



Installation Instructions

Audio, iPod Interface

Ver 1.0

Page 1 of 27

August 2006

Accessory
Development

SUBJECT

iPod® Interface Kit - P/N 65 11 0 409 343

MODEL

X3 (E83):	Select Vehicle Production 09/03 – On*
X5 (E53):	Select Vehicle Production 10/00 – On**
Z4 (E85):	Select Vehicle Production 10/02 – On***
Z4 Coupe (E86):	Select Vehicle Production 05/06 – On****
5-Series (E39):	Select Vehicle Production 9/00 – 8/03**

* Not compatible with 6 Disc CD Changer (SA 672), and vehicle production 09/03 – 09/05 with DSP (SA 677) and without Navigation.

** Not compatible with optional Navigation (SA609), DSP audio (SA677), and/or 6 Disc CD Changer (SA672).

*** Not compatible with 6 Disc CD changer (SA 672), and vehicle production 10/02 – 02/06 with DSP (SA 677) and without Navigation.

**** Not compatible with 6 Disc CD changer.

SUGGESTED INSTALLATION TIME: 0.75 Hours

Total installation time may vary depending on vehicle options and equipment.

The instructions below are developed for BMW vehicles and are not be compared to any other existing instructions for vehicles other than BMW. No methods other than those specified in this document are to be used for installation in BMW vehicles. Left and right are determined from driver's seat.

Carefully read all instructions and supplements before proceeding with the installation. Reference should be made to TIS for instructions dealing with a stock part of the vehicle but not stated in detail in these instructions.

The instructions were complete and up to date at time of publication; however, changes to the vehicle or installation may have occurred. Please report any problems or changes noted with the installation to BMW Technical Hotline, along with VIN, date of manufacture and as much detail as possible.

★ DO IT RIGHT THE FIRST TIME, ON TIME, EVERY TIME ★ ★

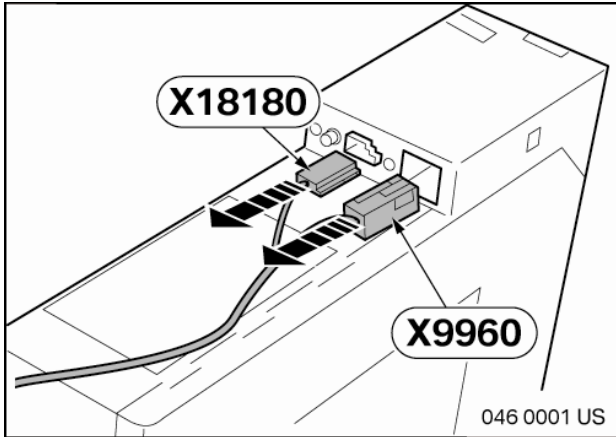
PARTS INFORMATION***Contents of Kit – P/N 65 11 0 409 343***

Description	QTY	BMW Part Number
iPod I/F module	1	65 11 0 392 130
iPod I/F cable	1	65 11 0 392 132
Radio I/F cable	1	65 11 0 411 924
Rubber Grommet	1	N/A
Adapter Wrap	1	N/A
Owner's Manual	1	65 11 0 395 146

SPECIAL TOOLS

Pin Removal Tool – 61 1 134

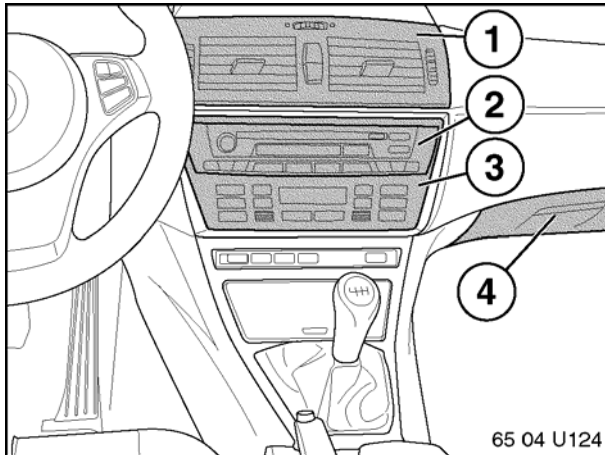
Crimp Tool – 408 449

Vehicle Preparation (for all vehicle models):

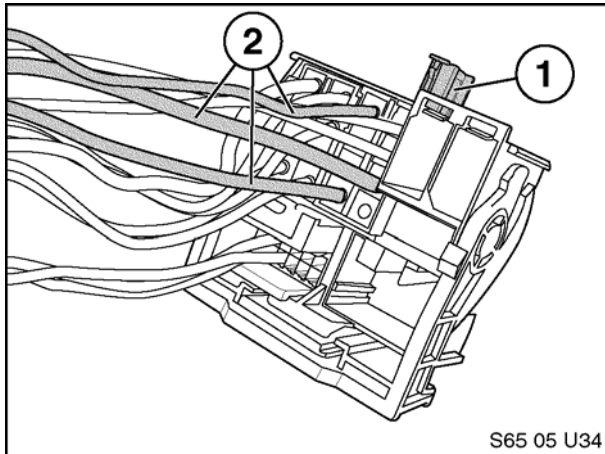
Only for vehicles equipped with the 6 Disc CD Changer:

- Remove 3-pin connector (X18180) and 6-pin connector (X9960) from 6 Disc CD changer.

Warning: Failure to perform this step will cause the iPod Interface to malfunction.

Procedure for X3:

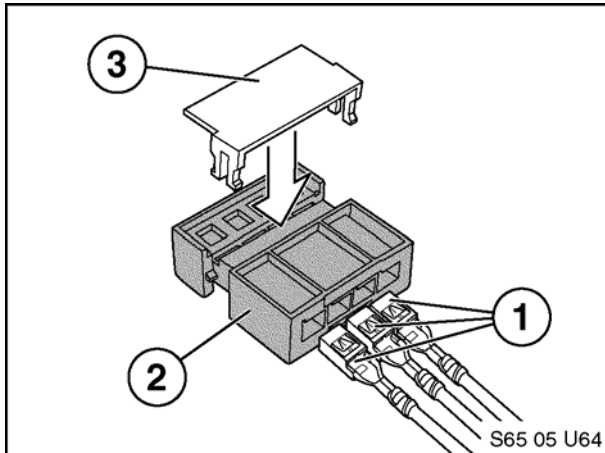
1. Disconnect vehicle battery.
2. Remove the following components using procedures available through TIS:
 - Center vent (1)
 - Radio (2)
 - Climate Control (3)
 - Glove box (4)



3. Remove the blue lock (1) from radio harness by releasing tab and sliding upwards, then remove following terminals (2) using AMP terminal removal tool (p/n 61 1 134):

Pin #	Color	Description
9	WS/RT/GE	I-Bus
12	BR	KL 31
15	RT/GN	KL 30

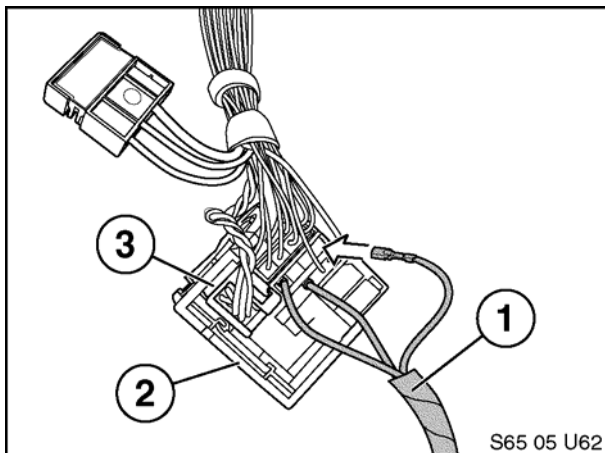
Note: Wire colors may vary depending on vehicle production changes.



4. Insert pins (1) removed from radio connector into 4-pin connector (2) as follows:

Color	Location	Description
RT/GN	2	KL 30
WS/RT/GE	3	I-Bus
BR	4	KL 31

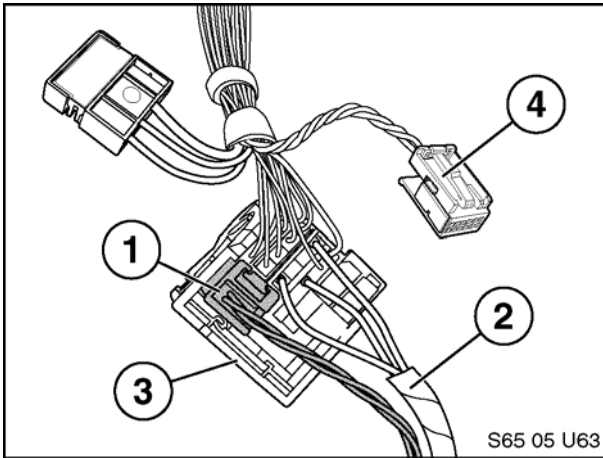
Note: Wire colors may vary depending on vehicle production changes.



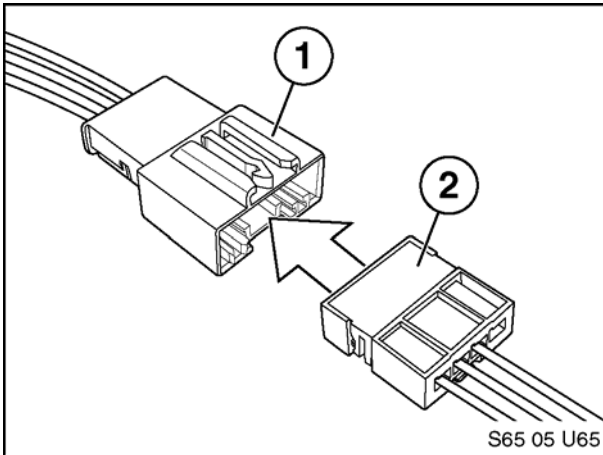
5. Insert 3 rectangular pins from iPod harness (1) into radio harness (2) as follows:

Color	Location	Description
WS/GR/GE	9	I-Bus
BR	12	KL 31
RT/GN	15	KL-30

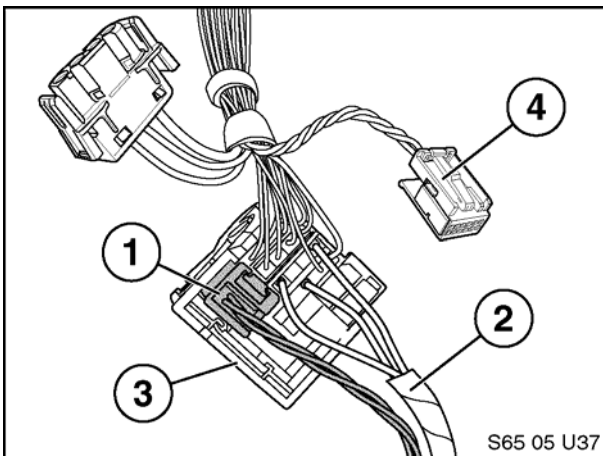
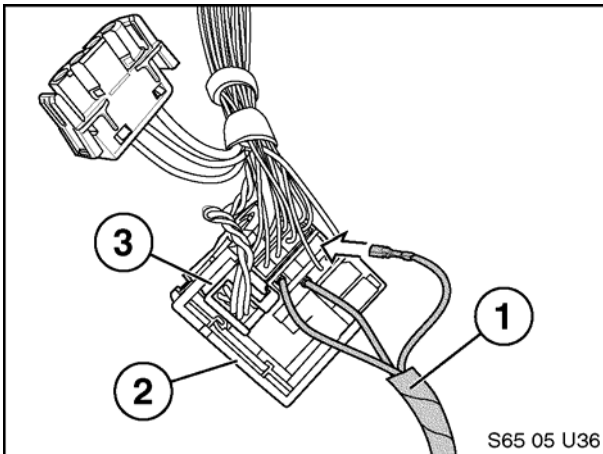
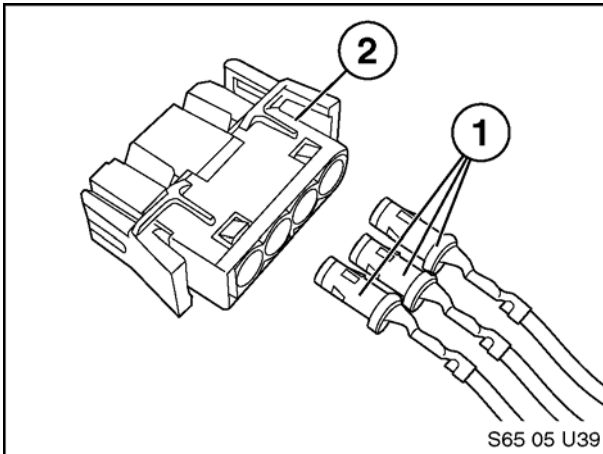
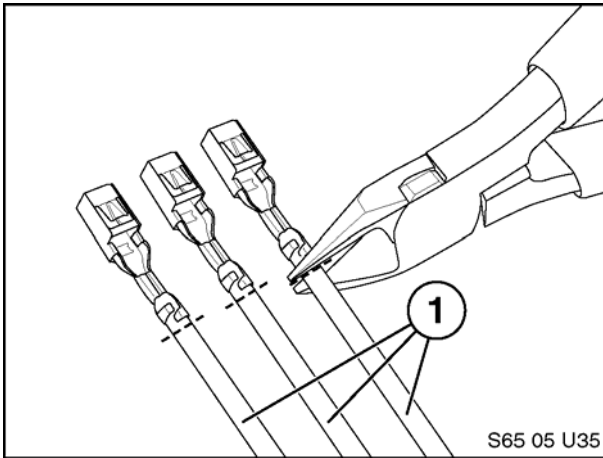
6. Remove white 12-pin connector (3) from lower section of radio connector.



7. Insert white 12-pin connector (1) from iPod harness (2) into lower left section of radio connector (3).
8. Tie original white 12-pin connector (4) back to harness.



9. Connect 4-pin connectors (1 & 2)



For Kits with radio I/F Cable 65 11 0 392 142:

1. Cut original terminals off of 3 wires (1) removed from locations 9, 12 & 15. Cut wire as close as possible to existing terminal to maintain wire length.
2. Strip 1/8" of wire shielding from 3 wires.
3. Using terminal crimping tool (BMW p/n 408 449 or Snap-on PWC47) crimp new female bullet connectors included in kit onto each of the wires from previous step.
4. Insert pins (1) removed from radio connector into 4-pin connector (2) as follows:

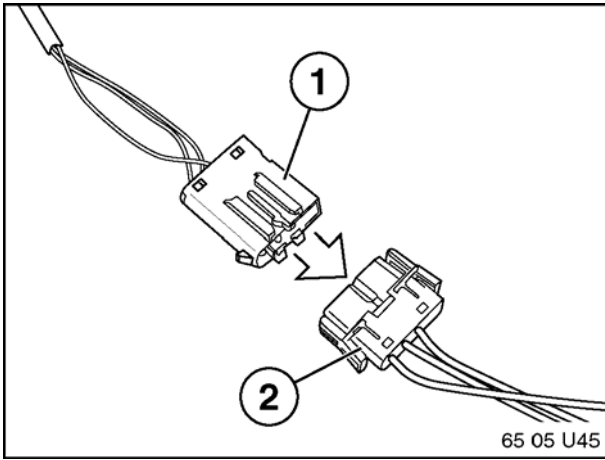
Color	Location	Description
Red/green	2	KL 30
White/red	3	I-Bus
Brown	4	KL 31

Note: Wire colors may vary depending on vehicle production changes.

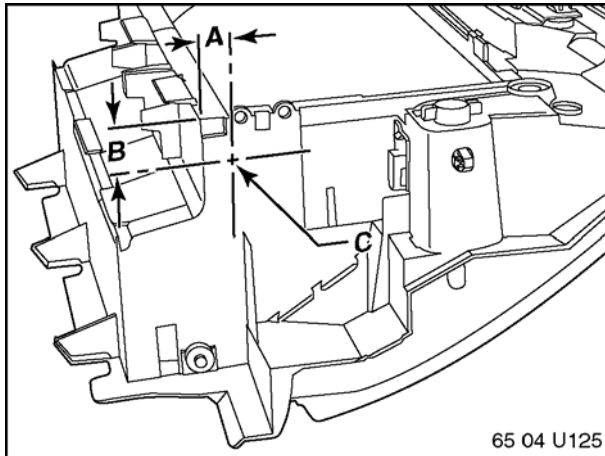
5. Insert 3 rectangular pins from iPod harness (1) into radio harness (2) as follows:

Color	Location	Description
White/gray	9	I-Bus
Brown	12	KL 31
Red/green	15	KL 30

6. Remove white 12-pin connector (3) from lower section of radio connector.
7. Insert white 12-pin connector (1) from iPod harness (2) into lower left section of radio connector (3).
8. Tie other white 12-pin connector (4) back to harness.

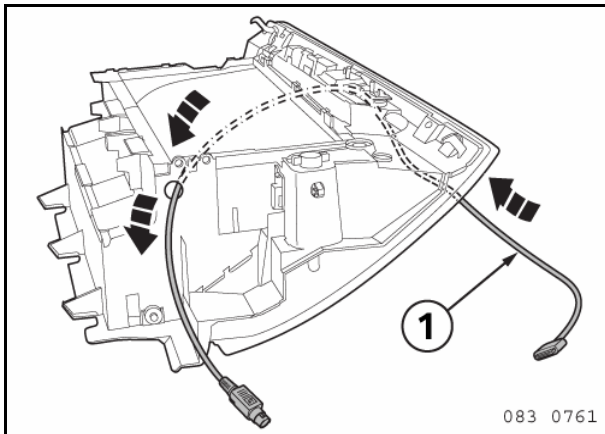


9. Connect 4-pin connectors (1 & 2)

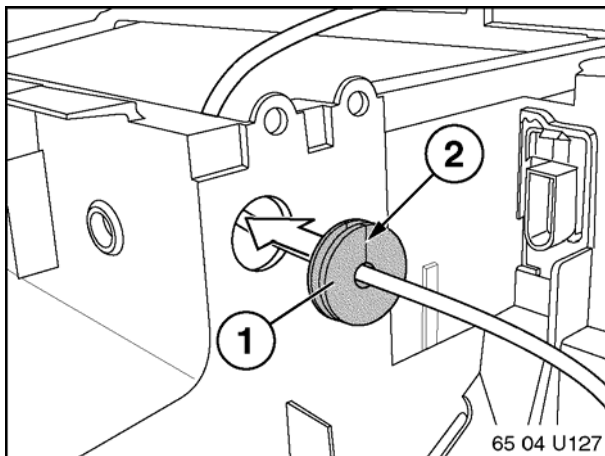


10. Locate and drill 5/8" (16mm) hole in glovebox.

A = 5/8" (16mm)
B = 7/8" (22mm)
C = 5/8" (16mm) Ø diameter

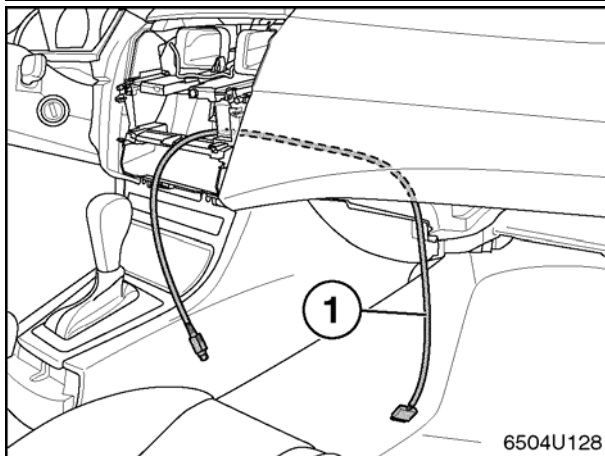


11. Insert iPod cable (1) through hole in glovebox as indicated.



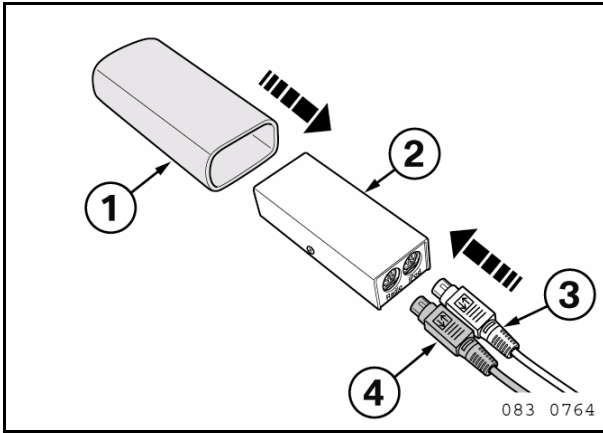
12. Split grommet (1) as indicated (2) and insert grommet through hole in glovebox wall.

13. Secure grommet to glovebox with weatherstrip adhesive from the outside of the glovebox.



14. Route iPod cable through center console from radio location to glovebox location.

15. Route cable into glovebox alongside fuse panel. Reinstall glovebox.



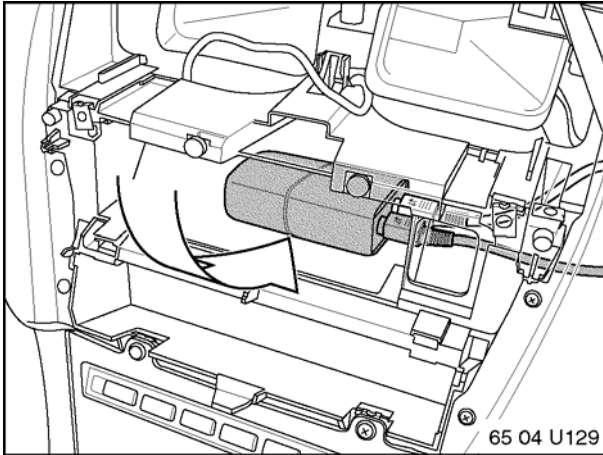
Caution: Check for bent pins on adapter cables before attaching to iPod module. If pins are damaged carefully bend them back into position with a small screwdriver.

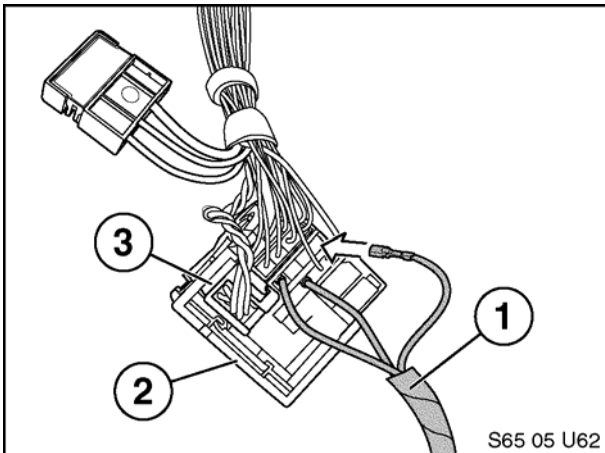
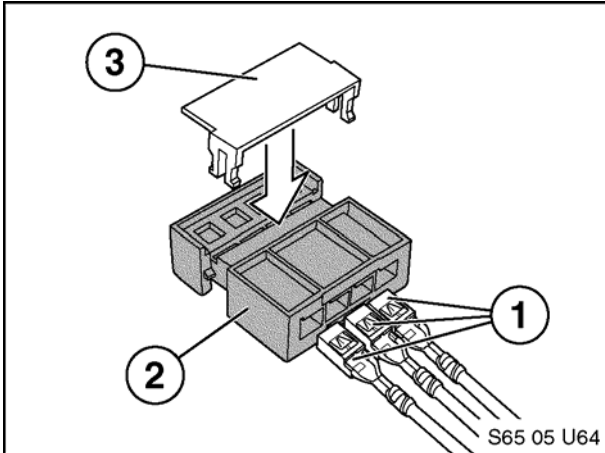
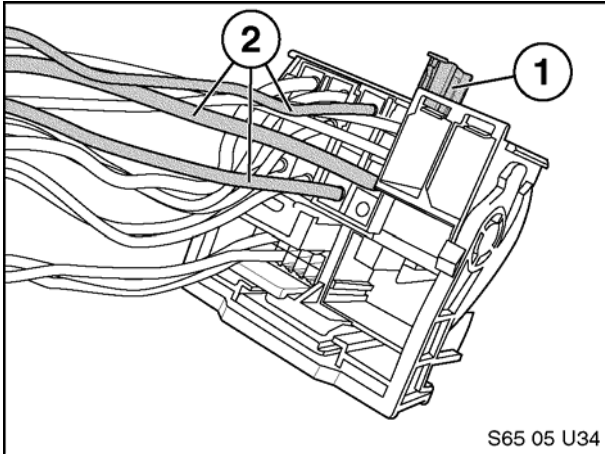
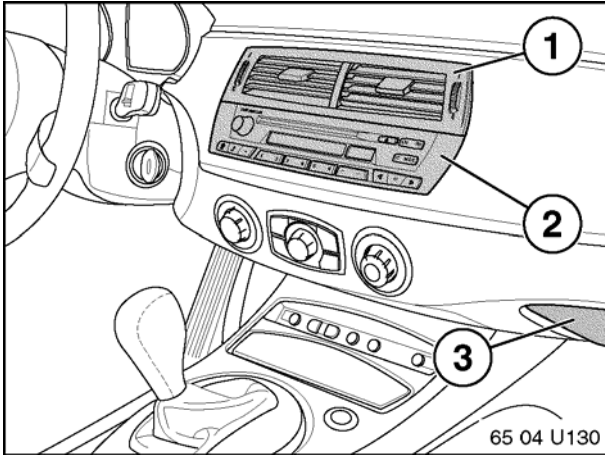
16. Slide iPod module (2) fully into foam padding tube (1).

17. Connect white iPod I/F cable (3) and black radio adapter cable (4) to iPod module (2), making sure to connect cables in their proper location.

18. Mount iPod I/F module as indicated below radio. Secure with cable ties if possible.

19. Re-install all components removed for installation procedure.



Procedure for Z4 Roadster and Coupe:

1. Disconnect vehicle battery
2. Remove the following components using instructions available through TIS:

- Center vent (1) (REF #64 22 161)
- Radio (2) (REF #65 11 080)
- Glove box door (3)

3. Remove the blue lock (1) from radio harness by releasing tab and sliding upwards, then remove following terminals (2) using AMP terminal removal tool p/n 611 134:

Pin #	Color	Description
9	WS/RT/GE	I-Bus
12	BR	Ground
15	RT/GN	KL 30

Note: Wire colors may vary depending on vehicle production changes.

4. Insert pins (1) removed from radio connector into 4-pin connector (2) as follows:

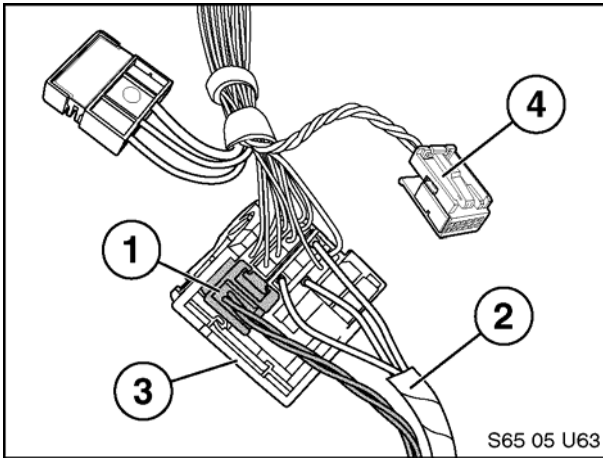
Color	Location	Description
RT/GN	2	KL 30
WS/RT/GE	3	I-Bus
BR	4	KL 31

Note: Wire colors may vary depending on vehicle production changes.

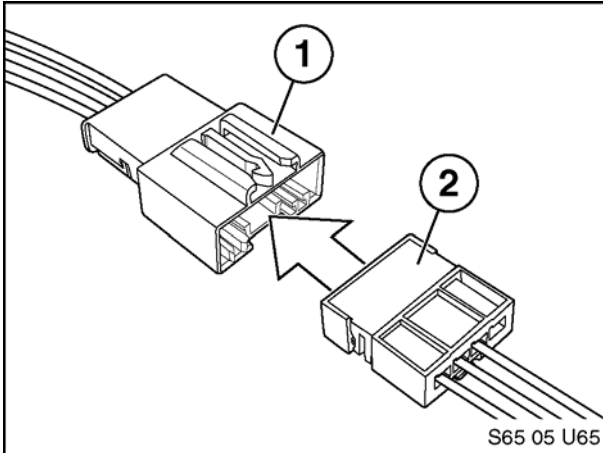
5. Insert 3 rectangular pins from iPod harness (1) into radio harness (2) as follows:

Color	Location	Description
WS/GR/GE	9	I-Bus
BR	12	KL 31
RT/GN	15	KL 30

6. Remove white 12-pin connector (3) from lower section of radio connector.

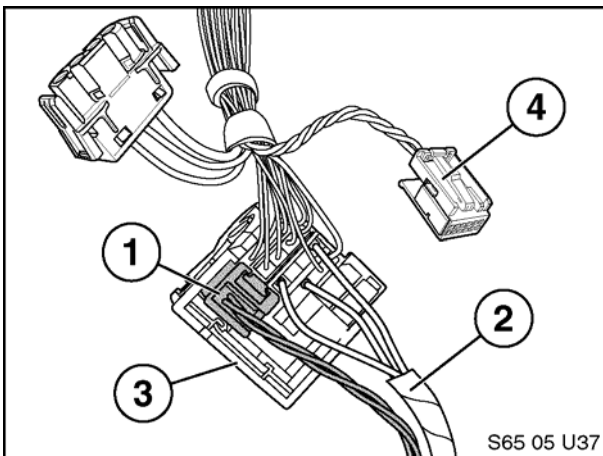
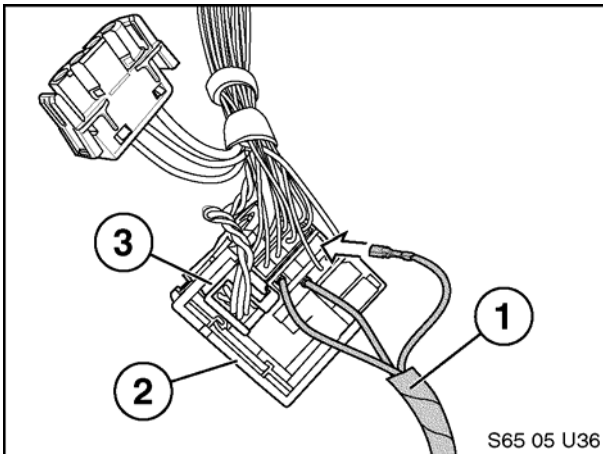
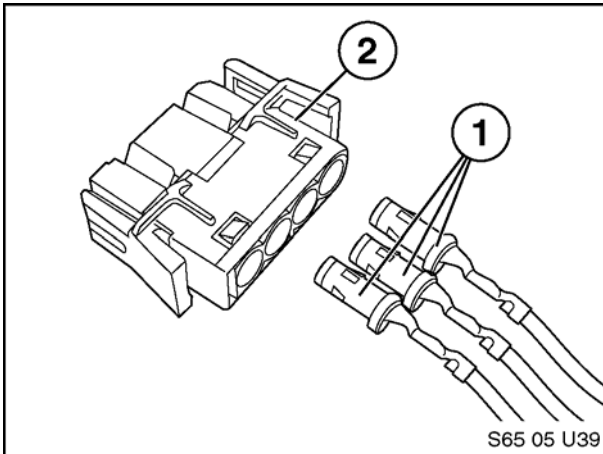
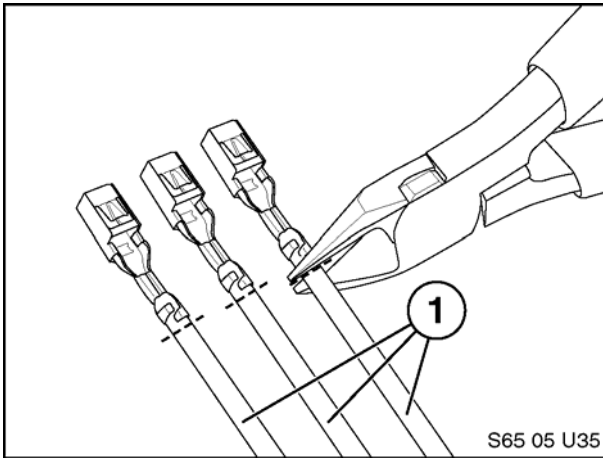


7. Insert white 12-pin connector (1) from iPod harness (2) into lower left section of radio connector (3).
8. Tie original white 12-pin connector (4) back to harness.



9. Connect 4-pin connectors (1 & 2)

Proceed to Step 10



For Kits with Radio I/F Cable 65 11 0 392 142:

1. Cut original terminals off of 3 wires (1) removed from locations 9, 12 & 15. Cut wire as close as possible to existing terminal to maintain wire length.
2. Strip 1/8" of wire shielding from 3 wires.
3. Using terminal crimping tool (BMW p/n 408 449 or Snap-on PWC47) crimp new female bullet connectors included in kit onto each of the wires from previous step.
4. Insert pins (1) removed from radio connector into 4-pin connector (2) as follows:

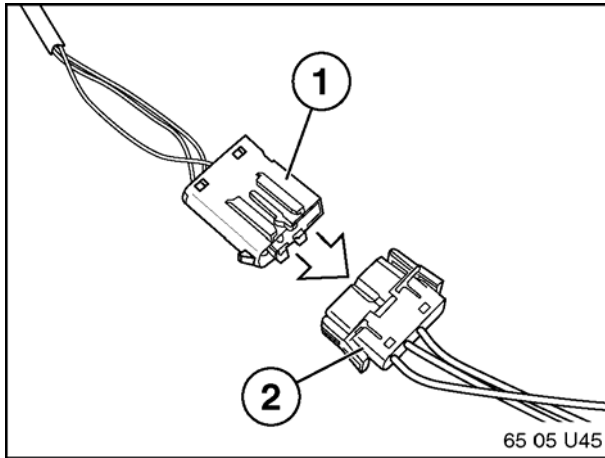
Color	Location	Description
Red/green	2	KL 30
White/red	3	I-Bus
Brown	4	KL 31

Note: Wire colors may vary depending on vehicle production changes.

5. Insert 3 rectangular pins from iPod harness (1) into radio harness (2) as follows:

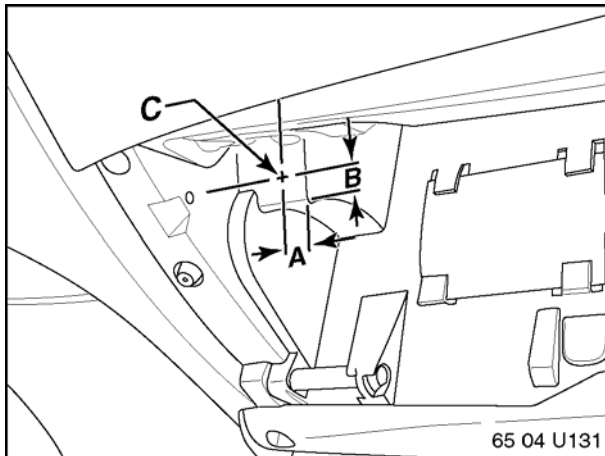
Color	Location	Description
White/gray	9	I-Bus
Brown	12	KL 31
Red/green	15	KL 30

6. Remove white 12-pin connector (3) from lower section of radio connector.
7. Insert white 12-pin connector (1) from iPod harness (2) into lower left section of radio connector (3).
8. Tie other white 12-pin connector (4) back to harness.



9. Connect 4-pin connectors (1 & 2)

Proceed to Step 10

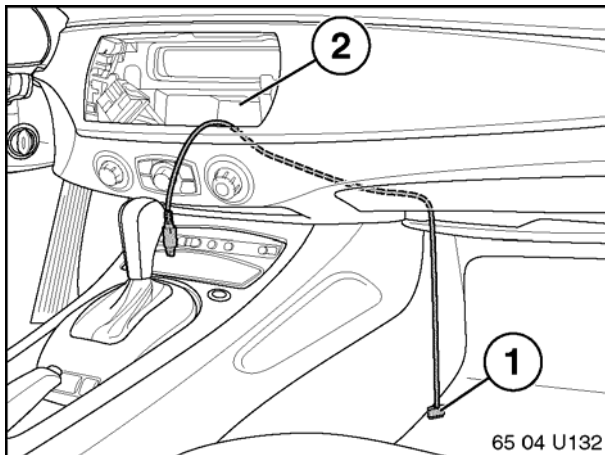


10. Locate and drill 5/8" (16mm) hole in glove box upper right panel.

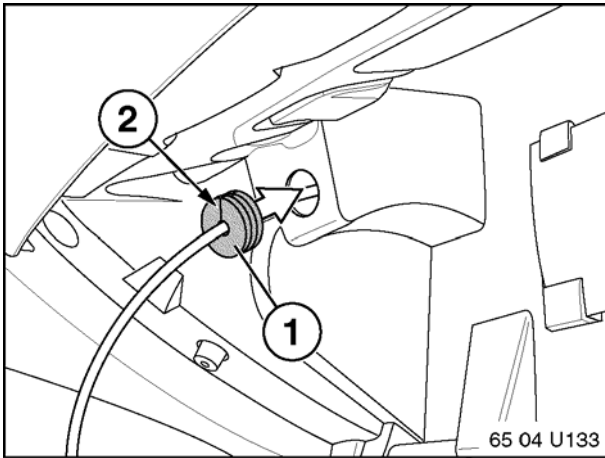
A = 5/8" (16mm)

B = 5/8" (16mm)

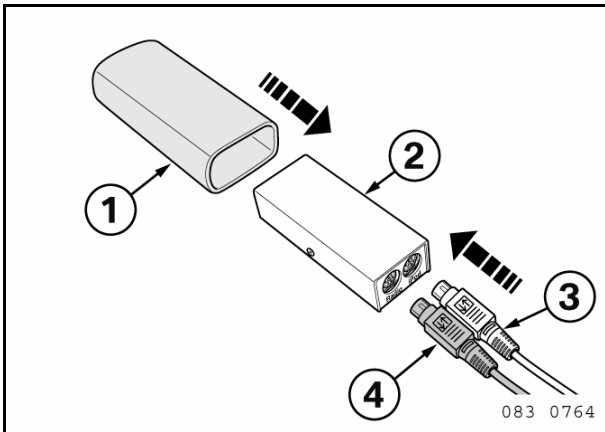
C = 5/8" (16mm) Ø diameter



11. Insert iPod cable (1) through hole in glovebox as indicated and route through radio cavity (2). A wire fish will be beneficial for this step.

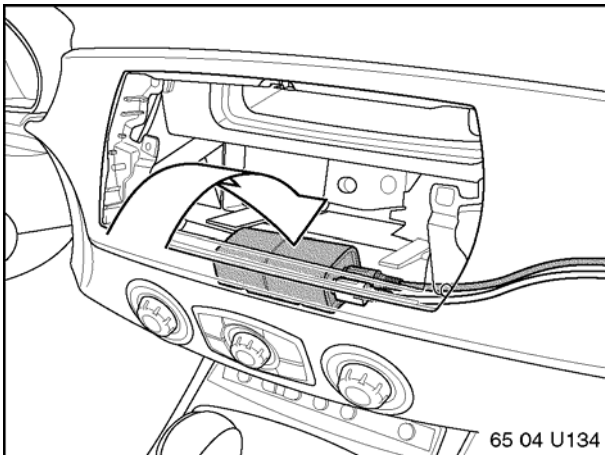


12. Split grommet (1) as indicated (2) and insert grommet through hole in glovebox wall.

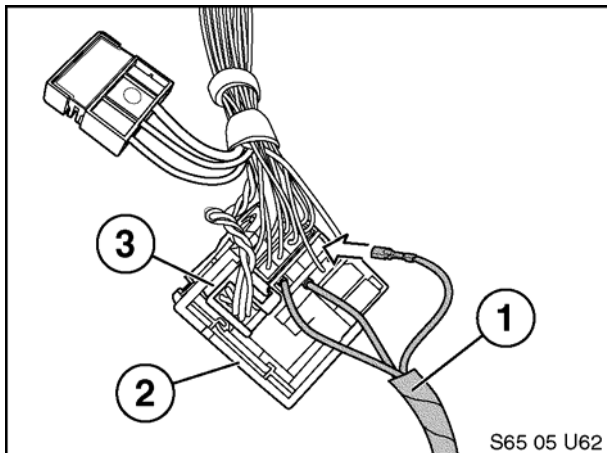
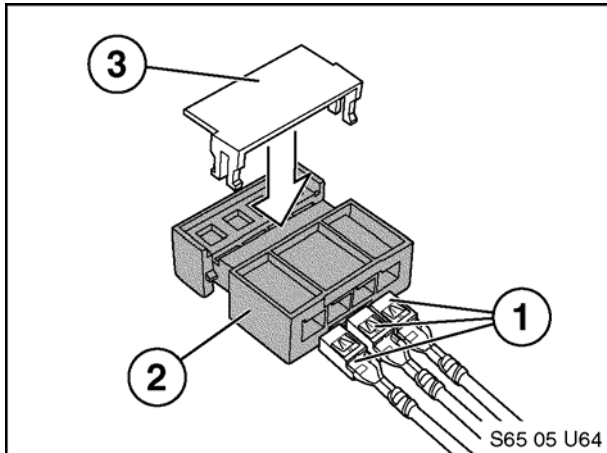
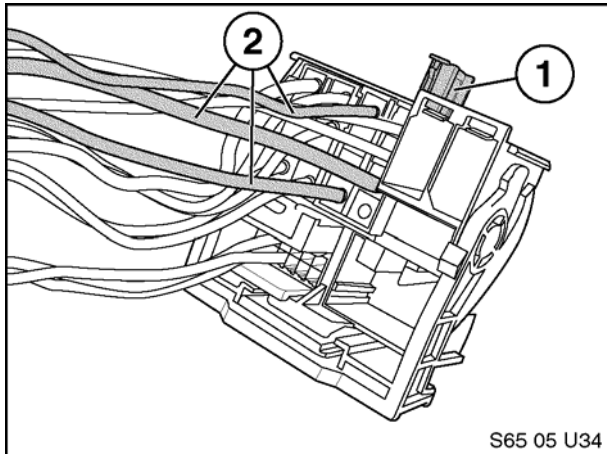
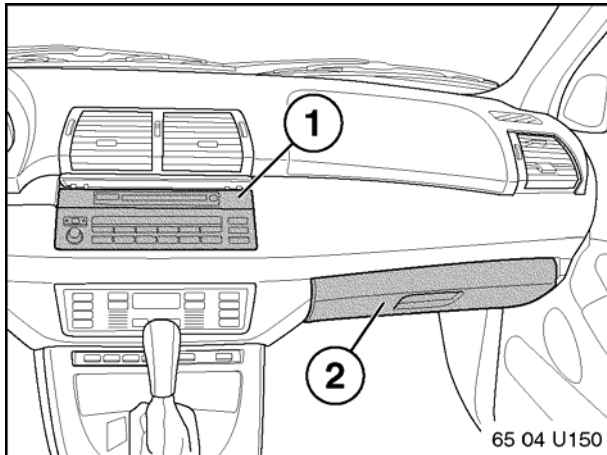


Caution: Check for bent pins on adapter cables before attaching to iPod module. If pins are damaged carefully bend them back into position with a small screwdriver.

13. Slide iPod module (2) fully into foam padding tube (1).
14. Connect white iPod I/F cable (3) and black radio adapter cable (4) to iPod module (2), making sure to connect cables in their proper location.



15. Mount iPod I/F module as indicated below radio. Secure with cable ties if possible.
16. Carefully pull white cable into glovebox to remove excess cable slack.
17. Re-install all components removed for installation procedure.

Procedure for X5:

1. Disconnect vehicle battery.
2. Remove the following components using procedures available through TIS:

- Radio (1)
- Glovebox (2)

3. Remove the blue lock (1) from radio harness by releasing tab and sliding upwards, then remove following terminals (2) using AMP terminal removal tool (p/n 611134):

Pin #	Color	Description
9	WS/RT/GE	I-Bus
12	BR	KL 31
15	RT/GN	KL 30

Note: wire colors may vary depending on vehicle production changes.

4. Insert pins (1) removed from radio connector into 4-pin connector (2) as follows:

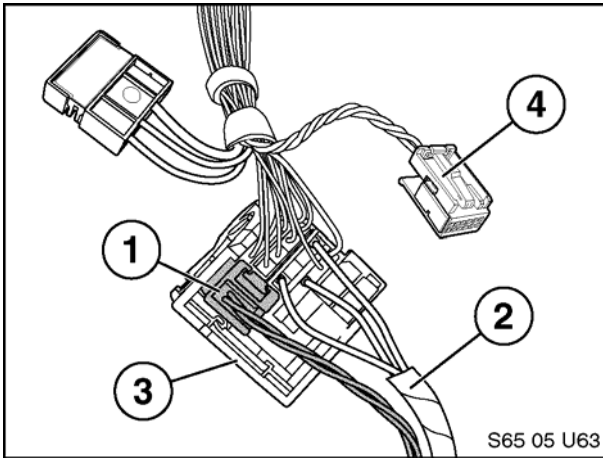
Color	Location	Description
RT/GN	2	KL 30
WS/RT/GE	3	I-Bus
BR	4	KL 31

Note: Wire colors may vary depending on vehicle production changes.

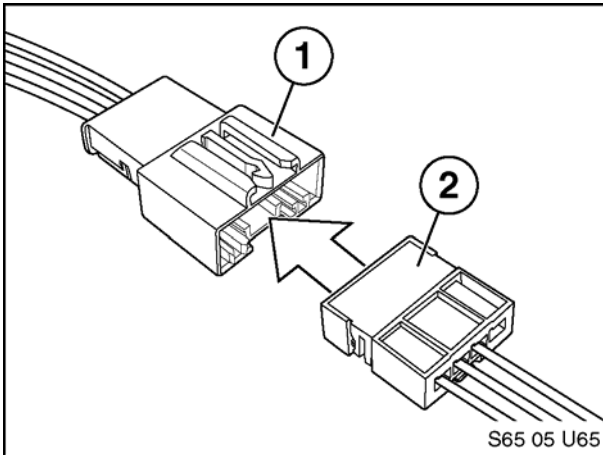
5. Insert 3 rectangular pins from iPod harness (1) into radio harness (2) as follows:

Color	Location	Description
WS/GR/GE	9	I-Bus
BR	12	KL 31
RT/GN	15	KL 30

6. Remove white 12-pin connector (3) from lower section of radio connector.

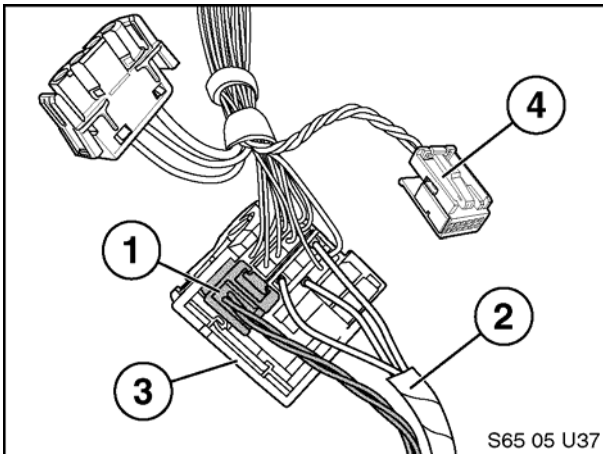
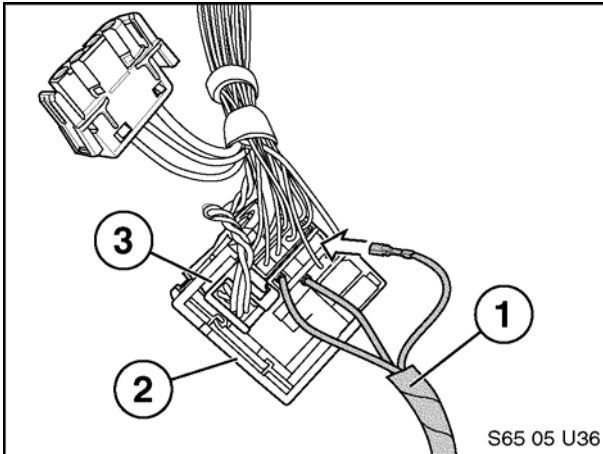
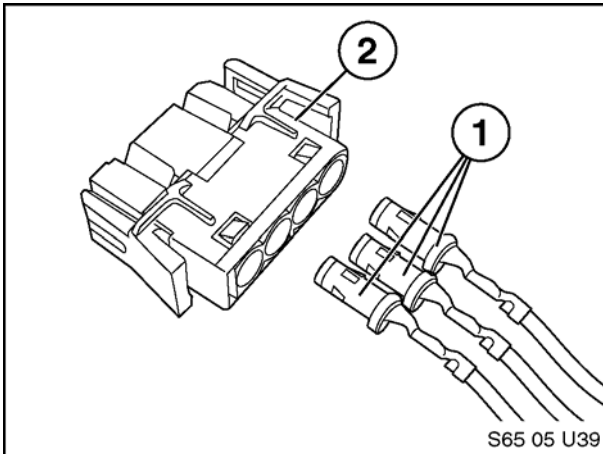
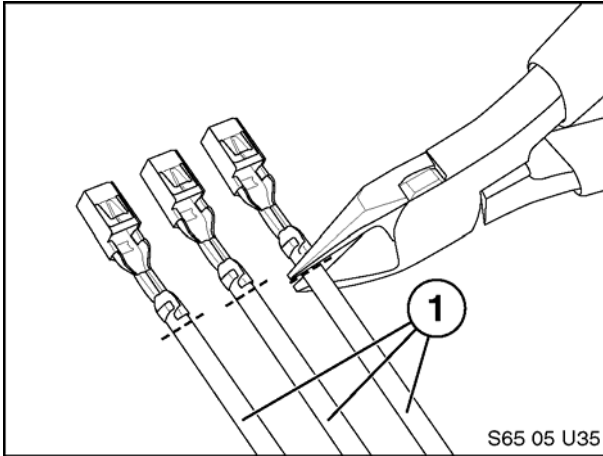


7. Insert white 12-pin connector (1) from iPod harness (2) into lower left section of radio connector (3).
8. Tie original white 12-pin connector (4) back to harness.



9. Connect 4-pin connectors (1 & 2)

Proceed to Step 10



For Kits with Radio I/F Cable 65 11 0 392 142:

1. Cut original terminals off of 3 wires (1) removed from locations 9, 12 & 15. Cut wire as close as possible to existing terminal to maintain wire length.
2. Strip 1/8" of wire shielding from 3 wires.
3. Using terminal crimping tool (BMW p/n 408 449 or Snap-on PWC47) crimp new female bullet connectors included in kit onto each of the wires from previous step.
4. Insert pins (1) removed from radio connector into 4-pin connector (2) as follows:

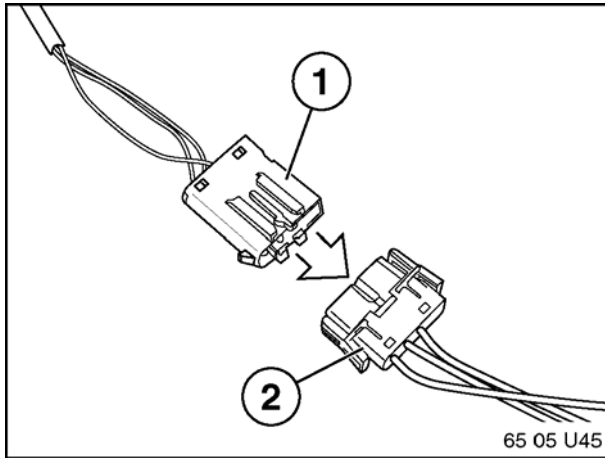
Color	Location	Description
Red/green	2	KL 30
White/red	3	I-Bus
Brown	4	KL 31

Note: Wire colors may vary depending on vehicle production changes.

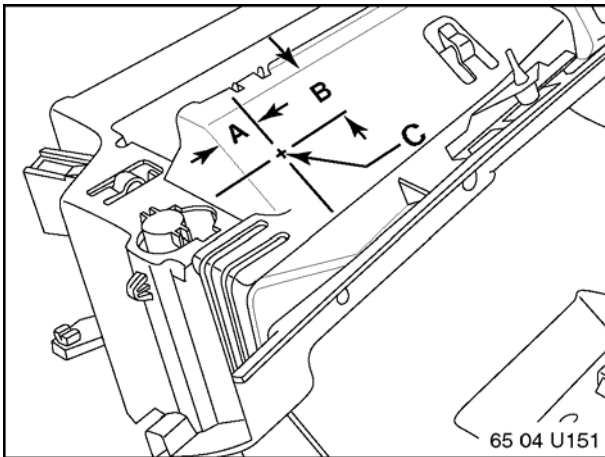
5. Insert 3 rectangular pins from iPod harness (1) into radio harness (2) as follows:

Color	Location	Description
White/gray	9	I-Bus
Brown	12	KL 31
Red/green	15	KL-30

6. Remove white 12-pin connector (3) from lower section of radio connector.
7. Insert white 12-pin connector (1) from iPod harness (2) into lower left section of radio connector (3).
8. Tie other white 12-pin connector (4) back to harness.

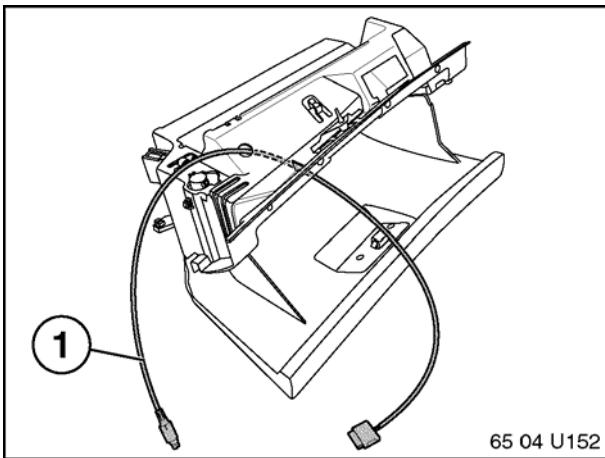


9. Connect 4-pin connectors (1 & 2)

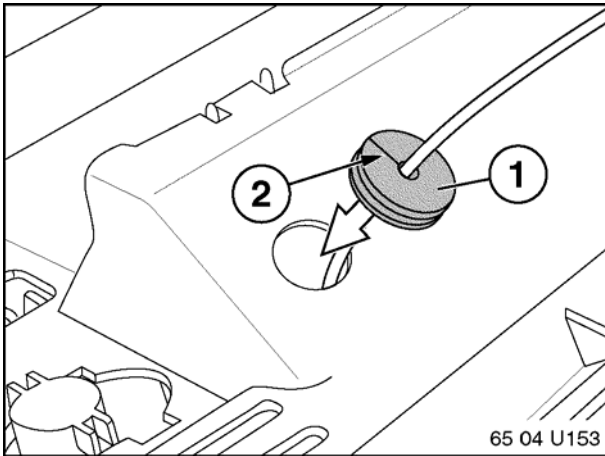


10. Locate and drill 5/8" (16mm) hole in glove box.

A = 7/8" (23mm)
B = 1 3/16" (30mm)
C = 5/8" (16mm) Ø diameter

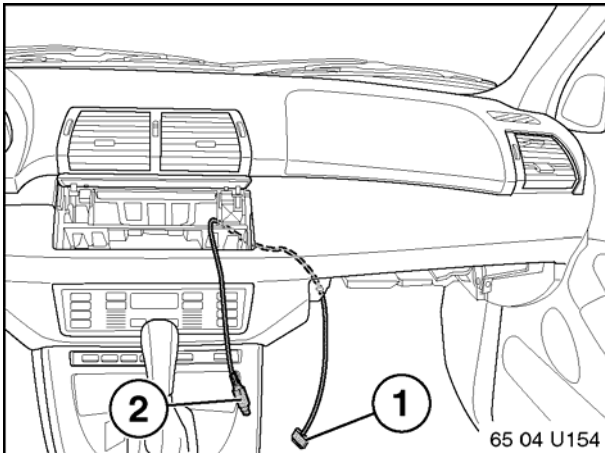


11. Insert iPod cable (1) through hole in glovebox as indicated.



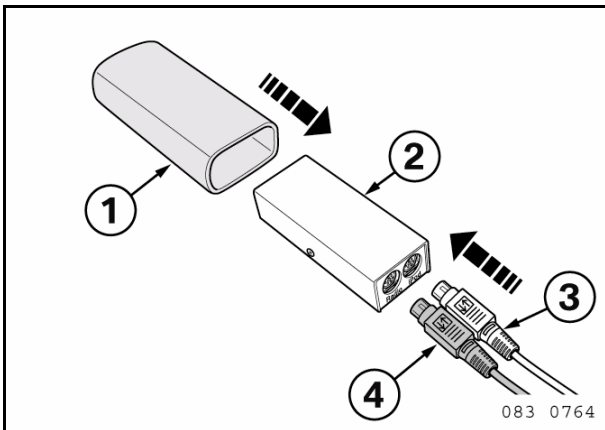
12. Split grommet (1) as indicated (2) and insert grommet through hole in glovebox wall.

13. Secure grommet to glovebox with weatherstrip adhesive from the outside of the glovebox.



14. Route iPod cable through center console from radio location to glovebox location.

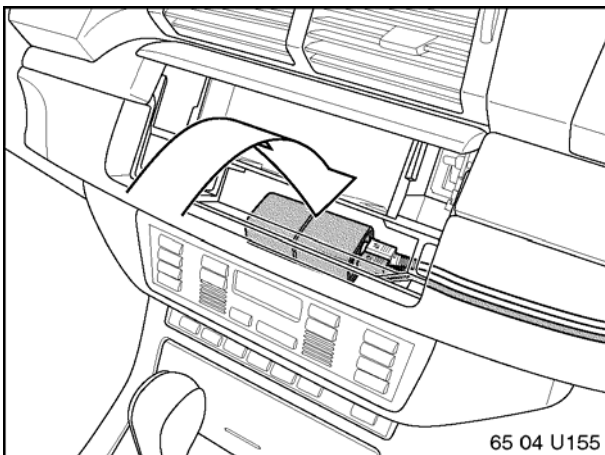
15. Route cable into glovebox alongside fuse panel. Re-install glovebox.



Caution: Check for bent pins on iPod cables before attaching to iPod module. If pins are damaged carefully bend them back into position with a small screwdriver.

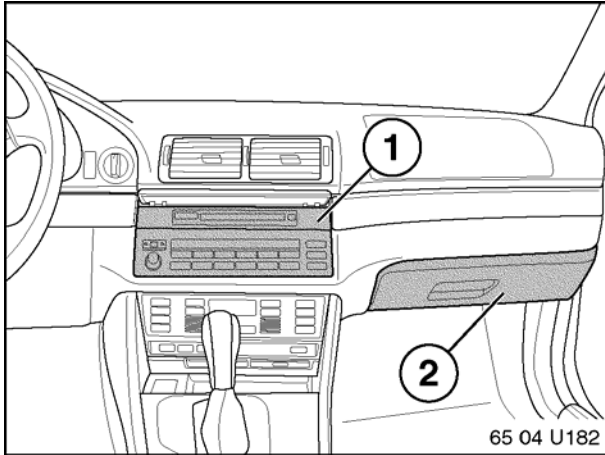
16. Slide iPod module fully into foam padding tube (1).

17. Connect white iPod I/F cable (3) and black radio I/F cable (4) to iPod module (2), making sure to connect cables in their proper location.

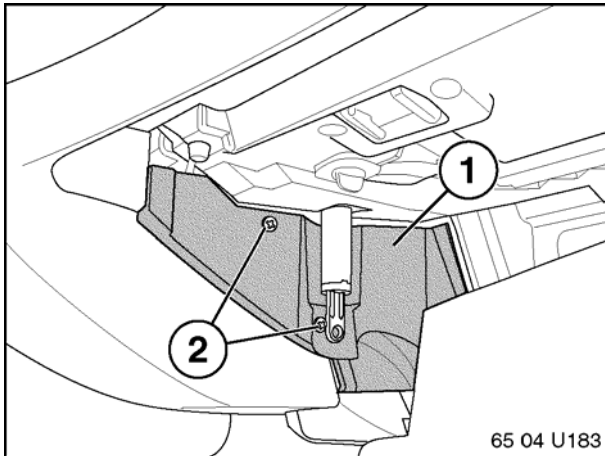


18. Mount iPod adapter as indicated below radio. Secure with cable ties if possible.

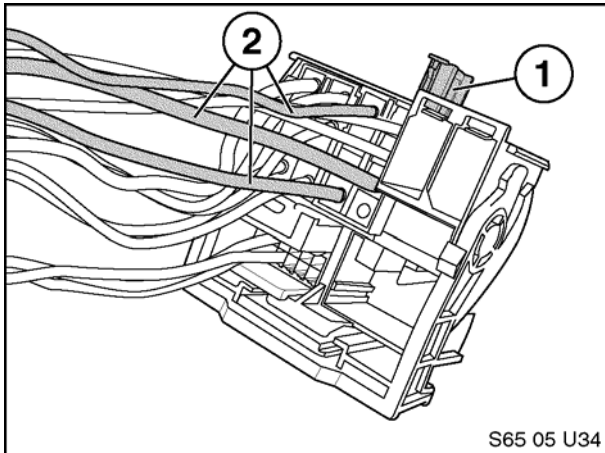
19. Reinstall all components removed for installation procedure.

Procedure for 5 Series (E39):

1. Disconnect vehicle battery.
2. Remove the following components using procedures available through TIS:
 - Radio (1)
 - Glove box (2)



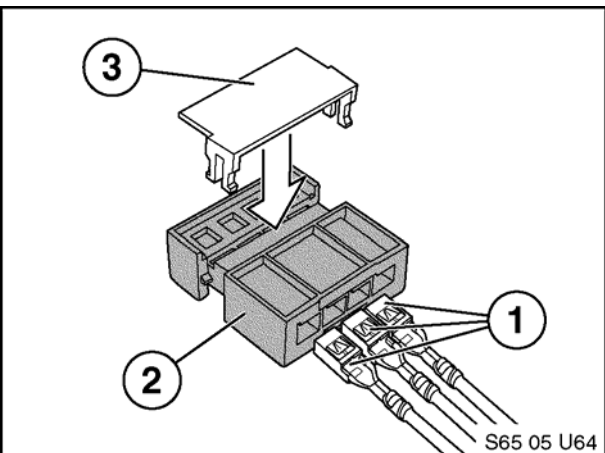
3. Remove glovebox side panel by first removing 2 screws.



4. Remove the blue lock (1) from radio harness by releasing tab and sliding upwards, then remove following terminals (2) using AMP terminal removal tool (p/n 61 1 134):

Pin #	Color	Description
9	WS/RT/GE	I-Bus
12	BR	KL 31
15	RT/GN	KL 30

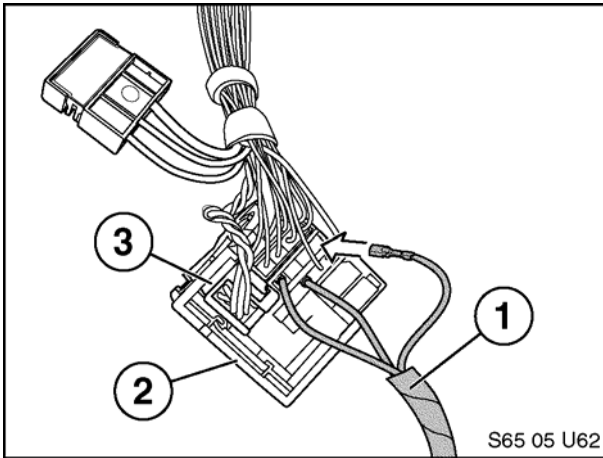
Note: Wire colors may vary depending on vehicle production changes.



5. Insert pins (1) removed from radio connector into 4-pin connector (2) as follows:

Color	Location	Description
RT/GN	2	KL 30
WS/RT/GE	3	I-Bus
BR	4	KL 31

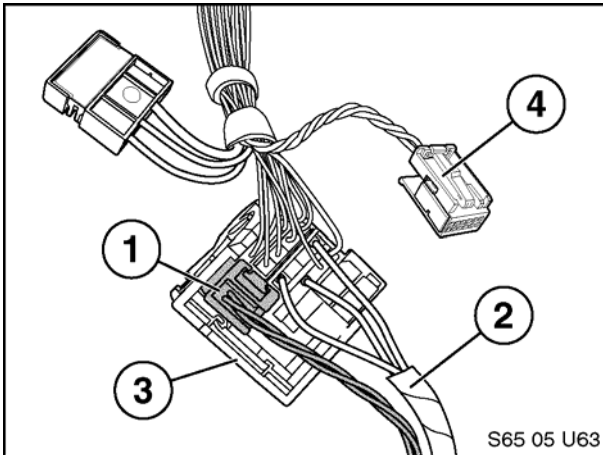
Note: Wire colors may vary depending on vehicle production changes.



6. Insert 3 rectangular pins from iPod harness (1) into radio harness (2) as follows:

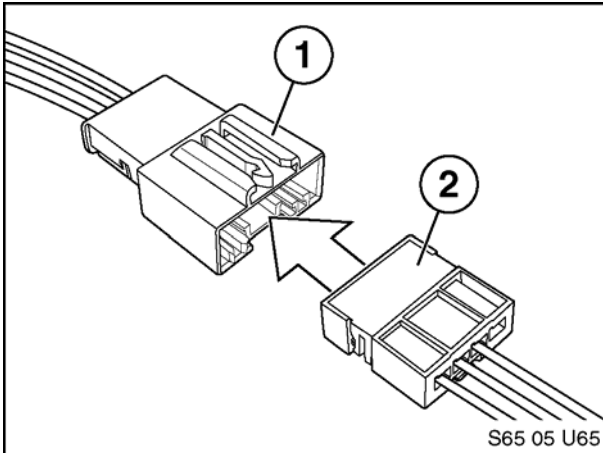
Color	Location	Description
WS/GR/GE	9	I-Bus
BR	12	KL 31
RT/GN	15	KL 30

7. Remove white 12-pin connector (3) from lower section of radio connector.



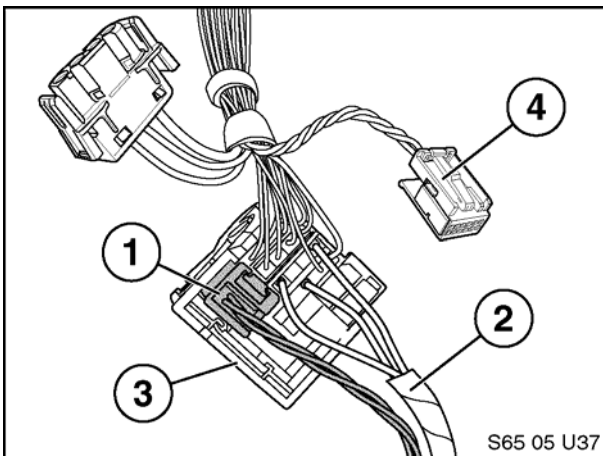
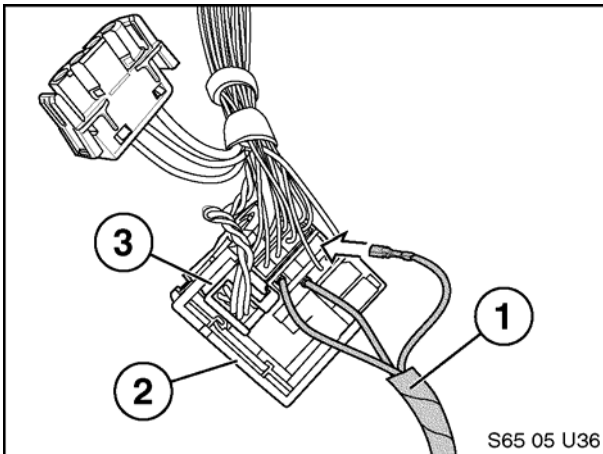
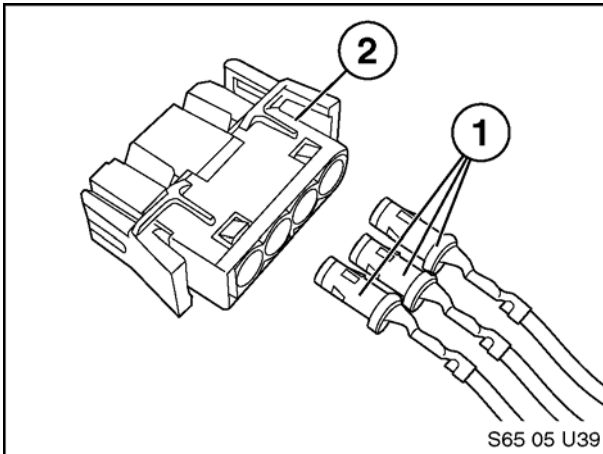
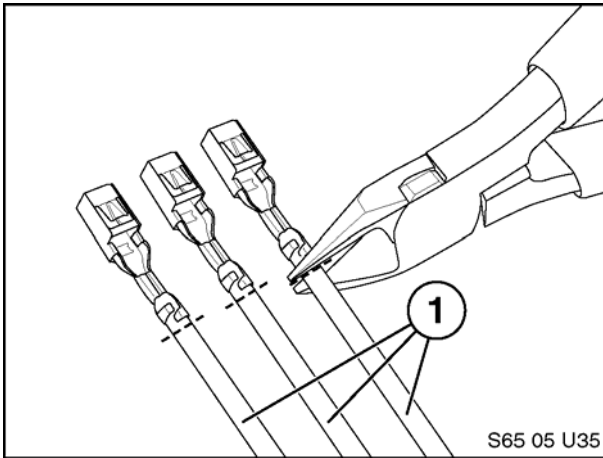
8. Insert white 12-pin connector (1) from iPod harness (2) into lower left section of radio connector (3).

9. Tie original white 12-pin connector (4) back to harness.



10. Connect 4-pin connectors (1 & 2)

Proceed to Step 11



For Kits with Radio I/F Cable 65 11 0 392 142:

1. Cut original terminals off of 3 wires (1) removed from locations 9, 12 & 15. Cut wire as close as possible to existing terminal to maintain wire length.
2. Strip 1/8" of wire shielding from 3 wires.
3. Using terminal crimping tool (BMW p/n 408 449 or Snap-on PWC47) crimp new female bullet connectors included in kit onto each of the wires from previous step.
4. Insert pins (1) removed from radio connector into 4-pin connector (2) as follows:

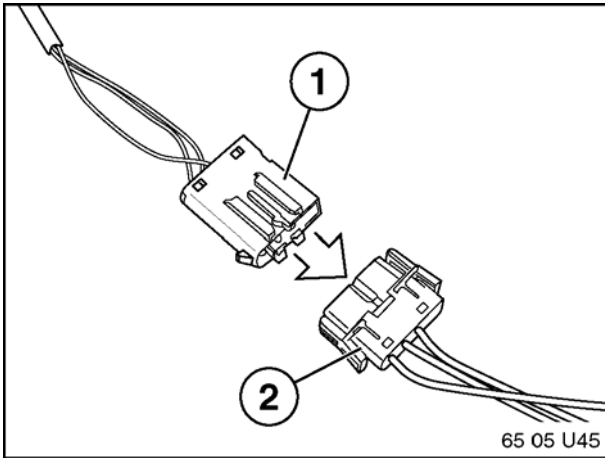
Color	Location	Description
Red/green	2	KL 30
White/red	3	I-Bus
Brown	4	Ground

Note: Wire colors may vary depending on vehicle production changes.

5. Insert 3 rectangular pins from iPod harness (1) into radio harness (2) as follows:

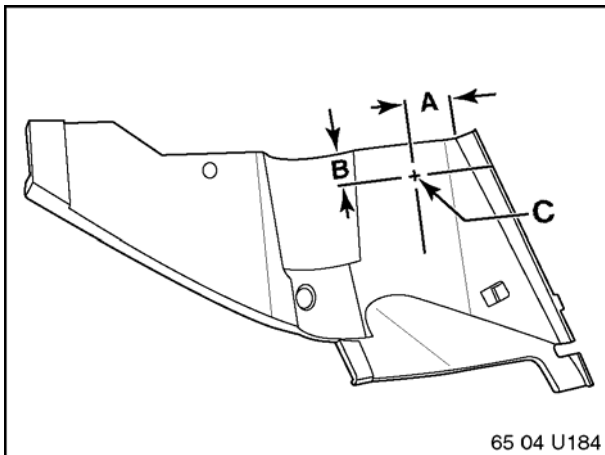
Color	Location	Description
White/gray	9	I-Bus
Brown	12	Ground
Red/green	15	KL-30

6. Remove white 12-pin connector (3) from lower section of radio connector.
7. Insert white 12-pin connector (1) from iPod harness (2) into lower left section of radio connector (3).
8. Tie other white 12-pin connector (4) back to harness.



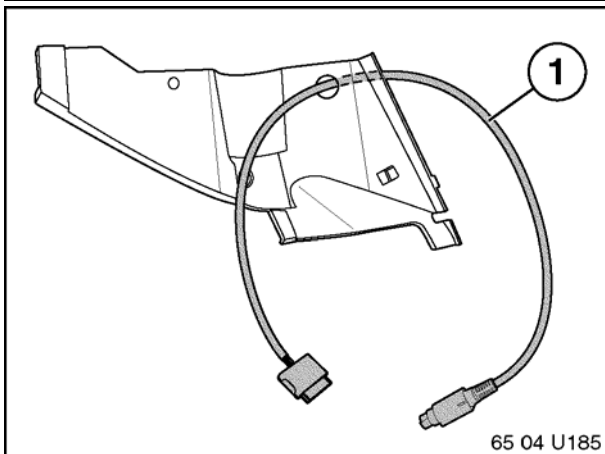
9. Connect 4-pin connectors (1 & 2)

10. Proceed with next step

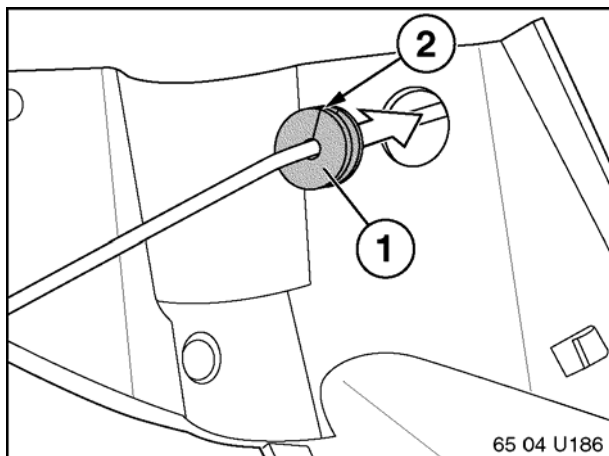


11. Locate and drill 5/8" (16mm) hole in glove box.

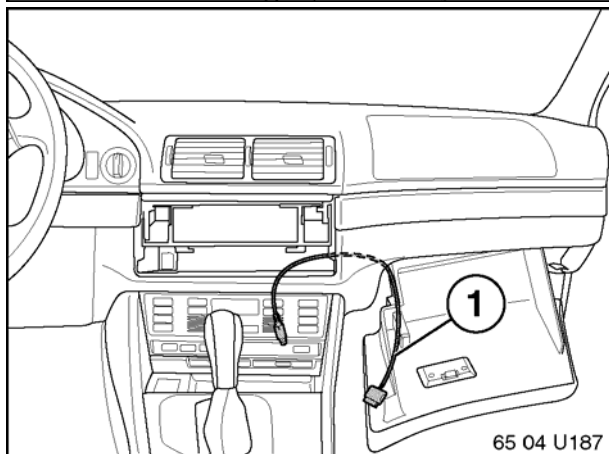
A = 1" (25mm)
B = 9/16" (14mm)
C = 5/8" (16mm) Ø diameter



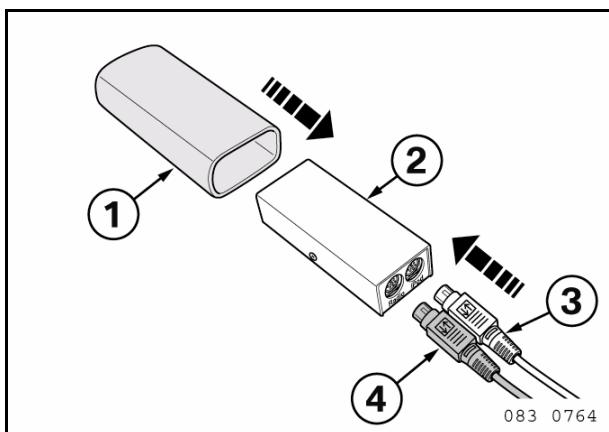
12. Insert iPod cable (1) through hole in glove box as indicated.



13. Split grommet (1) as indicated (2) and insert grommet through hole in glovebox wall.
14. Secure grommet to glovebox with weatherstrip adhesive from the outside of the glovebox.

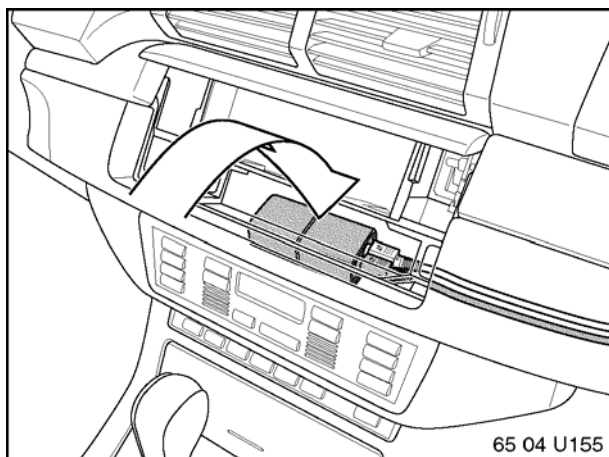


15. Route iPod cable through center console from radio location to glovebox location. Re-assemble glovebox and reinstall radio.



Caution: Check for bent pins on I/F cables before attaching to iPod module. If pins are damaged carefully bend them back into position with a small screwdriver.

16. Slide iPod module (2) fully into foam padding tube (1).
17. Connect white iPod I/F cable (3) and black radio I/F cable (4) to iPod module (2), making sure to connect cables in their proper location.



18. Mount iPod I/F module as indicated below radio. Secure with cable ties if possible.
19. Reinstall all components removed for installation procedure.

RETROFIT CODING

There is no retrofit coding required for this installation except for the following vehicles:

X3 (E83) with DSP and without Navi:	Vehicle Production 09/05 – On
Z4 (E85) with DSP and without Navi:	Vehicle Production 02/06 – On
Z4 Coupe (E86) with DSP and without Navi:	Vehicle Production 05/06 – On

For the vehicles listed above, please carry out the following retrofit procedure:

Note: Please refer to SI B09 05 01 for latest Progman retrofit procedure before starting vehicle coding.

Retrofit iPod Interface using Progman 22.xx or later

Follow approved Progman Retrofit procedures until Retrofit selection appears then:

Select **Retrofits**

Again Select **Retrofits**

Select **CD changer**

Select **Added**

Informational page displays “Retrofitting CD changer selected. The vehicle order is changed during sequence”.

Select **CONTINUE**

Informational page displays “Is a 90 Ah AGM battery fitted?”

Select **YES**

Tester will automatically determine measures plan for encoding 672 (CD changer) and will be added to vehicle order.

Select **ACCEPT**

Select **START** to execute measures plan

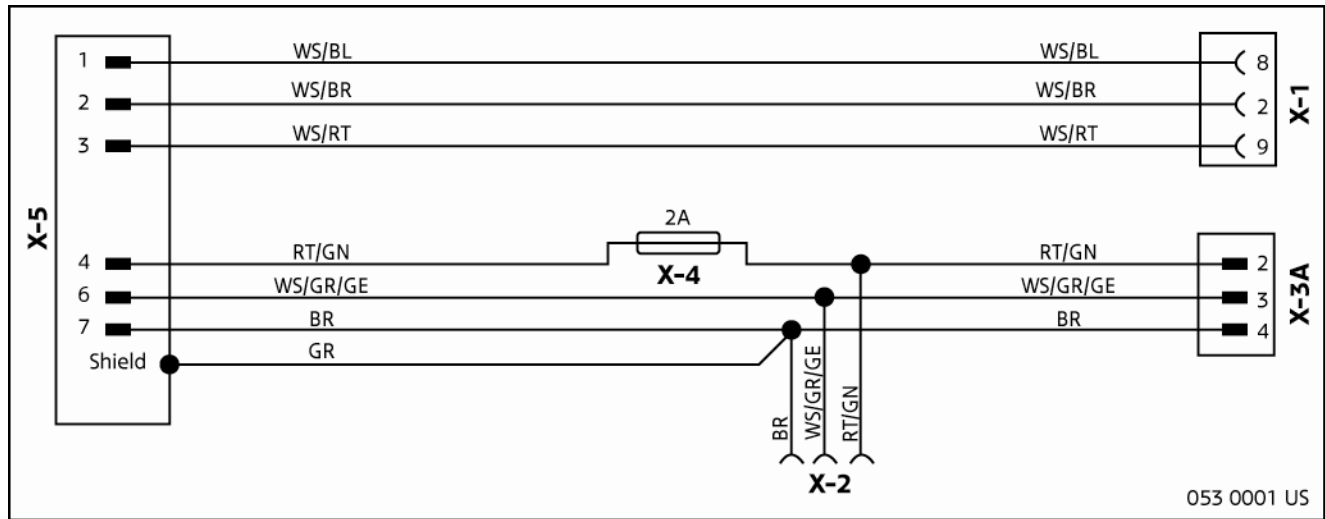
Upon completion of retrofit coding conduct functional test of the iPod to ensure that audio is heard thru the vehicle’s audio system.

TROUBLESHOOTING

- In iPod mode, “No Magazine” is displayed on the radio until an iPod is connected. (refer to BMW iPod Interface Owner’s Manual)
- This iPod Interface is compatible starting with the following iPod Firmware versions:
 - iPod with Dock Connector - SW 2.3
 - iPod with Click Wheel - SW 3.1.1
 - iPod mini - SW 4.1.1
 - iPod with Color display - SW 1.2.1
 - iPod nano - SW 1.1.1
 - iPod (Video) - SW 1.1.1

If the customer’s iPod has older versions of software, please advise them to upgrade the software before connecting them to the Interface in their BMW vehicles. (refer to BMW iPod Interface Owner’s Manual)

- In case of erratic behavior in iPod mode please perform the following:
 - **RESET** the iPod – Please refer to your Owner’s Manual that was included with your iPod.
 - **RESET** the iPod Interface – Disconnect the iPod from the iPod cable (White) and remove the black 7-Pin DIN connector from the interface module. Wait for 10 seconds and re-connect 7-pin DIN connector to module. Interface RESET is complete.

Circuit Diagram**Key**

- X-1** Connection, radio (audio signal)
X-2 Connection, MPQ contacts
X-3A Connection, 4-pin
X-4 Connection, Fuse (2A)
X-5 Connection, 7-Pin DIN connector

Wire Colors

BL	Blue
BR	Brown
GE	Yellow
GN	Green
GR	Gray
RT	Red
SW	Black
VI	Violet
WS	White