FIRST robot controller console | Blocks | OnBotJava | Manage

Save Op Mode | Download Op Mode

Op Mode Name: 1. Small Blue | Autonomous ▾ | Group:

- → LinearOpMode
- Gamepad
- ▶ Actuators
- ▶ Sensors
- Other Devices
- ▶ Android
- ▶ Utilities
- Logic
- Loops
- Math
- Text
- Lists
- Variables
- Functions
- Miscellaneous

```
to runOpMode
  Initialize Vuforia (use default settings).
  call Vuforia . initialize
          cameraDirection    CameraDirection   BACK ▾
          useExtendedTracking    true ▾
          enableCameraMonitoring    true ▾
          cameraMonitorFeedback    CameraMonitorFeedback   AXES ▾
    phoneLocationOnRobot translation dx    0
    phoneLocationOnRobot translation dy    0
    phoneLocationOnRobot translation dz    0
          phoneLocationOnRobot rotation x    0
          phoneLocationOnRobot rotation y    0
          phoneLocationOnRobot rotation z    0
    useCompetitionFieldTargetLocations    true ▾
  Prompt user to push start button.
  call AndroidTextToSpeech . initialize
  call Telemetry . update
  call AndroidTextToSpeech . setLanguage
          languageCode    " en "
          countryCode    " US "
  call Telemetry . update
  Wait until user pushes start button.
  call 1. Small Blue . waitForStart
  Activate Vuforia software.
  call Vuforia . activate
```

```
call Telemetry . update
call AndroidTextToSpeech . setLanguage
          languageCode    " en "
          countryCode    " US "
call Telemetry . update
Wait until user pushes start button.
call 1. Small Blue . waitForStart
Activate Vuforia software.
call Vuforia . activate
Get the tracking results.
call 1. Small Blue . sleep
          milliseconds    1000
set vuMarkResult ▾ to    call Vuforia . track
          trackableName    TrackableName   RELIC ▾
call 1. Small Blue . sleep
          milliseconds    1000
Is a VuMark visible?
if    VuforiaTrackingResults . IsVisible
          vuforiaTrackingResults    vuMarkResult ▾
do    Yes, we see one.
      What type of Relic VuMark is it?
      call Telemetry . addData
          key    " VuMark "
          text    " A VuMark is visible. "
      call Telemetry . update
      if    VuforiaTrackingResults . RelicRecoveryVuMark    = ▾    RelicRecoveryVuMark . LEFT ▾
```

```
do    call AndroidTextToSpeech . speak
                          text    " I can see the left! "
      call Telemetry . addData
                      key    " Relic Target "
                      text    " Go for the LEFT goal! "
      call Telemetry . update
      Deactivate before exiting
      call Vuforia . deactivate
      set slider . Direction to    Direction FORWARD
      set Jewel Color . Position to    0.36
      set Gripper . Position to    0.5
      set slider . Power to    1
      call 1. Small Blue . sleep
                      milliseconds    500
      call color sensor . enableLed
                          enable    false
      call 1. Small Blue . sleep
                      milliseconds    500
      call color sensor . enableLed
                          enable    true
      set slider . Power to    0
      set Jewel Color . Position to    0.81
      call 1. Small Blue . sleep
                      milliseconds    5000
      set Color to    call Color . rgbToColor
                          red    color sensor . Red
                      milliseconds    5000
      set Color to    call Color . rgbToColor
                          red    color sensor . Red
                          green    color sensor . Green
                          blue    color sensor . Blue

      if    Color . Saturation ≥ 0.5    and    Color . Hue > 260    or    Color . Hue < 37.5
              color    Color             color    Color             color    Color

      do    Red
            call AndroidTextToSpeech . speak
                                  text    " I can see Red! "
            set Jewel Color . Position to    0.81
            set left_drive . Direction to    Direction REVERSE
            set right_drive . Direction to    Direction FORWARD
            set left_drive . Power to    0
            set right_drive . Power to    0
            call 1. Small Blue . sleep
                            milliseconds    975
            knock off red
            set left_drive . Power to    0.2
            set right_drive . Power to    0.2
            call 1. Small Blue . sleep
                            milliseconds    250
            set Power
            right_drive to    0
            left_drive to    0
            call 1. Small Bl…
            call 1. Small Blue . sleep
                            milliseconds    1500
            go straight
            set Power
            right_drive to    0.25
            left_drive to    0.25
            call 1. Small Blue . sleep
                            milliseconds    1180
            set Power
            right_drive to    0
            left_drive to    0
            call 1. Small Blue . sleep
                            milliseconds    1000
            turn and deposit glyphs
            set left_drive . Direction to    Direction FORWARD
            set right_drive . Direction to    Direction REVERSE
            set left_drive . Power to    0
            set right_drive . Power to    0
            call 1. Small Blue . sleep
                            milliseconds    1000
            set Power
            right_drive to    0.8
            left_drive to    -0.4
            call 1. Small Blue . sleep
                            milliseconds    740
            set Power
```

```
call 1. Small Blue . sleep
        milliseconds  1000
final forward to deposit glyphs
set Power
right_drive  to  0.2
left_drive  to  0.2
call 1. Small Blue . sleep
        milliseconds  1500

else if   Color . Saturation  ≥  0.5   and   Color . Hue  ≥  180   and   Color . Hue  ≤  270
              color  Color                    color  Color                  color  Color

do   Blue
     call AndroidTextToSpeech . speak
                             text  " I can see Blue! "
     set Jewel Color . Position  to  0.81
     set left_drive . Direction  to  Direction FORWARD
     set right_drive . Direction  to  Direction REVERSE
     set left_drive . Power  to  0
     set right_drive . Power  to  0
     call 1. Small Blue . sleep
             milliseconds  1000
     go back, knock off red
     set left_drive . Power  to  0.22
     set right_drive . Power  to  0.22
     call 1. Small Blue . sleep
             milliseconds  250
             milliseconds  1000

     go back, knock off red
     set left_drive . Power  to  0.22
     set right_drive . Power  to  0.22
     call 1. Small Blue . sleep
             milliseconds  250
     set left_drive . Power  to  0
     set right_drive . Power  to  0
     call 1. Small Blue . sleep
             milliseconds  200
     set Jewel Color . Position  to  0.36
     call 1. Small Blue . sleep
             milliseconds  600
     go to cryptobox
     set Power
     right_drive  to  -0.3
     left_drive  to  -0.3
     call 1. Small Blue . sleep
             milliseconds  1600
     set Power
     right_drive  to  0
     left_drive  to  0
     call 1. Small Blue . sleep
             milliseconds  1000
     (turn)
     set Power
     right_drive  to  0.8
     left_drive  to  0
     call 1. Small Blue . sleep
             milliseconds  1000
     final forward to deposit glyphs
     set right_drive . Power  to  0.2
     set left_drive . Power  to  0.2
     call 1. Small Blue . sleep
             milliseconds  1500

else  No Jewel
      call AndroidTextToSpeech . speak
                              text  " I don't see a jewel "
      set Jewel Color . Position  to  0.36
      call 1. Small Blue . sleep
              milliseconds  2000
      set left_drive . Direction  to  Direction REVERSE
      set right_drive . Direction  to  Direction FORWARD
      set left_drive . Power  to  0
      set right_drive . Power  to  0
      call 1. Small Blue . sleep
              milliseconds  975
      knock off red
      set left_drive . Power  to  0.3
      set right_drive . Power  to  0.3
      call 1. Small Blue . sleep
              milliseconds  250
      set Power
      right_drive
```

```
set Power
  right_drive ▾ to  0.25
  left_drive ▾ to  0.25
call 1. Small Blue . sleep
  milliseconds  1150
set Power ▾
  right_drive ▾ to  0
  left_drive ▾ to  0
call 1. Small Blue . sleep
  milliseconds  1000
turn and deposit glyphs
set left_drive ▾ . Direction ▾ to  Direction  FORWARD ▾
set right_drive ▾ . Direction ▾ to  Direction  REVERSE ▾
set left_drive ▾ . Power ▾ to  0
set right_drive ▾ . Power ▾ to  0
call 1. Small Blue . sleep
  milliseconds  1000
set Power ▾
  right_drive ▾ to  0.8
  left_drive ▾ to  -0.4
call 1. Small Blue . sleep
  milliseconds  760
set Power ▾
  right_drive ▾ to  0
  left_drive ▾ to  0
call 1. Small Blue . sleep
  milliseconds  1000
  milliseconds  1000
set Power ▾
  right_drive ▾ to  0.8
  left_drive ▾ to  -0.4
call 1. Small Blue . sleep
  milliseconds  760
set Power ▾
  right_drive ▾ to  0
  left_drive ▾ to  0
call 1. Small Blue . sleep
  milliseconds  1000
final forward to deposit glyphs
set Power ▾
  right_drive ▾ to  0.2
  left_drive ▾ to  0.2
call 1. Small Blue . sleep
  milliseconds  1500

else if  VuforiaTrackingResults . RelicRecoveryVuMark ▾  = ▾  RelicRecoveryVuMark . CENTER ▾
                vuforiaTrackingResults . vuMarkResult ▾
do   call AndroidTextToSpeech . speak
              text  " I can see the center! "
     call Telemetry . addData
              key  " Relic Target "
              text  " Go for the CENTER goal! "
     call Telemetry . update
     Deactivate before exiting.
Deactivate before exiting.
call Vuforia . deactivate
set slider ▾ . Direction ▾ to  Direction  FORWARD ▾
set Jewel Color ▾ . Position ▾ to  0.36
set Gripper ▾ . Position ▾ to  0.5
set slider ▾ . Power ▾ to  1
call 1. Small Blue . sleep
  milliseconds  500
call color sensor ▾ . enableLed
              enable  false ▾
call 1. Small Blue . sleep
  milliseconds  500
call color sensor ▾ . enableLed
              enable  true ▾
set slider ▾ . Power ▾ to  0
set Jewel Color ▾ . Position ▾ to  0.81
call 1. Small Blue . sleep
  milliseconds  5000
set Color ▾ to  call Color . rgbToColor
              red  color sensor ▾ . Red ▾
            green  color sensor ▾ . Green ▾
             blue  color sensor ▾ . Blue ▾
if   Color . Saturation ▾        ≥ ▾  0.5   and ▾   Color . Hue ▾        > ▾  260   or ▾   Color . Hue ▾        < ▾  37.5
              color  Color ▾                              color  Color ▾                          color  Color ▾
do   Red
```

```
set Jewel Color . Position to 0.81
set left_drive . Direction to Direction FORWARD
set right_drive . Direction to Direction REVERSE
set left_drive . Power to 0
set right_drive . Power to 0
call 1. Small Blue . sleep
    milliseconds 975
knock off red backward
set left_drive . Power to -0.2
set right_drive . Power to -0.2
call 1. Small Blue . sleep
    milliseconds 250
set left_drive . Power to 0
set right_drive . Power to 0
call 1. Small Blue . sleep
    milliseconds 500
set Jewel Color . Position to 0.36
call 1. Small Blue . sleep
    milliseconds 2500
go straight
set Power
right_drive to -0.3
left_drive to -0.3
call 1. Small Blue . sleep
    milliseconds 1220
set Power
right_drive to 0
left_drive to -0.3
call 1. Small Blue . sleep
    milliseconds 1220
set Power
right_drive to 0
left_drive to 0
call 1. Small Blue . sleep
    milliseconds 1000
turn and deposit glyphs
set Power
right_drive to 0.8
left_drive to -0.4
call 1. Small Blue . sleep
    milliseconds 870
set Power
right_drive to 0
left_drive to 0
call 1. Small Blue . sleep
    milliseconds 1000
final forward to deposit glyphs
set Power
right_drive to 0.19
left_drive to 0.19
call 1. Small Blue . sleep
    milliseconds 1300
```

```
                                                    milliseconds  1300
else if      Color . Saturation    ≥    0.5    and      Color . Hue    ≥    180    and      Color . Hue    ≤    270
                        color   Color                            color   Color                        color   Color

do    Blue
      call AndroidTextToSpeech . speak
                              text   " I can see Blue! "
      set Jewel Color . Position  to   0.81
      set left_drive . Direction  to   Direction FORWARD
      set right_drive . Direction  to   Direction REVERSE
      set left_drive . Power  to   0
      set right_drive . Power  to   0
      call 1. Small Blue . sleep
                        milliseconds  1000
      go forward. knock off red
      set left_drive . Power  to   0.21
      set right_drive . Power  to   0.21
      call 1. Small Blue . sleep
                        milliseconds  250
      set left_drive . Power  to   0
      set right_drive . Power  to   0
      call 1. Small Blue . sleep
                        milliseconds  250
      set Jewel Color . Position  to   0.36
      call 1. Small Blue . sleep
                        milliseconds  1000
                        milliseconds  250
      set Jewel Color . Position  to   0.36
      call 1. Small Blue . sleep
                        milliseconds  1000
      go backward to cryptobox
      set Power
          right_drive  to   -0.3
          left_drive  to   -0.3
      call 1. Small Blue . sleep
                        milliseconds  1700
      set Power
          right_drive  to   0
          left_drive  to   0
      call 1. Small Blue . sleep
                        milliseconds  1000
      (turn)
      set Power
          right_drive  to   0.8
          left_drive  to   -0.4
      call 1. Small Blue . sleep
                        milliseconds  980
      set Power
          right_drive  to   0
          left_drive  to   0
      call 1. Small Blue . sleep
                        milliseconds  1000
      final forward to deposit glyph
      set left_drive . Direction  to   Direction FORWARD
      set right_drive . Direction  to   Direction REVERSE
      call 1. Small Blue . sleep
                        milliseconds  500
      set right_drive . Power  to   0.19
      set left_drive . Power  to   0.19
      call 1. Small Blue . sleep
                        milliseconds  1000

else  No Jewel
      call AndroidTextToSpeech . speak
                              text   " I don't see a jewel "
      set Jewel Color . Position  to   0.36
      call 1. Small Blue . sleep
                        milliseconds  2500
      set left_drive . Direction  to   Direction FORWARD
      set right_drive . Direction  to   Direction REVERSE
      set left_drive . Power  to   0
      set right_drive . Power  to   0
      call 1. Small Blue . sleep
                        milliseconds  975
      knock off red backward
      set left_drive . Power  to   -0.3
      set right_drive . Power  to   -0.3
      call 1. Small Blue . sleep
                        milliseconds  250
      set left_drive . Power  to   0
```

```
        call  1. Small Blue  .  sleep
                    milliseconds  1000
  turn and deposit glyphs
  set  Power
  right_drive  to  0.8
  left_drive  to  -0.4
        call  1. Small Blue  .  sleep
                    milliseconds  890
  set  Power
  right_drive  to  0
  left_drive  to  0
        call  1. Small Blue  .  sleep
                    milliseconds  1000
  final forward to deposit glyphs
  set  Power
  right_drive  to  0.19
  left_drive  to  0.19
        call  1. Small Blue  .  sleep
                    milliseconds  1000

else if   VuforiaTrackingResults  .  RelicRecoveryVuMark         =   RelicRecoveryVuMark  .  RIGHT
               vuforiaTrackingResults  vuMarkResult
do    call  AndroidTextToSpeech  .  speak
                    text  " I can see the right! "
      call  Telemetry  .  addData
                    key  " Relic Target "

do    call  AndroidTextToSpeech  .  speak
                    text  " I can see the right!
      call  Telemetry  .  addData
                    key  " Relic Target "
                    text  " Go for the RIGHT goal! "
      call  Telemetry  .  update
  Deactivate before exiting
      call  Vuforia  .  deactivate
      set  slider  .  Direction  to  Direction  FORWARD
      set  Jewel Color  .  Position  to  0.36
      set  Gripper  .  Position  to  0.5
      set  slider  .  Power  to  1
      call  1. Small Blue  .  sleep
                    milliseconds  500
      call  color sensor  .  enableLed
                    enable  false
      call  1. Small Blue  .  sleep
                    milliseconds  500
      call  color sensor  .  enableLed
                    enable  true
      set  slider  .  Power  to  0
      set  Jewel Color  .  Position  to  0.81
      call  1. Small Blue  .  sleep
                    milliseconds  5000
      set  Color  to   call  Color  .  rgbToColor
                                    red   color sensor  .  Red
```

```
set Color to  call Color . rgbToColor
                              red    color sensor . Red
                              green  color sensor . Green
                              blue   color sensor . Blue

if  Color . Saturation  ≥  0.5   and    Color . Hue        > 260   or    Color . Hue       < 37.5
                     color  Color              color  Color                     color  Color
do  Red
    call AndroidTextToSpeech . speak
                         text  " I can see Red! "
    set Jewel Color . Position to 0.81
    set left_drive . Direction to  Direction FORWARD
    set right_drive . Direction to  Direction REVERSE
    set left_drive . Power to 0
    set right_drive . Power to 0
    call 1. Small Blue . sleep
                  milliseconds 975
    knock off red
    set left_drive . Power to -0.25
    set right_drive . Power to -0.25
    call 1. Small Blue . sleep
                  milliseconds 250
    set Power
      right_drive to 0
      left_drive to 0
    call 1. Small Blue . sleep

    set Jewel Color . Position to 0.36
    call 1. Small Blue . sleep
                  milliseconds 2000
    go straight
    set Power
      right_drive to -0.25
      left_drive to -0.25
    call 1. Small Blue . sleep
                  milliseconds 1380
    set Power
      right_drive to 0
      left_drive to 0
    call 1. Small Blue . sleep
                  milliseconds 1000
    turn and deposit glyphs
    set Power
      right_drive to 0.8
      left_drive to -0.4
    call 1. Small Blue . sleep
                  milliseconds 1145
    set Power
      right_drive to 0
      left_drive to 0
    call 1. Small Blue . sleep
                  milliseconds 1000
    final forward to deposit glyphs
```

final forward to deposit glyphs
set Power ▾
right_drive ▾ to 0.19
left_drive ▾ to 0.19
call 1. Small Blue ▾ . sleep
milliseconds 1000

else if   Color ▾ . Saturation ▾   ≥ ▾ 0.5   and ▾   Color ▾ . Hue ▾   ≥ ▾ 180   and ▾   Color ▾ . Hue ▾   ≤ ▾ 270
          color Color ▾   color Color ▾   color Color ▾

do   Blue
     call AndroidTextToSpeech ▾ . speak
                          text " I can see Blue! "
     set Jewel Color ▾ . Position ▾ to 0.81
     set left_drive ▾ . Direction ▾ to Direction FORWARD ▾
     set right_drive ▾ . Direction ▾ to Direction REVERSE ▾
     set left_drive ▾ . Power ▾ to 0
     set right_drive ▾ . Power ▾ to 0
     call 1. Small Blue ▾ . sleep
                          milliseconds 500
     knock off red
     set left_drive ▾ . Power ▾ to 0.21
     set right_drive ▾ . Power ▾ to 0.21
     call 1. Small Blue ▾ . sleep
                          milliseconds 252
     set left_drive ▾ . Power ▾ to 0
     set right_drive ▾ . Power ▾ to 0
     set Jewel Color ▾ . Position ▾ to 0.81
     set left_drive ▾ . Direction ▾ to Direction FORWARD ▾
     set right_drive ▾ . Direction ▾ to Direction REVERSE ▾
     set left_drive ▾ . Power ▾ to 0
     set right_drive ▾ . Power ▾ to 0
     call 1. Small Blue ▾ . sleep
                          milliseconds 500
     knock off red
     set left_drive ▾ . Power ▾ to 0.21
     set right_drive ▾ . Power ▾ to 0.21
     call 1. Small Blue ▾ . sleep
                          milliseconds 252
     set left_drive ▾ . Power ▾ to 0
     set right_drive ▾ . Power ▾ to 0
     call 1. Small Blue ▾ . sleep
                          milliseconds 200
     set Jewel Color ▾ . Position ▾ to 0.36
     call 1. Small Blue ▾ . sleep
                          milliseconds 800
     go to cryptobox
     set Power ▾
     right_drive ▾ to -0.3
     left_drive ▾ to -0.3
     call 1. Small Blue ▾ . sleep
                          milliseconds 1850
     set Power ▾
     right_drive ▾ to 0
     set Jewel Color ▾ . Position ▾ to 0.81
     set left_drive ▾ . Direction ▾ to Direction FORWARD ▾
     set right_drive ▾ . Direction ▾ to Direction REVERSE ▾
     set left_drive ▾ . Power ▾ to 0
     set right_drive ▾ . Power ▾ to 0
     call 1. Small Blue ▾ . sleep
                          milliseconds 500
     knock off red
     set left_drive ▾ . Power ▾ to 0.21
     set right_drive ▾ . Power ▾ to 0.21
     call 1. Small Blue ▾ . sleep
                          milliseconds 252
     set left_drive ▾ . Power ▾ to 0
     set right_drive ▾ . Power ▾ to 0
     call 1. Small Blue ▾ . sleep
                          milliseconds 200
     set Jewel Color ▾ . Position ▾ to 0.36
     call 1. Small Blue ▾ . sleep
                          milliseconds 800
     go to cryptobox
     set Power ▾
     right_drive ▾ to -0.3
     left_drive ▾ to -0.3
     call 1. Small Blue ▾ . sleep
                          milliseconds 1850
     set Power ▾
     right_drive ▾ to 0

```
set Jewel Color . Position to 0.36
call 1. Small Blue . sleep
              milliseconds 2000
set left_drive . Direction to Direction FORWARD
set right_drive . Direction to Direction REVERSE
set left_drive . Power to 0
set right_drive . Power to 0
call 1. Small Blue . sleep
              milliseconds 975
knock off red
set left_drive . Power to -0.3
set right_drive . Power to -0.3
call 1. Small Blue . sleep
              milliseconds 250
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
              milliseconds 500
go straight
set Power
  right_drive to -0.25
  left_drive to -0.25
call 1. Small Blue . sleep
              milliseconds 1470
set Power
```

```
set Power
  right_drive to -0.25
  left_drive to -0.25
call 1. Small Blue . sleep
              milliseconds 1470
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
              milliseconds 1000
turn and deposit glyphs
set Power
  right_drive to 0.8
  left_drive to -0.4
call 1. Small Blue . sleep
              milliseconds 1100
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
              milliseconds 1000
final forward to deposit glyphs
set Power
  right_drive to 0.19
  left_drive to 0.19
call 1. Small Blue . sleep
              milliseconds 1000
```

```
                    milliseconds    1000
    else  call Telemetry . addData
                              key  " Relic Target "
                              text  " VuMark of UNKNOWN type... "
          call Telemetry . update

else  No, we don't see one.
      call Telemetry . addData
                        key  " VuMark "
                        text  " No VuMarks are visible. "
      call Telemetry . update
      Deactivate before exiting.
      call Vuforia . deactivate
      set slider . Direction . to   Direction  FORWARD
      set Jewel Color . Position . to   0.36
      set Gripper . Position . to   0.5
      set slider . Power . to   1
      call 1. Small Blue . sleep
                    milliseconds    500
      call color sensor . enableLed
                            enable   false
      call 1. Small Blue . sleep
                    milliseconds    500
      call color sensor . enableLed
                            enable   true

      set Gripper . Position . to   0.5
      set slider . Power . to   1
      call 1. Small Blue . sleep
                    milliseconds    500
      call color sensor . enableLed
                            enable   false
      call 1. Small Blue . sleep
                    milliseconds    500
      call color sensor . enableLed
                            enable   true
      set slider . Power . to   0
      set Jewel Color . Position . to   0.81
      call 1. Small Blue . sleep
                    milliseconds    1000
      set Color . to   call Color . rgbToColor
                                          red    color sensor . Red
                                          green  color sensor . Green
                                          blue   color sensor . Blue

      if   [ Color . Saturation    ≥  0.5 ]  and  [ Color . Hue  >  260 ]  or  [ Color . Hue  <  37.5 ]
                            color  Color                      color  Color            color  Color

      do  call AndroidTextToSpeech . speak
                                text  " I see nothing "
          call 1. Small Blue . sleep
                        milliseconds    1200

      Red
      call AndroidTextToSpeech . speak
                            text  " I see Red "
      set Jewel Color . Position . to   0.81
      set left_drive . Direction . to   Direction  FORWARD
      set right_drive . Direction . to   Direction  REVERSE
      set Power
      right_drive . to   0
      left_drive . to   0
      call 1. Small Blue . sleep
                    milliseconds    500
      knock off red backward
      set left_drive . Power . to   -0.3
      set right_drive . Power . to   -0.3
      call 1. Small Blue . sleep
                    milliseconds    250
      set left_drive . Power . to   0
      set right_drive . Power . to   0
      call 1. Small Blue . sleep
                    milliseconds    500
      set Jewel Color . Position . to   0.36
      call 1. Small Blue . sleep
                    milliseconds    2500
```

```
                        milliseconds   2500
go straight
  set Power
  right_drive to   -0.25
  left_drive to   -0.25
  call 1. Small Blue . sleep
               milliseconds   1200
  set Power
  right_drive to   0
  left_drive to   0
  call 1. Small Blue . sleep
               milliseconds   1500
turn to deposit glyphs
  set left_drive . Power to   -0.4
  set right_drive . Power to   0.8
  call 1. Small Blue . sleep
               milliseconds   950
  set Power
  right_drive to   0
  left_drive to   0
  call 1. Small Blue . sleep
               milliseconds   500
final forward to deposit glyphs
  set Power
  right_drive to   0.25
  left_drive to   0.25
  call 1. Small Blue . sleep
```

```
               milliseconds   500
final forward to deposit glyphs
  set Power
  right_drive to   0.25
  left_drive to   0.25
  call 1. Small Blue . sleep
               milliseconds   1800
else if   Color . Saturation   ≥   0.5   and   Color . Hue   ≥   180   and   Color . Hue   ≤   270
          color Color                          color Color                        color Color
do   Blue
  call AndroidTextToSpeech . speak
               text  " I see nothing "
  call 1. Small Blue . sleep
               milliseconds   1200
  call AndroidTextToSpeech . speak
               text  " I see blue "
  set Jewel Color . Position to   0.81
  set left_drive . Direction to   Direction FORWARD
  set right_drive . Direction to   Direction REVERSE
  set Power
  right_drive to   0
  left_drive to   0
  call 1. Small Blue . sleep
               milliseconds   500
go back, knock off red
  call AndroidTextToSpeech . speak
               text  " I see blue "
  set Jewel Color . Position to   0.81
  set left_drive . Direction to   Direction FORWARD
  set right_drive . Direction to   Direction REVERSE
  set Power
  right_drive to   0
  left_drive to   0
  call 1. Small Blue . sleep
               milliseconds   500
go back, knock off red
  set left_drive . Power to   0.25
  set right_drive . Power to   0.25
  call 1. Small Blue . sleep
               milliseconds   250
  set Power
  right_drive to   0
  left_drive to   0
  call 1. Small Blue . sleep
               milliseconds   500
  set Jewel Color . Position to   0.36
  call 1. Small Blue . sleep
               milliseconds   1000
go backward
  set Power
  right_drive to   -0.25
  left_drive to   -0.25
```

```
go backward
set Power
  right_drive to -0.25
  left_drive to -0.25
call 1. Small Blue . sleep
  milliseconds 2000
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
  milliseconds 1000
(turn)
set Power
  right_drive to 0.8
  left_drive to -0.4
call 1. Small Blue . sleep
  milliseconds 860
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
  milliseconds 1000
final forward to deposit glyphs
set left_drive . Power to 0.19
set right_drive . Power to 0.19
call 1. Small Blue . sleep

set left_drive . Power to 0.19
set right_drive . Power to 0.19
call 1. Small Blue . sleep
  milliseconds 1000
else
  call AndroidTextToSpeech . speak
    text " I see nothing "
  call 1. Small Blue . sleep
    milliseconds 1200
  no jewel
  call AndroidTextToSpeech . speak
    text " I don't see a jewel "
  set Jewel Color . Position to 0.36
  call 1. Small Blue . sleep
    milliseconds 2500
  set left_drive . Direction to Direction FORWARD
  set right_drive . Direction to Direction REVERSE
  set Power
    right_drive to 0
    left_drive to 0
  call 1. Small Blue . sleep
    milliseconds 500
  go backward
  set left_drive . Power to -0.3
  set right_drive . Power to -0.3
  call 1. Small Blue . sleep
    milliseconds 250
  set left_drive . Po

call 1. Small Blue . sleep
  milliseconds 250
set left_drive . Power to 0
set right_drive . Power to 0
call 1. Small Blue . sleep
  milliseconds 1000
go straight
set Power
  right_drive to -0.3
  left_drive to -0.3
call 1. Small Blue . sleep
  milliseconds 1100
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
  milliseconds 1000
turn to deposit glyphs
set left_drive . Power to -0.4
set right_drive . Power to 0.8
call 1. Small Blue . sleep
  milliseconds 1020
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
```

```
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
  milliseconds 500
final forward to deposit glyphs
set Power
  right_drive to 0.18
  left_drive to 0.18
call 1. Small Blue . sleep
  milliseconds 900

call Telemetry . update
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
  milliseconds 500
drop
set Jewel Color . Position to 0.36
set slider . Direction to Direction REVERSE
set slider . Power to 1
call 1. Small Blue . sleep
  milliseconds 1000
set slider . Power to 0
call 1. Small Blue . sleep
  milliseconds 500
call 1. Small Blue . sleep
  milliseconds 500
set Gripper . Position to 0.15
set slider . Direction to Direction FORWARD
set slider . Power to 1
call 1. Small Blue . sleep
  milliseconds 500
set slider . Power to 0
back up
set left_drive . Direction to Direction REVERSE
set right_drive . Direction to Direction FORWARD
set left_drive . Power to 0
set right_drive . Power to 0
call 1. Small Blue . sleep
  milliseconds 1500
set left_drive . Power to 0.25
set right_drive . Power to 0.25
call 1. Small Blue . sleep
  milliseconds 450
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
  milliseconds 500
repeat while   call 1. Small Blue . opModeIsActive
do  call Telemetry . update
    call 1. Small Blue . sleep
      milliseconds 500
set slider . Power to 0
back up
set left_drive . Direction to Direction REVERSE
set right_drive . Direction to Direction FORWARD
set left_drive . Power to 0
set right_drive . Power to 0
call 1. Small Blue . sleep
  milliseconds 1500
set left_drive . Power to 0.25
set right_drive . Power to 0.25
call 1. Small Blue . sleep
  milliseconds 450
set Power
  right_drive to 0
  left_drive to 0
call 1. Small Blue . sleep
  milliseconds 500
repeat while   call 1. Small Blue . opModeIsActive
do  call Telemetry . update
    call 1. Small Blue . sleep
      milliseconds 10
```

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