# Ocean Optics USB4000 with *usb4java*

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## Introduction

The usb4java library[1] is used to communicate with a USB peripheral. It used to interact with an Ocean Optics Inc. USB4000 spectrometers.

This library was used to build a collection of R functions stored in ***playWith_usbjava.R*** file. The commands required to communicate with the spectrometer are detailed in the device technical manual[2].

## Functions in playWith_usb4java.R

### init_usb()

Initialize usb device:
1. load required library
2. init JVM
3. Set Java class paths
4. Define some objects
RETURN:
a list of 4 components:
1. context: a Java object of class org.usb4java.Context
2. dlist: a Java object of class org.usb4java.DeviceList
3. libusb: a Java object of class org.usb4java.LibUsb
4. bufutils: a Java object of class org.usb4java.BufferUtils

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[1]http://usb4java.org/
[2]USB4000-OEM-Data-Sheet.pdf stored in the **Doc** of the RSTudio project **OceanOptics_with_usb4java_in_R**.