Chapter 12. System Reserve Register Address

Some Local Word(LW), Local Bit(LB) and Recipe Word(RW) are reserved for special purposes. Users should not use these areas except for their released purposes.

Local Bit(LB) : LB9000~9999 are reserved

Local Word(LW) : LW9000~9999 are reserved

Recipe Word(RW) : RW60000~65535 are reserved

12.1 Local Bit(LB)

LB Address	Description	Note	Version
9000~9009	Initialized as ON	Use these bits for some objects that need initial set as ON. (read/write)	ver 1.2
9010	Recipe download indicator Set ON when downloading Set OFF when download done	Use this bit to indicate when recipe download is in progress. (read only)	ver 1.2
9011	Recipe upload indicator Set ON when uploading Set OFF when upload done	Use this bit to indicate when recipe upload is in progress. (read only)	ver 1.2
9012	Recipe download/upload indicator Set ON when transferring data Set OFF when transfer done	Use this bit to indicate when recipe transfer is in progress. (read only)	ver 1.2
9013	Touch indicator	Changes to 1 when touch the "touch indicator" (read only)	Ver 1.4
9014	CPU indicator	Changes to 1 when touch the "CPU indicator" (read only)	Ver 1.4
9015	Alarm indicator	Changes to 1 when touch the "alarm indicator" (read only)	Ver 1.4
9016	Print error detection	Changes to 1 when printing fails (read only)	Ver 1.4
9017	Printer control bit	Write 1 to disable print functions. Write 0 to enable print functions. *Setting in System Parameters must have printer enabled, or Bit 9017 doesn't have any effective. (read/write)	Ver 1.4
9020	Pen (write ON when pen selected)	Message board use (read/write)	Ver 1.4
9021	Brush(write ON when Brush selected)	Message board use (read/write)	Ver 1.4
9022	Clipping(write ON when Clip selected)	Message board use (read/write)	Ver 1.4
9030	Pen width pixel 1	Message board use (read/write)	Ver 1.4
9031	Pen width pixel 2	Message board use (read/write)	Ver 1.4

LB Address	Description	Note	Version
9032	Pen width pixel 3	Message board use (read/write)	Ver 1.4
9040	Hide/Show Fast select screen	Write 1 to hide Write 0 to show (read/write)	Ver 1.4
9041	Hide/Show TaskBar	Write 1 to hide Write 0 to show (read/write)	Ver 1.4
9042	Hide/Show TaskButton	Write 1 to hide Write 0 to show (read/write)	Ver 1.4
9043	Hide/Show All (Fast select screen, TaskBar, TaskButton)	Write 1 to hide Write 0 to show (read/write)	Ver 1.4
9044	Save the Recipe Word to System Parameters	Set this bit ON will restore these system parameters from Reserved Recipe word. After restore, system will set this bit OFF. (read/write)	Ver 2.1
9045	Reset HMI	Set this bit ON will reset HMI. (write)	Ver 2.1
9046	Low security level	Changes to 1 when low security level into high security level. (read only)	Ver 2.1
9050*	Toshiba T/C write control bit	When this bit on, write T/C as ON Or OFF T1/T1S user's manual NOTE: In case of Timer/Counter register write, the Timer/Counter's device data (2 bytes each) corresponding to the Timer/Counter's register should be added. If the Timer/Counter's device is set to ON, it should be '01'. Otherwise, it should be '00'. (read/write)	Ver 1.5
9051*	Control touch enable or disable when Back Light is turned OFF	Write 1 to disable touch screen when Back Light is turned OFF (read/write)	Ver 1.6
9052*	Disable write back in PLC Control/change window	Write 1 to disable write back to PLC. This applies to change window controls only! When the value of LB9052 is 0 (off) and the return function is enable, if use [PLC control]/ [change window] (read address is D20) to change base window from 10 to 12, the value of D20 should be 12 to control the switch. After switching to window 12, PLC will automatically return the figure 12 to word address. If the return function is disable, the figure 12 won't be return to D21. (read/write).	Ver 1.6
9055*	Disconnect action – PLC communications	When MMI is disconnected from the PLC, it will act according to the state of local bit	Ver 1.6

LB Address	Description	Note	Version
		9055. 0: Any write to PLC command will be killed. 1: Any write to PLC command will be continuously retried.	
9056*	Disconnection action-Touch	When MMI is disconnected from the PLC, it will act according to the content of local bit 9056. 0: enable touch. 1: disable touch	Ver 1.6
9060*	Keypad control bit, left side(of window)	MMI writes this bit ON whenever a user actives an input data object (NI or AI), and writes OFF if input is valid or ESC key is pressed. User can use this bit to control Keypad popup. Keypad window will be closed if input succeeds. (read only)	Ver 1.6
9061*	Keypad control bit, left side	LB9060~LB906 and LB9080　LB9081(It explains behind to consult) (read only)	Ver 1.6
9062*	Keypad control bit, left and top side	(read only)	Ver 1.6
9063*	Keypad control bit, left and bottom side	(read only)	Ver 1.6
9064*	Keypad control bit, right side	(read only)	Ver 1.6
9065*	Keypad control bit, right side	(read only)	Ver 1.6
9066*	Keypad control bit, right and top side	(read only)	Ver 1.6
9067*	Keypad control bit, right and bottom side	(read only)	Ver 1.6
9068*	Keypad control bit, all side	(read only)	Ver 1.6
9069*	Keypad control bit, all side	(read only)	Ver 1.6
9080	Keypad control bit, top side	(read only)	Ver2.0
9081	Keypad control bit, bottom side	(read only)	Ver2.0

Keypad control bit position:
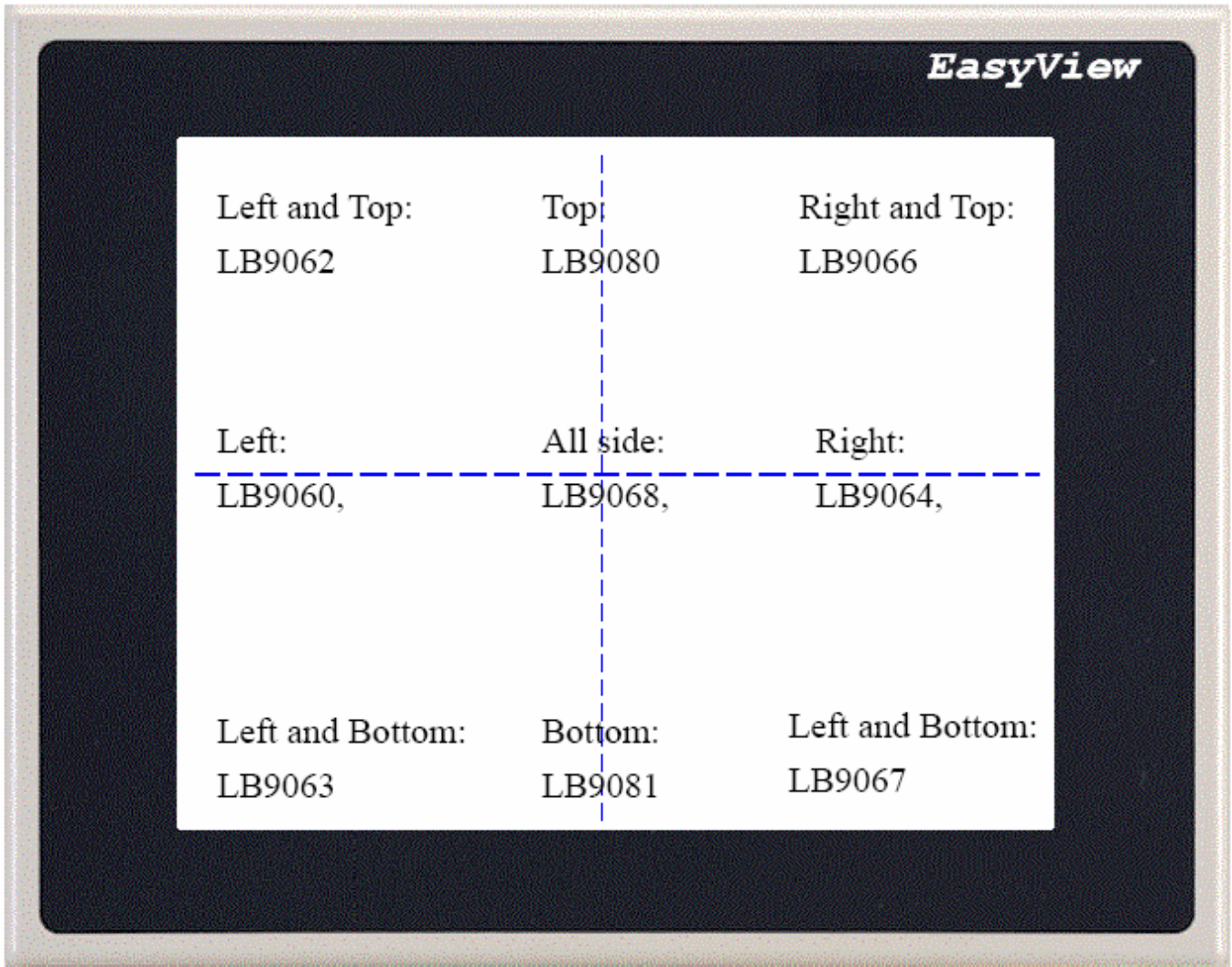
If use LB9060 to control the keypad, when the text input/Numeric input on the left of the screen is triggered, the keypad will pop up on the designated Direct window. Therefore, we suggest the designer to place the Direct window on the right of the screen to avoid overlaying the input data on the left hand side. By contrast, when selecting LB9080, when the text input/Numeric input is triggered, it will pop up the designated direct window which will include the keyboard.

LB Address	Description	Note	Version
9090	Event log clean up	Set this bit ON will clean up the Event log data (write only)	ver 2.5.2
9091	LCD contrast up	MT506xV45 use the LB to control the LCD, does not function in Online Simulation (write only) LCD contrast. Only works after	ver 2.6.0
9092	LCD contrast down	MT506xV45 use the LB to control the LCD, does not function in Online Simulation (write only) LCD contrast. Only works after	ver 2.6.0
9100~9227	PLC communication status	These bits mapping to PLC Node 0~127. Changes to 0 when the communication time	ver 2.6.0

		out. Write 1 to resume the communication (Only for extended address mode)(read/write)	
9228~9355	AUX device communication status	These bits mapping to AUX device Node 0~127. Changes to 0 when the communication times out. Write 1 to resume the communication. (Only for extended address mode) (read/write)	ver 2.6.0
9360	CF card detection bit	0: No CF card plugged in 1:CF card is detected. (read)	Ver 2.7.0
9361	Download receipt from CF card to HMI control bit	0: No movements 1: Start downloading (read/write).After downloading, LB9361 will keep at 0 status and then automatically change to 0 when the CF card is plugged out.	Ver 2.7.0

12.2 Local Word(LW)

LW Address	Description	Note	Version
9000	Recipe index base (R/W)	RWI and RBI use this index to access recipe data (read/write)	ver 1.2
9002-9003	Set Numeric Input to Max value when numeric input gets the focus.	Numeric Input displays its maximum value when activated. When Numeric Input loses the focus it is set to zero. (read)	ver 1.4
9004-9005	Set Numeric Input to Min value when numeric input gets the focus.	Numeric Input displays its minimum value when activated. When Numeric Input loses the focus it is set to zero. (read)	ver 1.4
9006	White board mode 0: pen 1: brush 2: clipping	Message board used (read)	Ver 1.4
9007	Pen width 0:1 pixel 1:2 pixel 2:3 pixel	Message board used (read)	Ver 1.4
9008	Pen color 0-255	Message board function—colors (256 colors) can be chosen by entering the value (read)	Ver 1.4
9010	Local second	Bcd code the effective range is 0-59 (read/write)	ver 1.2
9011	Local minute	BCD code, valid values: 0-59(read/write allow)	ver 1.2
9012	Local hour	BCD code, valid values: 0-23(read/write allow)	ver 1.2
9013	Local day	BCD code, valid values: 1-31(read/write allow)	ver 1.2

LW Address	Description	Note	Version
9014	Local month	BCD code, valid values: 1-12(read/write allow)	ver 1.2
9015	Local year	BCD code, valid values: 0-9999(read/write allow)	ver 1.2
9016	Local week	BCD code, valid values: 1-7(read/write allow)	ver 1.2
9020	Object queue item number	If a screens object queue exceeds 1000, then the MMI screen is too complex. PLC communication speed controls the update speed. If local data causes a slow update we suggest changing the window design. NOTE: EasyWindow has a tool called "System Resource". It displays object queue item numbers. Simulating PC may have more CPU speed, more caches, and more VGA speed. So simulator may not exhibit slowdown symptoms. (read)	Ver 1.4
9034-9035	System time (unit as 0.1 second)	Double word. Count by 0.1 second (read)	Ver 1.4
9040-9041*	Security password	Double word. Please refer to Ch.10 [Security Level] . (write) (9 digits at the most)	Ver 1.6
9042*	Security level	(write) Display the security level of current bas window. Please refer to Ch10 [Security Level]	Ver 1.6
9043*	Force security level	(write) Force to switch higher security (such as level 2) to lower security level (such as level 0). Please refer to Ch10 [Security Level]	Ver 1.6
9044*	Touch process mode	The mode basically resolves a limitation of previous version. When selecting a Monentary, the relevant positions are ON. If pop up any window and hide this switch before the switch is released at this moment, it will keep the state of ON even if you release this switch. This software has 3 kinds of operation modes to deal with Monentary after revising, And this is controlled by LW9044. So you can use one " Set constant " of " Set Word " comes to set up the mode that you need. 0: allow to pop up window mode when pressing and the switch set to OFF (default) when releasing even if the pop-up window hides the momentary switch. 1: not allow to pop up window mode when	Ver 1.6

LW Address	Description	Note	Version
		pressing when pressing to avoid the disorder of operation. 2: Allow pop up the windows mode while pushing.After Monentary is covered by pop up windows while pushing the state, the switch will not be replied (read / write)	
9050	Base Window Id	Under HMI is single machine or Master, the base window ID is stored in here. (read)	ver 1.2
9051	Slave Base Window Id	Under Master-Slave connection, the base window ID of Slave is stored in here (read/write)	ver 1.2
9054*	report printout option	0: Text & Meter & Trend 1: Text & Meter & Trend & Shape but no pattern 2: Text & Meter & Trend & Bitmap 3: Text & Meter & Trend & Bitmap & Shape but not pattern 4: All (read/write)	Ver 1.5
9055*	PLC Control word offset	In general, windows of a project are numbered from window 10. However, in [system parameter]/[compiler], users can set the window number starting from window 1.When beging from window 1, in fact the project will automatically add a offest,9, to the window number. In other words, the project is executed from window 10. The offest 9 is the value of LW9055. There are two situations in PLC Control object will use the context of the word: switching windows and report output. The bit address of every window number received by a PLC(or a local HMI) will be added the value of LW9055. Before writing back to PLC, EB500 will deduct the value of LW9055. For example: Use D10 to design a PLC control/ switch window object. If (LW9055)=9 D10=1, EB500 will switch to base window 10 and assign 1 to D10 (read/write)	Ver 1.6
9057	EventLog Database Item size	Management information, the size of every item (R)	Ver 2.1
9058-9059	EventLog Database size	Management information, the size of Database,	Ver 2.1

LW Address	Description	Note	Version
		the size includes management information. (total_item*item_size+management_inf o_size) (read only)	
9060-9075*	Numeric Input &ASCII Input	Start to assign the input data from LW9075 (by ASCII format)(read)	Ver 1.5
9080-9085*	Project name	Use ASCII Data to show project name. It occupies 12 bytes. (read only)	Ver 1.5
9096-9087*	Project size in bytes	Use Numeric Data to show it (In Decimal) (read only)	Ver 1.5
9088-9089*	Project size in K bytes	Use Numeric Data to show it (In Decimal) (read only)	Ver 1.5
9090-9091*	Compiler version ID	Use Numeric Data to show it (In Decimal) (read only)	Ver 1.5
9092*	Project compiled date/Year	Use Numeric Data to show it (In Decimal) (read only)	Ver 1.5
9093*	Project compiled date/Month	Use Numeric Data to show it (In Decimal) (read only)	Ver 1.5
9094*	Project compiled date/Day	Use Numeric Data to show it (In Decimal) (read only)	Ver 1.5
9100* 9101*	Indirect Addressing- For external PLC only	9100 is the window number 9101 is the offset of PLC address change. When set LW9100 is 11, LW9101 is 20, PLC bit address of all objects on Window 11 will add offset 20.i.e. D10 to D30. All addresses will be added offset 20*16=320, i.e. M20 to M340.	Ver 1.6
9130	Change Language	Input value 0~3. Display different languages according to label library. (read/write)	Ver 2.5.2
9135	Battery Voltage (BIN)	MT506xV45 uses lithium battery to keep the memorization of receipt data and the operation of RTC. LW9135 is displayed as a Decimal Value,LW9135 = 1228 = 3.00VDC If the LW9135 < 1126(2.75V), please change the Li-battery. Only works after download, does not function in Online Simulation (read/write)	Ver 2.6.0

LW Address	Description	Note	Version
		Create a Numeric Data Object, set the device address to LW9135.	
		Set the Input high = 1228 and Engineering high = 3. It will show the battery voltage.	
9136	The status of CF card recipe downing.	0: No movements 1:Downloading 2: The end 3: defeat (read)	Ver 2.7.0

12.3 Recipe Word(RW)

RTC			
RW Address	Description	Note	Version
60000	Real Time Clock second	BCD code, valid values: 0 - 59 (read/write allow)	ver 1.2
60001	Real Time Clock minute	BCD code, valid values: 0-59 (read/write allow)	ver 1.2
60002	Real Time Clock hour	BCD code, valid values: 0-23 (read/write allow)	ver 1.2
60003	Real Time Clock day	BCD code, valid values: 1-31 (read/write allow)	ver 1.2
60004	Real Time Clock month	BCD code, valid values: 1-12 (read/write allow)	ver 1.2
60005	Real Time Clock year	BCD code, valid values: 0-9999 (read/write allow) (MT506xV45 valid values: 1980-2079)	ver 1.2
60006	Real Time Clock week	BCD code, valid values: 1-7 (read/write allow) (MT506xV45 read only)	ver 1.2
NOTE about RTC: User can use "Objects" to display system time, its value can be written to. But, the user must take care to enter only valid values. For example: Seconds cannot be changed to 78(BCD), if 78 (BCD) is entered, the RTC will continue counting 78 79 80 ... etc. This will cause unpredictable conditions to happen.			

When the EasyBuilder [System parameters]/[Hardware]/[Recipe/System Parameter] select "Yes" will load system parameter from Recipe Card.When the MT500 is first time running *.eob, it will store system parameter to Recipe Card (SRAM). Next time MT500 will load system parameter from Recipe Card (SRAM). For technical problem, not ALL system parameter mapping to Recipe Card. Following list the mapping relationship.

System Parameter / General Tag & Security Tag			
RW Address	Description	Note	Version
60061	Back light saver	0: (Disable) 1~255: second(Enable) (read/write)	ver 2.1
60064	Buzzer	0:None 1:Yes (read/write)	ver 2.1
60071	Security Control	0:None 1:Yes (read/write)	ver 2.1
60072~ 60073	Password: level 0	Double word (read/write)	ver 2.1
60074~ 60075	Password: level 1	Double word (read/write)	ver 2.1
60076~ 60077	Password: level 2	Double word (read/write)	ver 2.1

Set LB9044 ON will restore these system parameters from Recipe word.