

# M1355 program user manual

#### Introduction

- 1. Led Bar is design for M1355 LED bar pattern edit program.
- 2. It can generate 805X machine code. Customers can program 805X by himself.
- 3. It contain <Led Net>, <Color mask> and <Action> to define operation.

#### Environment

- 1. Led net window: Show LED bar shape and other information.
- 2. Led bar editor: Command list of edit LED property. It can create, delete, copy, rotate and other edits property command of the LED net.
- 3. Color Mask: Every mask contains 20 color groups. User can define several color groups to define animation.
- 4. Action: It is define action command and use color.

M1355 Led Bar	
File Tools Help	
_Eile Iools Help	Led bar editor       Color mask       Action         None
	Delete Select       Set Led count default         Set Rotate Angle       Led Count : 1         Rotate Angle:10       Clear Next         Rotate select       Set Next         Select Begin       Set Led count         Set Start address       ID the same Address         Start Address:0       Set Max Rotate Count         Set ID       Max Rotate Count: 36
	No Text     Show Led count     Show Group Color     Iv       Show address     Color group number     Group Color only       Show next ID     Show ID
Bar	: Count : 0 Led Count : 0



#### How to define LED net

#### Add LED bar

- 1. Click <Add LED bar> button.
- 2. Click first point of LED bar on LED net window.
- 3. Click end point of LED bar on LED net window.

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	Add led bar ①
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ا	Select Start point
	Copy Select
	Move Select
	Delete Select Set Led count default
	Set Rotate Angle Led count : 1
	Rotate Angle: 10 Clear Next

#### Single select LED bar

- 1. Move mouse to LED bar first or end point. It will high light show select now.
- 2. Click if it is you want to select.

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#### Cancel select

- 1. Click <None> button.
- 2. Click point on LED net window where it have not any LED bar.

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		Led bar editor Color mask
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	l 2 •	Add led bar
		Select Zero point
		Select Start point
		Copy Select

#### Multiple select

- 1. Click <Add select> button.
- 2. Click first or end point of the LED bar.



M1355 Led Bar	
File Tools Help	
	Led bar editor Color mask Action
<b>1</b> 2 2 1	None Add select (1) Add led bar Select Zero point Select Start point Copy Select Move Select

#### Rectangle select

- 1. Click <None> button.
- 2. Mouse left key down and hold at first point.
- 3. Move mouse then release mouse key.



#### Move LED bar

- 1. Do select LED bar operation.
- 2. Click <Move Select> button.
- 3. Mouse left key down and hold at first point.
- 4. Move mouse then release mouse key.







#### Delete LED bar

- 1. Do select LED bar operation.
- 2. Click <Delete Select> button.

#### Copy select

- 1. Do select LED bar operation.
- 2. Click <Copy select> button.
- 3. Do move select operation.

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		Select Zero point
		Select Start point
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	- -	Move Select
		Delete Select



### Copy and rotate

- 1. Do copy LED bar operation.
- 2. Click <Select zero point> button.
- 3. Click zero point.
- 4. Click <Set Rotate angle> button.

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					Move Select	
					Delete Select	Set
					Set Rotate Angl	Led c
					Rotate Angle: 10	Cl

5. Input angle value.



6. Click <Rotate select> button.





Now you can use those command to make LED bar shape like below.



When you finish LED bar position define. You must define LED bar ID first. Click <Show ID> button.



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# ID must be from 0 and continuity.

- 1. Click <Set Start address> button.
- 2. Input start address to zero.
- 3. Click <Set ID> button.
- 4. Click LED bar one by one.











When you finish ID defining. It looks like below maybe.



#### When you finish ID defining.

You can not change ID value. Color mask get LED bar position depend on LED bar's ID value.

#### Led bar address look like LED bar ID.

But it can change value any time. The address cans the same ID value. LED bar's address is connectivity of the LED bar's sequence. It is also must from 0 and continuity. Now, define LED bar's address.

Click <Show address> button. It will show LED bar's address value.

- 1. Input start address to zero.
- 2. Click <Set address> button.
- 3. Click LED bar one by one.

Next ID is the next ID value when run <rotate> action command.

- 1. Click <Show next ID> button.
- 2. Click <Set next> button.
- 3. Click LED bar's sequence show as below.





- 4. Click <Set address> button again.
- 5. Click LED bar's sequence show as below.





Maximum rotating count is count per cycle. For this example maximum rotating count is 12.

- 1. Click <Set Max Rotate Count> button.
- 2. Input max rotate count value.

	Set Led count default
Input Max Rotate Co 🔀	d count : 1
Input Max Rotate Count	Clear Next
12 (2)	Set Next
OK Cancel	Set Led count
	ID the same Address
Start Address : 0	
Set address	Set Max Rotate Coun

Led count is LED number of LED bar. It is from 1 to 254.

- 1. Click <Show LED count> button to show LED count on the screen.
- 2. Click <Set LED count default> button to set up LED count default value.
- 3. Click <Set LED count> button.
- 4. Click LED bar you want to change LED count value use default value.

Choose <File | Save> to save to file.



Color mask depend on LED bar's ID value. It contains 20 color values defining to compress data size.

Now I show you how to define firework.

Choose <File | Open> Demo1\wheel.bar file.

Now let we make an example for color mask.

- 1. Click <Color mask> change to mask define page.
- 2. Click <Show Group Color> button.
- 3. Add <Color mask> table one item.
- 4. Give the mask name is <Firework>.
- 5. Click <Add> button of the color group table.
- 6. Click color group item.
- 7. Click LED bar you want to add to color group.



Led bar editor Color mask Action Color mask Marre O Firework O Elete Delete
Color Group LED bar ID(Address)
No Text Show Led count Show Group Color <sup>2</sup>



You can click other item to define your mask pattern.

You can delete LED bar from color mask.

- 1. Click item of LED bar ID.
- 2. Click <Delete> button.

Name		^	Add	Open
0 sparkler				
1 4 color			Delete	
2 Fire		~		
Color Group	LED	bar ID(	Address)	
LO		Bar ID		Add
o 📕 🗏	0	24		
1	1	14		Delete (2)
2	2	4		
3	3	74		
4	4	64		
5	5	54	(1)	
6	6	44		
7	7	34		
8				
9				
10				



If LED bar has not defining in Color mask. It uses item 0's color.

When you finish mask defining. It look like <wheel. Mask> file. Click <Open> button and choose wheel. Mask file.

You can click color group item. LED bar will high light when this group number contains ID number of it.

You must save to file when you finish your defining. Click <Save> button to save data to \*.mask file.

	Le	d bar editor	Color mask	Action				
	Ca	olor mask						
另存新檔						? 🔀	en	Save
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網路上的芳鄰								
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Now we combine LED bar and color mask to define action.

Choose <File | Open> to open <Demo1\wheel.bar>.

- 1. Change to color mask page.
- 2. Click <Open> button and load <Demo1\wheel.Mask>.
- 3. Click color item 0.
- 4. Change to color mask page.

	Led ba	editor Color mask Action4							
	Colo	· mask							
		Name Add Open(2)							
	0	sparkler (3)							
	1	4 color Delete							
	2	Fire							
1									
ſ	Color Group LED bar ID(Address)								
		LO Add							

- 5. Click <Add> button of command table to add one item of the action. You will see Mask name is <sparkler>.
- 6. Click <Group Color only> button.
- 7. Click item 0 of the command table.
- 8. Click <Add> button of color table to add one item.

C	Command ta	ble	(5) Add	3 Add Delete					
	Mask Name	Command		Interval		Times		-	
0	sparkler	Rotate 7		32ms			1		
	-								
C	Color table		8 Add	Delete		Сору			
	Frame Count G	i0 G1 G2 G3	G4 G5	G6 G7	G8 G9	9 G10 0	511 G12 0	513	
0	1								
R	, G	ļ	в [	1					
	No Text	Show Led cou	int Sho	w Group Co	olor	🔽 Lo	ock key		
S	ihow address	Color group nur	nber Gro	oup Color o	nly 🙆				
		-1							



9. Now, when you click data field, LED bar will high light if mask group has it ID.



- 10. Click speed button.
- 11. Click item 3 L16 of default color table.
- 12. Click G1 of color table.



- 13. Click <Copy> button of color table.
- 14. Click <Item 1, G2> of the color table.
- 15. Click <Copy> button of color table.
- 16. Click <Item 1, G3> of the color table.
- 17. Click <Copy> button of color table.
- 18. Click <Item 1, G4> of the color table.
- 19. Click <Copy> button of color table.
- 20. Click <Item 1, G5> of the color table.
- 21. Click <Copy> button of color table.
- 22. Click <Item 1, G6> of the color table.
- 23. Click <Copy> button of color table.



- 24. Click <Item 1, G7> of the color table. 25. Click <Copy> button of color table. 26. Click <Item 1, G8> of the color table. 27. Click <Copy> button of color table. 28. Click <Item 1, G9> of the color table. 29. Click <Copy> button of color table. 30. Click <Item 1, G10> of the color table. 31. Click <item 0, L1> of default color table. 32. Click <Copy> button of color table. 33. Click <Item 1, G1> of the color table. 34. Click <Copy> button of color table. 35. Click <Item 1, G2> of the color table. 36. Click <Copy> button of color table. 37. Click <Item 1, G3> of the color table. 38. Click <Copy> button of color table. 39. Click <Item 1, G4> of the color table. 40. Click <Copy> button of color table. 41. Click <Item 1, G5> of the color table. 42. Click <Copy> button of color table. 43. Click <Item 1, G6> of the color table. 44. Click <Copy> button of color table. 45. Click <Item 1, G7> of the color table.
- 45. Click < Itell 1,  $G_{1>0}$  of the color table
- 46. Click <Copy> button of color table.
- 47. Click <Item 1, G8> of the color table.
- 48. Click <Copy> button of color table.
- 49. Click <Item 1, G9> of the color table.
- 50. Click <Add> button of color table.
- 51. Click <Command> data field of command table to flash value.



52. Click <Interval> data field of command table to 128ms.

Command table							Ааа	Delete		
	Mask Name		Comm	and				Interval		Tir
0	sparkler Flash						32ms	•	1	
								32ms 64ms 128ms		
Color table Add								500ms 1 sec		С
	Frame Count	GO	G1	G2	G3	G4	G5	4 sec	~	9

- 53. Click <Play> button to see the animation.
- 54. Click <Save> button to save data to \*.act file.



#### How to generate 805X HEX code

- 1. Choose <File | Open> then select <Demo1\wheel.bar>.
- 2. Change to <Color mask> page.
- 3. Click <Open> button load <Demo1\wheel.mask> file.
- 4. Change to <Action> page.
- 5. Click <Open> button load <Demo1\wheel.act> file.
- 6. Choose <Tools | 8051 code out> . It will generate 8051 HEX code file.

## **Controller Application circuit**

