



## Nissan Patrol Y61 CAN Flash Information: Gen 1 ECU

The UpRev Cipher cable uses two different channels of communication with the ECU:

- 1) ISO 14230 K Line (single wire)
- 2) CAN bus (two wires: high and low)

For fastest reflash times, both communication channels must be present, and a reflash only takes about 1 minute.

If CAN bus is **not** available, the ECU can still be flashed entirely over the K Line with no hardware modification necessary, but this reflash process is slower (about 15 minutes instead of 1 minute).

The purpose of this document is to provide information to anyone who would like to enable CAN communication with their ECU. All modifications described below are entirely optional, and only serve to make the reflash process faster.

There are two possible issues with CAN bus on Patrol ECUs:

1. The wires are not connected from OBD II port to the ECU. From what we have seen, this is an issue on all Y61 Patrols.
2. Some ECUs are missing a CAN transceiver chip which is necessary for CAN communications. This is only on some Y61 Patrols. We do not know exactly which vehicles are missing this chip, but we suspect that it is only on vehicles without electronic throttle.

Both of these issues must be addressed to enable faster ECU reflashes.

## 1) Wiring the OBD Port

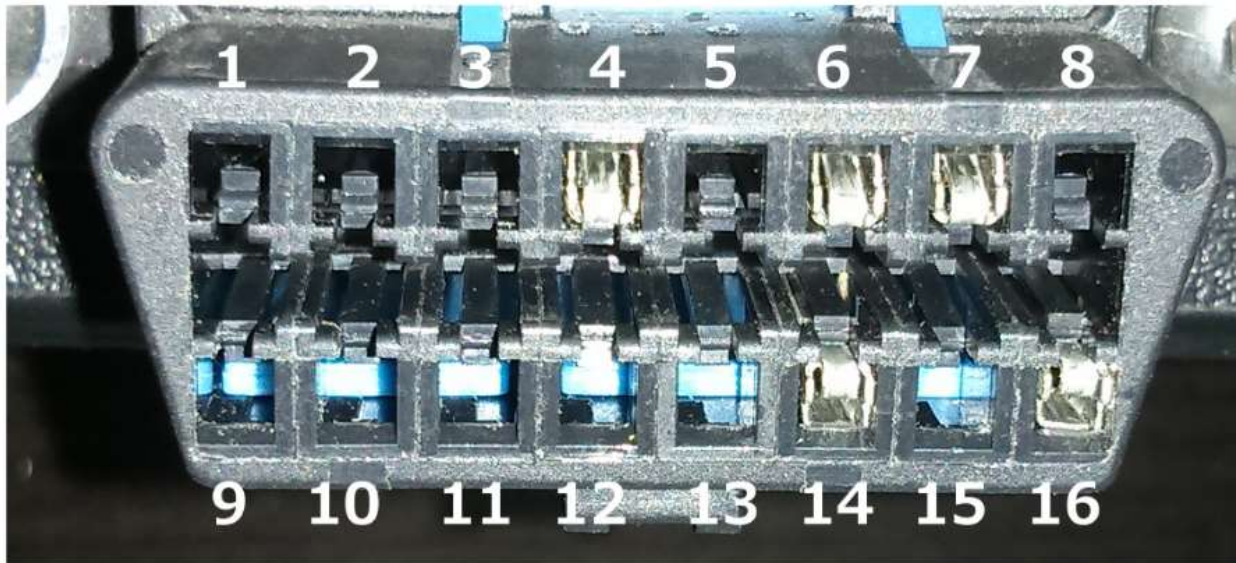
Two pins must be added to the OBD II port, and wired to the appropriate pins on the ECU harness.

**CAN High: ECU Harness Pin 174 > OBD II Pin 6**

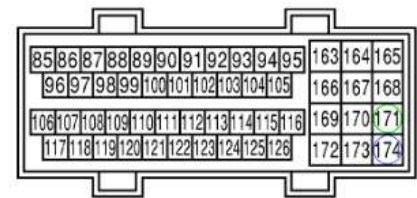
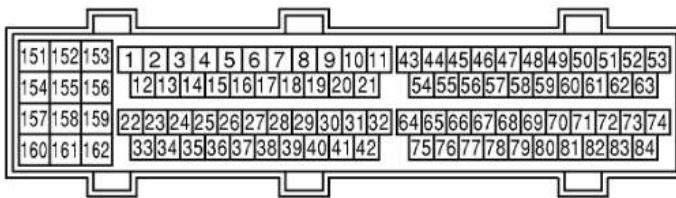
**CAN Low: ECU Harness Pin 171 > OBD II Pin 14**

See the figures below for pin locations

### OBD II Port



### ECU Harness



Pin 171 = CAN Low  
Pin 174 = CAN High

### ECU Harness

## 2) Checking for CAN Transceiver chip

Some Patrol ECUs are missing the CAN transceiver chip and supporting components. We have not been able to verify which ones have or do not have this chip for every Patrol ECU part number.

To check if the chip exists on your ECU, disconnect the ECU from the vehicle and remove the 4 screws which hold cover plate on the ECU.

Once the cover is removed, compare your ECU to the images below to determine if CAN transceiver is present.

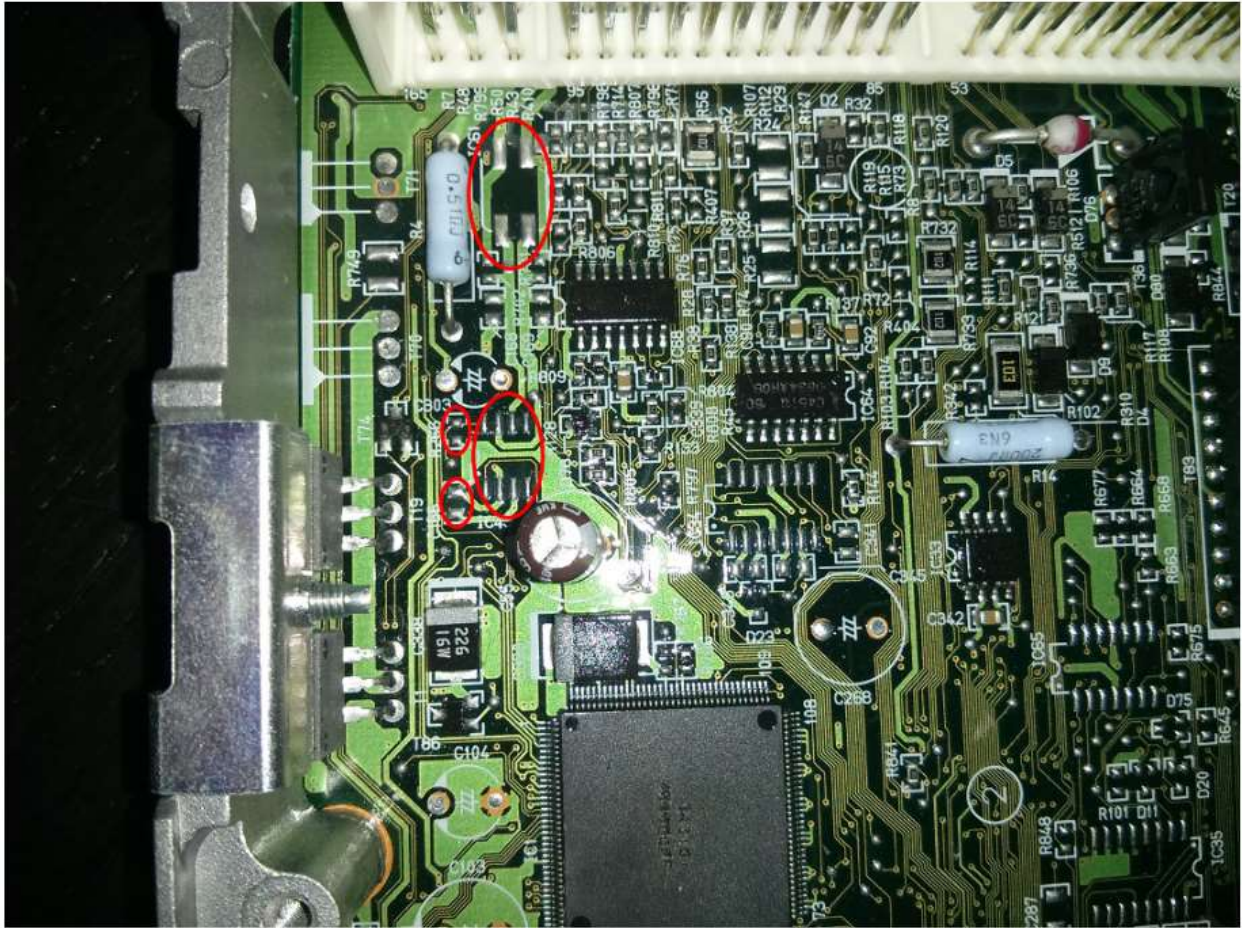
If your ECU is missing this chip and you wish to add it, UpRev can perform this modification for you. Please contact [sales@uprev.com](mailto:sales@uprev.com) for more information about this service.

### CAN Transceiver is present





**CAN Transceiver is missing**



**Required parts:**

Mouser Part #: 667 ERJ 6ENF3302V

Manufacturer Part #: ERJ 6ENF3302V

Manufacturer: Panasonic

Description: Thick Film Resistors SMD 0805 33Kohms 1% Tol

<https://mou.sr/433ikwi>

Mouser Part #: 871 B82790S253N201

Manufacturer Part #: B82790S253N201

Manufacturer: EPCOS

Description: Common Mode Filters / Chokes DATA LINE CHOKE 2X25UH 30%/+30%

<https://mou.sr/3Mxagpm>

Mouser Part #: 581 08055C104M

Manufacturer Part #: 08055C104MAT2A

Manufacturer: AVX

Description: Multilayer Ceramic Capacitors MLCC SMD/SMT 0805 0.1uF 50volts X7R 20%

<https://mou.sr/3pJG1v2>

Mouser Part #: 771 PCA82C250T/YM118

Manufacturer Part #: PCA82C250T/YM,118

Manufacturer: NXP Semiconductors

Description: Network Controller & Processor ICs CAN CTRLR 170uA 5V

<https://mou.sr/3Og3MF5>