ADAM2 Single Remocon MCU

IDE User's Manual V1.0

S/W Integrated Development Environment

- Assembler

- Simulator

- Code Wizard

1. ADAM2 IDE (Integrated Development Environment)

1.1 Introduction

ADAM2 IDE is a S/W development tool that integrate Editor, Assembler, Simulator, Code Wizard into one program.

It is possible to develop Remocon program without any other S/W and any other H/W equipment like oscilloscope or keymatrix board etc.

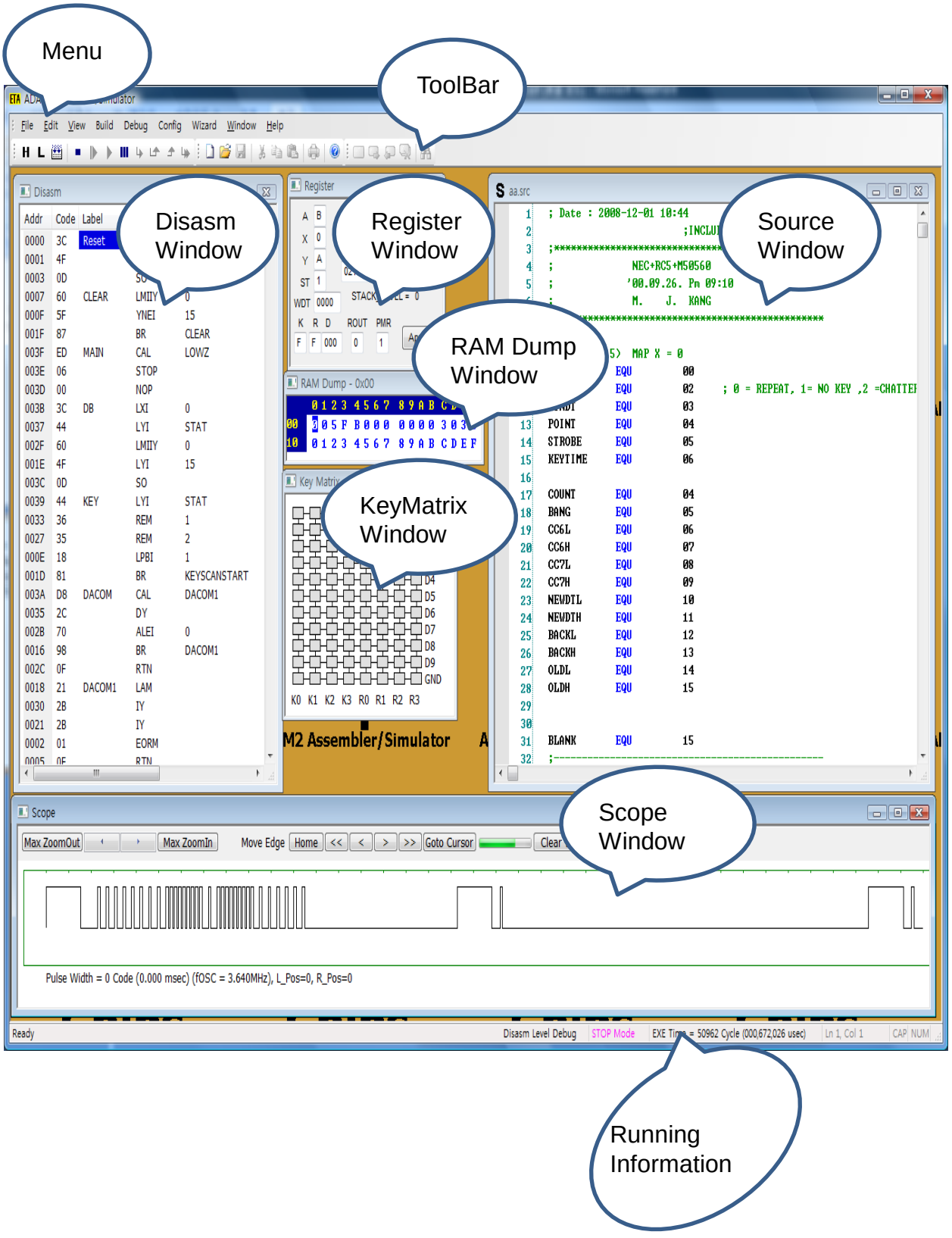
CodeWizard generate fully operational Remocon program.

All the things above is integrated in IDE environment.

1.2 Feature

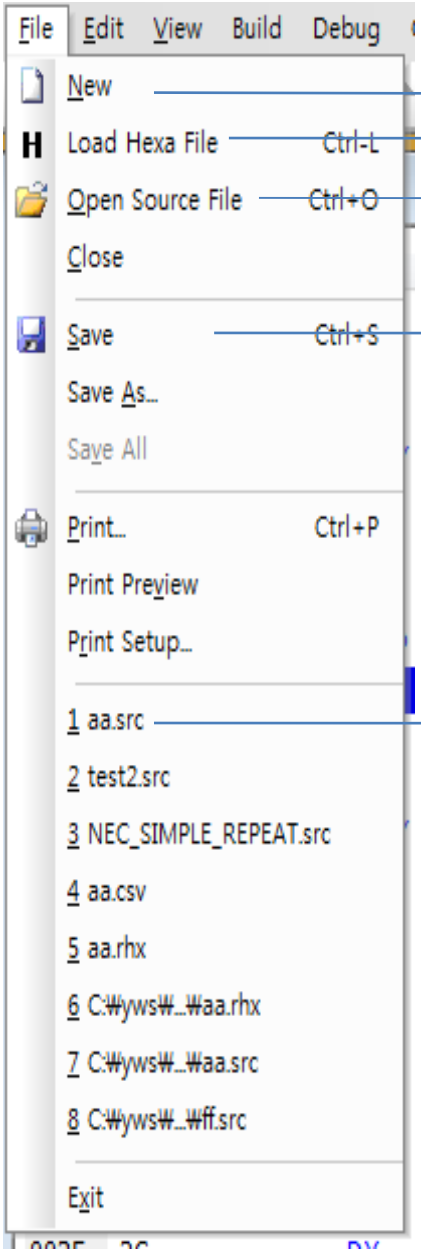
- Real Time Simulation for all ADAM2X MCU series
- Fully Support Symbolic Level Debugging and Source Lebel Debugging
- Real KeyMatrix Simulation
- Convenient Scope view for Remout Signal
- CodeWizard automatically generate ROM code which is full operational
- Support various Clock Frequency
- Support Embbed Editor for with Syntax Highlight
- Support Line Assemble
- Support Unlimited PC break and RAM break
- No problem at Window XP/Vista environment

1.3 Program Structure



2. Menu Description

2.1 File Menu



Create New Source File

Load Hexa file to Code Memory
(Hex file format is a Intel Hexa format)

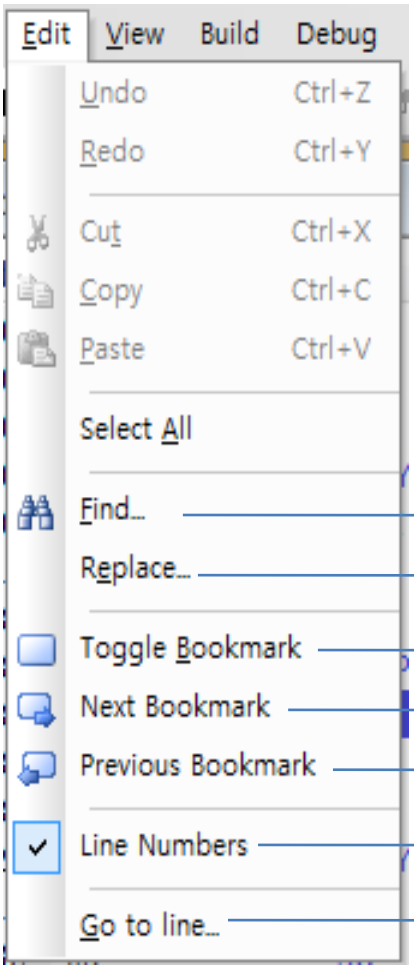
Open Source File

Save Source File

Recent Files (Max 8 Files)

2.2 Edit Menu

Edit menu is for functions of embedded Editor.
It support search/replace and book mark functions.
Embedded editor support syntax highlight also.



Find symbol in source window

Find and replace in source window

Toggle bookmark

Goto next bookmark

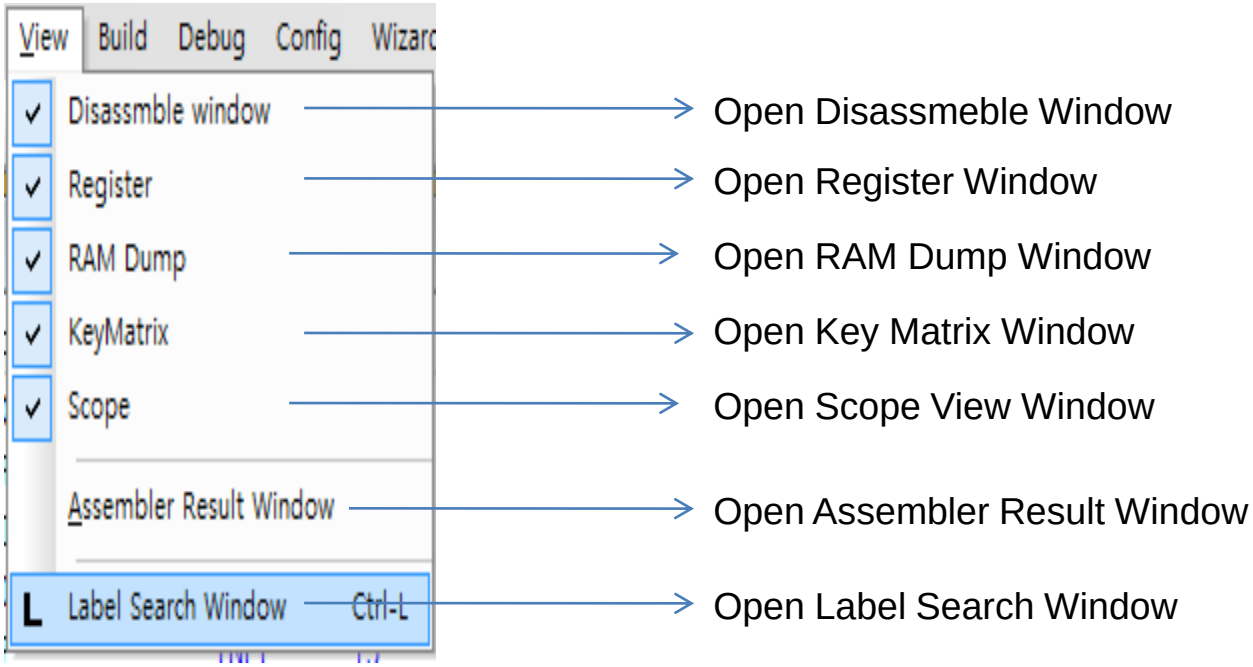
Goto before bookmark

On/Off Line number display

Goto dedicated line number

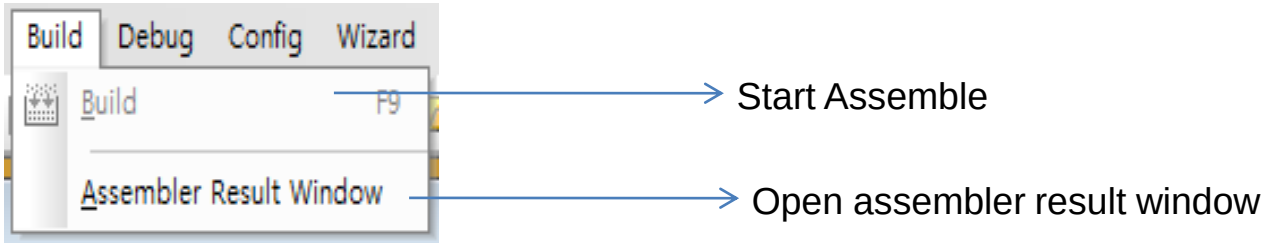
2.3 View Menu

Open various funcion windows.



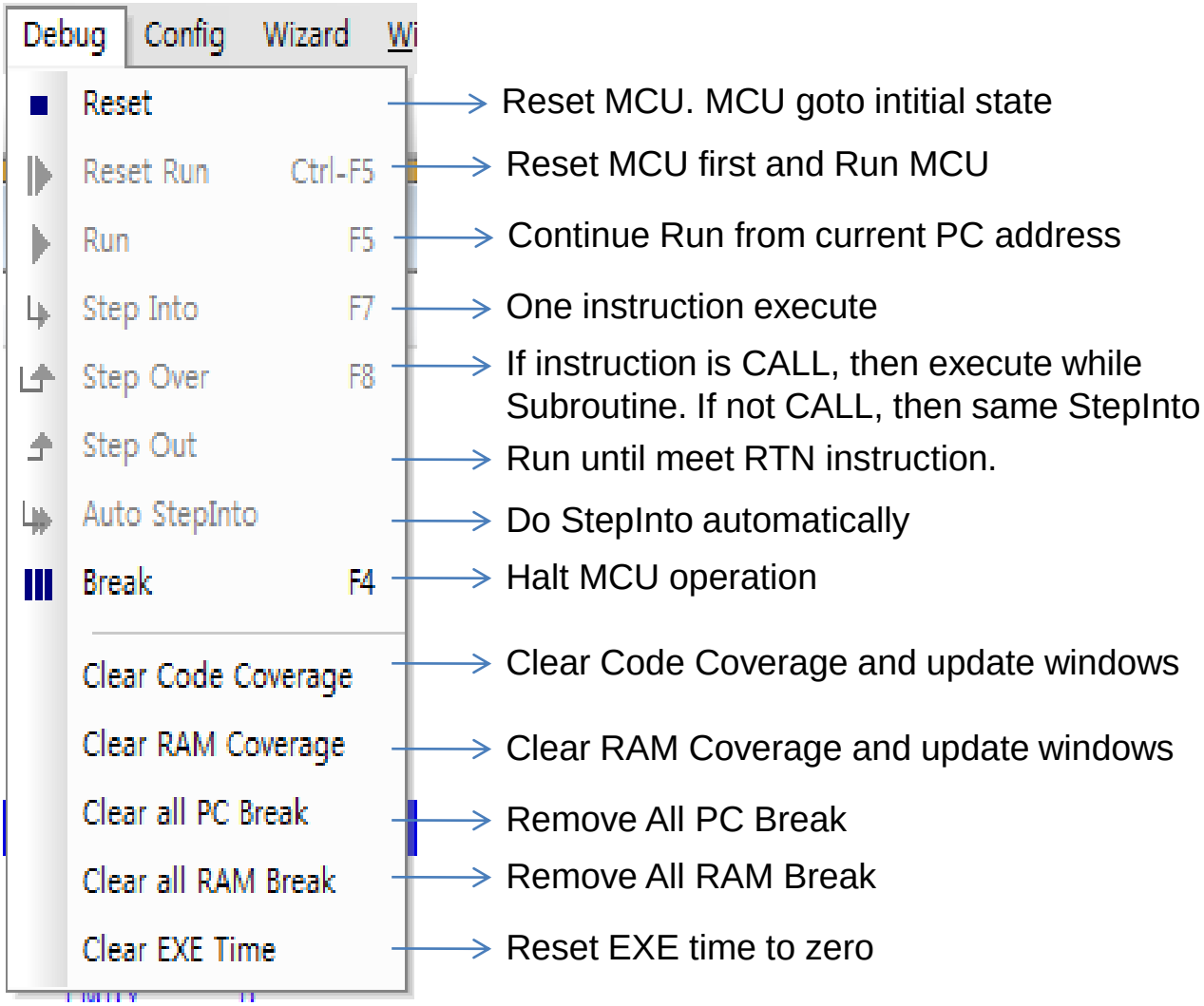
2.4 Build Menu

Start Assembler and open result window



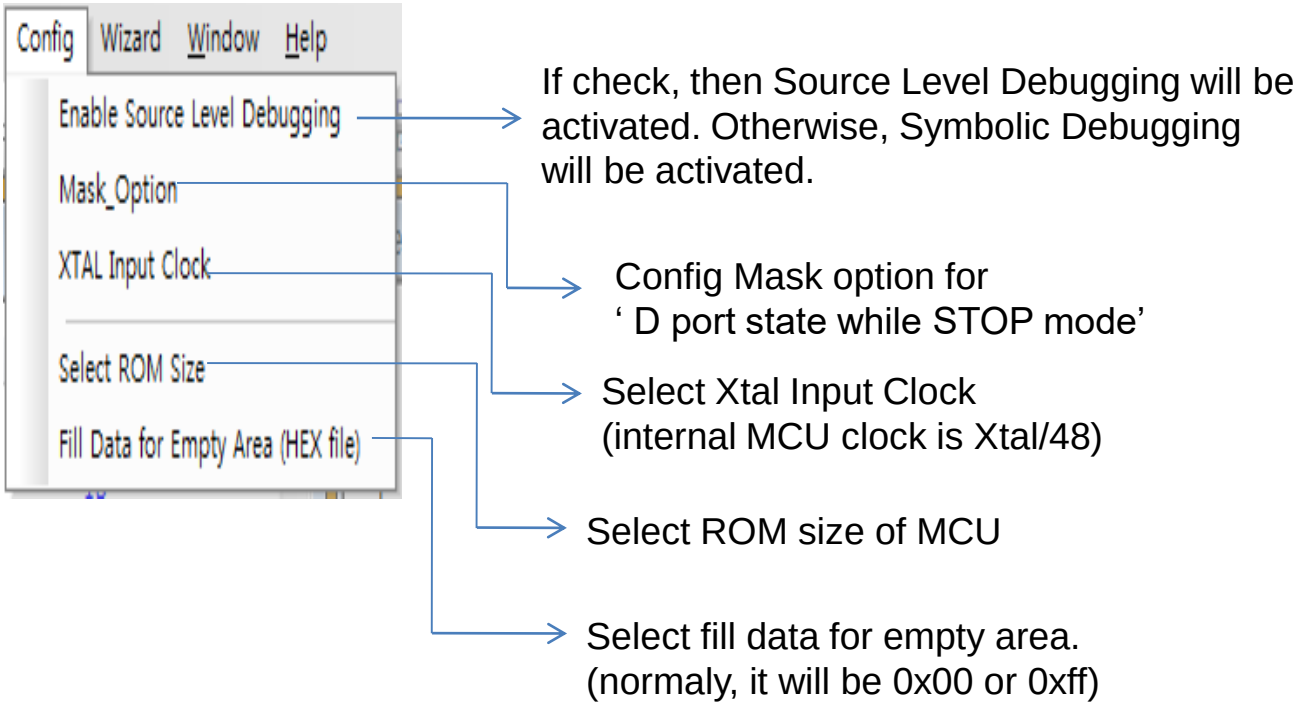
2.5 Debug Menu

Menu for debugging operations.



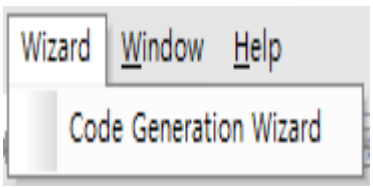
2.6 Config Menu

Select various options.



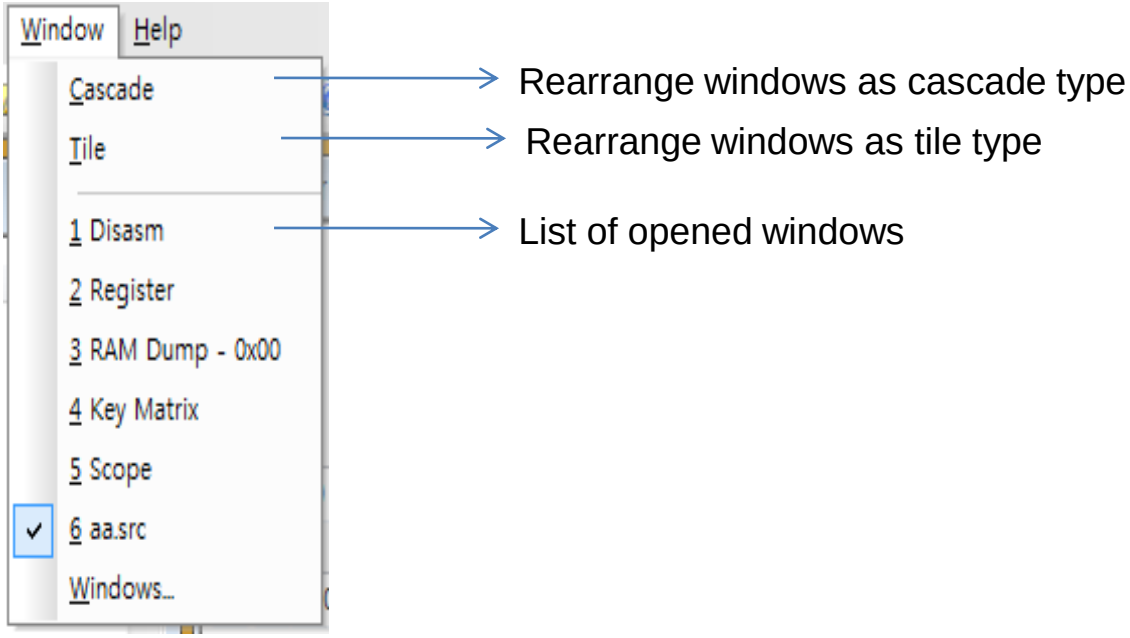
2.7 Wizard Menu

Open Wizard windows.
In Wizard windows, you can generate full operation ROM Code automatically.



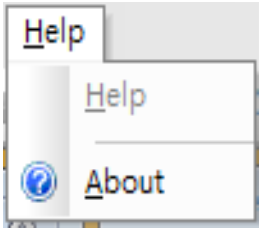
2.7 Window Menu

Manipulate windows arrangement style.



2.7 HelpMenu

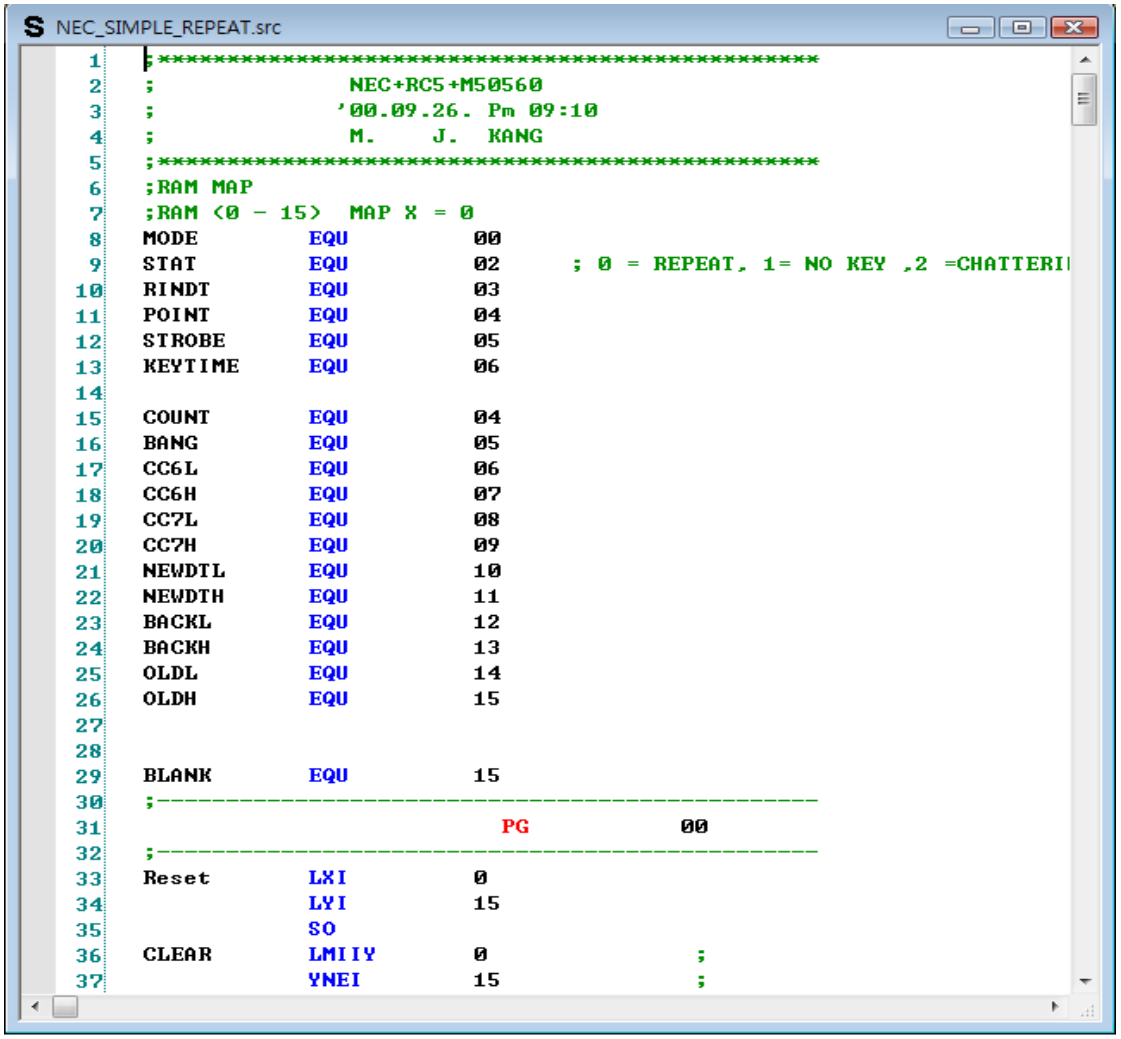
Open Help window and display About message



3. Function Windows

3.1 Source Edit Window

ADAM2 IDE have embedded editor.
It is possible to edit source code in this editor, and compile it in IDE.
Editor support Syntax Highlight, BookMark, and symbol search.
Also it is possible to Source Level Debug in this window.
For simple solution, only one source file can be opened at one time.

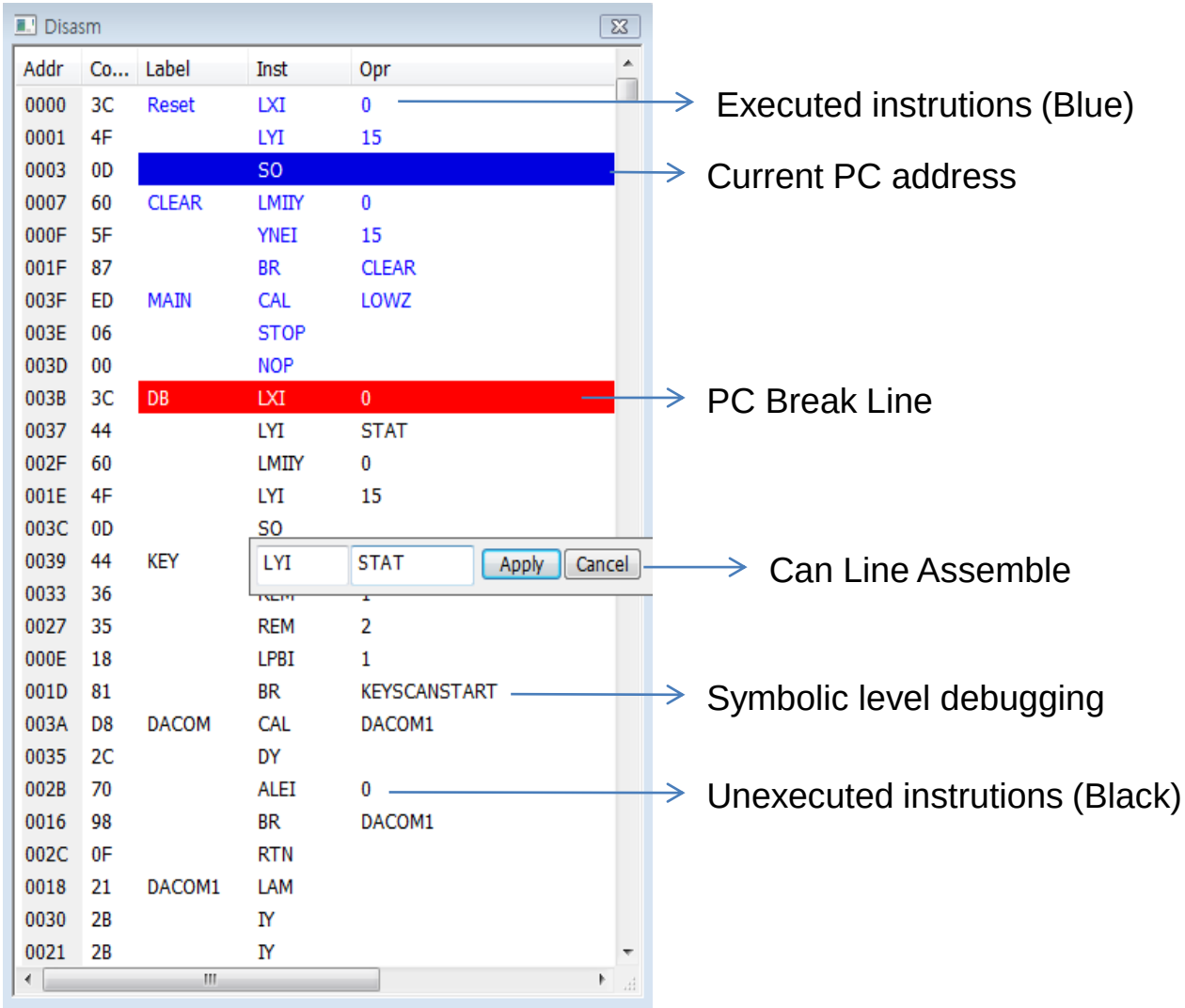


3.2 Disasemble Window

Disasm window is used for debugging user code as symbolic level.
It is possible to step by step debugg and set PC break point.
Also line assemble is possible.
Executed instruction is displayed blue color, and unexecuted instruction is displayed black color.

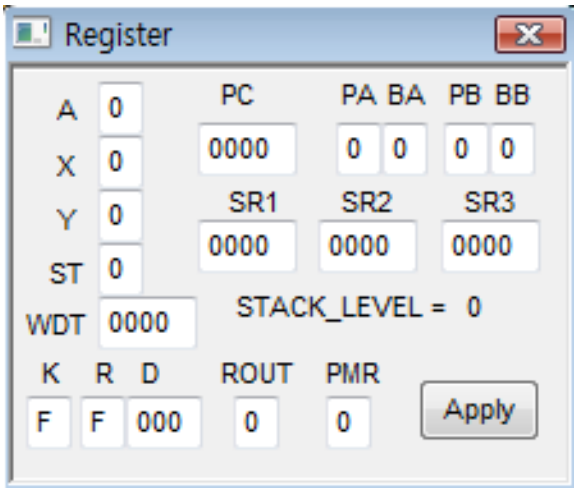
Mouse Handling

Left Mouse Click : Move Cursor
Left Mouse Double Click : Toggle PC Break Point
Right Mouse Click : Line Assemble



3.3 Register Window

Disasm window is used for monitoring MCU registers and I/O port value.
It is possible to edit new value and apply it to MCU registers and I/O port.

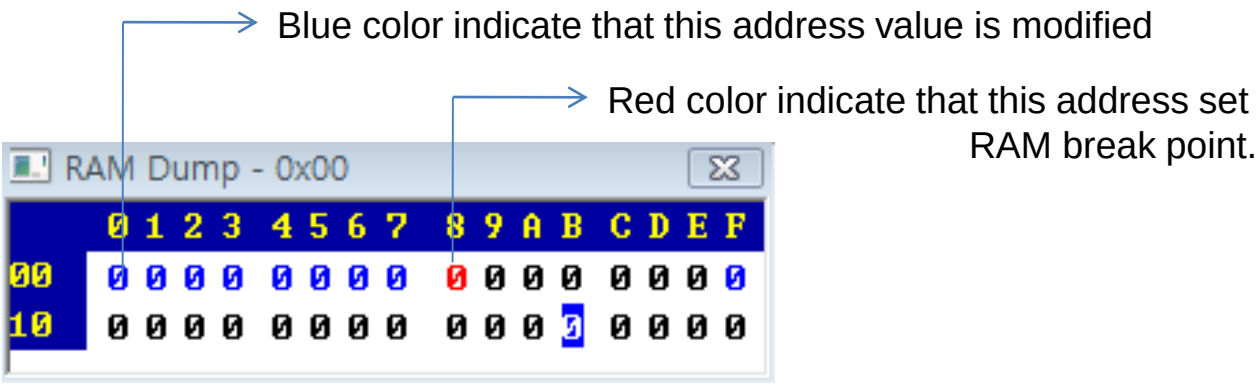


3.4 RAM Dump Window

RAM dump window is used for monitoring internal RAM memory.
It is possible to edit new value and apply it to memory.
Also RAM break function is possible.

Mouse Action

Left Click : Move Curosr
Left Double Click : Toggle RAM Break Point

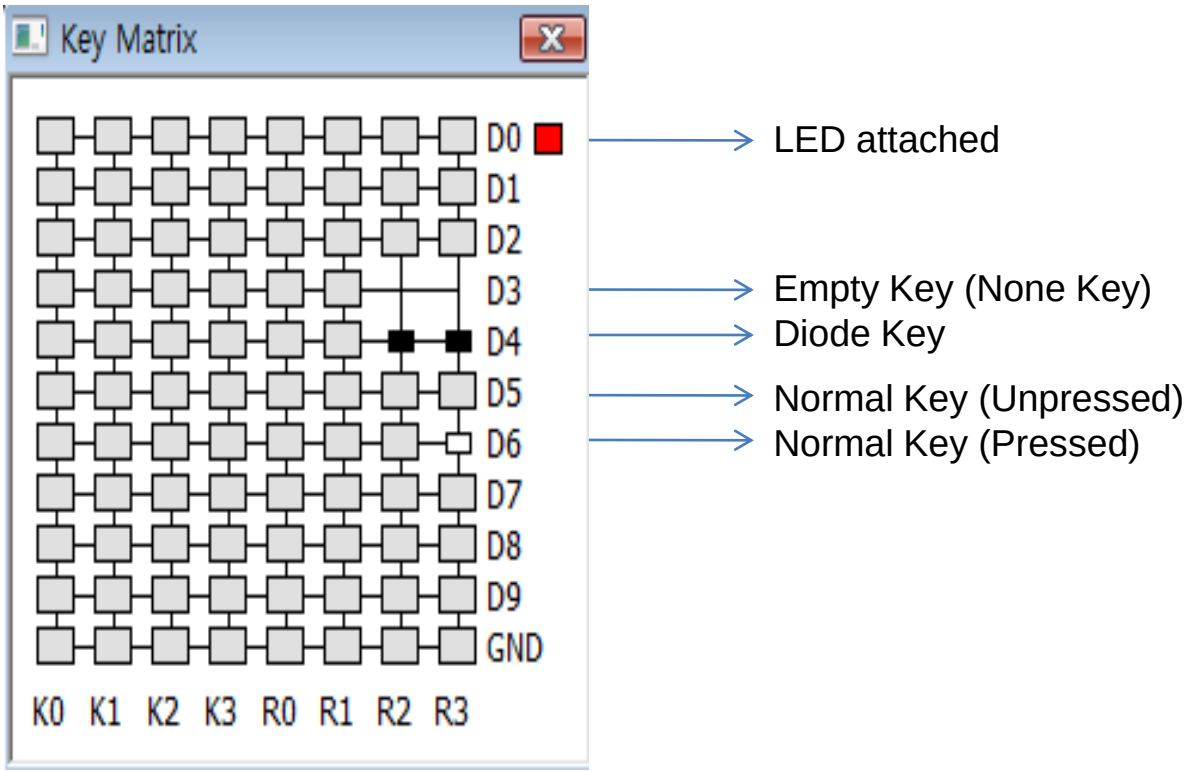


3.5 KeyMatrix Window

KeyMatrix window simulate H/W key matrix board in real time.
Press Key button act like real H/W key.
It is possible to press key and no button up and move other postion.
It will act like press double in real H/W key matrix.
Also setup each key property as normal, empty or diode key.

It is possible to LED display at each D port by following method.
→Locate Mouse to D port display area and press right mouse button.

It is possible to set each key property by follwing method.
→ Locate Mouse to each key area and press right mouse button.



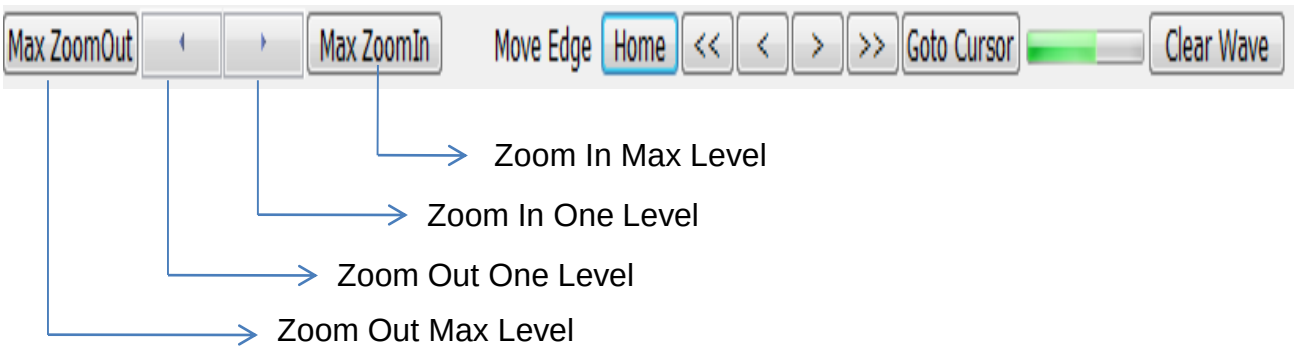
3.6 Scope Window

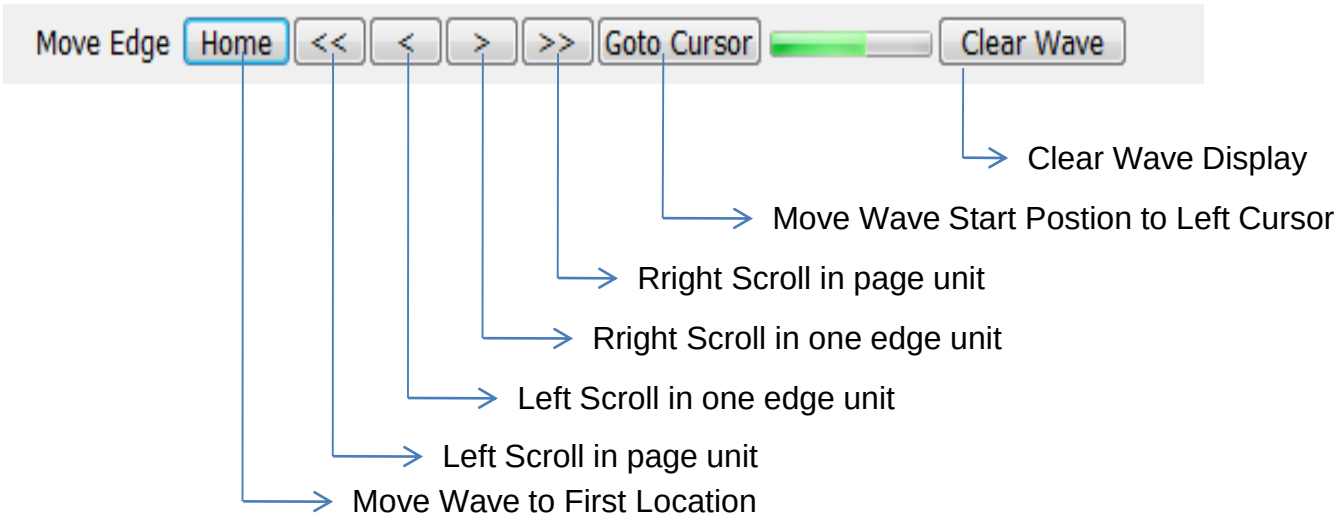
In Scope Window, you can view Remout signal as graphically.
It is dedicated remocon signal, so it is very simple debug remocon wave.

It can display about 3 second wave data in case fOSC=3.64MHz)
By Zoom In / Zoom Out button, you can view wave conviniently.
By Left Cursor/Right Cursor, you can calculate pulse width of signal.
By MoveEdge, you can explore output wave.

Mouse Action

Left Click: Move Left Cursor
Right Click: Move Right Cursor

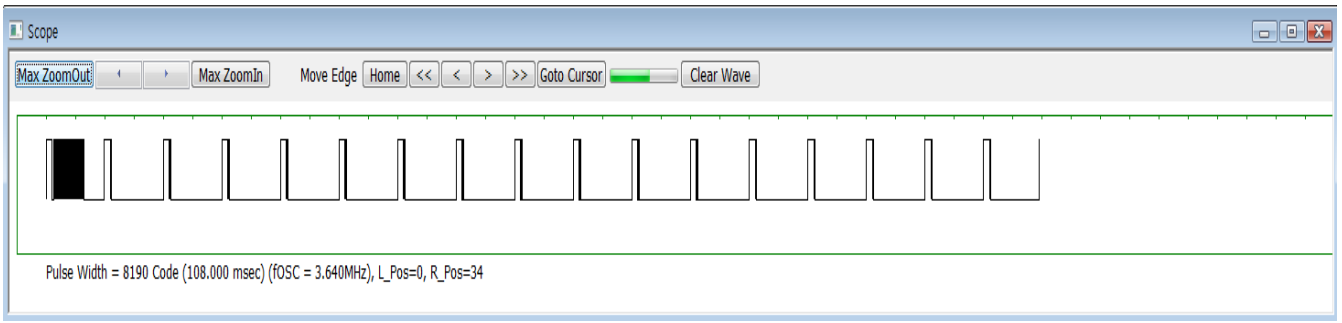




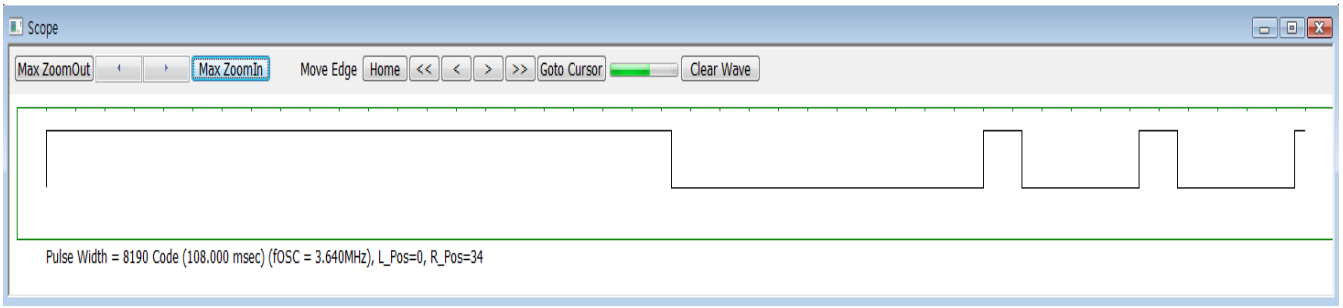
< Measure pulse width >

Measure pulse width by just click left cursor and right cursor button

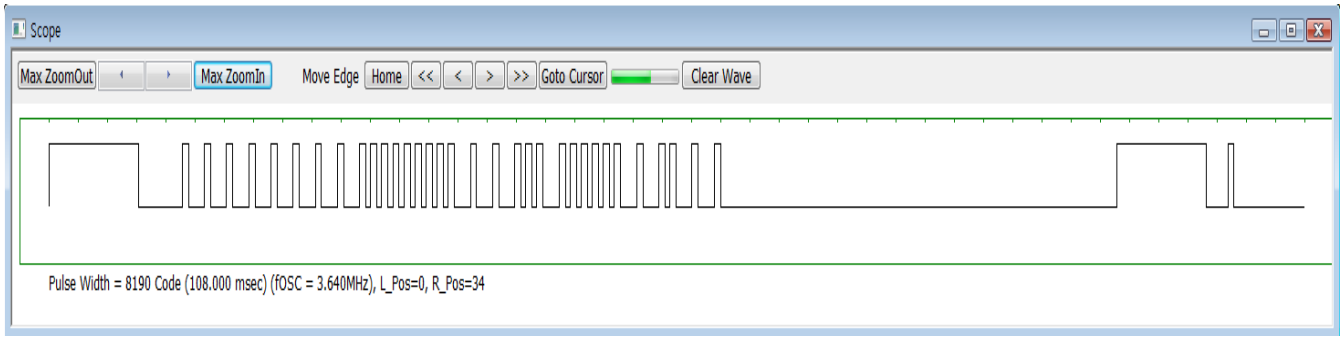
< Max Zoom Out>



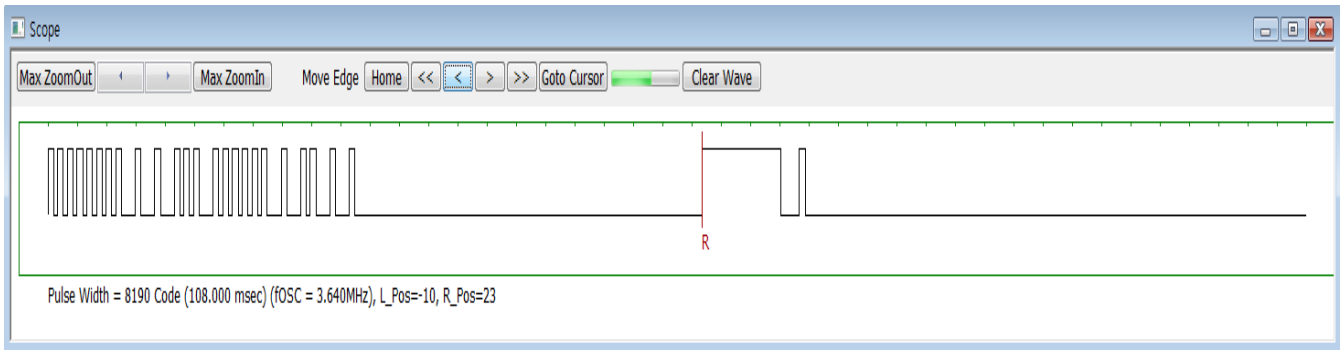
< Max Zoom In>



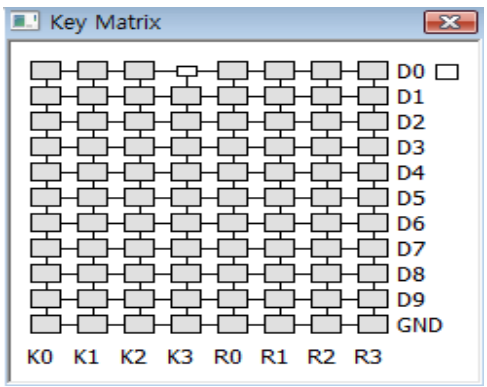
< Normal Zoom >



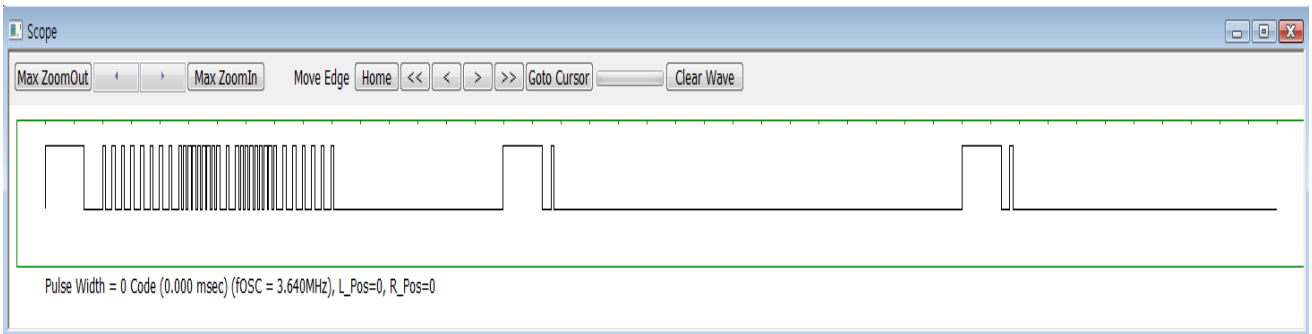
< Explore Waveform >



< Example >



- D0/K3 Key Press
- Waveform Output

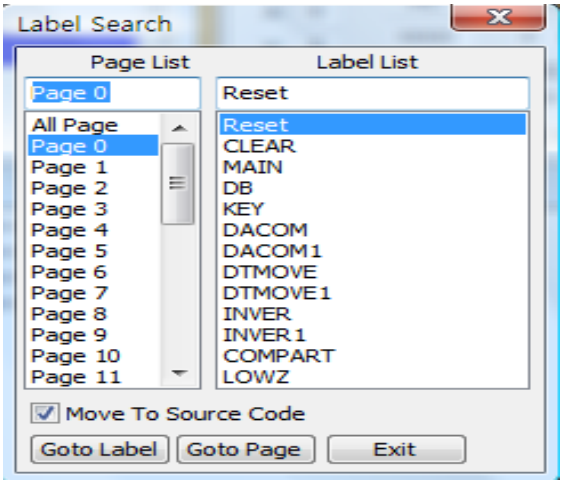


3. 7 Label Search Window

In Label serach window, you can goto label defined postion.
And can goto page start address.
If check ‘Move to Source Code’ button, then goto source file line also.
Else, only goto disassemble window.

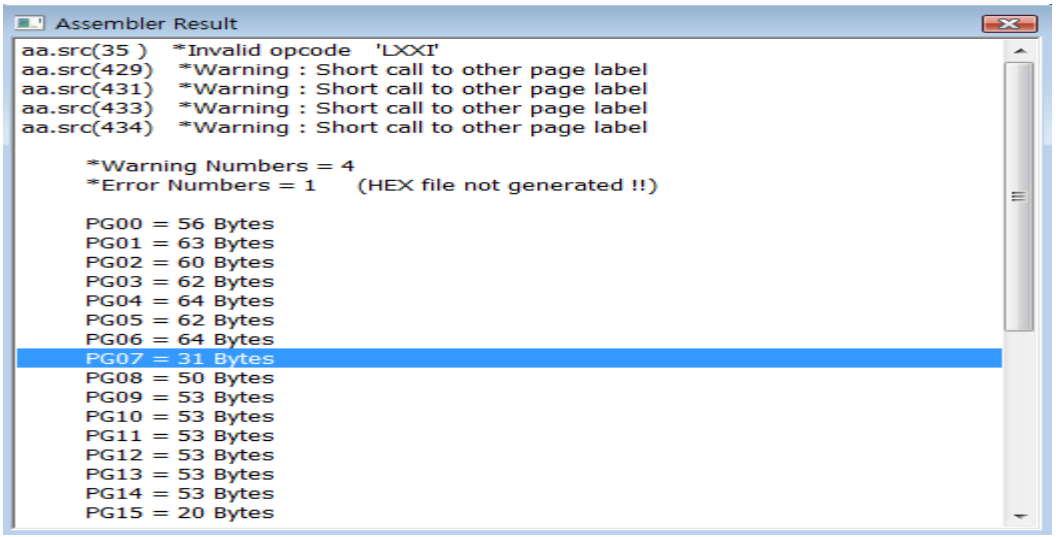
Mouse Action

Left Button Double Click : goto Label defined line



3. 8 Assembler Result Window

This window display the message of assembler output result.
If there is error or warning, click the error line.
Source window will be highlighted at the error line, you can correct the error line directly.



4. Code Wizard

In Code Wizard, you can generate fully operational remocon rom code.
Record Custom code, Key Value and select D port option.
And press ‘Generate’ button, then ROM code will be generated