

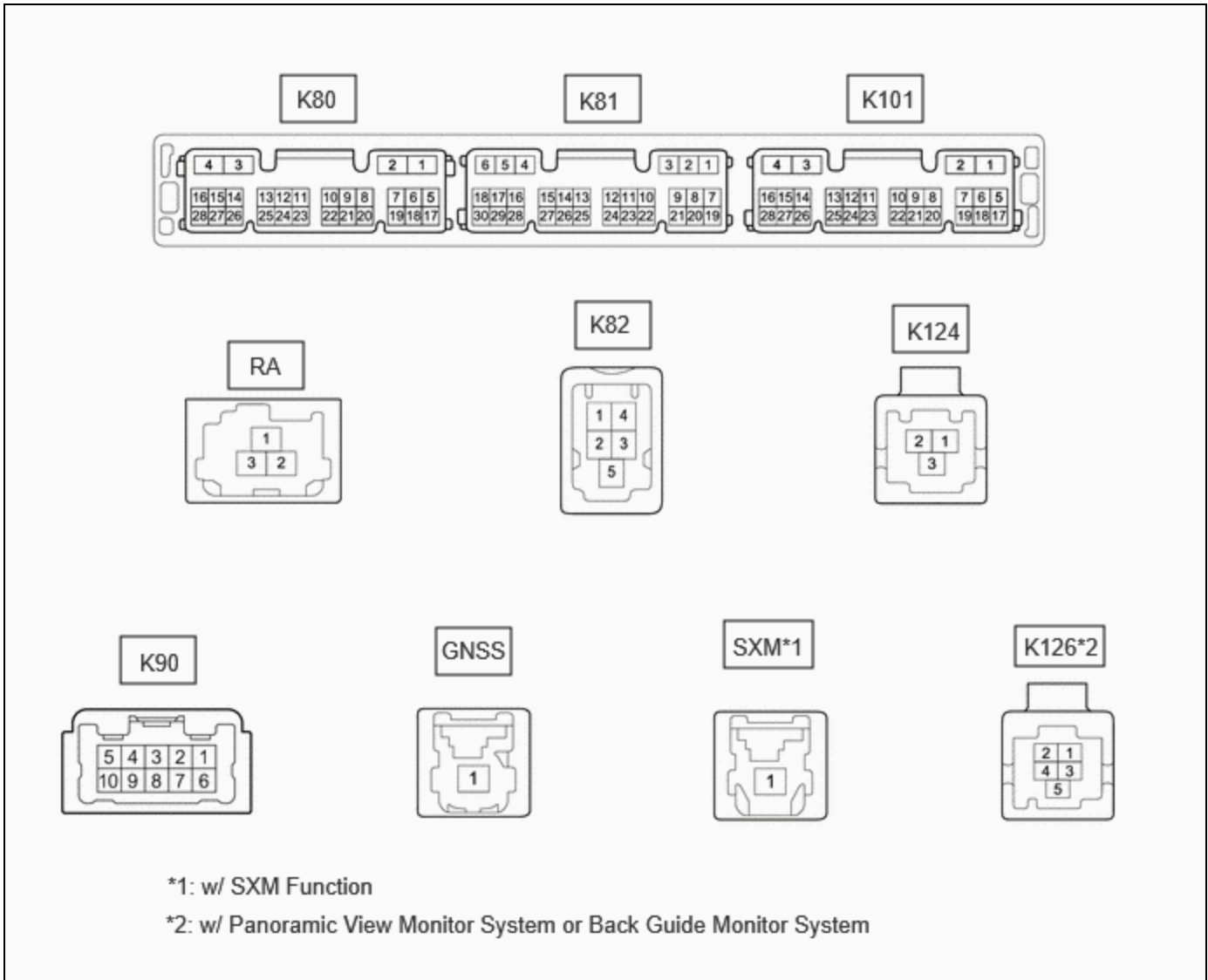
Last Modified: 12-04-2024	6.11:8.1.0	Doc ID: RM10000000291YQ
Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: AUDIO / VIDEO: AUDIO AND VISUAL SYSTEM: TERMINALS OF ECU; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

TERMINALS OF ECU

HINT:

Check from the rear of the connector while it is connected to the components.

RADIO AND DISPLAY RECEIVER ASSEMBLY



Connector K80

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K80-1 (GND1) - Body ground	Ground	Always	Below 1 Ω
K80-2 (GND2) - Body ground	Ground	Always	Below 1 Ω
K80-3 (+B) - K80-1(GND1)	No.1 stereo jack adapter assembly power source	Ignition switch off	11 to 14 V
K80-4 (+B1) - K80-1 (GND1)	Power source (+B)	Ignition switch off	11 to 14 V
K80-5 (REV) - K80-1 (GND1)	Reverse Signal	Ignition switch ON, shift position not in R → shift position in R	2 V or less → 11 to 14 V
K80-7 (PKB) - K80-1 (GND1)	Parking Brake Signal	Ignition switch ON Parking brake released → Ignition switch ON Parking brake applied	0.4 V or less → 3 V or higher
K80-8 (SPD) - K80-1 (GND1)	Vehicle speed signal	Wheel being rotated	Waveform 1
K80-12 (MUT1) - K80-1 (GND1)*1	Mute signal	Audio system playing → Mute	3.5 V or higher → Below 1 V
K80-15 (IG) - K80-1 (GND1)	Power source (IG)	Ignition switch ON	11 to 14 V
K80-16 (ACC1) - K80-1 (GND1)	Power source (ACC)	Ignition switch ACC	11 to 14 V
K80-18 (CSWA) - K80-1 (GND1)	Camera image transition signal	Normal → camera image screen change	2 V or less → 6 V or higher
K80-19 (CSW+) - K80- 1 (GND1)*2	Camera image transitionsignal	Normal → camera imagescreen change	2 V or less → 6 V or higher
K80-20 (SWG) - K80-1 (GND1)	Ground	Always	Below 1 Ω
K80-21 (SW1) - K80-1 (GND1)	Steering pad switch signal	No switch pushed → Volume- switch pushed → Volume+ switch pushed → Seek- switch pushed → Seek+ switch pushed	2.7 V or higher → approximately 2.3 V → approximately 1.6 V → approximately 1.0 V → 0.8 V or less
K80-22 (SW2) - K80-1 (GND1)	Steering pad switch signal	No switch pushed → Voice switch pushed → Off hook switch pushed → On hook switch pushed → MODE switch pushed	2.7 V or higher → approximately 2.3 V → approximately 1.6 V → approximately 1.0 V → 0.8 V or less

*1: w/ "JBL" Sound System

*2: w/ Panoramic View Monitor System

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K80-24 (ILL-) - K80-1 (GND1)	Illumination signal ground	Dimmed	Pulse generation
K80-25 (ILL+) - K80-1 (GND1)	Illumination signal	Light control switch not in tail or head position	11 to 14 V
K80-26 (WK2) - K80-1 (GND1)*1	Stereo component amplifier assembly start up signal	Ignition switch ACC	4 V or higher
K80-28 (ACCO) - K80-1 (GND1)	Multimedia ACC control signal	Power switch is pressed when playback is starting	8.0 to 13.5 V
*1: w/ "JBL" Sound System			
*2: w/ Panoramic View Monitor System			

Connector K81

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K81-1 (TX1+)*1	AVC-LAN communication signal	-	-
K81-2 (TX1-)*1	AVC-LAN communication signal	-	-
K81-4 (SGND) - K80-1 (GND1)	Shield ground	Always	Below 1 Ω
K81-5 (TMUT) - K80-1 (GND1)*2	Mute signal	Normal → Emergency call mode	2.0 V or higher → Below 1 V
K81-6 (ADPG) - K80-1 (GND1)	No. 1 stereo jack adapter assembly detection signal	No. 1 stereo jack adapter assembly disconnected → No. 1 stereo jack adapter assembly connected	Below 3.2 V
K81-11 (CNH1)	Local bus communication signal	Service Menu	-
K81-12 (CNL1)	Local bus communication signal	Service Menu	-
K81-13 (CANH)	CAN communication signal	Service Menu	-
K81-14 (CANL)	CAN communication signal	Service Menu	-
K81-15 (VOR+)*2	Sound signal	Answering incoming operator call	A waveform synchronized with sound signals is output
*1: w/ "JBL" Sound System			
*2: w/ DCM (Telematics Transceiver)			
*3: w/ Rear View Monitor System			

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K81-16 (VOR-)*2	Sound signal	Answering incoming operator call	A waveform synchronized with sound signals is output
K81-17 (USBG) - Body ground*2	Ground	Always	Below 1 Ω
K81-18 (USBV) - K80-1 (GND1)*2	Telematics transceiver USB power source	Ignition switch ON	3 V or higher
K81-21 (MIN+) - K80-1 (GND1)	Microphone voice signal	Voice is being input	A waveform synchronized with sound signals is output
K81-22 (MIN-) - K80-1 (GND1)	Microphone voice signal ground	Always	Below 1 Ω
K81-23 (MACC) - K80-1 (GND1)	Microphone power source	Ignition switch ON	7.5 to 8.5 V
K81-24 (SGND) - Body ground	Shield ground	Always	Below 1 Ω
K81-25 (SNS) - K80-1 (GND1)	Microphone circuit open detection signal	Always	Below 1 Ω
K81-26 (CSLD) - K80-1 (GND1)*3	Shield ground	Always	Below 1 Ω
K81-27 (CGND) - K80-1 (GND1)*3	Camera Ground	Always	Below 1 Ω
K81-28 (V+) - K81-29 (V-)*3	Video Signal	Ignition switch ON, shift position in R	-
K81-29 (V-) - K80-1 (GND1)*3	Video Signal	Always	Below 1 Ω
K81-30 (CA+) - K80-1 (GND1)*3	Camera power source	Ignition switch ON	7.5 to 9.0 V
*1: w/ "JBL" Sound System			
*2: w/ DCM (Telematics Transceiver)			
*3: w/Rear View Monitor System			

Connector K101

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K101-4 (FBGN) - K80-1 (GND1)*	Shield ground	Always	Below 1 Ω
K101-15 (FB2+) - K80-1 (GND1)*	Stereo component amplifier assembly voice signal 2	Voice is being input	A waveform synchronized with sound signals is output
*: w/ "JBL" Sound System			

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K101-16 (FB2-) - K80-1 (GND1)*	Stereo component amplifier assembly voice signal 2	Voice is being input	A waveform synchronized with sound signals is output
K101-17 (MI2+) - K80-1 (GND1)	Microphone 2 voice signal	Voice is being input	A waveform synchronized with sound signals is output
K101-18 (MI2-) - K80-1 (GND1)	Microphone 2 voice signal ground	Always	Below 1 Ω
K101-19 (SGD2) - K80-1 (GND1)	Ground	Always	Below 1 Ω
K101-20 (MAC2) - K80-1 (GND1)	Microphone 2 power source	Ignition switch ON	7.5 to 8.5 V
K101-21 (SNS2) - K80-1 (GND1)	Microphone 2 open circuit detection signal	Always	Below 1 Ω
K101-27 (FB1+) - K80-1 (GND1)*	Stereo component amplifier assembly voice signal 1	Voice is being input	A waveform synchronized with sound signals is output
K101-28 (FB1-) - K80-1 (GND1)*	Stereo component amplifier assembly voice signal 1	Voice is being input	A waveform synchronized with sound signals is output
*: w/ "JBL" Sound System			

Connector K90

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K90-1 (FR+) - K80-1 (GND1)	Sound signal	Audio system playing	A waveform synchronized with sound signals is output
K90-2 (FL+) - K80-1 (GND1)	Sound signal	Audio system playing	A waveform synchronized with sound signals is output
K90-3 (RL+) - K80-1 (GND1)	Sound signal*1 Interrupt sound signal*2	Audio system playing*1 Interrupt sound signal being output*2	A waveform synchronized with sound signals is output
K90-4 (RR+) - K80-1 (GND1)	Sound signal*1 Interrupt sound signal*2	Audio system playing*1 Interrupt sound signal being output*2	A waveform synchronized with sound signals is output
K90-6 (FR-) - K80-1 (GND1)	Sound signal	Audio system playing	A waveform synchronized with sound signals is output
K90-7 (FL-) - K80-1 (GND1)	Sound signal	Audio system playing	A waveform synchronized with sound signals is output
K90-8 (RL-) - K80-1 (GND1)	Sound signal*1 Interrupt sound signal*2	Audio system playing*1 Interrupt sound signal being output*2	A waveform synchronized with sound signals is output
*1: w/o "JBL" Sound System			
*2: w/ "JBL" Sound System			

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K90-9 (RR-) - K80-1 (GND1)	Sound signal*1 Interrupt sound signal*2	Audio system playing*1 Interrupt sound signal being output*2	A waveform synchronized with sound signals is output
*1: w/o "JBL" Sound System			
*2: w/ "JBL" Sound System			

Connector K124

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K124-1 (USB+)	USB signal	-	-
K124-2 (USB-)	USB signal	-	-
K124-3 (USBS)	Shield ground	Always	Below 1 Ω

Connector K82

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K82-1 (USV1)	Power source	Ignition switch ON	4.75 to 5.25 V
K82-2 (US1-)	USB communication signal	-	-
K82-3 (US1+)	USB communication signal	-	-
K82-4 (UGD1)	Ground	Always	Below 1 Ω
K82-5 (USG1)	Shield ground	Always	Below 1 Ω

Connector RA

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
RA-1 (ANT+)	Radio antenna power source	Receiving radio broadcast	7 to 16 V
RA-2a (GND)	Ground	-	-
RA-3 (MAIN)	Radio signal	-	-
RA-3a (GND)	Ground	-	-

Connector GNSS

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
GNSS-1 (GPS)	GNSS signal	-	-

Connector SXM (with SXM Function)

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
SXM-1(XM)	SXM Radio Signal	-	-

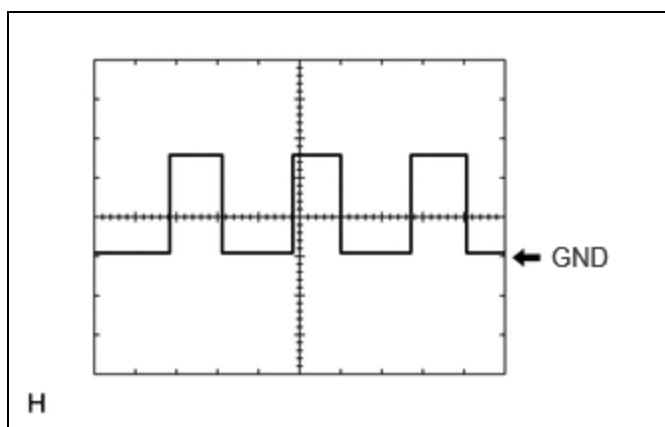
Connector K126 (w/ Panoramic View Monitor System)

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K126-1(GGND)	Camera ground	Always	Below 1 Ω
K126-2(GB+)	Camera power source	Ignition switch ON	7.5 to 9.0 V
K126-3(GVO+)	Video signal	-	-
K126-4(GVO-)	Video signal	-	-
K126-5(SGND)	Shield ground	Always	Below 1 Ω

Connector K126 (w/ Back Guide Monitor System)

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K126-1(CGND)	Camera ground	Always	Below 1 Ω
K126-2(CB+)	Camera power source	Ignition switch ON	7.5 to 9.0 V
K126-3(CV+)	Video signal	-	-
K126-4(CV-)	Video signal	-	-
K126-5(SGND)	Shield ground	Always	Below 1 Ω

(a) Waveform 1



ITEM	CONTENT
Measurement terminal	K80-8 (SPD) - K80-1 (GND1)
Measurement setting	5 V/DIV., 20 ms/DIV
Condition	Wheel being rotated

HINT:

The period changes depending on the rotation speed of the wheels.

(b) Reference (Oscilloscope waveform):

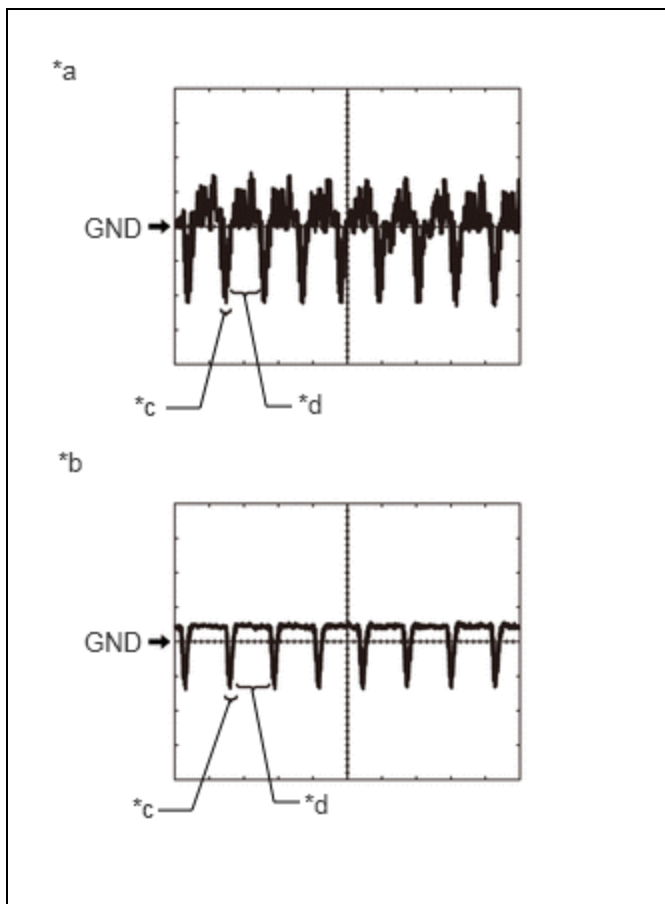
(1) Waveform 1 (camera lens not covered, displaying an image)

ITEM	CONTENT
Measurement terminal	K81-28 (V+) - K81-29 (V-)
Measurement setting	200 mV/DIV., 50 μ s/DIV.

ITEM	CONTENT
Condition	Ignition switch ON, shift lever in R

HINT:

- The video waveform changes according to the image sent by the rear television camera assembly.
- The video waveform is constantly output when the ignition switch ACC.



*a	Waveform 1 (camera lens not covered, displaying an image)
*b	Waveform 2 (camera lens covered, blacking out the screen)
*c	Synchronization Signal
*d	Video Waveform

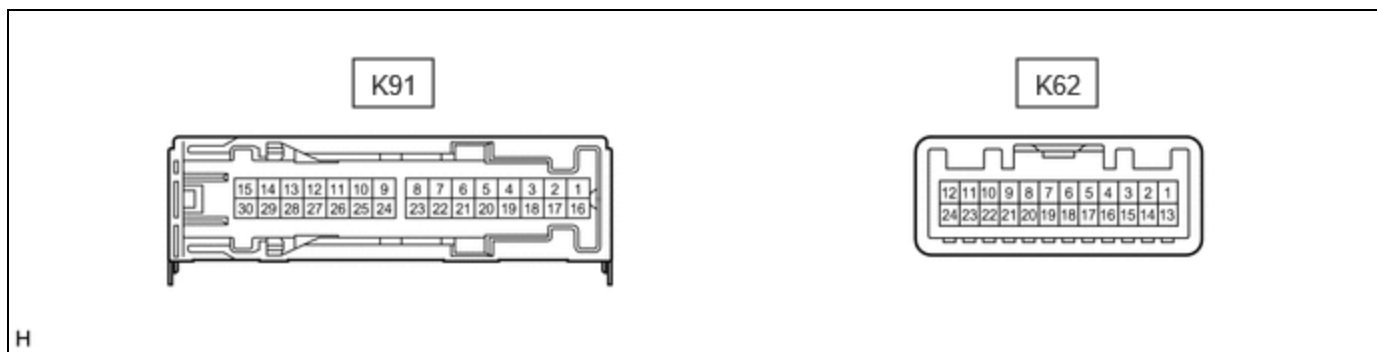
(2) Waveform 2 (camera lens covered, blacking out the screen)

ITEM	CONTENT
Measurement terminal	K81-28 (V+) - K81-29 (V-)
Measurement setting	200 mV/DIV., 50 μs/DIV.
Condition	Ignition switch ON, shift lever in R

HINT:

- The video waveform changes according to the image sent by the rear television camera assembly.
- The video waveform is constantly output when the ignition switch ACC.

STEREO COMPONENT AMPLIFIER ASSEMBLY (w/ "JBL" Sound System)



Connector K91

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K91-1 (+B) - K91-3 (GND)	Power source (+B)	Ignition switch off	11 to 14 V
K91-3 (GND) - Body ground	Ground	Always	Below 1 Ω
K91-8 (WFL+) - K91-3 (GND)	Sound signal (Woofer)	Audio system playing	A waveform synchronized with sound signals is output
K91-9 (TWL+) - K91-3 (GND)	Rear sound signal (LH)	Audio system playing	A waveform synchronized with sound signals is output
K91-10 (WFR+) - K91-3 (GND)	Sound signal (Woofer)	Audio system playing	A waveform synchronized with sound signals is output
K91-11 (TWR+) - K91-3 (GND)	Rear sound signal (RH)	Audio system playing	A waveform synchronized with sound signals is output
K91-12 (FL+) - K91-3 (GND)	Front sound signal (LH)	Audio system playing	A waveform synchronized with sound signals is output
K91-13 (RL+) - K91-3 (GND)	Front sound signal (LH)	Audio system playing	A waveform synchronized with sound signals is output
K91-14 (FR+) - K91-3 (GND)	Front sound signal (RH)	Audio system playing	A waveform synchronized with sound signals is output
K91-15 (RR+) - K91-3 (GND)	Front sound signal (RH)	Audio system playing	A waveform synchronized with sound signals is output
K91-16 (+B2) - K91-3 (GND)	Power source (+B)	Ignition switch off	11 to 14 V
K91-18 (GND2) - Body ground	Ground	Always	Below 1 Ω
K91-23 (WFL-) - K91-3 (GND)	Sound signal (Woofer)	Audio system playing	A waveform synchronized with sound signals is output
K91-24 (TWL-) - K91-3 (GND)	Rear sound signal (LH)	Audio system playing	A waveform synchronized with sound signals is output
K91-25 (WFR-) - K91-3 (GND)	Sound signal (Woofer)	Audio system playing	A waveform synchronized with sound signals is output
K91-26 (TWR-) - K91-3 (GND)	Rear sound signal (RH)	Audio system playing	A waveform synchronized with sound signals is output

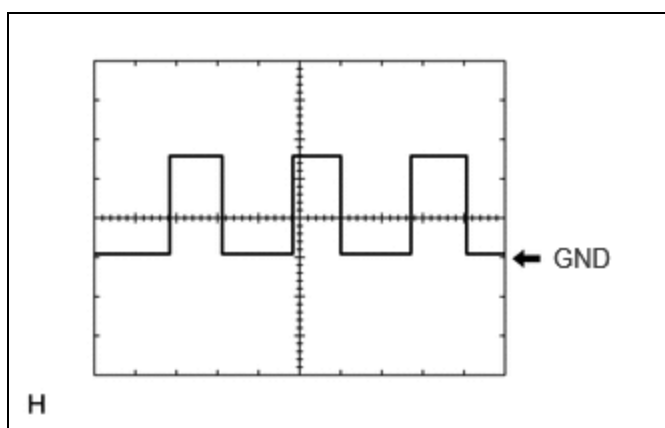
TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K91-27 (FL-) - K91-3 (GND)	Front sound signal (LH)	Audio system playing	A waveform synchronized with sound signals is output
K91-28 (RL-) - K91-3 (GND)	Front sound signal (LH)	Audio system playing	A waveform synchronized with sound signals is output
K91-29 (FR-) - K91-3 (GND)	Front sound signal (RH)	Audio system playing	A waveform synchronized with sound signals is output
K91-30 (RR-) - K91-3 (GND)	Front sound signal (RH)	Audio system playing	A waveform synchronized with sound signals is output

Connector K62

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K62-1 (MUTE) - K91-3 (GND)	Mute signal	Normal → Mute	3.5 V or higher → Below 1 V
K62-2 (L-) - K91-3 (GND)	Input voice signal (LH)	Voice is being input	A waveform synchronized with sound signals is output
K62-3 (L+) - K91-3 (GND)	Input voice signal (LH)	Voice is being input	A waveform synchronized with sound signals is output
K62-4 (R-) - K91-3 (GND)	Input voice signal (RH)	Voice is being input	A waveform synchronized with sound signals is output
K62-5 (R+) - K91-3 (GND)	Input voice signal (RH)	Voice is being input	A waveform synchronized with sound signals is output
K62-6 (SLD) - Body ground	Shield ground	Always	Below 1 Ω
K62-7 (TX-)	AVC-LAN communication signal	Service Menu	-
K62-8 (TX+)	AVC-LAN communication signal	Service Menu	-
K62-9 (FB1-) - K91-3 (GND)	Sound signal	Audio system playing	A waveform synchronized with sound signals is output
K62-10 (FB1+) - K91-3 (GND)	Sound signal	Audio system playing	A waveform synchronized with sound signals is output
K62-11 (SPD) - K91-3 (GND)	Vehicle speed signal	Wheel being rotated	Waveform 1
K62-12 (WK2) - K91-3 (GND)	Stereo component amplifier assembly start signal	Ignition switch ACC	4 V or higher
K62-13 (SLD1) - Body ground	Ground	Always	Below 1 Ω
K62-14 (II1-) - K91-3 (GND)	Input voice signal (LH)	Interrupt voice is being input	A waveform synchronized with sound signals is output
K62-15 (II1+) - K91-3 (GND)	Input voice signal (LH)	Interrupt voice is being input	A waveform synchronized with sound signals is output

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K62-16 (II2-) - K91-3 (GND)	Input voice signal (RH)	Interrupt voice is being input	A waveform synchronized with sound signals is output
K62-17 (II2+) - K91-3 (GND)	Input voice signal (RH)	Interrupt voice is being input	A waveform synchronized with sound signals is output
K62-18 (SLD2) - Body ground	Shield ground	Always	Below 1 Ω
K62-21 (FB2-) - K91-3 (GND)	Sound signal	Audio system playing	A waveform synchronized with sound signals is output
K62-22 (FB2+) - K91-3 (GND)	Sound signal	Audio system playing	A waveform synchronized with sound signals is output
K62-24 (TMUT) - K91-3 (GND)	Mute signal	Normal → Mute	3.5 V or higher → Below 1 V

(a) Waveform 1



ITEM	CONTENT
Measurement terminal	K62-11 (SPD) - K91-3 (GND)
Measurement setting	5 V/DIV., 20 ms/DIV.
Condition	Wheel being rotated

HINT:

The period changes depending on the rotation speed of the wheels.

DCM (TELEMATICS TRANSCEIVER)

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COMBINATION METER ASSEMBLY**HINT:**

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REAR TELEVISION CAMERA ASSEMBLY (w/ Back Guide Monitor System or Rear Television Camera)**HINT:**

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PARKING ASSIST ECU (w/ Panoramic View Monitor System)

HINT:

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