANNEL 1

1W15    90   M40  6     2*0 INPUT DATA
1W15    91   M40  4     2*1 INPUT DATA
1W15    92   M40 23     2*2 INPUT DATA
1W15    93   M40 27     2*3 INPUT DATA
1W15    94   M41  6     2*4 INPUT DATA
1W15    95   M41  4     2*5 INPUT DATA
1W15    96   M41 23     2*6 INPUT DATA
1W15    97   M41 27     2*7 INPUT DATA
1W15    98   M42  6     2*8 INPUT DATA
1W15    99   M42  4     2*9 INPUT DATA
1W15   900   M42 23     2*10 INPUT DATA
1W15   901   M42 27     2*11 INPUT DATA
1W15   902   M39 25     ACTIVE
1W15   903   M39 14     INACTIVE
1W15   904   M39 15     FULL
1W15   905   M39  8     EMPTY
1W15   906   M40  1     CLOCK (100NSEC)
1W15   907   M41  1     CLOCK (1US)
1W15   908
```

1W16	00			CHANNEL 1
1W16	90	M40	5	2*0 OUTPUT DATA
1W16	91	M40	11	2*1 OUTPUT DATA
1W16	92	M40	28	2*2 OUTPUT DATA
1W16	93	M40	24	2*3 OUTPUT DATA
1W16	94	M41	5	2*4 OUTPUT DATA
1W16	95	M41	11	2*5 OUTPUT DATA
1W16	96	M41	28	2*6 OUTPUT DATA
1W16	97	M41	24	2*7 OUTPUT DATA
1W16	98	M42	5	2*8 OUTPUT DATA
1W16	99	M42	11	2*9 OUTPUT DATA
1W16	900	M42	28	2*10 OUTPUT DATA
1W16	901	M42	24	2*11 OUTPUT DATA
1W16	902	M39	22	ACTIVE
1W16	903	M39	18	INACTIVE
1W16	904	M39	13	FULL
1W16	905	M39	9	EMPTY
1W16	906	M39	3	FUNCTION
1W16	907	M42	1	MASTER CLEAR
1W16	908			

1W17	00			CHANNEL 2
1W17	90	N36	6	2*0 INPUT DATA
1W17	91	N36	4	2*1 INPUT DATA
1W17	92	N36	23	2*2 INPUT DATA
1W17	93	N36	27	2*3 INPUT DATA
1W17	94	N37	6	2*4 INPUT DATA
1W17	95	N37	4	2*5 INPUT DATA
1W17	96	N37	23	2*6 INPUT DATA
1W17	97	N37	27	2*7 INPUT DATA
1W17	98	N38	6	2*8 INPUT DATA
1W17	99	N38	4	2*9 INPUT DATA
1W17	900	N38	23	2*10 INPUT DATA
1W17	901	N38	27	2*11 INPUT DATA
1W17	902	N35	25	ACTIVE
1W17	903	N35	14	INACTIVE
1W17	904	N35	15	FULL
1W17	905	N35	8	EMPTY
1W17	906	N36	1	CLOCK (100NSEC)
1W17	907	N37	1	CLOCK (1US)
1W17	908			

1W18	00			CHANNEL 2
1W18	90	N36	5	2*0 OUTPUT DATA
1W18	91	N36	11	2*1 OUTPUT DATA
1W18	92	N36	28	2*2 OUTPUT DATA
1W18	93	N36	24	2*3 OUTPUT DATA
1W18	94	N37	5	2*4 OUTPUT DATA
1W18	95	N37	11	2*5 OUTPUT DATA
1W18	96	N37	28	2*6 OUTPUT DATA
1W18	97	N37	24	2*7 OUTPUT DATA
1W18	98	N38	5	2*8 OUTPUT DATA
1W18	99	N38	11	2*9 OUTPUT DATA
1W18	900	N38	28	2*10 OUTPUT DATA
1W18	901	N38	24	2*11 OUTPUT DATA
1W18	902	N35	22	ACTIVE
1W18	903	N35	18	INACTIVE
1W18	904	N35	13	FULL
1W18	905	N35	9	EMPTY
1W18	906	N35	3	FUNCTION
1W18	907	N38	1	MASTER CLEAR
1W18	908			

1W19	00			CHANNEL 3
1W19	90	N40	6	2*0 INPUT DATA
1W19	91	N40	4	2*1 INPUT DATA
1W19	92	N40	23	2*2 INPUT DATA
1W19	93	N40	27	2*3 INPUT DATA
1W19	94	N41	6	2*4 INPUT DATA
1W19	95	N41	4	2*5 INPUT DATA
1W19	96	N41	23	2*6 INPUT DATA
1W19	97	N41	27	2*7 INPUT DATA
1W19	98	N42	6	2*8 INPUT DATA
1W19	99	N42	4	2*9 INPUT DATA
1W19	900	N42	23	2*10 INPUT DATA
1W19	901	N42	27	2*11 INPUT DATA
1W19	902	N39	25	ACTIVE
1W19	903	N39	14	INACTIVE
1W19	904	N39	15	FULL
1W19	905	N39	8	EMPTY
1W19	906	N40	1	CLOCK (100NSEC)
1W19	907	N41	1	CLOCK (1USEC)
1W19	908			

1W20	00			CHANNEL 3
1W20	90	N40	5	2*0 OUTPUT DATA
1W20	91	N40	11	2*1 OUTPUT DATA
1W20	92	N40	28	2*2 OUTPUT DATA
1W20	93	N40	24	2*3 OUTPUT DATA
1W20	94	N41	5	2*4 OUTPUT DATA
1W20	95	N41	11	2*5 OUTPUT DATA
1W20	96	N41	28	2*6 OUTPUT DATA
1W20	97	N41	24	2*7 OUTPUT DATA
1W20	98	N42	5	2*8 OUTPUT DATA
1W20	99	N42	11	2*9 OUTPUT DATA
1W20	900	N42	28	2*10 OUTPUT DATA
1W20	901	N42	24	2*11 OUTPUT DATA
1W20	902	N39	22	ACTIVE
1W20	903	N39	18	INACTIVE
1W20	904	N39	13	FULL
1W20	905	N39	9	EMPTY
1W20	906	N39	3	FUNCTION
1W20	907	N42	1	MASTER CLEAR
1W20	908			

1W21	00			CHANNEL 4
1W21	90	036	6	2*0 INPUT DATA
1W21	91	036	4	2*1 INPUT DATA
1W21	92	036	23	2*2 INPUT DATA
1W21	93	036	27	2*3 INPUT DATA
1W21	94	037	6	2*4 INPUT DATA
1W21	95	037	4	2*5 INPUT DATA
1W21	96	037	23	2*6 INPUT DATA
1W21	97	037	27	2*7 INPUT DATA
1W21	98	038	6	2*8 INPUT DATA
1W21	99	038	4	2*9 INPUT DATA
1W21	900	038	23	2*10 INPUT DATA
1W21	901	038	27	2*11 INPUT DATA
1W21	902	035	25	ACTIVE
1W21	903	035	14	INACTIVE
1W21	904	035	15	FULL
1W21	905	035	8	EMPTY
1W21	906	036	1	CLOCK (100NSEC)
1W21	907	037	1	CLOCK (1USEC)
1W21	908			

1W22	00			CHANNEL 4
1W22	90	036	5	2*0 OUTPUT DATA
1W22	91	036	11	2*1 OUTPUT DATA
1W22	92	036	28	2*2 OUTPUT DATA
1W22	93	036	24	2*3 OUTPUT DATA
1W22	94	037	5	2*4 OUTPUT DATA
1W22	95	037	11	2*5 OUTPUT DATA
1W22	96	037	28	2*6 OUTPUT DATA
1W22	97	037	24	2*7 OUTPUT DATA
1W22	98	038	5	2*8 OUTPUT DATA
1W22	99	038	11	2*9 OUTPUT DATA
1W22	900	038	28	2*10 OUTPUT DATA
1W22	901	038	24	2*11 OUTPUT DATA
1W22	902	035	22	ACTIVE
1W22	903	035	18	INACTIVE
1W22	904	035	13	FULL
1W22	905	035	9	EMPTY
1W22	906	035	3	FUNCTION
1W22	907	038	1	MASTER CLEAR
1W22	908			

1W23	00			CHANNEL 5
1W23	90	040	6	2*0 INPUT DATA
1W23	91	040	4	2*1 INPUT DATA
1W23	92	040	23	2*2 INPUT DATA
1W23	93	040	27	2*3 INPUT DATA
1W23	94	041	6	2*4 INPUT DATA
1W23	95	041	4	2*5 INPUT DATA
1W23	96	041	23	2*6 INPUT DATA
1W23	97	041	27	2*7 INPUT DATA
1W23	98	042	6	2*8 INPUT DATA
1W23	99	042	4	2*9 INPUT DATA
1W23	900	042	23	2*10 INPUT DATA
1W23	901	042	27	2*11 INPUT DATA
1W23	902	039	25	ACTIVE
1W23	903	039	14	INACTIVE
1W23	904	039	15	FULL
1W23	905	039	8	EMPTY
1W23	906	040	1	CLOCK (100NSEC)
1W23	907	041	1	CLOCK (1US)
1W23	908			

1W24	00			CHANNEL 5
1W24	90	040	5	2*0 OUTPUT DATA
1W24	91	040	11	2*1 OUTPUT DATA
1W24	92	040	28	2*2 OUTPUT DATA
1W24	93	040	24	2*3 OUTPUT DATA
1W24	94	041	5	2*4 OUTPUT DATA
1W24	95	041	11	2*5 OUTPUT DATA
1W24	96	041	28	2*6 OUTPUT DATA
1W24	97	041	24	2*7 OUTPUT DATA
1W24	98	042	5	2*8 OUTPUT DATA
1W24	99	042	11	2*9 OUTPUT DATA
1W24	900	042	28	2*10 OUTPUT DATA
1W24	901	042	24	2*11 OUTPUT DATA
1W24	902	039	22	ACTIVE
1W24	903	039	18	INACTIVE
1W24	904	039	13	FULL
1W24	905	039	9	EMPTY
1W24	906	039	3	FUNCTION
1W24	907	042	1	MASTER CLEAR
1W24	908			

1W25	00			CHANNEL 6
1W25	90	P36	6	2*0 INPUT DATA
1W25	91	P36	4	2*1 INPUT DATA
1W25	92	P36	23	2*2 INPUT DATA
1W25	93	P36	27	2*3 INPUT DATA
1W25	94	P37	6	2*4 INPUT DATA
1W25	95	P37	4	2*5 INPUT DATA
1W25	96	P37	23	2*6 INPUT DATA
1W25	97	P37	27	2*7 INPUT DATA
1W25	98	P38	6	2*8 INPUT DATA
1W25	99	P38	4	2*9 INPUT DATA
1W25	900	P38	23	2*10 INPUT DATA
1W25	901	P38	27	2*11 INPUT DATA
1W25	902	P35	25	ACTIVE
1W25	903	P35	14	INACTIVE
1W25	904	P35	15	FULL
1W25	905	P35	8	EMPTY
1W25	906	P36	1	CLOCK (100NSEC)
1W25	907	P37	1	CLOCK (1USEC)
1W25	908			

1W26	00			CHANNEL 6
1W26	90	P36	5	2*0 OUTPUT DATA
1W26	91	P36	11	2*1 OUTPUT DATA
1W26	92	P36	28	2*2 OUTPUT DATA
1W26	93	P36	24	2*3 OUTPUT DATA
1W26	94	P37	5	2*4 OUTPUT DATA
1W26	95	P37	11	2*5 OUTPUT DATA
1W26	96	P37	28	2*6 OUTPUT DATA
1W26	97	P37	24	2*7 OUTPUT DATA
1W26	98	P38	5	2*8 OUTPUT DATA
1W26	99	P38	11	2*9 OUTPUT DATA
1W26	900	P38	28	2*10 OUTPUT DATA
1W26	901	P38	24	2*11 OUTPUT DATA
1W26	902	P35	22	ACTIVE
1W26	903	P35	18	INACTIVE
1W26	904	P35	13	FULL
1W26	905	P35	9	EMPTY
1W26	906	P35	3	FUNCTION
1W26	907	P38	1	MASTER CLEAR
1W26	908			

1W27	00			CHANNEL 7
1W27	90	P40	6	2*0 INPUT DATA
1W27	91	P40	4	2*1 INPUT DATA
1W27	92	P40	23	2*2 INPUT DATA
1W27	93	P40	27	2*3 INPUT DATA
1W27	94	P41	6	2*4 INPUT DATA
1W27	95	P41	4	2*5 INPUT DATA
1W27	96	P41	23	2*6 INPUT DATA
1W27	97	P41	27	2*7 INPUT DATA
1W27	98	P42	6	2*8 INPUT DATA
1W27	99	P42	4	2*9 INPUT DATA
1W27	900	P42	23	2*10 INPUT DATA
1W27	901	P42	27	2*11 INPUT DATA
1W27	902	P39	25	ACTIVE
1W27	903	P39	14	INACTIVE
1W27	904	P39	15	FULL
1W27	905	P39	8	EMPTY
1W27	906	P40	1	CLOCK (100NSEC)
1W27	907	P41	1	CLOCK (1US)
1W27	908			

```
1W28   00            CHANNEL 7

1W28   90   P40  5   2*0 OUTPUT DATA
1W28   91   P40 11   2*1 OUTPUT DATA
1W28   92   P40 28   2*2 OUTPUT DATA
1W28   93   P40 24   2*3 OUTPUT DATA
1W28   94   P41  5   2*4 OUTPUT DATA
1W28   95   P41 11   2*5 OUTPUT DATA
1W28   96   P41 28   2*6 OUTPUT DATA
1W28   97   P41 24   2*7 OUTPUT DATA
1W28   98   P42  5   2*8 OUTPUT DATA
1W28   99   P42 11   2*9 OUTPUT DATA
1W28  900   P42 28   2*10 OUTPUT DATA
1W28  901   P42 24   2*11 OUTPUT DATA
1W28  902   P39 22   ACTIVE
1W28  903   P39 18   INACTIVE
1W28  904   P39 13   FULL
1W28  905   P39  9   EMPTY
1W28  906   P39  3   FUNCTION
1W28  907   P42  1   MASTER CLEAR
1W28  908
```

```
1W29   00            CHANNEL 10

1W29   90   Q36  6   2*0 INPUT DATA
1W29   91   Q36  4   2*1 INPUT DATA
1W29   92   Q36 23   2*2 INPUT DATA
1W29   93   Q36 27   2*3 INPUT DATA
1W29   94   Q37  6   2*4 INPUT DATA
1W29   95   Q37  4   2*5 INPUT DATA
1W29   96   Q37 23   2*6 INPUT DATA
1W29   97   Q37 27   2*7 INPUT DATA
1W29   98   Q38  6   2*8 INPUT DATA
1W29   99   Q38  4   2*9 INPUT DATA
1W29  900   Q38 23   2*10 INPUT DATA
1W29  901   Q38 27   2*11 INPUT DATA
1W29  902   Q35 25   ACTIVE
1W29  903   Q35 14   INACTIVE
1W29  904   Q35 15   FULL
1W29  905   Q35  8   EMPTY
1W29  906   Q36  1   CLOCK (100NSEC)
1W29  907   Q37  1   CLOCK  (1US)
1W29  908
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1W30	00			CHANNEL 10
1W30	90	Q36	5	2*0 OUTPUT DATA
1W30	91	Q36	11	2*1 OUTPUT DATA
1W30	92	Q36	28	2*2 OUTPUT DATA
1W30	93	Q36	24	2*3 OUTPUT DATA
1W30	94	Q37	5	2*4 OUTPUT DATA
1W30	95	Q37	11	2*5 OUTPUT DATA
1W30	96	Q37	28	2*6 OUTPUT DATA
1W30	97	Q37	24	2*7 OUTPUT DATA
1W30	98	Q38	5	2*8 OUTPUT DATA
1W30	99	Q38	11	2*9 OUTPUT DATA
1W30	900	Q38	28	2*10 OUTPUT DATA
1W30	901	Q38	24	2*11 OUTPUT DATA
1W30	902	Q35	22	ACTIVE
1W30	903	Q35	18	INACTIVE
1W30	904	Q35	13	FULL
1W30	905	Q35	9	EMPTY
1W30	906	Q35	3	FUNCTION
1W30	907	Q38	1	MASTER CLEAR
1W30	908			

1W31	00			CHANNEL 11
1W31	90	Q40	6	2*0 INPUT DATA
1W31	91	Q40	4	2*1 INPUT DATA
1W31	92	Q40	23	2*2 INPUT DATA
1W31	93	Q40	27	2*3 INPUT DATA
1W31	94	Q41	6	2*4 INPUT DATA
1W31	95	Q41	4	2*5 INPUT DATA
1W31	96	Q41	23	2*6 INPUT DATA
1W31	97	Q41	27	2*7 INPUT DATA
1W31	98	Q42	6	2*8 INPUT DATA
1W31	99	Q42	4	2*9 INPUT DATA
1W31	900	Q42	23	2*10 INPUT DATA
1W31	901	Q42	27	2*11 INPUT DATA
1W31	902	Q39	25	ACTIVE
1W31	903	Q39	14	INACTIVE
1W31	904	Q39	15	FULL
1W31	905	Q39	8	EMPTY
1W31	906	Q40	1	CLOCK (100US)
1W31	907	Q41	1	CLOCK (1US)
1W31	908			

1W32	00			CHANNEL 11
1W32	90	Q40	5	2*0 OUTPUT DATA
1W32	91	Q40	11	2*1 OUTPUT DATA
1W32	92	Q40	28	2*2 OUTPUT DATA
1W32	93	Q40	24	2*3 OUTPUT DATA
1W32	94	Q41	5	2*4 OUTPUT DATA
1W32	95	Q41	11	2*5 OUTPUT DATA
1W32	96	Q41	28	2*6 OUTPUT DATA
1W32	97	Q41	24	2*7 OUTPUT DATA
1W32	98	Q42	5	2*8 OUTPUT DATA
1W32	99	Q42	11	2*9 OUTPUT DATA
1W32	900	Q42	28	2*10 OUTPUT DATA
1W32	901	Q42	24	2*11 OUTPUT DATA
1W32	902	Q39	22	ACTIVE
1W32	903	Q39	18	INACTIVE
1W32	904	Q39	13	FULL
1W32	905	Q39	9	EMPTY
1W32	906	Q39	3	FUNCTION
1W32	907	Q42	1	MASTER CLEAR
1W32	908			

1W33	00			CHANNEL 12
1W33	90	R36	6	2*0 INPUT DATA
1W33	91	R36	4	2*1 INPUT DATA
1W33	92	R36	23	2*2 INPUT DATA
1W33	93	R36	27	2*3 INPUT DATA
1W33	94	R37	6	2*4 INPUT DATA
1W33	95	R37	4	2*5 INPUT DATA
1W33	96	R37	23	2*6 INPUT DATA
1W33	97	R37	27	2*7 INPUT DATA
1W33	98	R38	6	2*8 INPUT DATA
1W33	99	R38	4	2*9 INPUT DATA
1W33	900	R38	23	2*10 INPUT DATA
1W33	901	R38	27	2*11 INPUT DATA
1W33	902	R35	25	ACTIVE
1W33	903	R35	14	INACTIVE
1W33	904	R35	15	FULL
1W33	905	R35	8	EMPTY
1W33	906	R36	1	CLOCK (100 NSEC)
1W33	907	R37	1	CLOCK (1US)
1W33	908			

1W34	00		CHANNEL 12
1W34	90	R36 5	2*0 OUTPUT DATA
1W34	91	R36 11	2*1 OUTPUT DATA
1W34	92	R36 28	2*2 OUTPUT DATA
1W34	93	R36 24	2*3 OUTPUT DATA
1W34	94	R37 5	2*4 OUTPUT DATA
1W34	95	R37 11	2*5 OUTPUT DATA
1W34	96	R37 28	2*6 OUTPUT DATA
1W34	97	R37 24	2*7 OUTPUT DATA
1W34	98	R38 5	2*8 OUTPUT DATA
1W34	99	R38 11	2*9 OUTPUT DATA
1W34	900	R38 28	2*10 OUTPUT DATA
1W34	901	R38 24	2*11 OUTPUT DATA
1W34	902	R35 22	ACTIVE
1W34	903	R35 18	INACTIVE
1W34	904	R35 13	FULL
1W34	905	R35 9	EMPTY
1W34	906	R35 3	FUNCTION
1W34	907	R38 1	MASTER CLEAR
1W34	908		

1W35	00		CHANNEL 13
1W35	90	R40 6	2*0 INPUT DATA
1W35	91	R40 4	2*1 INPUT DATA
1W35	92	R40 23	2*2 INPUT DATA
1W35	93	R40 27	2*3 INPUT DATA
1W35	94	R41 6	2*4 INPUT DATA
1W35	95	R41 4	2*5 INPUT DATA
1W35	96	R41 23	2*6 INPUT DATA
1W35	97	R41 27	2*7 INPUT DATA
1W35	98	R42 6	2*8 INPUT DATA
1W35	99	R42 4	2*9 INPUT DATA
1W35	900	R42 23	2*10 INPUT DATA
1W35	901	R42 27	2*11 INPUT DATA
1W35	902	R39 25	ACTIVE
1W35	903	R39 14	INACTIVE
1W35	904	R39 15	FULL
1W35	905	R39 8	EMPTY
1W35	906	R40 1	CLOCK (100NS)
1W35	907	R41 1	CLOCK (1US)
1W35	908		

1W36	00			CHANNEL 13
1W36	90	R40	5	2*0 OUTPUT DATA
1W36	91	R40	11	2*1 OUTPUT DATA
1W36	92	R40	28	2*2 OUTPUT DATA
1W36	93	R40	24	2*3 OUTPUT DATA
1W36	94	R41	5	2*4 OUTPUT DATA
1W36	95	R41	11	2*5 OUTPUT DATA
1W36	96	R41	28	2*6 OUTPUT DATA
1W36	97	R41	24	2*7 OUTPUT DATA
1W36	98	R42	5	2*8 OUTPUT DATA
1W36	99	R42	11	2*9 OUTPUT DATA
1W36	900	R42	28	2*10 OUTPUT DATA
1W36	901	R42	24	2*11 OUTPUT DATA
1W36	902	R39	22	ACTIVE
1W36	903	R39	18	INACTIVE
1W36	904	R39	13	FULL
1W36	905	R39	9	EMPTY
1W36	906	R39	3	FUNCTION
1W36	907	R42	1	MASTER CLEAR
1W36	908			

1W37 CABLE 5 DEAD START PANEL

CABLE	PAIR	COLOR	DEST.		SOURCE
1W37	1	0	1I29-GND	S01-ON	S01-1
1W37		9	1I29-GND	S01-ON	S01-1
1W37	2	2	1I29-16	S01-OFF	S01-2
1W37		9			
1W37	3	4	1I29-2	S02-SWEEP	S02-1
1W37		9			
1W37	4	5	1I30-GND	S02-LOAD	S02-2
1W37		9	1I30-GND	S02-LOAD	S02-2
1W37	5	6	1I29-4	S02-DUMP	S02-3
1W37		9			
1W37	6	90	1 +6V	S03-HIGH	S03-1
1W37		9	1 +6V	S03-HIGH	S03-1
1W37	7	91	1G10-16	S01-NORMAL	S03-2
1W37		9			
1W37	8	92	1I30-GND	S03-LOW	S03-3
1W37		9	1I30-GND	S03-LOW	S03-3
1W37	9	93	1 +6V	S04-HIGH	S04-1
1W37		9	1 +6V	S04-HIGH	S04-1
1W37	10	94	1H29-26	S04-NORMAL	S04-2
1W37		9	24	S04-NORMAL	S04-2
1W37	11	95	GND	S04-LOW	S04-3
1W37		9	GND	S04-LOW	S04-3
1W37	12	96			
1W37		9			
1W37	13	97			
1W37		9			
1W37	14	98			
1W37		9			
1W37	15	900			
1W37		9			
1W37	16	910			
1W37		9			
1W37	17	920			
1W37		9			
1W37	18	930			
1W37		9			
1W37	19	940			
1W37		9			
1W37	20	950			
1W37		9			
1W37	21	960			
1W37		9			
1W37	22	970			
1W37		9			
1W37	23	980			
1W37		9			
1W37	24	990			
1W37		9			