

MiM Troubleshooting Document

Common Misunderstandings

- The Output (Active Low) from the MiM (ORANGE) wire going to KPRO ECU PIN (B9) triggers the **KPRO ECU** which controls the activation of the A/C Relay.
 - The MiM has no direct connection to the A/C System.
 - The MiM output (ORANGE) wire should **NEVER** be hooked to a **A/C RELAY** or the **A/C Compressor Clutch** directly. This will damage the unit and was not how it was intended to be used.
- The MiM has **NO** control over the A/C logic. The MiM converts a digital packet of data from the cluster into a single physical analog output to trigger the ECU. The cluster (Speedometer), ECU and electromechanical systems control the A/C system directly.
- The MiM communicates with the cluster through a **DIGITAL** signal. It is **NOT** an analog signal or triggered High/Low signal.
- The **CLUSTER** Controls both the **A/C Button Switch** and the **A/C Button Light Indicator** the MiM has **NO** interaction with these Inputs and Outputs.

Troubleshooting - Initial Checklist

- Is the connector/plug in the MiM Fully seated?
- When the car is turned on does the MiM cycle Blue/Red then stay **RED**?
 - If **NO** lights light up on the MiM check that power and ground are being supplied.
 - If the MiM does not alternate colors Blue/Red then the MiM may be defective.
- Is the vehicle warmed up (Been idling for multiple minutes or recently driven)?

Start Troubleshooting

- 1.) Start Vehicle - let it run for a few a minutes (Want coolant to warm up)
- 2.) While the Car is running. Do the following things on the gauge cluster happen?
 - Battery Light Turn [OFF]
 - Temperature Gauge Work [Rises]
- If **“NO”**
 - The MiM is **NOT** communicating with the gauge cluster over the multiplex line (purple wire).
 - Check all physical connections from MiM to cluster. MiM must be wired to pin (B4) on the cluster or pin 10 on the ECU plug E3.
 - To check, remove the cluster and disconnect the middle plug, disconnect the MiM from its harness and check that the “Purple Wire” has continuity with e Cluster pin (B4)
 - See Picture **“CLUSTER PLUG”** and **“TOYOTA ECU PLUG”**
- If **“YES”** do the following
 - Turn Blower knob to second position and confirm air is coming out of the vents.
 - Push A/C Button.
 - Does the A/C Button Indicator light turn on?
 - If **“NO”**
 - Visual inspect the MiM. What color is the indicator?
 - BLUE Indicator
 - The A/C Button indicator light may be non functional or a connection issue between Indicator and the cluster.
 - See Section **“BLUE Indicator”** if A/C compressor is not working
 - RED Indicator

- Connection between A/C button and cluster may be broken.
- It is also possible the cluster is one of the I/UP affected few. Do the following tests found in Section “**A/C High Beams**”.
- If “**YES**”
 - Visual inspect the MiM. What color is the indicator?
 - BLUE Indicator
 - See Section “BLUE Indicator”
 - RED Indicator
 - See Section “RED Indicator”

BLUE Indicator

- This Indicates the **CLUSTER** has requested A/C to be turned **ON**
- Does the A/C Compressor turn on?
 - If “**NO**”
 - Check that the MiM (Orange) wire is going to the correct ECU Pin (B9) of the KPRO
 - Make sure that in the Kpro Settings for VTPSW as A/C Input are selected inside the KPRO software.
 - Unhook the (Orange) wire from the KPRO ECU Pin (B9) that is coming from the MiM. While the MiM Indicator is Blue this wire should have continuity to **GROUND**
 - If “**YES**”
 - Go enjoy the K swap.

RED Indicator

- This is the Normal State of the MiM when it has not seen an A/C Request ON packet from the cluster.
- Contact tech support (Techsupport@mitchsautoparts.com)
- Reference (EE3) in your email subject and include the Year, Vin and if the vehicle was SMT or Manual with the answers to the questions above.

A/C HighBeams

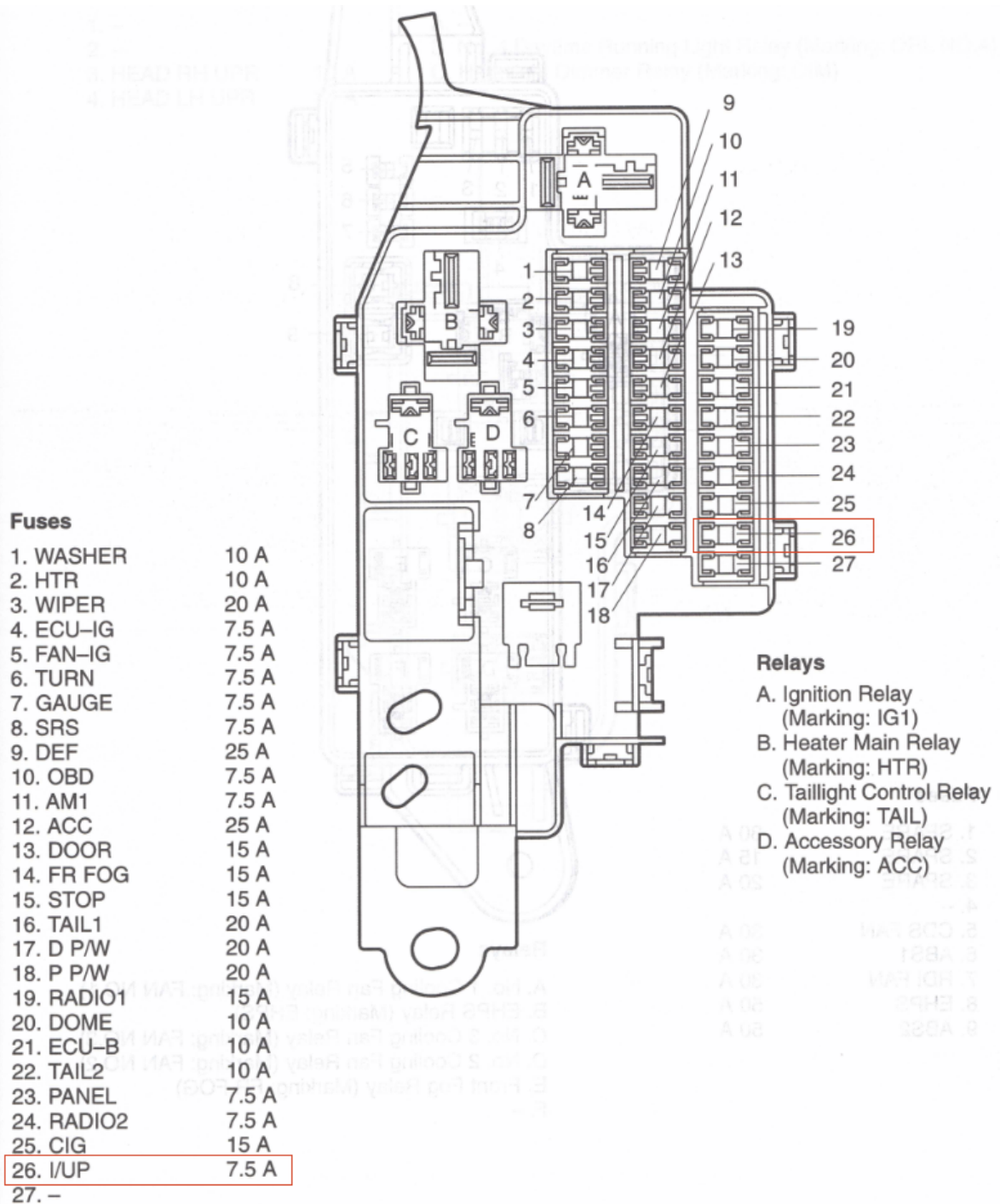
1. Turn the headlights to the **ON** position
2. Turn **ON** the High Beams
3. Press the A/C button on the climate controls
 - Does the A/C button Indicator light turn on?
 - If “**YES**”
 - Visually inspect the MiM. What color is the indicator?
 - BLUE Indicator
 - See Section “**A/C I/UP Fix**”
 - RED Indicator
 - Contact tech support (Techsupport@mitchsautoparts.com)
 - Reference (EE1) in your email subject and include the Year, Vin and if the vehicle was SMT or Manual and the answers to all the above questions.

A/C I/UP Fix

1. Turn off the high beams and the headlights.
2. Turn off the vehicle.
3. Find the fuse panel located in the driver's side footwell.
4. Open it and locate a 7.5A fuse labeled “**I/UP**” Fuse 26. See Picture “**Fuse Panel**”.
5. Remove this fuse.

6. Start the vehicle.
7. Make sure the blower knob is still in the second position and air is felt coming out of the vents.
8. Press the A/C button on the climate controls.
 - Does the A/C button Indicator light turn on?
 - If **“YES”**
 - Removal of the I/UP fuse will not affect the vehicle's operation. The factory toyota ECU has been removed and so no I/UP info can be sent to it anyway. The Kpro ECU like all Kswaps handles its own Electronic Load Detection (ELD).
 - See Section **“BLUE Indicator”**
 - If **“NO”**
 - Contact tech support (Techsupport@mitchsautoparts.com)
 - Reference (EE2) in your email subject and include the Year, Vin and if the vehicle was SMT or Manual and the answer to all above questions.

FUSE PANEL (Drivers FootWell)



Fuses

| | |
|------------|-------|
| 1. WASHER | 10 A |
| 2. HTR | 10 A |
| 3. WIPER | 20 A |
| 4. ECU-IG | 7.5 A |
| 5. FAN-IG | 7.5 A |
| 6. TURN | 7.5 A |
| 7. GAUGE | 7.5 A |
| 8. SRS | 7.5 A |
| 9. DEF | 25 A |
| 10. OBD | 7.5 A |
| 11. AM1 | 7.5 A |
| 12. ACC | 25 A |
| 13. DOOR | 15 A |
| 14. FR FOG | 15 A |
| 15. STOP | 15 A |
| 16. TAIL1 | 20 A |
| 17. D P/W | 20 A |
| 18. P P/W | 20 A |
| 19. RADIO1 | 15 A |
| 20. DOME | 10 A |
| 21. ECU-B | 10 A |
| 22. TAIL2 | 10 A |
| 23. PANEL | 7.5 A |
| 24. RADIO2 | 7.5 A |
| 25. CIG | 15 A |
| 26. I/UP | 7.5 A |
| 27. - | |

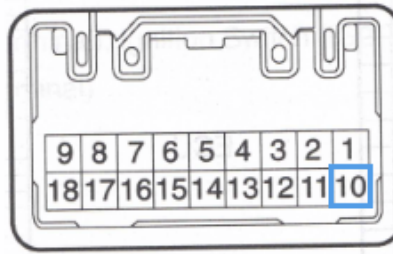
Relays

- A. Ignition Relay (Marking: IG1)
- B. Heater Main Relay (Marking: HTR)
- C. Taillight Control Relay (Marking: TAIL)
- D. Accessory Relay (Marking: ACC)

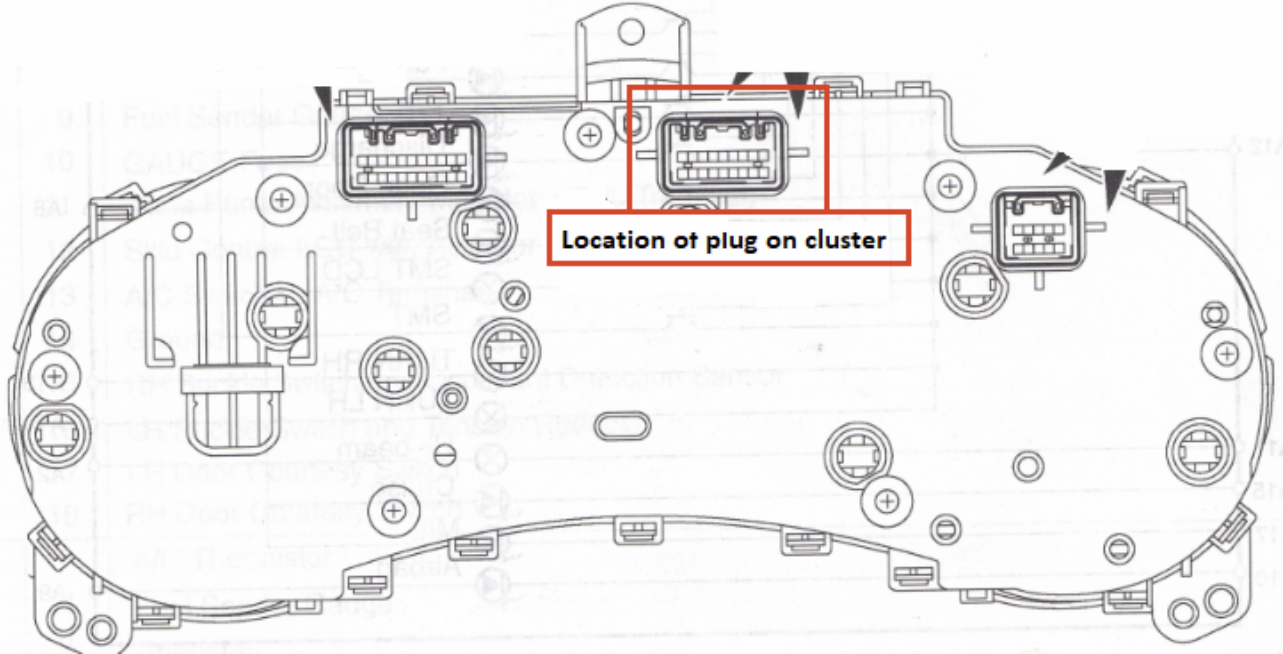
CLUSTER PLUG

C11 (Connector "B") (Blue Plug) (Typically a Blue Wire)

Connector "B"



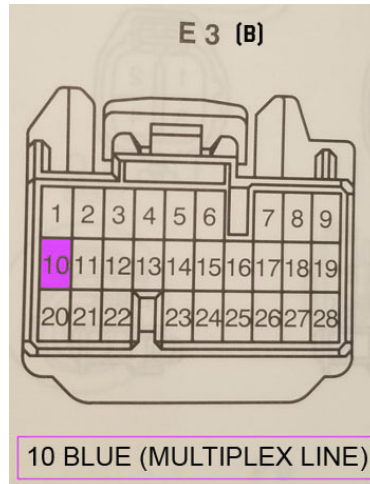
Pin (B10) - Looking at the front side of the plug. (Pins Go into holes) Wire it normally BLUE



Those using the MAP Kswap adapter harness

Those using the MAP Kswap Adapter Harness will have the Multiplex wire coming from the MiM go to this E3 plug. This plug provides a connection to the front of the car (Cluster Plug C11) Pin 4 to allow communication between the MiM and the cluster.

TOYOTA ECU PLUG E3 (Typically a Blue Wire) PIN (10)



PIN 10

MiM Wiring Reference

| Wires coming out of MiM | | | Connection to Car | |
|--------------------------|------------|---|---------------------------------|--------------|
| Function | WIRE COLOR | | Plug / Pin | WIRE COLOR |
| +12V Switched | YELLOW | | Attach to +12v Switched Circuit | N/A |
| GROUND | BLACK | | Attach to Clean Ground | N/A |
| Multiplex | PURPLE | Cut Wire coming out of Toyota ECU Plug. Attach (Solder/Crimp) to MiM Wire | TOYOTA ECU PLUG E3(B) (Pin 10) | BLUE |
| Oil Pressure Switch | BROWN | Cut Wire coming out of Honda C101 Plug. Attach (Solder/Crimp) to MiM Wire | HONDA C101 (Pin 18) | YELLOW / RED |
| Temperature Sensor (ECT) | BLUE | Tap (DO NOT CUT), MiM wire Into Wire coming out of Honda ECU Plug. Recommended to Solder Connection. | Honda ECU (B8) | RED / WHITE |
| A/C Trigger | ORANGE | DO NOT ATTACH THIS TO A A/C RELAY OR A/C CLUTCH DIRECTLY!!! Wire Directly to Honda ECU (Follow Instructions for VTPSW to A/C Input for Hondata) | Honda ECU (B9) | BLUE / BLACK |