USB KEYBOARD FOR ANDROID

VIA BLUETOOTH

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This tutorial describes the way of connecting Bluetooth module with arduino mega adkand testing whether the Bluetooth module is working or not with the help of software "DOCKLIGHT".

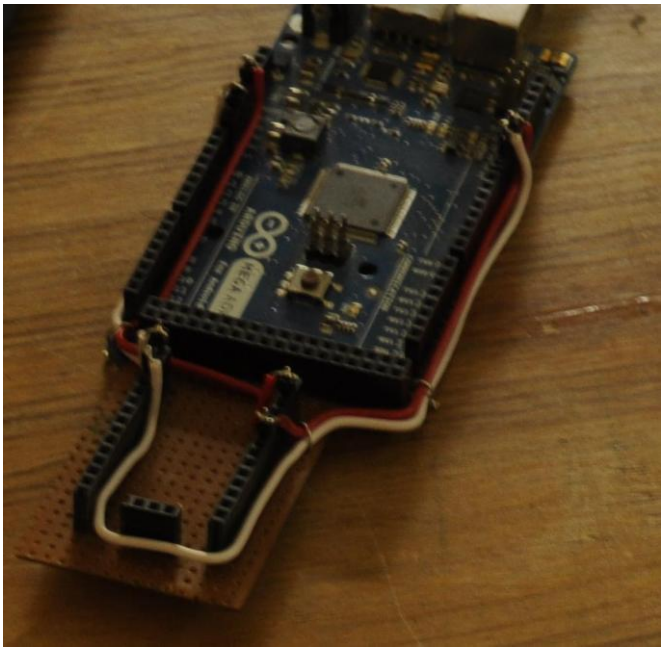
AUBTM-20(or any other Bluetooth module) works on UART communication.

AUBTM-20 UART provides the main interface to exchange data with other host system using the RS232 protocol. An external commands set is provided for the host system to control and configure AUBTM-20.

Four signals are provide for UART function. TX and RX transmit data between AUBTM-20 and the host. UART is initially configured to work at 9600 bps baudrate, 8-bit, no parity and 1 stop bit. The host could reconfigure the UART by issuing command.

In arduino adk board ,we have to declare two pins for UART communication.

TX of Bluetooth module is to be connected to RX of arduino adk and RX of Bluetooth module to TX of arduino adk as th data transmitted by the Bluetooth module is received by the receiving end of arduino adk.



5. Pin Configuration:

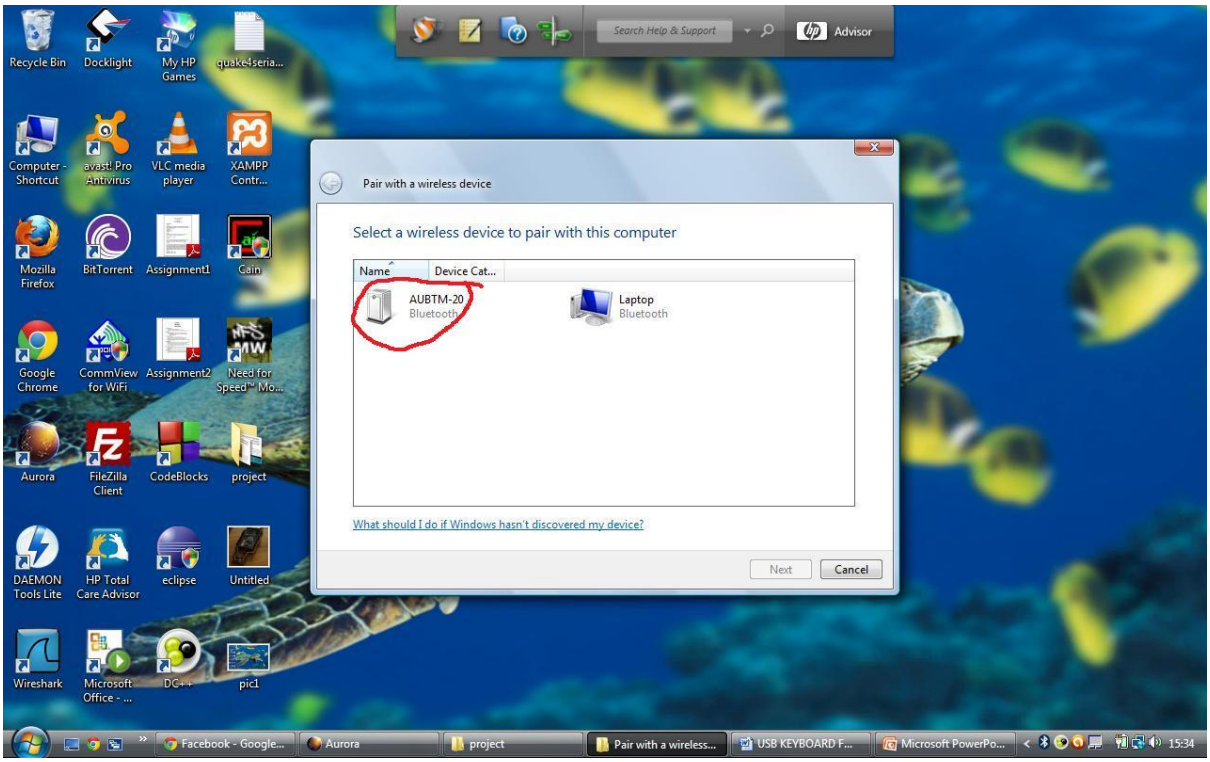
Pin Number	Pin name	I/O	
1	GND	GND	Ground
2	3V3	VDD	Power supply connection
3	PIO2	I/O	Programmable I/O lines
4	PIO3	I/O	Programmable I/O lines
5	NRTS	O	UART RTS (internal pull-up, active low)
6	RXD	I	UART RX (internal pull down)
7	PCMO	O	Synchronous 8 kbps data out (internal Pull down)
8	USB_D+	A	USB data plus (Internal 22 ohm serial resistor)
9	USB_D-	A	USB data minus (Internal 22 ohm serial resistor)
10	NCTS	I	UART CTS (internal pull down, active low)
11	PCMI	I	Synchronous 8 kbps data in (internal pull-down)
12	PCMC	I/O	Synchronous data clock (internal pull-down)
13	PCMS	I/O	Synchronous data strobe (internal pull-down)
14	GND	GND	Ground
15	GND	GND	Ground
16	3V3	VDD	Power supply connection
17	RES	I	Reset input (active low)
18	PIO6	I/O	Programmable I/O lines
19	PIO7	I/O	Programmable I/O lines
20	PIO4	I/O	Programmable I/O lines
21	NCSB	I	Chip selection for SPI (internal pull up, active low)
22	SCLK	I/O	SPI Clock (internal pull down)
23	MISO	O	SPI data output (pull down)
24	MOSI	I	SPI data input (pull down)
25	PIO5	I/O	Programmable I/O lines
26	TXD	O	UART TX (internal pull up)
27	NC	-	NC, not used
28	GND	GND	Ground
29	AIO0	I/O	
30	AIO1	I/O	
31	AIO2	I/O	
32	RF	RF	RF-transceiver antenna (when chip antenna not in use!)

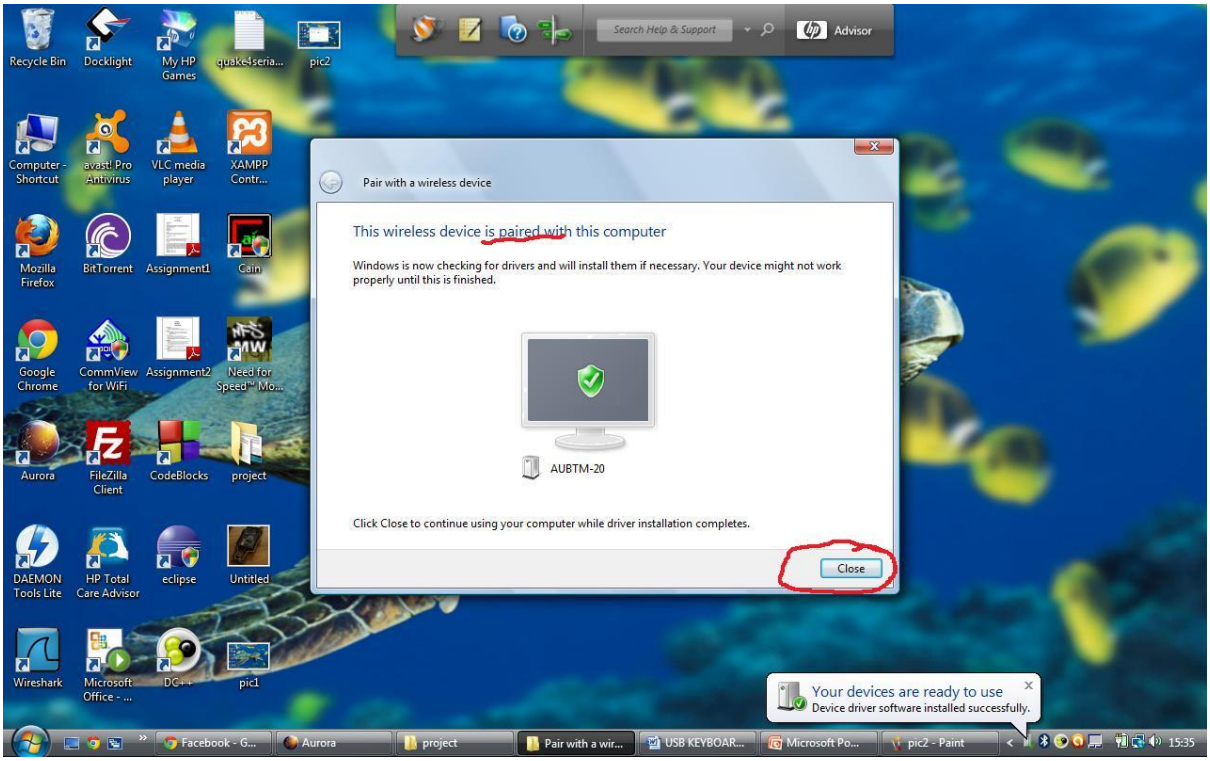
List 1. pin assignment

After connecting Bluetooth module ; Bluetooth module is tested by the software “DOCKLIGHT”. This software can be downloaded from http://www.docklight.de/download_en.htm.

After giving power to Bluetooth module ;connect it with your pc via bluetooth

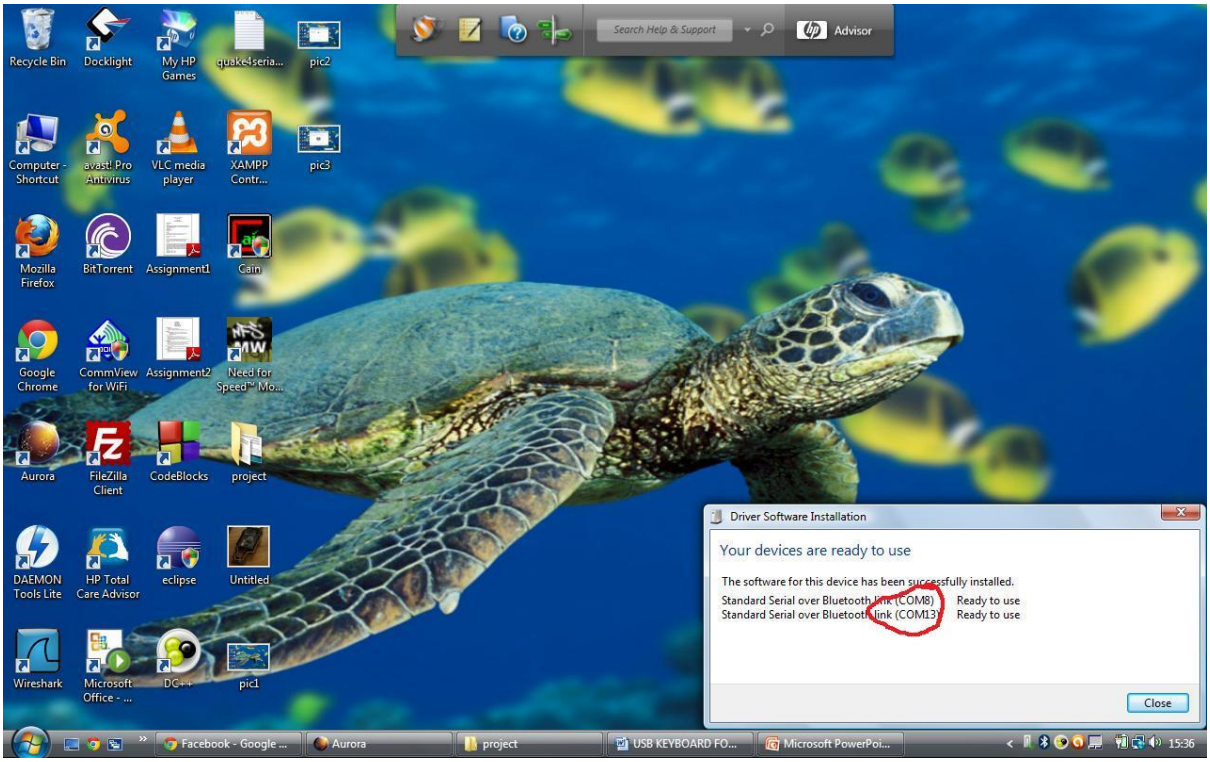
Click on the Bluetooth button and connect it with AUBTM-20.



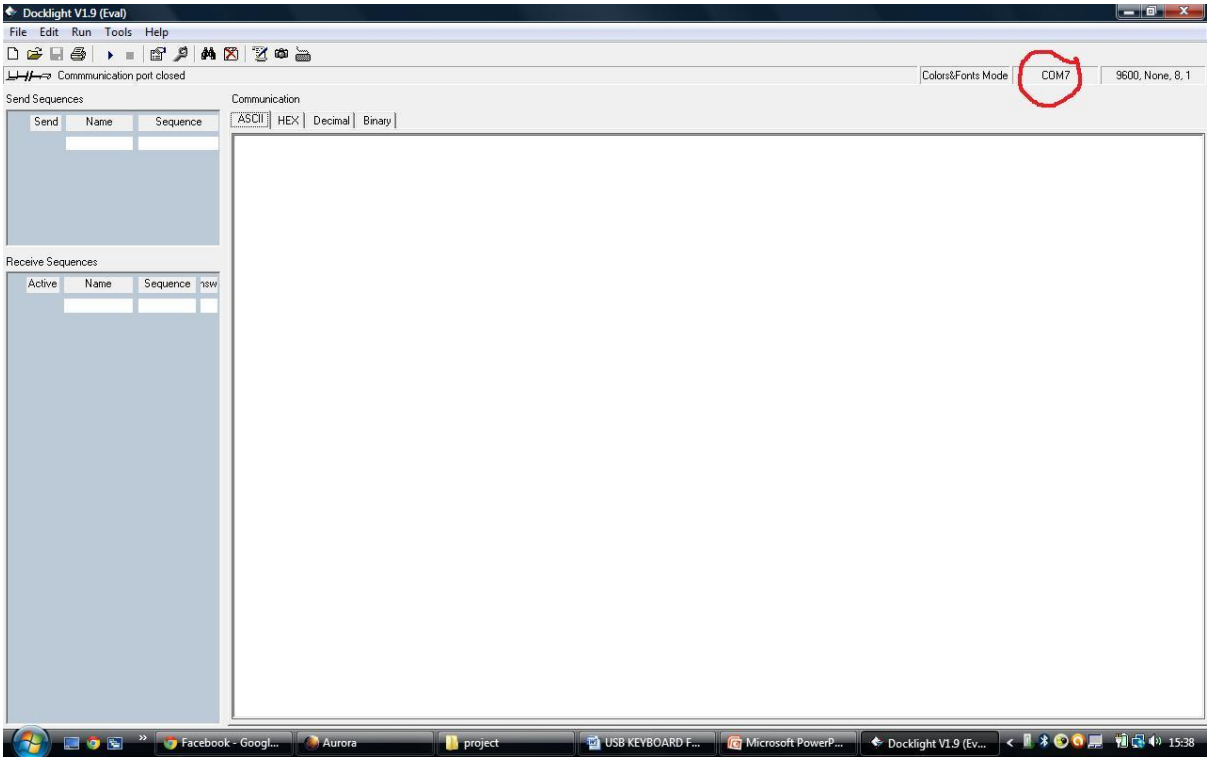


It will show that your pc is connected to AUBTM-20 and the prompt screen will show the drivers installing on your pc.

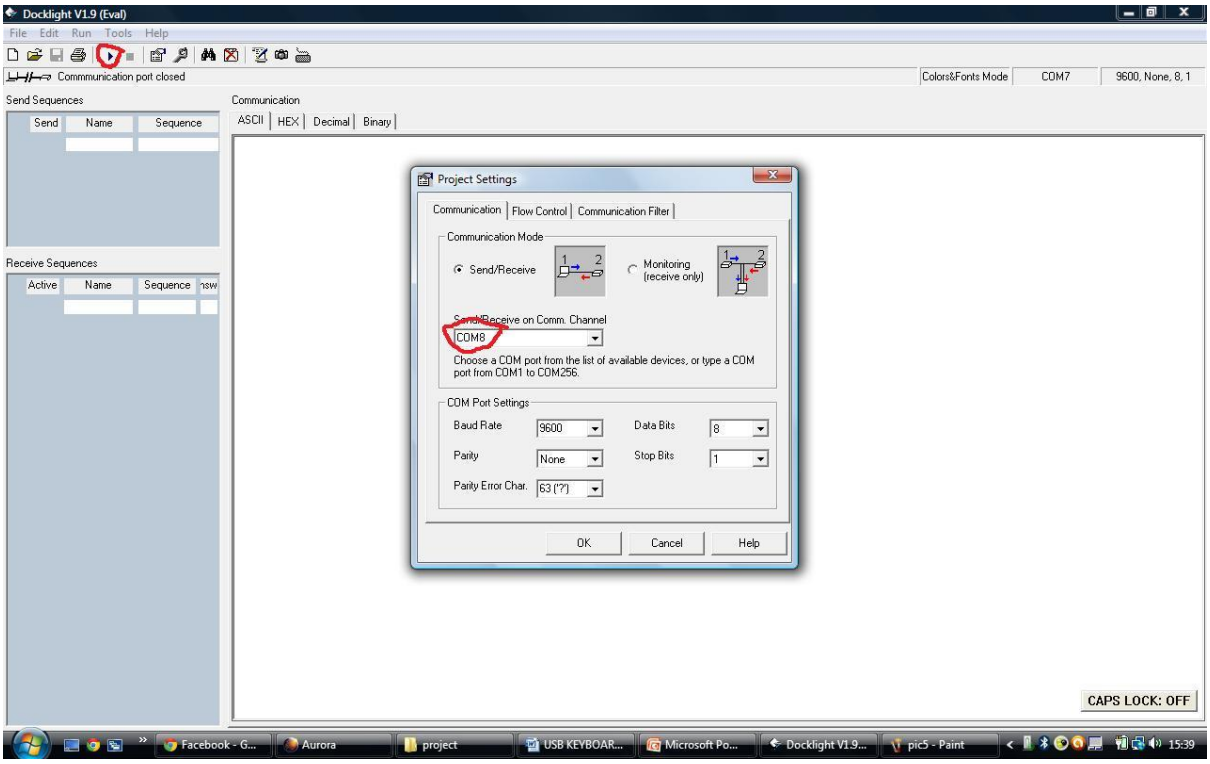
When all the drivers are installed ; the prompt screen will tell you the com-port at which the drivers are installed. KEEP THEM IN MIND!!!



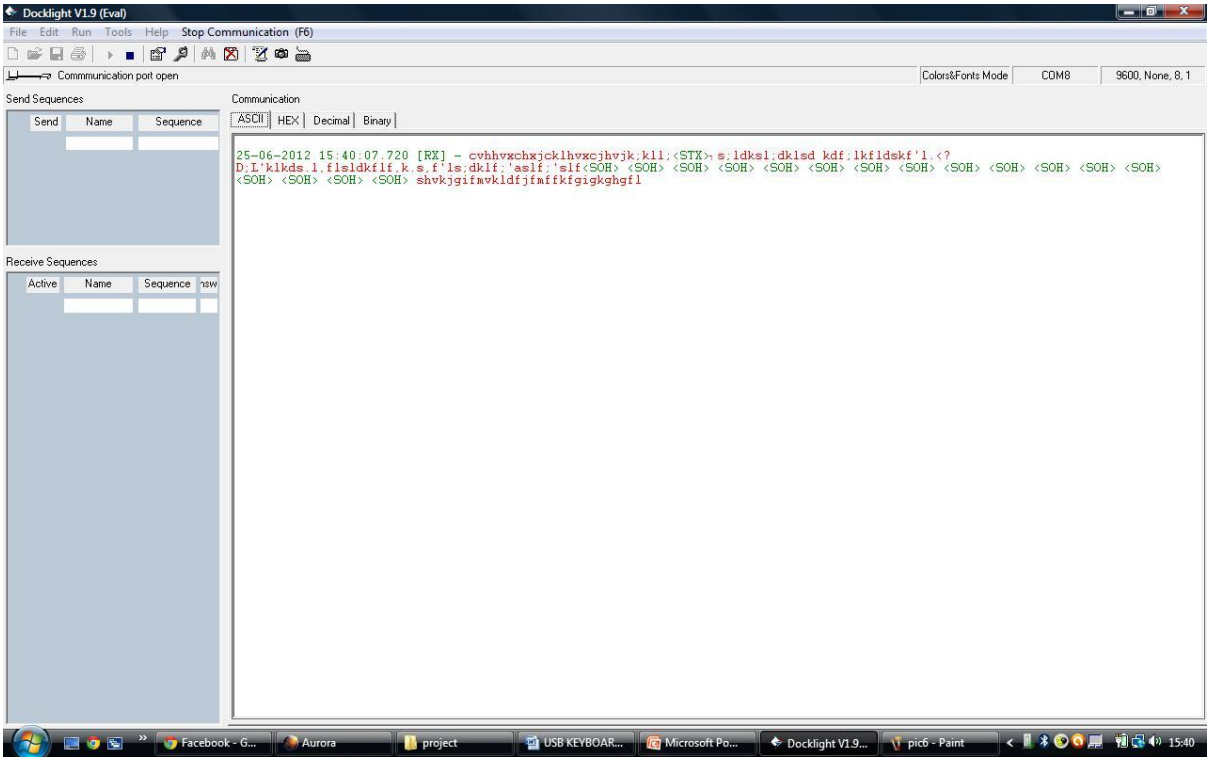
Now open the docklight .



On the top right side of the screen ,it is showing you the com port.you can change by double clicking on them.



Enter the port at which drivers are installed and press play button to run the communication between Bluetooth module and docklight



And the main screen will show you the data sent by the Bluetooth module.

If nothing appears on the screen ; check your connection and the Bluetooth module

Hence you are ready to use your Bluetooth module.