How to fix Error 516: Unable to Write: Broken Pipe

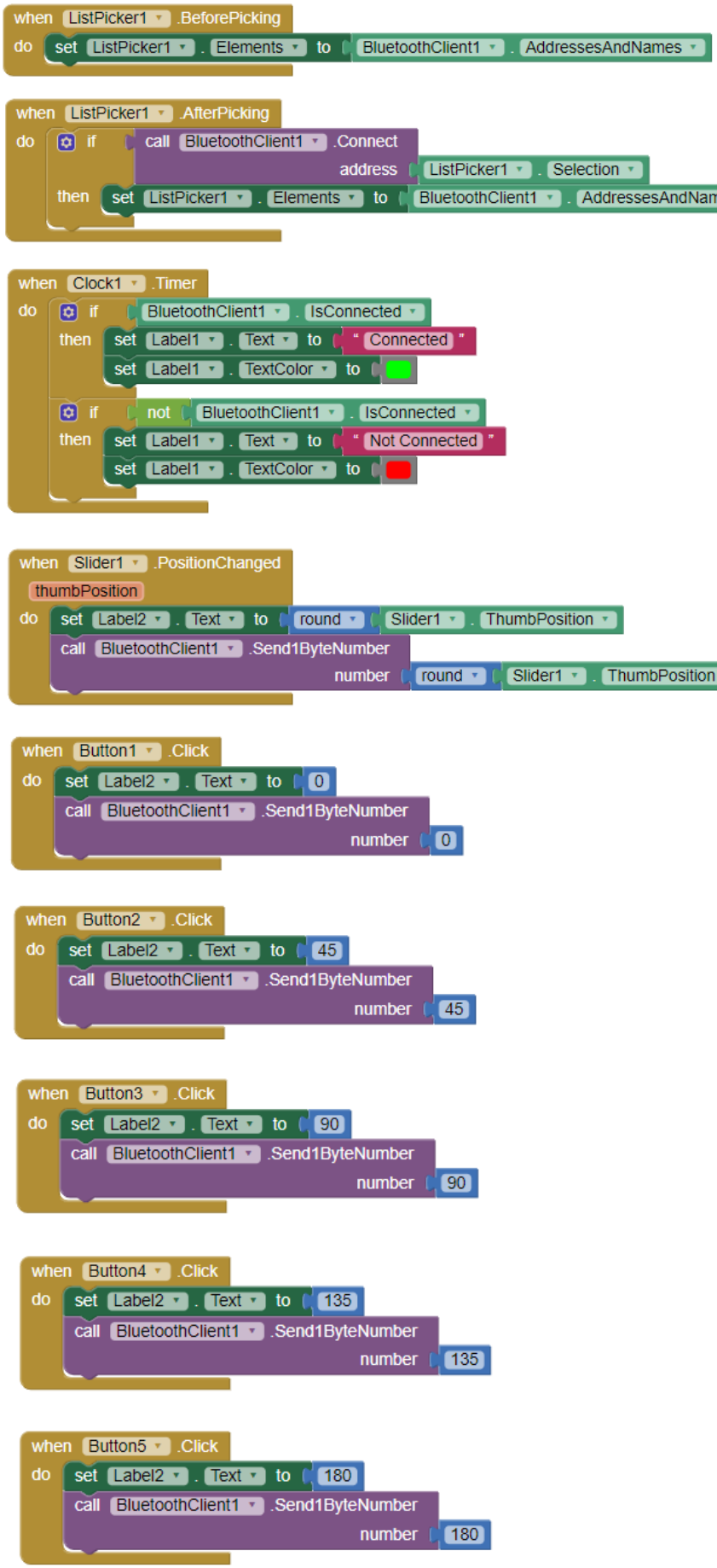
errors , **bluetooth** , **arduino** , **bug-or-problem**

NF_Hara #1 November 20, 2020, 6:52am

I'm working on a robotic arm project. But I want to try to connect one of the servo on the robotic arm via bluetooth HC-05. I found the method at **https://www.instructables.com/Arduino-How-to-Control-Servo-Motor-Via-Bluetooth-w/**

I've made an application at MIT according to the web. However, when I connect bluetooth via MIT App Inventor 2 on my android, I always get the message "Error 516: Unable to Write: Broken pipe". How to fix it? Please help me ☹

Is there something wrong with the blocks?


when ListPicker1 .BeforePicking
do set ListPicker1 . Elements to BluetoothClient1 . AddressesAndNames
when ListPicker1 .AfterPicking
do if call BluetoothClient1 .Connect
address ListPicker1 . Selection
then set ListPicker1 . Elements to BluetoothClient1 . AddressesAndNames
when Clock1 .Timer
do if BluetoothClient1 . IsConnected
then set Label1 . Text to " Connected "
set Label1 . TextColor to
if not BluetoothClient1 . IsConnected
then set Label1 . Text to " Not Connected "
set Label1 . TextColor to
when Slider1 .PositionChanged
thumbPosition
do set Label2 . Text to round Slider1 . ThumbPosition
call BluetoothClient1 .Send1ByteNumber
number round Slider1 . ThumbPosition
when Button1 .Click
do set Label2 . Text to 0
call BluetoothClient1 .Send1ByteNumber
number 0
when Button2 .Click
do set Label2 . Text to 45
call BluetoothClient1 .Send1ByteNumber
number 45
when Button3 .Click
do set Label2 . Text to 90
call BluetoothClient1 .Send1ByteNumber
number 90
when Button4 .Click
do set Label2 . Text to 135
call BluetoothClient1 .Send1ByteNumber
number 135
when Button5 .Click
do set Label2 . Text to 180
call BluetoothClient1 .Send1ByteNumber
number 180

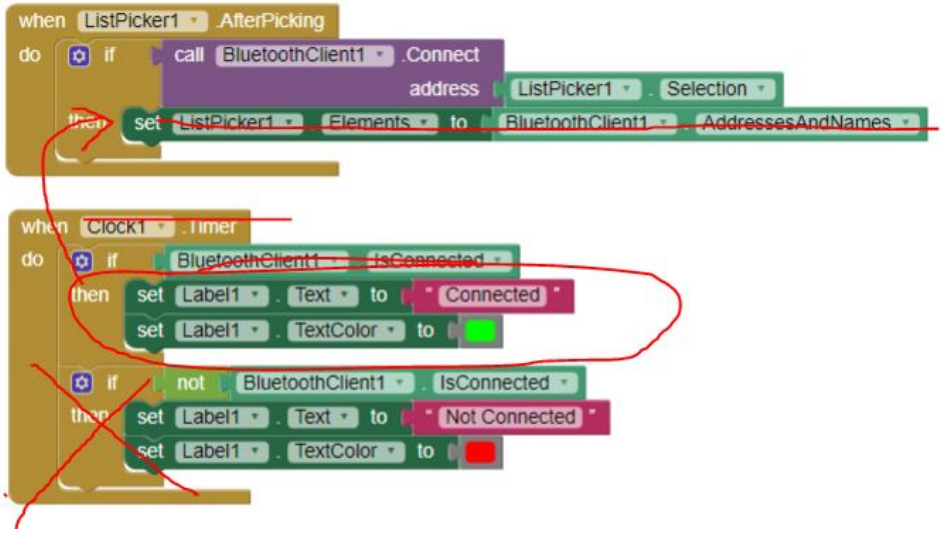
fyi. I have tried from several sources that say that the error can be fixed by connect, disconnect, and then reconnect the bluetooth in the application. But, it doesn't work for me ☹

Taifun #2 November 20, 2020, 2:20pm

> NF_Hara:
>
> Is there something wrong with the blocks?

yes... the clock compnent does not make sense, see also

> **Error 515: Not connected to a Bluetooth device**
>
> btw your clock example blocks from the screenshot will not help you to find out, if there still is a connection... as the bluetooth protocol was designed, there is no way to detect, if a connection still is alive, therefore you have to send regularly (i.e. poll) some data to the device. And if you get an error, then you know, that the connection was lost… also this **[Unbenannt]** does not make any sense... just set Label1.Text to "Is connected" there Taifun Trying to push the limits! …



> NF_Hara:
>
> I have tried from several sources that say that the error can be fixed by connect, disconnect, and then reconnect the bluetooth in the application. But, it doesn't work for me

are you able to connect after starting the app?
which device and Android version are you using for your tests?

Taifun

Trying to push the limits! **Snippets**, **Tutorials** and **Extensions** from **Pura Vida Apps** by Taifun.

NF_Hara #3 November 21, 2020, 10:36pm

> Taifun:
>
> are you able to connect after starting the app?
> which device and Android version are you using for your tests?
>
> Taifun

Hi, thanks for replying me.
Yes, I'm able to connect bluetooth with the MIT AI2 Companion application on my android after starting the app.
But it kept saying "Error 516: Unable to write: Broken pipe".

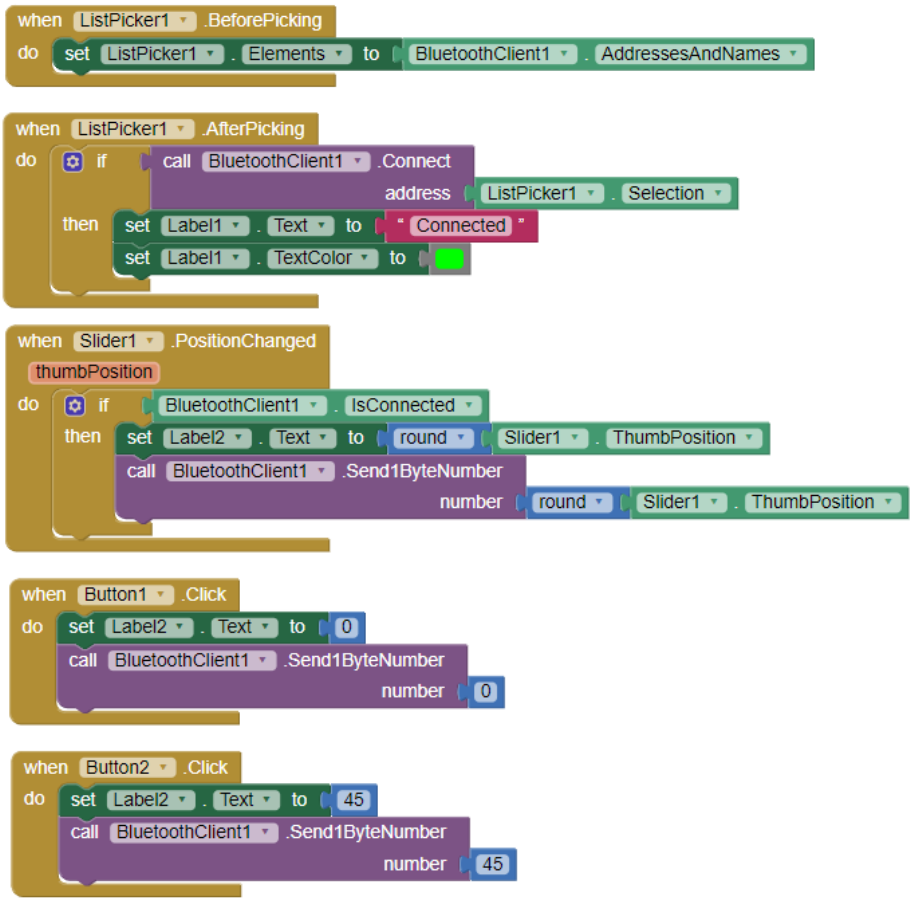
My android type is Android 10. Is android type affect the error?

NF_Hara #4 November 21, 2020, 11:00pm

> Taifun:
>
> yes... the clock compnent does not make sense, see also

I've tried the block. But, I still don't get it. Is there something wrong with my block?


Screen1
Connected
5
0
45
90
135
180
Error 516: Unable to write:
Broken pipe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do set ListPicker1 . Elements to BluetoothClient1 . AddressesAndNames
when ListPicker1 .AfterPicking
do if call BluetoothClient1 .Connect
address ListPicker1 . Selection
then set Label1 . Text to " Connected "
set Label1 . TextColor to
when Slider1 .PositionChanged
thumbPosition
do if BluetoothClient1 . IsConnected
then set Label2 . Text to round Slider1 . ThumbPosition
call BluetoothClient1 .Send1ByteNumber
number round Slider1 . ThumbPosition
when Button1 .Click
do set Label2 . Text to 0
call BluetoothClient1 .Send1ByteNumber
number 0
when Button2 .Click
do set Label2 . Text to 45
call BluetoothClient1 .Send1ByteNumber
number 45

ABG #5 November 21, 2020, 11:09pm

Consider the possibility that the slider position changed event happens too fast and too frequently for BlueTooth to keep up.

You can slow down the impact on the BlueTooth component by adding 2 global variables, slider_old and slider_new, both init 0, and a Slider_Clock with Timer event every second.

```
When slide changed
  set global slider_new to slider.Button position

When Slider_clock.Timer
  if global slider_new not equal slider_old then
     set slider_old to slider_new
     go do your BlueTooth thing.
   end if
```

Need help! Error 516: Unable to write: Broken Pipe

blake #6 February 24, 2021, 11:27pm

Hey,

Just reviving this to provide another possible solution to this particular problem. I just encountered this same issue. I was prototyping a project with an arduino and micro servo on a breadboard with an HC-05.

I followed some bluetooth tutorials for blinking an LED, everything worked fine. Then decided to make a slider element to send a value to turn a servo, and suddenly i keep getting a disconnect from the HC-05 (i can see the blink pattern change) and the pipe error when I try to send another command.

I couldn't really figure this out and spent a lot of time dissecting the code. It turns out, my error was in the electronics. In my haste to prototype an HC05/arduino/servo/AI2 pipeline, I didn't provide a more robust power source for the servo than simply hooking it up to the arduino's 5V out. The starting current of the servo springing to action would dip the voltage and reset the HC-05. By adding a separate, dedicated power source for the servo (connect up all the 0V/ground lines when you do this), suddenly everything started to work as expected, no more broken pipe errors (i.e. no more HC-05 resets).

Just throwing this out there for the next person with a slider/servo issue.

2 Likes

Yana_G #7 June 8, 2021, 3:58pm

It works for me. The power support is not enough.

priyankakonde #8 January 17, 2022, 7:02am

hello sir, my question was I am doing the connectivity of Bluetooth by using list picker.
and for connected or not connected I put label - But the if automatically Bluetooth module supply is off then without using disconnect button I have to set automatically label as disconnected how I was do that?

emmanuel_barnaba #9 June 15, 2022, 1:21pm

My man blake, I just want to thank you for the most excellent hack you have just helped me to get my bachelor's degree.
keep it up .

1 Like