
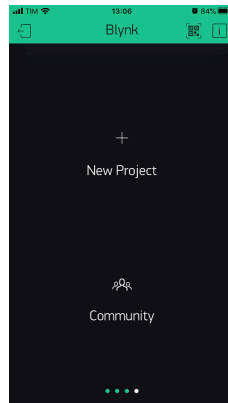



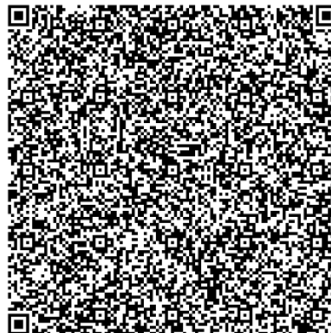
Blynk porting of the NERF Turret from littlefrenchkev

<https://www.littlefrenchkev.com/bluetooth-nerf-turret>

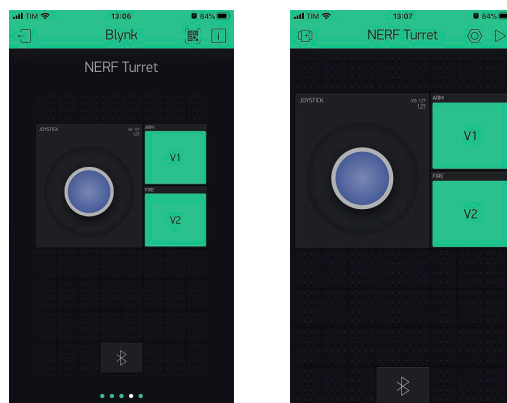
1. Download the Blynk app on your smartphone.
2. Open the Blynk  app.
3. Create a new account/login. After that, you should see something like this:



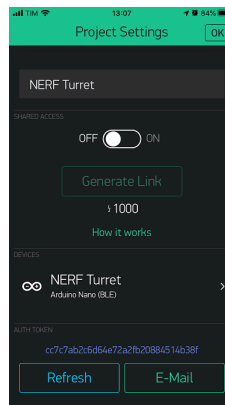
4. Press the QR button  in the upper right corner and scan the following QR Code.



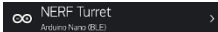
5. After scanning the QR Code, the new interface should pop up. Just touch it to select it.

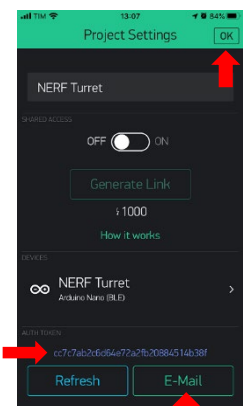
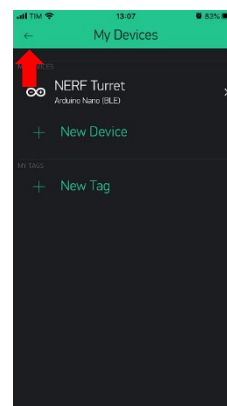
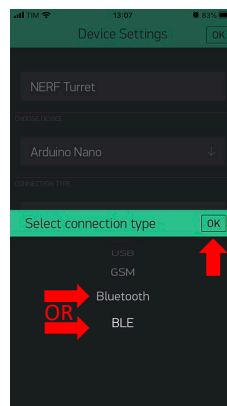
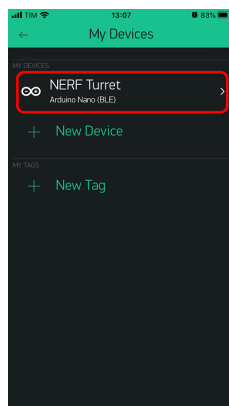


6. Push the Settings button  in the upper right corner.




From here you can:

- a. Change the Bluetooth module used (BLE – *HM10* - or Bluetooth – *HC05* – for example) by tapping here 



Keep in mind that iPhones can pair only Bluetooth 4 – BLE – modules (such as HM 10).

- b. Copy / email (**best!**)  the Blynk app interface token. The email used for sending the token is the one used during the registration. Use your token, the one in the image will not work!
7. Program the NERF Turret with the new Blynk ready firmware and power up it. **Before programming remember to modify the sketch:**
- a. Check the pin/turret servo connection in the right section:


```
// CHECK THESE <-----  
// Servos and rollers pins  
#define ROLLERS_PIN      12  
#define RECOIL_SERVO_PIN 11  
#define TILT_SERVO_PIN   10  
#define PAN_SERVO_PIN    9
```


- b. Check the servo angle values in the right section:

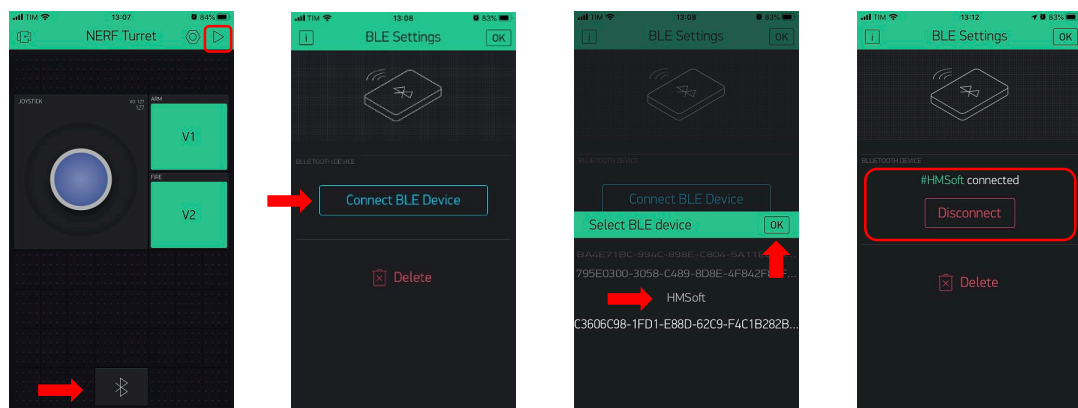
```
// CHECK THESE <-----
// Servos max and min angle
#define PAN_ANGLE_MIN      0
#define PAN_ANGLE_CENTER   90
#define PAN_ANGLE_MAX      180
#define TILT_ANGLE_MIN     50
#define TILT_ANGLE_CENTER   90
#define TILT_ANGLE_MAX     140
#define RECOIL_ANGLE_PUSHED 30
#define RECOIL_ANGLE_REST  100
```


- c. Insert the Blynk interface token (step 6b) in the right section:



```
// CHECK THIS <-----
// Blynk app token
#define BLYNK_TOKEN "YourBlynkAppToken"
```

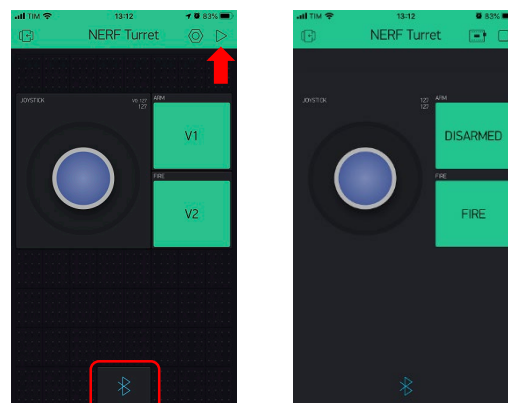
8. In the interface editor window, tap on the Bluetooth widget  and connect to the Bluetooth NERF Turret module (in the example, HMSoft).

The widgets can be modified/edited only if the interface is not running – there should be a play button  in the upper right corner







Sometimes the smartphone can't pair with the bluetooth module, just retry. Once connected, tap the OK button  in the upper right corner

9. If all steps went ok, now you should see the Bluetooth widget with a blue symbol.  Just tap on the play button  in the upper right corner to start the interface and finally drive the turret!!!



Final notes:

- Use the Joystick to move the turret. When released, the joystick will auto center (and the turret too). To change this behavior, just open the Joystick widget properties in the interface edit mode and set the “AUTO RETURN” property to “OFF”.
- Tapping the “DISARMED”  button will arm the turret, the rollers will start to spin and tapping on the “FIRE” button will fire darts. Tapping on the “ARMED”  button will stop the rollers and disable the “FIRE” button.
- The interface can pass from edit mode and running mode by pressing the play button  or the stop button  in the upper right corner.