



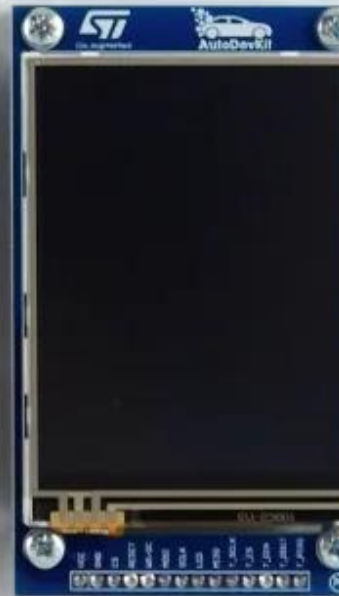
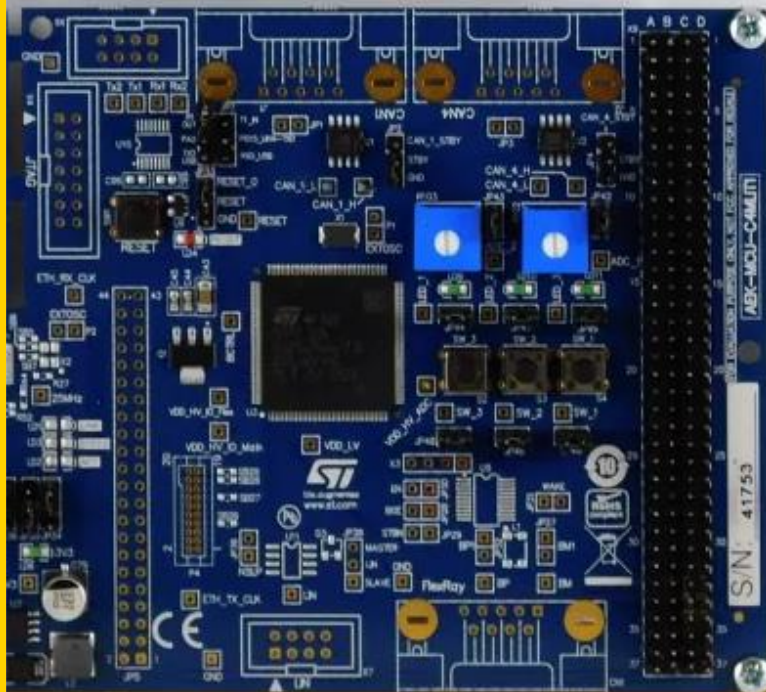
life.augmented



IntegratedSter



Disconnect
Speaker



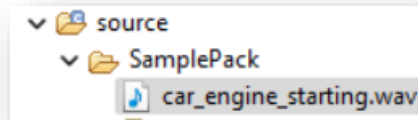
AVAS: how to load an audio file with OpenOCD and AEK-MCU-SPC5LNK

S. Romeo – Appl. engineer & FW dev.



AVAS – how to load an audio file – OpenOCD and AEK-MCU-SPC5LNK

1) Add the WAV file to the source folder :



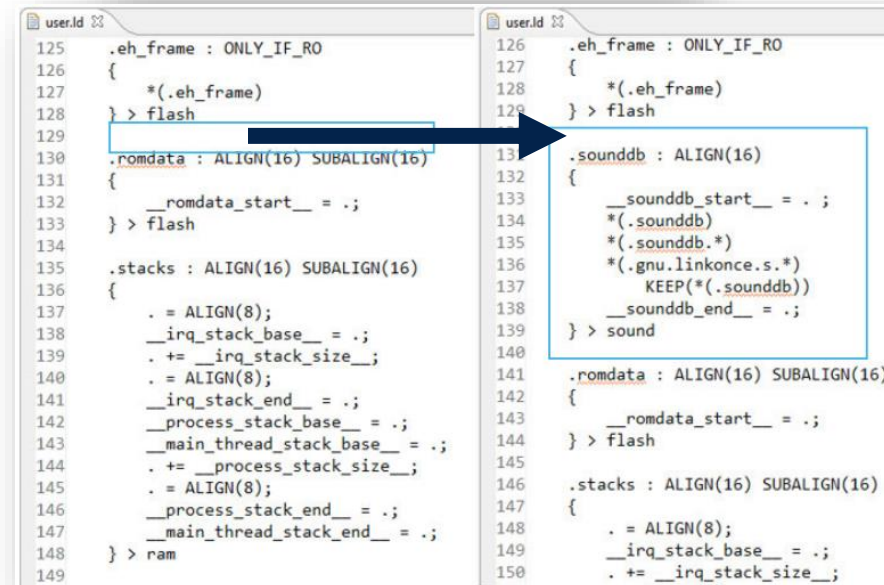
2) Copy the `application.ld` file and rename it `user_<compiler>.ld`
(Based on the compiler you are using)

Free GCC → `user_freegcc.ld`.
Green Hills → `user_ghs.ld`.
Hitech → `user_hightec.ld`.

3) Open the `.ld` file and add the “sound” section as showed:
(ensure that the `.wav` file added into `SamplePack` folder
is smaller than 768Kb)

```
MEMORY
{
  dataflash : org = 0x00800000, len = 128k
  flash     : org = 0x00FC0000, len = 256k
  sound     : org = 0x01000000, len = 768k
  ram      : org = 0x400A8000, len = 96k
}
```

4) Add the “.sounddb” section as showed:



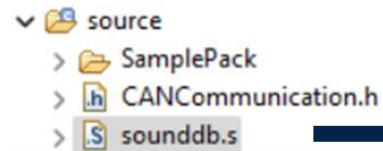
```
user.ld 125 .eh_frame : ONLY_IF_RO
user.ld 126 {
user.ld 127 {
user.ld 128 {
user.ld 129 } > flash
user.ld 130 .romdata : ALIGN(16) SUBALIGN(16)
user.ld 131 {
user.ld 132 {
user.ld 133 {
user.ld 134 {
user.ld 135 .stacks : ALIGN(16) SUBALIGN(16)
user.ld 136 {
user.ld 137 {
user.ld 138 {
user.ld 139 {
user.ld 140 {
user.ld 141 {
user.ld 142 {
user.ld 143 {
user.ld 144 {
user.ld 145 {
user.ld 146 {
user.ld 147 {
user.ld 148 {
user.ld 149 {
user.ld 149 } > ram

user.ld 126 .eh_frame : ONLY_IF_RO
user.ld 127 {
user.ld 128 {
user.ld 129 } > flash
user.ld 130 .sounddb : ALIGN(16)
user.ld 131 {
user.ld 132 {
user.ld 133 {
user.ld 134 {
user.ld 135 {
user.ld 136 {
user.ld 137 {
user.ld 138 {
user.ld 139 } > sound
user.ld 140 .romdata : ALIGN(16) SUBALIGN(16)
user.ld 141 {
user.ld 142 {
user.ld 143 {
user.ld 144 } > flash
user.ld 145 .stacks : ALIGN(16) SUBALIGN(16)
user.ld 146 {
user.ld 147 {
user.ld 148 {
user.ld 149 {
user.ld 150 {
user.ld 150 } > ram
```

(step 1-4 are described in [UM2719](#), page 31-33)

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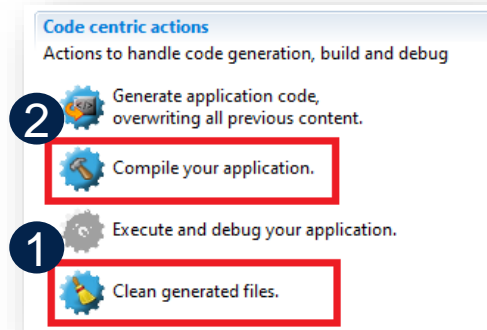
5) Open the `sounddb.s` file and add the `.wav` file path as showed:



```
.section .sounddb, "a"
    .align 2

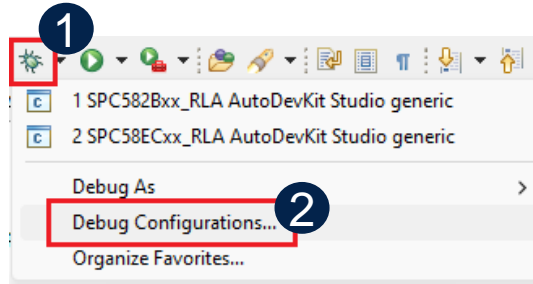
    .global engine_start1
engine_start1:
    .incbin "source/SamplePack/car_engine_starting.wav"
    .global engine_end1
engine_end1:
```

6) Clean and then compile:



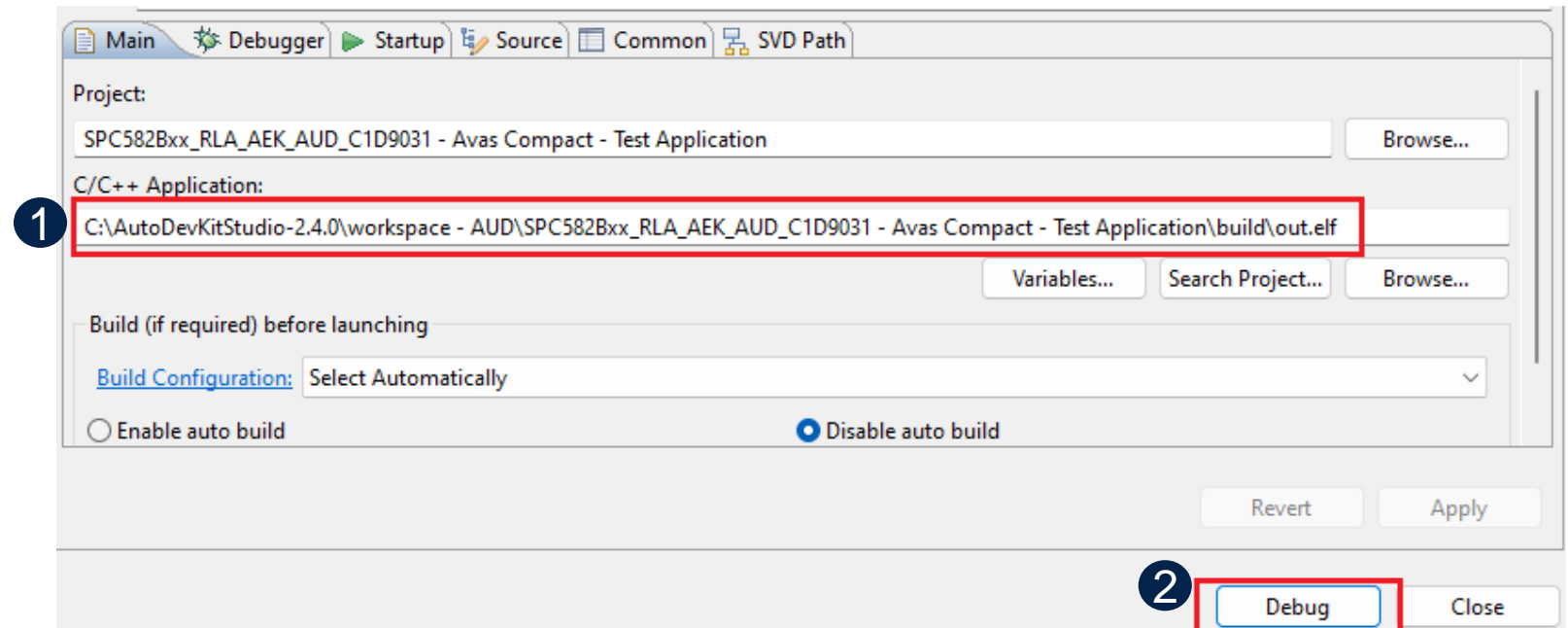
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7) Click on the debug



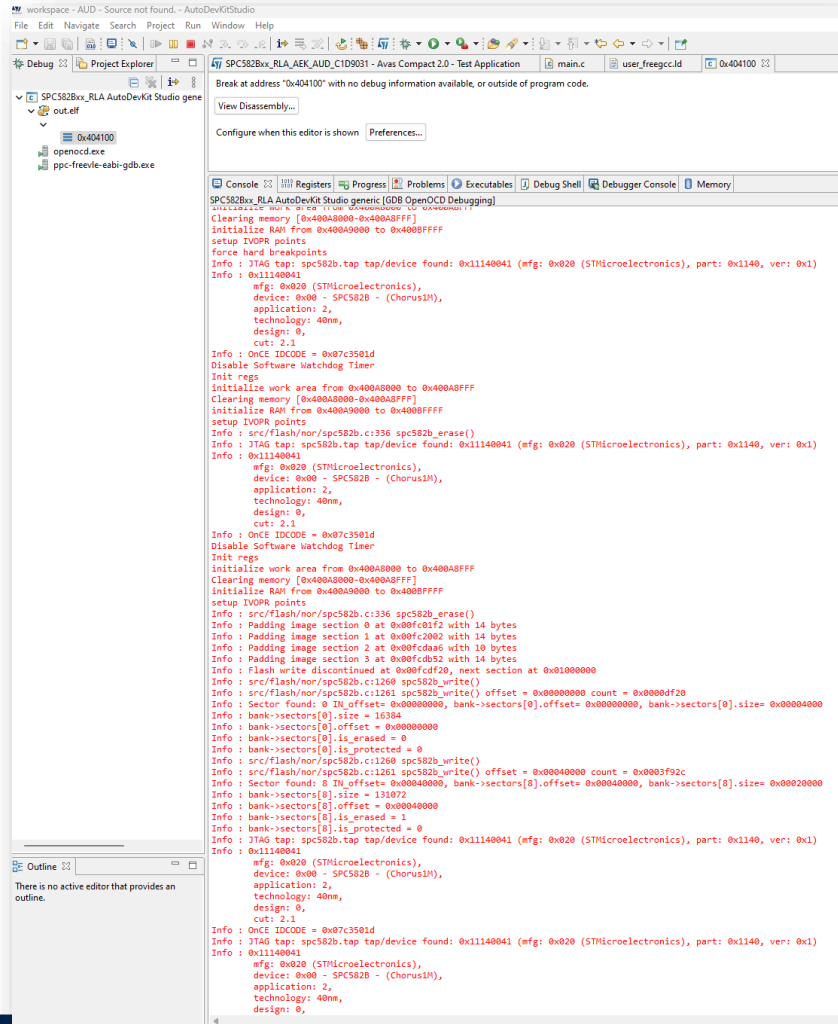
8) Browse the .elf file corresponding to your application and click on “Debug” button:

(for more information regarding how to configure your debugger refer to the [UM3303](#), page 10)

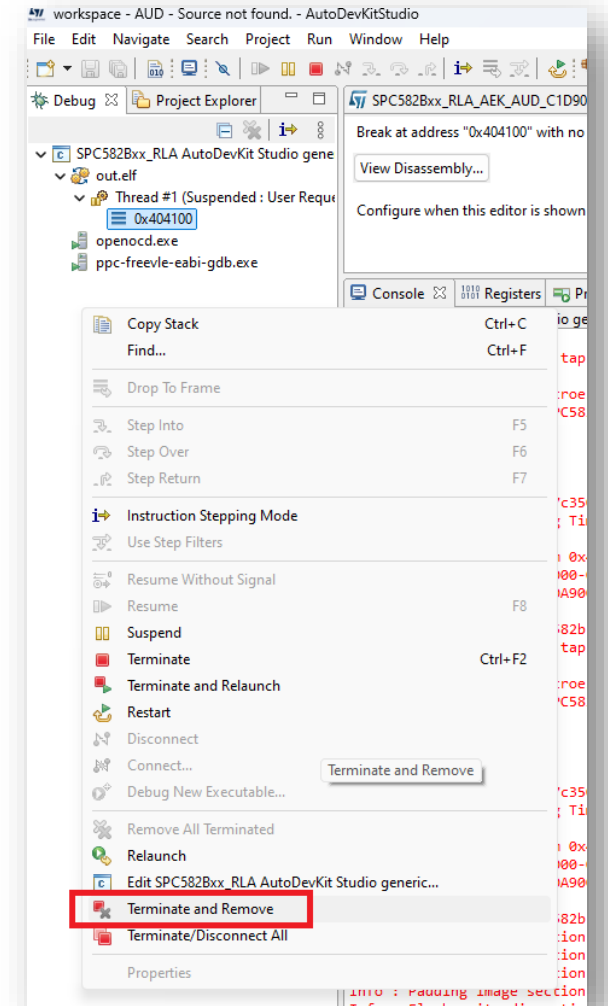


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9) After downloading the code the following screen will appear:



10) Right click on the “Debug” Window and select “Terminate and Remove”:



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11) click on the ST icon to return to the development environment:

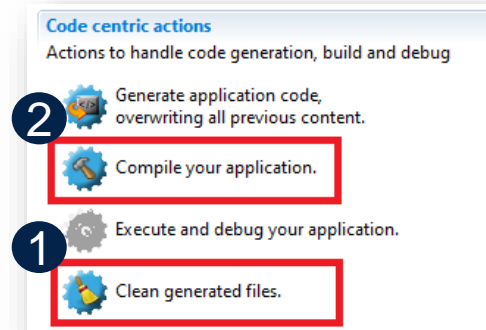


12) Open sounddb.s and comment the included row:

```
.section .sounddb, "a"
    .align 2

    .global engine_start1
engine_start1:
    // .incbin "source/SamplePack/car_engine_starting.wav"
    .global engine_end1
engine_end1:
```

13) Clean and compile



12) Click on debug icon  and repeat the “debug configuration” procedure.

Now it is possible to debug your code with the audio file loaded using OpenOCD+SPC5LNKA