**Chrysler / Jeep / Dodge**

The given informations are only valid for Chrysler / Jeep OEM radio with J1850 VPW (PCI) bus connection between radio and CD changer. (most radios before 2005)

Example: or

Communication between radio and CD changer works over the cars J1850 VPW bus system. This bus is in accordance with specification SAE J1850, the protocol uses one byte header frames in accordance with SAE J2178.

The radio will poll the changer with the following frame:

|  |  |  |
| --- | --- | --- |
| Frame header | 0x8D | CD Changer control frame |
| Data byte 1 | 0x0F | Poll to CD changer |
| Date byte 2 | 0x00 | Actual Radio mode0x01 = Radio off0x10 = Internal CD drive  0x20 = Mode MW or LW  0x21 = Mode FM  0x24 = Mode CD changer |
| CRC |  |  |

The following frame is the poll response if changer is in idle mode or changing disc/track:

|  |  |  |
| --- | --- | --- |
| Frame header | 0x8D | CD Changer control frame |
| Data byte 1 | 0x93 | Response to frame 8D 0F – Pong from CD changer when in idle status |
| Data byte 2 | 0x01 | Actual disc, range 0-0xFF, Hex coded0-9 = numbers 0-9A = ´:´  B = ´;´  C = ´<´  D = ´=´  E = ´>´  F = ´?´ |
| Data byte 3 | 0x01 | Actual track, range 0-0xFF, Hex coded0-9 = numbers 0-9A = ´:´  B = ´;´  C = ´<´  D = ´=´  E = ´>´  F = ´?´ |
| Data byte 4 | 0x80 | Display control0x02 = Blinking “SCAN” text0x04 = “RND” activated  0x30 = “NO MAG” text  0x60 = “NO DISC” text  0x70 = “–:–” steady  0x80 = Disc number + radio clock  0x90 = Disc number + track number + radio clock  0xA0 = Disc number + track number + “00:00”  0xB0 = Disc number + track number + song play time |
| CRC |  |  |

The following frame is the poll response if changer is playing a track:

|  |  |  |
| --- | --- | --- |
| Frame header | 0x8D | CD Changer control frame |
| Data byte 1 | 0x94 | Response to frame 8D 0F – Pong from CD changer while playing |
| Data byte 2 | 0x00 | Actual minutes of play time, range 0-99, BDC codedIf byte is 0x9x the time is displayed like “-0:00”, remaing time |
| Data byte 2 | 0x00 | Actual seconds of play time, range 0-99, BCD coded |
| CRC |  |  |

This frame must be send before the first 0x8D 0x94… frame, otherwise time update is not possible:

|  |  |  |
| --- | --- | --- |
| Frame header | 0x8D | CD Changer control frame |
| Data byte 1 | 0xE1 | Command to activate time displayRequired before 8D 94Otherwise play time update not possible |
| Data byte 2 | 0x01 | ??? |
| Data byte 3 | 0x10 | ??? |
| CRC |  |  |

The following frame will be send from radio to the changer, if a changer related button was pressed:

|  |  |  |
| --- | --- | --- |
| Frame header | 0x3D | CD Changer control frame, button press |
| Data byte 1 | 0x12 | ??? |
| Data byte 2 | 0x810x830x84 | ??? With “TUNE” and “SEEK” button??? With “DISC” button??? With “RND” button |
| Data byte 3 | 0x26 | Key ID0x23 = Button “TUNE FF” pressed0x24 = Button “TUNE RW” pressed  0x25 = Button “TUNE” released  0x26 = Button “SEEK UP” pressed  0x27 = Button “SEEK DOWN” pressed  0x35 = Button “RND” pressed  0xF1 = Button “DISC UP” pressed  0xF2 = Button “DISC DOWN” pressed |
| CRC |  |  |

To activate the CD changer audio inputs you simply answer the poll frame 0x8D 0x0F with response frame 0x8D 0x93.

Be aware that the CD changer bus (J1850/PCI) is the same bus where all other control boxes are connected together, like ECU, RKE or SKIM module. So be carefull while handling the bus, mistakes can lead to serious damage on your car.

Radio connector pinout:

Valid for this type of connector.

|  |  |  |
| --- | --- | --- |
| Radio Connector | | |
| Pin | Layout Code | Description |
| 1 | BATT | Fused B+ (IOD) |
| 2 | AC | Fused Ignition Switch Output (run-acc) |
| 3 | P-LAMP | Panel Lamp Driver |
| 4 | Side-M | ??? |
| 5 | NC | No Connection |
| 6 | NC | No Connection |
| 7 | RF- | Right Front Speaker + |
| 8 | RF+ | Right Front Speaker – |
| 9 | LF- | Left Front Speaker + |
| 10 | LF+ | Left Front Speaker – |
| 11 | GND | Ground |
| 12 | BATT | Fused B+ (IOD) |
| 13 | P-ANT | Ant/Amp Remote (12V Output during Radio ON) |
| 14 | J1850 | PCI Bus |
| 15 | EVA-MUTE | Speaker Mute Input (Low active) |
| 16 | NC | No Connection |
| 17 | NC | No Connection |
| 18 | LR- | Left Rear Speaker – |
| 19 | LR+ | Left Rear Speaker + |
| 20 | RR- | Right Rear Speaker – |
| 21 | RR+ | Right Rear Speaker + |
| 22 | GND | Ground |
| CD Changer Connector | | |
| Pin | Layout Code | Description |
| 1 | CDC R | CD-Changer Audio Input Right |
| 2 | S-GND | Shield Ground |
| 3 | GND | Ground |
| 4 | J1850 | PCI Bus |
| 5 | CDC ACC | CD-Changer Ignition Switch Output (run-acc) |
| 6 | CDC L | CD-Changer Audio Input Left |
| 7 | GND | Ground |
| 8 | NC | No Connection |
| 9 | RDW | ??? |
| 10 | CDC BATT | CD-Changer B+ Output |