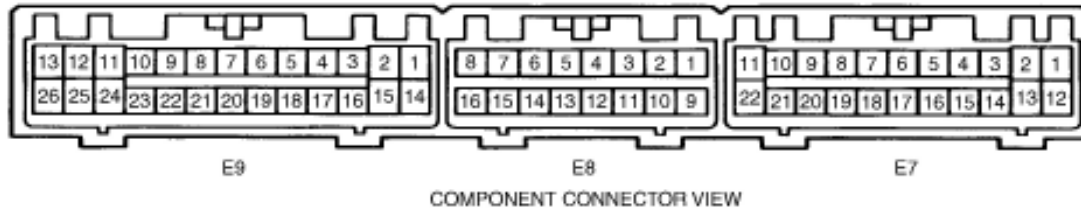


## CIRCUIT TESTS

### ECT ECU VOLTAGES

Access ECT ECU. See **Fig. 1** and **Fig. 2**. Turn ignition on. Using voltmeter, backprobe ECT ECU harness connector. Check voltage between selected terminal and terminal E1. Voltage should be as specified. See **Fig. 5** -**Fig. 7**.



Symbols (Terminals No.)	Wire Color	Condition	(Component)	STD Voltage (V)
S1 ↔ E1 (E9-7 ↔ E9-14)	V ↔ BR	IG ON	(No. 1 solenoid)	9 – 14
		1st or 2nd gear	(No. 1 solenoid)	9 – 14
		3rd or OD gear	(No. 1 solenoid)	Below 1
S2 ↔ E1 (E9-6 ↔ E9-14)	L-B ↔ BR	IG ON	(No. 2 solenoid)	Below 1
		1st or 2nd gear	(No. 2 solenoid)	9 – 14
		3rd or OD gear	(No. 2 solenoid)	Below 1
SL ↔ E1 (E9-1 ↔ E9-14)	P ↔ BR	IG ON	(Lock-Up solenoid)	Below 1
		Vehicle driving under lock-up position	(Lock-Up solenoid)	9 – 14
OD1 ↔ E1 (E7-20 ↔ E9-14)	Y-B ↔ BR	IG ON	(Cruise Control ECU)	9 – 14
OD2 ↔ E1 (E7-7 ↔ E9-14)	G-O ↔ BR	OD switch ON	(OD switch)	9 – 14
		OD switch OFF	(OD switch)	Below 1
L ↔ E1 (E7-19 ↔ E9-14)	Y ↔ BR	IG ON and Shift lever in L position	(PNP switch)	9 – 14
		IG ON and Shift lever in position other than L	(PNP switch)	Below 1
2 ↔ E1 (E7-18 ↔ E9-14)	*1 L-W ↔ BR *2 O ↔ BR	IG ON and Shift lever in 2 position	(PNP switch)	9 – 14
		IG ON and Shift lever in position other than 2	(PNP switch)	Below 1
R ↔ E1 (E7-17 ↔ E9-14)	R-B ↔ BR	IG ON and Shift lever in R position	(PNP switch)	9 – 14
		IG ON and Shift lever in position other than R	(PNP switch)	Below 1
NSW ↔ E1 (E7-22 ↔ E9-14)	B-W ↔ BR	IG ON and Shift lever in P or N position	(IGN switch)	9 – 14
		IG ON and Shift lever in position other than P or N	(IGN switch)	Below 1

\*1 : Made by Toyota Motor Corporation.

\*2 : Made by Toyota Manufacturing Kentucky.

NOTE: The letter "L" under Wire Color represents Blue.

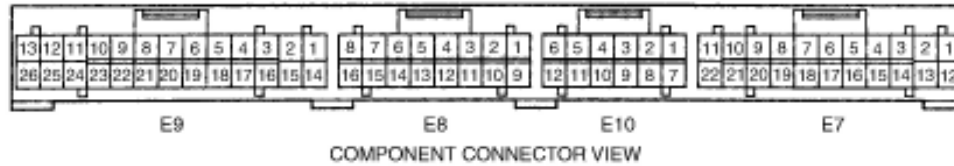
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**Fig. 5: ECT ECU Pin Voltage Table (1997 Camry, 1998-99 Camry & 1999 Camry Solara Without Engine Immobilizer)**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

# 1998 Toyota Camry CE

1997-99 AUTOMATIC TRANSMISSIONS Toyota A-140E Electronic Controls



COMPONENT CONNECTOR VIEW

Symbols (Terminals No.)	Wire Color	Condition	(Component)	STD Voltage (V)
S1 ↔ E1 (E9-8 ↔ E9-24)	V ↔ BR	IG ON	(No. 1 solenoid)	9 ~ 14
		1st or 2nd gear	(No. 1 solenoid)	9 ~ 14
		3rd or OD gear	(No. 1 solenoid)	Below 1
S2 ↔ E1 (E9-21 ↔ E9-24)	L-B ↔ BR	IG ON	(No. 2 solenoid)	Below 1
		1st or 2nd gear	(No. 2 solenoid)	9 ~ 14
		3rd or OD gear	(No. 2 solenoid)	Below 1
SL ↔ E1 (E9-20 ↔ E9-24)	P ↔ BR	IG ON	(Lock-Up solenoid)	Below 1
		Vehicle driving under lock-up position	(Lock-Up solenoid)	9 ~ 14
OD1 ↔ E1 (E7-18 ↔ E9-24)	Y-B ↔ BR	IG ON	(Cruise Control ECU)	9 ~ 14
OD2 ↔ E1 (E7-5 ↔ E9-24)	G-O ↔ BR	OD switch ON	(OD switch)	9 ~ 14
		OD switch OFF	(OD switch)	Below 1
L ↔ E1 (E7-15 ↔ E9-24)	Y ↔ BR	IG ON and Shift lever in L position	(PNP switch)	9 ~ 14
		IG ON and Shift lever in position other than L	(PNP switch)	Below 1
2 ↔ E1 (E7-16 ↔ E9-24)	*1 L-W ↔ BR *2 O ↔ BR	IG ON and Shift lever in 2 position	(PNP switch)	9 ~ 14
		IG ON and Shift lever in position other than 2	(PNP switch)	Below 1
R ↔ E1 (E7-17 ↔ E9-24)	R-B ↔ BR	IG ON and Shift lever in R position	(PNP switch)	9 ~ 14
		IG ON and Shift lever in position other than R	(PNP switch)	Below 1
NSW ↔ E1 (E7-22 ↔ E9-24)	B-W ↔ BR	IG ON and Shift lever in P or N position	(IGN switch)	9 ~ 14
		IG ON and Shift lever in position other than P or N	(IGN switch)	Below 1

\*1: Made by Toyota Motor Corporation.

\*2: Made by Toyota Motor Manufacturing Kentucky.

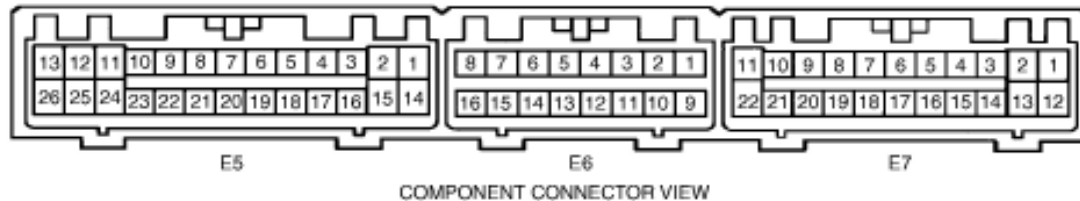
NOTE: The letter "L" under Wire Color represents Blue.

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**Fig. 6: ECT ECU Pin Voltage Table (1998-99 Camry & 1999 Camry Solara With Engine Immobilizer)**  
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

## 1998 Toyota Camry CE

1997-99 AUTOMATIC TRANSMISSIONS Toyota A-140E Electronic Controls



Symbols (Terminals No.)	Wire Color	Condition	(Component)	STD Voltage (V)
S1 ↔ E1 (E5-2 ↔ E5-14)	V ↔ BR	IG ON	(No. 1 solenoid)	9 ~ 14
		1st or 2nd gear	(No. 1 solenoid)	9 ~ 14
		3rd or OD gear	(No. 1 solenoid)	Below 1
S2 ↔ E1 (E5-15 ↔ E5-14)	BR-Y ↔ BR	IG ON	(No. 2 solenoid)	Below 1
		1st or 2nd gear	(No. 2 solenoid)	9 ~ 14
		3rd or OD gear	(No. 2 solenoid)	Below 1
SL ↔ E1 (E5-1 ↔ E5-14)	Y-B ↔ BR	IG ON	(Lock-Up solenoid)	Below 1
		Vehicle driving under lock-up position	(Lock-Up solenoid)	9 ~ 14
OD1 ↔ E1 (E7-20 ↔ E5-14)	P ↔ BR	IG ON	(Cruise Control ECU)	9 ~ 14
OD2 ↔ E1 (E7-7 ↔ E5-14)	GR-L ↔ BR	OD switch ON	(OD switch)	9 ~ 14
		OD switch OFF	(OD switch)	Below 1
L ↔ E1 (E7-19 ↔ E5-14)	Y-R ↔ BR	IG ON and Shift lever in L position	(PNP switch)	9 ~ 14
		IG ON and Shift lever in position other than L	(PNP switch)	Below 1
2 ↔ E1 (E7-18 ↔ E5-14)	Y-G ↔ BR	IG ON and Shift lever in 2 position	(PNP switch)	9 ~ 14
		IG ON and Shift lever in position other than 2	(PNP switch)	Below 1
R ↔ E1 (E7-17 ↔ E5-14)	R-W ↔ BR	IG ON and Shift lever in R position	(PNP switch)	9 ~ 14
		IG ON and Shift lever in position other than R	(PNP switch)	Below 1
NSW ↔ E1 (E7-22 ↔ E5-14)	B-Y ↔ BR	IG ON and Shift lever in P or N position	(IGN switch)	9 ~ 14
		IG ON and Shift lever in position other than P or N	(IGN switch)	Below 1
SPD ↔ E1 (E7-9 ↔ E5-14)	O ↔ BR	IG ON and rotate driver wheel slowly	(Vehicle speed sensor)	Below 1 ↔ 4-6

NOTE: The letter "L" under Wire Color represents Blue.

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**Fig. 7: ECT ECU Pin Voltage Table (1997-99 Celica)**  
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

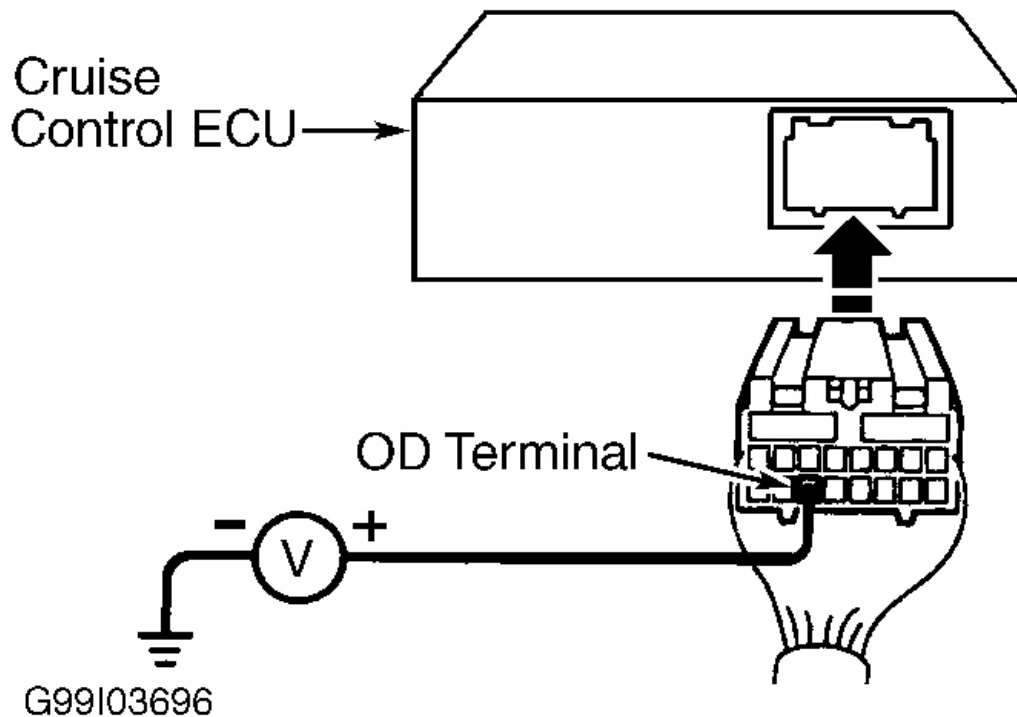
### THROTTLE POSITION (TP) SENSOR SIGNAL

1. Access ECT ECU. See **Fig. 1** and **Fig. 2** . Connect voltmeter between terminals VTA and E2 at ECT ECU harness connector. See **WIRING DIAGRAMS** . Turn ignition on. With throttle fully closed, voltage should be .3-1.0 volts. With throttle fully open, voltage should be 3.2-4.9 volts.
2. If voltage is not as specified, check throttle position sensor. See **THROTTLE POSITION (TP) SENSOR** under COMPONENT TESTS. If throttle position sensor is okay, check circuit(s) between TP sensor and ECT ECU. See appropriate wiring diagram in **WIRING DIAGRAMS** .

### OVERDRIVE CANCEL SIGNAL

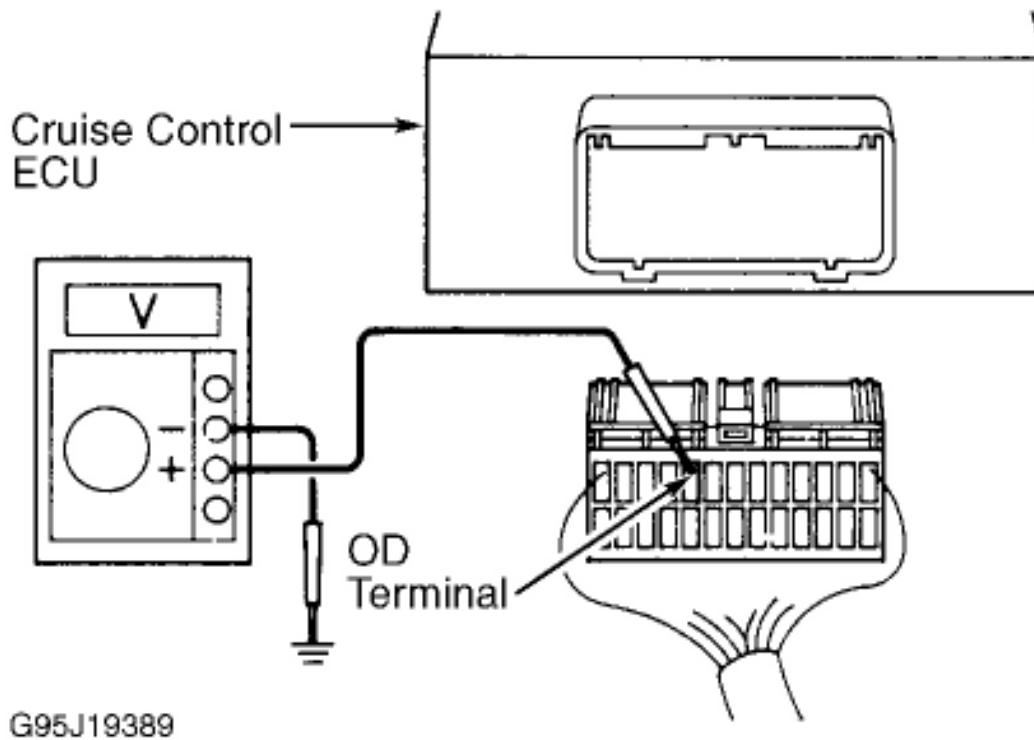
1. Access ECT ECU. See **Fig. 1** and **Fig. 2** . Turn ignition on. Measure voltage (backprobe) between terminal OD1 of ECT ECU harness connector and ground. If 9-14 volts is present, substitute known good ECT ECU and retest. If voltage is not as specified, go to next step.
2. Turn ignition off. Disconnect cruise control ECU harness connector. See **Fig. 8** and **Fig. 9** . Turn ignition

on. Measure voltage between terminal OD and ground. See **Fig. 8** and **Fig. 9** . If 9-14 volts is present, replace cruise control ECU and retest. If 9-14 volts is not present, check and repair circuit between cruise control ECU and ECT ECU.



**Fig. 8: Identifying Cruise Control ECU Terminals (1997-98 Camry, 1999 Camry Solara & 1998-99 Celica)**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



**Fig. 9: Identifying Cruise Control ECU Terminals (1997 Celica)**  
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.