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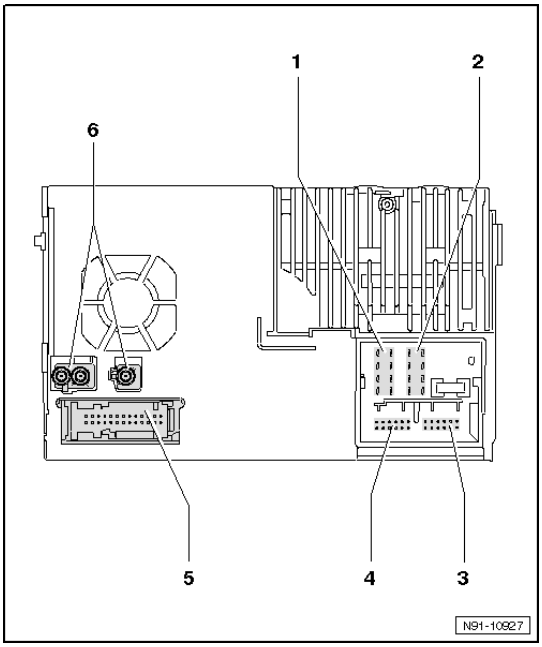
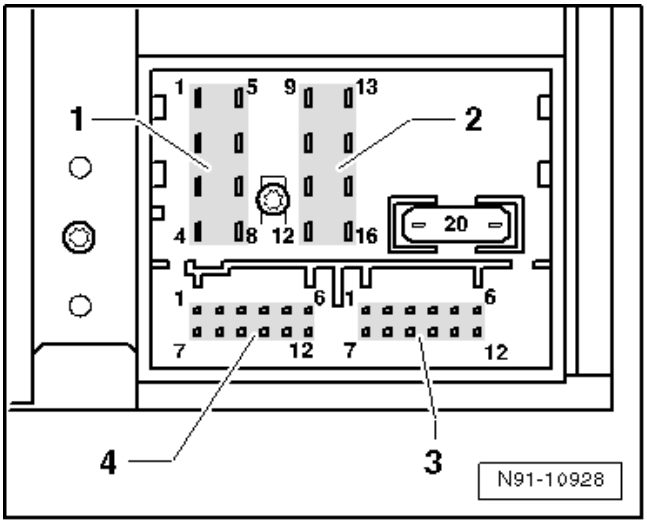
Volkswagen RNS 510 pin assignments



Multi-pin connector 1, 8-pin, for loudspeaker outputs



1 – Rear right loudspeaker, positive
2 – Front right loudspeaker, positive
3 – Front left loudspeaker, positive

4 – Rear left loudspeaker, positive
5 – Rear right loudspeaker, negative
6 – Front right loudspeaker, negative
7 – Front left loudspeaker, negative
8 – Rear left loudspeaker, negative

Note! When used with a sound amplifier, the same pin assignments are used as line-in for the sound amplifier. To achieve this, the radio unit is programmed from “output stage power 26 dB” to “output stage line-out 12 dB” in the factory. Details on how to perform this can be found in Volkswagen RNS 510 coding when installing with a factory amplifier.

Multi-pin connector 2, 8-pin, for voltage supply lines and CAN bus

9 – CAN bus, high
10 – CAN bus, low
11 – Display voltage supply, positive, optional for radio module low version only
12 – Voltage supply, negative, terminal 31
13 – Display HV CAN bus low, optional for radio module low version only, not for midline
14 – Display HV CAN bus high, optional for radio module low version only, not for midline
15 – Voltage supply, positive, terminal 30
16 – Anti-theft coding control signal, SAFE, positive

Multi-pin connector 3, 12-pin, for telephone and microphone signals

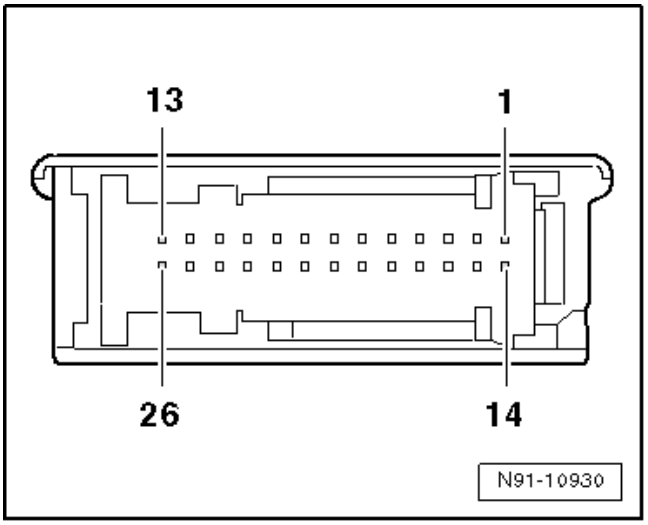
1 – Microphone input, negative
2 – AUX output, audio, right
3 – AUX output, common signal earth
4 – Microphone output, negative
5 – Telephone audio input signal left, negative
6 – Telephone audio input signal right, negative
7 – Microphone input, positive
8 – AUX output, audio, left
9 – Microphone output, positive
10 – Telephone mute (mute switch for radio)
11 – Telephone audio input signal left, positive
12 – Telephone audio input signal right, positive

Multi-pin connector 4, 12-pin, for CD changer control and CD audio input signals

1 – AUX signal input, left
2 – AUX signal earth
3 – CD changer, audio signal earth
4 – CD changer, voltage supply, positive, terminal 30, contact continuous load greater than 1 A, temporary peak load 5 A
5 – Not assigned
6 – CD changer, DATA OUT (data exchange for CD changer control from radio navigation system to CD changer)
7 – AUX signal input, right

8 – CD changer, left audio channel, CD/L
9 – CD changer, right audio channel, CD/R
10 – CD changer, control line, switched positive
11 – CD changer, DATA IN (data exchange for CD changer control from CD changer to radio navigation system)
12 – CD changer, CLOCK (internal check protocol for data flow monitoring)

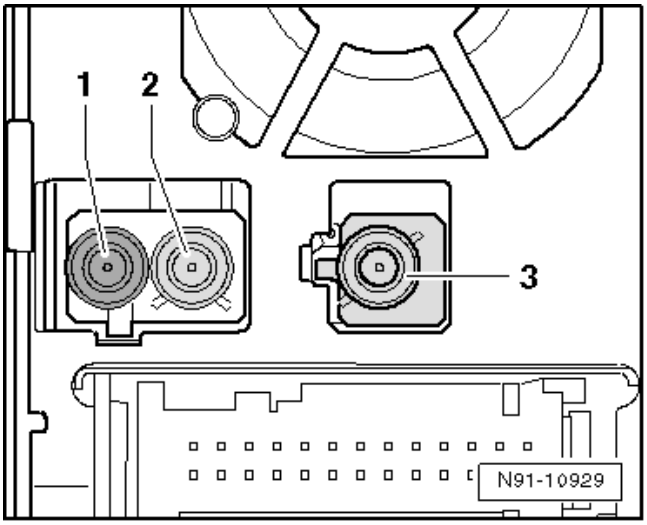
Multi-pin connector 5, audio and video, 26-pin



1 – Reserved for Debug RX protocol
2 – Reserved for Debug TX protocol
3 – Not assigned
4 – Video signal input, RGBS, negative (ground)
5 – Video signal output LF, Right (Audio use 17 for ground)
6 – Ground Sync input
(Internal universal preparation for mobile telephone, mobile telephone detection)
7 – Video signal output, vertical and horizontal synchronisation
(Internal universal preparation for mobile telephone, cradle and button evaluation)
8 – Video signal ouput, green
(Internal universal preparation for mobile telephone, cradle, aerial diagnosis)
9 – Video signal input, RGBS, negative (ground)
10 – Video signal input LF, right (Audio use 24 for ground)
11 – Video signal input, screening earth
12 – Video signal input, vertical and horizontal synchronisation
13 – Video signal input, green
14 – Not assigned
15 – Not assigned
16 – Not assigned
17 – Video signal output, LF, negative (ground)
18 – Video signal output LF, Left (Audio use 17 for ground)
19 – Video signal output, RGBS, negative (ground)
(Internal universal preparation for mobile telephone, cradle, negative)
20 – Video signal output, Blue

(Internal universal preparation for mobile telephone, switched terminal 30)
21 – Video signal output, Red
22 – Video signal input, LF, negative
23 – Video signal input, LF, left (Audio use 24 for ground)
24 – Video signal input, RGBS, negative (ground)
25 – Video signal input, blue
26 – Video signal input, red

Connectors 6, aerial connectors



1 – AM and FM2 radio reception aerial connector, double Fakra, no coding, impedance 50 ohms, colour cream-white

2 – FM1 radio reception aerial connector, double Fakra, coding B, impedance 50 ohms, colour cream-white

3 – Navigation aerial connector, double Fakra, coding C, impedance 50 ohms, colour signal blue

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Hakan Topcu on September 4, 2009 at 10:24 pm

Dear Friends,
i have Vw golf 6 (2009 Model) car and i wanna buy a brand new RNS 510 + Premium Bluetooth telephone kit

whats is the required parts (OEM's) and its part numbers

i am waiting your replies.

Thank you

Reply

Barry Crook on November 9, 2009 at 10:49 am

Is there only RGB video outputs on the rns510? i have headrest monitors i would like to fit and

my intention is to get whatever dvd is playing on the rns510 to also play on the headrest monitors but my problem is they only have composite video inputs (YELLOW RCA CONNECTOR) so i was wondering if there is any way of connecting them upto the headunit without an expensive rgb to composite converter box.. 😕

Any help would be very greatfully recieved…

Reply

Maverick on November 9, 2009 at 9:56 pm

Your only option is the conversion as per http://www.my-gti.com/525/

Reply

golfather on March 29, 2010 at 6:12 am

On the European RNS510, the Label for the pinouts has blanks where you have AUX Out pinouts.
Although the pins are actually populated on the unit itself, do you know if they are Live and actually give out an Aux out or are they only activated for US units?

Cheers

Reply

marko68 on November 27, 2010 at 10:26 pm

is there any way for the DVD work in progress except on the module?

Reply

Pingback: RNS 510 Video Input

Pingback: Video Ausgang RNS510 - Golf VI Forum

Pingback: Summary of Bluetooth Options for RNS510 - Page 31

javier f garcia on November 1, 2011 at 12:53 am

can i install a vw rns 510 radio in a 2009 vw rabbit

Reply

javier3270@msn.com on November 1, 2011 at 12:58 am

can i install rns 510 radio in a vw 2009 rabbit

Reply

Pingback: Scirocco R Modifications - RVC Info - Page 5

kully on June 17, 2012 at 2:02 am

is that correct?
on the Multi-pin connector 5, audio and video, 26-pin are pins 4 and 9 of the same? Really?

4 – Video signal input, RGBS, negative (ground)
9 – Video signal input, RGBS, negative (ground)

Reply

Pingback: RNS-510 with Parrot CK3000 low volume problem

Pingback: Aftermarket Head Unit Options - Replace RCD-510

Alex on September 17, 2012 at 9:01 am

Hi,
My Bury Take and Talk BT has stopped muting and playing through the car speakers since I replaced my RCD310 for a RNS510.

Reply

Alex on September 17, 2012 at 9:03 am

Hi,
My Bury Take and Talk BT has stopped muting and playing through the car speakers since I replaced my RCD310 for a RNS510. Does anyone know how to solve this problem?

Reply

Alex on September 17, 2012 at 9:09 am

Hello, can someone tell me what I need to conect rear camera to RNS510?

Reply

Pingback: BlueTooth related questions (all BT questions go in this thread only) - Page 7

Pingback: POLO with RCD510 Sub/Amp install

Pingback: 2012 Golf R sound build - ideas/prices

Pingback: GPS is off - Page 2

Pingback: Voice Command Microphone for my RNS510

w on July 16, 2013 at 8:41 am

Why is the RNS510 so restricted and you cannot attach anything to it now even a simple AUX lead without buying OEM VW parts. I want to install reverse camera and that is also not simple as you have to code it aswell. This is a nice unit but you cannot do much with it as you have to buy everything from VW for over £200 pounds just to add bluetooth or MDI. This is rubish when you already pay allot of money for the unit.

Reply

Pingback: rns-510 navigation by voice - Page 2

Pingback: T5 Reverse Light

Pingback: Dauerplus Seite 2 : Ist es nicht so, dass bei einer ausgeschaltetes Zündung Radio ...

Raffaele on July 17, 2014 at 7:12 pm

Hi, excuse me for the question: can i install a usb cable on the rns510 C? i need a usb socket to use a usbpen for my music. It's possible to connect a usb cable on the rns510? 5KD 035 724 A is the aux input but i don't know if exists a usb input for my navi.

Reply

vik on August 2, 2015 at 5:24 am

hi I have rns 510 and I like connect amplifier for subwoofer how I can do this

Reply

mohammed shibil on June 20, 2016 at 5:59 pm

i have VW sciroco 2010 and my electritioned did wiring for sub woofer and amolifier at the end he open the radio and he told me it has no output to connect subwoofer or amplifier any converter anything can adjust to add subwoofer ? alsdo RCD510 can support DVD video facilty ..?

Reply

tony pun on October 6, 2016 at 2:08 am

your site is wonderful for the details of the connectors

Reply

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