Pontiac G8 Receiver Programming Guide

The Pontiac G8 has extra features built into it that are not enabled from the factory. These features include video in motion, receiver startup logo, blue text, and reverse camera for V9 receivers. These settings are modified by accessing an EEPROM chip inside the receiver itself, reading that data, and making the necessary changes.

Disclaimer:

I am not responsible for any damage caused by modifications you choose to make. Changing or inserting the wrong data while reprogramming or damaging the receivers connectors could potentially ruin your receiver. Please proceed with caution.

Windows Software:

Before plugging in the USB programmer, please download the necessary files. You will need the programming software and a secondary 32-bit or 64-bit driver. If you have 64-bit windows, please download and run “64bitdriver.exe”, if you have 32-bit windows please download and run “32bitdriver.exe” With the programmer connected, download and the programming software, “USBsoftware.exe”. With the program open, click “chip search” and search for 24C16. Two options appear: 24C16 5V and 24C16 3V. (fig 1) Select either of these two options. In the bottom right-hand corner, make sure “Device State: Connected” is displayed. (fig 1) Click the Read button on the software. If the lower left bar goes to 100% with no error, your drivers and programmer are working correctly. You will not need to USB programmer plunged in until after the receiver is removed.

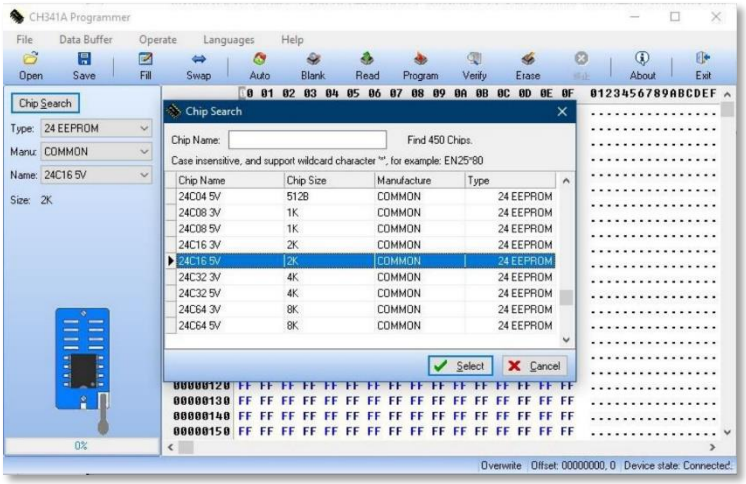

Figure 1- Set Up

Receiver Removal:

Removing the radio is very simple using common hand tools but please take your time. Remove the front face plate by pulling outwards from the bottom. If you haven't done this before, it may take some force. After the face plate is removed, there are 4 torx screws with washers, 1 on each corner. Remove the 4 screws. (fig 2) Do not pull out the receiver. There are 2 connectors you must remove first. Accessing the main radio harness on the passenger side can be done by removing the large plastic panel in the foot well below the glove box. You will clearly see the large black radio harness. It

has a lever style lock. Lift up from the bottom of the lever and pull out the harness. (fig 3) Next, you will need to remove the antenna connector on the drivers side. Begin by removing the driver side foot well plastic trim under the steering wheel. Unclip the white antenna connector on the left side of the receiver.

You can now safely slide out the receiver from the car while making sure neither connector is still attached. Next remove all the other Torx screws on the front of the receiver. These screws hole the CD player and lower base so be careful to support then when they come apart. (fig 2) Next there is several smaller screws around the trim of the CD player that will need to be removed to separate the two components. Once the radio is split into two parts, there is a ribbon cable connecting them. You can choose to disconnect it to make more room, but there is enough room with the cable still attached as well.

Figure 2 – Front of Receiver

Figure 3 – Passenger Side Connections

Connecting the Programmer:

Keep your USB programmer unplugged for now. Look down inside the radio and find the tiny little chip labeled 24C16WP. (fig 4) That is the chip we will be connecting to. Take the 8 pin clip and CAREFULLY attach it on to the chip. Assure that the red wire (symbolizing pin 1) on the USB ribbon cable is aligned with the bottom left (pin 1) on the chip. (fig 4) The black clip rests on the chips leads and will not “clip on”. Please be very gentle with the connector and take your time not to damage any pins. You can now safely connect the USB programmer to your PC. If you see 1 red light on the programmer, it is connected to the chip properly. If you see 2 red lights, it is not connected correctly and you should try and re-seat the clip.

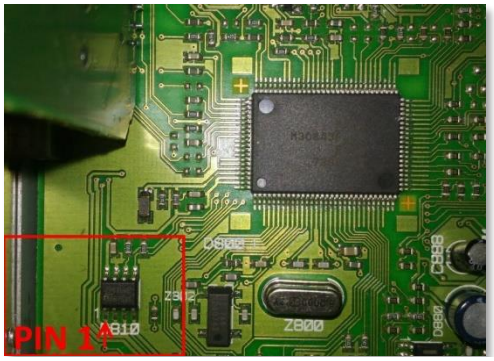

Figure 4 – Chip Location and Connection

Setting up the Programmer:

Open the “USBsoftware.exe” software. Verify that the “device state:” says “connected” in the lower right corner. Next verify that the chip type: reads “24 EEPROM”, the Manu: “COMMON”, and the Name: reads “24C16 5V” (or 3V, they both work). The click on the “Read” button on the top ribbon. If successful, it will only take 2-3 seconds, and you will see all the FF's change to the data on the chip. Now click “Verify” also on the upper ribbon. (fig 5) This will compare the chip to the file it just read and verify they are identical. If the verification fails, try to read and verify the chip again. Once the verification is complete, you will want to make a backup copy of your stock file in case you need to revert back to stock. Go to File > Save. Saving a backup of your stock radio is critical in the event there is an issue. It will save a binary file in a .bin extension. Looking at the data itself, you will see different locations called offsets with data in the way of a hex value. Offset starts at 000 and goes left to right and then top to bottom (like English text). There is a legend on the far-left column, and top row. The numbers go from 0-9, and then A-F. For example: Offset: 00A is the first row, 11th column. Offset 122 is 19th row, 3rd column. offset 3E9 is the 63rd row, 10th column, and so on. At the bottom right of the screen, it will tell you the offset you have clicked on. (fig 5)

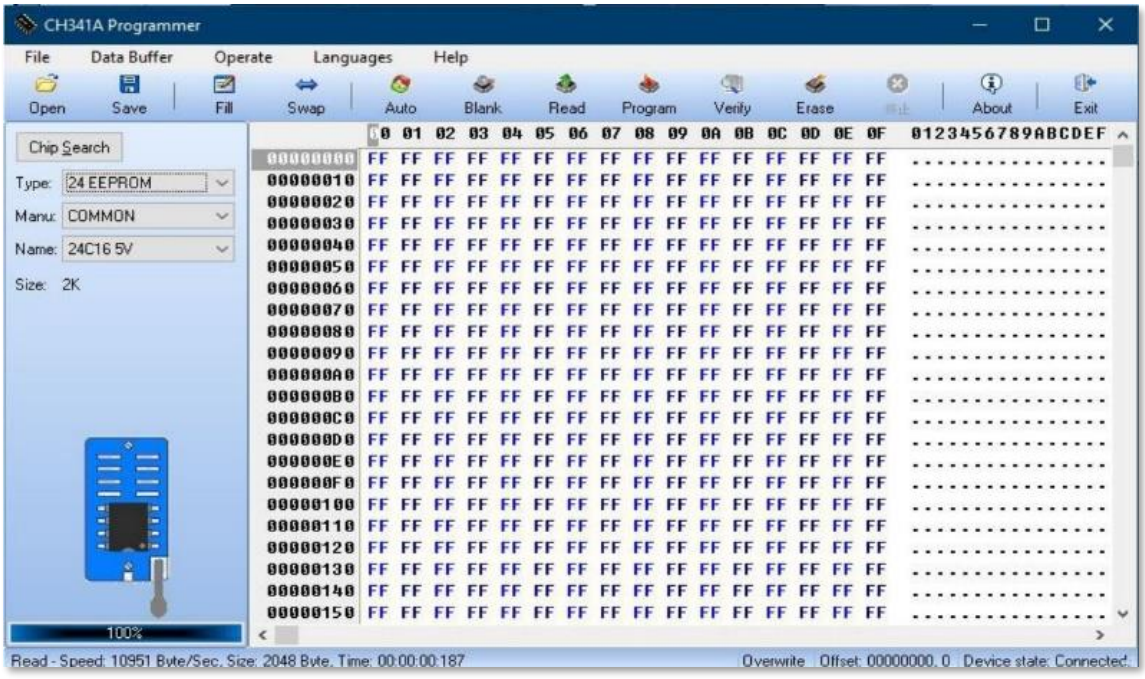

Figure 5 – Programmer Set Up

Video in Motion Reprogramming:

To unlock the ability to watch video while the car is moving, find Offset 5EC. Next to it, you will see a value 5ED. They should both read 03. These values may be shifted a spot or two. So it could be 5ED-5EE or 5EB-5EC, but there will be two side-by-side values of “03” on a stock radio. Change both of these “03” values to “FA”. (fig 6)

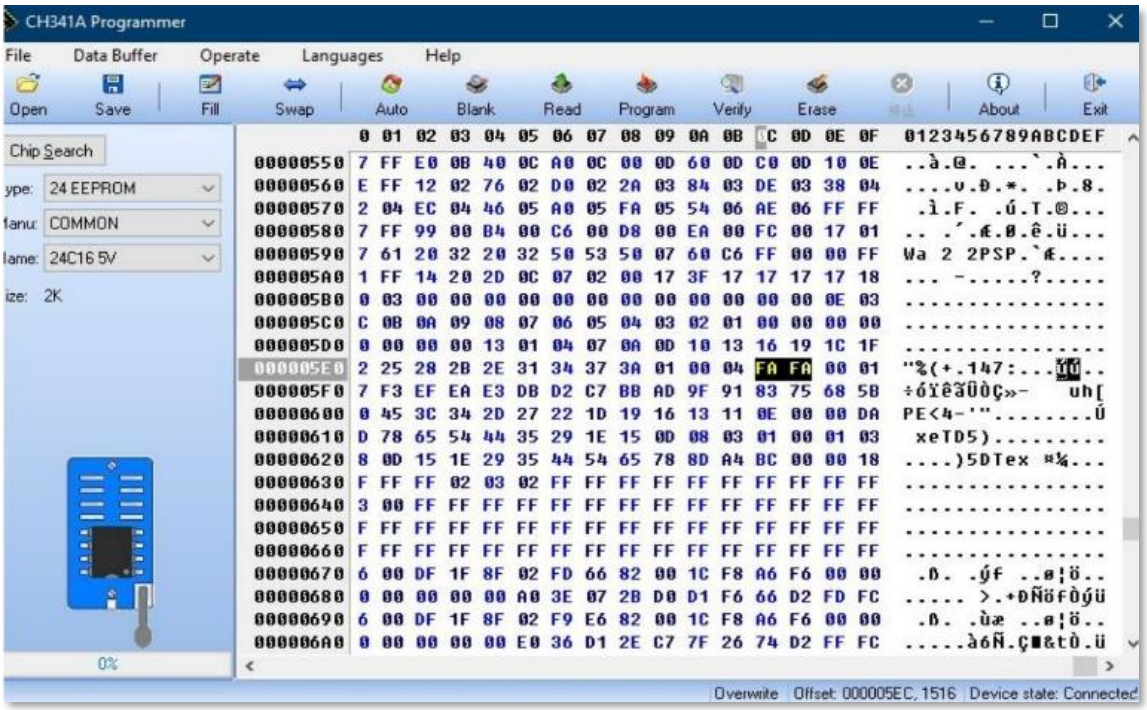

Figure 6 – VIM Set Up

Display Blue Receiver Text:

You can change your red receiver LCD text to blue. (fig 8) Change offsets 02B, 03B, and 04B from “11” to “12”. (fig 7) Please note, this will not change the button lights from red, just the display text.

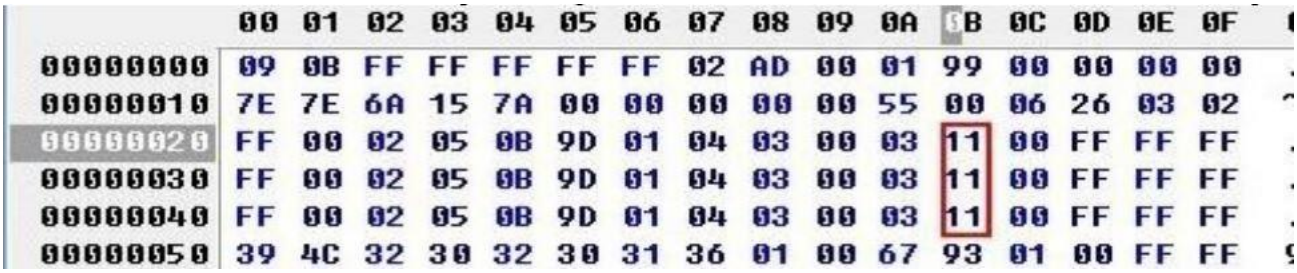

Figure 7 – Blue Text Setup

Figure 8 – Blue Text Example

Receiver Startup Logo:

The stock G8 has other startup logo/animations aside from the Pontiac logo. Go to Offset 01C. You will see hex value “06” is for the stock Pontiac logo. (fig 9) The other options are, Holden logo is “01”, Holden/Senator crest logo is “02”, Chevrolet is “03”, HSV is “04”, VXR is “05”, and Pontiac (stock) is “06”. (fig 10)

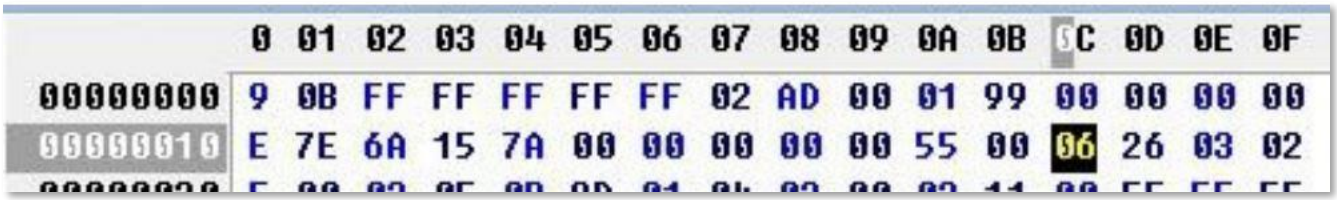

Figure 9 – Startup Logo Setup

Figure 10 – Logo Options

Reverse Camera for V9 Radios:

Only radios with head unit version V9 and up will have this feature. To check your software version, power down the radio, hold “Track Left”, “Disc Right” and “Power” buttons for 10 seconds. It will flash 3 pages, on the first page you will see “AHU MCU Version”. If it is 9.xx and above, you can do this modification. This feature enables a Reverse Cam On/Off setting in the radio's main settings menu, and when enabled, it will automatically switch to the video input that is connected into the camera-specific input on the reverse camera capable input cable. Please note this is a separate input from the rear aux video input. Find offset 00E. This will need to be changed from “00” to “55”. If this offset reads “FF”, you cannot enable this feature as your receiver is not V9 or later. Next, offset 635 needs to be changed to “01”. Note it may be “00” or “02” default. Once the receiver is reinstalled in the car, you will need to turn the Reverse Cam setting to “On”. (fig 11) Note: The stock screen includes an overlay, so be sure to use a reverse camera that does not have its own overlay guidelines. (fig 12)

Figure 11 – Reverse Camera Options

Figure 12 – Reverse Guidelines

Program the Chip:

Once you have completed any modifications you wish to make save this new revision using a new name. Then you can now press the “Program” button on the upper ribbon. Once it has been programmed, click “Verify” and ensure the verification completes. If you receive a verification error, reprogram and re-verify until this completes. If you have issues, try reinstalling the clip and repeat until the verification is a success. Then you can unplug the programmer, reassemble the receiver and install it back in the car. You may receive a “Security Lockout Active, Vehicle Data Mismatch” on first start-up after reinstalling. If this happens, turning the radio power off and on a couple times may fix it. Some have reported turning the key off and back on to clear it. If it persists after this, the data may have been programming incorrectly.

Finally, you make any modifications to your car at your own risk. I will not be responsible for damages you cause, so please research beyond this document prior to doing the work. Some bytes in the EEPROM may be shifted a few offsets in certain radios. If the hex values don't line up, don't assume that it's the correct offset to change. It may be nearby on the same line, or the next line, it depends. Proceed with caution, research, compare other bin dump files, or ask for help. If you are unsure, pay a professional to do it, or contact a vendor for a flash box that plugs into your OBD2 port that will make these changes without taking out the radio. Stay modding!

Huge thanks to Tim Rose and Nic Powell for publishing the original guide and pictures!