# AT85RFD-07 Getting Started

**User Guide**

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# Section 1

# Introduction

The AT85RFD-07 Starter Kit is designed to give designers a quick start to develop code on the AT85C51SND3Bx as well as for prototyping and testing of new designs.

## 1.1 Atmel Registration

In order to keep posted on any new information concerning the AT85C51SND3Bx products (new firmware delivery, new tool version, …) register at the following address: http://support.norway.atmel.com/bin/customer

As soon as you are registered, edit your preferences and 'check' the 8051 radio button in the e-mail notification section.

# Section 2

# Package Download

The Nand Flash memory of the AT85RFD-07 is delivered pre-programmed with the demo firmware and AT85C51SND3B documentation. Since the board is manufactured in large quantities, the package may be out of date. It is strongly recommended to download the latest version of the AT85C51SND3B package from our web site.

The following paragraphs explain how to retrieve the package from the web site or from the Nand Flash memory.

## 2.1 Web Site download

1. Connect to:
   https://www.atmel-nantes.fr/.mp3/at85c51snd3b
   User Name is: **atmelmp3**
   Password is: **snd3pass**
2. Copy the at85c51snd3b.zip file to your PC.
3. Unzip the package to your local hard drive.

## 2.2 Nand Flash Download

1. Connect the USB cable to the player and to a PC.

The demonstration firmware starts and enters the mass-storage application:



A new USB device is installed and a removable disk is mounted in the explorer:



***Note:*** The disk letter may differ.

The AT85RFD-07 disk corresponds to the on-board Nand Flash memory.

2. Open the AT85RFD-07 disk, its content is as follows:

| Name ▲ | Size | Type |
|---|---|---|
| 📁 Atmel | | File Folder |
| 📁 Update | | File Folder |
| 🔊 Sample.mp3 | 1,252 KB | MP3 Format Sound |
| 🔊 Sample.wma | 9,501 KB | Windows Media Audio file |

The Atmel directory contains the AT85C51SND3B package.
The Update directory is the location where to place the update package for the automatic firmware upgrade feature (see firmware user's guide).

3. Copy the Atmel directory to your local hard drive.

## 2.3 Package Content

The package content is the following:

```
📁 Atmel
  📁 at85c51snd3b
    📁 at85dvk-07           ...... Development kit package
      📁 Doc                ............. Dev-kit user's guides
      📁 Firmware           ............. Link to dev-kit firmware
      📁 Hardware           ............. Hardware package
    📁 at85rfd-07           ...... Reference design package
      📁 Doc                ............. Ref-dsn user's guides
      📁 Firmware           ............. Link to ref-dsn firmware
      📁 Hardware           ............. Hardware package
    📁 Datasheet            ...... Link to datasheet on Atmel web site
    📁 Firmware             ...... Firmware packages
      📁 Doc                ............. Firmware user's guide & application notes
    📁 Tools                ...... Development tools
      📁 Font Generator     ............. Atmel font generator
      📁 In System Programming  ............. Atmel in system programming
      📁 On Chip Debug      ............. Atmel on-chip debug
        📁 Dongle           .....................OCD dongle recovery tool
        📁 Flip             .....................Flip tool for dongle upgrade
        📁 Keil             .....................Keil debug drivers
      📁 Screen Generator   ............. Atmel screen generator
      📁 UMS-Drivers        ............. USB mass-storage drivers (Win98, Linux)
      📁 USB Bench          ............. Freeware USB bench32 tool
    📁 Training             ...... Training material
      📁 Hands-On           ............. Hands-on tutorial
      📁 Presentations      ............. Whole AT85C51SND3Bx presentations
```

![ATMEL logo]

# Section 3

# Tools Install

**3.1    Requirement**     Firmware has been developed and debugged using the Keil® µvision IDE. It is a project oriented fully integrated environment including debugger and advanced compiling and linking options like code banking.

In order to start development with AT85C51SND3B, it is required that the Keil environment is installed on the PC.

**3.2    In System Programming**     The in system programming install consists of:

■ Atmel MusicPlayerIsp Tool

■ Sun™ Java Run time Environment if necessary

**3.2.1    MusicPlayerIsp**     To install the Atmel MusicPlayerIsp, go to "Atmel\at85c51snd3b\Tools\In System Programming" directory and execute music-player-isp-X_Y_Z.exe; where X_Y_Z is the tool revision number.

■ Press Next to proceed
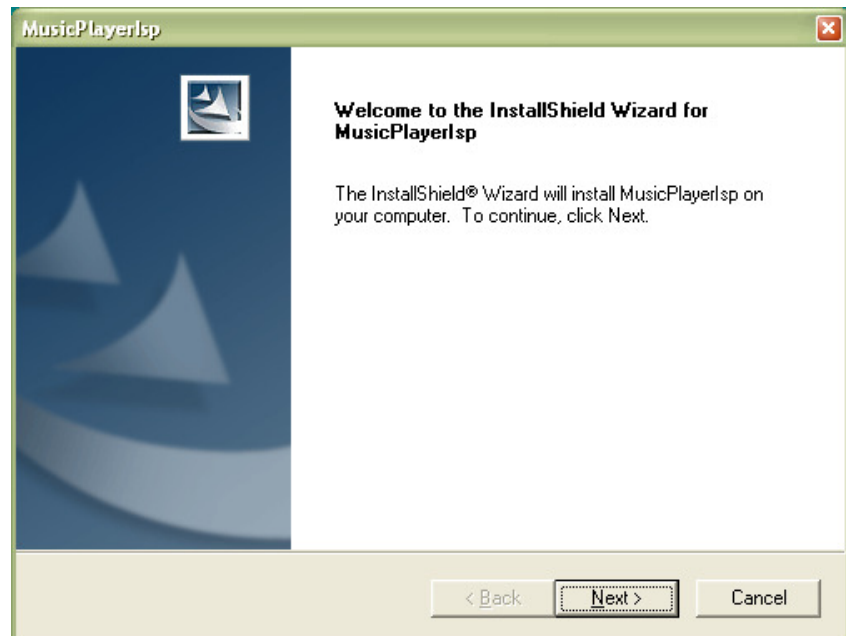
■ Read and accept the licence agreement
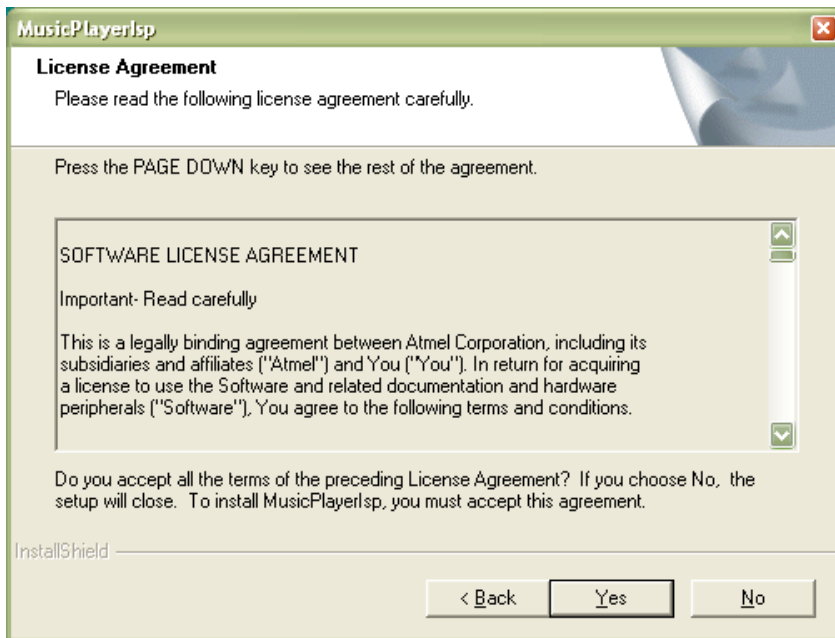


■ Select the installation directory (use the proposed default)
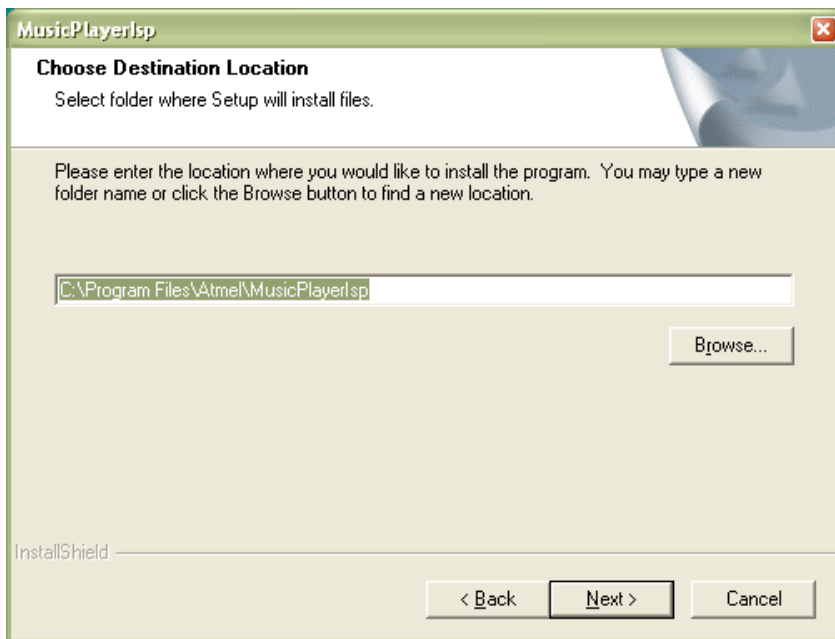
■ Validate the information
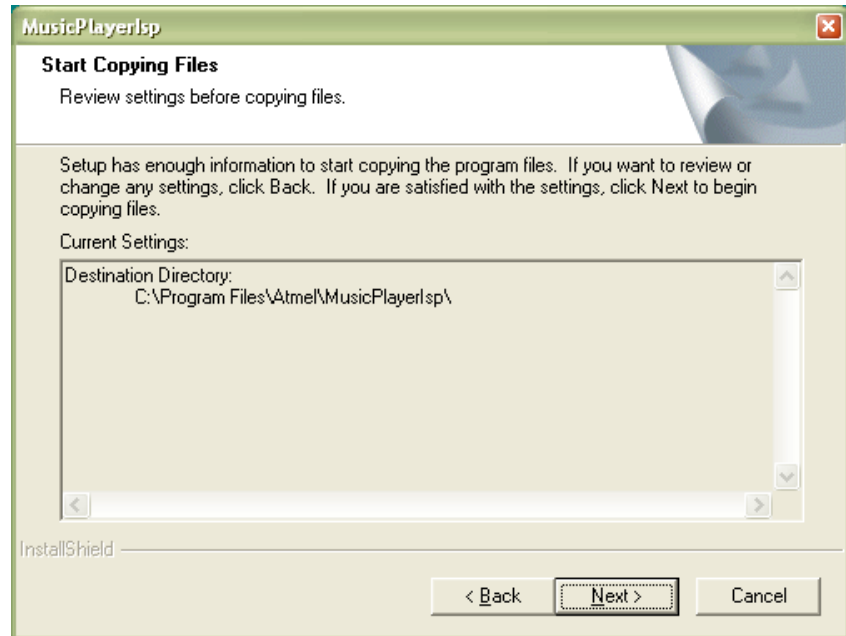


■ The installation starts…
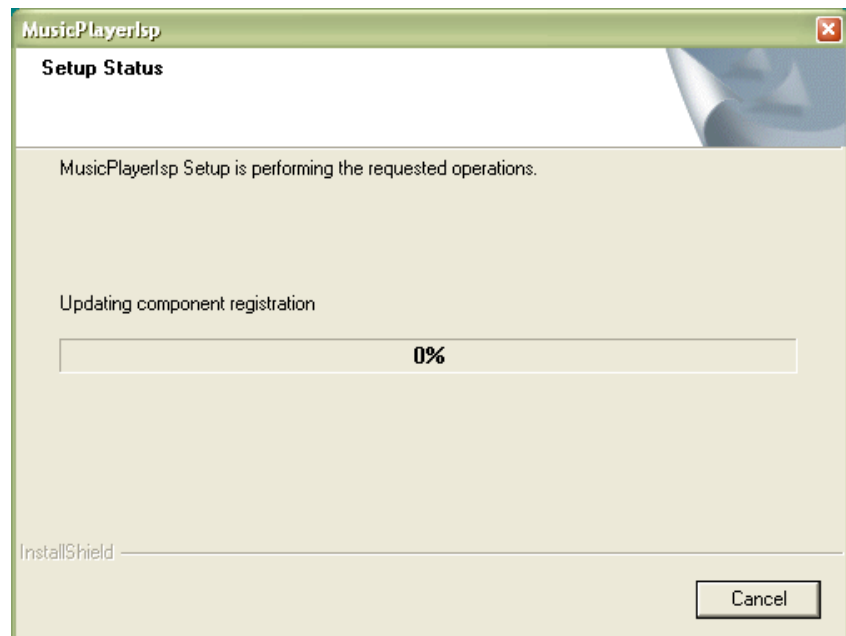
■ Do not restart your computer, exit the current session and log-in again
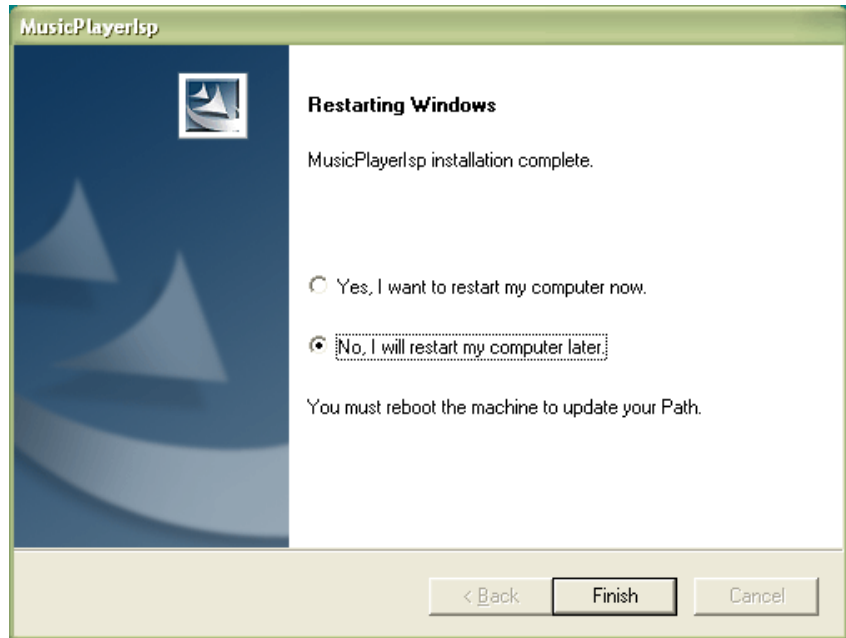


■ Start MusicPlayerIsp to check Java runtime installation

■ If the following pop-up appears, proceed with the SUN™ JRE installation
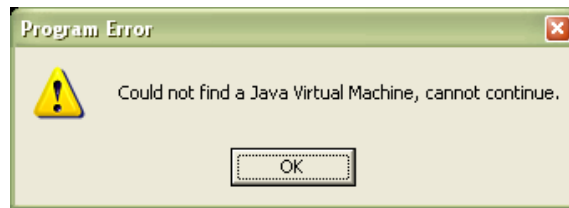


**3.2.2  SUN JRE**     To install the JRE, go to "Atmel\at85c51snd3b\Tools\In System Programming" directory and click on the "Sun JRE download" URL shortcut.

Follow the install procedure of the SUN JRE.

**3.3  USB Devices Installation**     In order to complete the installation, the AT85C51SND3B ISP USB device must be installed.

**3.3.1  AT85C51SND3B ISP USB device**     A USB removable mass-storage disk will be installed after plug-in.

– Press the ISP button
– Plug the board to a PC using the USB cable

A new USB device is installed and one removable disk is mounted in the explorer:



*Note:*  The disk letter may differ.

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