

2009 Mazda 6 - North America

**Wiring Information**

Item	Wire Color	Polarity	Wire Location
12 Volts	red/blue (40A)	+	ignition switch, white 6 pin plug, pin 6
Second 12 Volts	red/black (40A)	+	ignition switch, white 6 pin plug, pin 3
Starter	gray/red	+	ignition switch, white 6 pin plug, pin 1
Ignition	green/yellow	+	ignition switch, white 6 pin plug, pin 2
Accessory	pink/yellow	+	ignition switch, white 6 pin plug, pin 4
Second Accessory	yellow	+	ignition switch, white 6 pin plug, pin 5
Keysense	red/black	+	BCM in driver kick, white 30 pin plug (3), pin 27
CAN Bus High	gray/red (HS CAN)	data	data link connector, black 16 pin plug, pin 6
CAN Bus Low	blue/red (HS CAN)	data	data link connector, black 16 pin plug, pin 14
RX DATA	white/green	data	PATS Transceiver on ignition switch, white 8 pin plug, pin 3
TX DATA	gray/orange	data	PATS Transceiver on ignition switch, white 8 pin plug, pin 4
Power Lock	black/white	-1000 ohms	BCM in driver kick, white 16 pin plug (6), pin 4
Power Unlock	(same as power lock)	-	
Lock Motor	yellow/black	5 wire	BCM in driver kick, white 16 pin plug (7), pin 5
Driver Unlock Motor	white/red	5 wire	BCM in driver kick, white 16 pin plug (7), pin 6
Passenger Unlock Motor	white/black	5 wire	BCM in driver kick, white 16 pin plug (7), pin 7
Factory Alarm Arm	black (driver door key lock)	-1000 ohms	BCM in driver kick, white 16 pin plug (6), pin 14
Factory Alarm Disarm	(same as factory alarm arm)	double -	
Disarm No Unlock	(use keysense)		(for factory keyless to func while remote started, use FAD instead)
Parking Lights (+)	red/blue	+	BCM in driver kick, white 16 pin plug (8), pin 8
Parking Lights (-)	black/white	-	headlight switch, white 17 pin plug, pin 14
Hazards	black/orange	-	BCM in driver kick, white 30 pin plug (3), pin 18

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Item	Wire Color	Polarity	Wire Location
Turn Signal (Left)	blue	+	BCM in driver kick, white 16 pin plug (8), pin 14
Turn Signal (Right)	blue/black	+	BCM in driver kick, white 16 pin plug (8), pin 5
Headlight	black/green	-	headlight switch, white 17 pin plug, pin 13
AutoLights	black/pink (interrupt to turn off autolights)	-	headlight switch, white 17 pin plug, pin 12
Reverse Light	green/black	+	BCM in driver kick, white 16 pin plug (7), pin 1
Left Front Door Trigger	black/yellow	- N.C.	BCM in driver kick, white 16 pin plug (8), pin 9
Right Front Door Trigger	black/blue	- N.C.	BCM in driver kick, white 16 pin plug (8), pin 10
Left Rear Door Trigger	black/yellow	- N.C.	BCM in driver kick, white 16 pin plug (8), pin 12
Right Rear Door Trigger	black/red	- N.C.	BCM in driver kick, white 16 pin plug (8), pin 11
Dome Light	black/blue	-	BCM in driver kick, white 16 pin plug (6), pin 7
Trunk/Hatch Pin	black/blue	-	BCM in driver kick, white 16 pin plug (6), pin 2
Hood Pin	white	- N.C.	BCM in driver kick, black 24 pin plug (1), pin 10
Trunk/Hatch Release	black/red	-	BCM in driver kick, white 30 pin plug (3), pin 28
Trunk Release Motor	black/yellow	5 wire	BCM in driver kick, white 16 pin plug (7), pin 2
Tachometer	NOT red (I4) or blue (V6)	ac	any fuel injector
Neutral Safety	black/green (M/T)	-	PCM under hood, driv rear corner, plg towards passenger side, pin 44
Clutch Pedal	black/yellow	-	clutch switch, white 2 pin plug, pin 1
Fuel Pump	green/orange	+	driver kick, harness to rear
Rear Defroster	red	- latched	climate ctrl unit, wht 24 pin plug, pin 6 (manual A/C) or 10(auto A/C)
Mirror Defroster	(same as rear defroster)		
Left Front Heated Seat	pink	+ resistor	LH seat warmer switch, white 10 pin plug, pin 9
Right Front Heated Seat	pink/yellow	+ resistor	RH seat warmer switch, gray 10 pin plug, pin 9
Speed Sense	white	ac	radio, white 24 pin plug, pin 17, or amp in pass kick, bk 16P plg, pin 9

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Item	Wire Color	Polarity	Wire Location
Brake Wire	red/white	+	brake switch or driver kick, harness to rear
Parking Brake	black/red	-	BCM in driver kick, white 16 pin plug (8), pin 1
Horn Trigger	black	-	BCM in driver kick, white 30 pin plug (3), pin 8
Wipers	white/grn (low); white/blk (high); pink/org (ign)	+	wiper switch, black 14 pin plug, pins 4, 6, 3
Left Front Window (Up/Down)	yellow/black - white/green	A	power window main switch, white 14 pin plug, pins 5 - 6
Right Front Window (Up/Down)	yellow/black - white/green	A	passenger power window switch, white 12 pin plug, pins 11 - 7
Left Rear Window (Up/Down)	blue/white - purple	A	driver kick, door harness
Right Rear Window (Up/Down)	blue - pink/blue	A	driver kick, door harness
Sun Roof (Open/Close)	gray/white - gray/black(function with ign on only)	+	sunroof switch, gray 6 pin plug, pins 5 - 6
Memory Seat 1	gray/purple	-	position memory switch, white 5 pin plug, pin 3
Memory Seat 2	yellow	-	position memory switch, white 5 pin plug, pin 2
Memory Seat 3	blue/orange	-	position memory switch, white 5 pin plug, pin 1
Radio 12V	orange/black	+	radio, white 24 pin plug, pin 14
Radio Ground	black	-	radio, white 24 pin plug, pin 24
Radio Ignition	blue/black	+	radio, white 24 pin plug, pin 22
Radio Illumination	orange/black (parking lights); brown/yel (dimmer)	+,-	radio, white 24 pin plug, pins 15, 16
Factory Amp Turn-on	white/green	+	radio, white 24 pin plug, pin 6
Left Front Speaker (+/-)	white/black - gray/black	+,-	radio, white 24 pin plug, pins 1 - 2
Right Front Speaker (+/-)	white/red - gray/red	+,-	radio, white 24 pin plug, pins 3 - 4
Left Rear Speaker (+/-)	white/purple - gray/white	+,-	radio, white 24 pin plug, pins 10 - 11
Right Rear Speaker (+/-)	white or white/blue - gray	+,-	radio, white 24 pin plug, pins 12 - 13
Center Channel (+/-)	white/red - gray/red	+,-	amplifier in passenger kick, green 16 pin plug, pins 5 - 6

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Item	Wire Color	Polarity	Wire Location
Subwoofer (+/-)	white/black - gray/black	+,-	amplifier in passenger kick, black 8 pin plug, pins 8 - 4
Aux. Audio Input Left (+/-)	red/blue - black/white	+,-	radio, white 16 pin plug, pins 3 - 4
Aux. Audio Input Right (+/-)	white/green - black/white	+,-	radio, white 16 pin plug, pins 2 - 4
RSE Audio Left (+/-)	red/blue - black/green (bluetooth/satellite audio)	+,-	radio, white 16 pin plug, pins 3 - 4
RSE Audio Right (+/-)	white/green - blk/grn (bluetooth/satellite audio)	+,-	radio, white 16 pin plug, pins 2 - 4
Satellite Radio 12 Volts	orange/black	+	Sat Radio behind glove box, gry 16 pin plg, pin 16
Satellite Radio Ground	black	-	Sat Radio behind glove box, gray 16 pin plg, pin 1
Satellite Radio Ignition	blue/black	+	Sat Radio behind glove box, gray 16 pin plg, pin 8
Satellite Radio Antenna	(coaxial cable)		
Satellite Audio Left (+/-)	red/blue - black/green	+,-	Satellite Radio, gray 16 pin plug, pins 3 - 4
Satellite Audio Right (+/-)	white/green - black/green	+,-	Satellite Radio, gray 16 pin plug, pins 2 - 4

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***What Fits***

Item	Size	Depth	Location
Headunit	irregular		center of dash
Left Front Speaker	5.5 x 7.5		left front door
Left Front Tweeter	1.2		left front door
Right Front Speaker	5.5 x 7.5		right front door
Right Front Tweeter	1.2		right front door
Left Rear Speaker	5.5 x 7.5		left rear door
Left Rear Tweeter	3.1		left rear deck (surround)
Right Rear Speaker	5.5 x 7.5		right rear door
Right Rear Tweeter	3.1		right rear deck (surround)
Center Channel	3.1		top center of dash
Subwoofer	9		center of rear deck
Satellite Radio Tuner			behind glove box

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***Additional Wiring Notes***

Item	Note
Left Front Speaker (+/-)	On models with amplifier, the speaker and tweeter wires are white/black - gray/black at the amplifier in passenger kick, black 8 pin plug, pins 6 - 2.
Left Rear Speaker (+/-)	On models with amplifier, the speaker wires are white/purple - gray/white at the amplifier in passenger kick, green 16 pin plug, pins 10 - 9.
Right Front Speaker (+/-)	On models with amplifier, the speaker and tweeter wires are white/red - gray/red at the amplifier in passenger kick, black 8 pin plug, pins 7 - 3.
Right Rear Speaker (+/-)	On models with amplifier, the speaker wires are white - gray at the amplifier in passenger kick, green 16 pin plug, pins 7 - 8. The rear surround speakers are wired in series, and the wires are white/red - gray/red at the amplifier, green 16 pin plug, pins 3 - 4.