

```
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// Example Line Follower Program for the Rover5 Line Follower Kit
// To Be Used With Arduino Duemilanove Microcontrollers
//
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// Assigment of functions to port pins
int S0 = 2;
int S1 = 3;
int S2 = 4;
int S3 = 5;
int ENA = 6;
int out = 7;

void setup()
{
  Serial.begin(9600);
  Serial.println("\r\n\r\nColor Sensor Test v1.0\r\n");
}
```

```
}
```

```
void loop ()
```

```
{
```

```
int x;
```

```
unsigned long time, elapsed, last_time, final;
```

```
digitalWrite(ENA, LOW); // Enable sensor
```

```
digitalRead(S0); // Digital Read Rise of S0
```

```
digitalRead(S0); // Digital Read Fall of S0
```

```
for ( x = 0; x < 10; x++)
```

```
{
```

```
while (digitalRead (out) == LOW);
```

```
time = micros ();
```

```
// elapsed = time - last_time;
```

```
// last_time = time;
```

```
while (digitalRead (out) == HIGH);
```

```
// final = (elapsed + final)/2;
```

```
time = micros()- time;
```

```
final = (final + time) / 2;
```

```
}
```

```
Serial.println(final);
```

```
}
```