



# INSTRUCTIONS

J05788

2019-09-12



## BOOM! AUDIO AMPLIFIER KIT

### GENERAL

#### Kit Number

76000278

#### Models

For model fitment information, see the P&A retail catalog or the Parts and Accessories section of [www.harley-davidson.com](http://www.harley-davidson.com) (English only).

#### NOTE

For vehicles equipped with a Telematic Control Unit (TCU), use kit 76000278A in conjunction with this instruction.

#### ⚠ WARNING

Rider and passenger safety depend upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333b)

#### NOTE

This instruction sheet refers to service manual information. A service manual for your year/model motorcycle is required for this installation. One is available from a Harley-Davidson dealer.

### Electrical Overload

#### NOTICE

It is possible to overload the vehicle's charging system by adding too many electrical accessories. If the combined electrical accessories operating at any one time consume more electrical current than the vehicle's charging system can produce, the electrical consumption can discharge the battery and cause damage to the vehicle's electrical system. (00211d)

The purchase of this kit entitles you to a specially developed sound equalization software that is used with the Advanced Audio System. This unique equalization was designed to optimize the performance and sound response of the BOOM! Audio fairing lower speakers. Even if a Harley-Davidson dealer does not install this kit, this special equalization **software** is available without charge from any dealer through Digital Technician II. Dealer labor rates could apply for the upgrade procedure.

#### ⚠ WARNING

When installing any electrical accessory, be certain not to exceed the maximum amperage rating of the fuse or circuit breaker protecting the affected circuit being modified. Exceeding the maximum amperage can lead to electrical failures, which could result in death or serious injury. (00310a)

This amplifier requires up to **8 amps** more current from the electrical system.

### Kit Contents

See Figure 11 and Table 3.

### Preparation

#### NOTE

For vehicles equipped with security siren:

- Verify that the hands-free fob is present.
- Turn ignition on.

1. See the service manual. Follow the instructions to remove the seat, fuel tank, outer fairing and air duct.
2. See Figure 1. Remove the wire trough cover.

#### NOTE

Electrical connectors are identified in the service manual by the numbers and letters shown here **within brackets**.

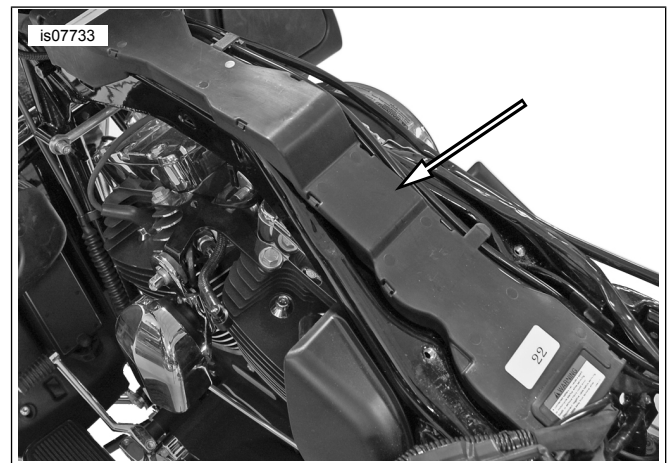
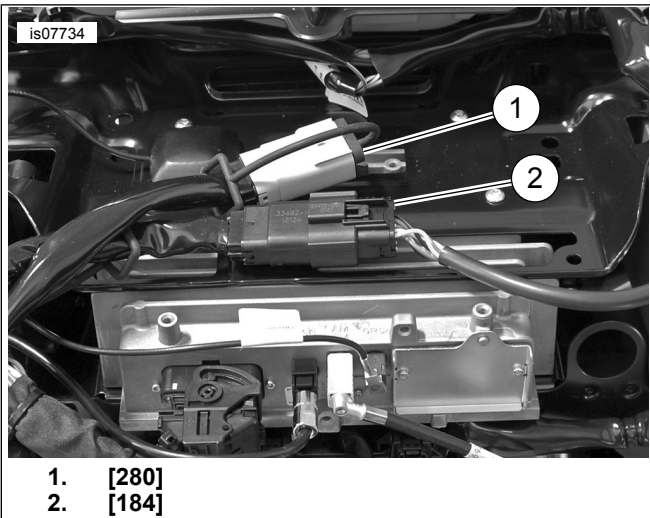


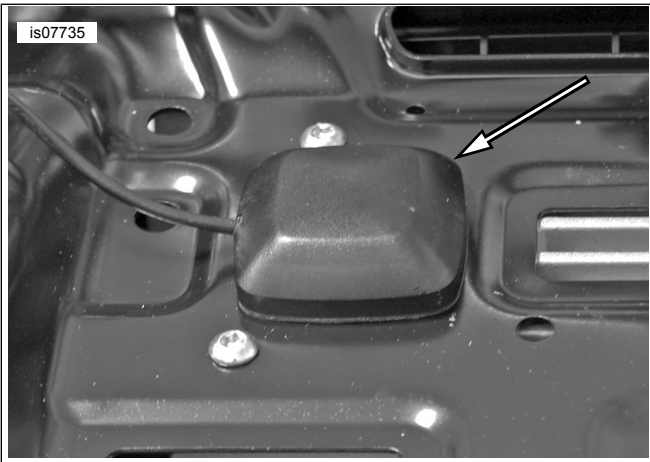
Figure 1. Wire Trough



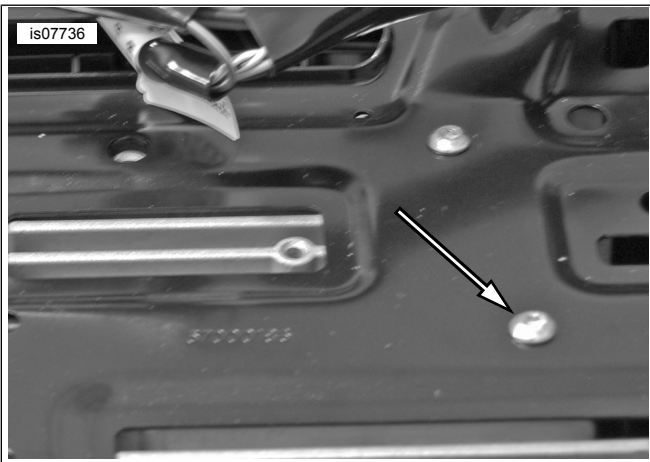
1. [280]
2. [184]

**Figure 2. [184] & [280]**

3. See Figure 2. Release the connector anchors for connectors [184] and [280] from the radio support bracket.
4. See Figure 3. If present, detach the XM/Nav antennas from the radio support bracket and position aside.



**Figure 3. Antenna Removal**



**Figure 4. Radio Support Bracket Screws**

5. See Figure 4. Remove and save the four radio support bracket to radio screws.

6. Position the amplifier bracket. Install the four radio support bracket to radio screws. Tighten to.

Torque: 2–3 N·m (18–27 in-lbs)

## Installation

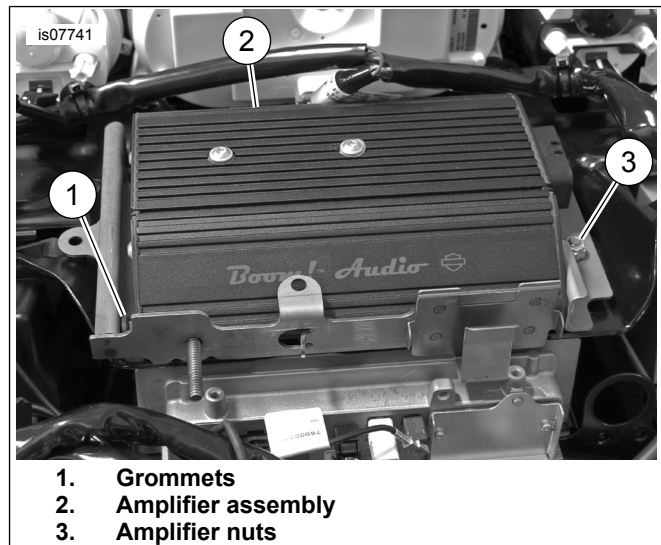
1. See Figure 5. Install pin studs and amplifier bracket to amplifier. Tighten to.

Torque: 9–12 N·m (7–9 ft-lbs)



1. Amplifier
2. Amplifier end bracket
3. Amplifier end bracket screws
4. Pin studs

**Figure 5. Amplifier Pin Studs and Amplifier End Bracket**



1. Grommets
2. Amplifier assembly
3. Amplifier nuts

**Figure 6. Amplifier Installation**

2. See Figure 6. Install the amplifier.
  - a. Insert pins into the grommets of the amplifier bracket.
  - b. Position holes of amplifier side bracket over studs in amplifier bracket.
  - c. Install the two nuts. Tighten to.

Torque: 6–11 N·m (4–8 ft-lbs)

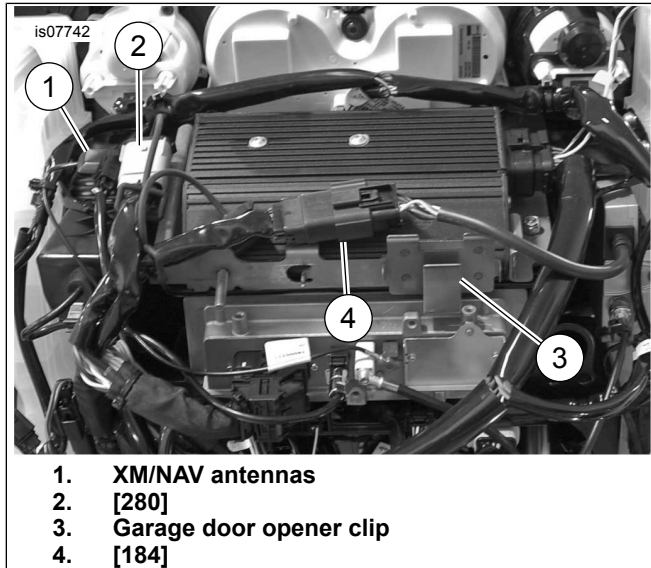
### NOTE

*Do not scratch the amplifier on the bracket when positioning over the studs.*

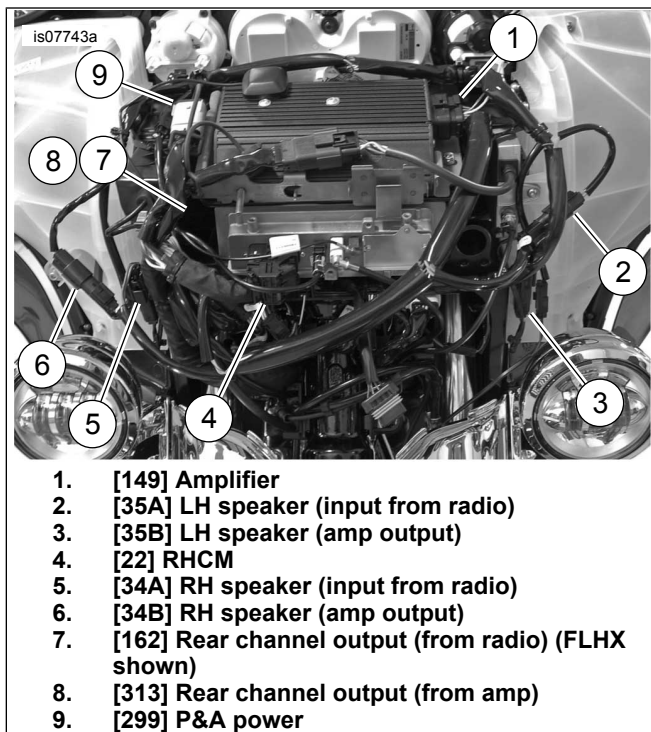
- See Figure 7. Insert connector [184] and [280] connector anchors into the amplifier bracket and if present, position the SiriusXM & NAV antennas.

**NOTE**

The amplifier bracket has a clip for a garage door opener transmitter. If the motorcycle has one, relocate it to this location. The stud on the front of the bracket is for CVO use only.



**Figure 7. Connector Relocation**



**Figure 8. Harness Connections**

- See Figure 8. Position the harness as shown and connect the connectors. Connections for [162] and [313] are detailed in the following notes.

**NOTE**

- FLHX models:** If this installation adds an amplifier to previously installed speakers, see the "Upgrade" section for wire harness connection instructions.
- If this amplifier is used with a secondary amplifier to enable six or eight speakers, see connection details for [162] and [313] in Table 1, Table 2 and kit 7600280. FLHX(S) [162] (F) a 4-way Molex rear channel output from radio. Used for speaker output without amp. See Figure 8. Unused with primary amp, used for secondary amp INPUT. See Figure 10. FLHTC/FLHTK/TRIKE [162] (R) a 16-way Molex rear channel output from radio. Contains all rear speaker pod wiring. Install 69200714 to use with amplifiers (see Step 7). Fairing Amp [313] a 4-way Molex rear channel output of the primary amplifier, can be used for saddlebag speakers, rear pods or fairing lowers. Reserved for fairing lowers when used on six or eight speaker configuration.

**Table 1. Connector [313] of Amplifier Harness**

MODEL	NUMBER OF SPEAKERS			
	2	4	6	8
FLHX(S)	N/A	A	B	B
FLHTCU	N/A	C	F	F
FLHTK	N/A	C	F	NO FIT
TRIKE	N/A	C	NO FIT	NO FIT

A: Connect to 69200489 jumper (for covers or R. Pods) or fairing lower harness 69200612  
 B: Connect to 69200489 jumper. Other end of jumper to speaker expansion harness 69200490 [296]  
 C: Connect to 69200489 jumper. Other end of jumper to rear speaker interconnect 69200714 (see below)  
 F: Connect [313] to fairing lowers only. 69200489 jumper not needed  
 N/A: 2 speaker system does not require use of [313]

**Table 2. Connector [162] of Stock Fairing Harness and Amp**

MODEL	NUMBER OF SPEAKERS			
	2	4	6	8
FLHX(S)	N/A	D	E	E
ULTRA	N/A	C	G	G
FLHTK	N/A	C	G	NO FIT
TRIKE	N/A	C	NO FIT	NO FIT

D: Do not connect, leave stock weather-cap in place  
 E: Connect to 69200489 jumper. Other end of jumper to speaker expansion harness 69200490 [296]  
 G: Connect rear speaker interconnect 69200714 to speaker expansion [296] and [297] 69200489 jumper not used.  
 N/A: 2 speaker system does not require use of [162]

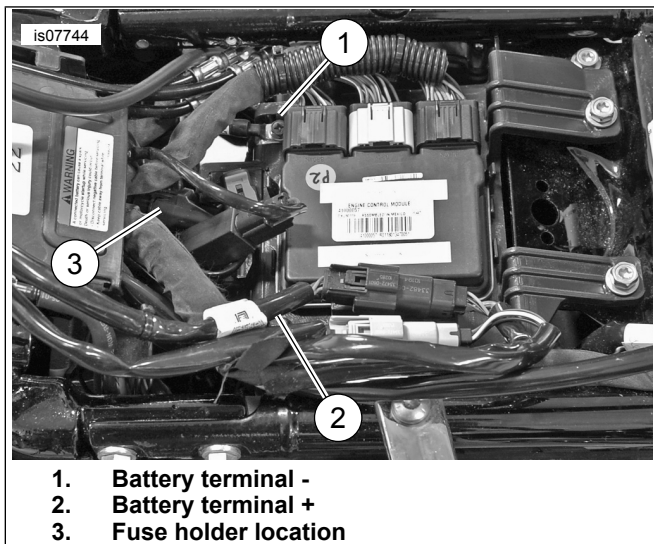
- Route the battery wires through the wire trough and to their respective battery terminals.
- Remove the - and + battery terminals.
  - Place the ring terminal labeled B+ on the positive battery terminal. Install the bolt.
  - Place the terminal labels B- on the negative battery post. Install the bolt.
  - Tighten the bolts to.  
Torque: 6.8–7.9 N·m (60–70 in-lbs)

- d. Position the in-line fuse holder in a location that can be accessed with minimal disassembly, do not place inside the wire trough.

7. **FLHTCU/K and Trike models only:** See Table 1 and Table 2. Install the rear speaker pod interconnect harness (69200714).

- a. See Figure 10. Disconnect [162] located behind passenger backrest.
- b. Connect the appropriate connectors to the interconnect harness [162A/B].
- c. Connect 4-way socket side of 69200714 to 4-way pin side of 69200489 jumper. Use cap (from 313) to plug unused 4-pin side of 69200714.
- d. If using speaker expansion kit 76000280, connect 4-way pin side of 69200714 to mating 4-way socket side of [296]. Connect 4-way socket side of 69200714 to mating 4-way pin side [297].

8. See Figure 9. Install the wire trough cover. Cap any unused pin-side connectors with 72632-10, provided with 692000478 [313] or from stock fairing harness connector [162] on FLHX models.



- 1. Battery terminal -
- 2. Battery terminal +
- 3. Fuse holder location

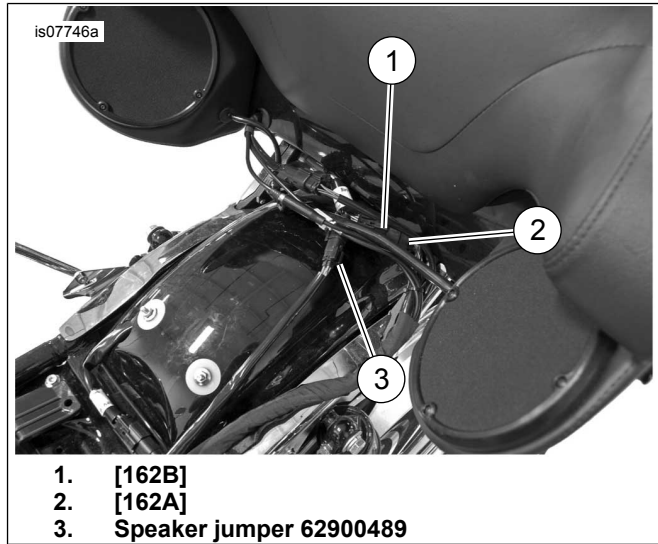
**Figure 9. Battery Connection**

9. Secure wire harness with cable straps. Verify that wiring does not interfere with steering or suspension travel.

**▲ WARNING**

**Be sure that steering is smooth and free without interference. Interference with steering could result in loss of vehicle control and death or serious injury. (00371a)**

10. See Figure 7. **SiriusXM-equipped models:** Relocate the SiriusXM antenna with the bracket and instructions from that kit. Install the main fuse and check radio operation.



- 1. [162B]
- 2. [162A]
- 3. Speaker jumper 62900489

**Figure 10. Rear Speaker Pod Interconnect**

11. Load amplifier EQ based on speaker configuration using amplifier flash section of Dealer Service Tool (Digital Technician).

- a. Check for updates to the Amplifier Base Calibration .
- b. Install newest version of Base Calibration, if updates are available.
- c. Proceed to radio reflash and select the new speakers configuration.
- d. The correct EQ based on the speakers configuration is available in the information section.
- e. Complete the reflash of the radio with the new speakers configuration.
- f. Proceed to Amplifier reflash.
- g. Load Amplifier EQ based on speakers configuration as noted in the radio reflash section.
- h. Complete the Amplifier reflash.

12. Follow the service manual instructions to install the air duct, outer fairing, tank and seat.

13. Refer to **Odometer Self-Diagnostics** in the EDM to clear any codes that were set during the installation.

# SERVICE PARTS

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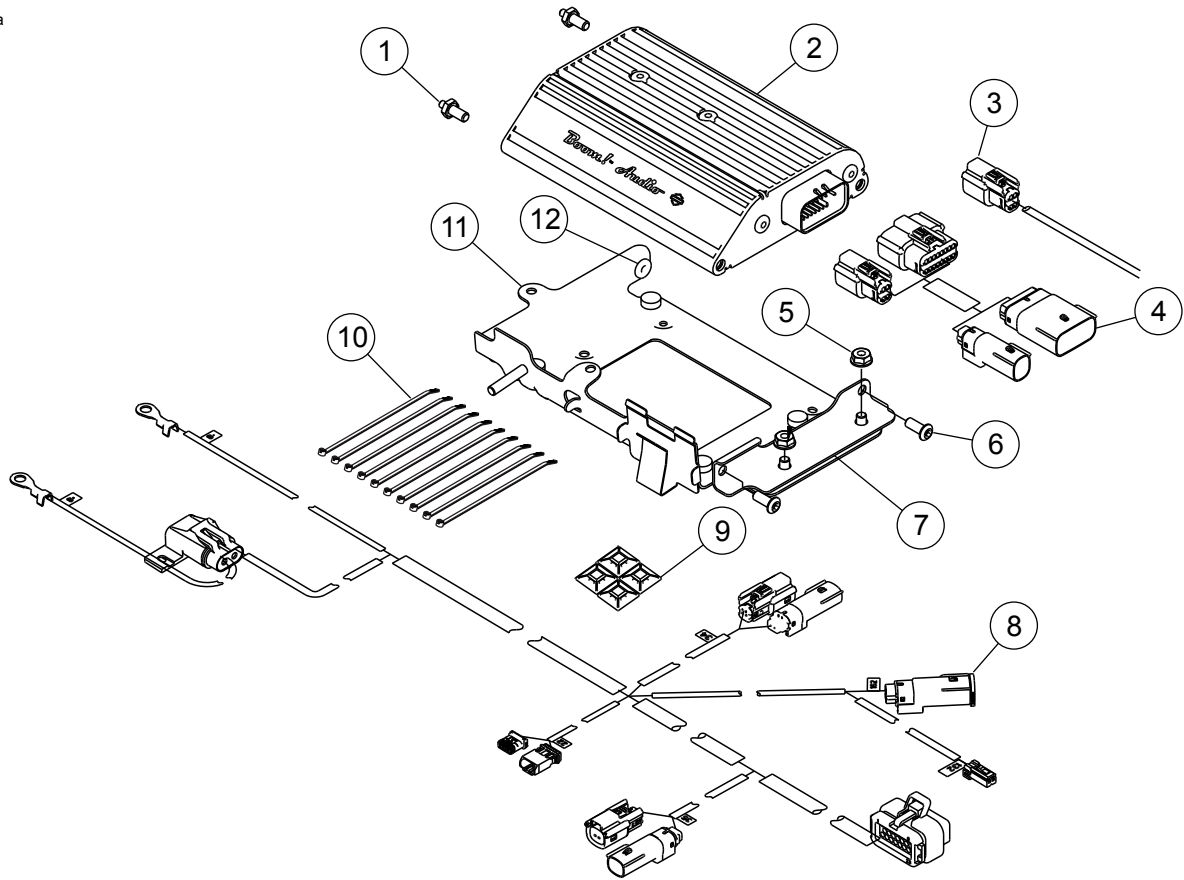


Figure 11. Service Parts, Boom! Audio Amplifier Kit

Table 3. Service Parts

Item	Description (Quantity)	Part Number
1	Stud, pin 1/4-20x3/16 (2)	12600087
2	Amplifier	76000277
3	Jumper, rear speaker	69200489
4	Harness, rear speaker interconnect	69200714
5	Lock nut (2)	7716
6	Hex socket button head screws (2)	926
7	Bracket, amplifier, angle	76000330
8	Harness, amplifier primary amp	69200487
9	Adhesive base (4)	69200342
10	Cable straps (10)	10006
11	Bracket, amplifier fairing mount	76000349
12	Grommet (2)	12100052

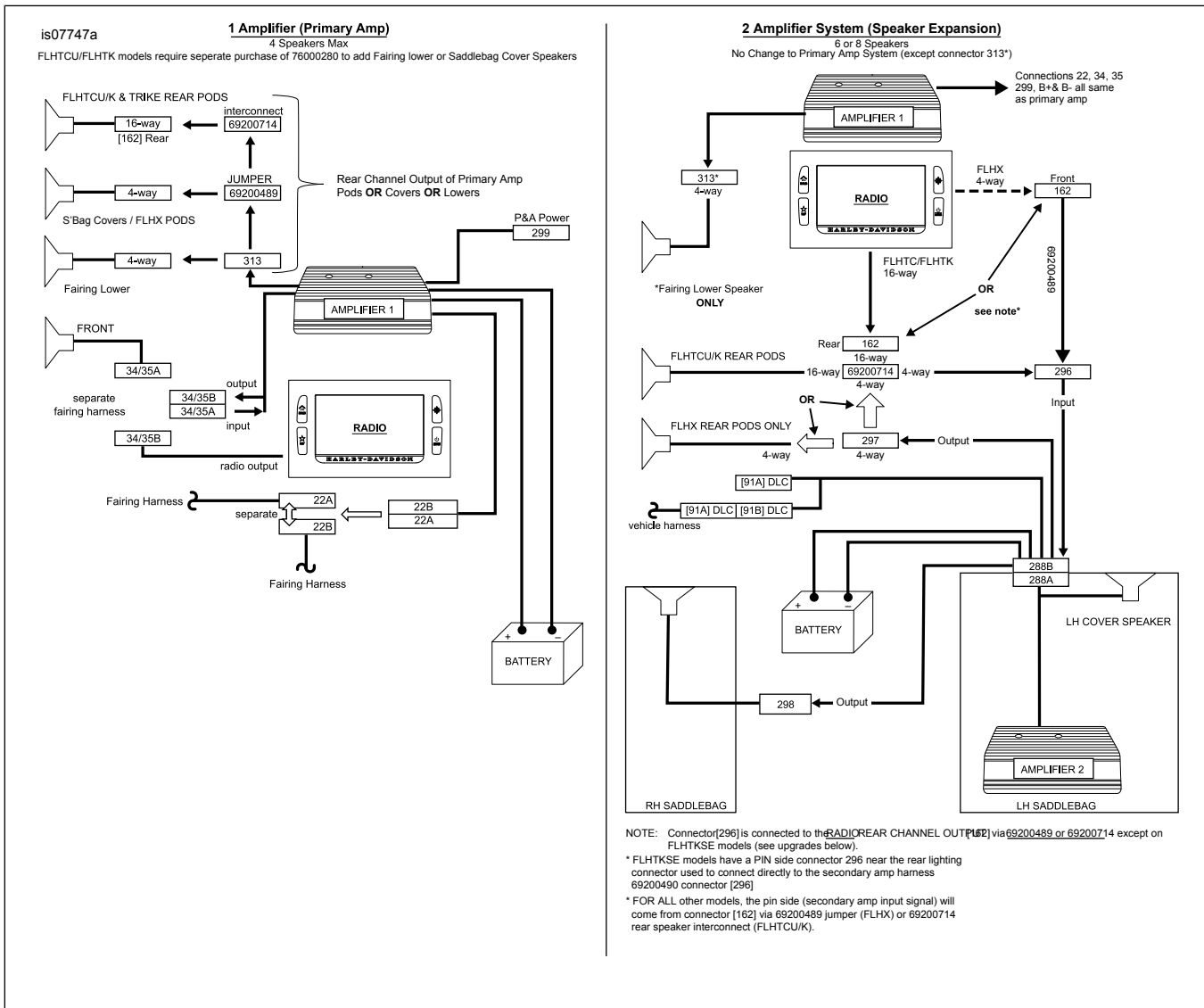


Figure 12. Amplifier Configuration

Table 4. Upgrades

UPGRADES	
<b>FLHX models with 4 speaker system: upgrading to Primary Amp</b>	
Loweres	Disconnect Lower harness (69200612) from vehicle harness radio output [162]. Reconnect to [313] of the fairing amplifier harness.
Pods/Covers	<ul style="list-style-type: none"> <li>Disconnect Jumper 69200489 from vehicle harness radio output [162]. Reconnect to [313] of the fairing amplifier</li> <li>Replace weather cap from [313] in [162].</li> </ul>