Problems and solutions for FOGPASS projects

19-06-2025

1. **volume related problem (like 32%,29%)**

Modified: Initializations.c

void ReadConfiguration(void)

* Declared u8 TpBf\_temp[1]; to separate the variables for the( volume and SYSTEMRST\_FLADDR)
* In line numbers 661 declared.
* In line number 667 changed TpBf0 to TpBf\_temp
* In line number 677 changed TpBf0[0] to TpBf\_temp[0]
* In line number 747 changed TpBf0[0] to ((TpBf0[0]/10) \* 10); for round the numbers (ex: if it get 42 it will changed to 40)
* And commented from line number 710 to 717 may be it repeating at another place so it is commented and other reason is it is also sharing the same variable with the volume

**23-06-2025**

**Modefied: VS10XX\_V1.C**

**void CODEC\_Config(void)**

* **ADDED SPI\_FLASH\_BufferRead(temp\_volm, AUDIO\_VOLUME, 1);//23-06-2025 for retrieve audio volume from spi flash and sending to speaker line no:11754**
* **From line number 11754 to 11761 is added in this code**
* **And commented the line number 11762 this function //VOL\_config\_read(); because this function is also doing the same thing it is retrieving the volume from spi flash and giving to speaker**
* **So, you got doubt like why you commented the function and pasted what is there in that function what is this?**
* **That function I have modified for this volume problem**
* **After modification of that function I have faced another problem which is every time if you off the device and on the device the volume value is getting for 0**
* **So I have pasted the function code before modification one because that function will work here perfect I have modified this function every time it is making to zero initially and we have to set the volume again for that reason I have done like this .**
* **If we don’t modified this function then the problem is not solved**
* **Coming to this function modification**
* **1st how it works initially before modification it will retrieve the audio value from spi\_flash and sending into the speaker so when there is a modification in that address then it will retrieve the modified value from the spi flash and sending to speaker so the volume may increase or decreased based on the value modified**
* **So I change some functionality for this function**
* **Like it will retrieve the value from the flash before sending to speaker I am checking the condition like weather the value is equal to what we set value if it is same then send to speaker if it is not same then there is a modification in value so write old volume value to spi\_flash and send the old volume to speaker and do the same process again and again compare the old and retrieve values if same send to speaker if not same its modified let change the value to old value and send to speaker**
* **Modified: key\_process.c**
* **void VOL\_config\_read(void)**
* **I have commented the old functionality and write the new functionality there you can observe the condition like checking the volumes values**
* **I think you may also got another doubt how the old volume is getting every time from system ON then retrieve the volume value from spi flash so there I am taking that value and storing in old\_volume\_strength variable if you want that, go to initializations.c file there at line number 748 I am collecting the value .**
* **You may also get doubt like if I changed the volume using switches then the value will be changed then the old\_volume\_strength variable will hold the first value only**
* **For that also I am added. if we manually changed also I am taking that value last value what we set, for that I am added old\_volume\_strength variable at key\_process.c at line number 590**

**2. The front of the display screen of the device needs to be improved. Because right now the gap between the letters of some sentences is too much**

Modified: Display.c

const u8 alphabets320241[96][73] in this two dimensional array I have changed the letter I data at line number 140

0x06, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xFC, 0xFF, 0x3F, 0xFC, 0xFF, 0x3F, 0xFC, 0xFF, 0x3F, 0xFC, 0xFF, 0x3F, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, // Code for char I

This data is modified to

0x06, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x3C, 0x00, 0x3C, 0x3C, 0x00, 0x3C, 0x3C, 0x00, 0x3C, 0x3C, 0x00, 0x3C, 0x3C, 0x00, 0x3C, 0xFC, 0xFF, 0x3F, 0xFC, 0xFF, 0x3F, 0xFC, 0xFF, 0x3F, 0xFC, 0xFF, 0x3F, 0x3C, 0x00, 0x3C, 0x3C, 0x00, 0x3C, 0x3C, 0x00, 0x3C, 0x3C, 0x00, 0x3C, 0x3C, 0x00, 0x3C, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, // Code for char I

void TopLine(void) in this function there is something to modify at line number **3877**

I have modified at line number 3877

(what I modified means sprintf((char \*)databuff sprintf((char \*)databuff," NORTH CENTRAL RAILWAYS B:%d V:%d ",Battery\_Percent,volumeStrength);",Battery\_Percent,volumeStrength);)

This is printing the top line in display when we doing simulation there it is showing

NORTH CENTRAL RAILWAYS B:95% V:100%

The problem I have seen that if B:100% THEN V:10% so there is no space in the edge so I moved one space before

So the problem cleared then it is printing normally

NORTH CENTRAL RAILWAYS B:100% V:100%

And line number **3879**

databuff[38]='%';

to

databuff[37]='%';

20-06-2025

1. Hang issue

//void HardFault\_Handler(void); //commented this line 16 in stm32fxxx\_it.h

Thinking that it may cause any problem because in this function there is a IWDG internal watch dog so there is a doubt it may causing the problem so we commented this one

stm32fxxx\_it.c file commented the **46-56** line related to HardFault\_Handler