

2019 Hyundai SantaFe(SmartKey)



<http://www.directechs.com>

Wiring Information

| Item | Wire Color | Polarity | Wire Location |
|--------------------|------------------|----------|---|
| 12 Volts | Red (50A) | + | ICU Junction Block-Dash Fuse Box, white 4 pin plug (B), pin 4 |
| Ground | (chassis ground) | | |
| Starter | Red | + | Driver Kick, red 54 pin plug (EM11), pin 34 |
| Ignition | Yellow | + | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 31 |
| Accessory | Blue | + | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 26 |
| Second Accessory | Orange/Black | + | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 40 |
| Ignition Interrupt | Gray/Orange | Cut | ICU Junction Block-Dash Fuse Box, rear, white 47 pin plug (G), pin 1 |
| PTS 1 | Gray/Black | - | Start Stop Button Switch, white 10 pin plug, pin 1 |
| PTS 2 | Yellow | - | Start Stop Button switch, white 10 pin plug, pin 7 |
| CAN Bus High | White (D-CAN) | Data | OBD-Data Link Connector, black 16 pin plug, pin 6 |
| CAN Bus Low | Brown (D-CAN) | Data | OBD-Data Link Connector, black 16 pin plug, pin 14 |
| CAN Bus High 2 | Red (B-CAN) | Data | ICU Junction Block-Dash Fuse Box, rear, black 32 pin plug (F), pin 32 |
| CAN Bus Low 2 | Blue (B-CAN) | Data | ICU Junction Block-Dash Fuse Box, rear, black 32 pin plug (F), pin 31 |
| CAN Bus High 3 | White (P-CAN) | Data | ICU Junction Block-Dash Fuse Box, rear, black 32 pin plug (F), pin 22 |
| CAN Bus Low 3 | Gray (P-CAN) | Data | ICU Junction Block-Dash Fuse Box, rear, black 32 pin plug (F), pin 23 |
| OBD 12 Volts | Green (20A) | + | OBD-Data Link Connector, black 16 pin plug, pin 16 |
| OBD Ground | Black | - | OBD-Data Link Connector, black 16 pin plug, pin 4 |

2019 Hyundai SantaFe(SmartKey)



<http://www.directechs.com>

| Item | Wire Color | Polarity | Wire Location |
|------------------------|-------------------------------------|-------------|---|
| OBD Ignition | Pink | + | OBD-Data Link Connector, black 16 pin plug, pin 3 |
| OBD Connector | Black | | Under Driver Dash, Below Fuse Panel Cover |
| IMMO Data | White/Orange or Black | Data | Driver Kick, red 54 pin plug (EM11), pin 40 |
| Security Light | (P-CAN) | | |
| Power Lock | White/Black (passenger switch) | - | ICU Junction Block-Dash Fuse Box, red 40 pin plug (D), pin 35 |
| Power Unlock | Blue/Orange (passenger switch) | - | ICU Junction Block-Dash Fuse Box, red 40 pin plug (D), pin 27 |
| Lock Motor | Orange | Reverse | ICU Junction Block-Dash Fuse Box, blue 58 pin plug (C), pin 20 |
| Driver Unlock Motor | Blue | Reverse | ICU Junction Block-Dash Fuse Box, blue 58 pin plug (C), pin 30 |
| Passenger Unlock Motor | Red | Reverse | ICU Junction Block-Dash Fuse Box, blue 58 pin plug (C), pin 58 |
| Factory Alarm Arm | (factory remote only) | | |
| Factory Alarm Disarm | (proximity key and push button) | | |
| Parking Lights | White/Black (LF); Brown (RF) | + | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 7 (LF); pin 6 (RF) |
| Parking Lights 2 | Green/Black (LR); Yellow/Black (RR) | + | ICU Junction Block-Dash Fuse Box, blue 58 pin plug (C), pin 33 (LR); pin 43 (RR) |
| Parking Lights - | Yellow | - 1680 Ohms | Headlight-Wiper Switch, black 16 pin plug, pin 14 |
| Parking Lights MUX | Yellow | MUX | Headlight-Wiper Switch, black 16 pin plug, pin 14 |
| Hazards | Pink | - | ICU Junction Block-Dash Fuse Box, rear, black 32 pin plug (F), pin 7 |
| Turn Signal (Left) | Red (LF); Gray (LR) | + | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 39 (LF); blue 58 pin plug (C), pin 28 (LR) |
| Turn Signal (Right) | White or Red (RF); White/Black (RR) | + | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 38 (RF); blue 58 pin plug (C), pin 37 (RR) |

2019 Hyundai SantaFe(SmartKey)



<http://www.directechs.com>

| Item | Wire Color | Polarity | Wire Location |
|--------------------------|--|-----------|---|
| Headlight | Blue/Orange | - | Headlight-Wiper Switch, black 16 pin plug, pin 15 |
| AutoLights | Yellow | Cut | Headlight-Wiper Switch, black 16 pin plug, pin 14 |
| Reverse Light | Red/Black | + | ICU Junction Block-Dash Fuse Box, blue 58 pin plug (C), pin 6 |
| Left Front Door Trigger | Gray/Black | - | ICU Junction Block-Dash Fuse Box, red 40 pin plug (D), pin 31 |
| Right Front Door Trigger | Yellow/Black | - | ICU Junction Block-Dash Fuse Box, red 40 pin plug (D), pin 32 |
| Left Rear Door Trigger | White/Black | - | ICU Junction Block-Dash Fuse Box, red 40 pin plug (D), pin 20 |
| Right Rear Door Trigger | Brown/Black | - | ICU Junction Block-Dash Fuse Box, red 40 pin plug (D), pin 19 |
| Dome Light | Brown | - | ICU Junction Block-Dash Fuse Box, rear, black 32 pin plug (F), pin 21 |
| Trunk/Hatch Pin | Brown | - | ICU Junction Block-Dash Fuse Box, red 40 pin plug (D), pin 14 |
| Hood Pin | Pink | - | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 46 |
| Power Liftgate | Green | - | Power Liftgate Switch, black 16 pin plug, pin 5 -- or-- Driver Kick, white 74 pin plug (MF11), pin 30 |
| Trunk/Hatch Release | Gray/Black (rear handle switch) | - | ICU Junction Block-Dash Fuse Box, red 40 pin plug (D), pin 28 |
| Trunk Release Motor | Blue | + | ICU Junction Block-Dash Fuse Box, blue 58 pin plug (C), pin 32 |
| Fuel Door Release | (locks/unlocks along with driver door) | | |
| Tachometer | Yellow/Orange | AC | Driver Kick, red 54 pin plug (EM11), pin 3 |
| Fuel Pump | Red | + | Driver Kick, blue 31 pin plug (EF11), pin 1 |
| Rear Defroster | Green/Orange | - Latched | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 21 |
| Mirror Defroster | (same as rear defroster) | | |
| Left Front Heated Seat | Brown | - | Seat Heater Switch, white 24 pin plug, pin 2 |

2019 Hyundai SantaFe(SmartKey)



<http://www.directtechs.com>

| Item | Wire Color | Polarity | Wire Location |
|------------------------------|---|------------|--|
| Right Front Heated Seat | Gray | - | Seat Heater Switch, white 24 pin plug, pin 14 |
| Heated Steering Wheel | Green | - | Steering Wheel Heater Switch, white 24 pin plug, pin 9 |
| Speed Sense | Brown | AC | Radio, white 35 pin plug, pin 18 (w/o navigation); white 38 pin plug, pin 38 (with navigation) |
| Brake Wire | Green/Black | + | Brake Switch, black 6 pin plug, pin 5 --or-- Driver Kick, red 54 pin plug (EM11), pin 48 |
| Parking Brake | Gray/Orange (w/o electric parking brake) | - | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 44 |
| Horn Trigger | White/Black | - | Horn Switch-Clock Spring, white 14 pin plug, pin 8 --or-- Driver Kick, red 54 pin plug (EM11), pin 4 |
| Horn - Factory Alarm | White | - | ICU Junction Block-Dash Fuse Box, white 47 pin plug (A), pin 10 |
| Wipers | Orange/Black | + | Driver Kick, red 54 pin plug (EM11), pin 24 |
| Left Front Window (Up/Down) | (motor is part of module) | | |
| Right Front Window (Up/Down) | Green - Blue (w/o auto); (with auto, motor is part of module) | A | Passenger Power Window Switch, white 12 pin plug, pins 5 - 3 |
| Left Rear Window (Up/Down) | Pink - Brown | A | Left Rear Power Window Switch, white 12 pin plug, pins 5 - 3 |
| Right Rear Window (Up/Down) | Pink - Brown | A | Right Rear Power Window Switch, white 12 pin plug, pins 5 - 3 |
| Sun Roof (Open/Close) | Black - Yellow/Orange (function with ignition on only) | - | Driver Kick, white 74 pin plug (MF11), pins 18 - 7 |
| Memory Seat 1 | Red | - Resistor | Driver Memory Switch, black 6 pin plug, pin 3 |
| Memory Seat 2 | (same as memory seat 1) | - Resistor | |
| Radio 12V | Red | + | Radio, white 35 pin plug, pin 10 |
| Radio Ground | Black | - | Radio, white 35 pin plug, pin 13 |
| Radio Ignition | White (w/o Idle Stop/Go); Pink (with Idle Stop/Go) | + | Radio, white 35 pin plug, pin 22 |

2019 Hyundai SantaFe(SmartKey)



<http://www.directechs.com>

| Item | Wire Color | Polarity | Wire Location |
|--------------------------------|---|----------|---|
| Radio Illumination | Red (parking lights); Blue (dimmer) | +,- | Radio, white 35 pin plug, pin 6 (parking lights); pin 19 (dimmer) |
| Factory Amp Turn-on | (M-CAN) | | |
| Power Antenna | Gray/Black | + | Radio, white 35 pin plug, pin 5 |
| Left Front Speaker (+/-) | Brown - White | +,- | Radio, white 38 pin plug, pins 13 - 14 |
| Right Front Speaker (+/-) | Red - Blue | +,- | Radio, white 38 pin plug, pins 16 - 15 |
| Left Rear Speaker (+/-) | Yellow - Black | +,- | Radio, white 38 pin plug, pins 1 - 2 |
| Right Rear Speaker (+/-) | Green - Orange | +,- | Radio, white 38 pin plug, pins 28 - 27 |
| Left Front Speaker - With Amp | Brown - White | +,- | Amplifier under passenger seat, black 28 pin plug, pins 4 - 19 |
| Right Front Speaker - With Amp | Red - Blue | +,- | Amplifier under passenger seat, black 28 pin plug, pins 3 - 18 |
| Left Front Tweeter - With Amp | Black - White | +,- | Amplifier under passenger seat, white 28 pin plug, pins 13 - 26 |
| Right Front Tweeter - With Amp | Orange - Blue | +,- | Amplifier under passenger seat, white 28 pin plug, pins 12 - 25 |
| Left Rear Speaker - With Amp | Yellow - Black | +,- | Amplifier under passenger seat, black 28 pin plug, pins 13 - 26 |
| Right Rear Speaker - With Amp | Green - Orange | +,- | Amplifier under passenger seat, black 28 pin plug, pins 12 - 25 |
| Left Rear Surround - With Amp | White - Brown | +,- | Amplifier under passenger seat, black 28 pin plug, pins 15 - 28 |
| Right Rear Surround - With Amp | Green - Pink | +,- | Amplifier under passenger seat, black 28 pin plug, pins 14 - 27 |
| Center Channel - With Amp | Pink - Yellow | +,- | Amplifier under passenger seat, white 28 pin plug, pins 14 - 27 |
| Subwoofer - With Amp | Green - Orange (coil 1); Blue - Red (coil 2) | +,- | Amplifier under passenger seat, black 28 pin plug, pins 2 - 17 (coil 1); pins 1 - 16 (coil 2) |
| Aux. Audio Input Left (+/-) | Green - Black/Orange (w/o navigation); Red - Black/Orange (with navigation) | +,- | Radio, white 38 pin plug, pins 24 - 25 |
| Aux. Audio Input Right (+/-) | White - Black/Orange (w/o navigation); Black - Black/Orange (with navigation) | +,- | Radio, white 38 pin plug, pins 10 - 25 |

2019 Hyundai SantaFe(SmartKey)



<http://www.directechs.com>

| Item | Wire Color | Polarity | Wire Location |
|-----------------------|-------------|----------|---------------------------------------|
| Rearview Camera Video | Red - Black | +,- | Radio, white 38 pin plug, pins 7 - 21 |

2019 Hyundai SantaFe(SmartKey)



<http://www.directechs.com>

What Fits

| Item | Size | Depth | Location |
|------|------|-------|----------|
|------|------|-------|----------|

2019 Hyundai SantaFe(SmartKey)

<http://www.directechs.com>

Additional Wiring Notes

| Item | Note |
|------------------|---|
| Accessory | Can also use yellow (+) in the Driver Kick, red 54 pin plug (EM11), pin 35. |
| Second Accessory | Can also use brown (+) in the Driver Kick, red 54 pin plug (EM11), pin 13. |
| CAN Bus High 2 | Also found in the Driver Kick, white 74 pin plug (MF11), pin 63. |
| CAN Bus High 3 | Also found in the Driver Kick, white 74 pin plug (MF11), pin 19. |
| CAN Bus Low 2 | Also found in the Driver Kick, white 74 pin plug (MF11), pin 62. |
| CAN Bus Low 3 | Also found in the Driver Kick, white 74 pin plug (MF11), pin 20. |
| Ignition | Can also use blue/black (+) in the Driver Kick, red 54 pin plug (EM11), pin 29. |