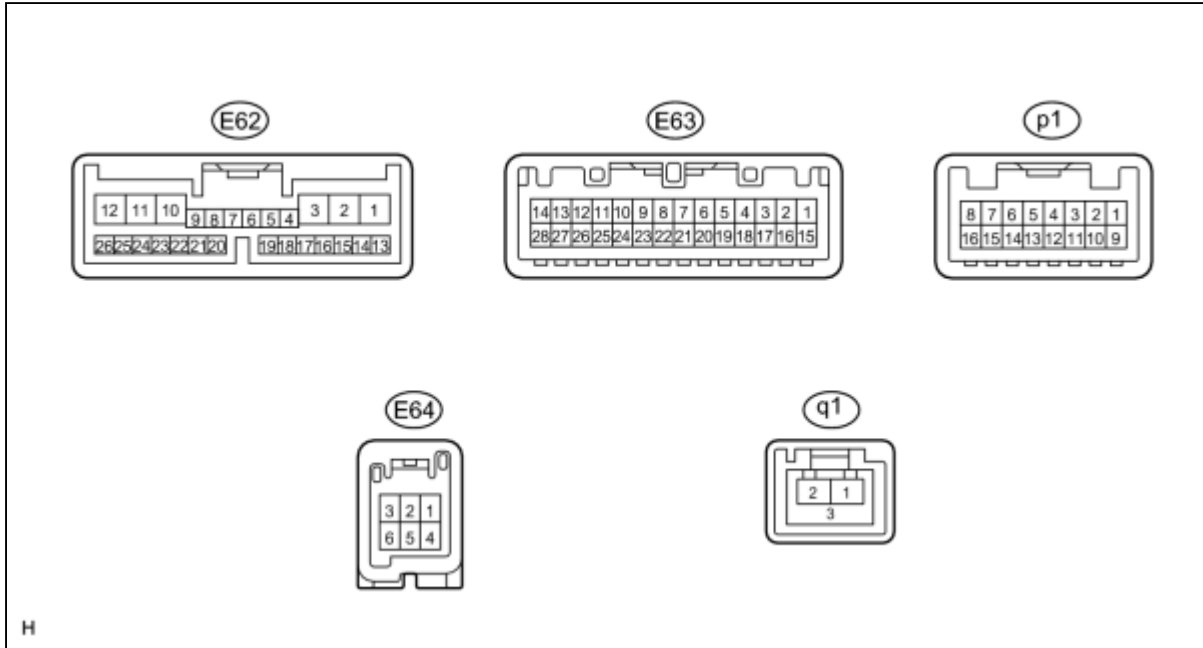


Last Modified: 7-13-2007		1.6 U
Service Category: Audio/Visual/Telematics		Section: Navigation/Multi Info Display
Model Year: 2008	Model: ES350	Doc ID: RM0000011BQ027X
Title: NAVIGATION: NAVIGATION SYSTEM: TERMINALS OF ECU (2008 ES350)		




TERMINALS OF ECU

1. MULTI-DISPLAY



SYMBOLS (TERMINAL NO.)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFICATION
+B1 (E62-1) - GND1 (E62-10)	GR - W-B	Battery	Always	10 to 14 V
ACC (E62-2) - GND1 (E62-10)	GR - W-B	Accessory (ON)	Turn engine switch off	Below 1 V
ACC (E62-2) - GND1 (E62-10)	GR - W-B	Accessory (ON)	Turn engine switch on (ACC or IG)	10 to 14 V
IG (E62-3) - GND1 (E62-10)	B - W-B	Ignition (ON)	Turn engine switch off	Below 1 V
IG (E62-3) - GND1 (E62-10)	B - W-B	Ignition (ON)	Turn engine switch on (IG)	10 to 14 V
HILL (E62-5) - GND1 (E62-10)	BR - W-B	Illumination signal	Turn light control switch OFF	Below 1 V
HILL (E62-5) - GND1 (E62-6)	BR - W-B	Illumination signal	Turn light control switch ON	10 to 14 V
TC (E62-7) - GND1 (E62-10)	W - W-B	Diagnosis ON signal	Turn engine switch on (IG)	9 to 14 V
HAZ (E62-8) - GND1 (E62-10)	W - W-B	Hazard signal	Turn hazard switch OFF	Below 1 V
HAZ (E62-8) - GND1 (E62-10)	W - W-B	Hazard signal	Turn hazard switch ON	Pulse generation
			Turn engine switch on (IG),	

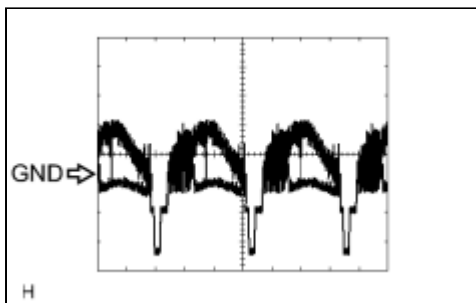
ARON (E62-9) - GND1 (E62-10)	R - W-B	Passenger airbag ON signal	Passenger airbag on indicator light ON	10 to 14 V
GND1 (E62-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 V
ILL- (E62-11) - GND1 (E62-10)	BR - W-B	Illumination signal	Turn light control switch OFF	Below 1 V
ILL- (E62-11) - GND1 (E62-10)	BR - W-B	Illumination signal	Turn light control switch ON	10 to 14 V
ILL+ (E62-12) - GND1 (E62-10)	G - W-B	Illumination signal	Turn light control switch OFF	Below 1 V
ILL+ (E62-12) - GND1 (E62-10)	G - W-B	Illumination signal	Turn light control switch ON	10 to 14 V
REV (E62-13) - GND1 (E62-10)	Y - W-B	Reverse signal	See "Vehicle Signal Check" Mode INFO	-
SPD (E62-14) - GND1 (E62-10)	SB - W-B	Speed signal from combination meter	See "Vehicle Signal Check" Mode INFO	-
AIR (E62-20) - GND1 (E62-10)	B - W-B	Passenger airbag OFF signal	Turn engine switch on (IG), Passenger airbag off indicator light ON	10 to 14 V
PBEW (E62-21) - GND1 (E62-10)	P - W-B	Passenger seat belt warning signal	Turn engine switch on (IG), front passenger seat and front seat buckle switch ON (Belt unfastened)	10 to 14 V
PBEW (E62-21) - GND1 (E62-10)	P - W-B	Passenger seat belt warning signal	Turn engine switch on (IG), front passenger seat and front seat buckle switch OFF (Belt fastened)	Below 1 V
DR (E62-22) - GND1 (E62-10)	L - W-B	Dimmer signal	Turn engine switch on (IG), light control switch TAIL or ON and automatic light control sensor covered by hand	Above 9 V
PKB (E62-23) - GND1 (E62-10)	Y - W-B	Parking brake signal	See "Vehicle Signal Check" Mode INFO	-
CANL (E62-25) - CANH (E62-26)	Y - L	CAN bus line	Go to CAN communication system INFO	-
TX2- (E63-3) - GND1 (E62-10)	LG - W-B	AVC-LAN communication signal	Turn engine switch on (ACC)	2 to 3 V
TX2+ (E63-4) - GND1 (E62-10)	L - W-B	AVC-LAN communication signal	Turn engine switch on (ACC)	2 to 3 V
TSW- (E63-5) - GND1 (E62-10)	W - W-B	Telephone relation switch signal	Always	Below 1 V
MACC (E63-9) - GND1 (E62-10)	W - W-B	Microphone AMP power supply	Turn engine switch off	Below 1 V
MACC (E63-9) - GND1 (E62-10)	W - W-B	Microphone AMP power supply	Turn engine switch on (IG)	5 V
MIN- (E63-10) - GND1 (E62-10)	R - W-B	Microphone voice signal	See "Microphone & Voice Recognition Check" INFO	-
MIN+ (E63-11) -	G - W-B	Microphone voice	See "Microphone & Voice Recognition	-

GND1 (E62-10)		signal	Check" 	
SGND (E63-12) - GND1 (E62-10)	W - W-B	Signal ground	Always	Below 1 V
CA+ (E63-13) - GND1 (E62-10) (*1)	B - W-B	Television camera power supply	Turn engine switch on (IG), shift lever in R position	Approx. 6 V
CGND (E63-14) - Body ground (*1)	W - Body ground	Ground	Always	Below 1 V
IVO- (E63-21) - GND1 (E62-10)	BR - W-B	Voice guidance signal	Voice guidance is provided	A waveform synchronized with sounds is output
IVO+ (E63-22) - GND1 (E62-10)	Y - W-B	Voice guidance signal	Voice guidance is provided	A waveform synchronized with sounds is output
SLD (E63-23) - GND1 (E62-10)	Shielded - W-B	Shielded ground	Always	Below 1 V
V+ (E63-27) - CGND (E63-14) (*1)	R - W	Television camera image signal	Turn engine switch on (IG), shift lever in R position	Pulse generation (Refer to waveform 1)
V- (E63-28) - CGND (E63-14) (*1)	Shielded - W	Shielded ground	Always	Below 1 V
NTSC (E64-1) - GND1 (E62-10) (*2)	BR - W-B	DVD image signal	DVD is played on radio receiver	Pulse generation (Refer to waveform 2)
SGD1 (E64-4) - GND1 (E62-10) (*2)	Y - W-B	Signal ground	Always	Below 1 V
SGND (E64-5) - Body ground (*2)	Shielded - Body ground	Shielded ground	Always	Below 1 V
TX- (p1-1) - GND (p1-6)	-	AVC-LAN communication signal	Turn engine switch on (ACC)	2 to 3 V
TX+ (p1-2) - GND (p1-6)	-	AVC-LAN communication signal	Turn engine switch on (ACC)	2 to 3 V
SGND (p1-3) - GND (p1-61)	-	Shielded ground	Always	Below 1 V
MCO- (p1-4) - GND (p1-6)	-	Microphone voice signal	See "Microphone & Voice Recognition Check" 	-
MCO+ (p1-5) - GND (p1-6)	-	Microphone voice signal	See "Microphone & Voice Recognition Check" 	-
GND (p1-6) - Body ground	-	Ground	Always	Below 1 V
ACC (p1-7) - GND (p1-6)	-	Accessory (ON)	Turn engine switch off	Below 1 V
ACC (p1-7) -	-	Accessory (ON)	Turn engine switch on (ACC)	10 to 14 V

GND (p1-6)				
BU+B (p1-8) - GND (p1-6)	-	Battery	Always	10 to 14 V
IVI- (p1-10) - GND (p1-6)	-	Voice guidance signal	Voice guidance is provided	A waveform synchronized with sounds is output
IVI+ (p1-11) - GND (p1-6)	-	Voice guidance signal	Voice guidance is provided	A waveform synchronized with sounds is output
REV (p1-15) - GND (p1-6)	-	Reverse signal	See "Vehicle Sensors" Mode INFO	-
SPD (p1-16) - GND (p1-6)	-	Speed signal	See "Vehicle Sensors" Mode INFO	-
GVI+ (q1-1) - GND (p1-6)	-	Digital image signal	Navigation display is on	Pulse generation
GVI- (q1-2) - GND (p1-6)	-	Digital image signal	Navigation display is on	Pulse generation
GVG1 (q1-3) - Body ground	-	Ground	Always	Below 1 V

*1: with Rear View Monitor

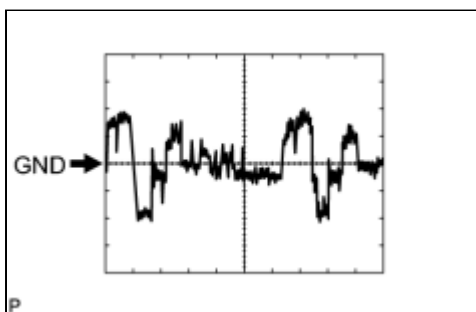
*2: for DVD Changer Models



(a) Reference: waveform 1

HINT:

- Terminal: V+ - CGND
- Gauge set: 0.2 V/DIV., 0.2 μ s/DIV.
- Condition: Engine switch: IG, shift lever: R position

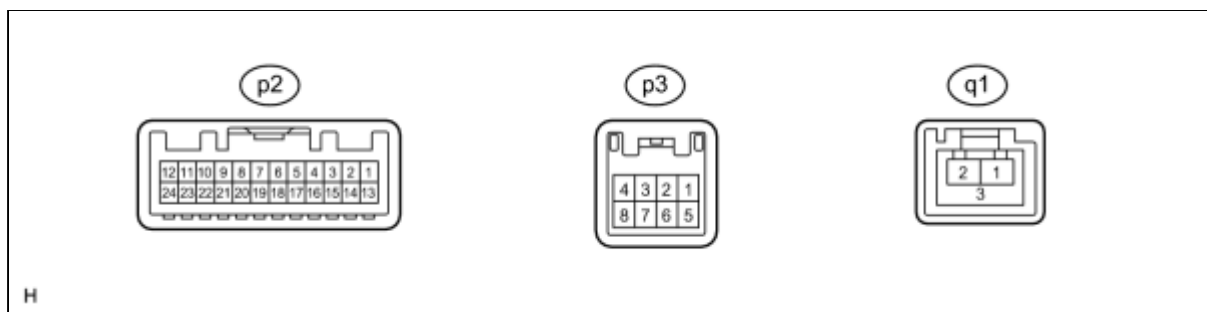


(b) Reference: waveform 2

HINT:

- Terminal: NTSC - Body ground
- Gauge set: 200 mV/DIV., 10 μ s/DIV.
- Condition: DVD is played on multi-display

2. NAVIGATION ECU



SYMBOLS (TERMINAL NO.)	WIRING COLOR	TERMINAL DESCRIPTION	CONDITION	SPECIFICATION
BU+B (p2-1) - GND (p2-15)	-	Battery	Always	10 to 14 V
SPD (p2-4) - GND (p2-15)	-	Speed signal	See "Vehicle Sensors" Mode INFO	-
SLD (p2-7) - GND (p2-15)	-	Shielded ground	Always	Below 1 V
IVI- (p2-8) - GND (p2-15)	-	Voice guidance signal	Voice guidance is provided	A waveform synchronized with sounds is output
IVI+ (p2-9) - GND (p2-15)	-	Voice guidance signal	Voice guidance is provided	A waveform synchronized with sounds is output
ACC (p2-13) - GND (p2-15)	-	Accessory (ON)	Turn engine switch off	Below 1 V
ACC (p2-13) - GND (p2-15)	-	Accessory (ON)	Turn engine switch on (ACC)	10 to 14 V
GND (p2-15) - Body ground	-	Ground	Always	Below 1 V
TX- (p2-18) - GND (p2-15)	-	AVC-LAN communication signal	Turn engine switch on (ACC)	2 to 3 V
TX+ (p2-19) - GND (p2-15)	-	AVC-LAN communication signal	Turn engine switch on (ACC)	2 to 3 V
REV (p2-20) - GND (p2-15)	-	Reverse signal	See "Vehicle Sensors" Mode INFO	-
MCO+ (p3-3) - GND (p2-15)	-	Microphone voice signal	See "Microphone & Voice Recognition Check" INFO	-
MCO- (p3-5) - GND (p2-15)	-	Microphone voice signal	See "Microphone & Voice Recognition Check" INFO	-
SGND (p3-6) - GND (p2-15)	-	Shielded ground	Always	Below 1 V
GVI+ (q1-1) - GND (p2-15)	-	Digital image signal	Navigation display is on	Pulse generation
GVI- (q1-2) - GND (p2-15)	-	Digital image signal	Navigation display is on	Pulse generation
GND (q1-3) - Body ground	-	Ground	Always	Below 1 V

3. RADIO RECEIVER [INFO](#)

4. STEREO COMPONENT AMPLIFIER [INFO](#)

