

# BTR-2.1 Bluetooth Retrofit Kit™ for Factory Head Unit

## **INSTALLATION INSTRUCTIONS**

It is intended that the average person with some knowledge of tools and basic electricity will be able to easily install this kit. If you have doubts, contact your local car stereo shop for installation.

THIS KIT **WILL NOT** WORK WITH THE *MOST* CAN-BUS HEAD UNITS SUCH AS CR/CDR-23 FOUND IN 2003 AND NEWER PORSCHE® VEHICLES. Please see BTR-3 Kit.

This kit **WILL NOT** work with CR/CDR-210 that does NOT have the front 6 CD Changer.

The installer should read through these instructions **twice** before attempting the procedure. There are critical steps to be completed, in order. The job will go quickly and MUCH smoother if this is done.

Further issues beyond the basic OEM sound system as installed at the factory or tampering by a previous owner may exist which could require further diagnostics by a qualified shop.

**KEEP YOUR PACKING LIST** for potential returns.

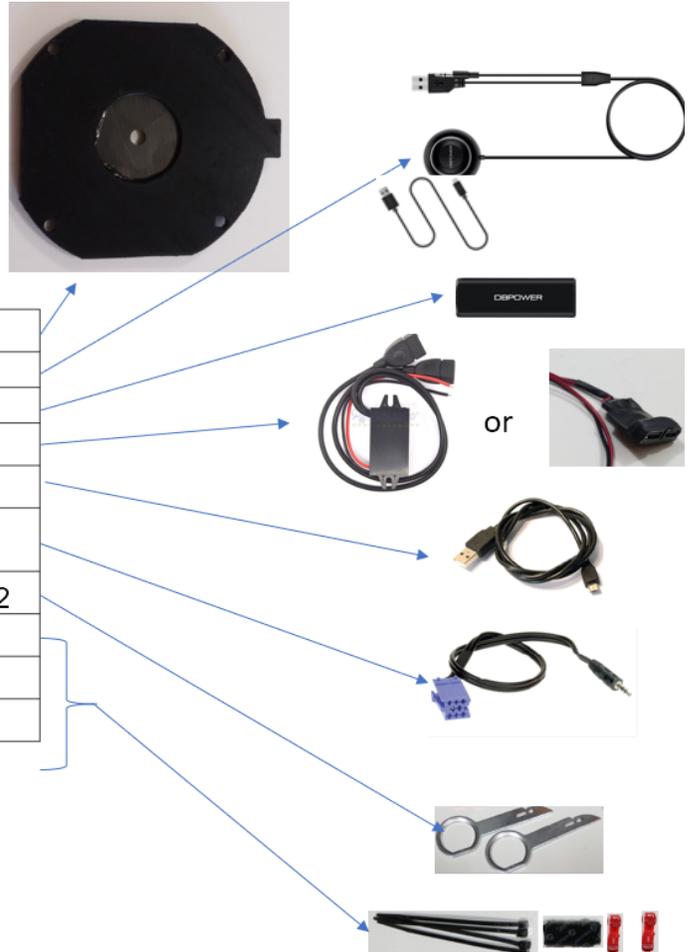
**KEEP YOUR PACKING LIST** for potential returns.

**Can't get the BTR-2.1 working? Contact us for troubleshooting help!**

**BTR-2.1 Bluetooth Retrofit Kit™ Contents:**

**BTR-2.1 Kit**

Qi Charger Assembly	1
Bluetooth Streaming/Calling Adapter	1
Ground Loop Noise Isolator	1
Power Converter	1
USB Adapter Cable	1
CD Changer Adapter Cable (Blue ISO plug to mini male stereo jack)	1
Head Unit Removal Keys	set of 2
zip tie (2 short / 2 long)	4
Velcro Tape	2
T-tap - red	2



*\*Your kit items may look slightly different from example shown. The PCM Double DIN unit orders will not receive the Head Unit Removal Keys.*

Tools and Materials Needed:	Other Possible Items:
<ul style="list-style-type: none"> <li>▪ Tape measure</li> <li>▪ Center Punch</li> <li>▪ Heavy Duty Pliers</li> <li>▪ Tiny screwdriver</li> <li>▪ Two medium screwdrivers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Black electrical tape</li> <li>▪ Liquid electrical tape (optional)</li> <li>▪ Plastic Wiring Loom (optional)</li> </ul>

*(\*if you don't know what these are, google them)*

**Install Time:** Approximately 1 hour.

## **Method of Operation**

The BTR-2.1 Bluetooth receiver allows the use of smart phone or tablet for streaming or phone calls through the factory head unit. The included smartphone wireless charger makes charging easy as you drive and stream. The BTR-2.1 Retrofit Kit™ takes the place of a front trunk mounted remote CD changer. A head unit with AUX or remote CD changer option is necessary. The Bluetooth receiver can be mounted where desired. You may choose to use alternatives to the BTR-2.1 kit such as alternative wiring / connectors / looms / adhesion methods or receiver mounting locations.

### Procedure:

1. OPTIONAL: Remove storage shelf, drill holes.
2. Remove radio head unit with supplied removal keys.
3. Install T-Taps on power wires.
4. Hook up power converter wires.
5. Plug Blue DIN connector plug into CD Changer receptacle.
6. OPTIONAL: Run wires from head unit to storage shelf.
7. Connect up Bluetooth Receiver.
8. (On some head units e.g. CDR/CR-220) disconnect the CD Changer power and RCA plugs
9. Test operation
10. Reinstall storage shelf and radio head unit.

**Before starting: DO YOU HAVE YOUR RADIO CODE??**



**Hint: Contact your Porsche Dealer if you need the code.**

## **Directions**

- A. Mount the Wireless Charger to the bottom of the storage shelf.**
- B. OPTIONAL: Use storage shelf for Locating BTR-2.1 BT Receiver**

1. Remove storage shelf, drill hole:
  - a. Gently pry out the storage shelf, use of trim removal tools on each side, or screwdrivers to assist this step.



- b. Fasten the wireless charger to the bottom side, USB connection pointing to front of car.
  - c. Cut off V shaped plastic protrusion on bottom center. We used a rotary tool with a diamond cutoff wheel:



Alternatively, use a rotary sanding disc with electric drill or similar or carefully cutting it off with box cutter.



**Before**

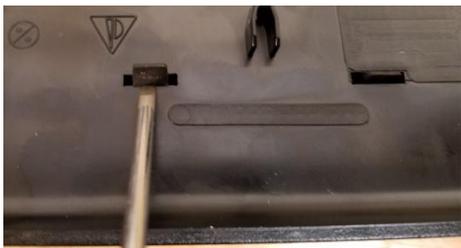


**After**

- i. Use supplied 3M tape or alternatively silicone caulk, plasti-dip or other glue, or mark and drill small holes and use sheet metal screw or threaded bolt and nut (not supplied) to fasten charger housing to storage shelf:



- d. Carefully remove rubber liner from inside shelf (small screwdriver may help).



- e. **OPTIONAL: DRILL HOLE FOR BT RECEIVER TO BE LOCATED INSIDE STORAGE SHELF.**

NOTE: This is a general method for drilling a hole. Mark shelf on back:



f. Use center-punch to mark center(s):



g. Wrap shelf with small towels or rags. Lightly clamp shelf in a vice so it cannot move.

h. Using a step drill, bore hole(s) from back. Use low speed setting so plastic does not melt – take your time:

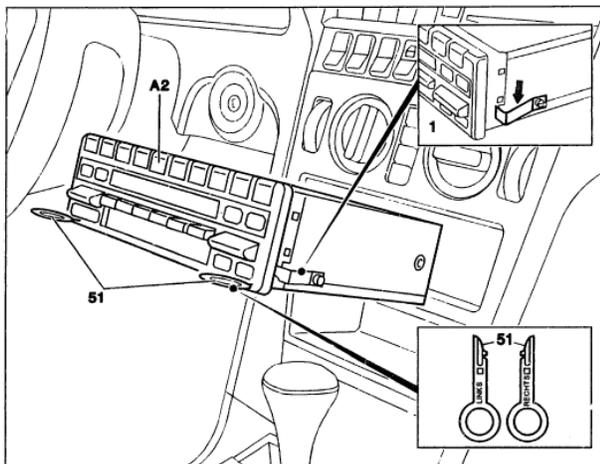


i. Replace rubber liner.

2. Remove key from ignition!

3. Remove radio head unit with supplied removal keys and two screwdrivers:

a. Insert keys all the way as shown below.



51 Removal plates  
A2 Radio

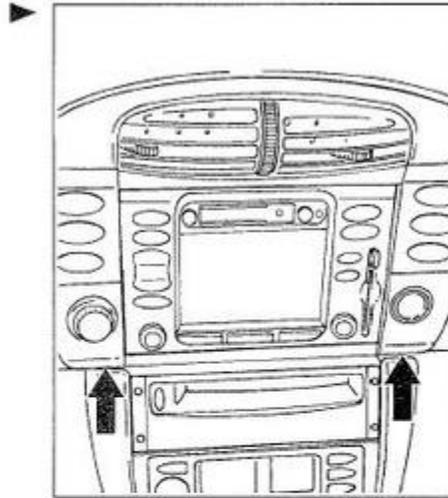
- b. Put two screwdrivers through the key holes as shown below.
- c. Grasp keys and pull the head unit toward back of car. The head unit may be tight and require some wiggling to pull it out:



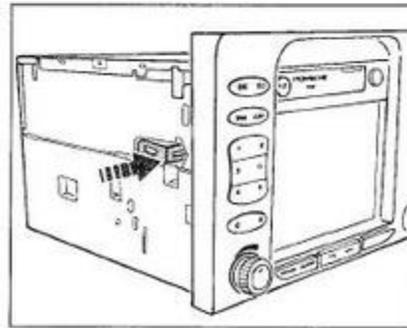
For PCM 1:

**Removing display and operator control unit (PCM)**

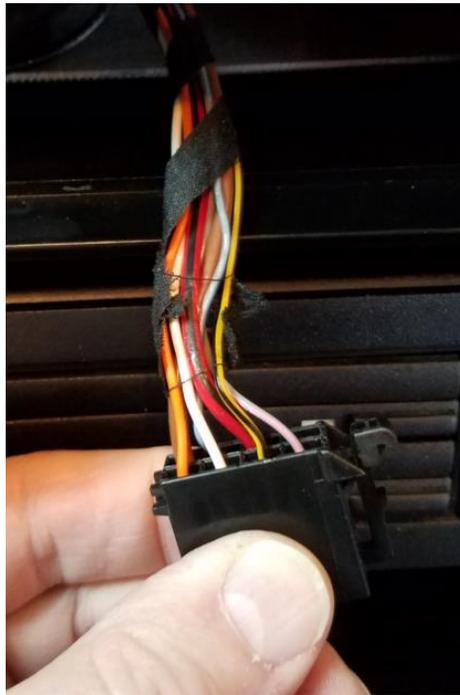
1. Unclip the **-switch covers-** from below and let them dangle from the electric leads.



2. Press together both spring clamps on the display and operator control unit and carefully pull out.
3. Disconnect electrical plug connections from the display and operator control unit.



4. Install red T-Taps for power wires - hook up **Power Converter** wires:
  - a. Unplug black power wire loom connector from back of head unit:

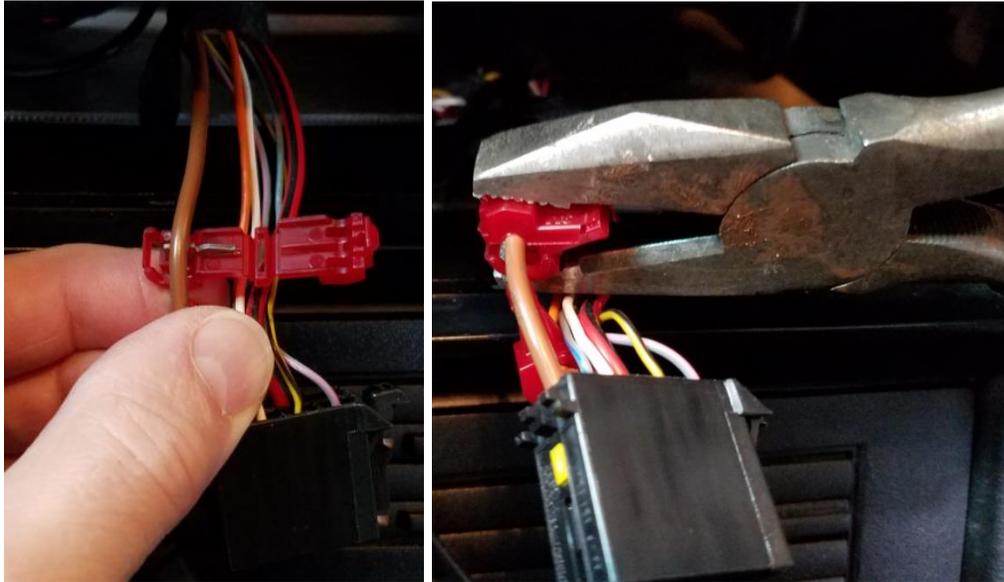


- b. Locate ORANGE (+) wire, install red T-Tap as shown close to plug:

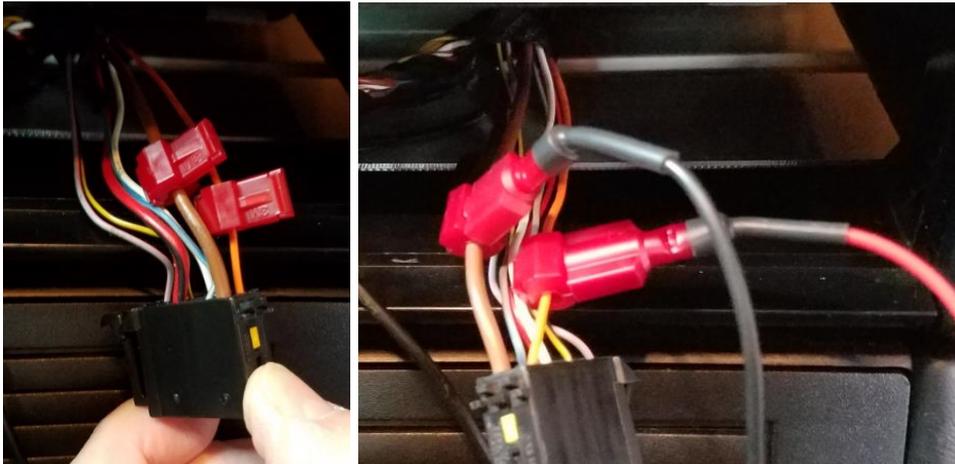


**Note:** Offset the two T-Taps – so one is closer to black connector than the other.

c. Locate BROWN (-) wire, install the T-Tap as shown:



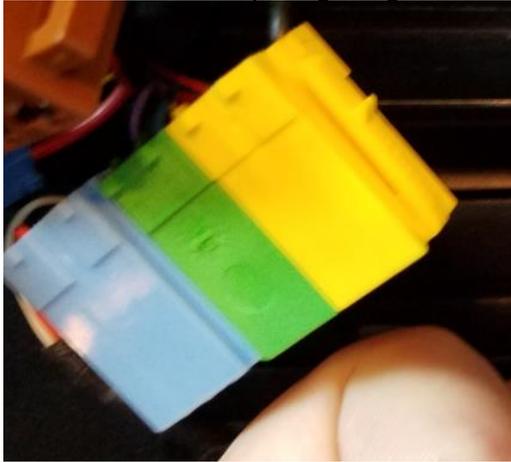
d. Connect up the Power Converter wires; RED to ORANGE and BLACK to BROWN as shown:



*Note offset T-Taps*

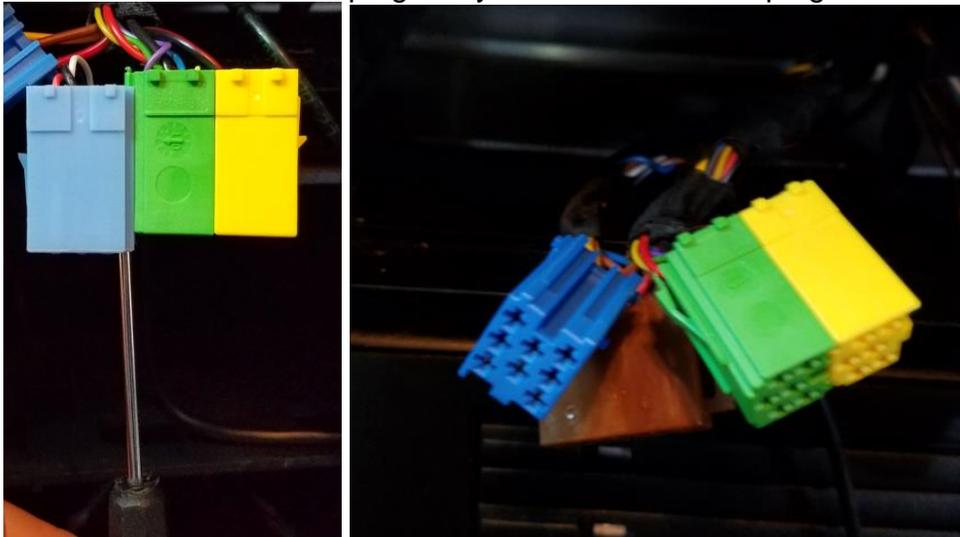
5. Blue Connector plug to CD Changer socket:

- a. Remove the 3-colored DIN plug set from the back of the head unit by squeezing in the outer-most prongs together:

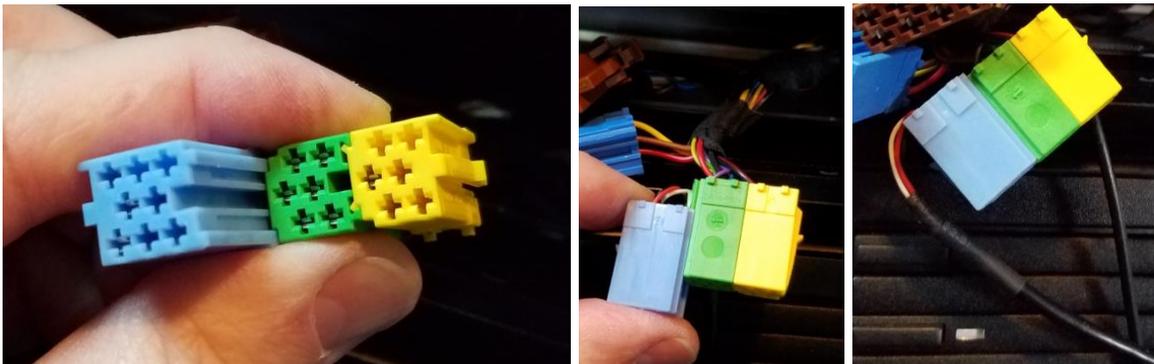


**NOTE:** *There may only be two plugs if your vehicle does not have the remote CD change.*

- b. Insert small screwdriver into slot between blue and green DIN connectors and slide the blue connector plug away from the other two plugs:



- c. Slide the new blue DIN connector plug into place:

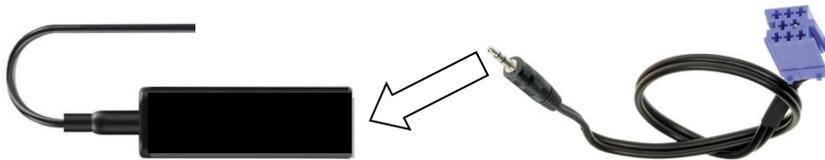


- d. Reconnect the 3-color plug set and the black power loom plug into the head unit:



6. Run wires from head unit to storage shelf.

- a. Route the Micro-USB and Phone jack wires from the back of the head unit down behind console and through the slots at the storage shelf.  
**HINT: using a coat hanger, stiff wire or similar method may aid in routing the wires behind the console.**
- b. From the front of the storage shelf, route the BT Receiver USB and Phone jack wires through the hole(s) in the back of the storage shelf.



- c. Plug in the Ground Loop Noise Isolator to BT Receiver cable at back side of shelf. Attach Ground Loop Noise Isolator to back of shelf with Velcro tape.



**NOTE:** Your Bluetooth Receiver may look slightly different.

- d. **FOR OPTIONAL BT RECEIVER IN STORAGE SHELF:** Route USB jack (BT Receiver) and stereo jack through hole in shelf.
- e. Plug the BT Receiver USB (left) and Wireless charge cable (right) into the Power Converter's USB jacks (center):



**\*Your kit items may look slightly different than shown.**

The Dual USB Power Adapter may also look like this:



- f. Plug stereo plug into Ground Loop Isolator.
- g. Plug wireless charger micro-USB connector into wireless charger.

## TEST

- a. Slide head unit and storage shelf **part way** into respective slots.
- b. Turn ignition key to ON and enter radio code.
- c. Test operation of BT Receiver – Unit should power up. Blue LED then alternating Blue / Red LED.  
***IF BT Receiver not working:*** <https://youtu.be/KYGg2wqIkSU>
- d. Position phone over wireless charger – should show your phone charging.
- e. Pair your phone with BT Receiver (separate instructions)

7. **Optional:** Disconnect CD Changer (e.g. CDC-3 with some head units such as CD / CDR-220):



- a. Rotate the large slotted head 90 degrees on each side of the CD Changer.



- b. Remove the two bolts top back of CD Changer (10 mm socket and extension):



- c. Slide CD Changer forward, up and loose.
- d. Wires exposed behind CD Changer; disconnect L, R and power wires.



- e. Either remove CD Changer and store, or put back in as removed, leaving wires disconnected.

#### 8. PCM-1:



- a. The BTR-2.1 is compatible with Porsche “non-AUX MODE” Radios (i.e. CDR-210, CR-210, PCM1 etc.) with A WORKING CD CHANGER.
- b. Requires a working CD Changer (i.e. CDC-3). The changer will no longer play but must remain connected in order for the radio to enter “CD CHANGER” Mode.
- c. At least one DISC must remain in Changer. Magazine and must be selected whenever BT playback is desired.

- d. Mount the Bluetooth Receiver with 3M tape or other means in a convenient location that will pick up your voice for phone calls (examples):



*Note: Your Bluetooth Receiver may look slightly different – however function is the same.*

- e. On some units like CDR-220 with remote CD Changer, the CD Changer power and RCA plugs should be disconnected.

## FINAL OPERATION TEST

- f. Turn ignition key to ON (and enter radio code).
  - g. Turn on radio.
    - i. Set Head Unit to accept AUX source (e.g. CR/CDR 220 and others):
      1. Good YouTube video here: <https://youtu.be/Xm117PI2ESw>
      2. Hold down the 'TP' button for 8 seconds until the screen shows '**BECKER 1**',
      3. Turn the right knob until '**AUX OFF**' appears on the screen,
      4. Press either button directly under the display for the arrows to change the setting from '**AUX OFF**' to '**AUX ON**'.
      5. Switch radio OFF (top left '**ON**' button).
      6. Switch radio back ON
      7. Press '**S**' until '**AUX**' is the "Source" mode.
    - ii. Other Head Units: Switch to CD operation. May need to have a CD in player slot 1 for operation.
9. First time pairing:
- a. Review instructions that came with your BT Receiver
  - b. With the key switched on, BT Receiver blue LED will flash on/off or red/blue.
  - c. Switch on BT operation on your phone.
  - d. SCAN for new BT device – select new device (example: BA-700, JRBC01, etc.). Enter code (example: 0000) if required to do so.
  - e. If successfully paired, the blue LED will glow steadily.
  - f. NOTE: The BT Receiver will automatically pair with your phone whenever the car is switched on, as long as the phone's BT is enabled.
  - g. Test operation – open music ap. Play music from phone through radio. For other instructions (pair a second phone, make and receive calls, etc.) see the BT Receiver instruction booklet.
  - h. If everything is working correctly, proceed to next step.
10. Reinstall storage shelf and radio head unit:
- a. Zip tie wires and tuck them out of the way behind radio head unit and behind storage shelf.
  - b. Attach one Velcro strip to power converter, attach other piece to a flat area behind console / behind radio and storage shelf. Attach converter to Velcro strip attached to car.
  - c. When all wires are tucked in and are out of the way, slide radio head unit back into place.
  - d. Slide storage shelf back into place.

- e. As desired, attach one Velcro strip to BT Receiver, then attach other piece to a flat area within or outside of storage shelf. Attach BT Receiver to Velcro strip attached to car.
- f. Retest operation.
- g. Congratulations, you now have BT streaming capability!

## Bluetooth Receiver Information

### **BTR-2.1 Bluetooth 4.0 Wireless Stereo Music Receiver with Ground Loop Noise Isolator – Hands-free Car Kits - Bluetooth Receiver with 3.5 mm Aux Cable - Built-in Mic**

- BLUETOOTH 4.0 HANDSFREE CAR KIT - Bluetooth Receiver, Built-in Microphone, Ground Loop Noise Isolator. Receive wireless music from smartphones, tablets or Bluetooth enabled audio devices and play them through your car audio system.
- NO BUZZING NOISE - Ground loop noise isolator helps to provide crystal music sound. In most cases, the sound quality is excellent.
- LATEST BLUETOOTH 4.0 TECHNOLOGY - Supports pairing two smart devices at once. Fully Backward Compatible. Full-speed transmission. Up to 33 ft range. You will never miss a call again with this Bluetooth car receiver.
- PURE SOUND QUALITY - Built-in microphone transmits your voice to your phone. Echo and noise canceling technology supply non-stop wireless stereo music and clear phone calls. Equipped with an Advanced Noise isolator, no noise or static.
- AUTO CONNECTION, EASY TO USE - Automatically power on and connect to the last paired device when starting the car. Wireless music player controls - Play, Pause, Previous song, Next song, Volume down, Volume up; Talking controls - Answer and reject calls. music or call switching.

Perfect handsfree solution for driving. Practical design Round Bluetooth Receiver case with center button, simple and relaxed. Soft blue annular indicator light will not distract you when driving. 3M adhesive makes the magnetic base more stable. Advanced Noise Canceling Technology. Equipped with an Advanced Noise isolator, giving you the best music experience. No more noise and static! Speak in your natural position and the built-in microphone will clearly transmit your voice to your phone. Easy to use, it is easy to setup the car kit and control it. Power the Receiver with the Power Converter. Pair the Bluetooth Receiver with your phone. Adjust the car radio mode to AUX in. Install the Receiver inside the car. Then you can enjoy hands-free operation. A simple twist /press is enough to control the Bluetooth car kit. Bluetooth Car Kit is compatible with all Bluetooth enabled devices; iPhone, iPad, iPod touch and iPod nano models, iPad mini, iPad mini and all Android smartphones and tablets including Galaxy Note, Galaxy Tab, Galaxy S.

Technical Details Bluetooth Version: V4.0

Frequency Range: 2.4GHz

Output Power Category: Class2

Bluetooth Profile: HFP/HSP/A2DP/AVRCP

Bluetooth Range: 10M (32 feet)

Electric voltage: DC 3.7V-5.0V

## ADDITIONAL INSTRUCTIONS

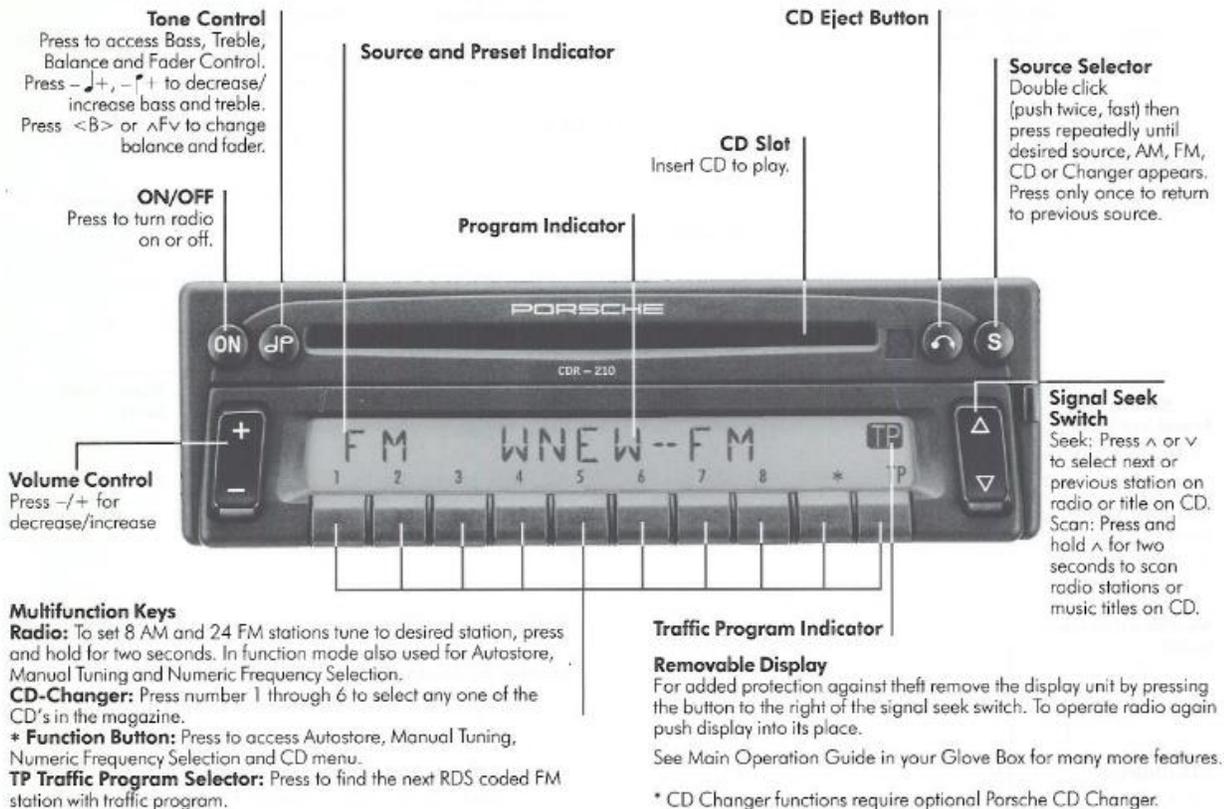
- CR/CDR 210
- General Supplemental Instructions for many other models

- CR/CDR 210

## 1996 – 2002: Radio Model CDR(CR)210 / CDR(CR)220

### OPERATION GUIDE

# PORSCHE



### AUX input setup

- Turn Radio ON.  
Press and hold the "TP" button for about 8 seconds until Sub Menu is displayed. Press the button located directly under AUX on the display to change the present setting from OFF to ON.  
Turn radio OFF.  
Auxilliary Audio Input has now been activated.

## CD-Changer Type

- Turn radio on
- Immediately press | \* | button for more than 2 seconds.
- Display shows **SEL USER**
- Immediately press the Automatic Tuning toggle switch to access "**CDC - TYPE**".
- You may now choose between 6 or 10 Disc Changers.
- To choose, press either multifunction key under the "<>" symbols.
- To store your choice, press the multifunction key under "**AS**".



To enable AUX function, press and hold TP button until BECKER is displayed. Scroll through options until AUX is displayed to switch it on.

- The S button selects the operating mode: AM, FM, CD, or CD Changer (only if a CD changer is connected) *However in your case, the BTR-2.1 receiver IS connected.* Press the S button repeatedly until the desired source is selected.
- The operation mode appears on the left side of the display.
- **The radio will switch between the last two modes used.**
- **If CD and FM were chosen as the last two operations, pressing the S button will switch between these functions.**
- **To access another mode, the S button must be pressed repeatedly until the desired operation appears in the display.**



\*6624D9015000177\*

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE CONDITION THAT THIS DEVICE DOES NOT CAUSE HARMFUL INTERFERENCE.

Typ: CCR 220  
Model No.: BE 6624  
Serial No.: 15000177  
12 Volt EC: 101

**BECKER**  
AUTOMOTIVE SYSTEMS



**PORSCHE** 996.645.125.10



AUX-BKR Auxiliay input Jack for Select Becker Radios with CD Changer



**Instructions:**

1. Press the CD or unique set of buttons on Radio to enter CD Changer Mode. Radio display will change to Track or Disc numbers (CD Changer will play but is not heard.)
2. Select a track from smart phone. Selected track will play on the car stereo.

**Warning!** Playlist and Track selection is **\*NOT\*** possible from the radio. You must use the smart phone controls to access music files.

3. Use radio volume knob to adjust playback level

**Note:** if playback is distorted, lower volume on smart phone, lower volume on audio device.

**Security Code Retrieval: 1996 – 2002: Radio Model CDR(CR)210 /**

**CDR(CR)220** - These radio models all have a four-digit Theft Security Code assigned based upon the radio serial number. The radio may revert to CODE in cases where the vehicle battery power is interrupted. When the security code is lost, the four-digit CODE number must be entered to reactivate. If the code was lost, Becker offered a submenu to allow you to view the serial without removing the radio (CR220 and CDR220 ONLY). With the radio turned on, press and hold the TP button for 10 seconds until BECKER 1 appears. Immediately rotate the right control knob two clicks clockwise. The serial number will display. Provide us with the radio model and serial number and we can help you to obtain the proper code.

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## General Supplemental Instructions for many other models



This radio is for illustration purposes only

### CDR30 & CDR31 Radio Installation

1. With radio removed disconnect the factory Quadlock plug (harness) from Radio (See Fig. 13)



Fig. 13

Factory Quadlock Plug and sub-plugs

2. To release factory Quadlock plug simply press tab and plug slides out
3. Connect adapter harness Quadlock plug to radio (See - to radio in Fig. 14)
4. Disconnect 12-pin **green** and **blue** sub-plugs from factory Quadlock plug (See Fig. 13)

**Warning!** CDR30/31 Radios with factory AUX and Bluetooth will have two sub-plugs (**Green** for AUX and **blue** for Bluetooth.) Green sub-plug remains disconnected and replaced with installation **black** 12-pin sub-plug (See Fig. 14)

5. Connect 12-pin **blue** sub-plug (from step 5) to Quadlock plug on adapter harness (To Radio in Fig. 15)



**Fig. 14**

Quadlock Plug on power harness

**Green sub-plug remains disconnected (See Fig. 14)**



**Fig. 15**

Quadlock plug/connector on power harness

## Operation:

The most important steps in this process is enabling AUX function within the Becker radio menu. The following steps are required to enable "AUX" otherwise the adapter will not perform as intended.

**Note:** Becker CDR210, CR210, PCMI radios do not have AUX function. Simply enter CD Changer mode to operate Bluetooth mode

## Enabling AUX function



### Radios with TP button: (i.e. CDR-220)



1. Turn radio "ON"
2. Press and hold the "TP" button for about 8 seconds until Becker I is displayed.
3. Turn the Tuning Knob until AUX OFF is displayed.
4. Press either button located directly under the Arrows on the display to change the present setting from OFF to ON.  
Turn radio OFF.
5. Turn Radio back "ON" Press "S" button to enter AUX Mode. This is the mode to use whenever you want to listen to the device connected to the adapter.

### Radios with ⚙ button: (i.e. BE6104)



1. Turn Radio "ON"
2. Press and hold the ⚙ button for about 8 seconds.
3. Select AUX "ON/OFF" option.
4. Press either button located directly under the Arrows on the display to change the setting to ON.
5. Turn radio OFF.
6. Turn Radio back ON press the "⚙" button until "AUX" is displayed.

### Other Radios with ⚙ button (i.e. BE4602)



1. Turn radio ON.
2. Press and hold the ⚙ button for 8 seconds, until Becker I is displayed.
3. Turn the Tuning Knob until AUX OFF is displayed.
4. Press either button located directly under the Arrows on the display to change the present setting from OFF to ON
5. Turn Radio back "ON" Press "CD" button to enter AUX Mode

### Radios with 3 Function buttons (i.e. BE4527)



1. Turn radio ON.
2. Press and hold Function button #2 (center) for more than 4 seconds.
3. The accompanying menu appears on the display.
4. Press the multifunction button located directly under "AUX" on the display to change the present setting from OFF to ON.
5. The Setting is stored automatically.

### Nav Traffic Radios



1. Press the "Radio" button to enter Radio mode.
2. Press the "Navi" and "FIO" simultaneously
3. Press "Next" until the AUX input, Changer Res screen
4. Press AUX to enable/disable.

### Becker 4775 (Land Rover) & Other Traffic Pro



1. With the Radio "ON" press and hold the Tone button until the sub-menu comes up.
2. Press the soft-key labeled "Aux" until the screen displays "AUX Mode on".
3. Press the Tone button to exit the menu.
4. To enter "AUX" mode, press the "CD" button and select the "AUX" soft-key.

## Sound 5 (BE7077 Sprinter Van)



1. Turn radio ON.
2. Press the *i* repeatedly until EXT menu appear.
3. Turn Rotary control knob clockwise and select EXT AUX.
4. Press the CD button repeatedly until "AUX" is displayed

## Cascade Pro (i.e. BE7941)



### To activate the External Device mode

1. Turn radio ON.
2. Press the information button
3. Turn the rotary control/push (OK) button counterclockwise until System Settings appears at the top right of the display
4. Press the rotary control/push (OK) button
5. Turn the rotary control /push (OK) button to select External Device
6. Confirm selection by pressing the rotary control/push (OK) button
7. Select "AUX" from list and turn it "ON".
8. Exit menu
9. To listen to the "AUX" device, press the MEDIA button
10. Turn the rotary control /push (OK) button to "AUX" and press the rotary control/push (OK) button

## Becker BE7801 Infotainment (Ferrari, Maserati)



1. Press the TP button for more than 2 seconds
2. Press multifunction button "AUX"
3. Select Ext audio source
4. press the right control knob to select "ON"
5. The setting is store automatically

## Becker DTM /High speed (i.e. BE-7892, BE7910)



1. Press the **Sound** button for more than 2 seconds
  2. Press multifunction button "AUX"
  3. Select **Aux Mode on**
  4. The setting is stored automatically
- In CD Operation, the multifunction button AUX must be pressed to select AUX operation

## CDR-30/31 Radios

Press the **CD/AUX** button repeatedly until "AUX Mode" is displayed.  
Alternately: To switch from CD to AUX press the "AUX" Soft key)

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