



用 JLINK V6 调试 STM32 的教程

相关配置：

开发板用的是万利的 STM3210B-LK1

JLINK 用的是 MCU123.COM 出品的全功能 JLINK V6.0

编译调试环境为：IAR EWARM 4.42A

JLINK 驱动用的是 3.86g

下载地址：http://www.mcu123.com/product/jlink/Setup_JLinkARM_V386g.zip

针STM3210B-LK1 评估板需要改动或设置的地方有 3 点：

第一：STM3210B-LK1 评估板的 BOOT0 及 BOOT1 跳线请跳到 0 位置。

第二：STM3210B-LK1 评估板上的 JTAG 接口的第 1, 2 脚请接上 3.3V(手工飞线)。

第三：JLINK 用 SWD 方式调试此款板子时，需要把板子上的 R4, R5 断开（因其板子上有 STLINK II）否则调试不成功哟

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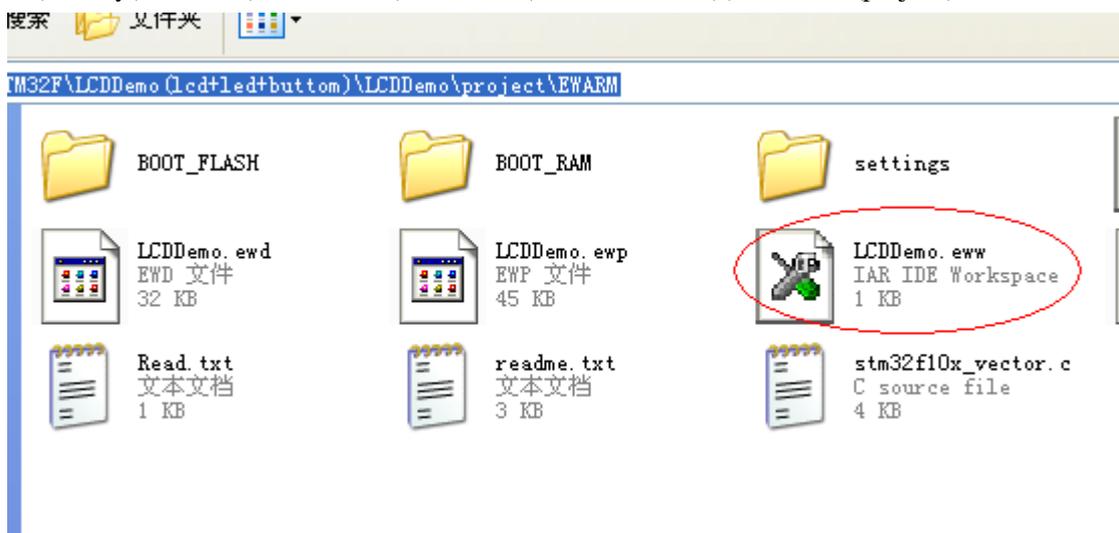
- 一 设置仿真器类型----JLINK 或 JTRACE
- 二 JLINK 仿真器相关设置
- 三 JTAG/SWD 两种方式的调试

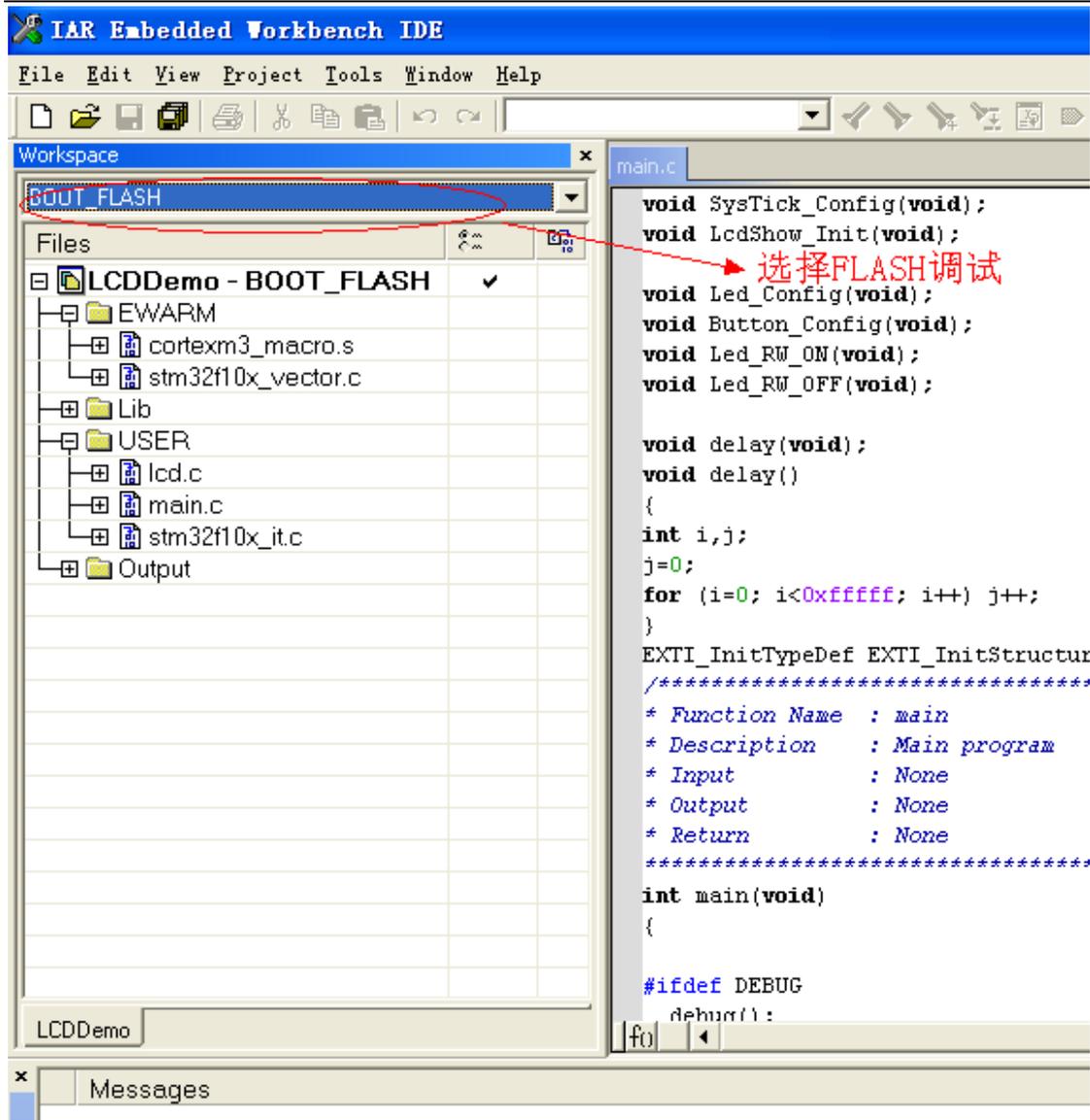
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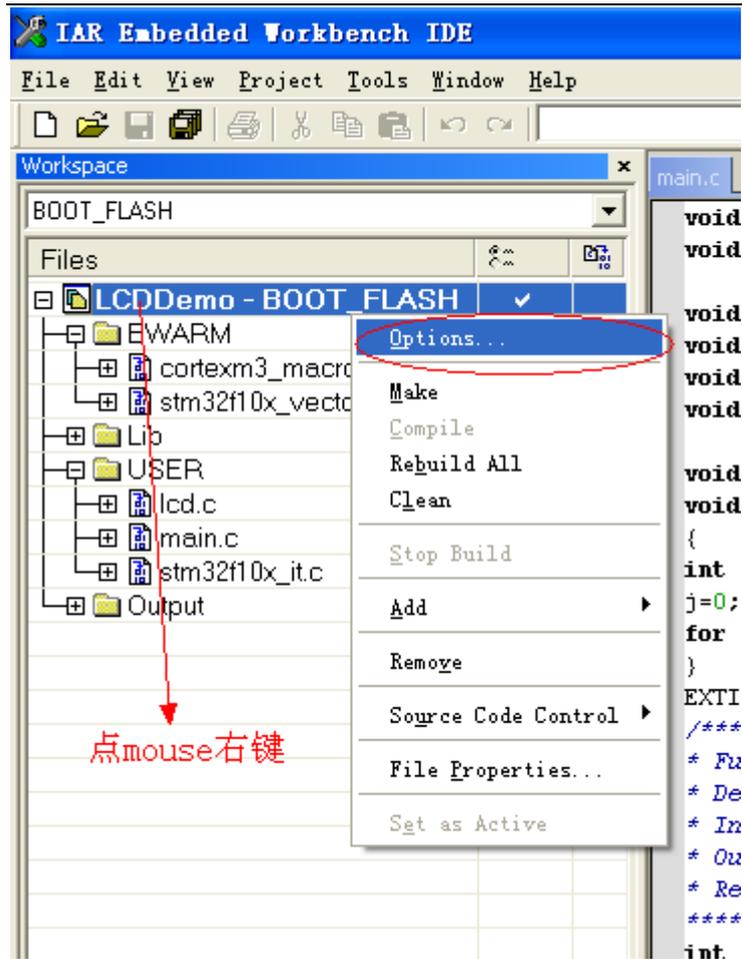
安装好 Manley 板子的例程

用 LCD Demo

D:\Manley\EKBoard\EKSTM32F\LCDDemo(lcd+led+button)\LCDDemo\project\EWARM

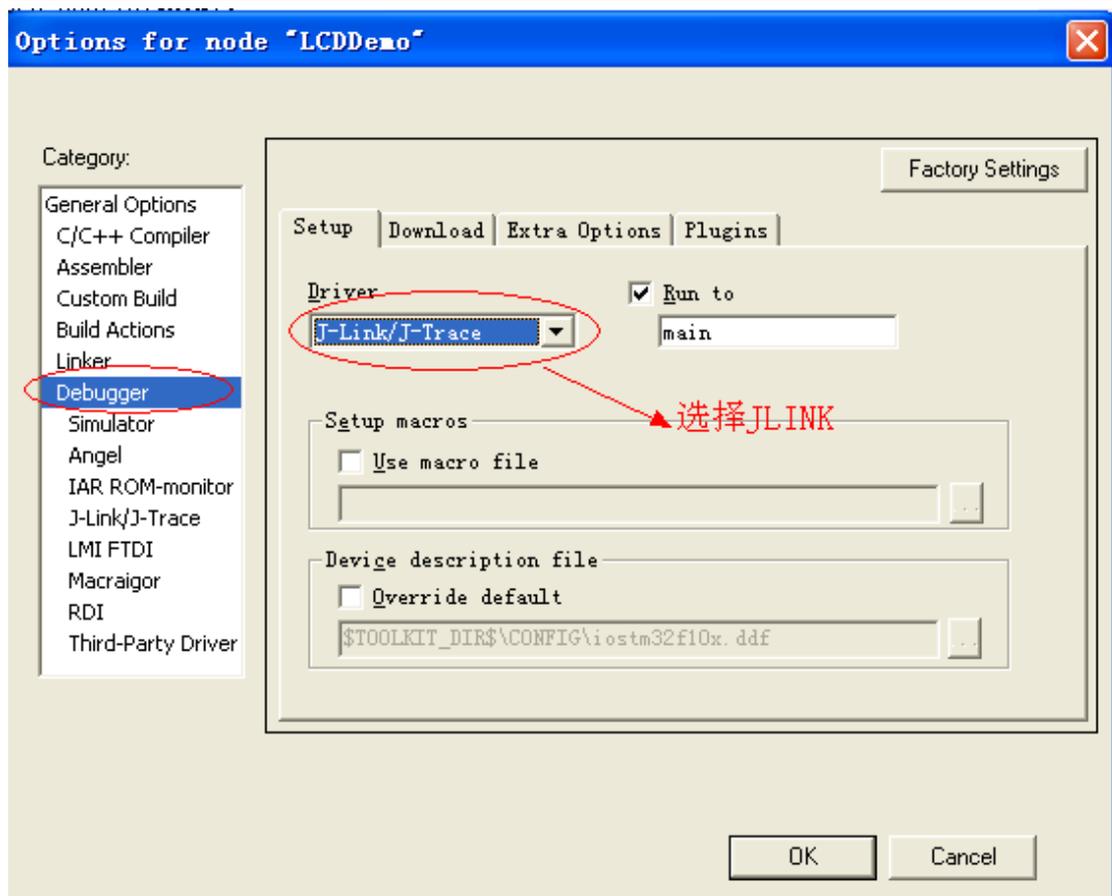




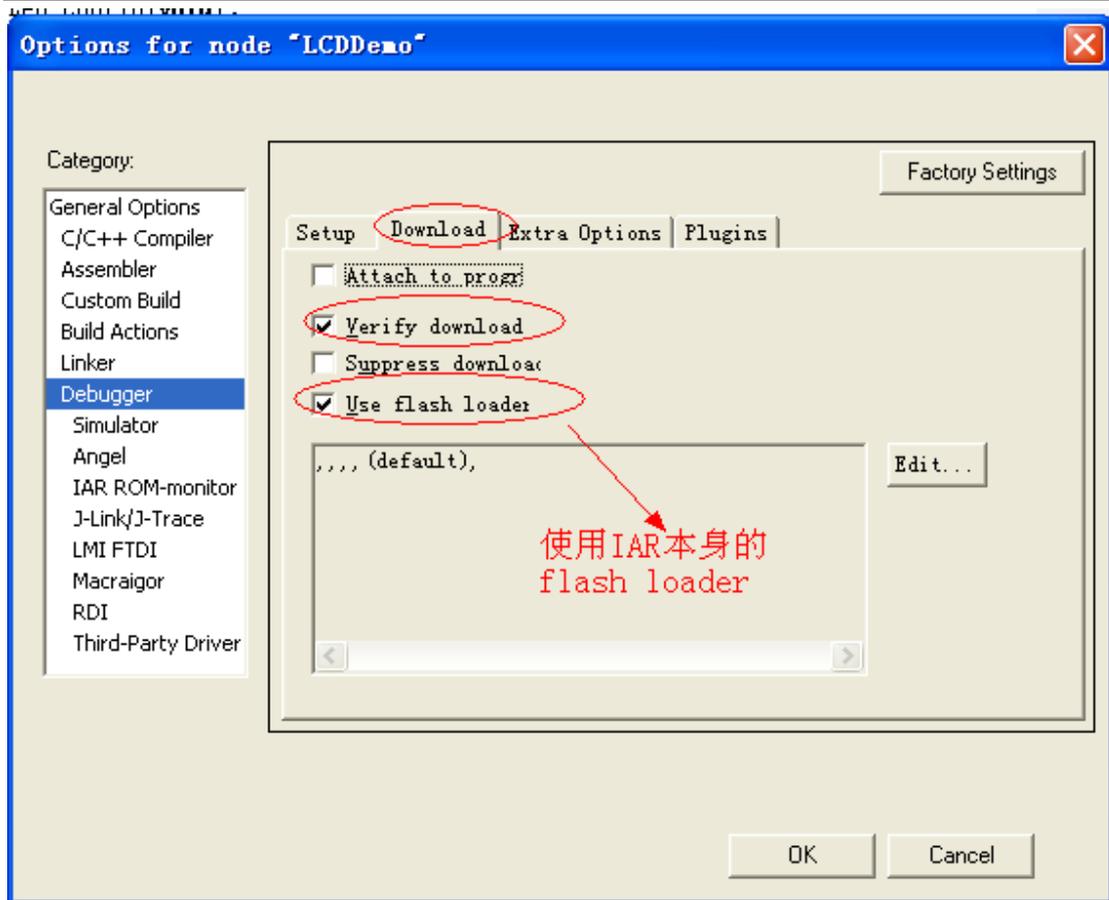


菜单:

Project->options



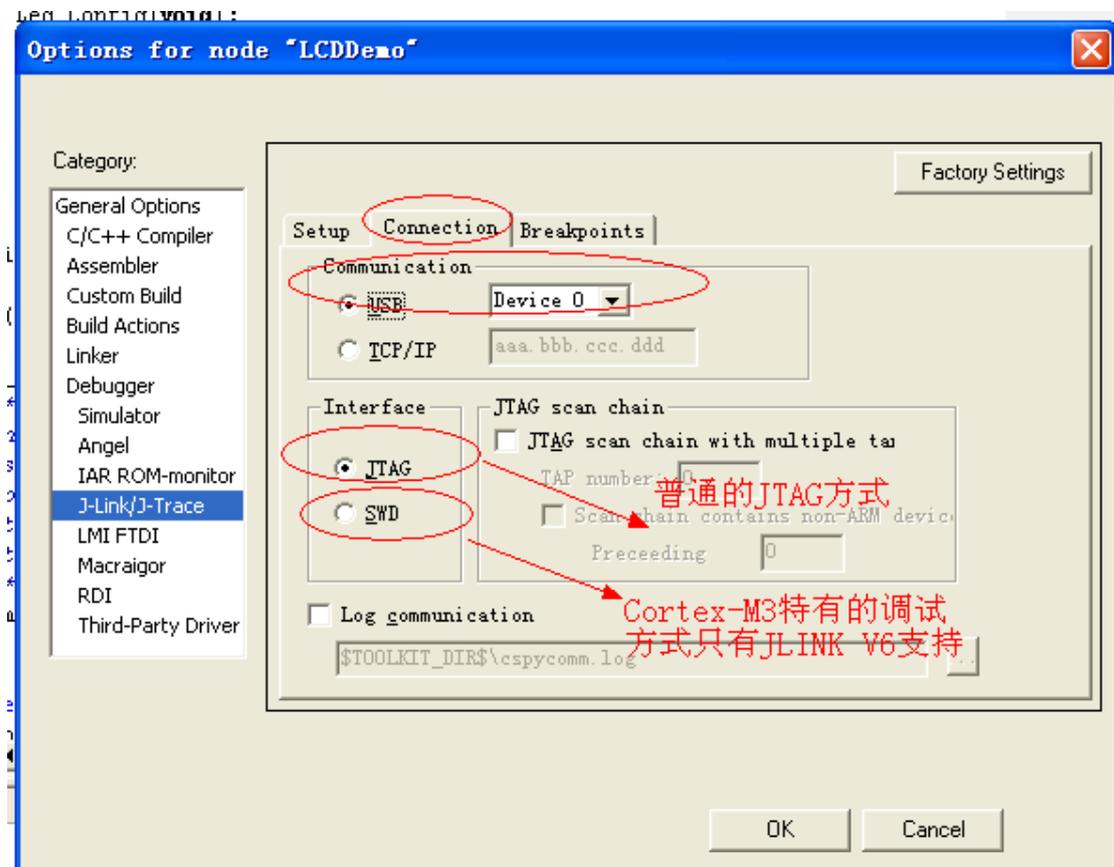
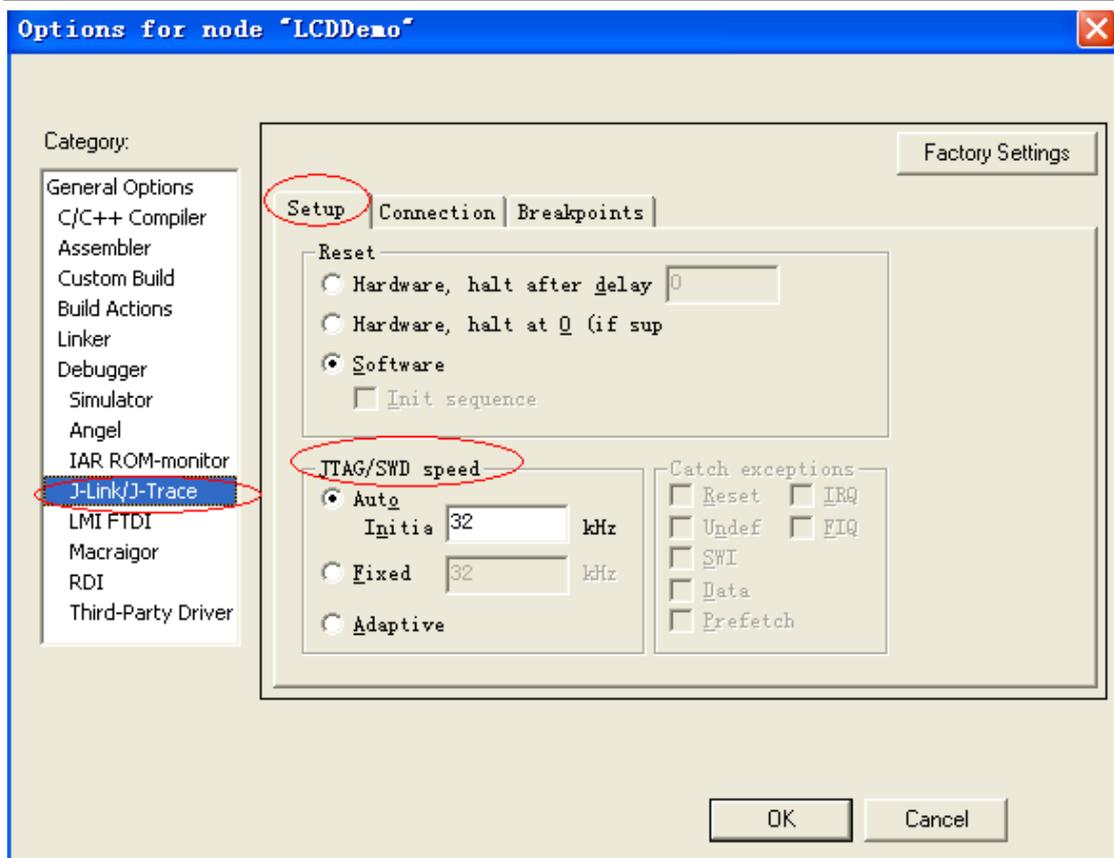
Project->options ->Debugger->Setup->Driver 选 JLINK



Project->options ->Debugger->Download

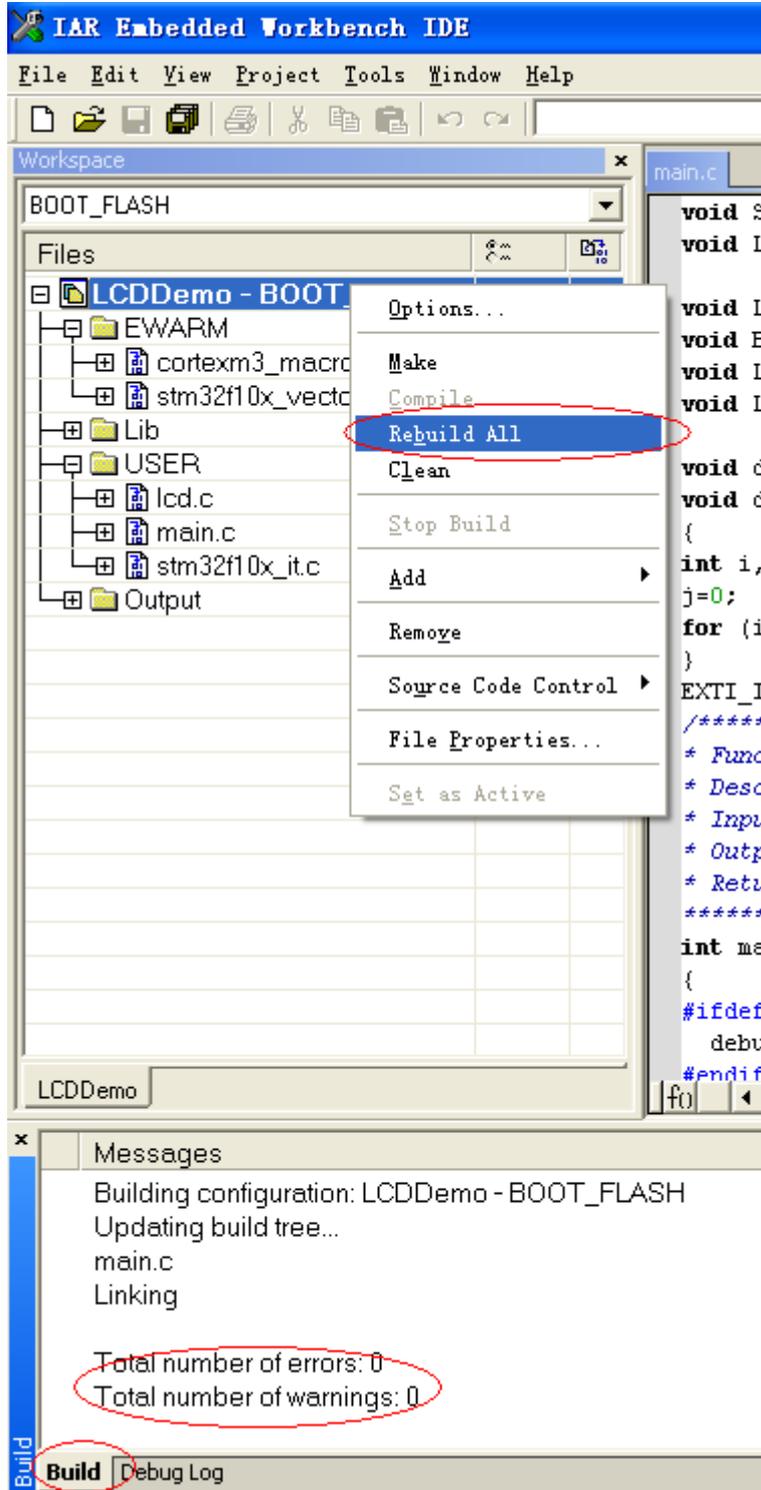
二 JLINK 仿真器相关设置

下面的设置可以用默认:



设置完 OPTIONS 点 OK 退出设置。

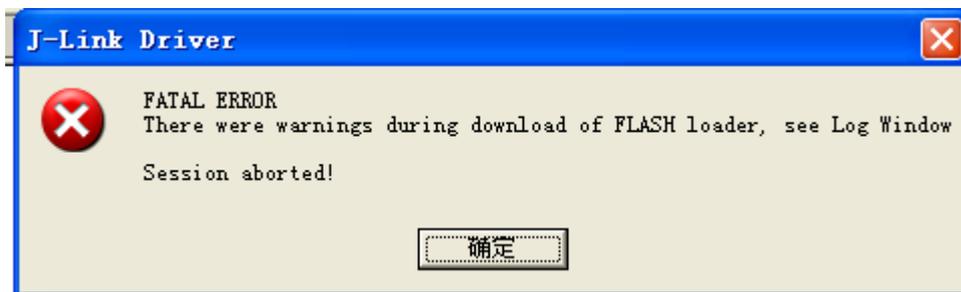
重新编译工程：



接下来进入仿真试试。

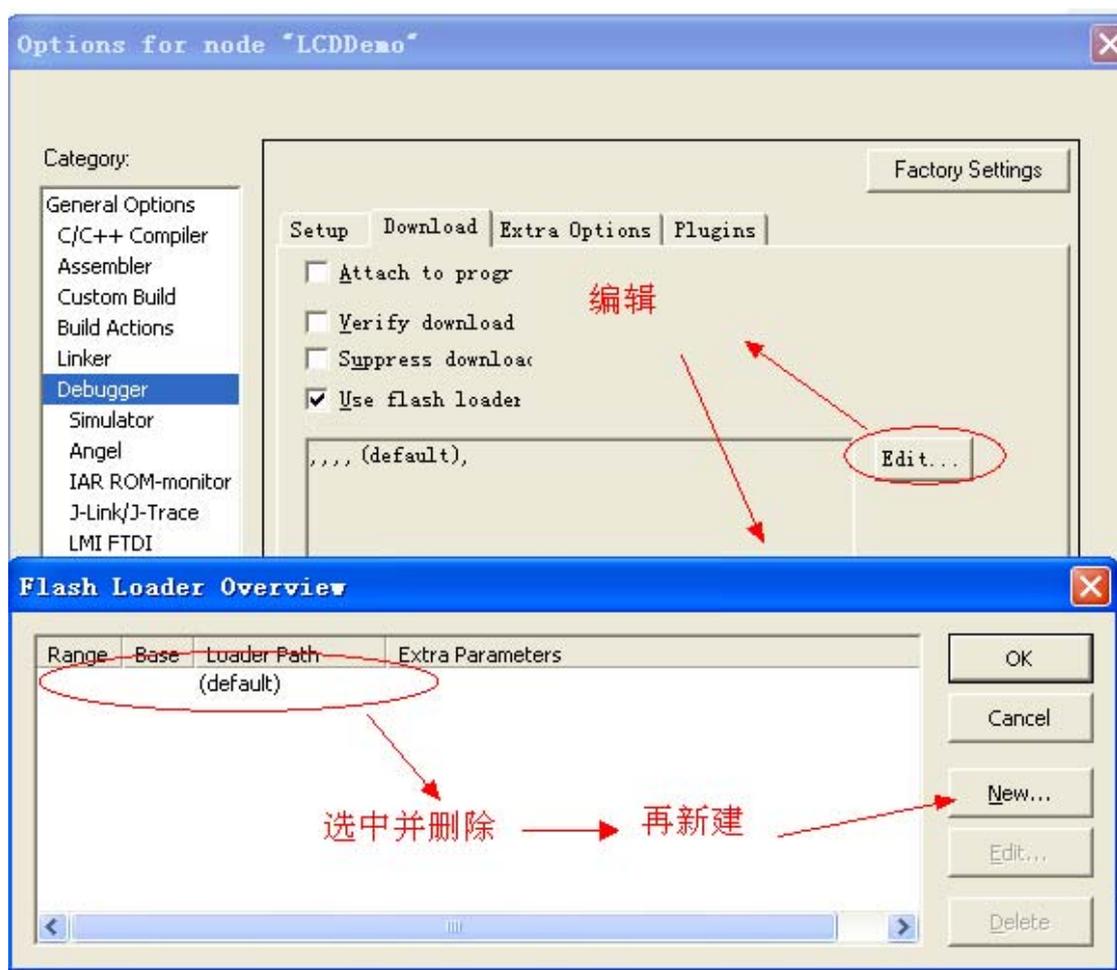


点击进入仿真

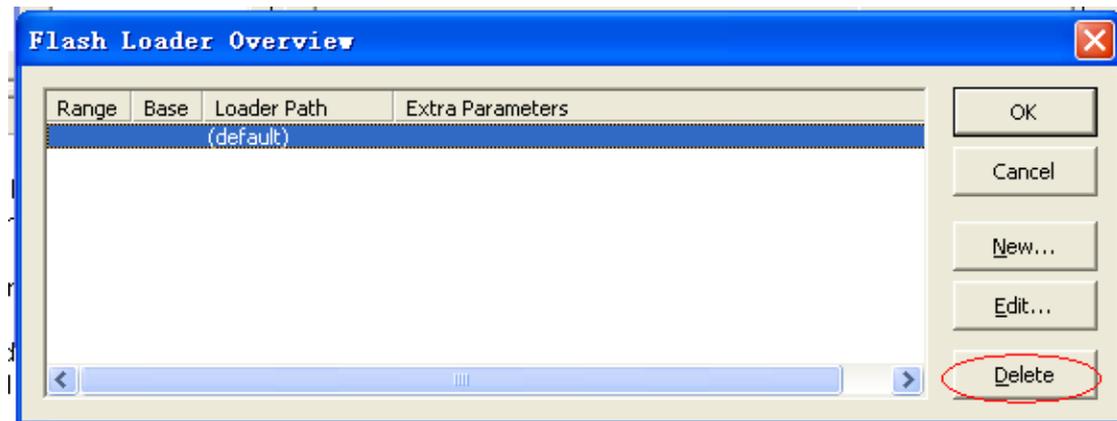


一般万利的板子用的是 STLINK II，以前的 FLASH LOADER 要重新设置，否则有可能下载不成功。

原因是 flash loader 的问题。

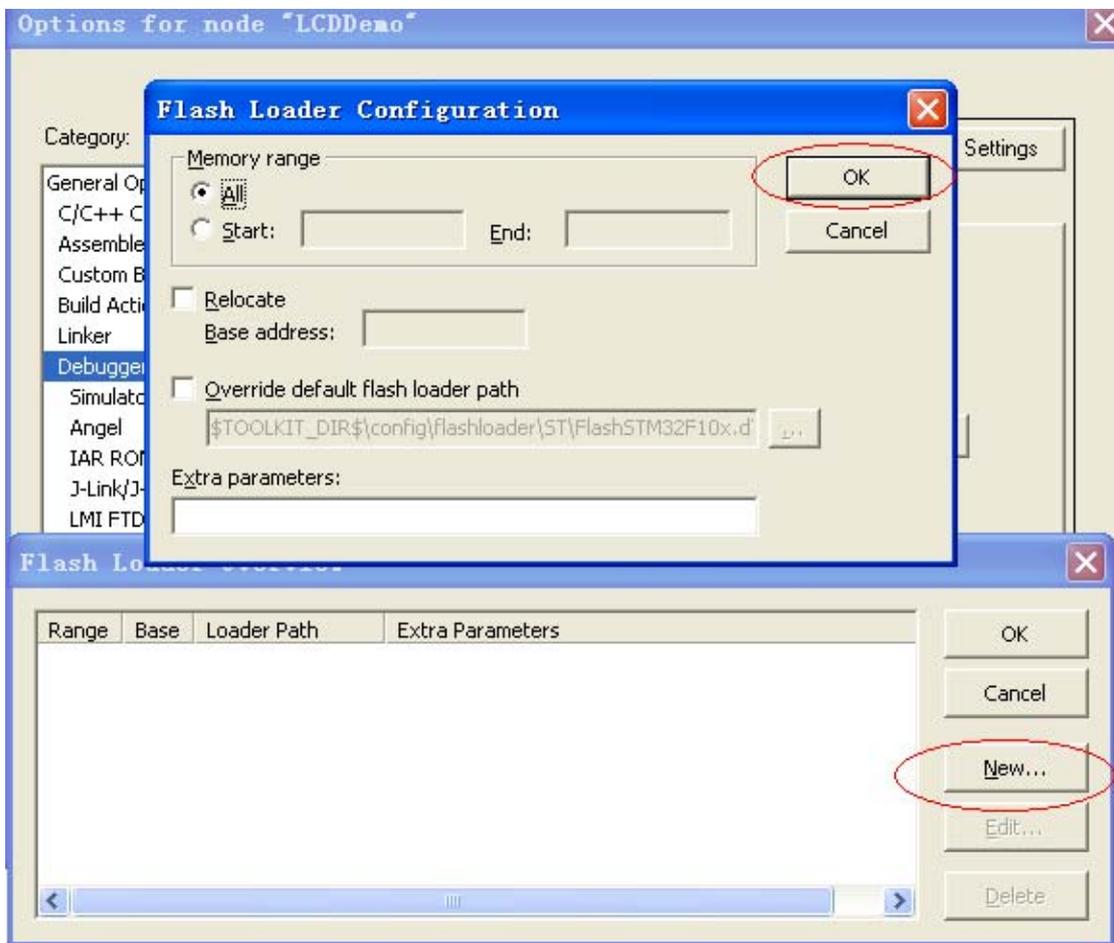


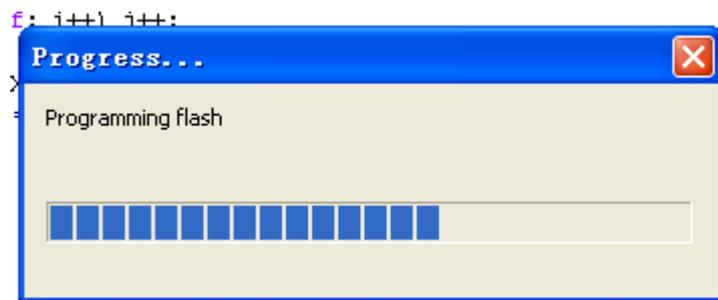
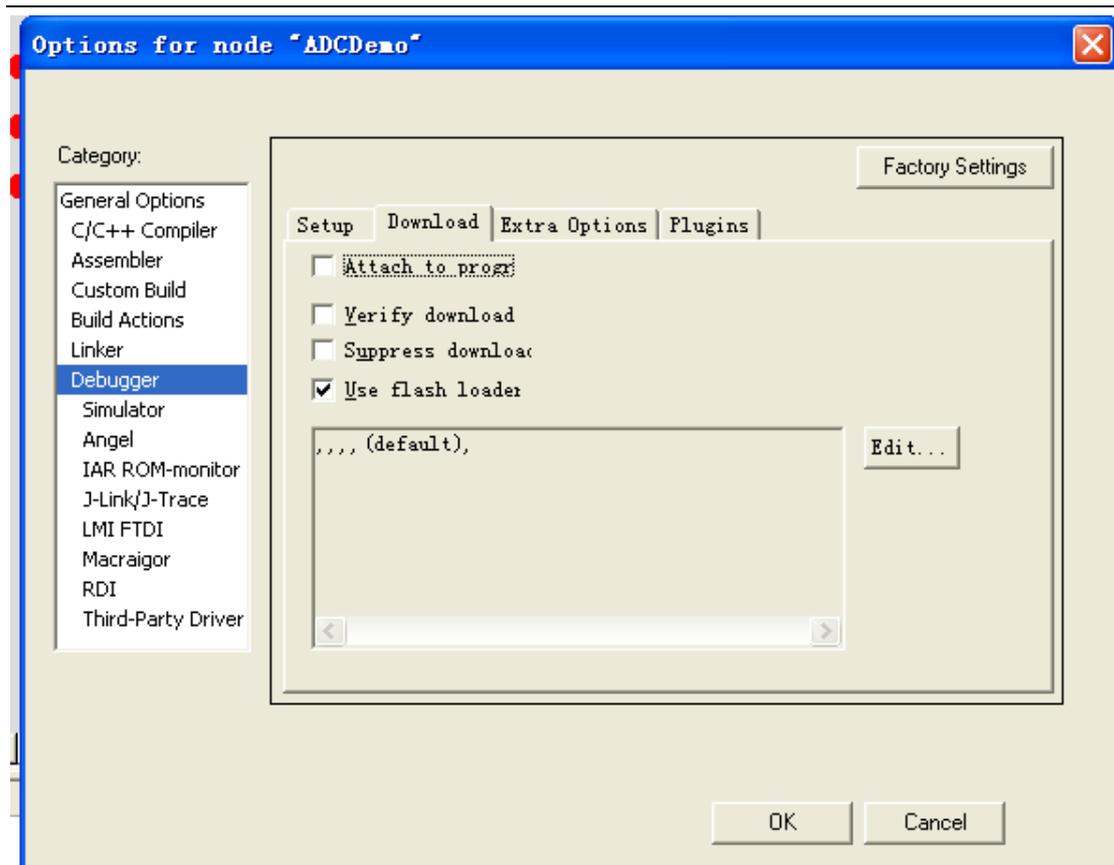
删除:



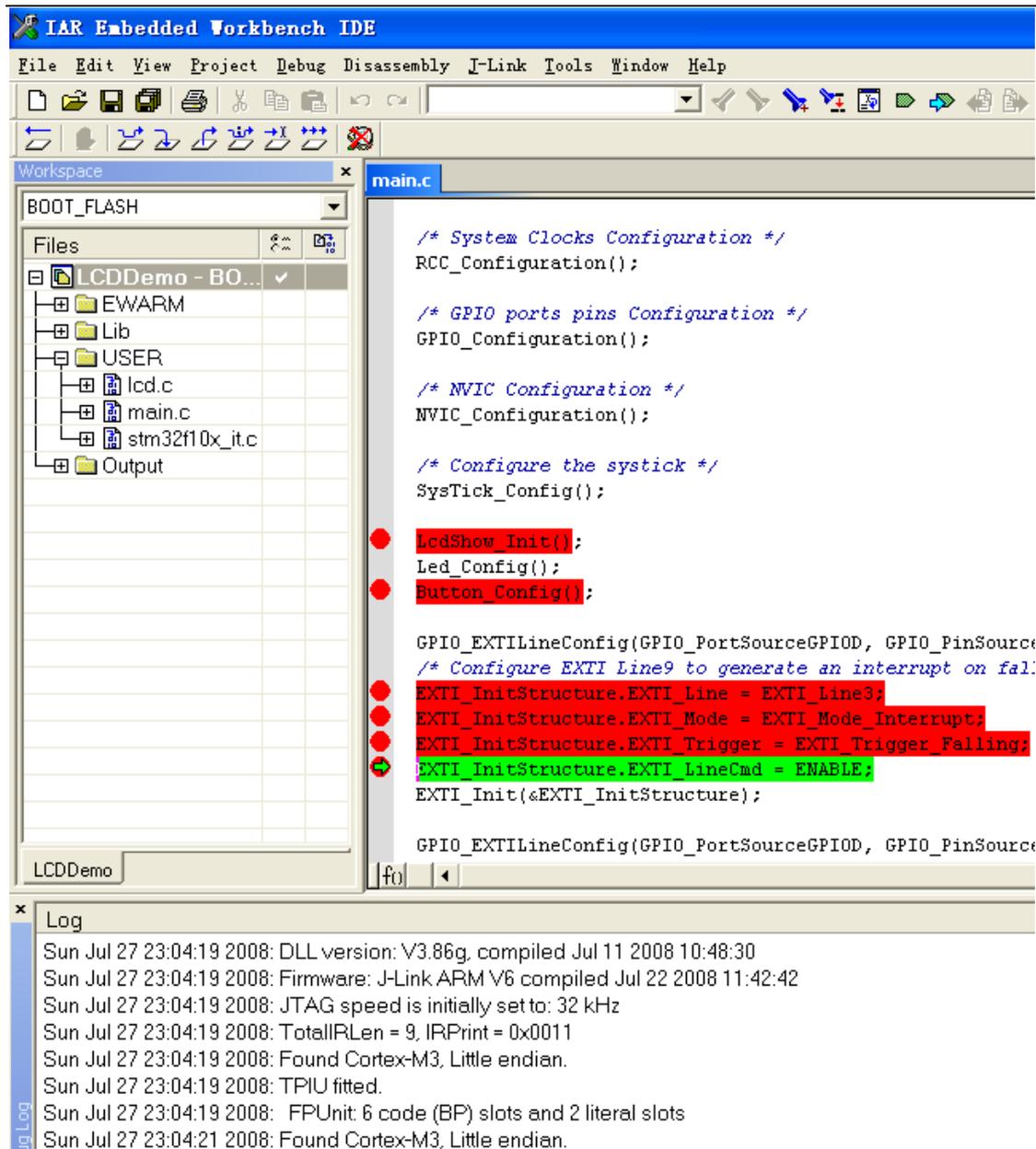


新建后，点 OK 退出即可。



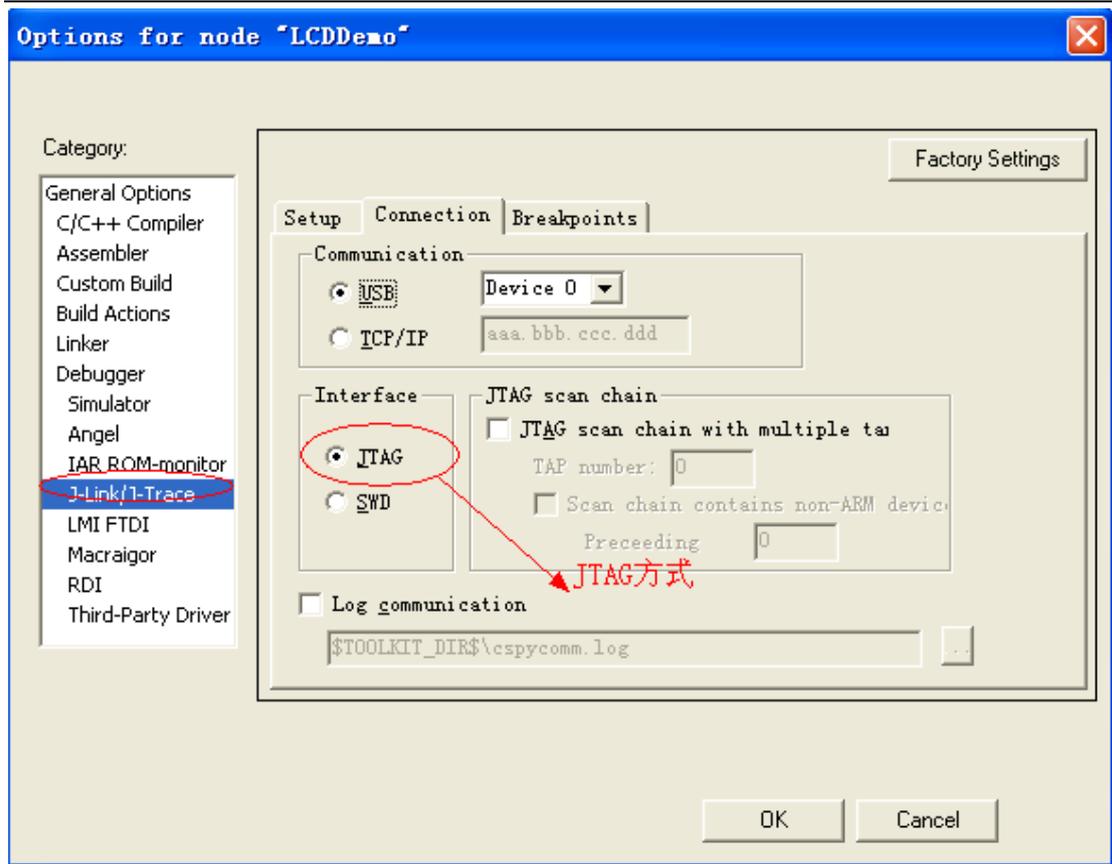


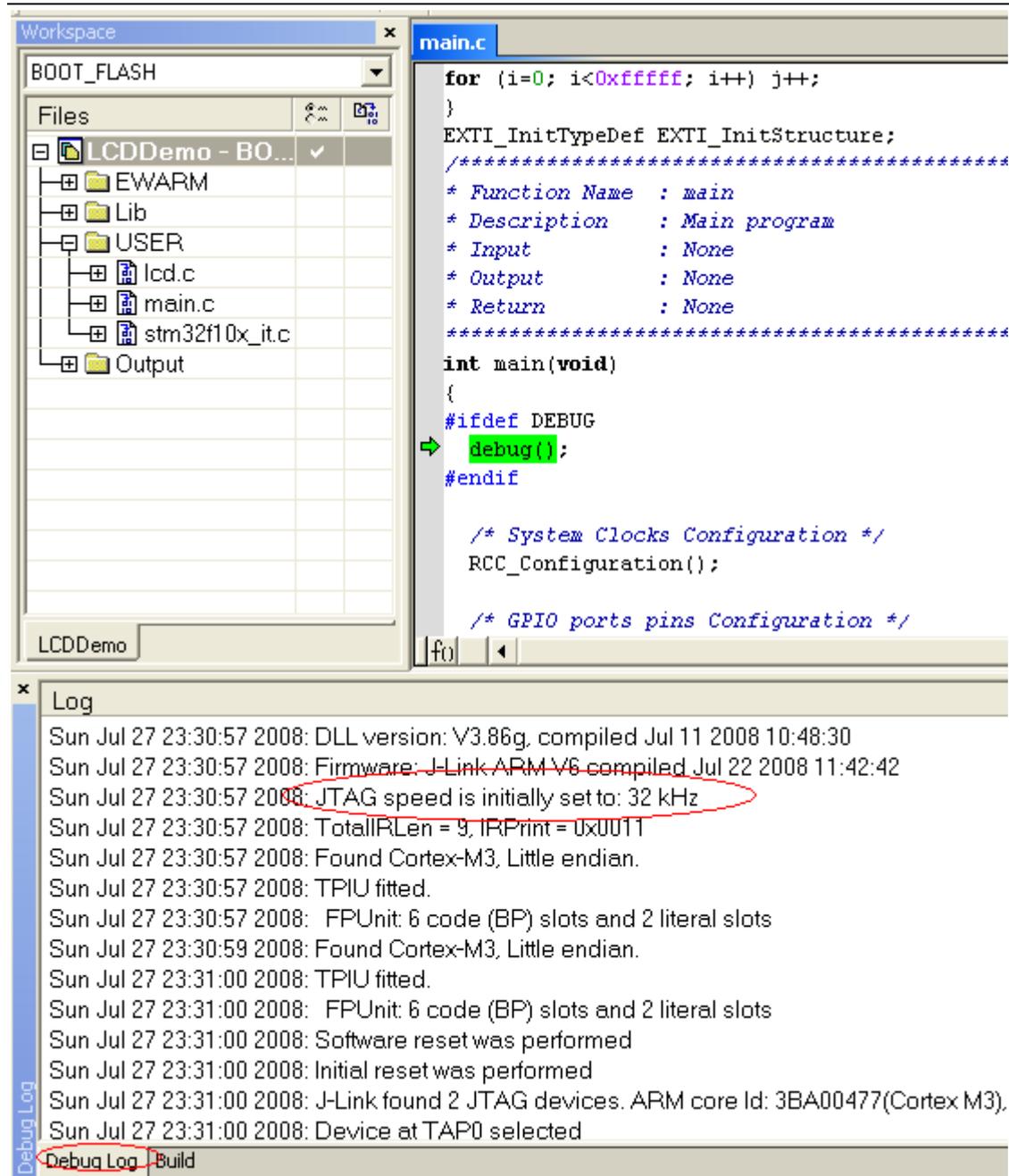
进入仿真器设了 5 个断点分别全速运行到断点处。
注：CORTEX M3 只支持 6 个硬件断点，



三 JTAG/SWD 两种方式的调试

JTAG 方式:





The screenshot shows an IDE interface with three main components:

- Workspace:** A file explorer on the left showing a project named "LCDDemo - BO...". The file structure includes folders for "EWARM", "Lib", "USER", and "Output". Under "USER", there are files "lcd.c", "main.c", and "stm32f10x_it.c".
- main.c:** A C source file editor showing the following code:


```

                for (i=0; i<0xffff; i++) j++;
            }
            EXTI_InitTypeDef EXTI_InitStructure;
            /*****
            * Function Name   : main
            * Description    : Main program
            * Input          : None
            * Output         : None
            * Return         : None
            *****/
            int main(void)
            {
            #ifdef DEBUG
            →  debug();
            #endif

            /* System Clocks Configuration */
            RCC_Configuration();

            /* GPIO ports pins Configuration */
            
```

 A green arrow points to the `debug();` line.
- Log:** A debug log window at the bottom showing the following messages:


```

                Sun Jul 27 23:30:57 2008: DLL version: V3.86g, compiled Jul 11 2008 10:48:30
                Sun Jul 27 23:30:57 2008: Firmware: JLink ARM V6 compiled Jul 22 2008 11:42:42
                Sun Jul 27 23:30:57 2008: JTAG speed is initially set to: 32 kHz
                Sun Jul 27 23:30:57 2008: TotalIRLen = 9, IRPrint = 0x0011
                Sun Jul 27 23:30:57 2008: Found Cortex-M3, Little endian.
                Sun Jul 27 23:30:57 2008: TPIU fitted.
                Sun Jul 27 23:30:57 2008: FPUUnit: 6 code (BP) slots and 2 literal slots
                Sun Jul 27 23:30:59 2008: Found Cortex-M3, Little endian.
                Sun Jul 27 23:31:00 2008: TPIU fitted.
                Sun Jul 27 23:31:00 2008: FPUUnit: 6 code (BP) slots and 2 literal slots
                Sun Jul 27 23:31:00 2008: Software reset was performed
                Sun Jul 27 23:31:00 2008: Initial reset was performed
                Sun Jul 27 23:31:00 2008: J-Link found 2 JTAG devices. ARM core Id: 3BA00477(Cortex M3).
                Sun Jul 27 23:31:00 2008: Device at TAP0 selected
            
```

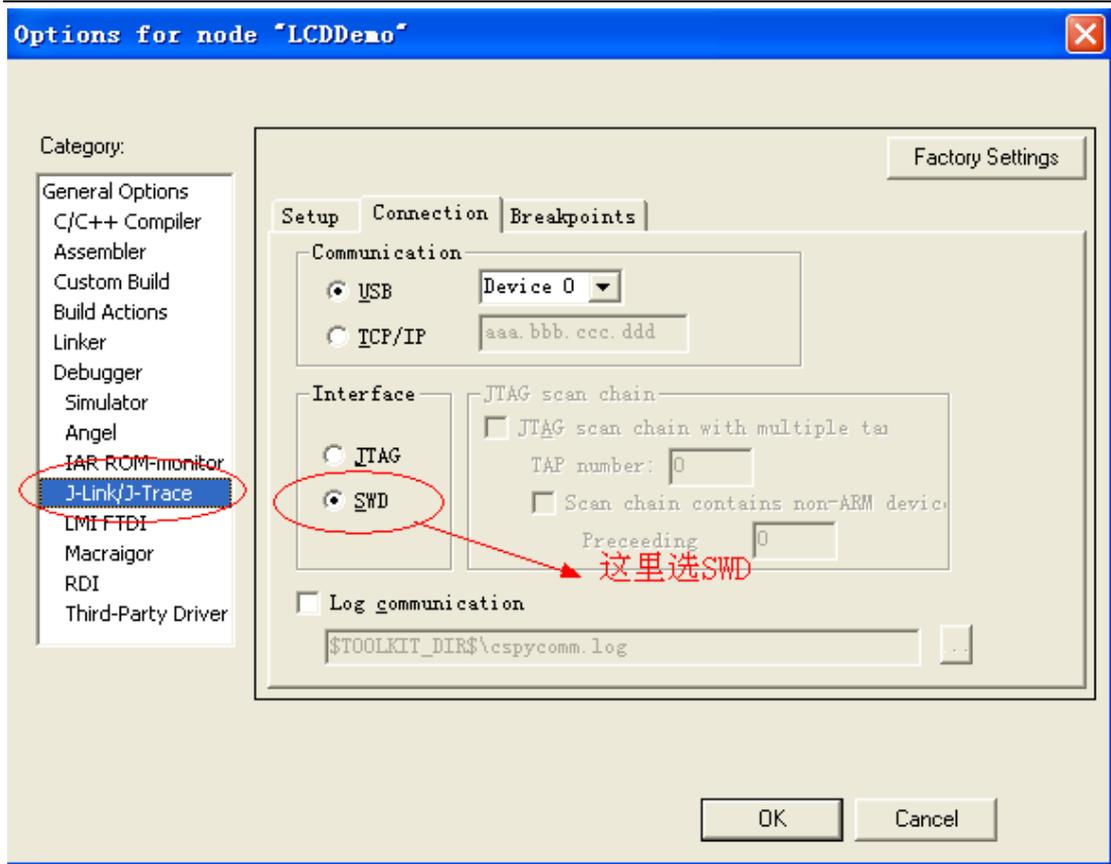
 The log window has a "Debug Log" tab selected and a "Build" button at the bottom.

用 SWD 方式调试 STM32

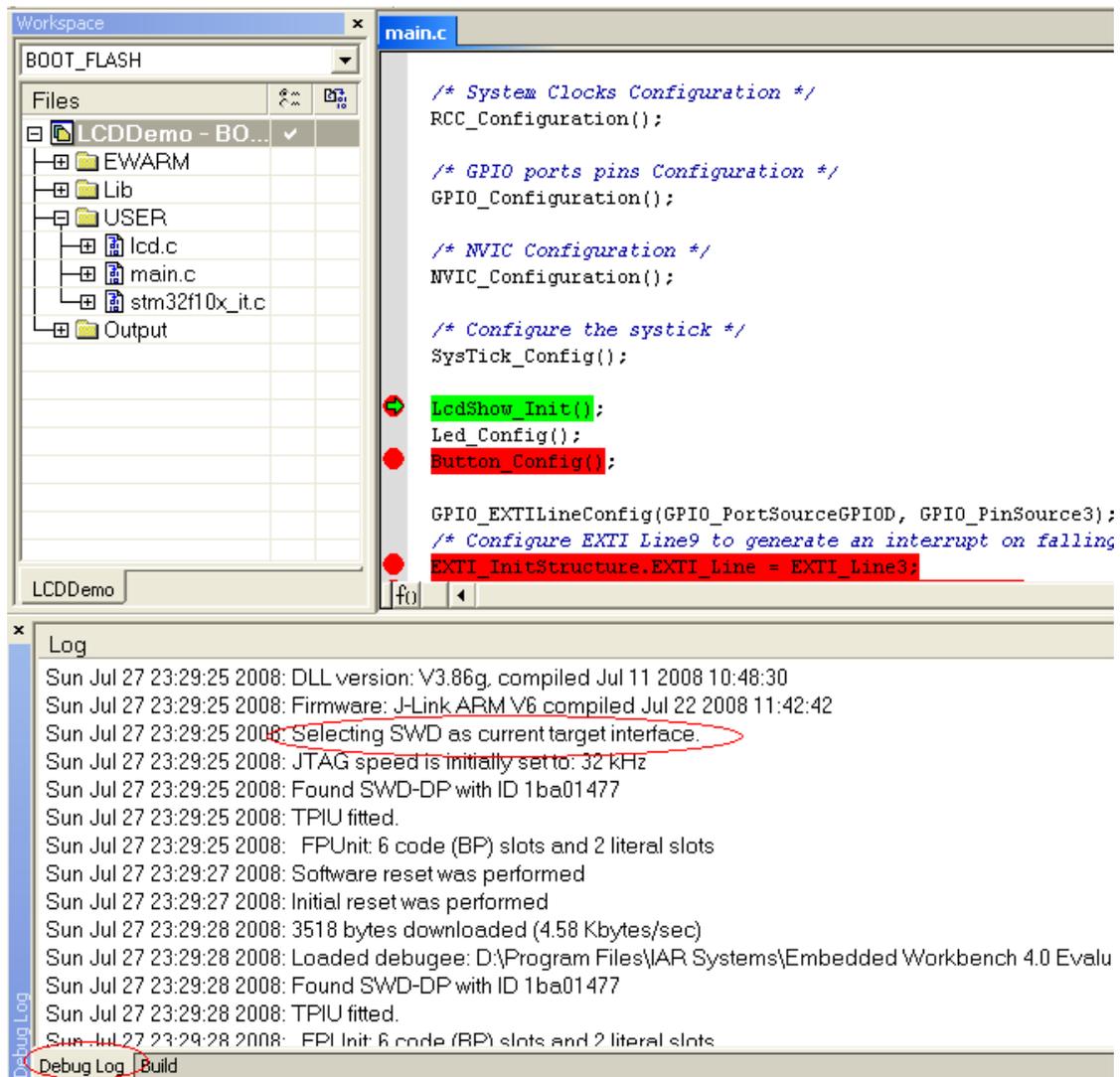
设置 SWD 方式

Project->options ->J-Link/J-Trace->connection->interface

中选择 SWD。



设置后进入仿真在 Debug log 中可以看到调试信息:



The screenshot displays an IDE workspace for a project named 'LCDDemo - BO...'. The file tree on the left shows folders for 'EWARM', 'Lib', 'USER', and 'Output', with files 'lcd.c', 'main.c', and 'stm32f10x_it.c' under the 'USER' folder. The main editor window shows the content of 'main.c', which includes system configuration functions like 'RCC_Configuration()', 'GPIO_Configuration()', 'NVIC_Configuration()', and 'SysTick_Config()'. It also features 'LcdShow_Init();', 'Led_Config();', and 'Button_Config();'. A red arrow points to 'LcdShow_Init();' and a red dot is next to 'Button_Config();'. The bottom panel shows a 'Log' window with system messages, including 'Selecting SWD as current target interface.' circled in red.

注：有问题大家可以到www.mcu123.net/bbs 讨论，指正。谢谢。

调试 CORTEX-M3 系列的芯片推荐使用的开发工具有：

IAR 环境： J-LINK 首选。

KEIL RVMDK 环境： ULINK2 首选。