

## Generic Nissan Engine ECU Register Table.

This is a list of all known registers and their function. Any particular ECU will only respond to a sub-set of these depending on the engine type and configuration. Please report inaccuracies back to the Nissan Technical egroup.

### INITIALISATION 0xFF 0xFF 0xEF

SELF DIAGNOSTIC	0xD1
ERASE ERROR CODES	0xC1
ECU INFO	0xD0

Data Name	Byte	Register No (hex)	Scaling
CAS Position (RPM)	MSB	0x00	See LSB
CAS Position (RPM)	LSB	0x01	Value * 12.5 (RPM)
CAS Reference (RPM)	MSB	0x02	See LSB
CAS Reference (RPM)	LSB	0x03	Value * 8 (RPM) ??
MAF voltage	MSB	0x04	See LSB
MAF voltage	LSB	0x05	Value * 5 (mV)
RH MAF voltage	MSB	0x06	See LSB
RH MAF voltage	LSB	0x07	Value * 5 (mV)
Coolant temp	Single byte	0x08	Value-50 (deg C)
LH O2 Sensor Voltage	Single byte	0x09	Value * 10 (mV)
RH O2 Sensor Voltage	Single byte	0x0a	Value * 10 (mV)
Vehicle speed	Single byte	0x0b	Value * 2 (kph)
Battery Voltage	Single Byte	0x0c	Value * 80 (mV)
Throttle Position Sensor	Single Byte	0x0d	Value * 20 (mV)
FUEL TEMP SEN	Single byte	0x0f	Value-50 (deg C)
Intake Air Temp	Single Byte	0x11	Value -50 (deg C)
Exhaust Gas Temp	Single Byte	0x12	Value * 20 (mV)
Digital Bit Register	Single byte	0x13	See digital register table
Injection Time (LH)	MSB	0x14	See LSB
Injection Time (LH)	LSB	0x15	Value / 100 (mS)
Ignition Timing	Single Byte	0x16	110 – Value (Deg BTDC)
AAC Valve (Idle Air Valve %)	Single Byte	0x17	Value / 2 (%)
A/F ALPHA-LH	Single byte	0x1a	Value (%)
A/F ALPHA-RH	Single byte	0x1b	Value (%)
A/F ALPHA-LH (SELFLEARN)	Single byte	0x1c	Value (%)
A/F ALPHA-RH (SELFLEARN)	Single byte	0x1d	Value (%)
Digital Control Register	Single byte	0x1e	See digital register table
Digital Control Register	Single byte	0x1f	See digital register table
M/R F/C MNT	Single byte	0x21	See digital register table
Injector time (RH)	MSB	0x22	See LSB
Injector time (RH)	LSD	0x23	Value / 100 (mS)

Waste Gate Solenoid %	Single byte	0x28	
Turbo Boost Sensor, Voltage	Single byte	0x29	
Engine Mount On/Off	Single byte	0x2a	
Position Counter	Single byte	0x2e	
Purg. Vol. Control Valve, Step	Single byte	0x25	
Tank Fuel Temperature, C	Single byte	0x26	
FPCM DR, Voltage	Single byte	0x27	
Fuel Gauge, Voltage	Single byte	0x2f	
FR O2 Heater-B1	Single byte	0x30	Bank 1?
FR O2 Heater-B2	Single byte	0x31	Bank 2?
Ignition Switch	Single byte	0x32	
CAL/LD Value, %	Single byte	0x33	
B/Fuel Schedule, mS	Single byte	0x34	
RR O2 Sensor Voltage	Single byte	0x35	
RR O2 Sensor-B2 Voltage	Single byte	0x36	Bank 2?
Absolute Throttle Position, Voltage	Single byte	0x37	
MAF gm/S	Single byte	0x38	
Evap System Pressure, Voltage	Single byte	0x39	
Absolute Pressure Sensor, Voltage	Dual	0x3a, 0x4a	
FPCM F/P Voltage	Dual	0x52, 0x53	

**Digital (Bit) registers (1 = Active)**

Reg	Bit 7 (MSB)	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0 (LSB)
0x13				A/C On Switch	Power Steering Sw	Park/Neutral Switch	Start Signal (Cranking)	CLSD/THL POS
0x1e	Aircon Relay	Fuel pump Relay	VTC SOL				Coolant Fan Hi	Coolant Fan Lo
0x1f		P/Reg control valve	Wastegate SOL		IACV-FICD SOL			EGR SOL
0x21	LH-BANK 1=LEAN	RH-BANK 1=LEAN						

### ACTIVE TESTS (0x0A)

NAME	REG	SCALE
COOLANT TEMP TEST	0x80	VAL=0x50 = 30°C, 0x32 = 0°C, 0x00=-50°C
FUEL INJECTION MAIN SIGNALS	0x81	VAL=0x64 = 0%, 0x6E=+10%, 0x5A=-10%
IGN TIMING TEST	0x82	VAL=0x05=+5 BTDC, 0xFB=-5 BTDC
IACV-AAC/V OPENING	0x84	VAL=0x00 =0%, 0x8C=100%
IACV OPENING	0x85	VAL=0x00 =0%, 0x8C=100%
IACV/FICD-SOLENOID	0x87	VAL=0x00 =OFF
POWER BALANCE TEST	0x88	DIGITAL (see table below), <b>Some ECU types use 0x01 to 0x08 to select cylinder (SR20, ?)</b>
FUEL PUMP RLY TEST	0x89	VAL=0x00 =OFF (0x00 = ON for some ECU, SR20 etc)
P/REG CONTROL SOLENOID	0x8A	VAL=0x00 =OFF
SELF LEARN CONTROL	0x8B	VAL=0x00 = CLEAR
IACV-AAC/V CONTROL	0x8C	VAL=0x00 =OFF
VALVE TIMING SOLENOID	0x8F	VAL=0x00 =OFF
MAP SW CONTROL SOLENOID	0x90	VAL=0x00 =OFF
COOLANT FAN LOW SPEED TEST	0x93	VAL=0x00 =OFF
COOLANT FAN HIGH SPEED TEST	0x94	VAL=0x00 =OFF

### REGISTER 0x88 (POWERBALANCE)

Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
CYL8 1=OFF 0=ON	CYL7 1=OFF 0=ON	CYL6 1=OFF 0=ON	CYL5 1=OFF 0=ON	CYL4 1=OFF 0=ON	CYL3 1=OFF 0=ON	CYL2 1=OFF 0=ON	CYL1 1=OFF 0=ON

## A/T ECU Sensor Register Table.

<b>INITIALISATION</b>	<b>0xFF 0xFF 0xEA</b>
-----------------------	-----------------------

STREAM ALL AVAILABLE SENSORS	0x9F
SELF DIAGNOSTIC	0xD1
ERASE ERROR CODES	0xC1
ECU INFO	0xF0

NAME	REG	SCALE	
VHCL/S SE-A/T	0x00	KM/H	
VHCL/S SE-MTR	0x01	KM/H	
THRTL POS SEN	0x02	VOLT	VAL/50
FLUID TEMP SEN	0x03	VOLT	VAL/50
BATTERY VOLT	0x04	VOLT	(VAL*8)/100
ENGINE SPEED	0x06	RPM	VAL*32
MULTI 1	0x08		See bit registers
MULTI 2	0x09		See bit registers
MULTI 3	0x0A		See bit registers
GEAR	0x0C	1/2/3/4	VAL+1
SELECT LVR POS	0x0D	N-P/R/D/2/1	\$83=N-P, \$82=1, \$81=2, \$80=D, \$87=R
VEHICLE SPEED	0x0E	KM/H	
THROTTLE POSI	0x0F	%	VAL/2.55
LINE PRESS DUTY	0x10	%	(VAL*64)/100
TCC S/V DUTY	0x11	%	

### Digital (Bit) registers (1 = Active)

Reg	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
0x08	KICKDOWN SW	CLOSED THL/SW	POWER SHIFT SW	W/O THRTL/P-SW	ASCD-OD CUT	ASCD-CRUISE	R-POS SW	OD- SW
0x09					HOLD SW	OVERRUN/C S/V	SHIFT S/V B	SHIFT S/V A
0x0A	P/N POSITION SW	D-POS SW	2-POS SW	1-POS SW				

## S-HICAS ECU Register Table. (hydraulic)

<b>INITIALISATION</b>	<b>0xFF 0xFF 0xE4</b>
-----------------------	-----------------------

STREAM ALL AVAILABLE SENSORS	0x9F
SELF DIAGNOSTIC	0xD1
ERASE ERROR CODES	0xC1
ECU INFO	0xF0

NAME	REG	SCALE
VHCL SPEED SE	0x01	BYTE KM/H
STEERING ANGLE	0x02 , 0x03	WORD VAL/2 DEGREES
STEERING ANGLE	0x03	BYTE VAL/2 DEGREES
MULTI 1	0x04	BYTE
HICAS SOL	0x05	BYTE VAL/200 A (Ampere)
POWER STR SOL	0x06	BYTE VAL/200 A (Ampere)

### Digital (Bit) registers (1 = Active)

Reg	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
0x04			ENGINE SPD 0:<1500RPM 1:>1500RPM	WOT/P-SWITCH	PKB/CLUTCH SWITCH	STOPLAMP SWITCH	NEUTRAL SIGNAL	STEERING DIRECTION (0=L / 1=R)

### ACTIVE TESTS (0x0A)

SIMULATED DRIVE	0x01	0x01=ACTIVE
-----------------	------	-------------

## AIRCON ECU Register Table

INITIALISATION	0xFF	0xFF	0xDF
----------------	------	------	------

SELF DIAGNOSTIC 0xD1

CLEAR ERROR CODES	0xC1
-------------------	------

NAME	REG		SCALE	
AMBIENT TEMP/S	0x20	°CELCIUS	WORD	VAL/16
IN CAR SEN HD	0x21	°CELCIUS	WORD	VAL/16
IN CAR SEN FT	0x22	°CELCIUS	WORD	VAL/16
DEF DUCT SEN	0x23	°CELCIUS	WORD	VAL/16
VENT DUCT SEN	0x24	°CELCIUS	WORD	VAL/16
FLOOR DUCT SEN	0x25	°CELCIUS	WORD	VAL/16
SUNLOAD	0x26	KCAL	WORD	VAL/160
COOLANT TEMP/S	0x27	°CELCIUS	WORD	VAL/16
MODE DOOR PBR	0x28	VOLT	WORD	
OBJ TEMP HEAD	0x29	°CELCIUS	WORD	VAL/16
OBJ TEMP FOOT	0x2A	°CELCIUS	WORD	VAL/16
AIRMIX DOOR 1	0x2B	°CELCIUS	WORD	VAL/16
AIRMIX DOOR 2	0x2C	CELCIUS	WORD	VAL/16
MODE DOOR ANGLE	0x2D	DEGREES	WORD	
INTAKE DOOR ANGLE	0x2E	DEGREES	WORD	
BLOWER MOTOR	0x2F	VOLT	WORD	VAL/16
SET TEMP ADJ	0x40	°CELCIUS	WORD	VAL/16
COMPRESSOR	0x41	ON/OFF	BYTE	0x00=OFF
SET TEMP	0x42	°CELCIUS	WORD	VAL/16
MULTI 1	0x43	DIGITAL	BYTE	
MULTI 2	0x47	DIGITAL	BYTE	

[illegible]

### ACTIVE TESTS (0x0A)

AIRMIX DOORS OPERATION	0x2B	(WORD) 0xE0C0=COOL 0x1F40=HOT 0x0080=8°C 0x0320=50°C
MODE DOOR OPERATION	0x2D	(WORD) 0x0000=VENT, 0 DEGREES OPEN 0x0145=B/L, 20 DEGREES OPEN 0x0330=HEAT, 51 DEGREES OPEN 0x0528=DEF, 83 DEGREES OPEN
INTAKE DOOR OPERATION	0x2E	(WORD) 0x0000=IN, 0 DEGREES OPEN 0x00F0=IN/OUT, 15 DEGREES OPEN 0x01E0=OUT, 30 DEGREES OPEN
BLOWER MOTOR OPERATION	0x2F	(WORD) 0x0000=0 VOLT 0x6000=6 VOLT 0xC000=12 VOLT
SET DIFF. UPPER/LOWER TARGET TEMP	0x40	(WORD) 0xFFE0 = SET -2°C (MIN) 0x0000 = SET 0°C 0x0020 = SET +2°C (MAX)
CHECK MAGNET CLUTCH OPERATION	0x41	(BYTE) 0x00=OFF
COMPLEX PATTERNS	0x44	(BYTE) DIGITAL (see table)