User's Manual

IMO Programmable Logic Controller

KLD-150S

IMO Industrial Systems

CONTENTS

Chapter 1. INTRODUCTION

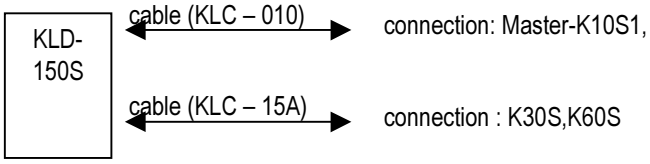
1.1 Features

Handy Loader, KLD-150S, is a programming tool commonly used for K Series programmable controller and, besides program edit function, features various functions such as monitor, special functions and mode setting of PGM, PAUSE, RUN or DEBUG.

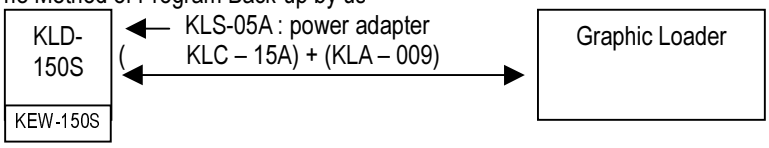
1) Operation in four modes
   - ① Program Mode
   - ② Run Mode
   - ③ Debug Mode
   - ④ Pause Mode
2) Monitor
3) EPROM Writer function
   - ① Reading from EPROM
   - ② Writing to EPROM
   - ③ Confirming of EPROM Clear
   - ④ Comparing EPROMs
4) Luminous LCD display

1.2 Handling Precautions

1) The configuration of Connection to MK series



2) The Method of Program Back-up by us

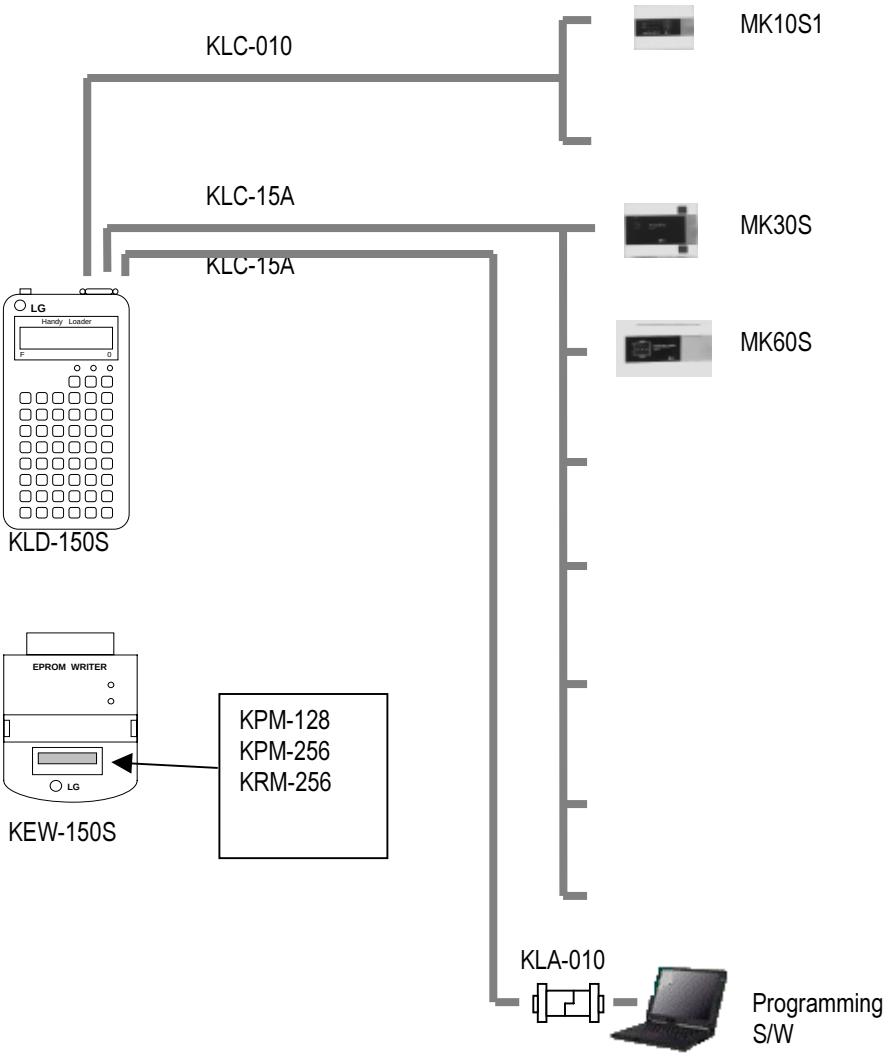


KPM – 128
KRM – 256
KPM – 256

Note) * Refer to Section 4.1 for keyboard operations.

Chapter 2. CONFIGURATION AND PRODUCT LIST

2.1 System Configuration



2.2 Products List

Unit	Type	Descriptions
KLD-150S	Handy loader	• LCD-attached programming tool • Loader cable (KLC-15A) included
KPM-128 KRM-256 KPM-256 KEW-150S	Memory pack	• EPROM(12.5V) Pack • RAM Pack • EPROM Writer
KLC-010	Loader cable	• 9:6 Loader cable for K10S1 and K10S (Not supplied with KLD-150S)
KLA-010	Adapter	• 9:9 adapter for communication between PC (Programming S/W) and KLD-150S with loader cable.

Chapter 3. SPECIFICATIONS

3.1 General Specifications

Item	Specifications
Storage temperature range	-10 °C to 50 °C
Operating temperature range	0 °C to 40 °C
Ambient humidity range	85 % RH or less (non-condensing)
Operating ambience	Free from corrosive gases
Dimensions	90W✕175H✕36D [□]
Weight	420 g

3.2 Performance Specifications

Item	Specifications
Available PLC	K Series
Power supply	Supplied by the PLC connected DC 5V 0.6A
Method of connection to the PLC	Connected by loader cable Communication method : RS-232C, 9.6kbps (MASTER-K),
LCD display	16 letters, 2 line dot matrix LCD LCD light supply: On/Off by key operation, Auto-Off after 10 minutes from the last key operation
Keyboard	3-mode selecting keys with mode indication LED 48-operating keys Confirming key operation : Buzzer
Programming method	On-Line : Direct input to PLC program area Off-Line : Requires KEW-150S and external power supply(KLS-05A)
Complement	Available EPROM: 16 K, 32 k byte EPROM

1) **Jack connector to external power supply**
   When the power is supplied not by the PLC but by a power supply adapter, used to connect its cord.
2) **Connector to PLC**
   Used to connect to the PLC-to-Loader connection cable.
3) **Dot matrix LCD display**
   Dot matrix LCD with 16 letters and 2 lines. Used for the loader display screen. An attached light makes it possible to operate the loader even in the dark place.
4) **PLC mode indicator**
   Indicates a mode of the PLC. A mode of RUN, PROGRAM, PAUSE and DEBUG is indicated depending on the state of the PLC.
5) **Key Board**
6) **Connector to KEW-150S**
   It is used to connect to KEW-150S(option unit). The functions of EPROM read, EPROM write, EPROM clear confirm and EPROM comparison is available when connected to it.

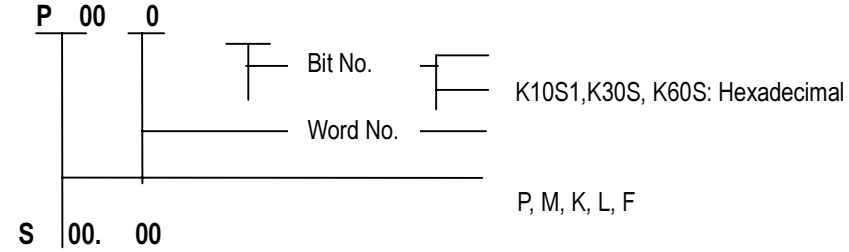
3.3 Key Function

Key type	Name	Function
Mode Key	RUN	Changes the mode of the PLC into RUN mode.
	DEB PAU	Changes from Run mode to Pause mode, or from Program mode into Debug mode.
	PGM	Changes the mode of the PLC into Program mode.
Double functions toggle key	SHFT	It is used to execute the hidden function if a key has two different functions. The effective range of this key is limited within only one-time execution.
Executive Key	ENT	Inputs a program into the PLC program area or changes the values(the present or setting value of D and T/C) in data area. (Enter)
	CLR	Returns to the last state. SHFT+CLR make the screen to return to the initial screen. (Clear)
	TEST	Changes the present or setting value of T/C, the D register value, or the value in a word.
	SRCH	Searches a command or bit in a program, or the end of a program.
	DELT	Deletes the specified steps in a program.
	INST	Inserts the specified step in a program.
	STEP ▼	Displays next step in a program, or next bit or card in monitoring. Reads and displays the program at the specified address, if an address is specified.
	▲ STEP	Displays previous step in a program, or previous bit or card in monitoring. Reads and displays the program at the specified address, if an address is specified.
Command Key	LOAD	Used in LOAD, LOAD NOT, AND LOAD, or OR LOAD
	AND	Used in AND, AND NOT or AND LOAD
	OR	Used in OR, OR NOT or OR LOAD
	NOT	Used in LOAD NOT, AND NOT, OR NOT, or NOT

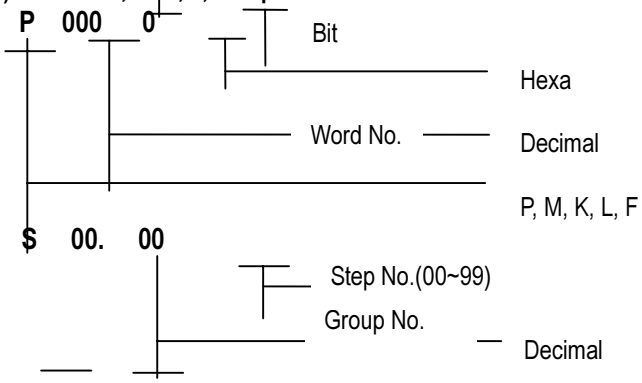
Key Type	Name	Function
Command Key	OUT	OUT
	SET	SET
	RST	RST (Reset)
	FUN	Used when application commands other than basic commands are used.
	TMR	Used when TON, TOFF, TMR, TMON, or TRTG is used. (Timer)
	CNT	Used when CTU, CTD, CTUD, or CTR is used. (Counter)
Area Key	P	I/O bit or word
	M	Complementary bit or word
	K	Constant-power regulating bit or word
	L	Link bit or word
	T	Timer
	C	Counter
	F	Special bit
	S	Step controller bit
	D	Data register
Numeric Key	0 ~ 9 A ~ F	Inputs numbers such as address, I/O no., and data register no.
Other Key	PRM	Inputs parameters
	EPRM	Reads/Writes an user program.
	ON 8	Force On
	OFF 9	Force Off
	CD A	Specifies the word for P, L, M, K, F or S.
	H B	Inputs hexadecimal numbers.
	· C	① Inputs minus numbers. (e.g.: timer setting values, etc.)
		② Used when the S is used in the step controller.
	# D	Specifies indirectly the data register
	F+ E	Increments function number of an application program.
	F- F	Decrements function number of an application program.
	AUX	Selects auxiliary function .
	MON	Starts monitor.

3.4 Description of Memory Word & Bit

1) K10S1 ~ K500H Representation



2) MK1000H, GK3, 4, 5 Representations



3.5 Mode Description

3.6

KLD-150S is the programming tool for MASTER-K and GLOFA-K series controller and is operated on the modes given below:

①Program Mode ( ) RUN

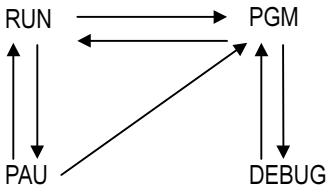
②Run Mode ( ) PGM

③Debug Mode ( ) DEB PAU

④Pause Mode ( ) DEB PAU

- **Mode Selection**

Each mode of KLD150S is selected as below, and when a mode is selected the corresponding LED display turns on.

Mode	Mode Key Operations	LED
PGM (Program Mode)	 ① Only arrow directions are available. ② If error occurs during change from PGM to RUN, it is displayed.	PGM LED
RUN (Run Mode)		RUN LED
DEB (Debug Mode)		PGM + PAU
PAU (Pause Mode)		RUN + PAU

Chapter 4. KEY OPERATIONS

4.1 POWER ON (ON Line)

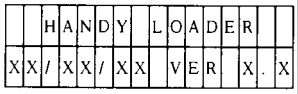
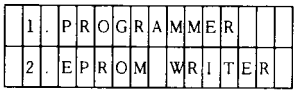
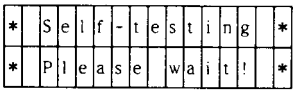
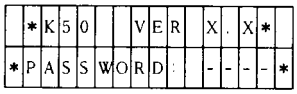
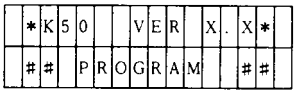
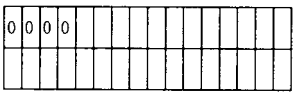
Mode Selection & Description

RUN/PAU	PGM	DEB
O	O	O

Usable when the KLD-150S has been connected to the CPU of MASTER-K or GLOFA-K(hereafter, called PLC) series.

Note

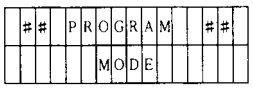
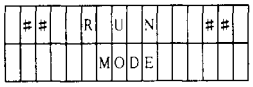
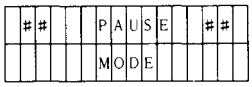
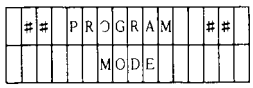
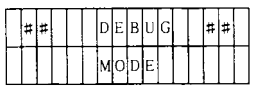
1) Not registering a password means that "0000" has been registered as the password.
2) If the PLC has an error, the message of '.....' or 'SYSTEM ERROR' appears before the screen ready for entering the password.

Loader Display	Key Operations	Description
		• This message is shown for one second if the KLD-150S has been connected to the PLC CPU. • <The "X" marks denotes the change date of the O.S. and its version No.>
		• Pressing the [1] key makes you enter into the programmer of KLD-150S.. • The EPROM Writer function of the [2] key is only available when KLD-150S is connected to Programming S/W.
		• This message indicates that the communications test between the PLC and the KLD-150S is being performed.
	→ Not displayed if a password has not been registered	• The message of waiting to enter the password appears if no error has been occurred during the communications test and a password has been registered. (The type of the PLC is displayed.)
		• This message indicates that there's no problem for communications between the PLC and the KLD-150S. • The present operation mode of the PLC CPU is displayed
		• Perform necessary operations with the keys of the KLD-150S.

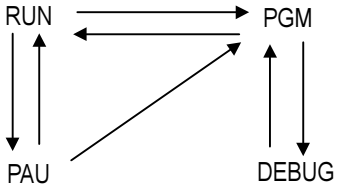
4.2 MODE CHANGE

In the KLD-150S, the following mode key operations controls the PLC.

1) Mode Key Description

Loader Display	Key Operations	Description
	PGM	•The PGM key changes the operation mode of the PLC into the Program mode.
	RUN	•The RUN key changes the operation mode of the PLC into the Run mode.
	DEB PAU	•The DEB PAU key changes the operation mode of the PLC from the Run mode into the Pause mode, or from the Program mode into the Debug Mode.
	PGM	
	DEB PAU	

2) Mode Key Operations



① Only Arrow directions are available.
② If error occur during transition from the PGM mode into RUN mode, it will be displayed.
③ K10S1/K30S/K60S does not have the DEBUG mode.

4.3 PASSWORD REGISTRATION

Mode Selection & Description

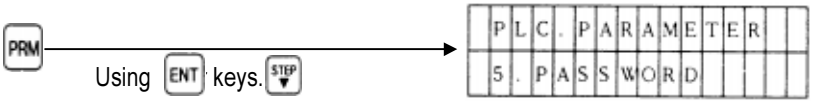
RUN/PAU	PGM	DEB
O	O	X

Note

Use of the password prevents others from monitoring or modifying a user program

Loader Display	Key Operations	Description
0 0 0 0 L O A D N O T M 0 0 0		• Password registration function menu.
1 . P A S S W O R D 2 . H S C S E T	PRM	• Pressing the PRM key make a specified menu displayed corresponding to the type of the PLC. Select the item " Password".
P A S S W O R D N E W : - - - -	1	• The message waits for the user to enter a new password.
P A S S W O R D N E W : ə ə ə ə	1 1 1 1	• Enter a new password.
P A S S W O R D V E R I F Y : ə ə ə ə	1 1 1 1	• Enter the password again for verification.
1 . P A S S W O R D 2 . H S C S E T		• Entering a password has been completed.
* K 5 0 V E R 1 . 1 * * P A S S W O R D : - - - - *	• Displaying the ready message for entering the password when the power is applied after password registered	• If a password has been already registered, the applying the power from the PLC makes the message waiting for the user to enter the registered password.
* K 5 0 V E R 1 . 1 * * P A S S W O R D : ə ə ə ə *	1 1 1 1	• Enter the registered password.
# # P R O G R A M # # M O D E		• Entering the password correctly change the mode into the corresponding mode.

1) Select the No. 1 item of the PLC parameters in the K10S1, K30S, K60S,



4.4 PASSWORD CHANGE AND DISABLE

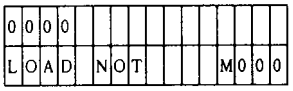
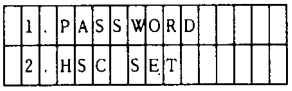
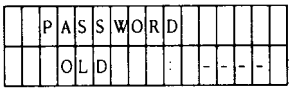
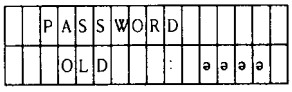
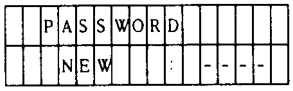
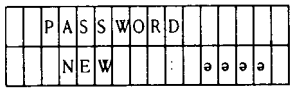
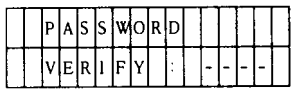
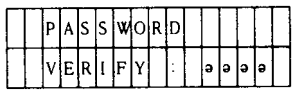
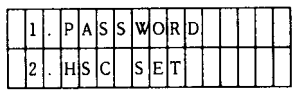
Mode Selection & Description

RUN/PAU	PGM	DEB
O	O	X

It is used to change the registered password and disable the password function so that the user does not use it.

Note

The mark " ▨▨▨▨ " replaces the password entered to prevent it from being exposed to others.

Loader Display	Key Operations	Description
	PRM	
		• Password registration function menu
	1	
		• The message is waiting for the user to enter the registered password. • If the registered password is "1111"
	1 1 1 1	
		• Enter the password.
		• This message is waiting for the user to enter a new password to be changed. • If "0000" is entered, it means that the password function will not be used hereafter.
	1 2 3 4	
		• Enter a new password to be changed.
		• This message is waiting for the user to enter the new password again for verification • Enter the new password again for verification.
	1 2 3 4	
		• The system is verifying that the last entered password is same with the password entered in the message "NEW: ·····".
		•Password change has been completed.

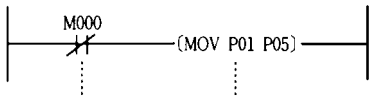
4.5 PROGRAM INPUT and MODIFY

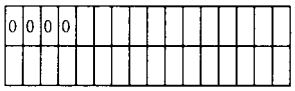
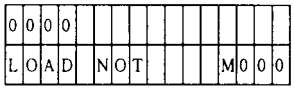
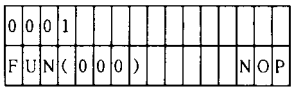
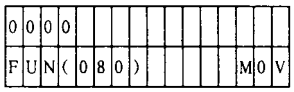
Mode Selection & Description

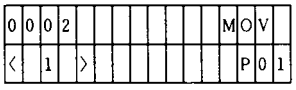
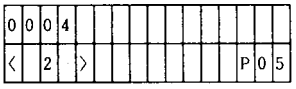
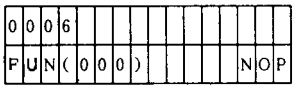
RUN/PAU	PGM	DEB
×	O	×

It is used to input or modify a program.

Program



Loader Display	Key Operations	Description
		• This message indicates that a program can be input in the PGM mode. • The mark "XX" denotes the O/S version No. of the connected PLC.
	CLR	
		• Pressing the CLR key makes the message wait for the user to enter an instruction.
	LOAD NOT	
	M 0 0 0	
		• Program Input • Enter an instruction and a bit No.
	ENT	
		• Pressing the ENT key after the entering program at the step "0000" makes the instruction input, and then the message waits for next instruction input.
	FUN	
	0 8 0	
		• Entering "0 8 0" and pressing the ENT key make the instruction MOV input. • For entering an application instruction, press the FUN key and enter the number of the instruction.
	ENT	

Loader Display	Key Operations	Description
		• The message waits for inputs.
	P 0 1	• Enter “P01”.”
		
	ENT	
		• The message waits for inputs.
	P 0 5	• Enter “P05”.
		
	ENT	•The message waits for the user to enter an instruction for the step “0006”.
		

Execute Program Modify in the PGM mode. For finding and modification, use the “ STEP▼, STEP▲ SRCH keys to find a desired instruction, step, word No., byte No., or data.

4.6 STEP SEARCH and PROGRAM READ

Mode Selection & Description

RUN/PAU	PGM	DEB
O	O	X

It is used for Program Read or monitoring the programs at the specified step that you'd like to read.

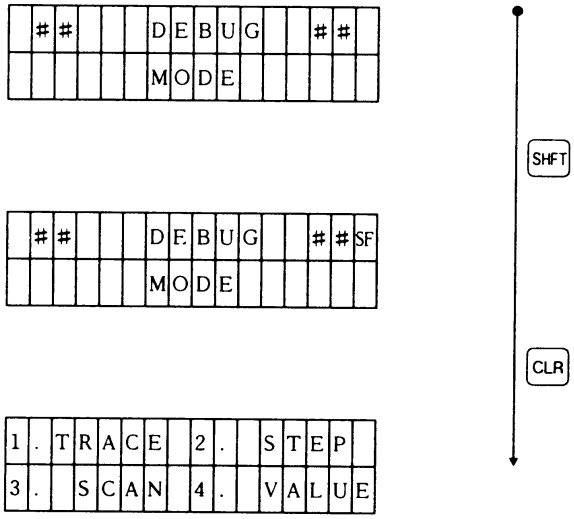
Note

Reading, monitoring and confirming the programs at the step you want to modify is available in the "PGM" mode. Monitoring is also available in the "RUN" mode.

Loader Display	Key Operations	Description
1234 LOAD NOT M010		• This is to find a step regardless of message display status • Note 1)
0000	SHFT CLR	• Pressing the SHFT CLR makes the step "0000" set. • Note 2)
0135	0 0 0 0	• The number of the step that you wanted to read or monitor is entered.
0135 AND M001	STEP▼	• In the PGM mode, a program is displayed. but in the RUN mode, Bit On/Off is displayed
0134 LOAD NOT M000	▲STEP	• Pressing the STEP▼ key makes the number of step increment by one. • Pressing the ▲STEP key makes the number of step decrement by one.
0136 OUT P000	STEP▼	• Pressing the STEP▼ key in the step "0135" makes this message appear.
0136 OUT	CLR	• "P000" has been cleared.
0136	CLR	• The instruction "OUT" has been cleared.
0000	CLR	•The step "0000" has been set.. •The number of the step that you want to find can be set for Program Read or Step Monitor.

4.7 PROGRAM EXAMPLES

Note 1) In the debug mode, pressing the [SHFT] [CLR] " keys makes the selectable message for the execution of the debug mode displayed.



Note 2) If an entered value of step number by the numeric keys can be larger than the maximum step number, then the " [ENT] key will not operate

HINT

1) After you have read a step, if you press the " [STEP▼] [▲STEP] " keys when no instruction has been modified then the instruction at the next step is read.
2) Pressing the " [STEP▼] [▲STEP] " keys after modification of an instruction makes the present indicated step read.
3) After entering the new instruction in order to modify the current program or continue a new program, the " [ENT] key has to be pressed to download to PLC, if you press the " [STEP▼] [▲STEP] " keys are pressed, the entered instruction is not recognized by PLC.

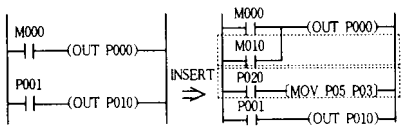
4.8 PROGRAM INSERT

Mode Selection & Description

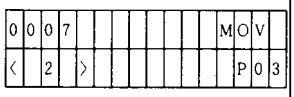
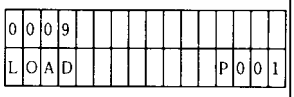
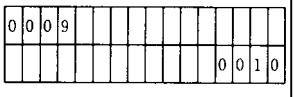
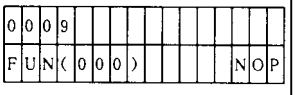
RUN/PAU	PGM	DEB
×	O	×

This function is to insert one instruction or "NOP"s in the present step under the condition that a program has been entered.

Program

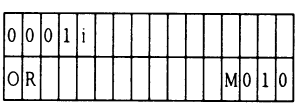


Loader Display	Key Operations	Description
0001 OUT P000	OR M 0 1 0	• Use the SHFT key to insert an instruction in the desired step. • Example: Step "0001" M010 Insert
0001 OR M010	INST	
0002 OUT P000	ENT	• The step No.of the instruction OUT P0000 in the step "0001" increments by one and changes into the step "0002".
0003 LOAD P001	LOAD P 0 2 0	• The step No.of the instruction OUT P0010 in the step "0003" increments by one and changes into the step "0004".
0003 LOAD P020	INST	
0004 FUN(080) MOV	FUN 0 8 0	P020 Insert
0005 〈 1 〉 P05	INST	• Application program insert • Example: Step "0004"
	P 0 5	⊣{MOV P05 P03 }⊢
	INST	Insert

Loader Display	Key Operations	Description
	P 0 3	
	INST	• When inserting 10 NOPs into from the step "0009". • The 10 NOPs are inserted into from the step 0009 to the step 0018, respectively. .
	CLR CLR SHFT	<N steps can be inserted.>
	0 0 1 0	
	INST	• The 10 NOPs are inserted into from the step 0009 to the step 0018, respectively. .
		

NOTE

1) Pressing the INST key instead of the ENT key makes the content at the present step shift to next and then the new content that you want to insert will be entered at the same step.
2) As for an application instruction, the number of step that will be inserted is same as the step No. of the application program.
3) As for an application program, use the ENT key instead of the INST key to enter the setting of the last device.
4) Pressing the INST key makes the letter "i" appear for a moment and then disappear by the step number. Also, the buzzer will rings twice. Pressing the INST key will make the buzzer ring once.



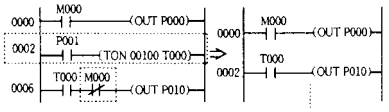
4.9 PROGRAM DELETE

Mode Selection & Description

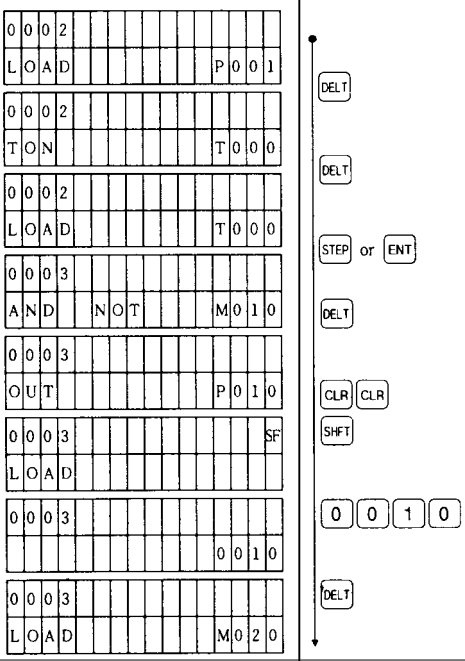
RUN/PAU	PGM	DEB
O	O	X

This function deletes step(s) from the present step in an existing program.

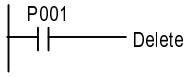
Program



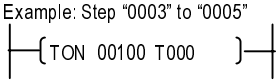
Loader Display / Key Operations



Description

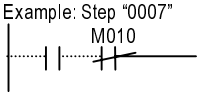


- As for the application instructions for the Timer and the Counter, the preset values, word No. and word data of the instructions will be also deleted and the step No. will decrement by the number of the step(s) deleted.
- Example: Step "0003" to "0005"



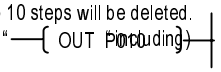
Insert

- Example: Step "0007"



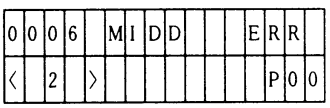
<Deleting step(s)>

- 10 steps will be deleted.

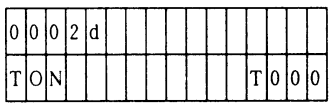


- Used for Block Delete
- The instruction at the step "0013" will be displayed at the step "0013" after deletion of the steps "0003" to "0012"

1) As for application instructions for the Timer and Counter, the message 'MIDDLE ERR' shown below will be displayed if the deletion of a middle step including setting values, word No. or word data is attempted. (Be sure to delete the first step of the instruction.)



1) Pressing the DELT key will make the letter "d" appear for a moment and then disappear by the step number. Also the buzzer will rings twice.
(The buzzer rings once when the DELT key is pressed, and rings once after the execution.)



4.10 BIT NO. SEARCH

Mode Selection & Description

RUN/PAU	PGM	DEB
O	O	X

Note

For searching an instruction step, enter the instruction and press the SRCH key.

Loader Display	Key Operations	Description
0004		
0004 P000	P 0 0 0	• Enter the bit No. to be searched.
0021 OUT P000	SRCH	• The content of step including the specified bit No. is shown after searching.
0050 OUT P000	SRCH	• Pressing the SRCH key makes the step including the desired bit No. searched again and displayed.
0110 OUT P000	SRCH	
0220 OUT P000	SRCH	
0221 OUT P000	SRCH	• If the search reaches the final step, it restarts from the first step.

NOTE

1) The following shows the displays during searching.

0004 Searching P000

2) If the searched bit No. is not found, the following message is displayed.

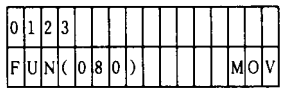
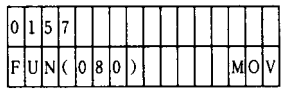
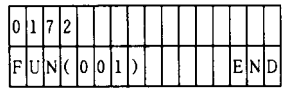
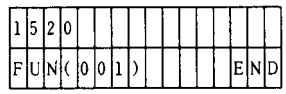
1234 Not Found P000

4.11 WORD NO. SEARCH

Mode Selection & Description

RUN/PAU	PGM	DEB
O	O	×

Note

Loader Display	Key Operations	Description
	CLR CLR cd A	• The mark 'cd' means a word No. • Enter a word No. for searching.
	P 0 3 SRCH	
		• The content of step including specified word No. is shown after searching.
	CLR CLR FUN 0 8 0	• Enter the instruction to search. • This is to search the MOV instruction.
	SRCH	• The step including specified instruction is shown after searching.
	STEP ▼	• This is to search a decimal or hexadecimal value.
	SRCH	
		• After pressing the SRCH key, the step including specified numeric value is shown.
	CLR CLR	
	FUN 0 0 1	• This is to search the step including "END" instruction.
	SRCH	
		• The end step is shown.

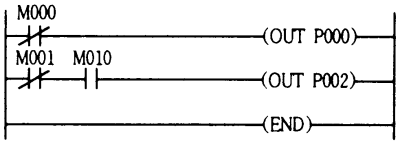
4.12 STEP MONITOR

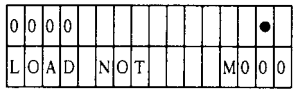
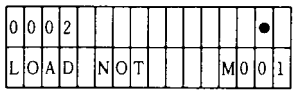
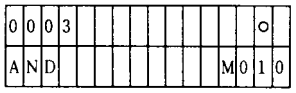
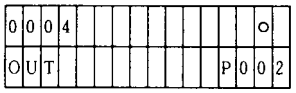
Mode Selection & Description

RUN/PAU	PGM	DEB
O	X	X

It is used to monitor a program by the step in the RUN mode.

Program



Loader Display	Key Operations	Description
	STEP ▼ STEP ▼	• Pressing the SHFT CLR keys set the screen to the step "0000". Enter the step to be monitored.
	STEP ▼	• The mark "●" means that the circuit "LOAD NOT M001" is being conducted.
	STEP ▼	• The mark "○" means that the circuit " AND M010" is not being conducted.
	STEP ▼	• The step "0004" which is incremented by one step from the step "0003"can be monitored.
		• The step "0005" can be monitored by pressing the STEP ▼ key at the step "0004"

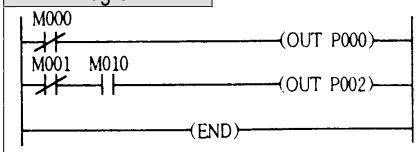
4.13 BIT MONITOR

Mode Selection & Description

RUN/PAU	PGM	DEB
O	×	×

Maximum four bits and their status at the present step of a program can be monitored at one time.

Program



Loader Display	Key Operations	Description
0002 LOAD NOT M001	PGM, RUN	
0002 ● LOAD NOT M001	CLR CLR	• Step Monitor in the Run mode.
0002	M 0 0 0	• Enter bit No. to monitor.
	MON	• Monitoring the bit "M000"
M000 ○	P 0 0 0	• The mark "●" means that the bit is turned on and the mark "○" means being turned off.
	MON	• Adding the monitoring bit P000.
M000 ○ P000 ○	M 0 0 1	• Adding the monitoring bit M001.
	MON	• Monitoring the bits M000, P000 and M001.
P000 ○ M001 ○	M 0 1 0	• Adding the monitoring bit M010.
	MON	• Monitoring the bits M000, P000, M001 and M010.
M000 P000 ○ M001 ○ M010 ○	P 0 0 2	
	MON	• If more than 4 bits have been entered, the bit on the upper left part will disappear.
P000 ○ M000 ○ M010 ○ P002 ○	CLR CLR	
	CLR CLR	• Delete the bits that are being monitored.
0002		
	STEP ▼	• Present step monitor
0002 ● LOAD NOT M001		

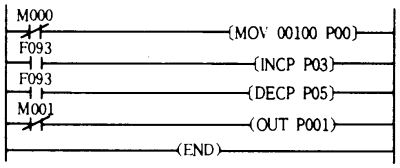
4.14 WORD MONITOR

Mode Selection & Description

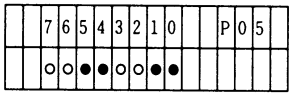
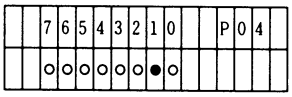
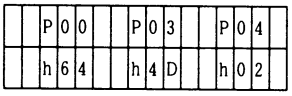
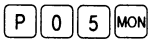
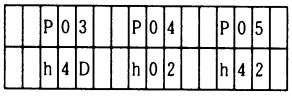
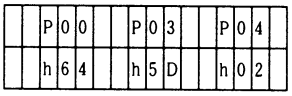
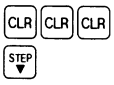
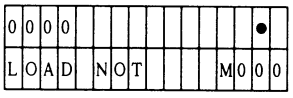
RUN/PAU	PGM	DEB
O	X	X

Bits, decimal values and hexadecimal values can be monitored in a word No. As for decimal and hexadecimal values, maximum three words can be simultaneously monitored.

Program



Loader Display	Key Operations	Description
0000 ● LOAD NOT M000	RUN	• Monitoring a word No. in the RUN mode.
	CLR CLR	
0000	CD A P 0 0	• Enter the word recognizing key. And enter word No. "P00".
0000 cd P00	MON	• Monitoring "P00". (For decimal monitor, press the H B key.)
P000 h64	P 0 3 MON P 0 5 MON	• 1 byte monitoring is available in K50H. 1 word monitoring is available in other PLC.
P000 P003 P005 h64 hBE h65	SHFT MON	• Monitoring simultaneously P00, P03 and P05. • Intends to monitor the status of each bit.

Loader Display	Key Operations	Description
		• Monitoring the status of each bit of "P05"
		• Monitoring the status of P04 with use of the STEP key.
		
		• Monitoring simultaneously the word numbers of P03, P04 and P05. • The word P00 has been left-shifted and stored in memory.
		• Monitoring simultaneously the word numbers of the P00, P03 and P04 again.
		• Returning to the step monitor form the word No. monitor.

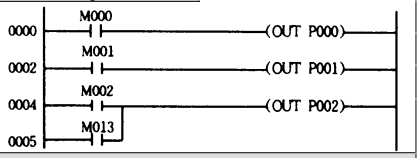
4.15 BIT/WORD FORCE ON/OFF

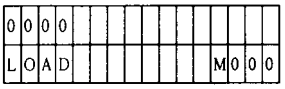
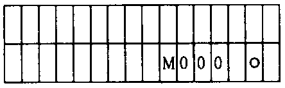
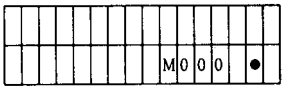
Mode Selection & Description

RUN/PAU	PGM	DEB
O	X	X

It is used to force turn on/off of the bit of Word No.

Program



Loader Display	Key Operations	Description
	CLR CLR	
	M 0 0 0 MON	
	8	• Monitoring the bit of M000 .
	P 0 0 0 MON	• Forced turning on the bit of M000.

Loader Display	Key Operations	Description
M000 ● P000 ●	CLR CLR CD A M 0 0	
M00 h01	MON	• Monitoring the present data of the word area. .
	SHFT MON	
7 6 5 4 3 2 1 0 M00 o o o o o o o ●		• Monitoring the word area by the bit. • 16 bits will be monitored like following, except for the 50H. F E D C B A 9 8 7 M00 o o o o o o o o o o o o o o o ●
	TEST	
7 6 5 4 3 2 1 0 M00 o o o o o o o ●		• Force turning on the bits in the word area.
	ON 8 ENT	(Press the ON 8 key eight times.) • The screen is waiting for force on/off inputs with the cursor flickering.
7 6 5 4 3 2 1 0 M00 ● ● ● ● ● ● ● ●		• Force turning on the eight bits in the area of the word M00.
	CLR	
M00 hFF		• The present data of the word area is being monitored.

1) Force turning on/off a bit and using the bit in a program can change the status of the bit.

2) Force turning on/off the “F” area is not available.

3) Force turning on/off is available on output area of “P” area.

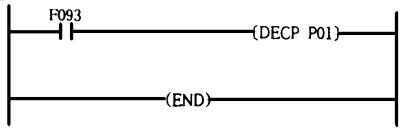
4.16 CURRENT VALUE CHANGE

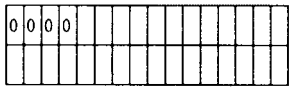
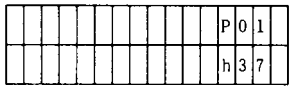
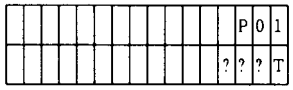
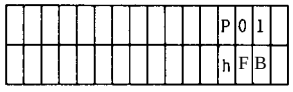
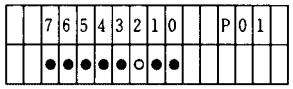
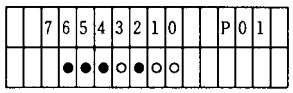
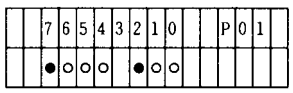
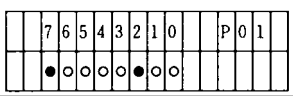
Mode Selection & Description

RUN/PAU	PGM	DEB
O	×	×

Used to change the word number for monitor during monitoring a word No.

Program



Loader Display	Key Operations	Description
		• Display shows step monitor.
	CLR CLR	
		
	OD A P 0 1	• Enter a word No. to monitor.
	MON	
	TEST	• Change the content of selected word.
		
	H B F B	• The data of the word P01 changes into FBH and the instruction is executed.
	ENT	• In the MK-S series, K200H, K500H, K1000H and GK3, GK4 and GK5, 16 bits will be displayed.
	SHFT MON	
		• The cursor means that pressing the ON 8 OFF 9 keys is waited.
	TEST	
		
	ON 8 OFF 9 OFF 9	• Pressing the ON 8 or OFF 9 key makes the cursor shift to the right.
	OFF 9	
	ENT	• The data of the word P01 changes to 84H and the instruction is executed.
		

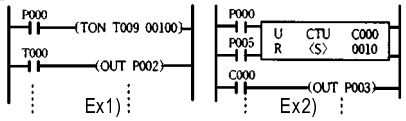
4.17 TIMER/COUNTER INPUT

Mode Selection & Description

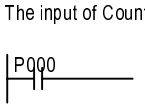
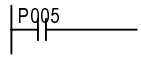
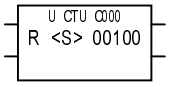
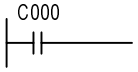
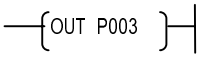
RUN/PAU	PGM	DEB
×	O	×

Input or modify the Timer/Counter instructions.

Program



Loader Display	Key Operations	Description
Example 1)		
0000 LOAD P000	LOAD P 0 0 0	• Enter 'LOAD P000'..
	ENT	P000
	TMR T 0 0 0	• Enter the desired timer number using the TMR key.
0001 TON T000	ENT	• As for pressing the TMR key, TON appears when pressed one time, TOFF when two times, TMR when three times, TMON when four times and TRTG when five times. TON reappears when six times.
0002 (DATA)	1 0 0	• The message waits for input of a timer preset value.
0002 (DATA) 00100	ENT	(TON 00100 T000)
	LOAD T 0 0 0	• Confirm a timer preset value.
0004 LOAD T000	ENT	• Enter "LOAD T000"
	OUT P 0 0 2	T000
0005 OUT P002	ENT	• Enter "OUT P002"
		(OUT P002)

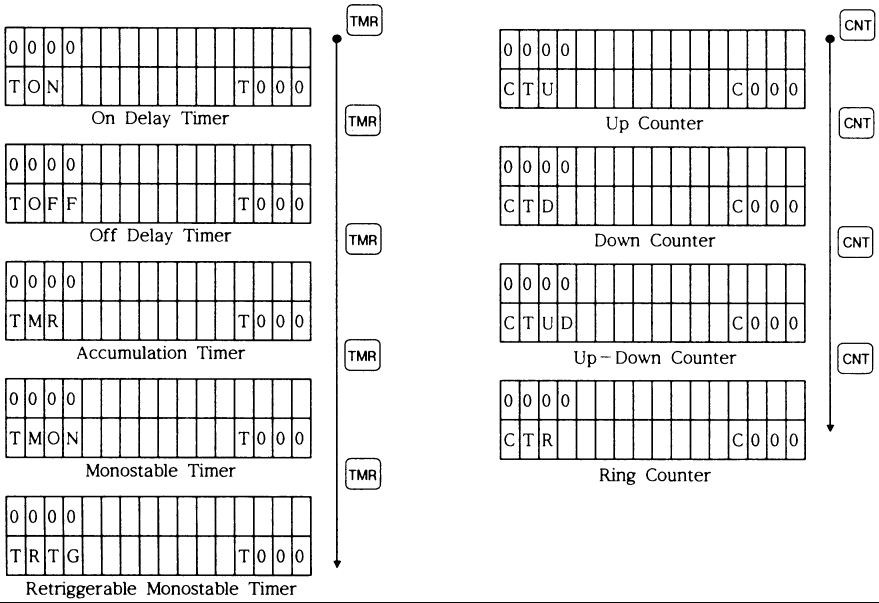
Loader Display	Key Operations	Description
Example 2)		
0000 LOAD P000	LOAD P 0 0 0 ENT	• The input of Counter 
0001 LOAD P005	LOAD P 0 0 5 ENT	• Reset input of Counter (when 'LOAD P000' has been entered at the step "0000".) 
0002 CTU C000	CNT C 0 0 0 ENT	• Enter a desired counter number by using the CNT key. • As for pressing the CNT key, CTU appears when pressed one time, CTD when two times, CTUD when three times and CTR when four times. CTU reappears when five times.
0003 (DATA)	1 0 0	• The message waits for input of a counter preset value.
0003 (DATA) 00100	ENT LOAD C 0 0 0	• Enter counter. 
0005 LOAD C000	ENT OUT P 0 0 3	• Enter "LOAD C000" 
0006 OUT P003		• Enter "OUT P003" 

- Program Modification should be executed in the PGM mode. For modifying an instruction, step, word No. or bit no., search it by using STEP ▼ key or ▲ STEP PGM
- Pressing the TMR key or CNT key continuously make the numbers of Timer/Counter displayed. For entering a program, press the ENT key.

4.18 DESCRIPTIONS

1) If a timer/counter preset value is lager than the maximum value, pressing the [ENT] key makes the "OPRND. ERR" displayed.
Example) If preset value is larger than the maximum value 65535, the followings are displayed.
(If a hexadecimal or decimal number is entered for device in an application instruction and it is larger than the specified number, the same error is displayed.)

2) The application instructions whose FUN number falls into 130 to 147 are BCD instructions and the [B] key cannot be entered.
3) The application instruction that has the letter "D" as its initial (EX. : DMOV) is a double word instruction. The application instruction that has the letter "P" as its final letter (EX. : MOVP) is a pulse instruction.
4) If the [TMR] key is pressed repeatedly, the followings are displayed in sequence. Pressing the [ENT] key when a desired timer instruction is displayed makes the program entered(in the PGM mode).
5) If the [CNT] key is pressed repeatedly, the followings are displayed in sequence. Pressing the [ENT] key when a desired counter instruction is displayed makes the program entered(in the PGM mode).



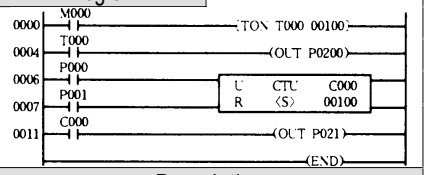
4.19 TIMER/COUNTER MONITOR

Mode Selection & Description

RUN/PAU	PGM	DEB
O	X	X

Monitor of timer or counter.

Program



Loader Display	Key Operations	Description
0000 TON T000	MON	•Monitoring the on delay timer T000.
ON T000 ● 00100	C 0 0 0	• Enter counter No. C000 to monitor.
ON T000 UP C000 ● 00100 ○ 00000	MON	• C000 is used as Up-Counter.
ON T000 NU C001 ● 00100 ○ 00000	STEP ▼	• The STEP ▼ and STEP ▲ keys are only available for the right side timer or counter. . • Displayed numeric on low row is elapsed value.
ON T000 UP C000 ○ 00100 ○ 00000	STEP ▲	• Monitoring is available by using the STEP ▼ STEP ▲ keys.
ON T000 ● 00100	CLR	
T000 <S> <P> ON ● 00100 00100	SHFT MON HB	• The preset value and elapsed value are displayed only for the right side timer or counter.
T000 <S> <P> ON ● h0064 h0064	CLR	• Hexadecimal or decimal reelapsedation can be selected.
ON T000 ● h0064	CLR STEP ▼	• Pressing the CLR key make the message return to the original status.
0001 TON T000		• Return to the step monitor,

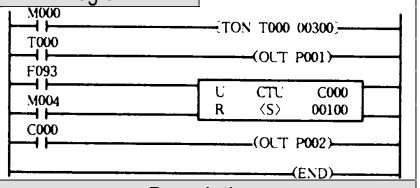
1) If "D area" has been used as timer/counter preset value, "D Word No." is displayed.

4.20 TIMER/COUNTER PRESET VALUE CHANGE

Mode Selection & Description

RUN/PAU	PGM	DEB
O	×	×

Program



Loader Display	Key Operations	Description
0000 TON T000		• The preset value of the TON timer is displayed.
	STEP	
0002 (DATA) 0300		
	TEST	
0002 (DATA) T????		• Waiting inputs for change of the preset value.
	4 0 0 ENT	
0002 (DATA) 0400		• The preset value changes from '300" to "400".
	STEP STEP STEP STEP STEP	
0008 CTU 0000		
	STEP	
0009 (DATA) 0100		• The preset value of CTU counter is displayed.
	TEST	
0009 (DATA) T????		• Waiting inputs for change of the preset value.
	2 0 0 ENT	
0009 (DATA) 0200		• The preset value changes from "100" to "200".

1) If the preset value is reelapseded with a "D" Word No. it cannot be changed. If it is specified to a decimal or hexadecimal number then the change of it into a "D" Word No. is also impossible.

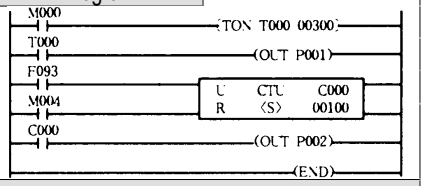
4.21 TIMER/COUNTER FORCE ON/OFF and ELAPSED VALUE CHANGE

Mode Selection & Description

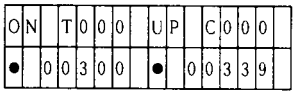
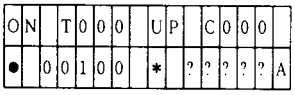
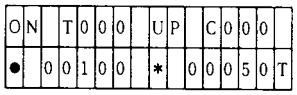
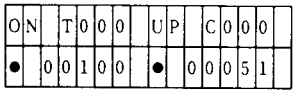
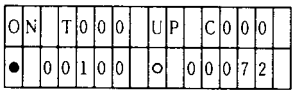
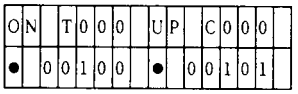
RUN/PAU	PGM	DEB
O	O	O

Force on/off a timer or counter, or change a elapsed value.

Program



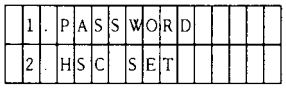
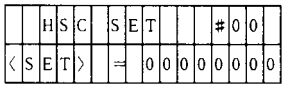
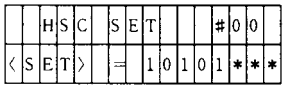
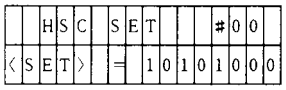
Loader Display	Key Operations	Description
0 0 0 0	CLR CLR T 0 0 0	• The message waits for input of an instruction.
ON T000 ● 0030	MON TEST	• Monitoring the timer T000. • The bit turns on when the elapsed value reach the preset value "300".
ON T000 * ???T	1 0 0	• Changing the elapsed value.
ON T000 * 0010	ENT	• Change the elapsed value to "100"
ON T000 ● 0010	OFF 9	
ON T000 ○ 0010	C 0 0 0	• Forcing turn off the bit and newly increasing the elapsed value from the elapsed value 100 to the preset value 300.

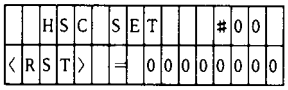
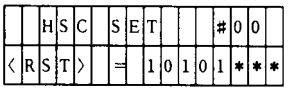
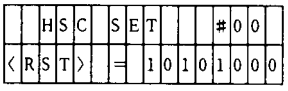
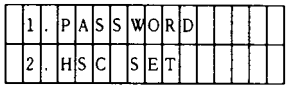
Loader Display	Key Operations	Description
	MON TEST	• Monitoring the counter C000. • The bit turns on when the elapsed value reach the preset value “100” and the elapsed value increments to the maximum counter value.
	5 0	• Changing the elapsed value. • Available only for the right side timer or counter.
	ENT	
	OFF 9	
		• Forcing turn off the bit of the C000.
		• The bit C000 turns on when the elapsed value reach the preset value “100” and the elapsed value increases to the maximum counter value.

4.22 HSC DATA SETTING

Mode Selection & Description			Program
RUN/PAU	PGM	DEB	
X	O	X	

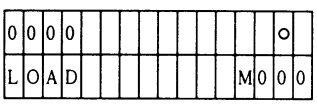
1) Used to input data for the high speed counter.

Loader Display	Key Operations	Description
	PRM	• The parameter menu is displayed.
	2	
		• Waiting for input of a HSC data.
	1 0 0	
		• This displays when the HSC data value has been set to 100.
	ENT	
		• Waiting for inputs which make the output to the card P01 turn on.
	1 0 1 0 1	
		• Set the output value for the output to the card P01.
	0 0 0	
		
	ENT	

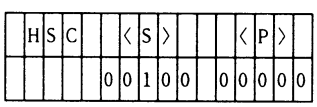
Loader Display	Key Operations	Description
	1 0 1 0 1	• Waiting for inputs which make the output to the word P01 turn off.
	0 0 0	• Set the value for turning off the output to the word P01.
	ENT	
	ENT	• The HSC can be set from 0 to 19.
		• Return to the parameter menu.

□ Monitoring the elapsed value and preset value of the High Speed Counter.

SHFT CLR



MON

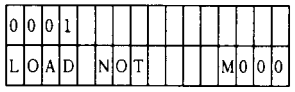
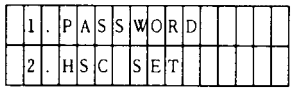
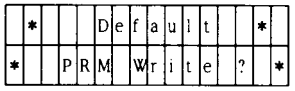
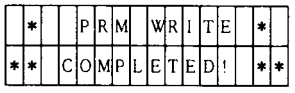
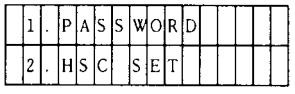
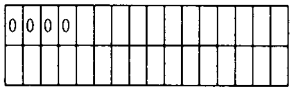
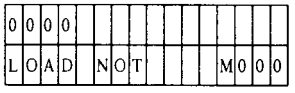


4.23 HSC :DATA SETTING with DEFAULT

Mode Selection & Description	Note

RUN/PAU	PGM	DEB
O	O	X

clears the HSC setting and replace it with the default parameters.

Loader Display	Key Operations	Description
	PRM	• The parameter menu is displayed.
	SHFT DELT	
	ENT	• Confirming that the default parameters will be set or not . • Clearing only the function "HSC SET".
	CLR	• This message indicates that setting with default parameters has been completed.
	CLR	• The parameter menu is displayed.
	STEP	
		

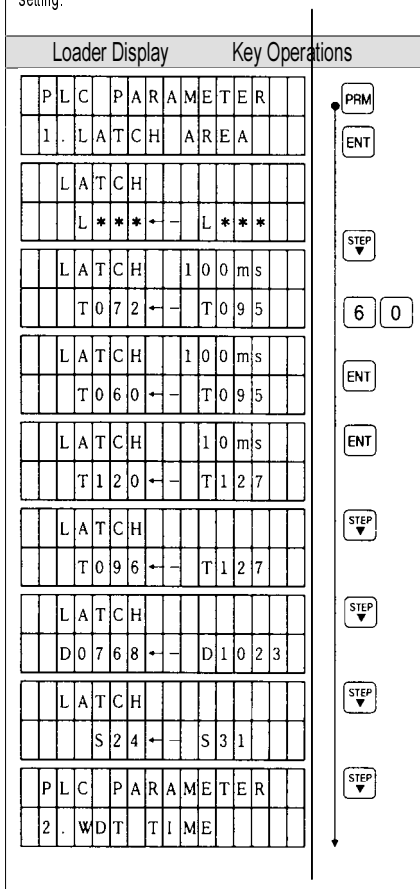
4.24 LATCH AREA SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

The user can set Latch area, which can be different from the default setting.

Note



Description

- The parameter menu is displayed.
- Link area is displayed.
- 100 ms default latch area is displayed.
- The area from the T060 to T095 is specified to latch, which is different from default setting.
- 10 ms default latch is displayed.
- Counter latch is displayed.
- Latch area of the data device D area is displayed.
- Latch area of the step controller is displayed.

The PLC series can be operated with the different setting of the latch from the default setting, suitable to the operating conditions.

1) Parameters changes only when the" ENT "s pressed after the change values have been input to the device area.

2) Pressing the STEP ▼ makes the default setting stored without change.

3) Pressing the CLR y makes the message return to the parameter menu.

4.25 WATCH DOG TIME(WDT) SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Sets the maximum scanning time according to the length of a user program.

Note

The DT is changeable from minimum 2000 200 ms) to the maximum 20000 2000 ms). sable only for the 500 and 1000)

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM	• Latch area is displayed.
	STEP ▼	
PLC PARAMETER 2. WDT TIME		• This function is to set the atch Dog Time.
	ENT	
WDT TIME SET 02000 * 0.1mS		• DT Default setting value of the minimum 2000 200 ms)
	3 0 0 0	
WDT TIME SET 03000 * 0.1mS		• Change the DT to 3000 300 ms) and enter it. • This is to set the DT that the user want to set.
	ENT	
PLC PARAMETER 3. ERROR MODE		• The message changes to the next parameter function.

4.26 ERROR MODE SETTING

Mode Selection & Description			Note
RUN/PAU	PGM	DEB	
X	O	X	

Determine whether the program execution continues or not when fuse error, extension error or processing error has occurred.

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM	
PLC PARAMETER 2. WDT TIME	STEP ▼	
PLC PARAMETER 3. ERROR MODE	STEP ▼	• To determine whether the execution continues or not when error has occurred.
ERROR MODE FUSE ERROR : YES	ENT	• Set to "Y S" if the program continues when the fuse error has occurred.
ERROR MODE FUSE ERROR : NO	OFF 9	• Set to " " if the program does not continue when the fuse error has occurred.
ERROR MODE I/O ERROR : NO	STEP ▼ or ENT	• Set to " " if the program does not continue when the extension error has occurred •
ERROR MODE OPR. ERROR : YES	STEP ▼ or ENT	• Set to "Y S" if the program continues when an instruction has error.
PLC PARAMETER 4. I/O TABLE	STEP ▼ or ENT	• table function of the PLC parameter

4.27 I/O TABLE SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

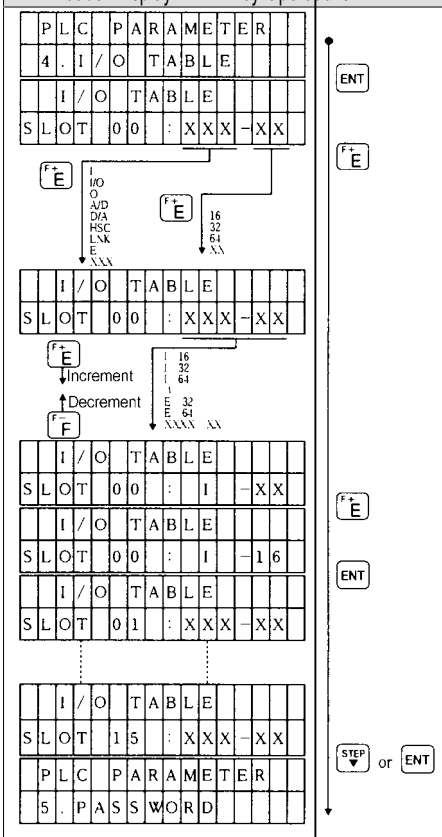
Used to set the type of I/O card loaded onto the mother board.

Available in k500H, K1000H, GK3,4,5

Note

*	:No setting	S	: SPECIAL I/O	DLU	: Data Link
I	: INPUT	E	:EMPTY SLOT	RMU	: Remote link
I/O	: HYBRID	A/D	: A/D UNIT	PID	:PID processing unit
O	: OUTPUT	D/A	: D/A UNIT	POS	:Positioning unit
		HSC	: High Speed Counter		
		LNK	Communication unit		

Loader Display / Key Operations / Description



- he message waits for the user to set the type of the word 00.
- In the K500H/1000H, DLU, U, PID or POS is displayed.
- Use the keys to set the type of the I/O card for each F+ E F- F slot.
- or the K500H and K1000H
- Set the P00 to 16-point input word.
- Set the type of the card for the slot 01 to 15. Setting method is same with the slot 00.)
- As for K500H, K100H, the type setting should be done to the slot 31.
- Setting the password for the next parameter.
- ote 1) As for the K200H, Setting I/O table is not available but monitoring the type of the card loaded at the present.

1) In the GLOFA-K series, the F+ E F- F keys are used to set the type of the I/O card for each slot.

4.28 I/O TABLE MONITOR

Mode Selection & Description

RUN/PAU	PGM	DEB
O	X	O

Used to monitor the type of I/O connected to the PLC

Note

X– XX
- I/O Point
  - 16 : 16 point
  - 32 : 32 point
- Card type
  - I : input
  - O:output

Loader Display	Key Operations	Description
PLC PARAMETER 1.LATCH AREA	PRM	• The loader parameter menu is displayed.
PLC PARAMETER 4.I/O TABLE	SHFT, STEP	• Pressing the STEP key 3 or 4 times repeatedly makes the I/O table displayed.
I/O TABLE MON SLOT 00 : X –XX	STEP, MON	• The type of I/O connected at the present is displayed. K200H : To twelve I/Os K500H : To sixteen I/Os K1000H : To thirty-two I/Os X– XX I :input O:output
	STEP *1	
	STEP	• After all I/O units that can be loaded onto have been monitored to their maximum number, the message go to the next password mode. X– XX I/O point 16 : 16-point 32 : 32-point
PLC PARAMETER 5.PASSWORD		• Pressing the ENT makes the name of the module onto the each slot displa

4.29 PARAMETER DEFAULT VALUE SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Set the parameter to initial value.

Note

Parameter value set by the user

⇨ to the default value.

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM	•The parameter menu of the K3, K4 or K5 is displayed.
	SHFT	
* Default * * PRM Write ? *	DELT	•Confirming that the parameter value of K3, K4 or K5 will be set to the default value.
	ENT	•The parameter value is set to the default value. •The parameter menu is displayed.
PLC PARAMETER 1. LATCH AREA		

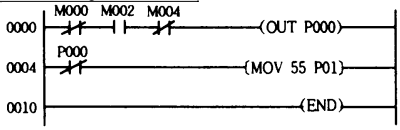
4.30 TRACE RUN

Mode Selection & Description

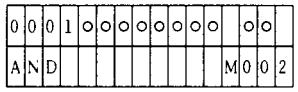
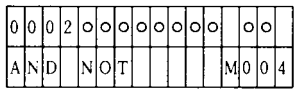
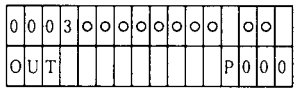
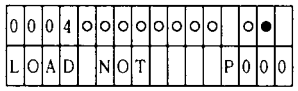
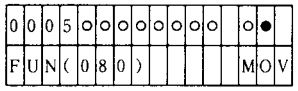
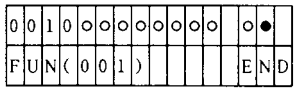
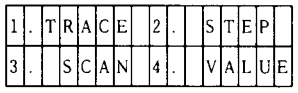
RUN/PAU	PGM	DEB
X	X	O

Execute a written program by one step for debugging.

Program



Loader Display	Key Operations	Description
0000 LOAD NOT M000	PGM	
	DEB PAU	
##DEBUG## MODE		• Indicating that the present mode is the debugging mode.
	CLR	
1.TRACE 2.STEP 3.SCAN 4.VALUE		• The function menu of the debugging mode is displayed.
	1	
STARTSTEP 1.FIRST 2.B.P.		• Determining the step from which trace(1 step run) starts in the debugging mode.
	1	
0000		• 1 step run starts from the step "0000".
	STEP ▼	
0000○○○○○○○○○○ ○● LOAD NOT M000		• The B.P makes 1 step run starts from the step of the last previous break point .

Loader Display	Key Operations	Description
	STEP	
	STEP	
	STEP	
	STEP	
	STEP	• As for the application instruction, its middle step cannot be displayed . The content after the step number of the application instruction is displayed by the 1 step run.
	CLR CLR	
		• The function menu of the debugging mode is displayed.

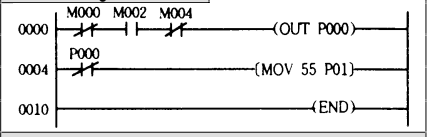
4.31 STEP BREAK RUN

Mode Selection & Description

RUN/PAU	PGM	DEB
X	X	O

Used when the break point is used for debugging of a written program.

Program



Loader Display	Key Operations	Description
0000 LOAD NOT M000	PGM DEB PAU	
##DEBUG## MODE	CLR	• The menu of the debugging mode is displayed.
1.TRACE 2.STEP 3.SCAN 4.VALUE	2	• Enter the step at which a break point is set.
$STEP BREAK BREAK STEP=????	0 0 0 5	• When a break point is entered at the step "0005"
$STEP BREAK BREAK STEP=0005	ENT	• Determining the step from which break run is executed in the debugging mode.
START STEP 1.FIRST 2.B.P.	1	• The B.P makes step break run starts from the step of the last previous break point .
0000	STEP ▼	• Indicating that the step break run is being executed.
0000 Running		
0005 ooooooooo o● FUN(080) MOV		• Indicating that the execution breaks at the step "0005".
$STEP BREAK BREAK STEP=????	CLR CLR	• Enter the step at which a break point is re-set.
1.TRACE 2.STEP 3.SCAN 4.VALUE	CLR	• The function menu of the debugging mode is displayed.

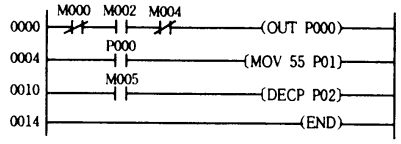
4.32 SCAN RUN

Mode Selection & Description

RUN/PAU	PGM	DEB
X	X	O

Execute a program for a specified scan number to test a written program or to find error. (From step 0 to the instruction END)

Program



Loader Display	Key Operations	Description
0000 LOAD NOT M000	PGM DEB PAU	
##DEBUG## MODE	CLR	
1.TRACE 2.STEP 3.SCAN 4.VALUE	3	• The function menu of the debugging mode is displayed. • Enter the scan number for break point setting
$STEP BREAK BREAK STEP=????	0 0 2 0 0	• Set the scan number as desired. aximum 65535 break scan can be set.
$STEP BREAK BREAK STEP=00200	ENT	• Determine the step from which the break run starts in the debugging mode. • The B.P makes scan run starts from the step of the last previous break point.
START STEP 1.FIRST 2.B.P.	1	
0000 00150 Running h0096		• Indicating that scan run is being executed.
00140000000000 00 FUN(001) END		• The instruction END is displayed after the scan run has been executed 200 times.
$STEP BREAK BREAK STEP=????	CLR CLR	• Enter the scan number for break point re-setting.
1.TRACE 2.STEP 3.SCAN 4.VALUE	CLR	• The function menu of the debugging mode is displayed.

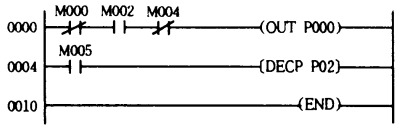
4.33 VALUE BREAK RUN

Mode Selection & Description

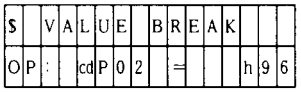
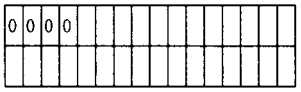
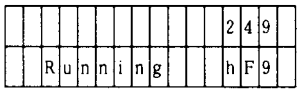
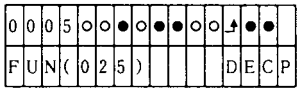
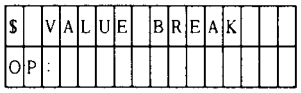
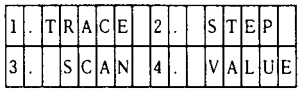
RUN/PAU	PGM	DEB
X	X	O

Used when a bit or card value is used for the break point to test a written program or to find error. (From step 0 to the instruction END)

Program



Loader Display	Key Operations	Description
0000 LOAD NOT M000	PGM	
	DEB PAU	
##DEBUG## MODE	CLR	
1.TRACE 2.STEP 3.SCAN 4.VALUE	4	• The function menu of the debugging mode is displayed.
$VALUE BREAK OP:	CD A P 0 2	• Enter the device value to be set as the break point.
$VALUE BREAK OP: cdP02 =	ENT	• Contact word address of unit by input is possible
	H B OFF 9 6	

Loader Display	Key Operations	Description
		• This instruction makes the break stop when the data value of the card P02 is h96.
	ENT	
		• Determine the step from which the break run starts in the debugging mode. • The B.P makes scan run starts from the step of the last previous break point.
	1	
		
	STEP ▼	
		• Indicating that value break run is being executed.
		• The value break run stops when the data value of the card P02 is h96 • The mark " " indicates that a pulse instruction has been executed..
	CLR CLR	
		• Enter the device value for value break run.
	CLR	
		• The function menu of the debugging mode is displayed.

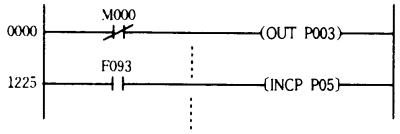
4.34 DELETE PART OF PROGRAM

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Used to clear a part or all of a written program.
(Unavailable in the K250)

Program



Loader Display	Key Operations	Description
1225 LOAD F093		• Displaying a step in the PG mode.
1.M CLR 2.D CLR 3.SUBS. 4.BLOCK	AUX	• The menu to delete is displayed.
START STEP:	1	• Selecting the memory clear.
START STEP: 0100 END STEP:	1 0 0 ENT	• The message waits for the user to enter the start step to be deleted. • The message waits for the user to enter the end step to be delete.
START STEP: 0100 END STEP: 0250	2 5 0	
0100 - 0250 * MEMORY Clear? *	ENT	• Confirming the memory clear. • This message ask the user to delete the specified steps or not for confirmation.
* MEMORY * ** Cleard! **	ENT	• This indicates that the program delete was completed.
1.M CLR 2.D CLR 3.SUBS. 4.BLOCK	CLR	• eturn to the menu.

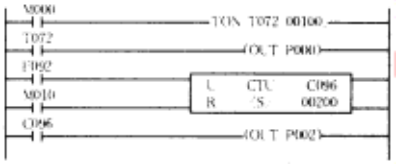
4.35 CLEAR PROGRAM DATA

Mode Selection & Description

RUN/PAU	PGM	DEB
×	O	×

Clear partly or wholly a data in the memory device.

Program



Loader Display	Key Operations	Description
0001 TON T072	PGM	
1.M CLR 2.D CLR 3.SUBS. 4.BLOCK	AUX	
* DATA CLEAR * PMKLSTCD	2	•The menu is displayed.
* DATA CLEAR * MKLSTCD	P	• The menu for selection of the device whose data is displayed.
* DATA CLEAR * KLSTCD	M	• Device "M"
* DATA CLEAR * LSTCD	K	• Device "K"
* DATA CLEAR * LTCD	S	• Device "S"
* DATA CLEAR * LTC	D	• Device "D"
LTC * DATA Clear? *	ENT	• Executing data clear for the device L, T and C.
* DATA * ** Cleard! **	ENT	• Confirming the data clear • Confirming data clear of the device of L.T.C. • Data clear has been completed.
1.M CLR 2.D CLR 3.SUBS. 4.BLOCK	CLR	• The clear menus is displayed.

Select devices to which data clear is not applied

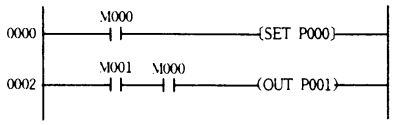
4.36 CHANGE A MEMORY DEVICE IN SPECIFED BLOCK

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Change a memory device are to specified device in the designated block.

Program



Loader Display	Key Operations	Description
0000 LOAD M000	PGM	• Displaying the step "0000" in the PGM mode.
1. M CLR 2. D CLR 3. SUBS. 4. BLOCK	AUX	• The clear menu is displayed.
FROM:	3	• Waiting for input of the device data to be changed.
FROM: M000 TO:	M 0 0 0 ENT	• 'M000' will be substituted.
FROM: M000 TO: M123	M 1 2 3	• ' M123' substitute for 'M000'.
START STEP:	ENT	• Beginning step of block
START STEP: 0000 END STEP:	0 0 0 0 ENT	
START STEP: 0000 END STEP: 0004	0 0 0 4	• End step of block.
* 0000 STEP * * Substituting! *	ENT	• Indicating that 'M000' is being changed into 'M123' in the step 0000 to 0004.
* 0002 STEP * * Substituted! *		• The execution has been completed.(Two of 'M000" have been substituted.)
1. M CLR 2. D CLR 3. SUBS. 4. BLOCK	CLR	• The clear menu is displayed.

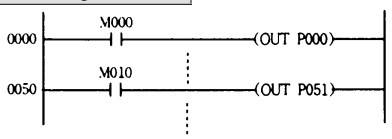
4.37 BLOCK MOVE/COPY

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Used to copy or move a data of a written program by the block.

Program



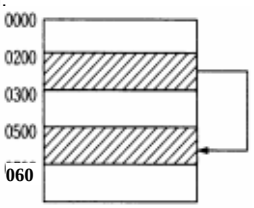
Loader Display	Key Operations	Description
0000 LOAD M000	PGM	• Displaying the step “0000” in the PGM mode.
1. MCLR 2. DCLR 3. SUBS. 4. BLOCK	AUX	• The menu is displayed.
1. BLOCK MOVE 2. BLOCK COPY	4 Block Move exe- 1 Block Copy exe- 2	• Block move/copy selection menu
START STEP: 	0020 ENT (Block Move) 0020 ENT (Block Copy)	• Waiting for input of the start step for block move/copy.
START STEP: 0020 END STEP:		
START STEP: 0020 END STEP: 0030	0030 ENT (Block Move) 0030 ENT (Block Copy)	• End step for block move/copy
0020 – 0030 → DEST. STEP:		
0020 – 0030 → DEST. STEP: 0060	0060 ENT (Block Move) 0060 ENT (Block Copy)	• Specifying the destination step where the block will be moved/copied.
* BLOCK MOVE * ** Completed! **	CLR	• Block move has been completed.
* BLOCK COPY * ** Completed! **	CLR	• Block copy has been completed.
1. MCLR 2. DCLR 3. SUBS. 4. BLOCK		• he clear menu is displayed.

4.38 DESCRIPTION OF BLOCK MOVE/COPY

1) Block Move

Make sure that the beginning step and end step should not be an intermediate step of an application instruction.

* Error will occur if the beginning or end step is an intermediate step of an application instruction.



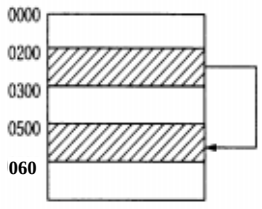
Block Move

The programs of the steps 200 to 300 will be filled with NOP.

2) Block Copy

Make sure that the beginning step and end step should not be an intermediate step of an application instruction.

* Error will occur if the beginning or end step is an intermediate step of an application instruction.



Block Copy

The programs at the steps 200 to 300 will be same with the programs at the 500 to 7000 that will be copied.

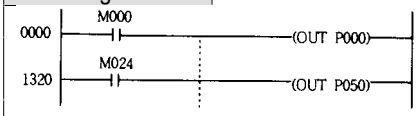
4.39 DELETE WHOLE PROGRAM

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

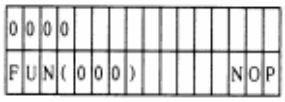
Delete the user program wholly.

Program



Loader Display	Key Operations	Description
1320 LOAD M024	CLR	• Device M024 will disappear.
1320 LOAD	CLR	• The load Instruction will disappear.
1320	CLR	• The step 1320 will be changed to the step 0000.
0000	SHFT	
0000 56	DELT	
0000 FUN(000) NOP		• Indicating that all of the program has been deleted.

1) In the-K series, from step 0000 to end step will be changed into NOP.



2) In the GLOFA-K series, the message appears which asks the user to confirm the Program deletion.

4.40 EPROM CHECK

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Note

Check the EPROM on KEW-150S whether it is blank or not.

Loader Display	Key Operations	Description
0000 LOAD M000	PGM	
1. E CHK 2. WRITE 3. VERIFY 4. READ	CLR	
* CHECK EPROM * 128K ROM <ENT>	EPRM	• The function menu is displayed.
* CHECK EPROM * 256K RAM <ENT>	1	• Select 'E CHK' menu to check the blank.
* CHECK E.CHK * 256K ROM <ENT>	STEP ▼	• Select menu in accordance with ROM capacity.
* EPROM E.CHK * ** 1380 STEP **	STEP ▼	
* EPROM E.CHK * ** COMPLETED! **	ENT	• Erase check (ROM blank)
1. E.CHK 2. WRITE 3. VERIFY 4. READ	CLR	• Erase check has been completed. • The function menu is displayed. CL

1) If the EPROM is not blank the following will be displayed.

* EPROM E.CHK *
** FAILED ! **

2) During execution of an instruction, press the key to stop the execution. The following will be displayed.

* EPROM E.CHK *
** CANCELED! **

3) Available EPROMs specifications
   ① The applicable voltage for EPROM Write is 12.5V for Vpp and 6V for 6Vcc.
   ② The units where the high speed program is available.
   128K ROM : TM 27C128(T.I. D27128A (INTEL)
   256K ROM: MBM27C256A-25(FUJITSU), NMC27C256(NEC)
   ③ DS1235 (DALLAS) RAM being non-volatile RAM is used.
4) In the MASTER-K series EPROM check is available, but in the GLOFA-K series EPROM check(FLASH MEMORY check) is not available.

4.41 EPROM WRITE

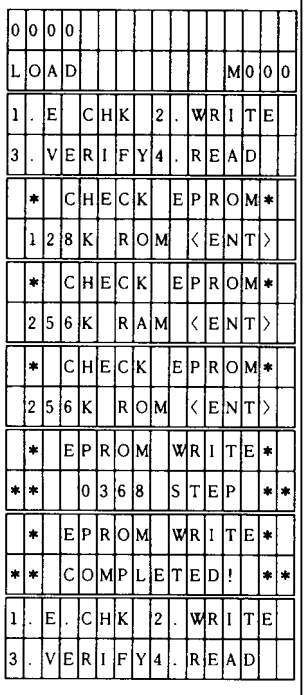
Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

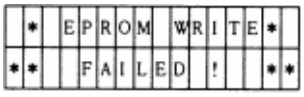
Write the PLC program to the EPROM or RAM pack loaded onto the KEW-150S connected to KLD-150S.

Note

PLC CPU (program area) —Write→ RAM pack or of the KEW-150S

Loader Display	Key Operations	Description
		• he function menu is displayed. • Select 'WRITE' menu. • Select menu in accordance with the capacity of the EPROM or RAM. • Writing the program to the EPROM or RAM. • Execution complete. • The function menu is displayed.

1) The following will be displayed if error has been occurred during EPROM write.



2) In the GLOFA-K series EPROM Write (FLASH MEMORY Write) is also available as in the MASTER-K series.

4.42 EPROM VERIFY

Mode Selection & Description	Note
RUN/PAU: × PGM: O DEB: ×	PLC CPU (program area) ◄ Ver-RAM pack or RAM pack of the KEW-150S
Compare a PLC program with the program in the EPROM or RAM pack.	

Loader Display	Key Operations	Description
0000 / LOAD M000	PGM	
1.E CHK 2.WRITE / 3.VERIFY 4.READ	EPRM	• The function menu is displayed.
* CHECK EPROM * / 128K ROM ⟨ENT⟩	3	• Select 'VERIFY' menu
* CHECK EPROM * / 256K RAM ⟨ENT⟩	STEP ▼	• Select menu in accordance with the capacity of the EPROM or RAM.
*EPROM VERIFY * / 256K ROM ⟨ENT⟩	STEP ▼	
*EPROM VERIFY / ** 0567 STEP **	ENT	• Verify the program in the EPROM or RAM pack to the program area of the CPU.
*EPROM VERIFY * / ** COMPLETED! **		• Execution complete.
1.E.CHK 2.WRITE / 3.VERIFY 4.READ	CLR	• The function menu is displayed.

1) The following will be displayed if error has been occurred during EPROM verify.

* EPROM WRITE *
** FAILED ! **

2) In the GLOFA-K series EPROM Verify (FLASH MEMORY Verify) is also available as in the MASTER-K series.

4.43 EPROM READ

Mode Selection & Description

RUN/PAU	PGM	DEB
×	O	×

Read the program in the EPROM or RAM pack land write the program to the PLC.

Note

PLC CPU (program area) ← Read → or RAM pack of the KEW-150S

Loader Display	Key Operations	Description
0000 LOAD M000	PGM	• The function menu is displayed.
1. E CHK 2. WRITE 3. VERIFY 4. READ	EPRM	• Select menu in accordance with the capacity of the EPROM or RAM.
* CHECK EPROM * 128K ROM 〈ENT〉	4	
* CHECK EPROM * 256K RAM 〈ENT〉	STEP ▼	
* CHECK EPROM * 256K ROM 〈ENT〉	STEP ▼	
* EPROM READ * ** 0278 STEP **	ENT	• Read the program in the EPROM or RAM pack to the program area of the CPU.
* EPROM READ * ** COMPLETED! **		• Execution complete.
1. E. CHK 2. WRITE 3. VERIFY 4. READ	CLR	• The function menu is displayed.

1) The following will be displayed if error has been occurred during EPROM Read.

	*		E	P	R	O	M		R	E	A	D		*	
*	*			F	A	I	L	E	D		!			*	*

2) In the GLOFA-K series, EPROM Read (FLASH MEMORY Read) is also available as in the MASTER-K series.

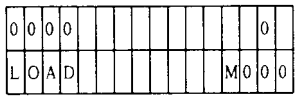
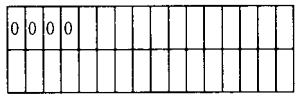
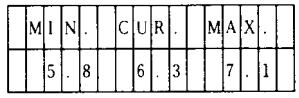
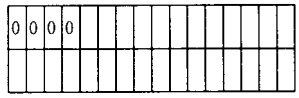
4.44 SCAN TIME DISPLAY

Mode Selection & Description

RUN/PAU	PGM	DEB
O	X	X

Note

Minimum to maximum at 1 scan time from step 000 to end step in the program execution is displayed.

Loader Display	Key Operations	Description
		• Reading the step 0000 in the Run mode.
	CLR CLR	
		
	MON	
		• MIN., MAX., and CUR scan time are displayed.
	CLR	
		
	STEP ▼	
		• Reading the step 0000 in the Run mode

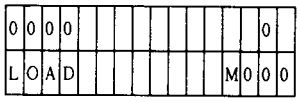
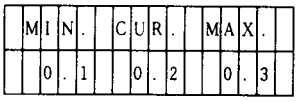
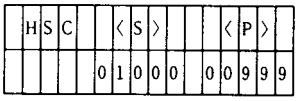
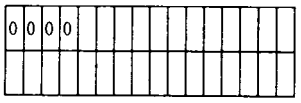
* REMARK

1) The unit for scan time is msec.
2) If the scan time is over 100 msec then the unit changes to sec.

Example) 64.6 64.6msec
2.04s 2.04sec

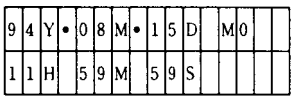
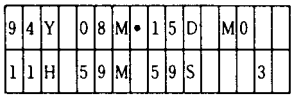
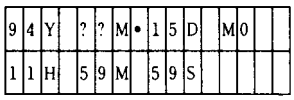
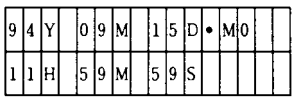
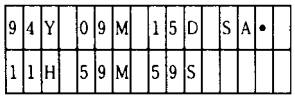
4.45 SCAN TIME/HSC MONITOR (K10S1/K10S/K30S/K60S/K100S)

Mode Selection & Description	Note
RUN/PAU: O, PGM: O, DEB: X Monitor the scan time or the preset value and elapsed value of the HSC in the K10S1/K10S/K30S/K60S/K100S.	Applicable to K10S1/K10S/K30S/K60S/K100S only.

Loader Display	Key Operations	Description
		• Reading the step 0000 in the Run mode.
	CLR CLR	
		
	MON	
		• Monitoring the scan time. (The unit for scan time : msec)
	MON	
		
	CLR CLR	• Monitoring the preset value and elapsed value of the HSC.

4.46 RTC(CLOCK FUNCTION) MONITOR AND SETTING (K30S/K60S)

Mode Selection & Description	Note
RUN/PAU: O, PGM: O, DEB: × Monitor the clock function or modify the time.	Applicable to K30S/K60S.

Loader Display	Key Operations	Description
	CLR CLR	• Monitoring the clock function(RTC). (year, month, day, date, hour, minute and second)
	SHFT MON	• The mark "• " is the cursor that indicates the location that can be modified.
	ENT	•Modifying the month.
	TEST	•Modification of the month has been completed. (The same method is used for modification of others except for the date.)
	0 OFF 9 ENT	• Method of modifying the date.
	ENT TEST ▲ STEP STEP ▼	

4.47 HEXADECIMAL ◀▶DECIMAL CHANGE

Mode Selection & Description

RUN/PAU	PGM	DEB
O	O	X

Used when the user wants to convert a decimal value to the hexadecimal value and vice versa.

Note

Hexadecimal◀▶Decimal

Loader Display	Key Operations	Description
0000 LOAD NOT M000		
FROM:	SHFT AUX	• Convert a decimal value to the hexadecimal value or vise versa.
FROM: 0000065535	6 5 5 3 5	• Enter a decimal value.
FROM: 0000065535 TO : h0000FFFF	ENT	• Enter ENT key to execute conversion. • The converted hexadecimal value is shown.
FROM:	CLR	• Waiting for input again.
FROM: h0000FFFF	HB F F F F	• Enter a hexadecimal value.
FROM: h0000FFFF TO : 0000065535	ENT	• Enter ENT key to execute conversion. • The converted decimal value is shown.
0000	CLR CLR	
0000 LOAD NOT M000	STEP ▼	

4.48 LCD BACK LIGHT ON/OFF

Mode Selection & Description

RUN/PAU	PGM	DEB
O	O	O

Turn on/off the LCD back light of the KLD-150S handy loader.

Note

Loader display in the K3, K4 and K5.

```
 H. L  PARAMETER
 1. LCD  2. BUZZER
```

Loader Display	Key Operations	Description
0000 LOAD NOT M000	SHFT PRM	
1. LCD 2. BUZZER ** SELECT! **	1	• The loader parameter menu is displayed.
LCD BACK-LIGHT 1. ON← 2. OFF	2	• The present status of the LCD back light is displayed.
LCD BACK-LIGHT 1. ON 2. OFF←	CLR	• Turning off the LCD back light.
1. LCD 2. BUZZER ** SELECT! **	CLR	• The loader parameter menu is displayed.
0000 LOAD NOT M000	STEP ▼	

4.49 BUZZER TONE CONTOL

Mode Selection & Description

RUN/PAU	PGM	DEB
O	O	O

Turn on/off the bu er of the KLD-150S handy loader or to change the bu er tone.

Note

Loader display in the K3, K4 and K5.

```
H. L PARAMETER
1. LCD 2. BUZZER
```

Loader Display	Key Operations	Description
0000 LOAD NOT M000		
1. LCD 2. BUZZER ** SELECT! **	SHFT PRM	• The loader parameter menu is displayed.
BUZZER SET 1. ON← 2. OFF	2	• The mark "←" denotes the present status of the bu er.
BUZZER TONE ○ 1 2 3→4 5 ○	1	• The bu er tone is displayed. Default is "3".
BUZZER TONE ○ 1←2 3 4 5 ○	1	• The modified tone of the bu er is displayed and the tone will be changed.
BUZZER TONE 1. ON 2. OFF	CLR	• Turing off the bu er
1. LCD 2. BUZZER ** SELECT! **	2 CLR CLR	• The loader parameter menu is displayed.
0000 LOAD NOT M000	STEP	• A step instruction is displayed.

1) If the power of the loader turns off or its turning on/off is changed by the parameter, then default values are used.

```
BUZZER TONE                BUZZER TONE
1. ON← 2. OFF      →       ○ 1 2 3←4 5 ○
```

4.50 PLC STATION AND BAUD RATE SETTING (K10S1/K30S/K60S)

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Set the PLC station number and baud rate for S4 5 communication.

Note

Available for K10S1/K10S/K30S/K60S/K100S only.
Default : PLC station : 00h
Baud rate : 9600bps

Loader Display	Key Operations	Description
0000	CLR CLR	
PLC PARAMETER 3. PLC STATION	PRM STEP▼ STEP▼	● The mode for setting the PLC station number.
PLC STATION h00	ENT STEP▼ ▲STEP ENT	● Setting the PLC station number (Setting range : 0 to 31) station
PLC PARAMETER 4. BAUD RATE	CLR CLR PRM STEP▼ STEP▼ STEP▼	● The mode for setting the PLC baud rate.
BAUD RATE 6. 09600	ENT STEP▼ STEP▼ ENT	● Setting the PLC baud rate. (Setting values: 300, 600, 1200, 2400, 4 00, 9600, 19200)
0000	CLR CLR	

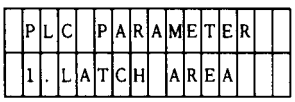
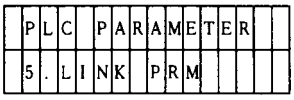
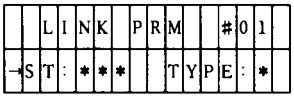
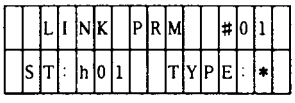
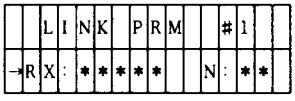
4.51 BAUD RATE SETTING

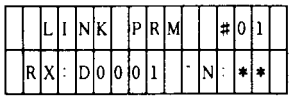
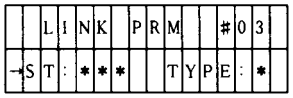
Mode Selection & Description	Note
RUN/PAU: X, PGM: O, DEB: X Set the baud rate for communications with the PC .	● Available in the K500H, K1000H and K5.

Loader Display	Key Operations	Description
PLC PARAMETER 1.LATCH AREA	PRM	
	STEP ▼	● Press the STEP ▼ key nine times.
PLC PARAMETER 10.BAUD RATE	ENT	
BAUD RATE 1.00300	STEP ▼	● Press the STEP ▼ key five times.
	STEP ▼	
BAUD RATE 6.09600	ENT	● Baud rate is set to 9600.
PLC PARAMETER 1.LATCH AREA		

4.52 LINK PARAMETER SETTING for DATA LINK UNIT

Mode Selection & Description	Note
RUN/PAU: × PGM: O DEB: ×	Available in K200H, K500H and K1000H.
Set the link parameter for Data Link Unit..	

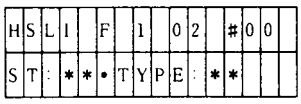
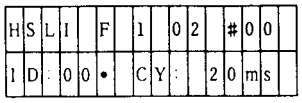
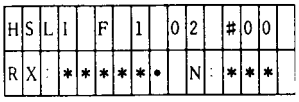
Loader Display	Key Operations	Description
	PRM	
	STEP ▼ STEP ▼ ENT	● Link P is displayed if the STEP ▼ key is pressed five times in the K200H and six times in the K500H and K1000H.
	1 ENT	● The number and type of the station are displayed.
	1 ENT	● Enter 1 as the station number. Enter 1 (remote input) for the type of the station. 0 : Local 1 : emote input 2 : emote output 3 : emote input/output
	D 1 ENT	● Set the beginning number of the word to store the read data.

Loader Display	Key Operations	Description
 	4 ENT	● Set the number of words that will be read from the start word. Four words from the D0001 will be stored the read. words.

4.53 HS LINK PARAMETER SETTING

Mode Selection & Description	Note
RUN/PAU: × / PGM: O / DEB: × Set the link parameter for F-net. or -net	Available in the K3, K4 and K5.

Loader Display	Key Operations	Description
PLC PARAMETER 1.LATCH AREA	PRM	
	STEP▼ STEP▼	● HS Link P is displayed when the STEP▼ key is pressed five times.
PLC PARAMETER 6.HS LINK PRM	ENT	
HS LINK PRM HS LINK 1	STEP▼ or ▲STEP ENT	● Set the type of the HS link. K3 : 1 to 4 K4 : 1 to 2 K5 : 1
HS LINK 1 UNIT: GLOFA Fnet	STEP▼ or ▲STEP ENT	● Set the type of the HS link unit K4 and K5 : Fnet K3 : Fnet, net
HS LINK 1 F SLOT:0•SF_ST:00	1 ENT 2 ENT	● Set the slot No. and the self station number. Slot No. : 0 to Self station number : 0 to 63

Loader Display	Key Operations	Description
	1 ENT STEP ▼ ENT	● Setting the station number and link type. Station number : 0 to 63 Setting the type : If the station number is same with self station number, ➡ Only LS(Local Send) is available. If the station number differs from the self station number, ➡ S/ setting is impossible in the -net. ➡ LS (Local Send) : Only TX exists. L (Local eceive) : Only X exists. S (emote Send) : TX/ X exist. (emote eceive) : TX/ X exist.
	1 ENT STEP ▼ ENT	● Setting the ID and CY. ID : Data block ID (0 to 31) CY : Setting the Communications Cycle 20ms, 50ms, 100ms, 200ms, 500ms, 1s, 5s or 10s.
	D 1 0 ENT 4 ENT	NOTE HS link parameter setting is available when the HS link enable is set to No .

4.54 LINK CONTROL SETTING

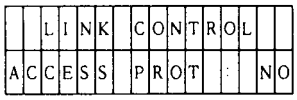
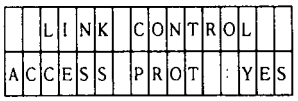
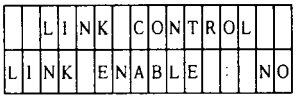
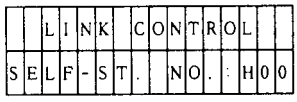
Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Note

Available in the K200H, K500K and K1000H.

Loader Display	Key Operations	Description
PLC PARAMETER 1.LATCH AREA	PRM	
	STEP ▼	
PLC PARAMETER 7.LINK CONTROL	STEP ▼	● Press the STEP ▼ key six times in the K200H, seven times in the K500H and K1000H.
	ENT	
LINK CONTROL SYNC ENABLE : NO	ON 8	
LINK CONTROL SYNC ENABLE : YES		● Synchroni ing the communications between the PLC scan and remote.
	ENT	
LINK CONTROL WRITE PROT : NO		
	ON 8	● Setting to prevent the host PC from writing data to the PLC.
LINK CONTROL WRITE PROT : YES		

Loader Display	Key Operations	Description
	ENT	
	ON 8 ENT	• Setting to prevent the host PC from reading/writing data from/to the PLC. • Host PC cannot read/write data from/to the PLC.
	ON 8 ENT	• Executing the high speed data link.
	1 ENT	• Specifying the self station number.

4.55 HS LINK ENABLE SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Note

Available in the K3, K4 and K5.

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM	
	STEP ▼	• Press the STEP ▼ six times.
	STEP ▼	
PLC PARAMETER 7. HS LINK ENABLE		
	ENT	
HS LINK ENABLE HSL1 ENABLE : NO		
	ON 8	• Permitting to enable the HS link. K3 : HSL 1 to 4 K4 : HSL 1 to 2 K5 : HSL 1
HS LINK ENABLE HSL2 ENABLE : YES	ENT	
	ENT	

4.56 DEBUG OUTPUT

Mode Selection & Description	Note
RUN/PAU: × PGM: O DEB: ×	ailable in the and .
Determine whether output will be displayed or not in the debug mode.	

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM	
	STEP ▼	• ress the STEP ▼ se en times.
	STEP ▼	
PLC PARAMETER 8 DEBUG OUTPUT		
	ENT	
DEBUG OUTPUT OUTPUT: NO		• utput will be displayed during debugging.
	ON 8	
	ENT	

4.57 TIMER SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
×	O	×

djust the area o the ms timer.

Note

ailable in the and .

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM	
	STEP ▼	• ress th STEP ▼ ey se en times.
*1 PLC PARAMETER 8. TIMER SET	STEP ▼	
	ENT	
TIMER 100ms T000 - T191		• After set the 100 ms timer for from T00 to T200, the area of 10 ms timer is changed automatically as T201 to T255.
	2 0 0	
PLC PARAMETER 9. INTERRUPT	ENT	

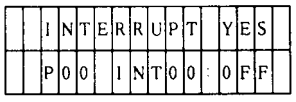
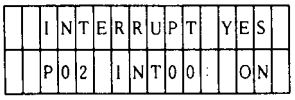
* Display or the and .

PLC PARAMETER
15. TIMER SET

4.58 INTERRUPT SETTING (1)

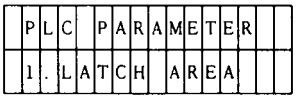
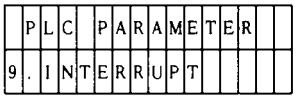
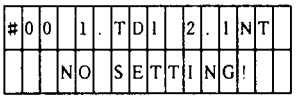
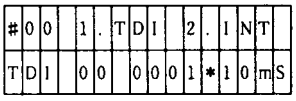
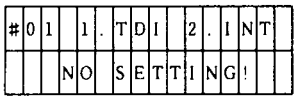
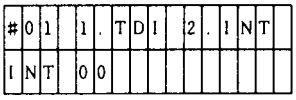
Mode Selection & Description	Note
RUN/PAU: × / PGM: O / DEB: × Set the priorities and input words of the interrupts of the MASTER-K series.	A ailable in the K and K .

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM	
	STEP ▼	• Press the STEP ▼ key eight times.
	STEP ▼	
PLC PARAMETER 9. INTERRUPT		
	ENT	
INTERRUPT TDI < PDI		
	STEP ▼ or ▲ STEP	• select the priorities of the TDI and PDI.
	ENT	
INTERRUPT NO OOOOOmS TDI	SHFT	
	ON 8	
INTERRUPT YES OOOOOmS TDI		
	1 0	• Enabling the TDI function
INTERRUPT PDI? NO	ENT	• Set the TDI cycle to 10 ms.
	SHFT	• Enabling the PDI function.
	ON 8	

Loader Display	Key Operations	Description
	ENT	
	0 2	
	SHFT	
	ON 8	• The PDI will be executed if the P020 turns on.

4.59 INTERRUPT SETTING (2)

Mode Selection & Description	Note
RUN/PAU: × / PGM: O / DEB: × Set the priorities and input words of the interrupts of the GLOFA-K series.	Available in the K3, K4 and K5.

Loader Display	Key Operations	Description
	PRM STEP ▼ STEP ▼	
	ENT	● Press the STEP ▼ key eight times.
	1	
	2 ENT	● Set the TDI to priority and to 20ms. .
	2	
	STEP ▼ ENT	● Set the priority of the INT to “1”.

4.60 FORCE ON/OFF SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Set the force on off for the bit P.

Note

Available in the K3, K4 and K5.

Loader Display	Key Operations	Description
PLC PARAMETER 1.LATCH AREA	PRM STEP ▼ STEP ▼	• Press the STEP ▼ key nine times.
PLC PARAMETER 11.FORCE ON/OFF	ENT	
FORCE ON/OFF P0000 F:OFF D:1	TEST 1 A	• Specify the P001A.
FORCE ON/OFF P001A F:OFF D:0	ENT ON 8 1	
FORCE ON/OFF P001A F:ON D:1		• Enabling the flag of the P001A. Set to 1
FORCE ON/OFF P001B F:OFF D:0	STEP ▼	

4.61 FORCE ON/OFF ENABLE SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Enable the force on/off for the bit P.

Note

Available in the K3, K4 and K5.

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM	
	STEP ▼	• Press the STEP ▼ key ten times.
	STEP ▼	
PLC PARAMETER 12. FORCE ENABLE		
	ENT	
FORCE ENABLE ENABLE : NO		
	ON 8	• Set the force enable to yes.
FORCE ENABLE ENABLE : YES		
	ENT	
PLC PARAMETER 13. REMOTE CONNET		

4.62 REMOTE CONNECTION SETTING

Mode Selection & Description

RUN/PAU	PGM	DEB
X	O	X

Connect the remote to first level on the second level.

Note

Available in the K3, K4 and K5.

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM STEP▼ STEP▼	
PLC PARAMETER 13. REMOTE CONNET		● Press the STEP▼ eleven times.
	ENT	
REMOTE CONNECT REMOTE : 1 STAGE		● 1 st or 2 nd level can be selected by use of the STEP▼ key STEP▲
	ENT	
REMOTE CONNECT TYPE: GLOFA Fnet		● Select the GLOFA Fnet/Mnet by the STEP▲ and STEP▼ keys.
	ENT	
REMOTE CONNECT SLOT: 1	1 ENT	● Set the slot No. to 1.
REMOTE CONNECT STATION: 03	3 ENT	● Set the station No. to 3.

4.63 REMOTE DISCONNECTION SETTING

Mode Selection & Description	Note
RUN/PAU: × / PGM: O / DEB: × Disconnect the remote connection.	Available in the K3, K4 and K5.

Loader Display	Key Operations	Description
PLC PARAMETER 1. LATCH AREA	PRM STEP ▼ STEP ▼	
PLC PARAMETER 14. REMOTE DISCON		• Press the STEP ▼ key twelve times.
	ENT	
REMOTE DISCON 1. YES 2. NO	1	• Disconnect the remote connection.

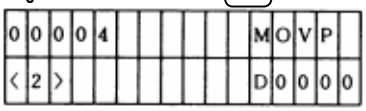
4.64 PLC INFORMATION VIEW

Mode Selection & Description	Note
RUN/PAU: × / PGM: O / DEB: ×	Available in the K3, K4 and K5.
View the PLC type and the flash memory type.	

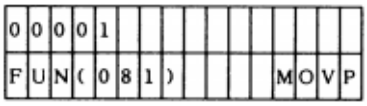
Loader Display	Key Operations	Description
1. INFORMATION 2. EXECUTION	EPRM	
	1	• Pressing the 1 key show the PLC information. Pressing the 2 key makes the EPROM check, write, verify or read be executable.
	ENT	
PLC : GLOFA-K4 F-MEM: 64KBYTE	CLR	• The types of the PLC and flash memory are displayed.
	CLR	• Pressing the CL key twice makes the screen released.

4.65 RROGRAM INSERT/DELETE DURING RUN

1. **Program Insert : Press the [INS] at the end of the instruction to be inserted.**

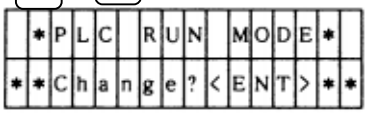


2. **Program Delete : Press the [DEL] at the beginning of the instruction to be deleted.**



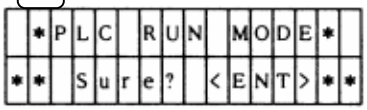
3. **Precautions**
   - Only one instruction is available for Program Insert/Delete during run.
   - Pressing the Delete key in the middle area of an instruction. ➡ Middle Error MIDD. ERR occurs.
   - Program Delete is unavailable during run.
   - Memory Clear/Data Clear/ Data Substitute/ lock Edit are also unavailable during run.
   - Step Insert/Delete are unavailable during run.
4. **Key operations for Program Insert/Delete during run.**

   First, press the [ ] key [DEL] the following appears.



   Press the [CLR] for cancellation.

   Then, press the [ENT] and the following appears.



   Press the [CLR] for cancellation.

   Finally, press the [ENT] and the Program Insert/Delete will be completed .

4.66 Function Comparison Table of All Units of MASTER-K series

No.	Function		Available Units (MASTER-K [ ])						
			K10S/K30S K60S/K100S	10/60H	30H/50H	200H	250	500H	1000H
1	Initial screen	EPROM Write/ Program Select	O	O	O	O	O	O	O
		Displays available units and versions	O	O	O	O	O	O	O
2	Lumi-nes-cence	Corresponding unit should be connected	O	O	O	O	O	O	O
		Auto Off after 10 min. from the last key enter	O	O	O	O	O	O	O
3	Mode Change		O	O	O	O	O	O	O
4	Password Registration		O	O	O	O	O	O	O
5	Password Change and Disable		O	O	O	O	O	O	O
6	Program Input and Modify		O	O	O	O	O	O	O
7	Program Read		O	O	O	O	O	O	O
8	Program Insert		O	O	O	O	O	O	O
9	Program Delete		O	O	O	O	O	O	O
10	Program Check		O	O	/	O	O	/	/
11	Device Search (Bit)		O	O	O	O	/	O	O
12	Instruction Search		O	O	O	O	/	O	O
13	Step Monitor		O	O	O	O	O	O	O
14	Bit Monitor		O	O	O	O	/	O	O
15	Word Monitor		O	O	O	O	/	O	O
16	Force Bit On/Off		O	O	O	O	/	O	O
17	Force Word On/Off		O	O	O	O	/	O	O
18	Word's Present Value Change		O	O	O	O	/	O	O
19	Timer/Counter Input		O	O	O	O	O	O	O
20	Timer/Counter Monitor		O	O	O	O	/	O	O
21	Timer/Counter Setting Change		O	O	O	O	/	O	O
22	Force Timer/Counter On/Off		O	O	O	O	/	/	/

No.	Function	Available Units (MASTER-K [ ])						
		K10S/K30S K60S/K100 S	10/60 H	30H/50 H	200 H	250	500 H	1000H
23	Timer/Counter's Present Value Change	O	O	O	O	/	O	O
24	HSC Data Setting	O	O	O	O	/	/	/
25	HSC Default PRM Write	O	O	O	O	/	/	/
26	Latch Area Setting	/	O	/	O	O	O	O
27	W.D.T time Setting	/	/	/	/	O	O	O
28	Error mode Setting	/	/	/	/	O	O	O
29	I/O Table Setting	/	/	/	/	O	O	O
30	Link Parameter	/	/	/	/	O	O	O
31	Link Control	/	O	O	O	/	O	O
32	Timer Set	/	/	/	/	/	O	O
33	Interrupt	/	/	/	/	/	O	O
34	Baud Rate	O	/	/	/	/	O	O
35	I/O Table Monitor	/	O	/	O	/	O	O
36	Default Parameter Write	O	O	O	O	O	O	O
37	1 Step Run	/	O	O	O	O	O	O
38	Step Break Run	/	O	O	O	O	O	O
39	Scan Run	/	O	O	O	O	O	O
40	Value Break Run	/	O	O	O	O	O	O
41	Program Part Clear	O	O	O	O	/	O	O
42	Program Data Clear	O	O	O	O	O	O	O
43	Block Data Change	O	O	O	O	/	O	O
44	Block Move & Copy	O	O	O	O	/	O	O
45	Program All clear	O	O	O	O	O	O	O

4.67 Function Comparison Table of All Units of GLOFA-K series

No.	Function		Available Units
			GLOFA K3 /4 / 5
1	Initial screen	Displays the type and version No. of the PLC .	O
2	Luminescence	Turns On when the PLC is connected.	O
	Function	Auto Off after 10 min. from the last key enter	O
3	LCD Brightness Adjustment		O
4	Mode Change		O
5	Password Registration		O
6	Password Change and Disable		O
7	Program Input and Modify		O
8	Program Read		O
9	Program Insert		O
10	Program Delete		O
11	Program Check		O
12	Bit Search		O
13	Instruction Search		O
14	Operand Search		O
15	Program Last Search		O
16	Step Monitor		O
17	Bit Monitor		O
18	Card Monitor		O
19	Card Bit monitor		O
20	Force Bit /Card On/Off		O
21	Card's Present Value Change		O
22	Timer/Counter Input		O
23	Timer/Counter Monitor		O
24	Timer/Counter Setting Change		O
25	Timer/Counter Present Value Change		O

No.	Function	Available Units
		GLOFA K3 /4 / 5
26	Default Parameter Write	O
27	Latch Area	O
28	WDT Time	O
29	Error Mode	O
30	I/O Table	O
31	I/O Table Monitor	O
32	HS Link PRM Write	O
33	HS Link Enable	O
34	Interrupt	O
35	Baud Rate	K5
36	HSC Data Setting	X
37	Debug Output Setting	O
38	1 Step Run	O
39	Step Break Run	O
40	Scan Run	O
41	Value Break Run	O
42	Program All clear	O
43	Program Part Clear	O
44	Program Data Clear	O
45	Program Code Change	O
46	Block Copy/Move	O
47	Flash Memory Blank Check	X
48	Flash Memory Write	O
49	Flash Memory Verify	O
50	Flash Memory Read	O
51	Scan Time Monitor	O
52	Hexadecimal ←→ Decimal Change	O
53	LCD Back Light On/Off	O

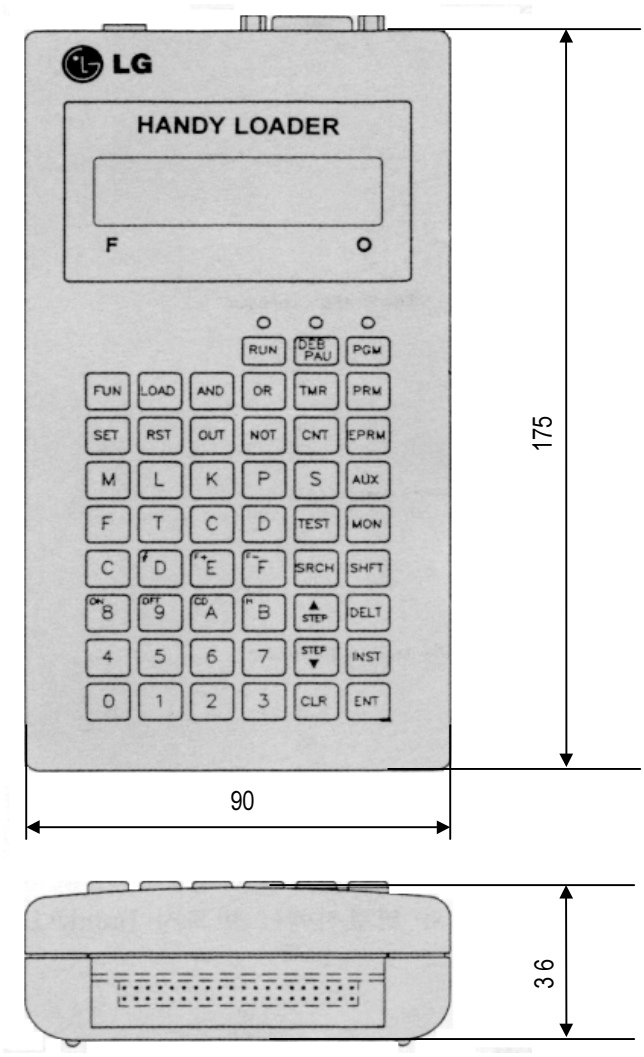
No.	Function	Available Units
		GLOFA K3 /4 / 5
54	Buzzer Sound Control	O
55	RTC(Time) Monitor	O
56	Minus Number Input and Monitor	O
57	Force Data Setting	O
58	Force Data Setting Enable	O
59	Remote(DIS) Connection	O
60	FSM P area Data Monitor	O
61	FSM Slot Monitor	O
62	FSM Emergency Data Monitor	O
63	FSM System Flag Monitor	O

5.1 MASTER-K10S1/K10S/K30S/K60S/K100S

Error	CPU state	Cause	Corrective Action
I/O Error	Stop	Loading or unloading the extension unit.	Check the extension unit after the power was turned off, and then turn the power on.
Code Error	Stop	User program error.	Modify the error step using peripheral devices.
Parameter Error	Stop	PLC program error	Modify the error parameters using peripheral devices.
Missing End	Stop	User program has no 'END' instruction.	Insert the 'END' instruction.
Missing RET	Stop	User program has no 'RET' instruction.	Insert the 'RET' instruction.

Chapter 6. DIMENSIONS

<KLD-150S> unit : mm



Chapter 7. KEW-150S DESCRIPTION AND DIMENSIONS

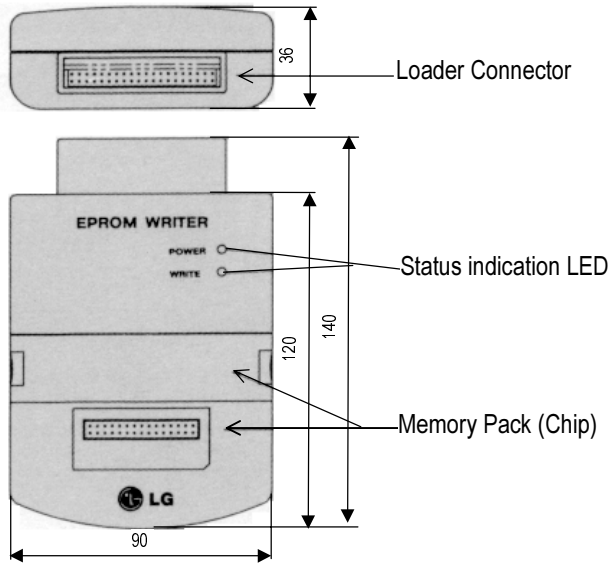
1. Features

EPROM Writer(KEW-150S) is a unit of the MASTER-K series and has Program Store function and Off-line function.

1) Functions of EPROM Read Write, Erase Confirm, Compare
2) Off-line function (K10 to K200)
3) The Write LED display turns on during execution of the EPROM Write

2. Appearance and Names of Main Parts

unit : mm



3. Handling Precautions

1) Be sure to turn off the power of the Handy Loader (KLD-150S) when connecting this unit to it

4. Handling Method

- Refer to the part of EPROM handling in the KLD-150S User's Manual.