

Product: 29EC

1.1. Technical description of apparatus

1.1.1. Block diagrams

Refer to the block diagram in figure 5. 29EC is a simple amplifier driving a resonant choke that acts as a magnetic antenna. A signal provided at the input is boosted by the transistor stage and fed to a resistor, capacitor and the choke connected in series. The capacitor is chosen to tune out the inductance of the choke and the resistor limits the current. The choke is mounted off the PCB to increase the resulting magnetic field.

The DC power supply comes from a switched output on the 14RC ECU. After a short stabilisation period a 125kHz. drive signal is transmitted. The drive signal is on-off keyed to transmit data to the wheel sensors.

The diagram illustrates a vehicle system with four tires, each containing an SP301 TPM Transmitter. The vehicle's internal components include a TPM Receiver and a Vehicle unit. The TPM Receiver is connected to two LF Initiator (optional) units, which in turn connect to the Vehicle unit. The Vehicle unit is also connected to two LF Initiator (optional) units. Communications are shown between the TPM Receiver and the transmitters, and between the Vehicle and the transmitters. Labels indicate LF Communication (to SP301 Optional) and RF Communication (from SP301).

Figure 5: Block diagram of 29EC initiator

