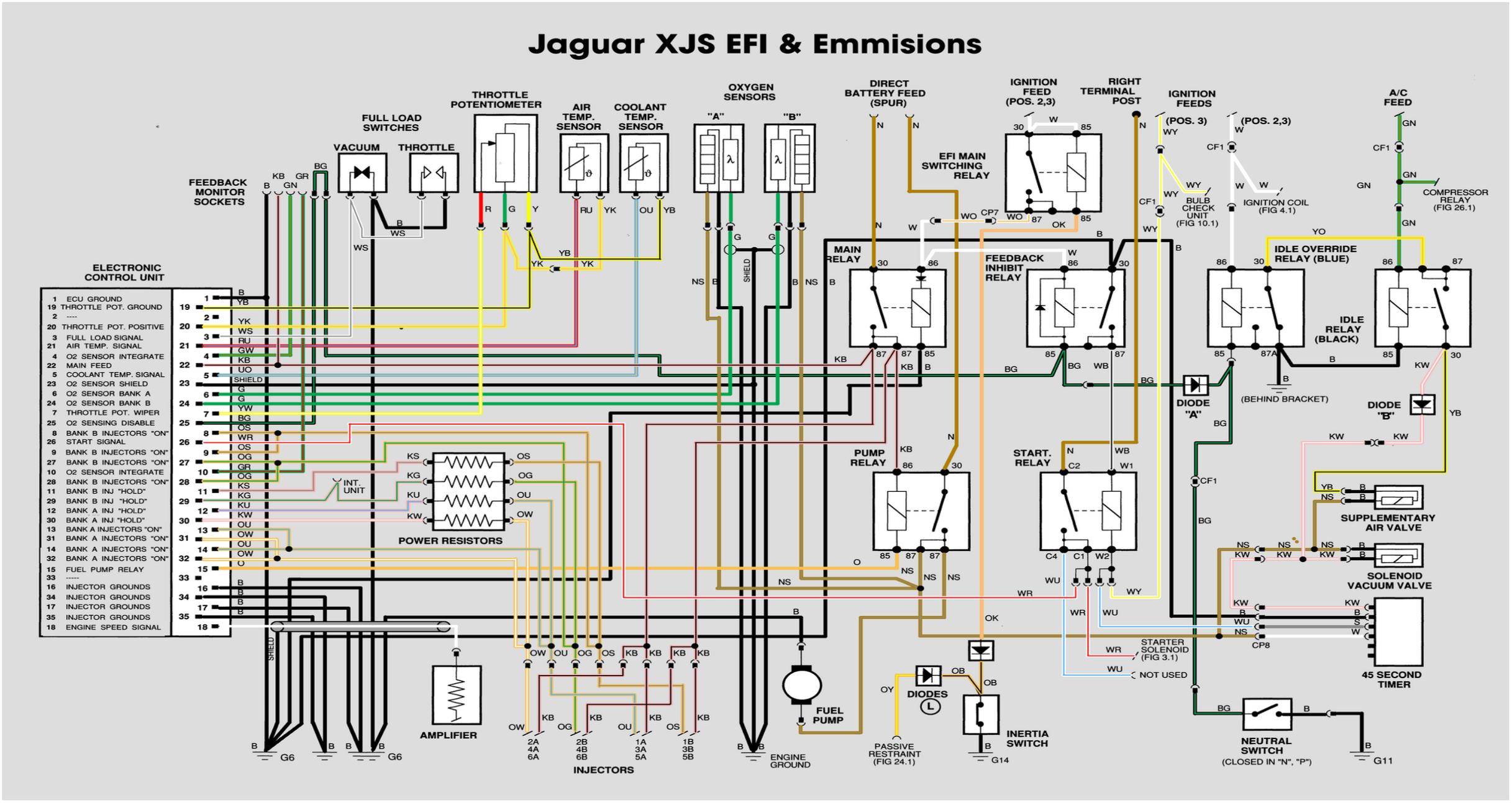


How the system works:

The ECU first opens the injectors and then holds them open by reducing the current to prevent injector burnout. The relevant signals come from the ECU pins to the injectors and resistor pack as shown in the table below. The “open” signal bypasses the injectors and the “hold” signal goes to the injectors via the resistor pack.

A BANK

INJECTOR plug signal source	Wire colour	To injector number	Explanation	Loom notes
A bank permanent 12v From ignition	Pink/brown ignition to injector	1A, 3A, 5A via the injector loom plug	The 12v permanent feed to the injectors comes on with the ignition. The pulsing is entirely controlled by the ECU via the earthing side of the injector	Note: the injector loom plugs into the car loom, it does NOT plug into the resistor pack. The car loom, **pre the resistor pack**, makes the required splices to the resistor pack.
A bank permanent 12v From ignition	Pink/brown ignition to injector	2A, 4A, 6A via the injector loom plug	The 12v permanent feed to the injectors comes on with the ignition. The pulsing is entirely controlled by the ECU via the earthing side of the injector	
ECU pin number Open pulse 13 and 14 12: A bank HOLD	Pink/blue goes TO the resistor pack from the ECU	ORANGE/blue goes FROM the resistor pack to: 1A, 3A, 5A via the injector loom plug	The ECU gives an "ON" pulse which earths the injector with unreduced current to open it initially, bypassing the resistor pack. The ECU then sends a reduced "HOLD" signal goes via the resistor pack to hold the injector open for the required pulse width using reduced current	
ECU pin number Open pulse 31 and 32 30: A bank HOLD	Pink/white goes TO the resistor pack from the ECU	ORANGE/white goes FROM the resistor pack to: 2A, 4A, 6B via the injector loom plug	The ECU gives an "ON" pulse which earths the injector with unreduced current to open it initially, bypassing the resistor pack. The ECU then sends a reduced "HOLD" signal goes via the resistor pack to hold the injector open for the required pulse width using reduced current	

B BANK

INJECTOR plug signal source	Wire colour	To injector number	Explanation	Loom notes
B bank permanent 12v	Pink/brown ignition to injector	1B, 3B, 5B via the injector loom plug	The 12v permanent feed to the injectors comes on with the ignition. The pulsing is entirely controlled by the ECU via the earthing side of the injector	Note: the injector loom plugs into the car loom, it does NOT plug into the resistor pack. The car loom, **pre the resistor pack**, makes the required splices to the resistor pack.
B bank permanent 12v	Pink/brown ignition to injector	2B, 4B, 6B via the injector loom plug	The 12v permanent feed to the injectors comes on with the ignition. The pulsing is entirely controlled by the ECU via the earthing side of the injector	
ECU pin number Open pulse 8 and 9: 11: B bank HOLD	Pink/slate goes TO the resistor pack from the ECU	ORANGE/slate goes FROM the resistor pack to: 1B, 3B, 5B via the injector loom plug	The ECU gives an “ON” pulse which earths the injector with unreduced current to open it initially, bypassing the resistor pack. The ECU then sends a reduced “HOLD” signal goes via the resistor pack to hold the injector open for the required pulse width using reduced current	
ECU pin number Open pulse 27 and 28: 29: B bank HOLD	Pink/green goes TO the resistor pack from the ECU	ORANGE/green goes FROM the resistor pack to: 2B, 4B, 6B via the injector loom plug	The ECU gives an “ON” pulse which earths the injector with unreduced current to open it initially, bypassing the resistor pack. The ECU then sends a reduced “HOLD” signal goes via the resistor pack to hold the injector open for the required pulse width using reduced current	

Injector loom plug details and how they work.

- There are EIGHT wires on the injector loom plug, matching the eight on the car loom plug it connects to.
- FOUR of these wires are **Pink/brown** and these ALWAYS carry 12 volts whenever the ignition is on.
- The other FOUR of these wires carry two types of current: FIRST the opening pulse of the full 12 volts (e.g. A bank ON in the table above) and SECOND the ECU switches the current to go via the resistor pack thus providing a reduced current to the injector to keep it open for the required duration (e.g. A bank HOLD in the above table). NOTE the same injector loom wire carries the opening pulse and the subsequently reduced pulse, the ECU managing this switch.
- Thus for injector activation purposes **there are really four PAIRS of wires in the injector loom**, each pair having one wire with a constant 12 volts and a second wire that manages the current load as organised by the ECU.
- The ECU activates the injectors by earthing them, that is the loom wire that controls the opening and the holding pulse is earthed by the ECU for the required duration to open and hold open the injector.
- **Within the injector loom itself**, it starts off at the plug with eight wires, being, as noted above, FOUR groups of TWO wires. Left alone this would only be sufficient to activate four injectors. Therefore, within the injector loom, downstream from the plug, **each pair of two wires split three ways**.
- Each split pair thus is able to activate THREE injectors. And four x three = 12 injectors activated.

Car loom to Injector loom plug colour scheme:

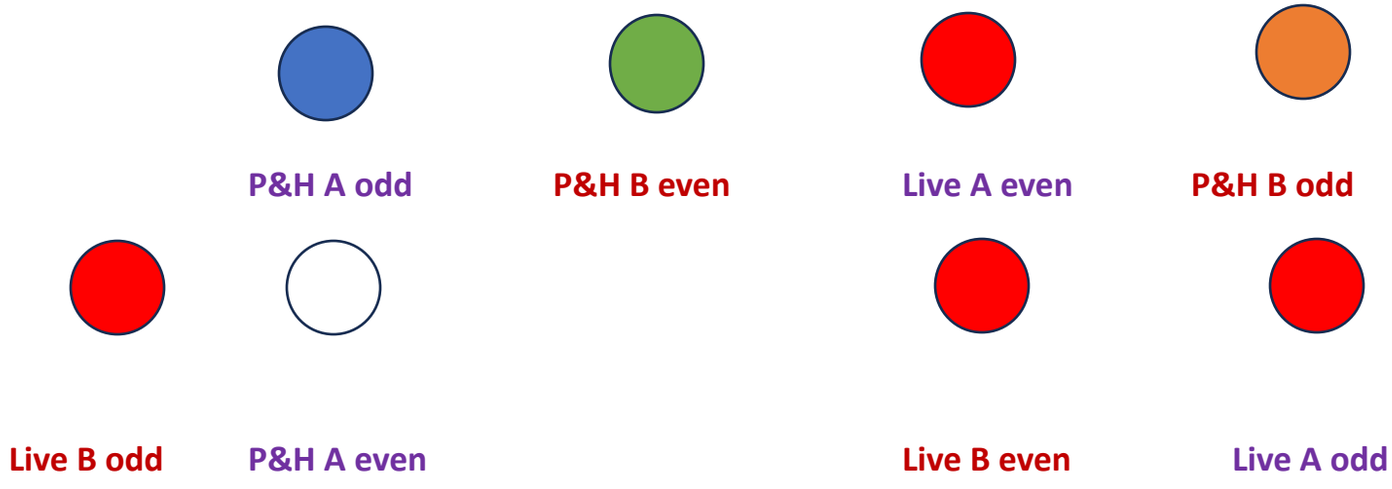
A bank colours

			New loom colour	
A bank ODD numbers	12v LIVE feed	PINK/brown	RED	
	ECU controlled Peak and hold	ORANGE/blue	BLUE	
A bank EVEN numbers	12v LIVE feed	PINK/brown	RED	
	ECU controlled Peak and hold	ORANGE/white	WHITE	

B bank colours

			New loom colour	
B bank ODD numbers	12v LIVE feed	PINK/brown	RED	
	ECU controlled Peak and hold	ORANGE/slate	ORANGE	
B bank EVEN numbers	12v LIVE feed	PINK/brown	RED	
	ECU controlled Peak and hold	ORANGE/Green	GREEN	

NOTE This diagram is looking at the BACK (ie wire entry to the plug) of the injector loom to car loom plug. This is the SAME as the FRONT of the car loom plug



Using four pin plugs this colour = the A bank plug wires needed

Using 4 pins plugs this colour = the B bank plugs needed

This schema of the OEM plug is looking at the BACK of the injector loom plug where the injector loom wires go into it. It is therefore ALSO looking at the FRONT of the car loom plug where the injector loom plugs into it.