How to build a Loc camera with panning.

Document created 3-6-2020

Rev A: 9-6-2020 – hardcoded WIFI credentials are replaced with log-on box.

Rev B: 19-6-2020 – code changes – and detailed setup and configurations for Blynk and ESP8266

By Jens Krogsgaard, jenskrogsgaard@gmail.com, Syrenvaenget 10, 3520 Farum, Denmark - +4542669987



Content

1	Summary	/	2
1.1	1 Cons	struction of the wagon	3
	1.1.1	Bottom plate	3
	1.1.2	Gear	3
	1.1.3	Servomotor	4
	1.1.4	ESP8266 – Node MCU	4
	1.1.5	Power supply	5
	1.1.6	Camera	5
	1.1.7	Connect Node CMU with servo and battery	6
1.2	2 BLYN	NK — app	7
	1.2.1	Import a copy of my Blynk app	7
	1.2.2	Make your own Blynk-app from scratch1	2
1.3	3 Codi	ing the Node MCU – ESP82661	5

1 Summary

This document contains a description of how I designed and programmed a camera wagon. The camera can pan and it is controlled by an ESP9266 Node MCU. To operate the camera, I have made an a Blynk app.



Check the YouTube video regarding this project: - click on the picture to start the video



1.1 Construction of the wagon

1.1.1 Bottom plate



Metal plate $-31 \times 200 \times 3$ mm. The weight of the plate stabilizes the wagon when driving Bought in Bauhaus and cut out.

The bottom plate is designed to match the wagon from Rollende Landstraße / Rolling Road

1.1.2 Gear

I have used 3 gear-wheels:

- wheel 31,5 mm
- 1 wheel 21,5 mm is used.

Bought at Conrad.de: <u>https://www.conrad.de/de/search.html?search=237663</u>

Shafts 4 mm – bought at bauhaus



Glue a metal disc onto the gear-wheel to carry the camera - check that it is magnetic

1.1.3 Servomotor

https://www.elextra.dk/details/H34768/servomotor-mikro-3-72vdc-120ms-60-9g



The servo is mounted on a 31 x 44 x 2 mm plastic plate

The screws are 3 mm - from the Bauhaus. The bushings are plastic tubes.

1.1.4 ESP8266 – Node MCU

https://www.conrad.de/de/p/joy-it-entwickler-platine-node-mcu-esp8266-wifi-1613301.html



1.1.5 Power supply

I have used a 9V battery - Here you might consider a different solution so you don't have to change the battery.

A toggle switch to disconnect battery power is also necessary.



1.1.6 Camera

Polaroid Cube+ - wifi.

Unfortunately, it does not appear to be available anymore



1.1.7 Connect Node CMU with servo and battery



The servo with its three wires is connected in this way:

- Yellow signal D4
- Red 3v
- Black Ground

The battery is connected to GND and VIN

1.2 BLYNK – app

Here there are two options:

- Import a copy of my Blynk app
- Make your own Blynk-app from scratch

These two options are described in the next two chapters.

1.2.1 Import a copy of my Blynk app.

Follow the guide below step 1 to 5 to import a full functional copy of my app.

When you have imported my Blynk app – you can make all the changes to it that you want.

Step No	Description	Clip				
1	Install Blynk – app on mobile	Image: Oister 11.54 √ Q Blynk ⊗ Annuller				
		Blynk - IoT for Arduin Værktøjer ★★★★☆ 6				
		DRAGE-N-DROP WIDGETS TO CREATE YOUR OWN APP				
		Install the App – it is free.				

Step No	Description	Clip
2	Create an account	III OISTER
		Email
		Password
		Next



Step No	Description	Clip
4	Check the project. The project 'Kamerawaggon – basic' should now have been imported. This is the basic project with functionality to operate the servo. You kann change it – add extra texts – buttons and pictures. To do that you must buy more' Energy' – I have bought for 59 dk – it is 7-8 Euro. You can start with this basic app – and see how it works.	IDISTER 12.42 Kamerawaggon - ba: Image: Comparison of the second
5	Get the Blynk Token	To get the Blynk-token – press this button

Step	Description	Clip
No		12 42 A
		(E) Kamerawaggon - bay (O)
		11 OISTER 🛜 12.42 7 💻
		Project Settings ок
		Kamerawaggon - basic
		SHARED ACCESS
		Generate Link
		4 1000
		How it works
		DEVICES
		Drejekamera v2
		NodeMCU (WiFi)
		AUTH TOKEN
		0ijkmy4v6wvQZsybaza98ANI2E0n_xbG
		Refrech E Mail
		Now you can see your Token – it is NOT the same as shown
		on the picture above.
		Presse the E-mail-button – and your token will be email'ed to
		, , , , , , , , , , , , , , , , , , , ,

1.2.2 Make your own Blynk-app from scratch

Follow the guide below if you want to make your own Blynk app – and not a copy of my app. See previous chapter.

There are many videos on YouTube describing how to work with Blynk.

Take a look at this video: <u>https://www.youtube.com/watch?v=EYrEjC3QEew&t=8s</u>

Install the Blynk app on your Mobile or iPad and follow the instructions in the video above.

Make sure to get the authorization code – you shall use it later.

Below a description of the Blynk app to control the Servo:





	Detail for: The select speed slider
Speed O	NB: the values goes from 20 to 0
V1 20 1	The speed is implemented as an delay in
DECIMALS	miniseconds between each change of degree.
# 4	Example – go from 45 to 90 degree.
	We loop from 45 to 90 – that is 45 steps. In each step we have a delay – if the value of the is small – for example 5 – then the speed is fast.
OFF ON	If the delay is high – for example 18 – then the speed is slow
V2 0 1	Detail for: This is button 0 degree – V2.
	The other 4 buttons are identical – of course
PUSH SWITCH	another pin (v3 – v4 – v5 – v6) and another label
ON/OFF STATES	
OFF LABEL ON LABEL	
ON ON	
OFF BACKGROUND ON BACKGROUND	
EDGES	
ROUNDED SHARP PILL TEXT	
STYLE	
SOLID OUTLINE	

1.3 Coding the Node MCU – ESP8266

Coding of the Node MCU is done in the Arduino environment. First you must configure the Arduino IDE – and the compile the code and send it to the ESp8266.

If you are new in Arduino coding you might want to have a look on this video:

https://www.youtube.com/watch?v=p06NNRq5NTU&t=331s

Follow the guide below to code the Node MCU – step 1 to 14.

Step	Description	Clip
No		
1	Install Arduino https://www.arduino.cc/en/Main/Software	⊘ Ardulino - Software × + ← ⇒ ○ ▲ https://www.ardulino.cc/en/Main/Softw Siz ☆ ☆ ● ④ Synkroniserer II ThinkVantage Syste. Download Microsof ▲ Indstillinger Miwula street view Ny fane Q ● \$10 N
		Download the Arduino IDE
		ARDUINO 1.8.13 Windows Installer, for Windows 2IP file for non a Are open-source Arduino Software (IDE) Windows app Requires W The open-source Arduino Software (Software Context) Windows app Requires W Dated on Processing and other open-source software. Mac OS X 10 10 or newer Dated on Context Diasoftware can be used with any Arduino bard. Refer to the Getting Started page for Linux ARM 32 bits
		Install the program
		🖽 Windows Sikkerhed
		Vil du installere dette enhedsprogram?
		Navn: Adafruit Industries LLC Porte (COM og LP Udgiver: Adafruit Industries
		Hav altid tillid til programmer fra "Adafruit Installer Installer Installer ik Industries".
		Du bør kun installere driverprogrammer fra udgivere, du har tillid til. <u>Hvordan afgør jeg, hvilke enhedsprogrammer der er sikre at installere?</u>
		I have installed this program also

Step No	Description	Clip
2	Start Arduino IDE form the desktop Icon	Windows Sikkerhed-meddelelse
		Windows Defender Firewall har blokeret nogle af funktionerne i denne app
		Nogle af funktionerne i Java(TM) Platform SE binary er blokeret på alle offentlige og private netværk af Windows Defender Firewall. Navn: Java(TM) Platform SE binary Udgiver: Orade Corporation Sti: C:\program files (x86\\arduino\java\bin\javaw.exe
		Tillad, at Java(TM) Platform SE binary kommunikerer på disse netværk: <mark>IØPn</mark> vate netværk, f.eks. et hjemme- eller arbejdsnetværk
		Offentlige netværk, f.eks. dem i lufthavne og på caféer (anbefales ikke, da disse netværk ofte kun har en ringe eller ingen sikkerhed)
		Hvad er risikoen ved at tillade en app via en firewall?
3	Connect the ESP8266 to the PC with USB-cable	
4	Check com-port	📩 Enhedshåndtering
	number. In this Example is et COM3	Filer Handling Vis Hjælp
		> DESKTOP-JQQQVCP > Desktorer
		> 👔 Billedenheder
		> 🖓 Brugerstyrede inputenheder
		> Computer
		Hukommelsesteknologienheder
		> 🦏 IDE ATA/ATAPI-controllere > 🍇 Lagerenhedscontrollere
		> Lyd-, video- og spil-controllere
		 Mus og andre pegeredskaber
		 > Interverkskort > Porte (COM og LPT)
		Silicon Labs CP210x USB to UART Bridge (COM3)
		Processorer Skærme
		> 🛶 Skærmkort
		> Losswareenneder
		> 🔤 Tastaturer > 🚍 Udskriftskøer
		> 🖗 USB-controllere (Universal Serial Bus)

Step	Description	Clip
No		
		Now choose this port in Arduino:
		CameraWaggon_v0 Arduino 1.8.13 Fil Rediger Sketch Værktøjer Hiælp
		Automatisk formatering Ctrl+T
		Arkivér skitse Camera Vargen Fix Encoding & Reload
		/* Cube Camera Manage Libraries Ctrl+Shift+I
		Servo contro 31-5-2020 - Serial Plotter Ctrl+Shift+L
		rev A - 9-6- WiFi101 / WiFiNINA Firmware Updater
		fdefine BLYNK Board: "NodeMCU 1.0 (ESP-12E Module)"
		<pre>\$include <esp8 "115200"="" #include="" <blyn="" count="" heled="" pre="" }<=""></esp8></pre>
		#include <serv< td=""> Opload Speed: 115200 / #include <serv< td=""> CPU Frequency: "80 MHz" ></serv<></serv<>
		<pre>#include <wifi "4mb="" (fs:2mb="" <="" flash="" ota:~1019kb)"="" pre="" size:=""></wifi></pre>
		<pre>#include <eepr "disabled"="" debug="" port:=""> #include <doub "none"="" debug="" level:="">></doub></eepr></pre>
		#define DRD_TI IwIP Variant: "v2 Lower Memory"
		DoubleResetDet
		// auth kode f char auth[] = Erase Flash: "Only Sketch"
		int oldPos; // SSL Support: "All SSL ciphers (most compatible)"
		int stepPos; / Get Board Info CC
5	Open Arduino IDE	sketch jun19a Arduino 1.8.13
5		Fil Rediger Sketch Værktøjer Hiælp
		sketch_jun19a
		<pre>void setup() {</pre>
		// put your setup code here, to run once:
		<pre>void loop() {</pre>
		<pre>// put your main code here, to run repeatedly:</pre>
		}
		Francishar
6	Install ESP8266 – board	Settings Network
		Sketchbook location:
	Choose File -> Properties –	C:\Users\Bruger\Documents\Arduino Br
		Editor font size: 12
	 sketch_jun19a Arduino 1.8.13 Fil Rediger Sketch Værktøjer Hiælp 	Interface scale: Automatic 100 + % (requires restart of Arduino)
	Ny Ctrl+N	Theme: Default theme v (requires restart of Arduino) Show verbose output during: compilation unload
	Åbn Ctrl+O	Compiler warnings: None ~
	Sketchbook	Display line numbers Enable Code Folding
	Eksempler >	Check for updates on startup Save when verifying or uploading
	Gem Ctrl+S	Use accessibility features
	Gem som Ctrl+Shift+S	More preferences can be edited directly in the file
	Sideopsætning Ctrl+Shift+P - Udskriv Ctrl+P	C:\Users\Bruger\AppData\Local\Ardwino15\preferences.bd (edit only when Ardwino is not running)
	Egenskaber Ctrl+Comma	Ok Ar
	Afslut Ctrl+Q	Convita LIPI for the line below to the
		"Additional boards Manager UPL"
	http://arduing.acm9266.com/stable/acelear	Additional boards Widnager UKL
1	nttp://arduino.esp8266.com/stable/package_es	uszbcom_index.json

Step	Description	Clip
No		
7		> sketch.jun19a Arduino 1.8.13 "ill Rediger Sketch Verktøjer Hjælp Void setup() // put your setich_jun19a void setup() { // put your setial Nonitor Ctrl+Shift+I Serial Nonitor Void loop() { // put your Port Port Arduino Uno Autor Yan
		Programmer: "AVRISP mkll" Burn Bootloader Arduino Namo Arduino Maga 256 Arduino Mega ADK
		Boards Manager
		Type All esp8266 esp8266 by ESP8266 Community Boards included in this package: Generic ESP8266 Module, Generic ESP8285 Module, ESPDuino (ESP-1 ESPresso Lite 1.0, ESPresso Lite 2.0, Phoenix 1.0, Phoenix 2.0, Node MOD-WIFI-ESP8266(-DEV), SparkFun ESP8266 Thing, SparkFun ESP8 D1 R2 & mini, LOLIN(WEMOS) D1 mini Pro, LOLIN(WEMOS) D1 mini Lit Arduino, 4D Systems gen4 IoD Range, Digistump Oak, WiFiduino, Am ITEAD Sonoff, DOIT ESP-Mx DevKit (ESP8285). Online Help More Info
		ather HUZZAH ESP8266, Invent One, XinaBox CW01, ule), NodeMCU 1.0 (ESP-12E Module), Olimex Fun Blynk Board, SweetPea ESP-210, LOLIN(WEMOS) no (ESP-12 Module), ThaiEasyElec's ESPino, WifInfo, Wio Link, ESPectro Core, Schirmilabs Eduino WiFi, 2.7.1 V Install
		Now – hit the Install button
8	Choose the NodeMCU 1.0 board – as shown belo	bw

Step	Description			Clip		
No	skotch jup10a l Ar	Juino 1 9 12				
	il Rediger Sketch V					
	sketch_jun19a	Automatisk formatering Arkivér skitse Fix Encoding & Reload Manage Libraries	Ctrl+T Ctrl+Shift	:+1		
	// put your	Serial Monitor Serial Plotter WiFi101 / WiFiNINA Firmware Update	Ctrl+Shift Ctrl+Shift er	:+M :+L		
	void loop() {	Board: "Arduino Uno"			Boards Manager	
	<pre>// put your : }</pre>	Port Get Board Info		>	Arduino AVR Boards > ESP8266 Boards (2.7.1) >	Generic ESP8285 Module ESPDuino (ESP-13 Module) Adafruit Feather HUZZAH ESP8266
		Programmer: "AVRISP mkII" Burn Bootloader		>		Invent One XinaBox CW01 ESPresso Lite 1.0 ESPresso Lite 2.0 Phoenix 1.0 Phoenix 2.0 NodeMCU 0.9 (ESP-12 Module) NodeMCU 1.0 (ESP-12E Module) Olimex MOD-WIFI-ESP8266(-DEV) SparkFun ESP8266 Thing Day
9	Add extra Libr Go to this mer	aries nu ^{ino 1.8.13}				
	Fil Rediger Sketch Væ	r <mark>ktøjer</mark> Hjælp Automatisk formatering	Ctrl+T			
		Arkivér skitse	curri			
	sketch_jun19a	Fix Encoding & Reload	Ctrl+Shift	t+I		
	void setup() { // put your	Serial Monitor	Ctrl+Shift	t+M		
	Now you mus The 3 library's	Serial Plotter t add 3 Library's – choose th s is listed below:	Ctrl+Shift ne last v	ersion	– and install them	
	Find Blynk lib	rary – and install it				
	👳 Library Manag	er				
	Type All	∨ Topic All ∨ <mark>Blyn</mark>	<mark>ık</mark>			
	Blynk by Volodymyr S Build a smartph ESP8266, ESP32 micro:bit, DFRob More info	hymanskyy one app for your project in minutes! , Arduino UNO, Nano, Due, Mega, Zerc ot, RedBearLab, Microduino, LinkIt ON	It supports o, MKR100, E	s WiFi, B Yun, Ras	LE, Bluetooth, Ethernet, GSI spberry Pi, Particle, Energia,	M, USB, Serial. Works with many boar ARM mbed, Intel Edison/Galileo/Joule
	Find WiFiman	ager library – and install it:				

Step No	Description	Clip
	 Library Manager Type All Topic All wifi manager wifi manager by tzapu, tablatronix WiFi Configuration manager with web configuration portal for and custom parameters at runtime. More info 	• ESP boards Library for configuring ESP8266/ESP32 modules WiFi creden
	Find DoubleResetDetector library – and install it	t
	Control Contro	etector
	DoubleResetDetector by Stephen Denne Library to detect a double reset, using ESP8266 RTC Memory re-configuration of a device's wifi. <u>More info</u>	An alternative start-up mode can be used. One example use is to allow
10	Remove existing code – and paste in the code	When you start Arduino – there are some line with codes – remove these lines sketch_jun19b Arduino 1.8.13 – – × Fil Rediger Sketch Værktøjer Hjælp sketch_jun19b roid setup() { // put your setup code here, to run once: } void loop() { // put your main code here, to run repeatedly: } Now copy and paste in the code-lines (see row below) Save the projects

Step	Description	Clip	
No			
		CameraWaggon_v0 Arduino 1.8.13	
		Fil Rediger Sketch Værktøjer Hjælp	
		Ny Ctrl+N	
		Åbn Ctrl+O	
		Open Recent >	
		Sketchbook >	
		Eksempler > nd movement 0	
		Luk Ctrl+W ard	
		Gem Ctrl+S led wifi crede	
		Gem som Ctrl+Shift+S	
		Sideonsætning Ctrl+Shift+P	
		Lldskriv Ctrl+P 56_b>	
		Egenskaber Ctrl+Comma	
		Afslut Ctrl+Q	
		Jinorado Aprilantin	
		Choose a destination and name for the project	
	<pre>/* Cube Camera Pan - v3 Servo controle - speed and movement 0 to 180 degree 31.5-2020 - Jens Krogsgaard rev A - 9-6-2020: Hardcoded wifi credentials and blynk token is replaces with logon-box. */ Hdefine BLYNK_PRINT Serial Hinclude <esp8266wifi.h> Hinclude <ufimanager.h>//https://github.com/tzapu/WIFIManager Hinclude <ufimanager.h>//https://github.com/tzapu/WIFIManager Hinclude <ufimanager.h>//https://github.com/tzapu/WIFIManager Hinclude <esp80m.h> Hinclude <imager.h>//https://github.com/tzapu/WIFIManager Hinclude <esp80m.h> Hinclude Serve.h> Hinclude <ufimanager.h>//https://github.com/tzapu/WIFIManager Hinclude <ufimanager.h>//https://github.com/tzapu/WIFIManager Hinclude <ufimanager.h>/https://github.com/tzapu/WIFIMAnager Hinclude <ufimanager lin<="" lineaunal="" th=""></ufimanager></ufimanager.h></ufimanager.h></ufimanager.h></ufimanager.h></ufimanager.h></ufimanager.h></ufimanager.h></ufimanager.h></ufimanager.h></ufimanager.h></esp80m.h></imager.h></esp80m.h></ufimanager.h></ufimanager.h></ufimanager.h></esp8266wifi.h></esp8266wifi.h></esp8266wifi.h></esp8266wifi.h></esp8266wifi.h></esp8266wifi.h></esp8266wifi.h></esp8266wifi.h></esp8266wifi.h></esp8266wifi.h></pre>		

Step	Description	Clip
No		•
	if (drd.detectDoubleReset()) {	
	// when reset button is activated by a double click a reconnect to wifi i initiated.	
	Serial.println("Double Reset Detected");	
	wifiManager startConfigPortal("ConnectCameraTrain"):	
	} else {	
	Serial.println("No Double Reset Detected");	
	digitalWrite(LED_BUILTIN, HIGH);	
	<pre>// temporary notspot ConnectCamera I rain is credied wifiManager autoConnect("ConnectCameraTrain");</pre>	
	<pre>winivanager.autoconnect(connectcanterarrain), }</pre>	
	<pre>strcpy(auth, BlynkToken.getValue());</pre>	
	//if you get here you have connected to the WiFi	
	Serial.println("connectedyeey :)"); pipMode/BUILTIN_LED_OUTPUT);	
	// Initialize the BUILTIN_LED pin as an output, I like blinkies.	
	Blynk.begin(auth, WiFi.SSID().c_str(), WiFi.psk().c_str());	
	servoSpeed = 10;	
	servo.attach(2); // 2 means D4 pin of ESP8266	
	// Slider angle - 0 to 180 degree	
	BLYNK_WRITE(VO) {	
	turnServo(param.asInt());	
	}	
	BLYNK WRITE(V1) {	
	servoSpeed = param.asInt();	
	}	
	// Button - 0 degree	
	turnServo(0);	
	}	
	// Button - 45 degree	
	//Loc camera with panning.pdf Page 14 rev A: 9-6-2020	
	turnServo(45):	
	}	
	// Button - 90 degree	
	BLYNK_WRITE(V4) {	
	{unservo(90), }	
	, // Button - 135 degree	
	BLYNK_WRITE(V5) {	
	turnServo(135);	
	ر // Button - 180 degree	
	BLYNK_WRITE(V6) {	
	turnServo(180);	
	} // Turn servo an angle	
	// Speed is implemented as delay between each angle	
	// long delay - slow speed	
	// short delay - fast speed	
	void turnServo(int turnTo) r	
	េ oldPos = servo.read():	
	newPos = turnTo;	
	if (oldPos <= newPos)	
	{ for (stanPos = oldPos : stanPos <= nowPos stanPos := 1)	
	ion (stephos = olaros ; stephos <= newPos; stepPos += 1) {	
	servo.write(stepPos);	
	delay(servoSpeed);	
	}	

eke { tor (trePos = oldPos; stepPos >= newPos; stepPos == 1) { servo.write(stepPos); delay(servoSpeed); } } } } uoid loop() { bynk.run(); } 11 Copy in the Blynk-Token In the Blynk installation = step 3 = you emailed the Blynk token. Now find this token and paste into the code: That is = replace the yellow-marked text in the code above with your Blynk token. When you have done it save the project. 12 Compile the project Press the Check/compile button Image: Compile the project Press the Check/compile the project Im	Step	Description	Clip
11 Copy in the Blynk-Token In the Blynk installation - step 3 - you emailed the Blynk token. Now find this token and paste into the code: 11 That is - replace the yellow-marked text in the code above with your Blynk token. 12 Compile the project 12 Compile the project 12 Compile the project 12 Compile the project 14 Press the Check/compile button © CameraWaggon_v0 Arduino 1.8.13 Fil Rediger Sketch Værktøjer Hjælp √* Cube Camera Pan - v3 Servo controle - speed and movement 31-5-2020 - Jens Krogsgaard rev A - 9-6-2020: Hardcoded wifi cree */ #define BLYNK_PRINT Serial #include <blynksimpleeap8266.h> #include <blynksimpleeap8266.h> #include <onsserver.h> #include <onsserver.h> #include <wifimanager.h> //https://git If everything is OK- in the bottom of the screen you will now see this message:</wifimanager.h></onsserver.h></onsserver.h></blynksimpleeap8266.h></blynksimpleeap8266.h>		<pre>else { for (stepPos = oldPos ; stepPos >= newPos; stepPos -= 1) { servo.write(stepPos); delay(servoSpeed); } } void loop() { Blynk.run(); }</pre>	
12 Compile the project Press the Check/compile button CameraWaggon_v0 Arduino 1.8.13 Fil Rediger Sketch Værktøjer Hjælp Verificer CameraWaggon_v0 /* Cube Camera Pan - v3 Servo controle - speed and movement 31-5-2020 - Jens Krogsgaard rev A - 9-6-2020: Hardcoded wifi cre */ #define BLYNK_PRINT Serial #include <esp8266wifi.h> #include <esp8266wifi.h> #include <servo.h> #include <supserver.h> #include <wifimanager.h> //https://git If everything is OK- in the bottom of the screen you will now see this message:</wifimanager.h></supserver.h></servo.h></esp8266wifi.h></esp8266wifi.h>	11	Copy in the Blynk-Token	In the Blynk installation – step 3 – you emailed the Blynk token. Now find this token and paste it into the code: That is – replace the yellow-marked text in the code above with your Blynk token. When you have done it save the project.
BSS : 25680) - zeroed variables (global, set state) Sketch uses 345744 bytes (33%) of program storage space. Ma Global variables use 31420 bytes (38%) of dynamic memory, J This is Danich — in English it must be Einich	12	Compile the project	<pre>Press the Check/compile button CameraWaggon_v0 Arduino 1.8.13 Fil Rediger Sketch Værktøjer Hjælp CameraWaggon_v0 /* Cube Camera Pan - v3 Servo controle - speed and movement 0 t 31-5-2020 - Jens Krogsgaard rev A - 9-6-2020: Hardcoded wifi creden */ #define BLYNK_PRINT Serial #include <esp8266wifi.h> #include <esp8266wifi.h> #include <servo.h> #include <servo.h> #include <servo.h> #include <wifimanager.h> //https://github If everything is OK- in the bottom of the screen you will now see this message: Færdig med at kompilee Færdig med at kompile</wifimanager.h></servo.h></servo.h></servo.h></esp8266wifi.h></esp8266wifi.h></pre>

Step No	Description	Clip
		If there are errors they will belicted and you must
		correct them
13	Send the code to the FSP8266	CameraWaggon v0 Arduino 1.8.13
10		Fil Rediger Sketch Værktøjer Hjælp
		CameraWaggon v0
		/* Cube Camera Pan - v3
		Servo controle - speed and movement 0 to 180 degree 31-5-2020 - Jens Krogsgaard
		rev A - 9-6-2020: Hardcoded wifi credentials and b
		<pre>#define BLYNK_PRINT Serial</pre>
		<pre>#include <esp8266wifi.h> finclude <elumbrimnlefen8266 h=""></elumbrimnlefen8266></esp8266wifi.h></pre>
		If everything is OK – you will see this message in the bottom of the screen
		Done uploading.
		Leaving Hard resetting via RTS pin
14	Test – test – test	

Step No	Description	Clip
	If there problems connecting the Blynk app to the chapter.	e ESP8266 then take a look at the rest of this

Follow this procedure to connect the Camera Train to your wifi-network – if it not connected automatically:

- 1 Find your Blynk token from mail or in the Blynk app. Copy this token to the clipboard
- 2 Turn on the camera-train with the switch button.

3 – On your Mobile/Ipad or PC – find the hotspot 'ConnectCameraTrain – and choose this hotspot. See Examples below

Il OiSTER	-7 (-),	Choose the hotspot ConnectCamaraTrain
Wi-Fi		
✓ HomeBox-8DB0_2.4G	🔒 🗢 i	
MINE NETVÆRK		
ConnectCameraTrain	? (i)	
HomeBox-8DB0_5G	🔒 🤶 i	

IN OISTER 3G 11.57 192.168.4.1 ConnectCameraTrain	 Choose the first button – 'Configure WiFi
< > Log ind Annu	ller
ConnectCameraTr WiFiManager	aiı
Configure WiFi	
Configure WiFi (No Scan)	
Info	
Reset	
II OISTER 3G 13.26	Choose your WiFI network and type in the password.
Connected interview of the second	ller (see previous chapter).
<u>HomeBox-8DB0_2.4G</u>	Paste in this token here. Click Save.
HomeBox-8DB0_2.4G	
•••••	
oxgU9UqRgP4mWTVt-cx62sVdxq`	
save	
\wedge \vee	ок

