

MOTIONPACK FD SERIES DESCRIPTIVE INFORMATION

ABSOLUTE/INCREMENTAL SYSTEM, SINGLE AXIS MOTION
CONTROLLER PROGRAMMER



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1. SPECIFICATIONS

Table 1.1 Specifications

Item	Ratings
Type	CMPR-PFD30
Indicator	Liquid crystal module with EL back-light 16 characters × 4 lines and display LEDs
EL Service Lifetime	Luminance is deteriorated a little after approx 2000 hours elapse.
Switch	Operation key switch × 40
Auxiliary Memory Unit	No-contact method memory card (reader/writer built-in)
Printer Board	RS-232C level interface built-in (D-SUB 9-pin)
Power Supply	Supplied from controller through cable
Environment	Operation ambient temperature : 0 to 50°C natural air cooling Storage ambient temperature : -20 to +60°C Ambient humidity : 30 to 95%RH (non-condensing) Vibration resistance : In accordance with JIS C 0911 (up to 1G) Shock resistance : In accordance with JIS C 0912 (up to 10G) Atmosphere : Free from inflammables, corrosive gases, dust, metallic dust, high temperature or high humidity.
External Dimensions	85 (W) × 190 (H) × 37 (D) (in mm)
Approx Weight	Approx 450 g

2. PANEL

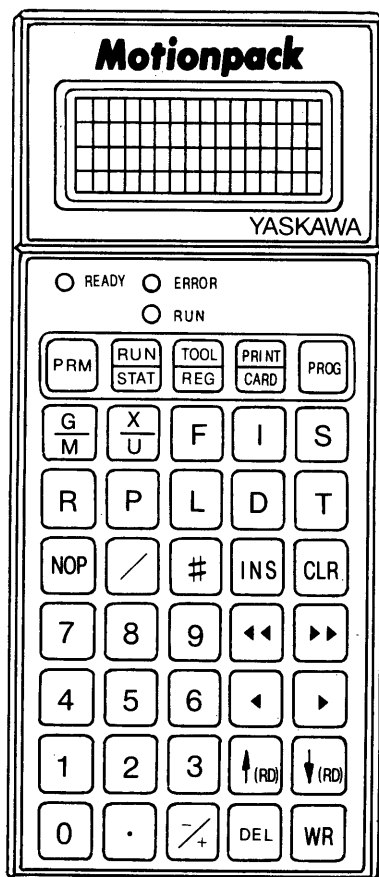


Fig. 2.1 Panel

Key Name	Functions (Applications)
PRM	Used for parameter checking or setting.
REG	Used for register checking or setting.
TOOL	Used for compensated value checking or setting.
PROG	Used for program checking, change, creation, deletion or move.
RUN	Used for current operation status checking.
STAT	Used for status checking.
PRINT	Used for parameter, program, register or compensated value print-out.
CARD	Used for parameter, program, register or compensated value load/save or checking card directory information.
◀◀ ▶▶	Used for data value change and moves the cursor to the head of the next (former) character line. (The cursor move is a rotation move.)
◀ ▶	Used for data value change and moves the cursor to the next character in a character line. (The cursor move is a rotation move.)
DEL	Used for character deletion. (Characters after the deleted character go to one space to the left.) Used for program (block) deletion.
CLR	When this key is depressed one time during any data setting in a menu that is currently developed, the screen before the data input is displayed. When it is depressed again, the latest input screen is displayed if there is a formally input menu selection screen ; if not, the RUN status is displayed.
NOP	Used for programming or NOP block creation.
INS	Used for character insertion or block insertion.
WR	Used for data writing-in to Motionpack FD. Used for menu definition.
()	Used for data read-in from Motionpack FD. Used for page feeding.

Other keys are over-writing input (characters). /or # key is not used.

3. OPERATION METHOD AND CONNECTION

3.1 OPERATION METHOD

(1) Cable Connection

Connectors, one for connection with the controller and another for connection with the printer are provided for the programmer bottom and side, respectively.

Connect the programmer with the controller using exclusive-use cables. Do not fail to lock the connectors when the exclusive-use programmer is used.

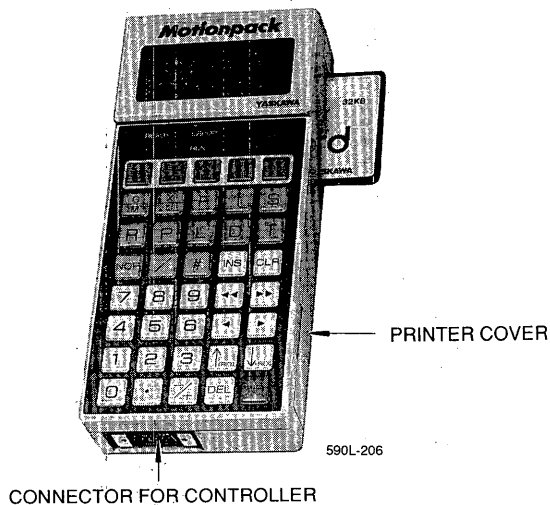


Fig. 3.1 Programmer

(2) Operation

Since the programmer has the power supply and signals stored in a cable, it can operate as soon as the cable is connected. (See Table 3.1.)

The programmer does not have a reset key. If it is necessary to reset, remove the connector for controller and connect it again. (Reset is enabled at the power supply startup.)

Table 3.1 Contents of Display (Normal/Error)

Display	Color	Contents
READY	Green	Lights when exclusive-use programmer operates normally, light OFF when it does not.
ERROR	Red	Lights when communication with controller is not executed normally.

(3) Panel Mounting

The programmer can be mounted on the panel face. In this case, mount the programmer at the rear side using three taps on the rear side.

(4) Liquid Crystal Adjustment

The programmer can adjust the liquid crystal display contrast or EL back-light luminance (bright) if necessary. For adjustment, open the printer cover and use a driver.

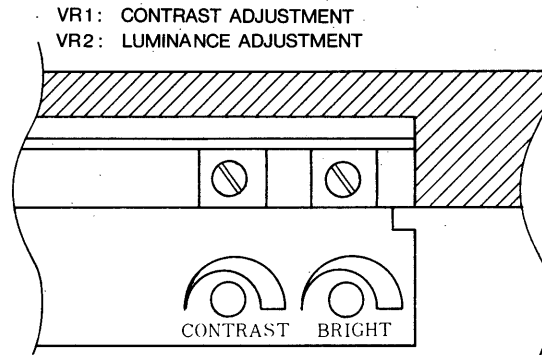


Fig. 3.2 Liquid Crystal Adjustment

(5) Precautions on Memory Card Application

Since the memory card is of no-contact method, it does not have any connectors.

Therefore, if the card is not inserted to the reader/writer slit firmly, the data cannot be read or written and "card access error" occurs. The error message is shown below.

The error also occurs if the card is removed during reading or writing since files in the card are damaged.

If "card access error" is displayed, insert the card again and attempt to execute. However, should the error not be cleared, it is necessary to execute the card all-clear.

C	a	r	d	a	c	c	e	s	s					
							e	r	r	o	r			
-	p	.	u	.	s	h	C	L	R	k	e	y	-	-

3.2 CONNECTION WITH CONTROLLER

(1) Connector at Programmer Side

Main Port (DELC-J9PAF-12L9): Connection with controller

5		9	0 _s V
4	*RXD	8	0 _s V
3	RXD	7	+5 V
2	*TXD	6	+5 V
1	TXD		

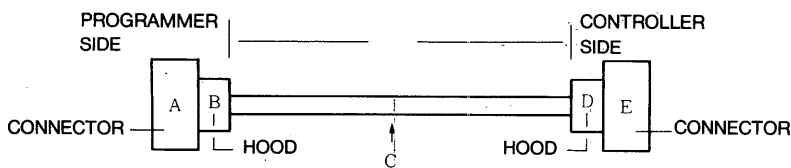
Connector No.	Programmer Side Connector	Applicable Connector	Hood	Maker
Main	DELC-J9PAF-12L9	DE-9SF-N	DE-C8-J9-F1-1	JAE

(2) Connector at Controller Side

CN5 (DELC-J9SAF-12L9) : Connection with programmer

9	0 _s V	5	
8	0 _s V	4	*RXD
7	+5 V	3	RXD
6	+5 V	2	*TXD
		1	TXD

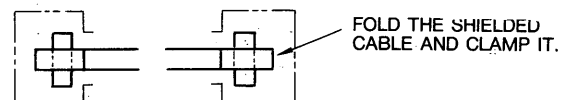
(3) Exclusive-use Cable (Attached)



Type : CMPR-WU13
(3 m)

Fig. 3.3 Exclusive-use Cable (Attached)

A Connector DE-9SF-N		C Cable UL Shielded Cable DP8409123		E Connector DE-9PF-N	
Pin No.	Cable Core	Cable Color	Pin No.	Signal Name	
1	Twisted	Grey	1	TXD	
2		White (grey)	2	*TXD	
3	Twisted	Orange	3	RXD	
4		White (orange)	4	*RXD	
5	Twisted	Light green	5		
6		White (light green)	6	+5 V	
7		Red	7	+5 V	
8		Yellow	8	GND	
9		Green (yellow)	9	GND	



3.3 CONNECTION WITH PRINTER

Connection with the printer is in accordance with the RS-232C serial interface specifications. Hand-shake between the programmer and the printer is performed either by flag control method or X-ON/X-OFF control method.

(1) Flag Control Method

When the printer is in receiving disable status (e.g. when the buffer RAM memory is almost full), the output signal from the printer is turned off and transmission from the programmer is stopped temporarily. Then when transmission is ready, the printer turns on the output signal and the data transmission from the programmer is permitted.

This method is as shown in the Fig. 3.4.

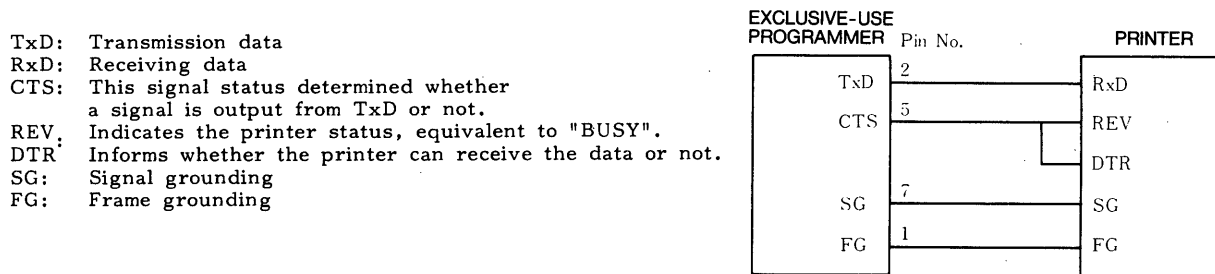


Fig. 3.4 Connection in Flag Control

(2) X-ON/X-OFF Control Method

The printer receiving status (whether it can receive the data or not) is controlled by sending a control code from the printer side.

X-ON (DC1 code <11H>) or X-OFF (DC1 code <13H>) is sent to the exclusive-use programmer when the printer is ready to receive the data or when the printer is not ready to receive the data, respectively, the exclusive-use programmer sends the data according to the instruction.

This method is as shown in the Fig. 3.5.

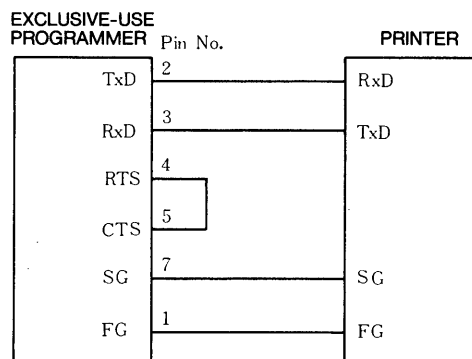


Fig. 3.5 X-ON/X-OFF Control Method

(3) Connector at Programmer Side

RS-232C port (DELC-J9SAF-12L9): Connection with printer

1	FG	6	(RESERVED)
2	TXD	7	0 _s V
3	RXD	8	(RESERVED)
4	RTS	9	(RESERVED)
5	CTS		

Connector No.	Programmer Side Connector	Applicable Connector	Hood	Maker
Printer	DELC-J9SAF-12L9	DE-9PF-N	DE-C8-J9-F1-1	JAE

4. FUNCTION LIST

Table 4.1 Function List

No.	Function Name	Contents
1	Parameter check	Display the specified parameter contents.
2	Parameter set	Sets a value to the specified parameter.
3	Register check	Displays the specified register contents.
4	Register set	Sets a value to the specified parameter.
5	Compensated value check	Sets a shifted value or offset value of the specified coordinate system.
6	Compensated value set	Sets a shifted value or offset value of the specified coordinate system.
7	Program check	Displays the specified block program contents.
8	Program change	Sets a program to the specified block.
9	Program (block) deletion	Deletes the specified block program.
10	Program (block) copy	Copies the specified block program to other block.
11	Program (block) move	Moves the specified block program to other block.
12	Memory card read	Transmits a program or parameter from the memory card to the Motionpack.
13	Memory card write-verify	Transfer or verify a program or parameter from the memory card to the Motionpack.
14	Printer output	Outputs a program or parameter from the card to the printer.
15	RUN display (mode, current position, current N number, speed, waiting status, alarm occurrence)	Displays each data as described in the parentheses to the left in order to monitor the Motionpack run status.
16	RUN display (Current executing) program display)	Displays the program contents that is being executed.
17	RUN display (Various position data)	Displays the position data in order to monitor the Motionpack run status.
18	Status display (I/O status)	Displays the I/O signal status in order to monitor the Motionpack run status.
19	Status display (alarm message display)	Displays an alarm message.
20	Status display (Position deviation) display)	Displays the position deviation value.
21	Status display (Speed, print-out according to resultant torque monitor)	Outputs the monitored value of speed or torque to the printer.

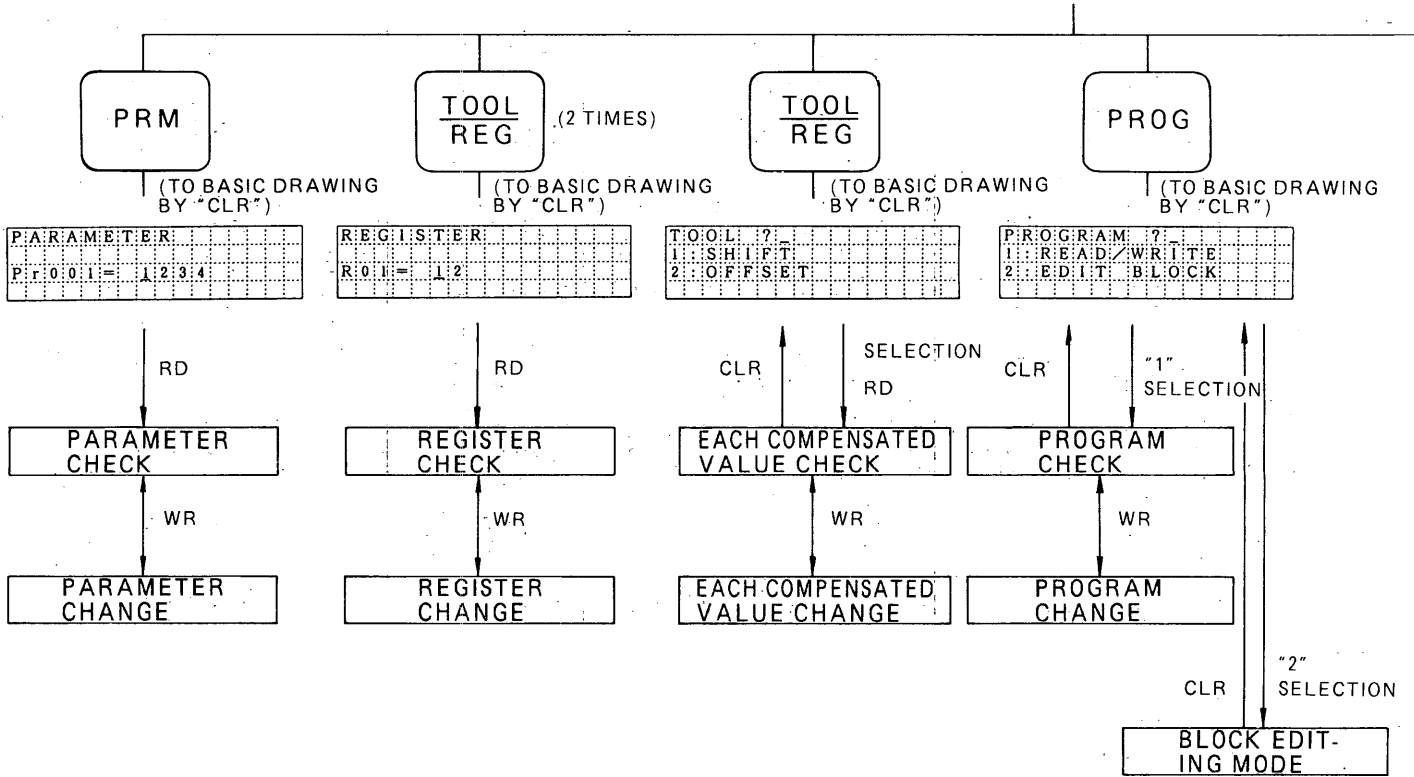
5. OPERATION METHOD

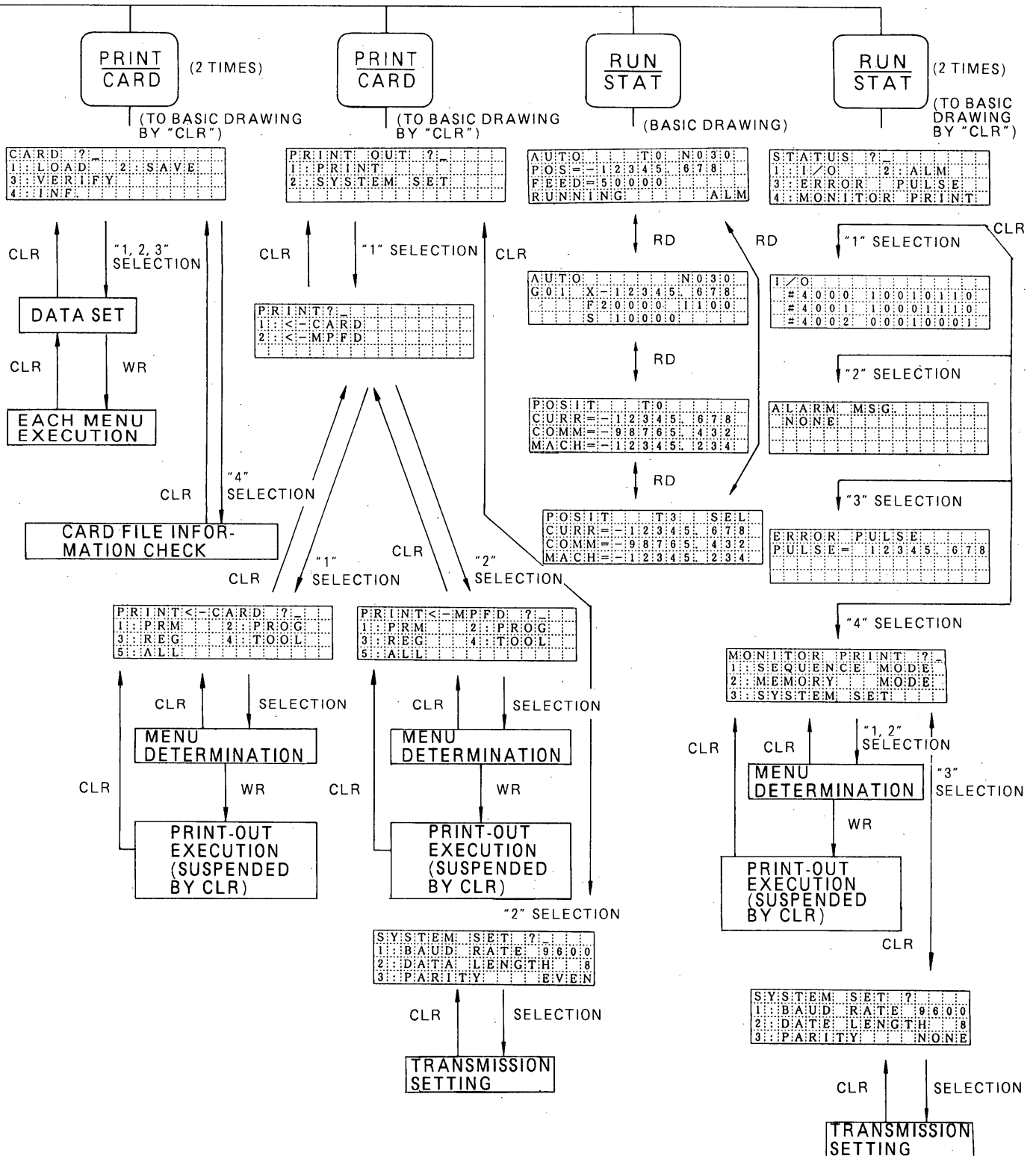
5.1 MENU FLOW CHART

The menu flow chart of the programmer operation is shown below.

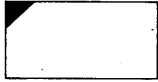
M.P.	F.D.	M.V.E.R.	*	**
		P.V.E.R.	*	**
c.o.p.y.r.i.g.h.t.				
1991	Y.A.S.K.A.W.A			

(AT POWER SUPPLY ON)





5.2 INITIAL SCREEN



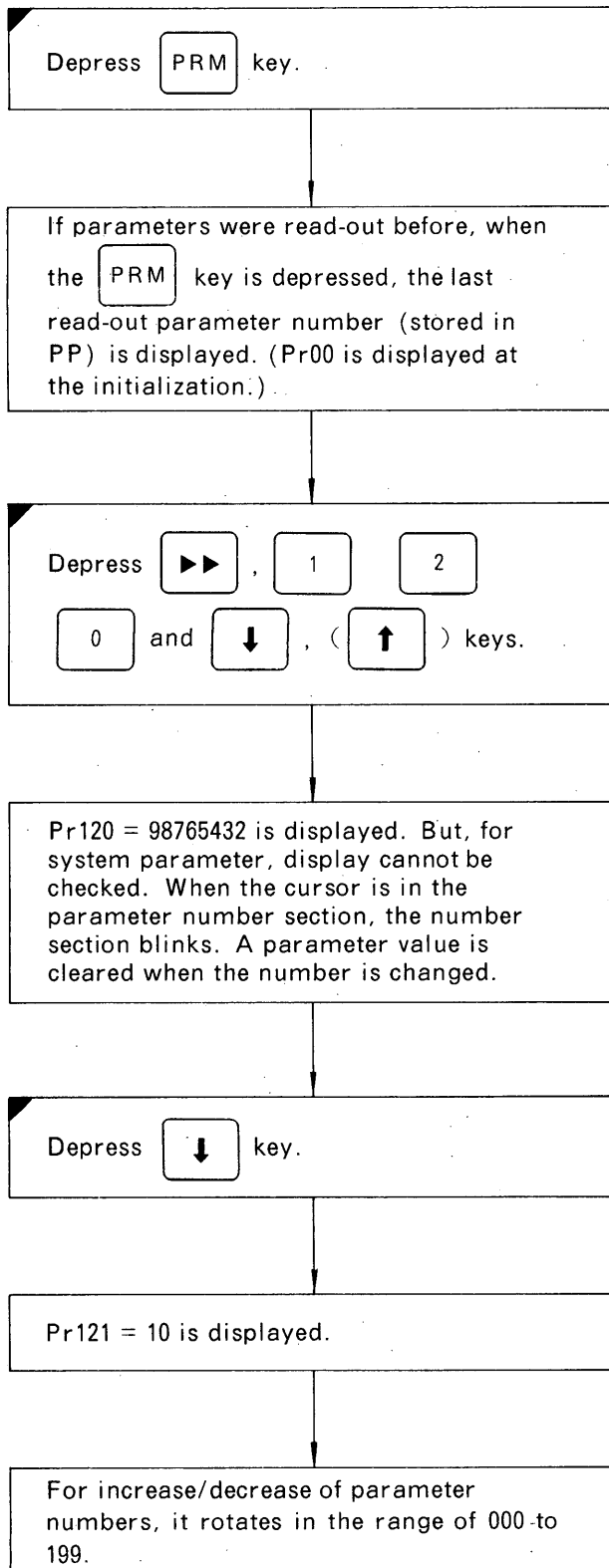
indicates an operation procedure.

Power supply ON

Displays the Motionpack version and PP side version at power supply ON.
Then, depressing a function key opens the menu.

M:P	-	F	D		M	V	E	R	:	*	.	*	*													
										P	V	E	R	:	*	.	*	*								
										c	o	p	y	r	i	g	h	t	:							
										1	9	9	1							Y	A	S	K	A	W	A

5.3 PARAMETER CHECK



P	A	R	A	M	E	T	E	R						
P	r	0	0	1	=	1	2	3	4					

P	A	R	A	M	E	T	E	R						
P	r	1	2	0	=	9	8	7	6	5	4	3	2	

P	A	R	A	M	E	T	E	R						
P	r	1	2	1	=	1	0							

5.4 PARAMETER CHANGE

The Current value is displayed for the parameter checking procedures described above.

Pr042 = 10 is displayed.

P	A	R	A	M	E	T	E	R	:								
P	r	0	4	2	=	1	0										

Depress , and keys.
 A number cannot be input in the space for signs (7th column) though it is attempted. In this case, it is automatically input in the 8th column.

P	A	R	A	M	E	T	E	R	:								
P	r	0	4	2	=	2	0	0									

Depress key.

200 is written-in to Pr042. At the same time, Pr042 = 200 is displayed and the cursor indicates the head of data.
 *When a write-in error occurs, "inputerr" is displayed in the "PARAMETER" display section.

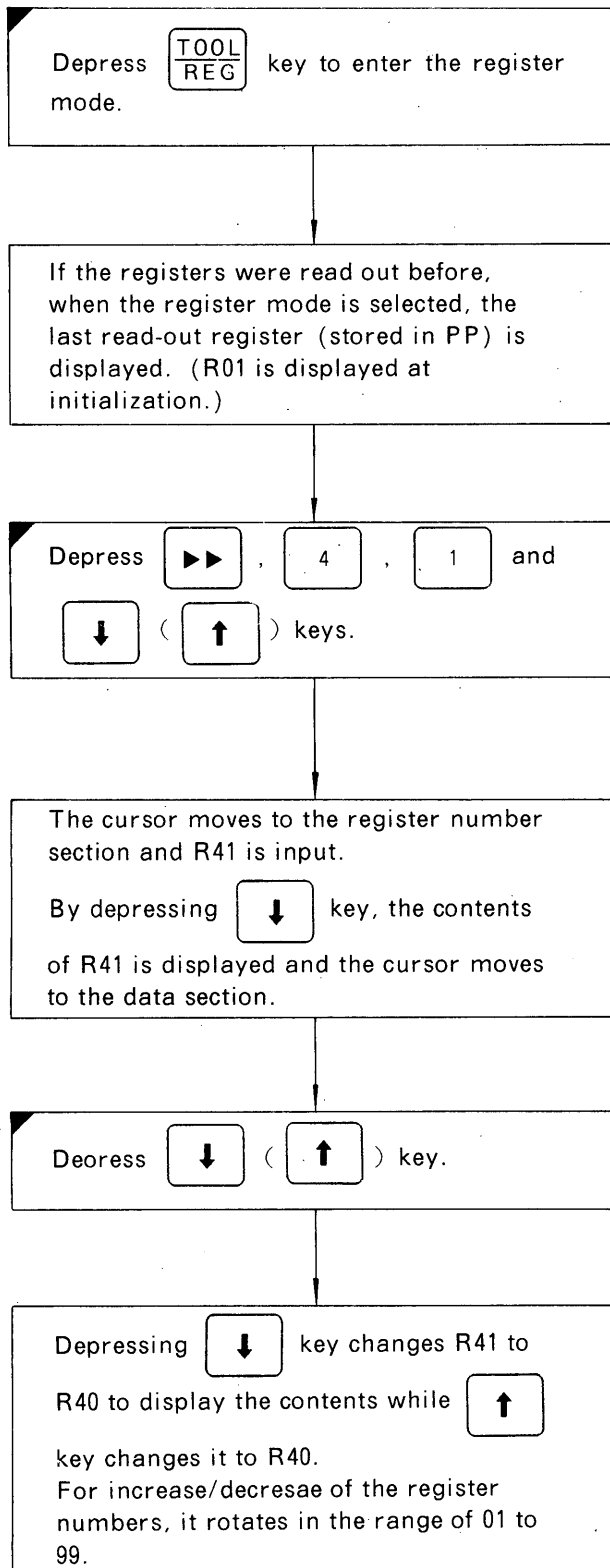
P	A	R	A	M	E	T	E	R	:								
P	r	0	4	2	=	2	0	0									

Depress and keys.

The cursor indicates the head of the Pr number. The number section blinks when the cursor is in the parameter number section. Then the parameter value is cleared at the number change.

P	A	R	A	M	E	T	E	R	:								
P	r	1	4	2	=												

5.5 REGISTER CHECK



R	E	G	I	S	T	E	R												
R	0	1	=					1	2										

R	E	G	I	S	T	E	R												
R	4	1	=					9	8										

R	E	G	I	S	T	E	R												
R	4	2	=					1	0										

5.6 REGISTER CHANGE

The current value is displayed for the register checking procedures described above.

R42 = 1 is displayed and the cursor indicates the head of data.

REGISTER									
R	4	2	=	1	:	0			

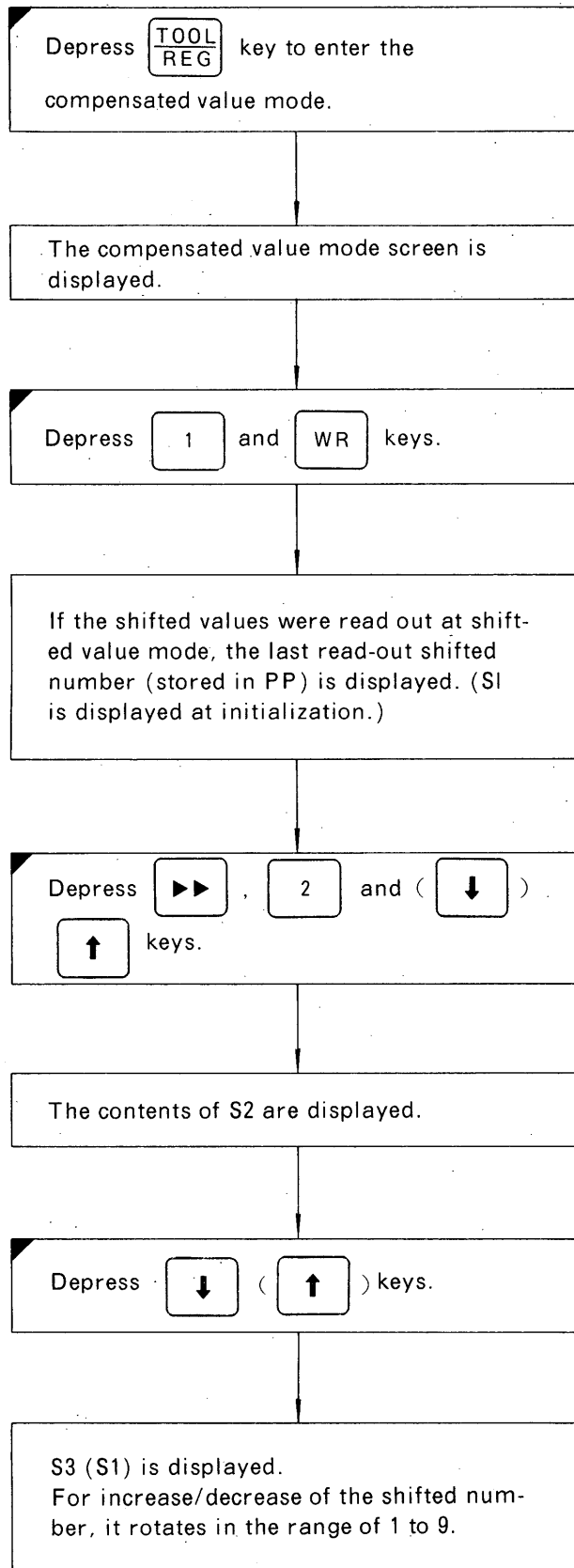
Depress , and key.
 20 is displayed in the R42 data section and R42 = 20 is set by the key.
 Then the cursor moves to the head of the data.

REGISTER									
R	4	2	=	2	:	0			

Depress and keys.
 By depressing key, the cursor moves to the register number section and is input at the cursor position.
 The number section blinks when the cursor is in the register number section and the register value is cleared at the number change.

REGISTER									
R	1	2	=		:				

5.7 COMPENSATED VALUE (SHIFTED VALUE) CHECK



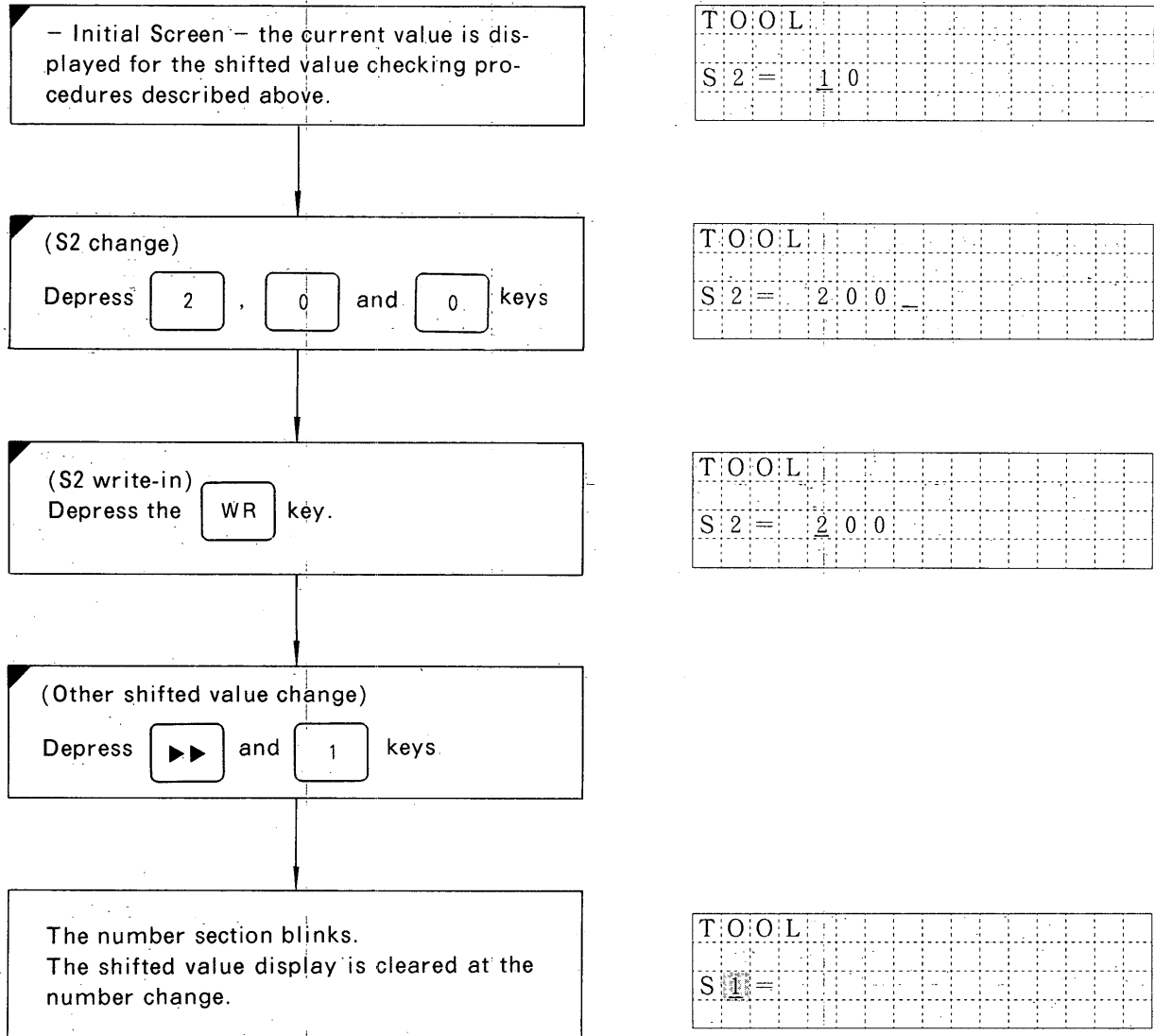
T	O	O	L	?	_				
1	:	S	H	I	F	T			
2	:	O	F	F	S	E	T		

T	O	O	L						
S	1	=		0					

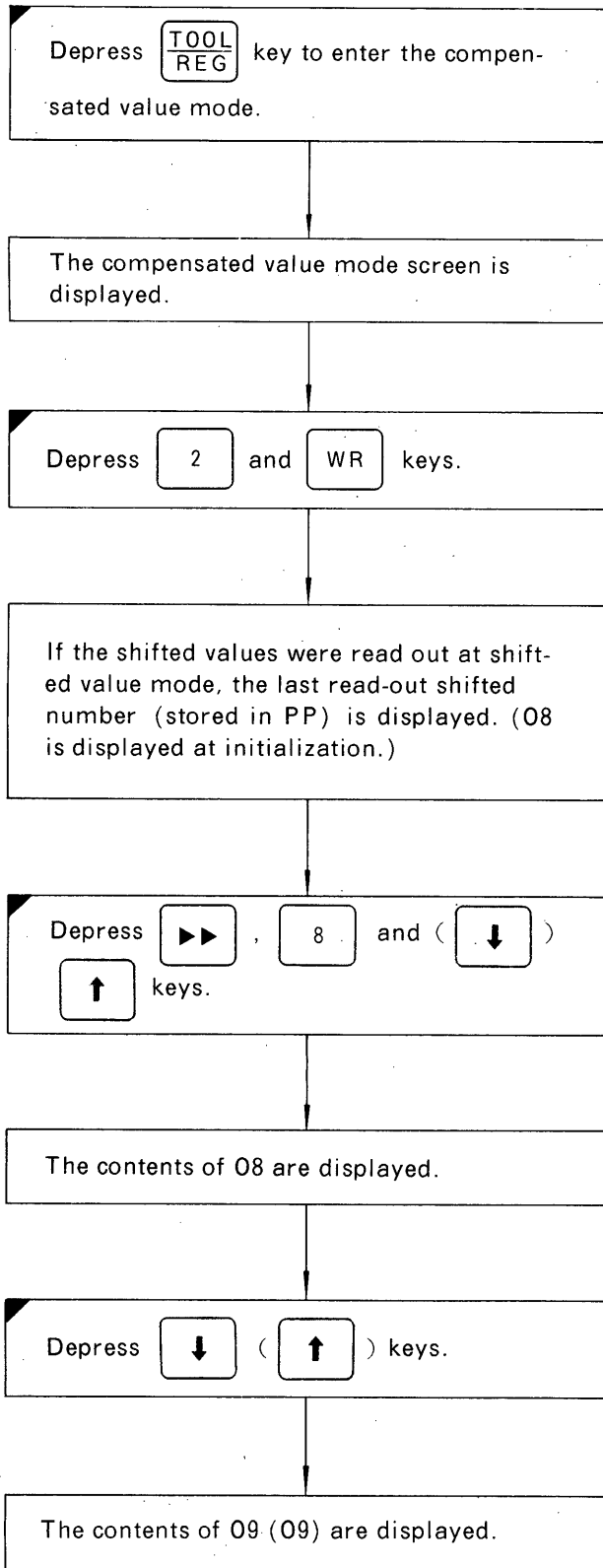
T	O	O	L						
S	2	=		1	2	3	4		

T	O	O	L						
S	3	=		1	0				

5.8 COMPENSATED VALUE (SHIFTED VALUE) CHANGE



5.9 COMPENSATED VALUE (OFFSET VALUE) CHECK



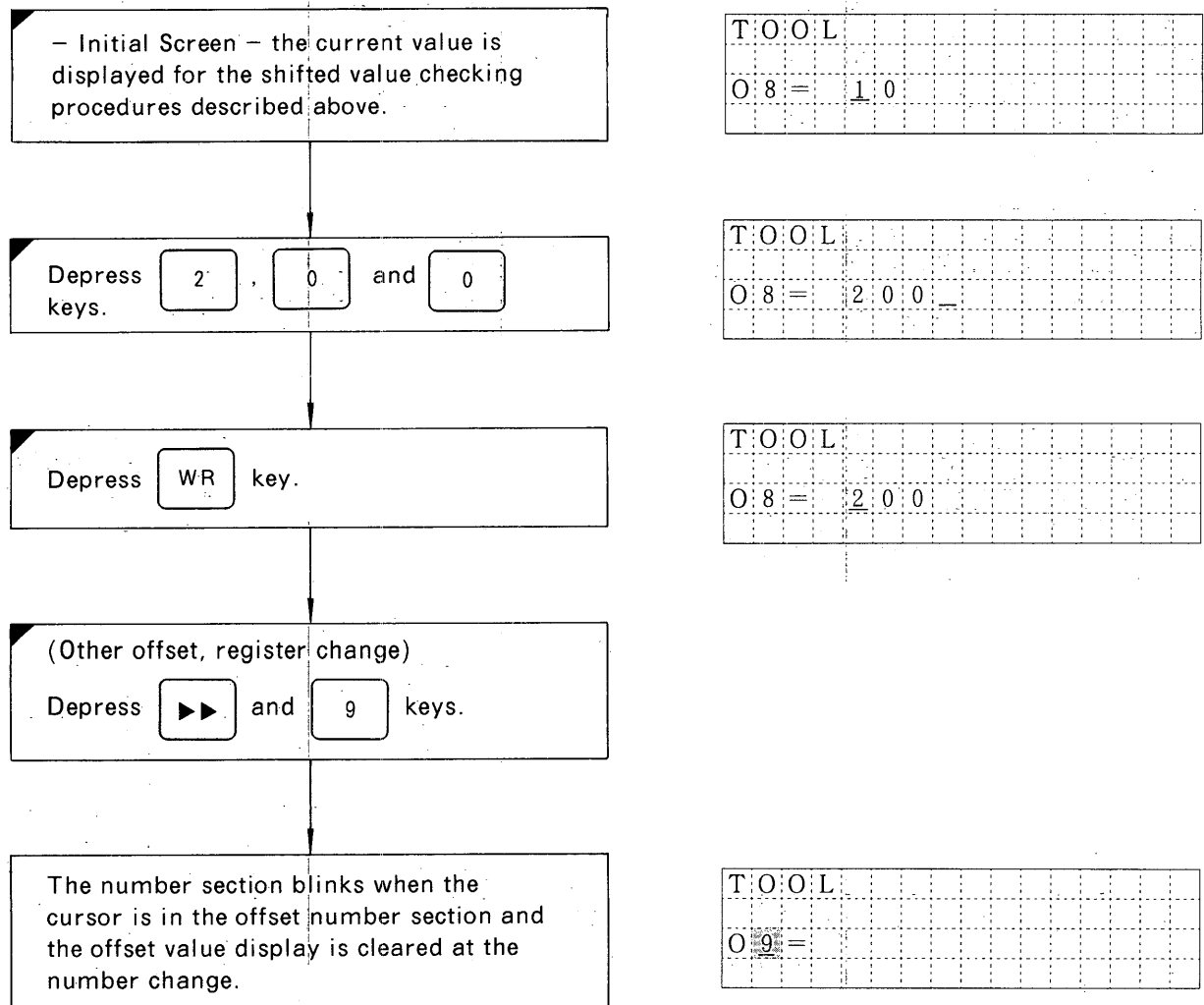
T	O	O	L	?	_				
1	:	S	H	I	F	T			
2	:	O	F	F	S	E	T		

T	O	O	L						
O	8	=		1	2	3	4		

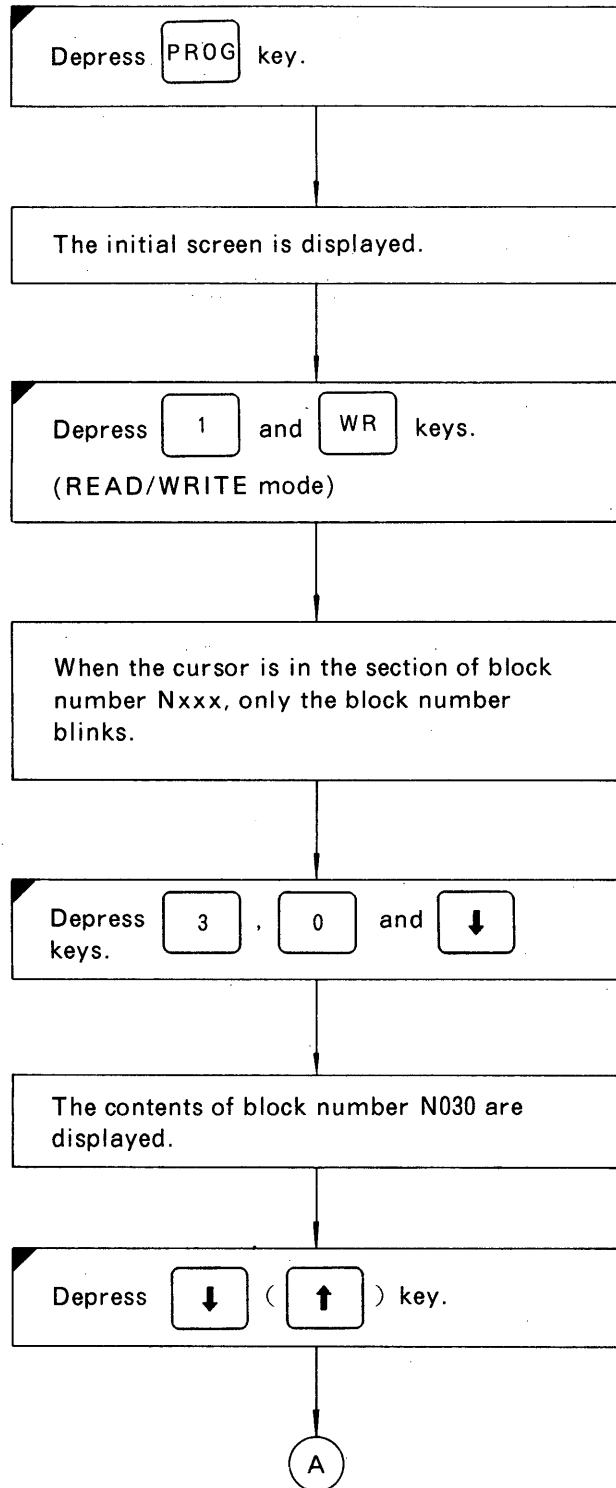
T	O	O	L						
O	9	=		1	0				

Only 08 and 09 are the offset values.

5.10 COMPENSATED VALUE (OFFSET VALUE) CHANGE



5.11 PROGRAMMER CHECK

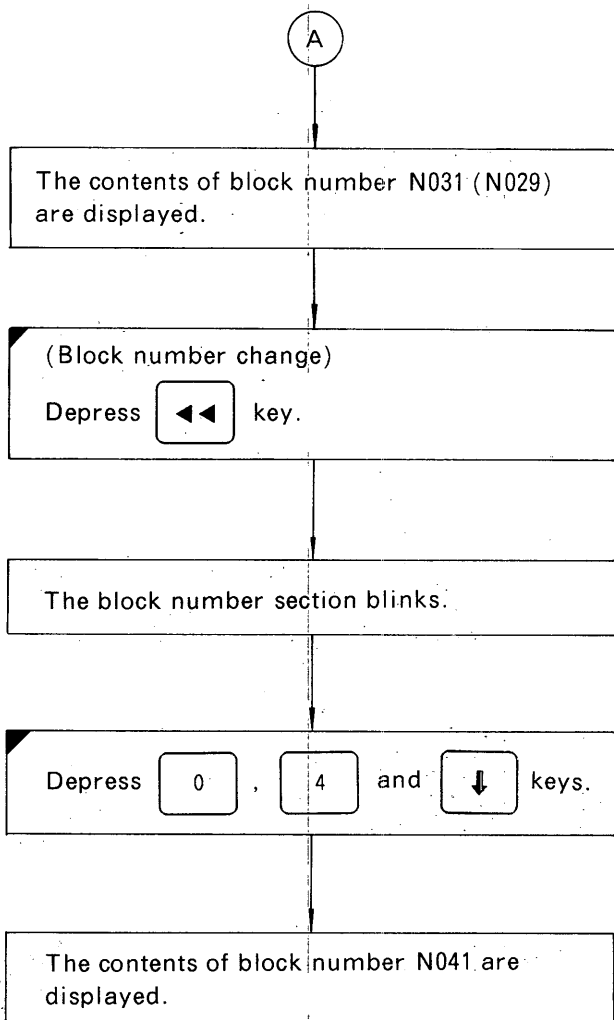


P	R	O	G	R	A	M	:	?	_				
1	:	R	E	A	D	/	W	R	I	T	E		
2	:	E	D	I	T		B	L	O	C	K		

P	R	O	G	R	A	M	:			N	_		

P	R	O	G	R	A	M	:			N	0	3	0
G	6	7				P	2	0	0				

5.11 PROGRAMMER CHECK (Cont'd)



P	R	O	G	R	A	M			N	0	3	1		
G	0	1		X	-	2	0	0	0		0	0	0	0
				F	2	0	0	0	0		I	1	0	0
				S	1	0	0	0	0					

P	R	O	G	R	A	M			N	0	3	1		

P	R	O	G	R	A	M			N	0	4	1		
G	0	5		X	-	2	0	0	0		0	0	0	0
				F	2	0	0	0	0		I	1	0	0
				S	1	0	0	0	0					

5.12 PROGRAM CHANGE

Depress **PROG** key. Select "READ/
WRITE"...

(The contents of the desired block number
are displayed.)
Depress **4**, **0** and **↓**
keys.

P	R	O	G	R	A	M				N	:	0	:	4	:	0						
G	:	0	:	1		X	-	2	:	0	:	0	:	0	:	0	:	0	:	0		
						F	2	:	0	:	0	:	0	:	0	:	I	1	:	0	:	0
						S	1	:	0	:	0	:	0	:	0	:						

When the command
is changed

Depress (**▶**) key.
Depress **6**, **7** and **▶▶**
keys.
The cursor display is moved to P.
Depress (**▶**), **1**, **2**
and **3** keys.

P	R	O	G	R	A	M				N	:	0	:	4	:	0
G	:	6	:	7		P	1	:	2	:	3					

Depress **WR** key.

P	R	O	G	R	A	M				N	:	0	:	4	:	0
G	:	6	:	7		P	1	:	2	:	3					

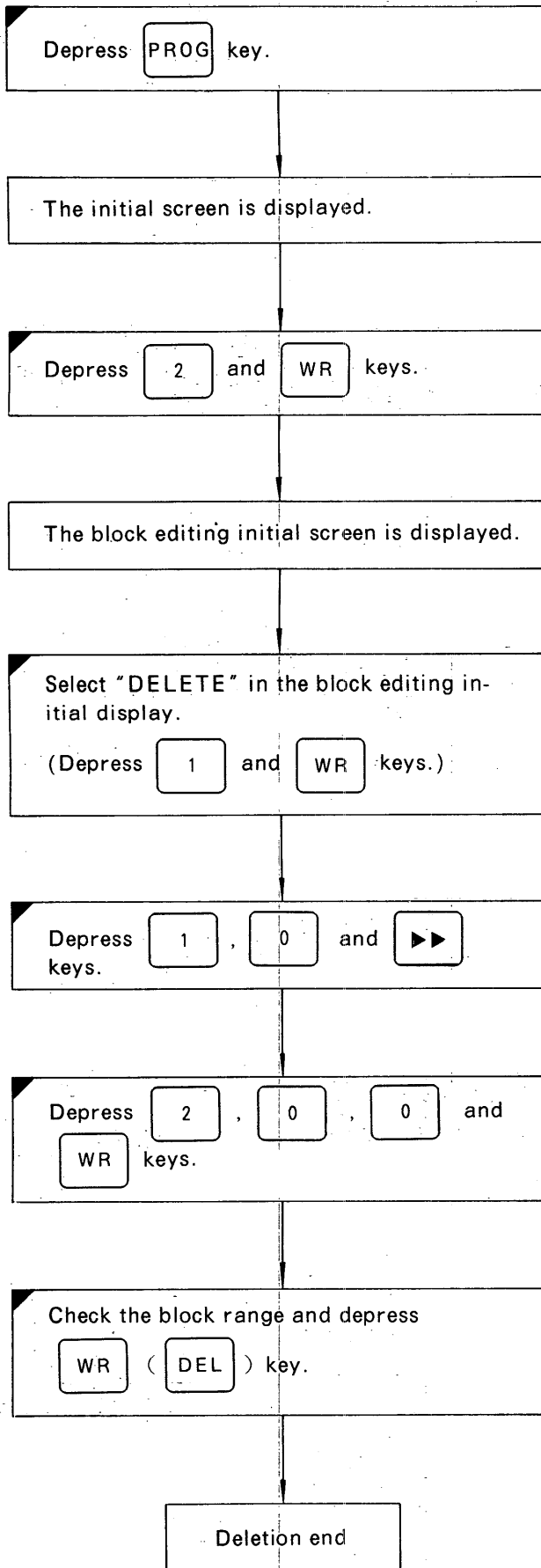
When part of the
command is changed

Depress **▶▶**, **▶**, **▶** and
4 keys.

P	R	O	G	R	A	M				N	:	0	:	4	:	0						
G	:	0	:	1		X	-	4	:	0	:	0	:	0	:	0	:	0	:	0		
						F	2	:	0	:	0	:	0	:	0	:	I	1	:	0	:	0
						S	1	:	0	:	0	:	0	:	0	:						

Depress **WR** key.

5.13 PROGRAM (BLOCK) DELETION



Program Initial Screen

P	R	O	G	R	A	M	?				
1	:	R	E	A	D	/	W	R	I	T	E
2	:	E	D	I	T		B	L	O	C	K

Program Editing Initial Screen

B	L	O	C	K	?				
1	:	D	E	L	E	T	E		
2	:	C	O	P	Y				
3	:	M	O	V	E				

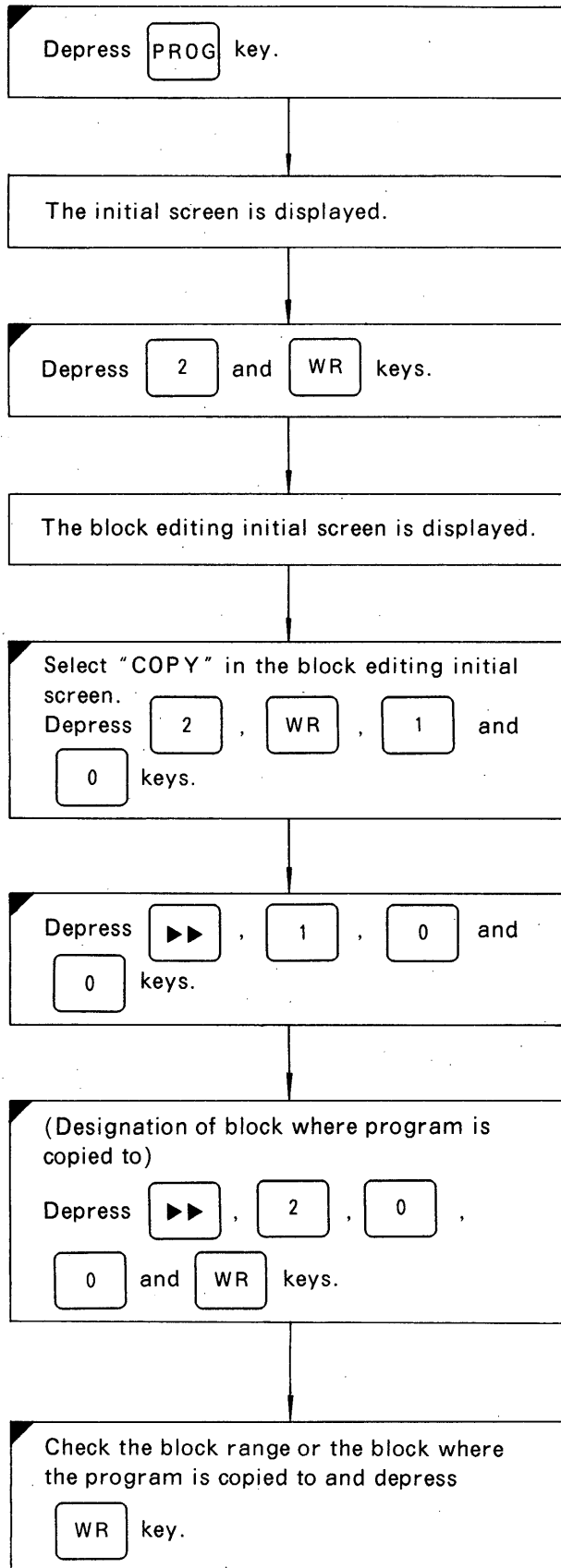
B	L	O	C	K		D	E	L	E	T	E
N	_				-	N	_				

B	L	O	C	K		D	E	L	E	T	E
N	:	1	0			-	N	_			

B	L	O	C	K		D	E	L	E	T	E
N	:	1	0			-	N	2	0	0	
						o	k	?			

B	L	O	C	K		D	E	L	E	T	E
N	:	1	0			-	N	2	0	0	
						e	n	d	.		

5.14 PROGRAM (BLOCK) COPY



Program Initial Screen

P	R	O	G	R	A	M	:	?	_											
1	:	R	E	A	D	/	W	R	I	T	E									
2	:	E	D	I	T		B	L	O	C	K									

Block Editing Initial Screen

B	L	O	C	K	:	?	_													
1	:	D	E	L	E	T	E													
2	:	C	O	P	Y															
3	:	M	O	V	E															

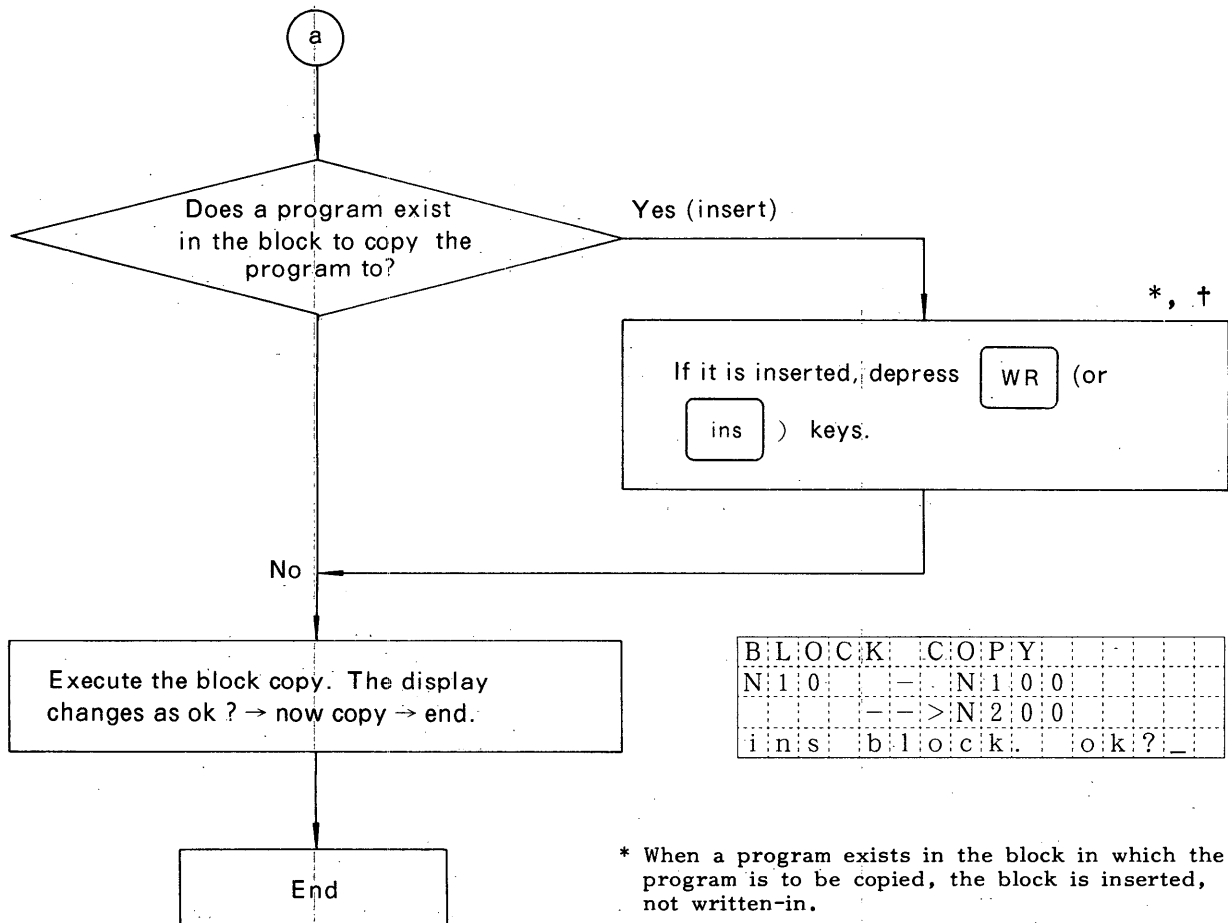
Block Range Designation

B	L	O	C	K	:	C	O	P	Y											
N	1	0				-				N										
						-				>	N									

B	L	O	C	K	:	C	O	P	Y											
N	1	0				-				N	1	0	0							
						-				>	N	2	0	0						

B	L	O	C	K	:	C	O	P	Y											
N	1	0				-				N	1	0	0							
						-				>	N	2	0	0						
										o	k	:	?	_						

5.14 PROGRAM (BLOCK) COPY (Cont'd)



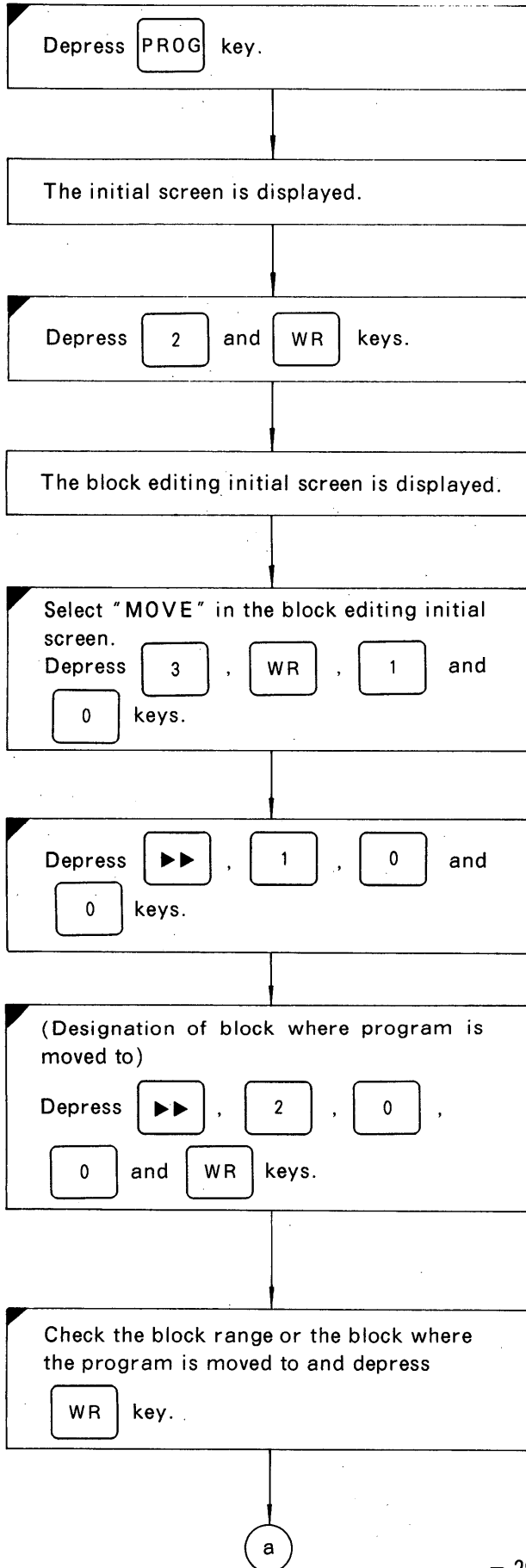
B	L	O	C	K	C	O	P	Y				
N	1	0		-		N	1	0	0			
				-	-	>	N	2	0	0		
i	n	s		b	l	o	c	k	.	o	k	?_

* When a program exists in the block in which the program is to be copied, the block is inserted, not written-in.

† An error message is displayed if block insertion is not possible.

B	L	O	C	K	C	O	P	Y		
N	1	0		-		N	1	0	0	
				-	-	>	N	2	0	0
				e	n	d	.			

5.15 PROGRAM (BLOCK) MOVE



```

PROGRAM: ? _
1 : READ / WRITE
2 : EDIT BLOCK

```

```

BLOCK: ? _
1 : DELETE
2 : COPY
3 : MOVE

```

```

BLOCK: MOVE
N10 - - N

```

```

BLOCK: MOVE
N10 - - N100
- - > N

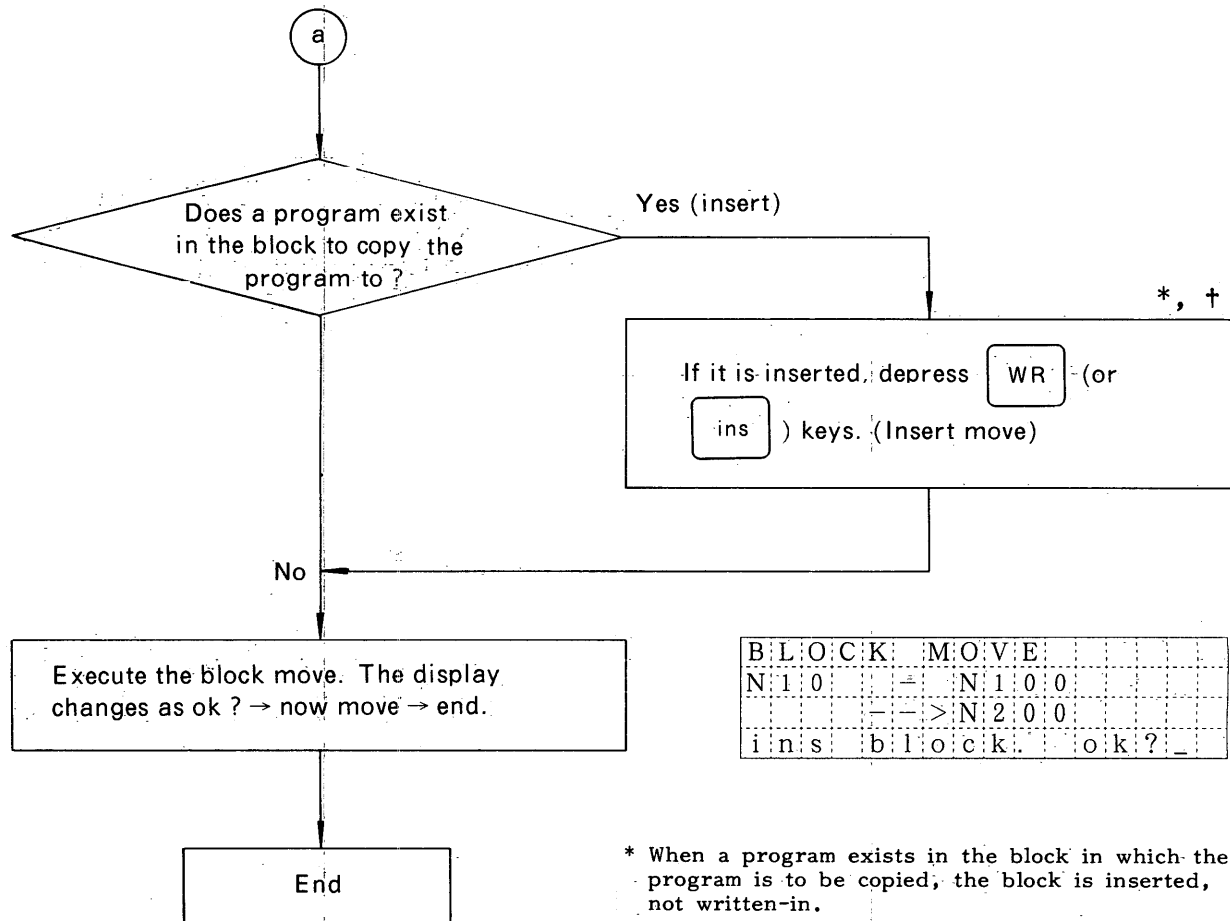
```

```

BLOCK: MOVE
N10 - - N100
- - > N200
o.k: ? _

```

5.15 PROGRAM (BLOCK) MOVE (Cont'd)



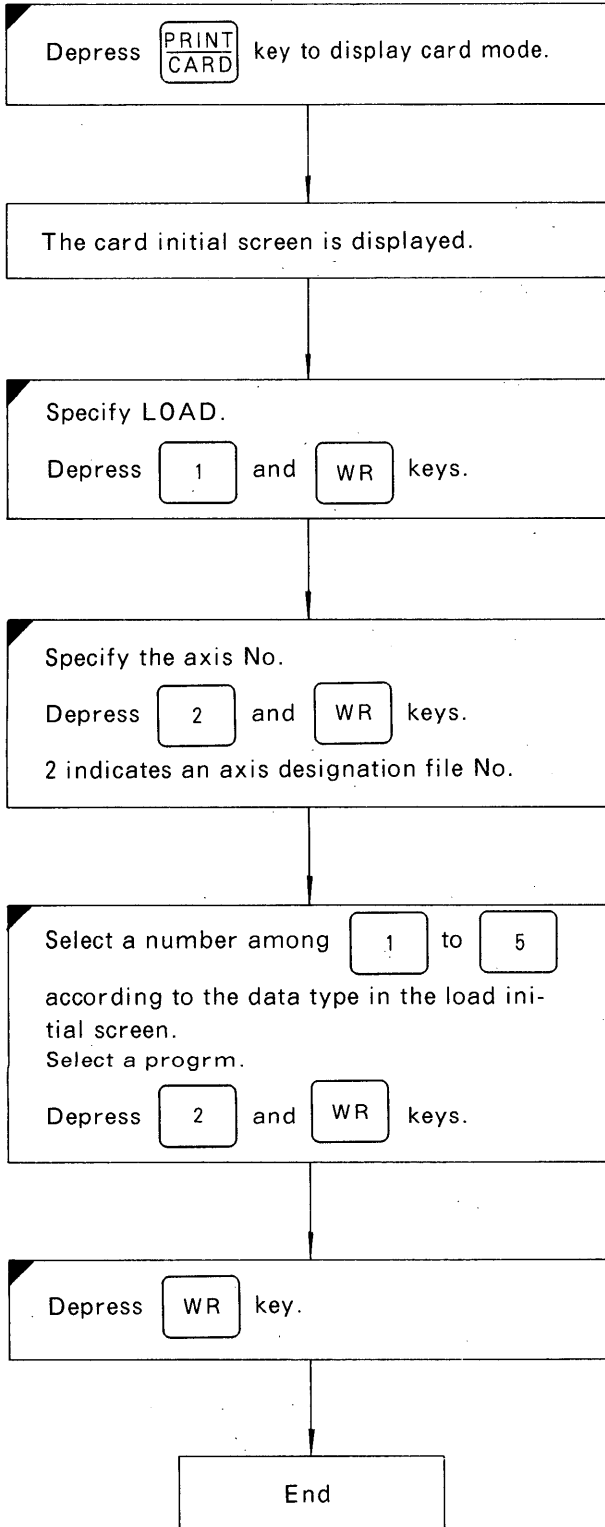
B	L	O	C	K	M	O	V	E				
N	1	0		-	N	1	0	0				
				-	-	>	N	2	0	0		
i	n	s		b	l	o	c	k	.	o	k	?_

B	L	O	C	K	M	O	V	E		
N	1	0		-	N	1	0	0		
				-	-	>	N	2	0	0
e	n	d	.							

* When a program exists in the block in which the program is to be copied, the block is inserted, not written-in.

† An error message is displayed if block insertion is not possible.

5.16 MEMORY CARD READ



Card Initial Screen

```

C A R D : ? _ _ _ _ _
1 : L O A D      2 : S A V E
3 : V E R I F Y
4 : I N F .
    
```

Axis Designation Initial Screen

```

← C A R D : # _ _ _ _ _ L D
  F I L E # ? _ _ _ _ _
    
```

```

← C A R D : # 2 ? _ _ _ _ L D
1 : P R M      2 : P R O G
3 : R E G      4 : T O O L
5 : A L L
    
```

Data types displayed.

```

← C A R D : # 2 P R O G L D
  o k ?
    
```

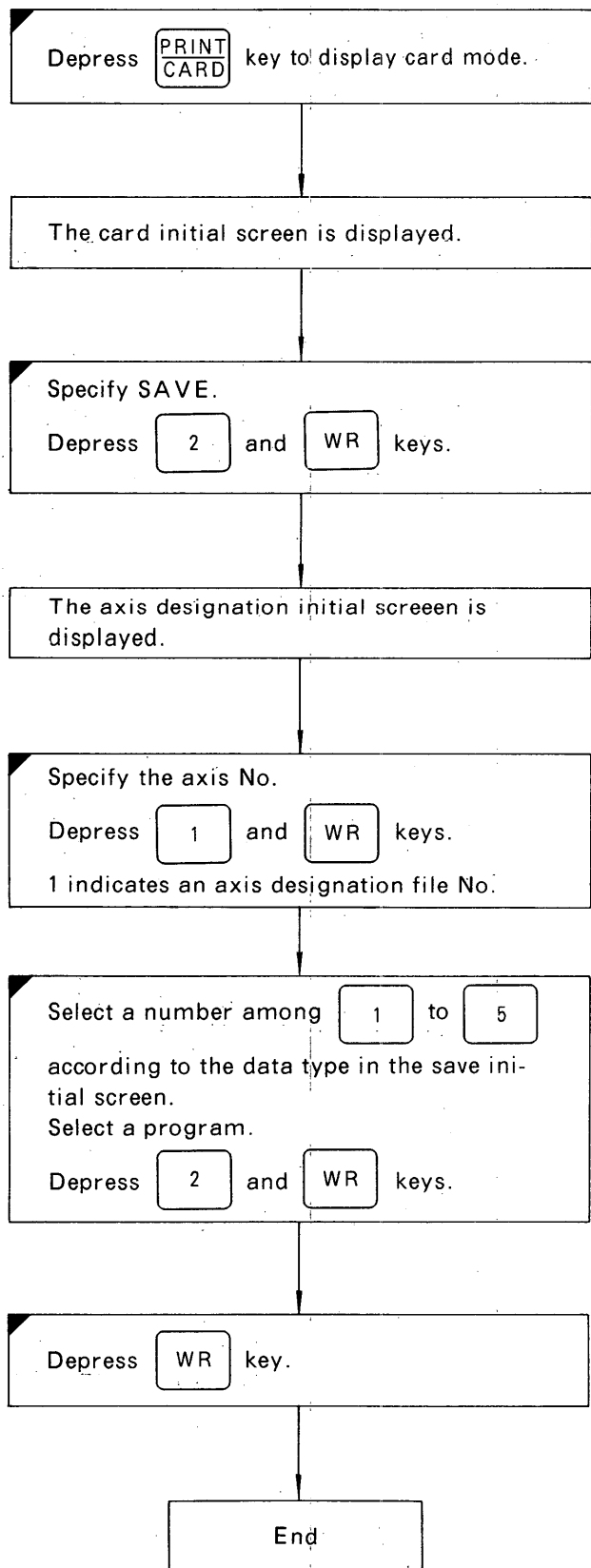
```

← C A R D : # 2 P R O G L D
  n o w l o a d .
    
```

```

← C A R D : # 2 P R O G L D
  e n d .
    
```

5.17 MEMORY CARD WRITE



Card Initial Screen

CARD:	?	_			
1::	L O A D		2::	S A V E	
3::	V E R I F Y				
4::	I N F				

->	CARD	#					S V
			F I L E	#	?	_	

->	CARD:	#	1	?	_		S V
1::	P R M		2::	P R O G			
3::	R E G		4::	T O O L			
5::	A L L						

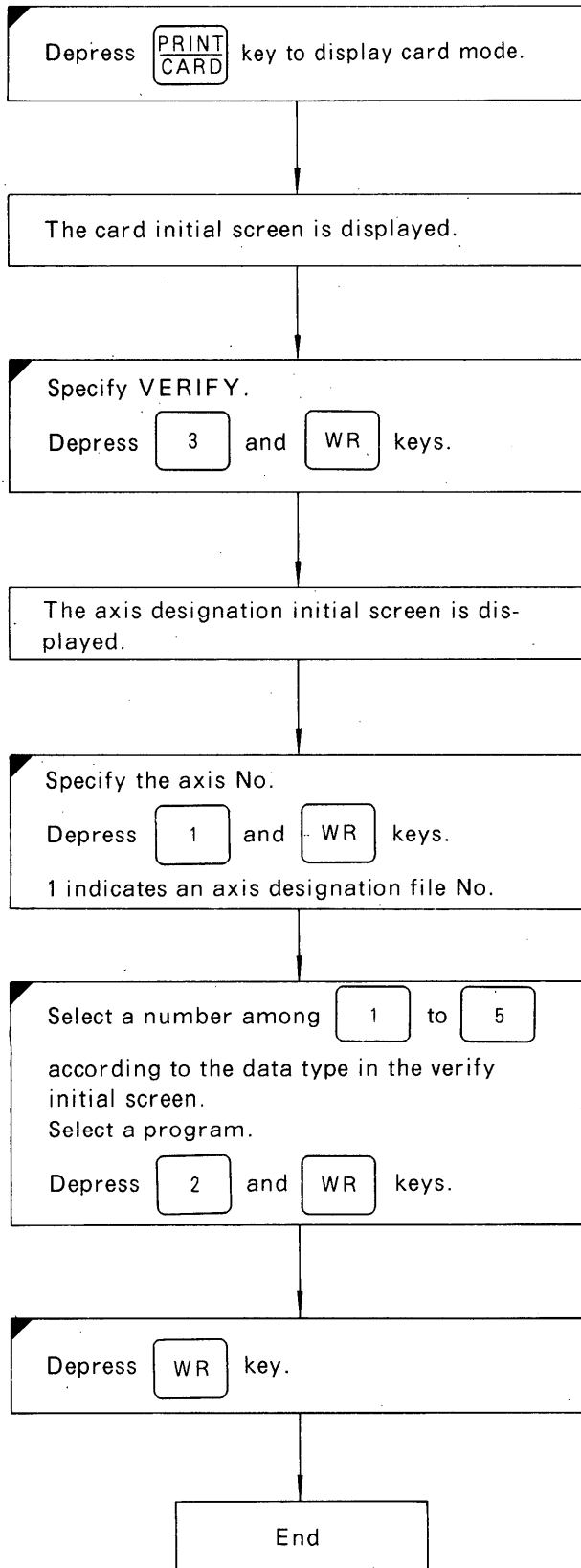
Data types displayed.

->	CARD	#	1				S V
			o k	:	?	_	

->	CARD	#	1		P R O G		S V
			n o w		s a v e.		

->	CARD	#	1		P R O G		S V
			e n d.				

5.18 MEMORY CARD VERIFY



Card Initial Screen

```

CARD ? _
1 : LOAD   2 : SAVE
3 : VERIFY
4 : INF.
    
```

```

!CARD # _ VF
 FILE # ? _
    
```

```

!CARD # 1 ? _ VF
1 : PRM    2 : PROG
3 : REG    4 : TOOL
5 : ALL
    
```

Data types displayed.

```

!CARD # 1 V F
      ok ? _
    
```

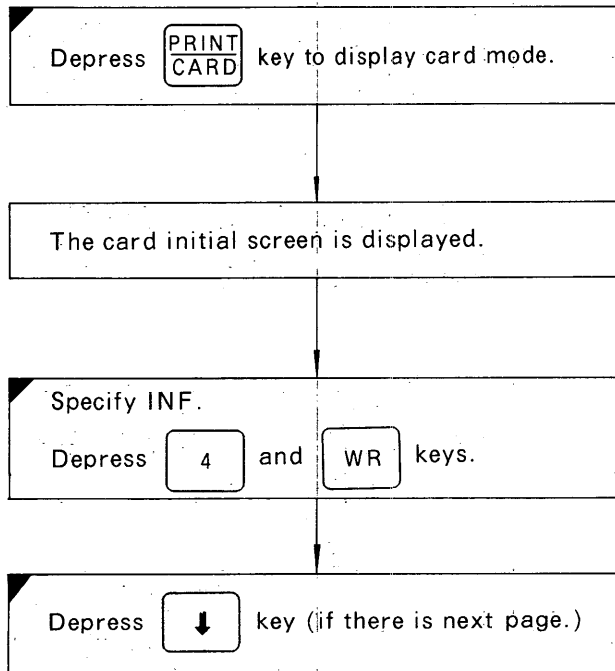
```

!CARD # 1 P R O G V F
      now verify.
    
```

```

!CARD # 1 P R O G V F
      e n d .
    
```


5.19 MEMORY CARD DIRECTORY



Card Initial Screen

CARD	?	_									
1	:	L	O	A	D	2	:	S	A	V	E
3	:	V	E	R	I	F	Y				
4	:	I	N	F							

Directory Display Screen

CARD	I	N	F		F#	1	-	#	4					
F#	1	(	P	r	,	P	g	,	R	g	,	T	1)
F#	2	(	P	r	,				R	g	,	T	1)
F#	3	(	P	r	,	P	g	,				T	1)

CARD	I	N	F		F#	1	-	#	4					
F#	4	(P	r	,	P	g	,				T	1)

5.20 PRINT-OUT

5.20.1 Transmission Conditions Setting

Depress **PRINT CARD** key to display print mode.

The printer initial screen is displayed.

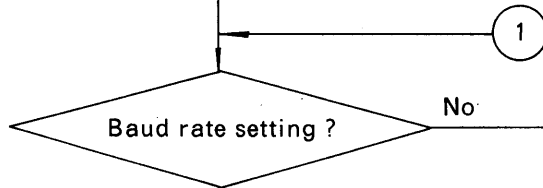
Printer Initial Screen

P	R	I	N	T		O	U	T		?	_		
1	:	P	R	I	N	T							
2	:	S	Y	S	T	E	M		S	E	T		

Specify SYSTEM SET.
Depress **2** and **WR** keys.

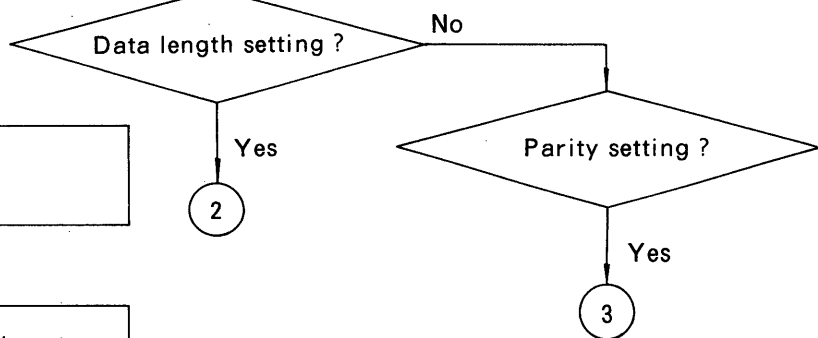
The current transmission set values are displayed.

S	Y	S	T	E	M		S	E	T		?	_			
1	:	B	A	U	D		R	A	T	E		9	6	0	0
2	:	D	A	T	A		L	E	N	G	T	H		8	
3	:	P	A	R	I	T	Y					N	O	N	E



Depress **1** and **WR** keys.

The Baud rate setting screen is displayed.



B	A	U	D		R	A	T	E		?	_		
1	:	3	0	0		2	:	6	0	0			
2	:	1	2	0	0	4	:	2	4	0	0		
5	:	4	8	0	0	6	:	9	6	0	0		

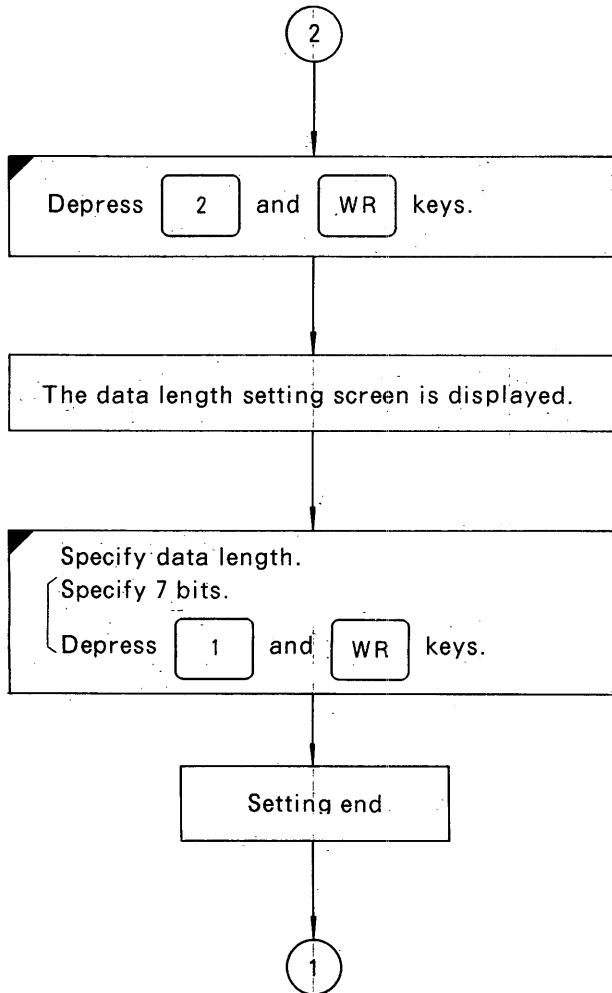
Specify a Baud rate.
Specify 2400 Baud.
Depress **4** and **WR** keys.

Setting end

S	Y	S	T	E	M		S	E	T		?	_			
1	:	B	A	U	D		R	A	T	E		2	4	0	0
2	:	D	A	T	A		L	E	N	G	T	H		8	
3	:	P	A	R	I	T	Y					N	O	N	E

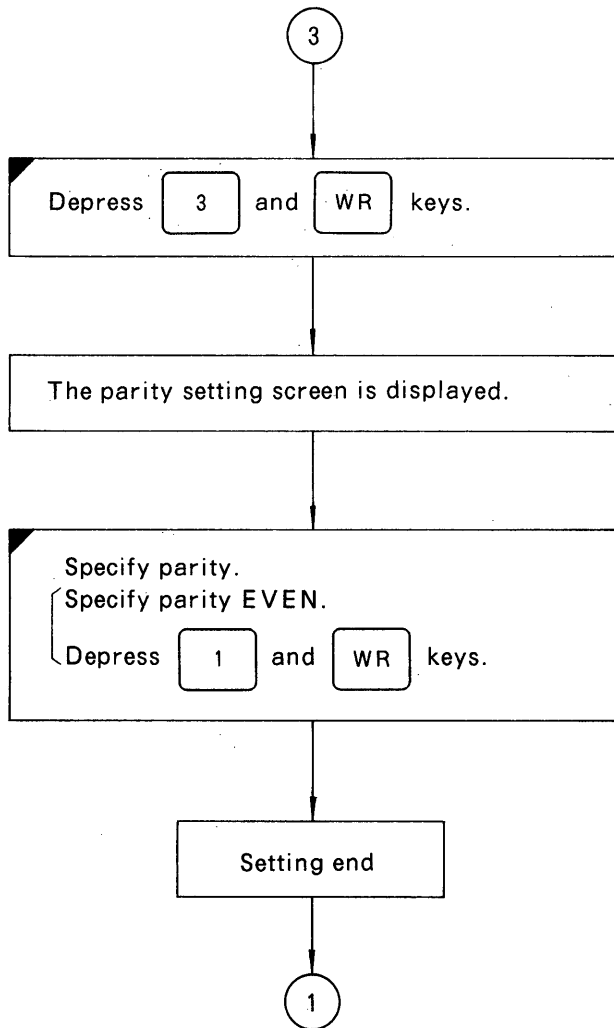
①

5.20.1 Transmission Conditions Setting (Cont'd)



D:A:T:A	L:E:N:G:T:H:	?	
1:	7 b i t		
2:	8 b i t		

S:Y:ST:E:M	S:E:T:	?	
1:	BAUD RATE	9600	
2:	DATA LENGTH	7	
3:	PARITY	NONE	



P	A	R	I	T	Y	?	_												
1	:	E	V	E	N														
2	:	O	D	D															
3	:	N	O	N	E														

S	Y	S	T	E	M	S	E	T	?	_									
1	:	B	A	U	D	R	A	T	E	9	6	0	0						
2	:	D	A	T	A	L	E	N	G	T	H	8							
3	:	P	A	R	I	T	Y			E	V	E	N						

5.20.2 Card Contents Print-out

Depress **PRINT CARD** key to display print mode.

The printer initial screen is displayed.

Depress **1** and **WR** keys.

The printer select screen is displayed.

Depress **1** and **WR** keys.

Specify the data types from **1** to **5** in the data designation screen
 Specify the parameter.
 Depress **1** and **WR** keys.

Specify an axis designation file No.
 Specify F#1.
 Depress **1** and **WR** keys.

4

Printer Initial Screen

```

P R I N T   O U T   ?   _
1 : P R I N T
2 : S Y S T E M   S E T
    
```

```

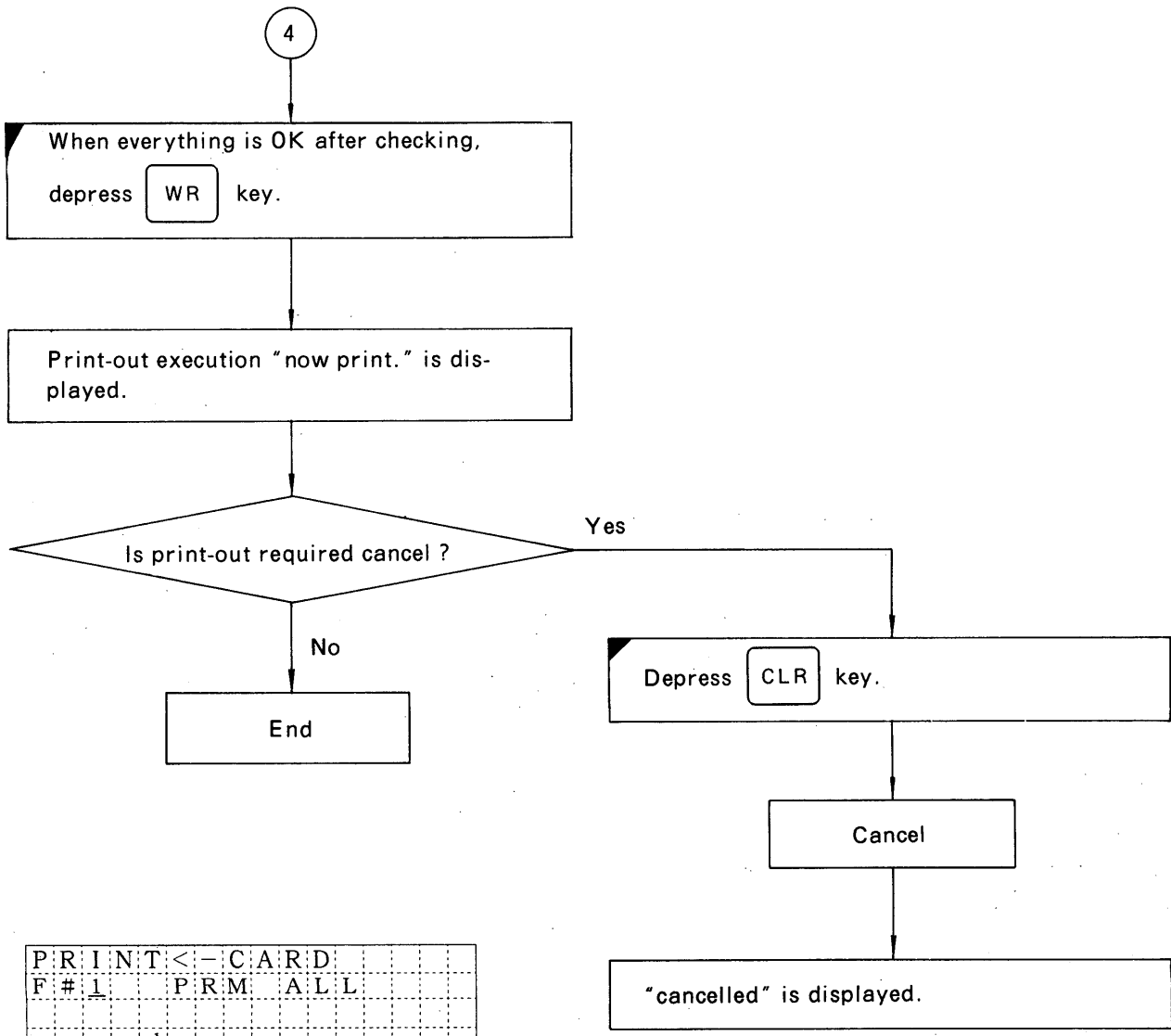
P R I N T ? _
1 : < - C A R D
2 : < - M P F D
    
```

```

P R I N T < - C A R D ? _
1 : P R M      2 : P R O G
3 : R E G      4 : T O O L
5 : A L L
    
```

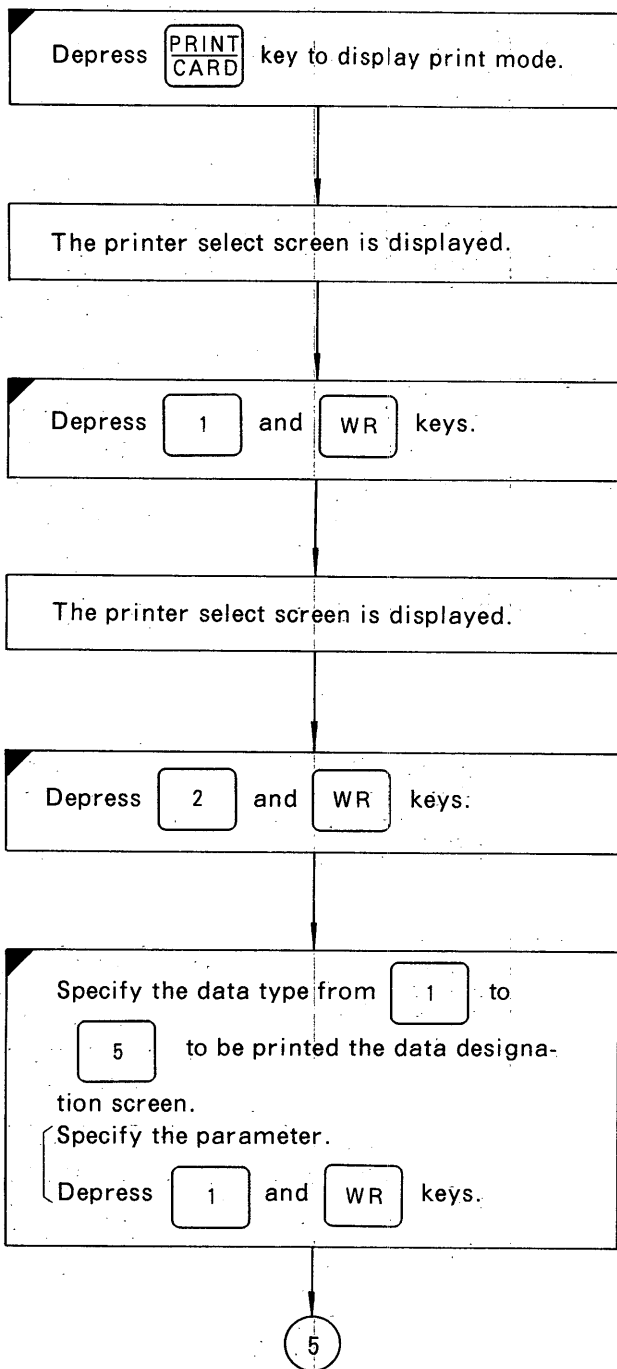
```

P R I N T < - C A R D
F # :      P R M   A L L
    
```



P	R	I	N	T	:	<	-	C	A	R	D	.		
F	#	1		P	R	M	:	A	L	L	.			
				e	n	d	.							

5.20.3 Motionpack Print-out



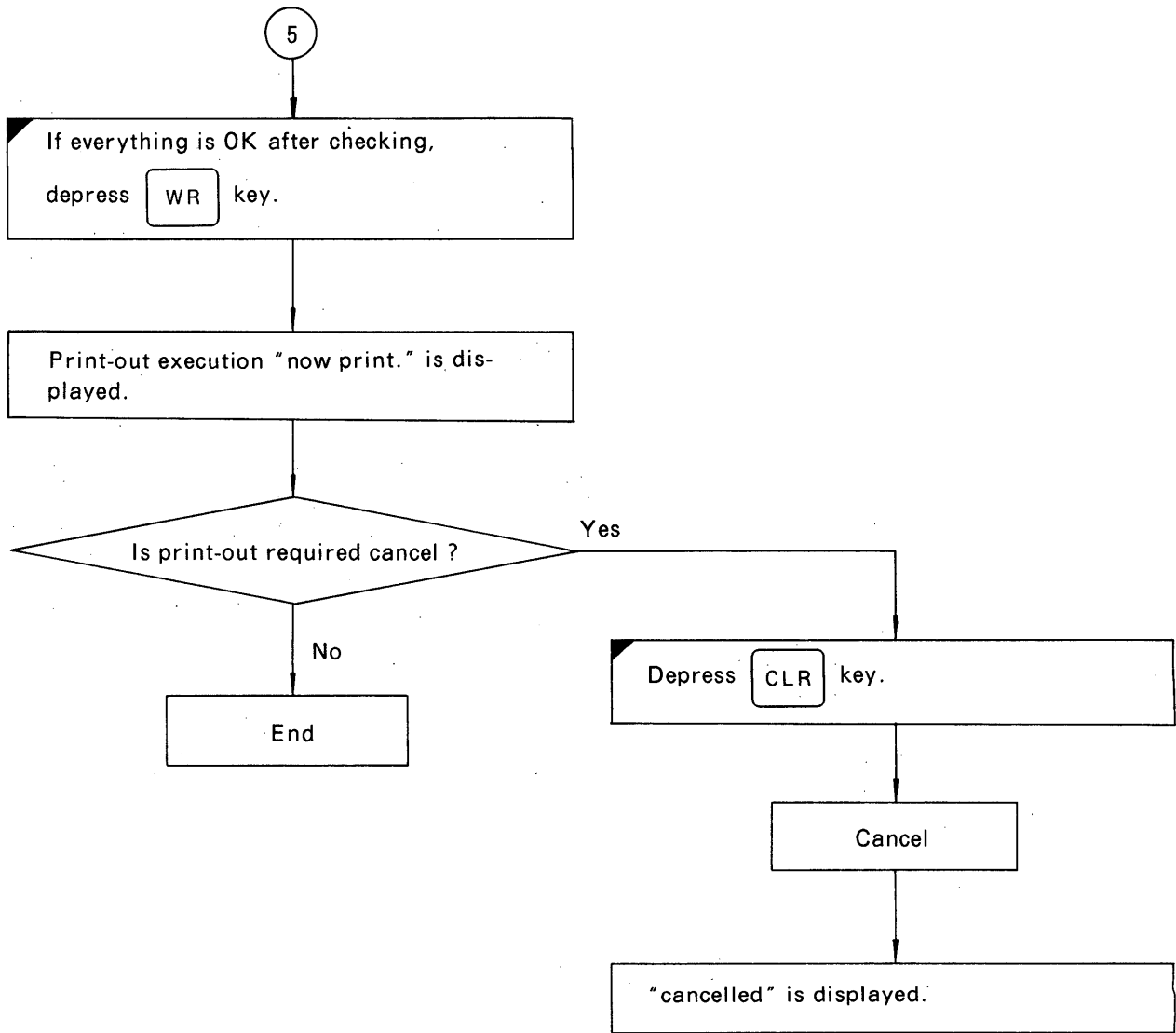
Printer Initial Screen

P	R	I	N	T		O	U	T		?	_				
1	:	P	R	I	N	T									
2	:	S	Y	S	T	E	M		S	E	T				

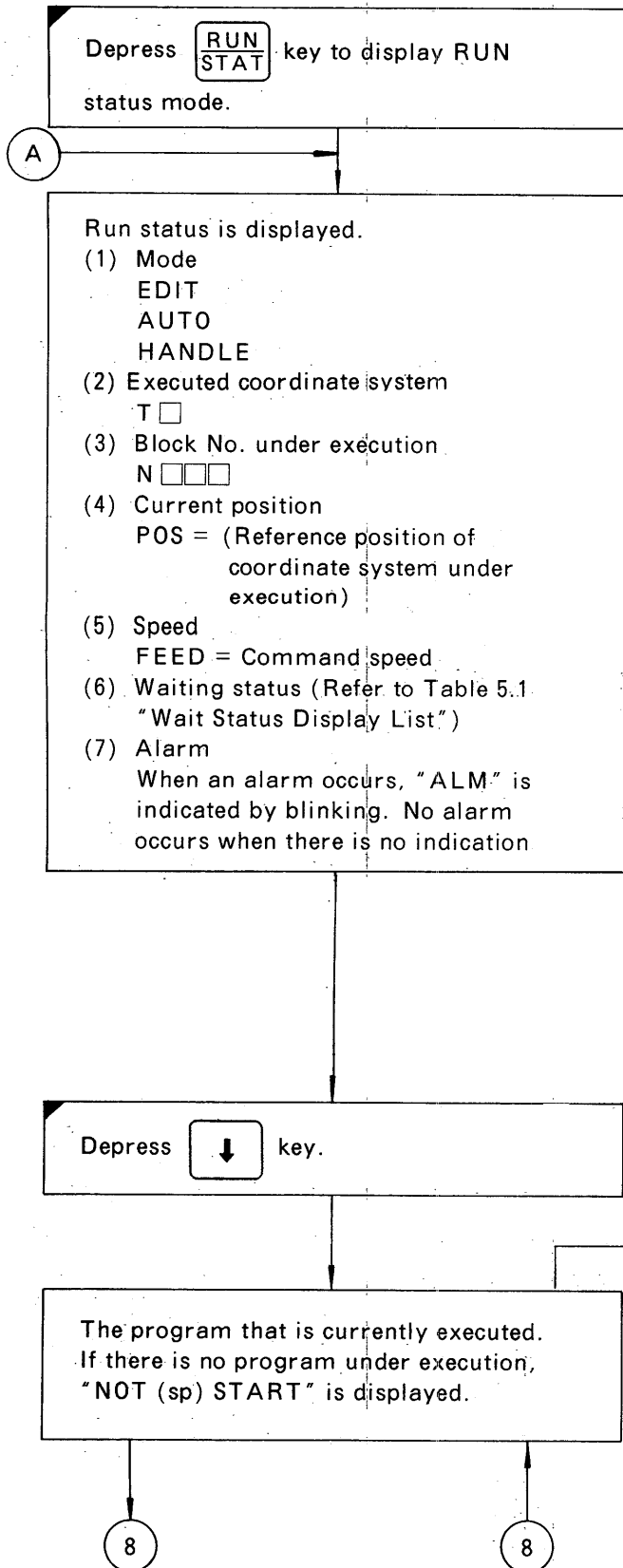
P	R	I	N	T	?	_									
1	:	<	-	C	A	R	D								
2	:	<	-	M	P	F	D								

P	R	I	N	T	<	-	M	P	F	D	?	_			
1	:	P	R	M			2	:	P	R	O	G			
3	:	R	E	G			4	:	T	O	O	L			
5	:	A	L	L											

P	R	I	N	T	<	-	M	P	F	D		P	R	M	



5.21 RUN STATUS TABLE



RUN Status Display

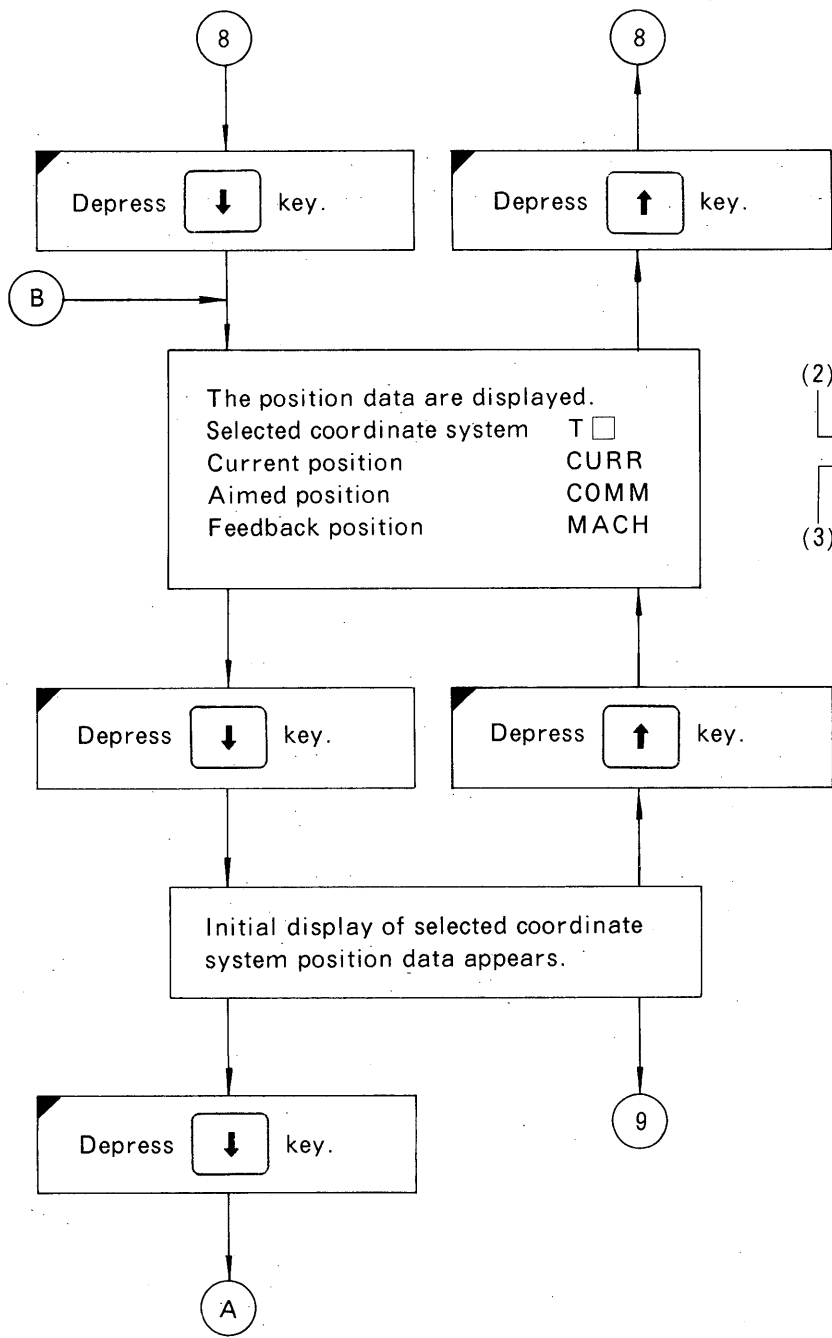
(1)	A:U:T:O					(2)	T:0	N:0	3	0	
(4)	P:O:S	=	-	1	2	3	4	5	6	7	8
	F:E:E:D	=	5	0	0	0	0				
(5)	R:U:N:N:I:N:G									(7)	A:L:M

Table 5.1 Wait Status Display List

No.	PP Display Message	Wait Status	Contents
1	Non Auto	Wait for auto mode	Mode is not changed to auto mode.
2	Not Start	Wait for starting operation	Memory operation has not started. (PGST signal has not been input)
3	Feed Hold	Wait for restarting operation	Memory operation has not been executed due to some errors* (* ex. PGST signal has been turned OFF.)
4	Positioning	Executing positioning instruction	Executing positioning instructions (G01, G05, G06, G34 and G35).
5	Wait Time-up	Executing Wait Time-up instruction	Executing time counting by G04 Wait Time-up instruction.
6	Wait Inpost	Wait for in position	Waiting for machine to come into the in position range (Pr 36).
7	Wait M-Fin	Wait for M-fin signal	Waiting for checking signal (M-Fin) against M signal output (M50 to M58) to be turned ON.
8	Wait V-Coin	Wait for main axis speed coincidence	To main axis control functions (M03, M04 and M05) command, waiting for speed coincidence (V coin) and speed zero (VZERO signals input.
9	Running	Executing program	Executing program commands other than the ones indicated above.

A

A:U:T:O						N:0	3	0			
G:0	1	X:	1	2	3	4	5	6	7	8	
		F:	2	0	0	0	0	I:	1	0	0
		S:	1	0	0	0	0				

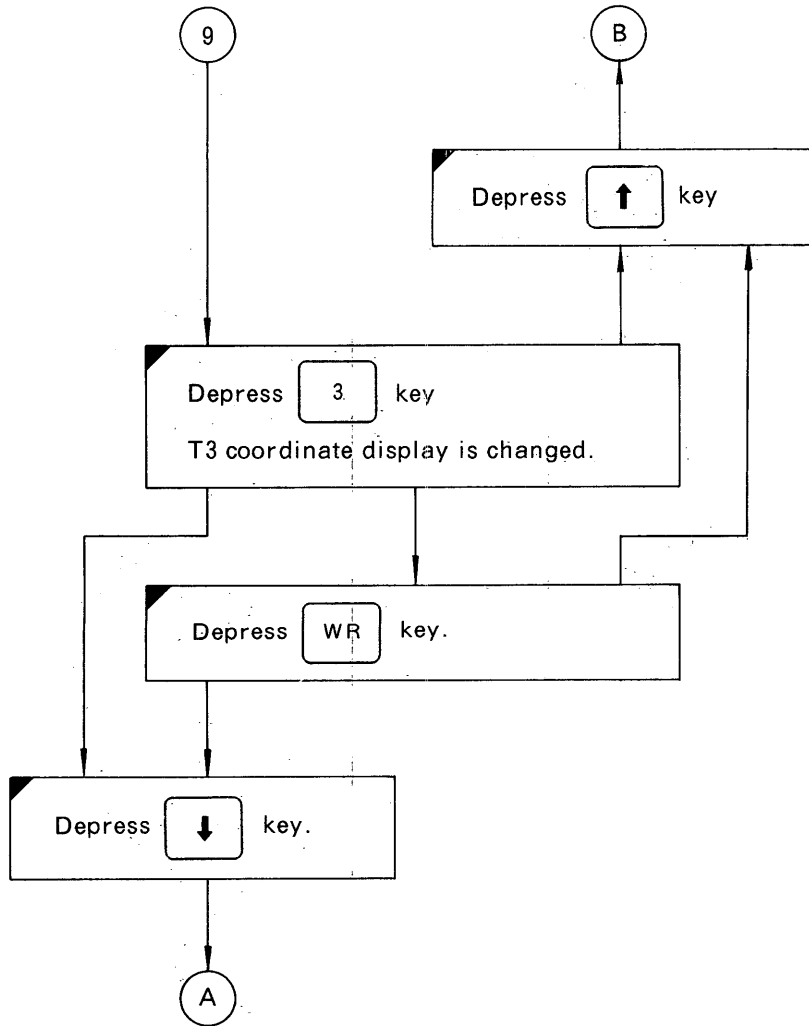


Position Display

(2)	P	O	S	I	T	T	0								
	C	U	R	R	=	-	1	2	3	4	5	.	6	7	8
	C	O	M	M	=	-	9	8	7	6	5	.	4	3	2
(3)	M	A	C	H	=	-	1	2	3	4	5	.	2	3	4
	(4)														

P	O	S	I	T	T	0	S	E	L


5.21 RUN STATUS TABLE (Cont'd)



P	O	S	I	T	T	3	S	E	L



P	O	S	I	T	T	3	S	E	L				
C	U	R	R	=	-	1	2	3	4	5	6	7	8
C	O	M	M	=	-	9	8	7	6	5	4	3	2
M	A	C	H	=	-	1	2	3	4	5	2	3	4

5.22 STATUS DISPLAY



Depress  key to display status mode.

The status screen is displayed.



S	T	A	T	U	S	?	_							
1	:	I	/	O		2	:	A	L	M				
3	:	E	R	R	O	R		P	U	L	S	E		
4	:	M	O	N	I	T	O	R		P	R	I	N	T

Depress  and  keys.

I/O status is displayed.

Depress  and  keys.

An alarm message is displayed.

The page turn-over is obtained by using  or  key.

Alarm Message Display



A	L	A	R	M		M	S	G	:
N	O	N	E						

I/O Display



I	/	O	:								*		
#	4	0	0	0		1	0	0	1	0	1	1	0
#	4	0	0	1		1	0	0	0	1	1	1	0
#	4	0	0	2		0	0	0	1	0	0	0	1

#4000 ~ : Input signal

#4500 ~ : Output signal

Depress  and  keys.

The position deviation is displayed.

Depress  and  keys.

The print-out initial screen with resultant speed or torque monitor is displayed.

Position Deviation Display

E	R	R	O	R		P	U	L	S	E				
P	U	L	S	E	=	1	2	3	4	5		6	7	8

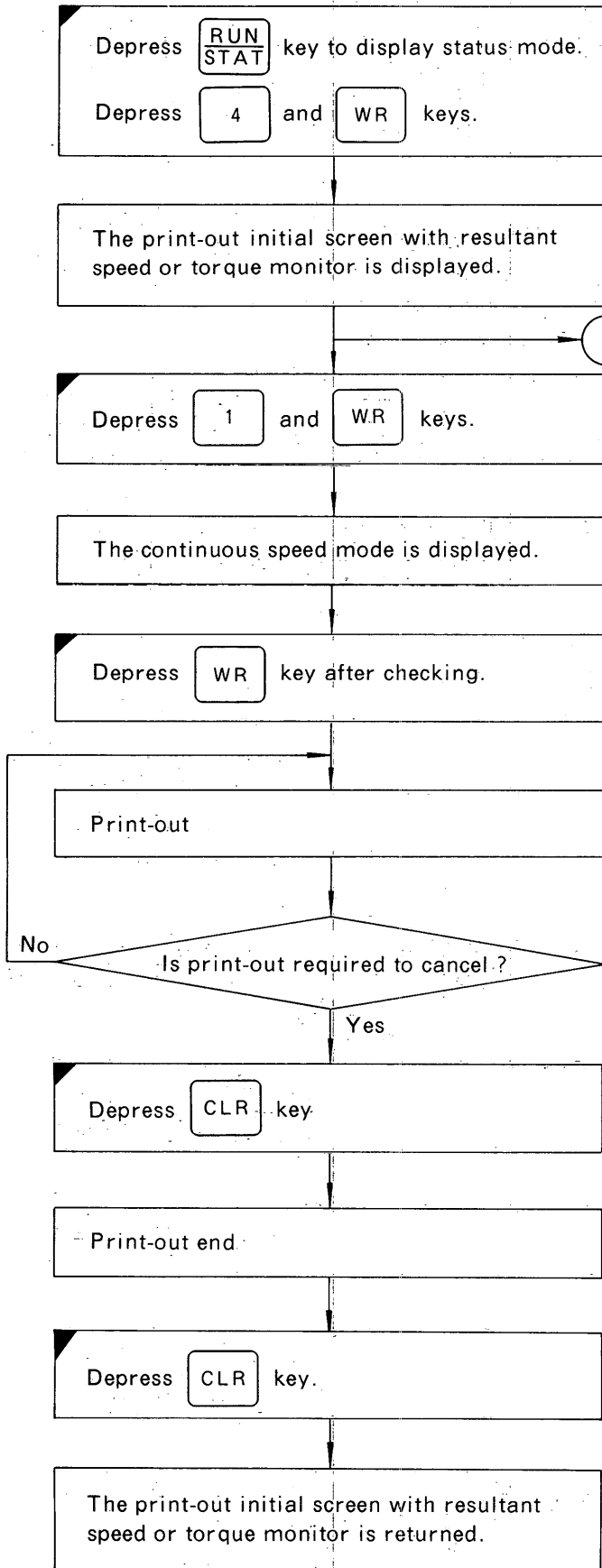
(To Par. 5.23)

Print-out Initial Display with Resultant Speed or Torque Monitor

M	O	N	I	T	O	R		P	R	I	N	T		?	_
1	:	S	E	Q	U	E	N	C	E		M	O	D	E	
2	:	M	E	M	O	R		M	O	D	E				
3	:	S	Y	S	T	E	M		S	E	T				

* For I/O signal names, refer to "13, I/O SIGNAL LIST" of SIE-C883-1.2.

5.23 PRINT-OUT WITH RESULTANT SPEED AND TORQUE MONITOR



```

MONITOR PRINT ? _
1 : SEQUENCE MODE
2 : MEMORY MODE
3 : SYSTEM SET
  
```

During Continuous Print Monitor

```

MONITOR PRINT
< SEQUENCE MODE >
ok ?
  
```

```

MONITOR PRINT
< SEQUENCE MODE >
now print.
  
```

Print-out End

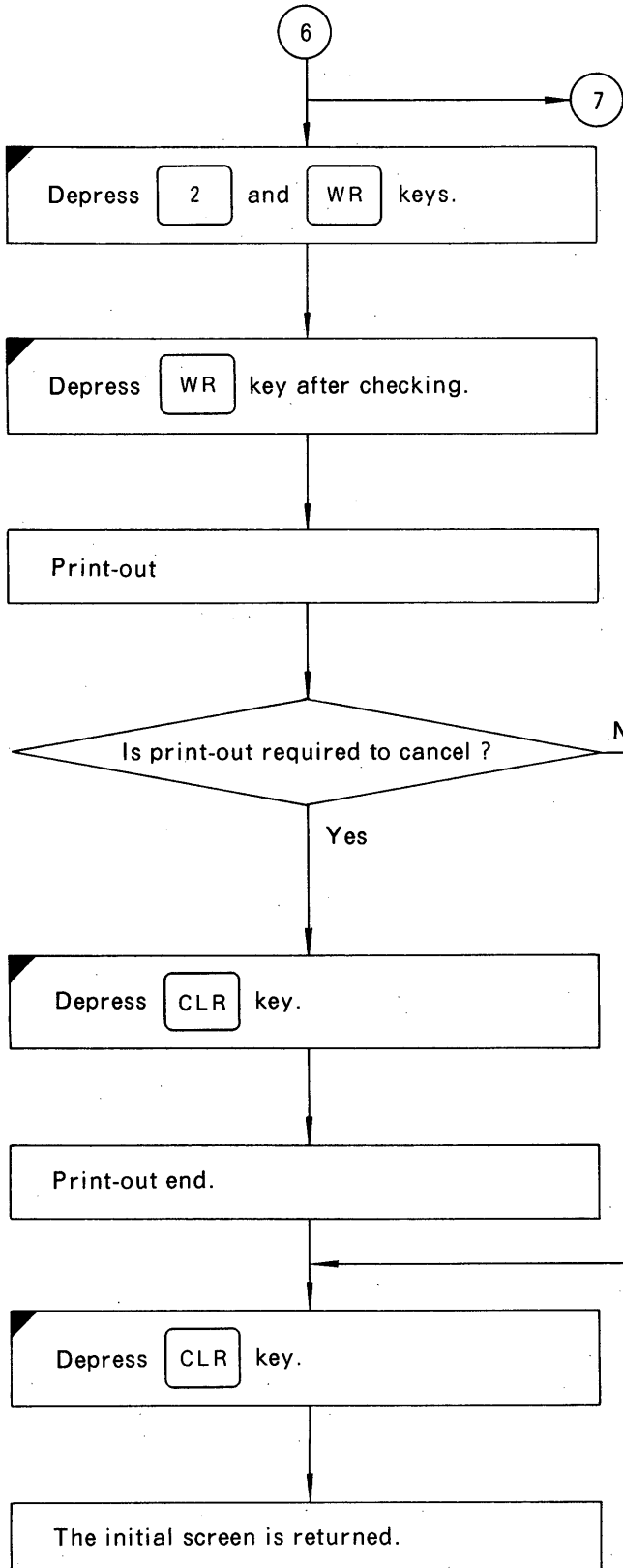
```

MONITOR PRINT
< SEQUENCE MODE >
cancelled.
  
```

Print-out Initial Screen with Resultant Speed or Torque Monitor

```

MONITOR PRINT ? _
1 : SEQUENCE MODE
2 : MEMORY MODE
3 : SYSTEM SET
  
```



```

MONITOR PRINT
<MEMORY MODE>
o.k.?
  
```

During Print Monitor

```

MONITOR PRINT
<MEMORY MODE>
now print.
  
```

Print-out End

```

MONITOR PRINT
<MEMORY MODE>
cancelled.
  
```

```

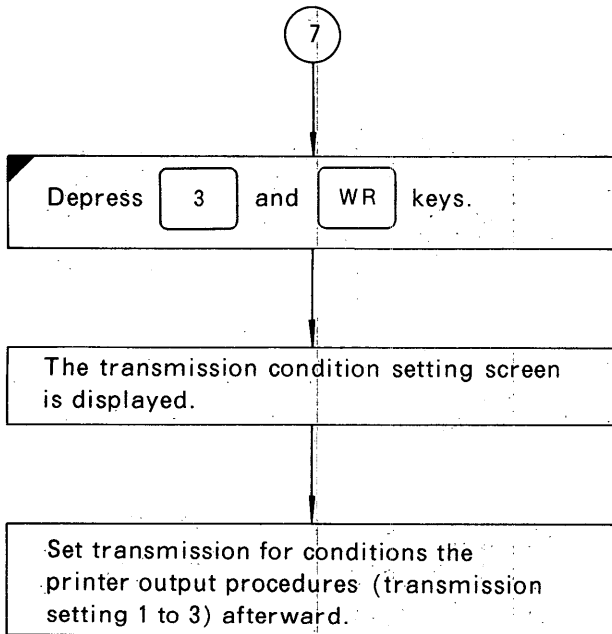
MONITOR PRINT
<MEMORY MODE>
end.
  
```

Print-out Initial Screen with Resultant Speed or Torque Monitor

```

MONITOR PRINT ?
1 : SEQUENCE MODE
2 : MEMORY MODE
3 : SYSTEM SET
  
```

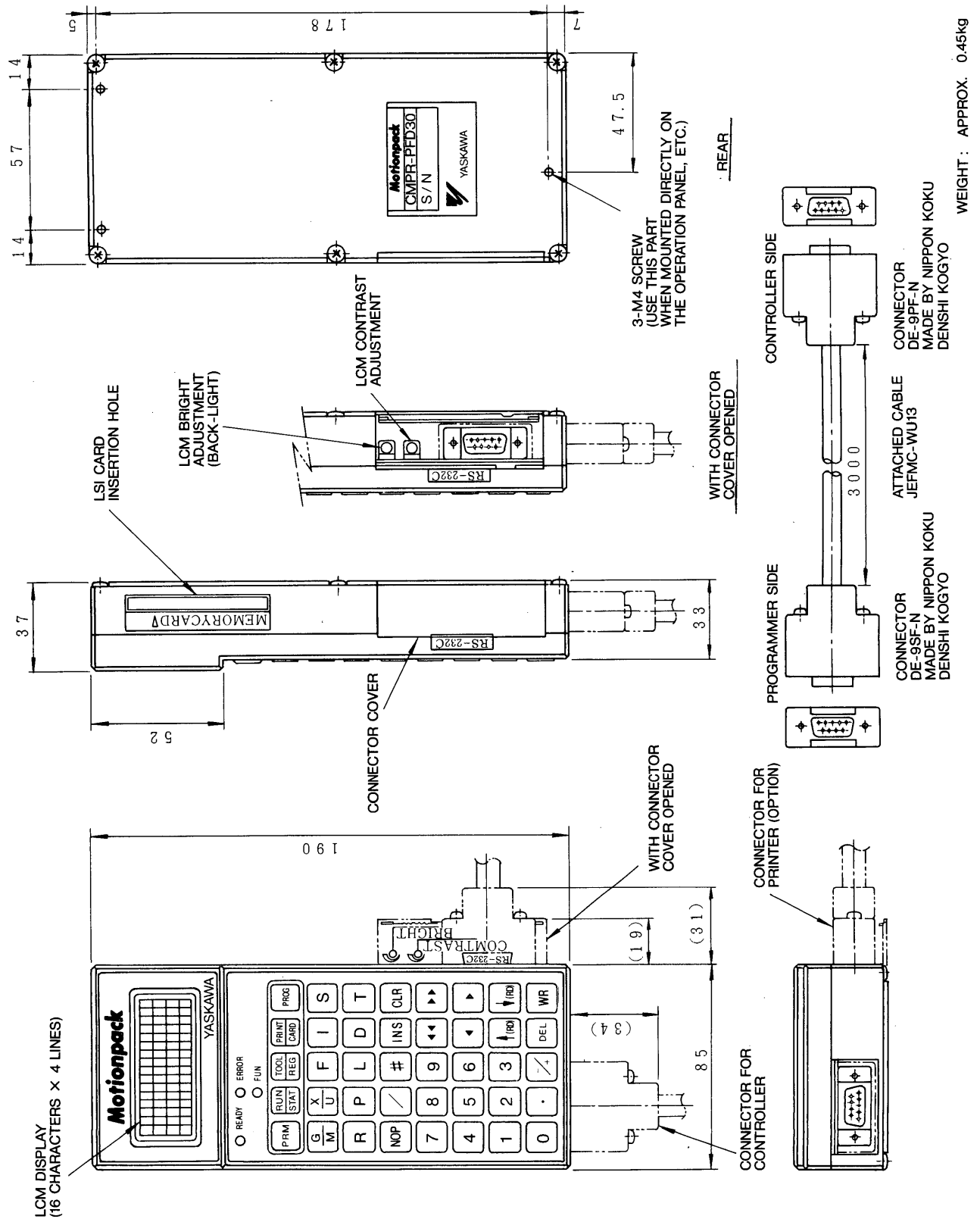
5.23 PRINT-OUT WITH RESULTANT SPEED AND TORQUE MONITOR (Cont'd)



M	O	N	I	T	O	R	:	P	R	I	N	T	?	
1	:	S	E	Q	U	E	N	C	E		M	O	D	E
2	:	M	E	M	O	R	Y	:		M	O	D	E	
3	:	S	Y	S	T	E	M	:	S	E	T			

S	Y	S	T	E	M	:	S	E	T	:	?				
1	:	B	A	U	D		R	A	T	E		9	6	0	0
2	:	D	A	T	E		L	E	N	G	T	H		8	
3	:	P	A	R	I	T	Y	:			N	O	N	E	

6. EXTERNAL DIMENSIONS



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