

Amtery Programmable Attenuator

Software Panel Guide

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1. Overview

1.1. Scope

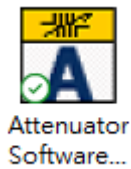
This guide is intended for introducing the behavior of Amtery programmable attenuator with USB interface and using Attenuator Software Panel to control it.

1.2. Getting started

- A. System requirement: Attenuator Software Panel supports Microsoft Windows 7/8/10/11.
- B. Installation: Download the Amtery attenuator software from Amtery web site and install it.
- C. Insert Amtery Attenuators with USB interface.

1.3. Launch the interactive panel

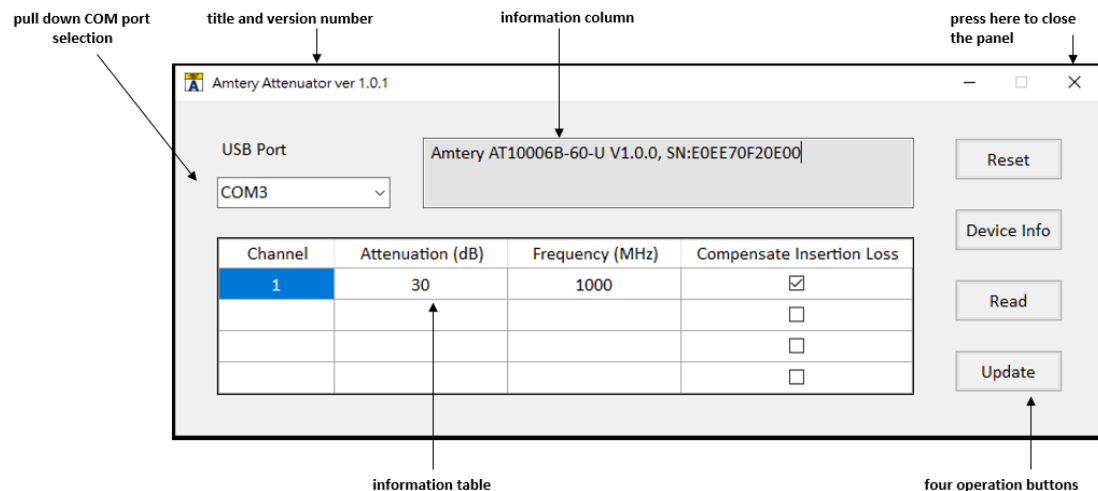
- A. Launch it from desktop. Double click "Attenuator Software Panel".



- B. Launch it from Windows start up program "Amtery Programmable Attenuator" -> "Attenuator Software Panel".

2. Panel Introduction

Attenuator Software Panel controls Amtery attenuators with USB interface without programming.



2.1. Pull down COM Port

Use the pull-down menu to select the attenuator that is connected to the PC. After selection, the panel connects the device and read the current setting and information. The current setting is shown in the panel information table below, while the device information is shown in the panel information column.

2.2. Panel Close

Press the "X" icon right up the window to close the panel and program.

2.3. Panel Information Column

The column in the upper side of the panel displays the information after pressing buttons.

2.4. Panel Information Table

The information table in the middle bottom of the panel is both for user-input and device-setting display. Input desired setting here before pressing "Update". After pressing "Update" or "Read", the device current setting is displayed here.

The table is divided by four columns: channel, attenuation (dB), frequency (MHz), and compensation insertion loss.

- A. Channel: Read-only column that displays the channel number.
- B. Attenuation (dB): Set desired attenuation and display current attenuation in dB.
- C. Frequency (MHz): Set and display compensation frequency in MHz. Though any positive numbers are valid input, only multiplier of 10MHz (ex: 2570MHz, 5020MHz) are valid compensation frequency points. If user inputs a value that exceeds device valid frequency,

the attenuator returns error message.

- D. Compensation: Enable/Disable compensation mode. For compensation mode, please refer section 3.

2.5. Panel Buttons

- A. Reset device: Reset the device.
- B. Device Info: Read the device information. The device information string is formatted as “Amtery” + “model name” + “firmware version” + “SN”.
- C. Read: Read the device status and displays in the table.
- D. Update: Write the desire setting (attenuation value, frequency, and compensation mode) into the device.

3. Attenuator Behavior

3.1. Compensation OFF

If the compensation is OFF, the attenuator disregards the insertion loss and just set the attenuation. The user will get “set attenuation + insertion loss”. All valid attenuation value is a multiple of the minimum attenuation step. Any attenuation other than multiples will be converted to the closest multiplier.

3.2. Compensation ON

If the compensation mode is ON, the attenuator reads the insertion loss in its memory, calculates the insufficient attenuation, and set the remaining attenuation automatically to fill the gap. The user will get “set attenuation”. (Please note the insertion loss increases with frequency, so the wanted frequency must be specified.) For example, a user sets 10 dB attenuation at 6 GHz, the attenuator will read the memory and get the insertion loss at 6 GHz, such as 4.5 dB. Then the attenuator will set the actual attenuation automatically to 5.5 dB to provide 10 dB attenuation totally.