Signal specification

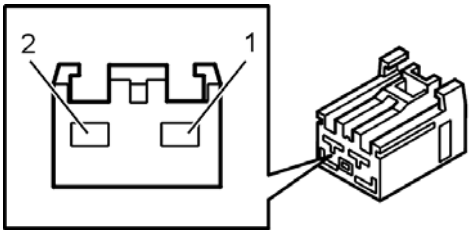
General

All the values given below are between the respective terminal in column 1 and terminal #A2 in column 2 (power ground) unless otherwise stated in brackets after the table entry.

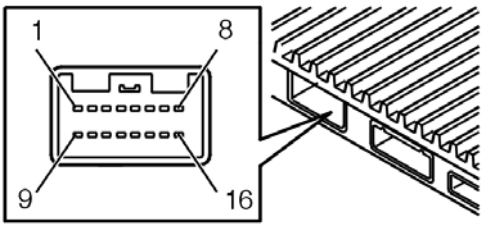
Note! It is important to connect the breakout box and check the ground terminals before taking readings.

U= DC voltage in volts (V) U_{low} = Voltage approximately 0 V

U_{bat} = Battery voltage (V)



Connector A				
Terminal	**Breakout box terminal**	**Signal type**	**Ignition on**	**Other**
#A1	#45	30 supply	U = U_{bat}	
#A2	#46	Ground	U=U_{low}	

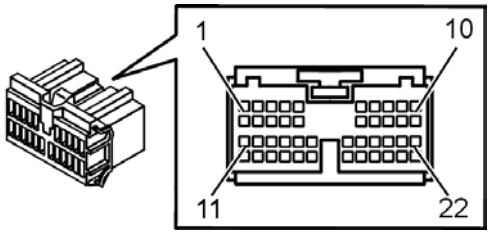


Connector B				
Terminal	**Breakout box terminal**	**Signal type**	**Ignition on**	**Other**
#B1	#1	Loudspeaker left front door (-)	Analog output signal when the loudspeaker is in use	0 - 19 V depending on the output from the control module. Loudspeaker impedance: Base performance = 4 Ω High performance = 2 Ω Premium sound = 4 Ω Treble

				loudspeaker = 8 Ω
#B2	#2	Center loudspeaker (-)	Analog output signal when the loudspeaker is in use	0 - 11 V depending on the output from the control module. Loudspeaker impedance: Premium sound with Multimedia Module (MMM) display screen = 6 Ω Premium sound without Multimedia Module (MMM) display screen = 8 Ω
#B3	#3	Loudspeaker right front door (-)	Analog output signal when the loudspeaker is in use	0 - 19 V depending on the output from the control module. Loudspeaker impedance: Base performance = 4 Ω High performance = 2 Ω Premium sound = 4 Ω Treble loudspeaker = 8 Ω
#B4	#4	Loudspeaker left rear door (-)	Analog output signal when the loudspeaker is in use	0 - 19 V depending on the output from the control module Loudspeaker impedance: Base performance = 4 Ω High performance = 2 Ω Premium sound = 6 Ω D-post treble loudspeaker = 8 Ω
#B5	#5	Loudspeaker right rear door (-)	Analog output signal when the loudspeaker is in use	0 - 19 V depending on the output from the control module. Loudspeaker impedance: Base performance = 4 Ω High performance = 2 Ω Premium sound = 6 Ω D-post treble loudspeaker = 8 Ω
#B6	#6	15 supply, activation signal for the control module	$U = U_{bat}$	$U=U_{bat}$, the control module is activated $U=U_{low}$ the control module is not activated

#B7	#7	-	-	
#B8	#8	Signal ground, microphone	$U=U_{low}$	
#B9	#9	Loudspeaker left front door (+)	Analog output signal when the loudspeaker is in use	0 - 19 V depending on the output from the control module. Loudspeaker impedance: Base performance = 4 Ω High performance = 2 Ω Premium sound = 4 Ω Treble loudspeaker = 8 Ω
#B10	#10	Center loudspeaker (+)	Analog output signal when the loudspeaker is in use	0 - 11 V depending on the output from the control module. Loudspeaker impedance: Premium sound with Multimedia Module (MMM) display screen = 6 Ω Premium sound without Multimedia Module (MMM) display screen = 8 Ω
#B11	#11	Loudspeaker right front door (+)	Analog output signal when the loudspeaker is in use	0 - 19 V depending on the output from the control module. Loudspeaker impedance: Base performance = 4 Ω High performance = 2 Ω Premium sound = 4 Ω Treble loudspeaker = 8 Ω
#B12	#12	Loudspeaker left rear door (+)	Analog output signal when the loudspeaker is in use	0 - 19 V depending on the output from the control module. Loudspeaker impedance: Base performance = 4 Ω High performance = 2 Ω Premium sound = 6 Ω D-post treble loudspeaker = 8 Ω
#B13	#13	Loudspeaker right rear door (+)	Analog output signal when the loudspeaker is in use	0 - 19 V depending on the output from the control module.

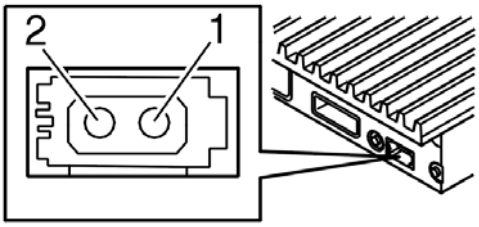
				Loudspeaker impedance: Base performance = 4 Ω High performance = 2 Ω Premium sound = 6 Ω D-post treble loudspeaker = 8 Ω
#B14	#14	-	-	
#B15	#15	-	-	
#B16	#16	Microphone signal	Analog input signal when the microphone is in use	



Note! Connector C is only used on cars fitted with a headset panel

Connector C				
Terminal	**Breakout box terminal**	**Signal type**	**Ignition on**	**Other**
#C1	#1	Headset 1, left-hand headset	Analog output signal when the headset is in use	
#C2	#2	Headset 1, right-hand headset	Analog output signal when the headset is in use	
#C3	#3	Headset 2, left-hand headset	Analog output signal when the headset is in use	
#C4	#4	Headset 2, right-hand headset	Analog output signal when the headset is in use	
#C5	#5	-	-	
#C6	#6	-	-	
#C7	#7	Headset 3, left-hand headset	Analog output signal when the headset is in use	
#C8	#8	Headset 3, right-hand headset	Analog output signal when the headset is in use	
#C9	#9	Headset 4, left-hand headset	Analog output signal when the headset is in	

			use	
#C10	#10	Headset 4, right-hand headset	Analog output signal when the headset is in use	
#C11	#11	-	-	
#C12	#12	-	-	
#C13	#13	Headset 1. ground signal	$U=U_{low}$	
#C14	#14	Headset 2. ground signal	$U=U_{low}$	
#C15	#15	Headset 1 and 2, signal ground	$U=U_{low}$	
#C16	#16	Headset 1, control signal buttons	Analog input signal when the buttons for selecting track and sound source are in use	The voltage varies between 5 - 0.9 V depending on which button is pressed in
#C17	#17	Headset 2, control signal buttons	Analog input signal when the buttons for selecting track and sound source are in use	The voltage varies between 5 - 0.9 V depending on which button is pressed in
#C18	#18	Headset 3, signal ground	$U=U_{low}$	
#C19	#19	Headset 4, signal ground	$U=U_{low}$	
#C20	#20	Headset 3 and 4, signal ground, buttons	$U=U_{low}$	
#C21	#21	Headset 3, control signal buttons	Analog input signal when the buttons for selecting track and sound source are in use	The voltage varies between 5 - 0.9 V depending on which button is pressed in
#C22	#22	Headset 4, control signal buttons	Analog input signal when the buttons for selecting track and sound source are in use	The voltage varies between 5 - 0.9 V depending on which button is pressed in



Connector D				
Terminal	**Breakout box**	**Signal type**	**Ignition on**	**Other**

	terminal			
#D1		MOST input signal		Optical input signal when the MOST network is activated
#D2		MOST output signal		Optical output signal when the MOST network is activated