

USA·SPEC

PA15-GM iPod to GM car stereo Interface with Text Display

PLAY, CONTROL & CHARGE Your iPod through GM Car Stereo System!

KEY FEATURES

This interface connects an iPod, iPhone, or iTouch directly to your GM audio system with following benefits:

- Connect directly iPod's audio output to GM vehicle audio system for optimal sound quality playback.
- Displays text information on XM ready radios.
- Retains XM receiver, CD changer, CD player, and DVD system.
- Offers three ways to access your music on iPod: Direct Mode, Folder Mode and Playlist Mode.
- Charges iPod battery while playing, charging automatically ends. half hour after iPod is paused.
- Connects Satellite radio, DVD player or other audio sources through AUX Audio Input jack.



APPLICATION

PA15-GM is applicable to the following GM vehicles: (Note: Radio must have AUX or SOURCE button).

MAKE	MODEL	YEAR
CADILLAC	ESCALADE	03 - 06
	EXT	03 - 06
	CTS / RSX	04 - 07
CHEVY	❖ CORVETTE	05 - 10
	IMPALA	00 - 05
	MONTE CARLO	00 - 05
CHEVY TRUCKS	AVALANCHE	03 - 06
	COLORADO	03 - 07
	❖❖ EQUINOX (Equiped W/XM Tuner only)	03 - 06
	SILVERADO	03 - 06
	SILVERADO CLASSIC	07
	SUBURBAN	03 - 07
	TAHOE	03 - 07
	TRAIL BLAZER	04 - 07
❖❖ UPLANDER	05 - 06	
	VENTURE	04

MAKE	MODEL	YEAR
GMC	CANYON	05 - 07
	DENALI	03 - 06
	ENVOY	05 - 07
	SIERRA	03 - 06
	SIERRA CLASSIC	07
	YUKON	03 - 06
HUMMER	H1	04 - 06
	H2 / SUT	03 - 07
	H3	07
PONTIAC	GRAND PRIX	05

- ❖ If a CORVETT has factory installed XM receiver, use model PA15-VETTE.
- ❖❖ If a EQUINOX or UPLANDER does not have a factory installed XM receiver, a separately sold cable adaptor is required. Contact **USA·SPEC** @626-3363836

USA·SPEC verified the published radio and vehicle application to the best of our ability. Due to uncontrollable factors, **USA·SPEC** can not 100% guarantee every published application. These factors include variables such as, anomalies within a factory radio, factory radio heretofore unknown to **USA·SPEC** and partail model year changes.

iPod, iPod nano, iPod classic, iTouch and iPhone are trade marks of Apple Computer, Inc.
XM is a trade mark of XM Satellite Radio Inc.
GM is a registered trade mark of General Motors Corporation.

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OWNER'S MANUAL

TECH. SUPPORT
 (626) 336-3836
 9 AM ~ 4 PM PST
 MON ~ FRI
 Email: techsupport@usaspec.com

Thank you for purchasing a **USA·SPEC** product. This manual describes the functions and operation of PA15-GM iPod interface to GM radios. Please read this manual before installing the interface adaptor in your vehicle.

!!!!IMPORTANT!!!!

- ❖ It is strongly recommended that the adaptor is installed in an easily accessible location. DO NOT permanently place deep behind radio. You may need to access for future upgrades, resets, dip switch setting, etc...
- ❖ Eject ALL CDs from the built-in CD player or CD changer before removing the radio from the dash board.
- ❖ **USA·SPEC** distributes products through authorized dealers so customers will receive proper services and information from the dealers. **USA·SPEC** reserve the right to offer technical or warranty service only on products purchased through authorized **USA·SPEC** accounts.
- ❖ SAFETY NOTE: You should always give full attention to driving. Do NOT operate the feature or function of PA15-VETTE in such a way that distracts you while driving.
- ❖ KEEP MANUAL in vehicle. Place it with the owner's manual for the car. You may need to refer to it or if vehicle is sold, the next owner can enjoy it and know how to use it .

Section 1. ABOUT INTERFACE PA15-GM

1-1 Introduction

- a) This interface connects an iPod, iTouch or iPhone directly to your GM car audio system for optimal playback sound quality.
- b) This interface allows iPod to co-exist with GM navigation system, CD changer, XM radio receiver and DVD system, and controls iPod via both car radio and steering wheel controls.
- c) PA15-GM's on board software translates commands from your CD changer controls or XM Band controls into commands that the iPod understands.
 - i) You can either use the XM controls or CD changer controls on radio to work with iPod, iTouch or iPhone. Use XM control if text display is desired. Radio must have a BAND button to use XM control.
 - ii) **When using XM control, XM1 is for iPod and XM2 is retained for broadcast reception.**
 - iii) If radio has a built-in CD changer, you must configure PA15-GM to radio's XM control with the DIP switches and radio must have BAND button.
- d) This interface charges iPod while it is playing and charging stops automatically half hour after iPod is paused.

1-2 Text Display of Song Information

- a) Artist name and song title can be displayed on radio by configuring PA15-GM to work with radio's XM band.
- b) Only DISC number and track number are displayed on radio (Disc number = Playlist number) when using PA15-GM with radio's CD/AUX or DISC button.

1-3 Package Content

PA15-GM contains one PA15-GM interface adaptor and one each of following cables: CAS-GM24, CAS-GM2ext5, CAS-GM2x and CB-PA105.

1-4 Compatibility

Future iPod and iTunes software updates may affect the features and functions described in this owner's manual and www.usaspec.com web site.

1-5 Applications

Make	Model	Year	Control iPod <i>with ...</i>	Note
CADILLAC	Escalade / EXT	03 - 06	DISC or XM	(1)
	CTS	04 - 07	XM	(2)
	RSX	04 - 07	XM	(2)
Chevrolet	Corvette	05 - 10	DISC or XM	(4)
	Impala	00 - 05	DISC or XM	(1)
	Monte Carlo	00 - 05	DISC or XM	(1)
Chevy Truck	Avalanche	03 - 06	DISC or XM	(1)
	Blazer	2004	XM	(1)
	Colorado	05 - 10	XM	(1)
	Equinox	05 - 06	XM	(1) (3)
	S-10 Truck	2004	XM	(1)
	Silverado	03 -06	DISC or XM	(1)
	Silverado Classic	2007	DISC or XM	(1)
	SSR	05 - 06	XM	(1)
	Suburban	03 - 06	DISC or XM	(1)
	Tahoe	03 - 06	DISC or XM	(1)
	Trail Blazer	04 - 09	XM	(1)
	Uplander	05 - 07	XM	(1) (3)
Venture	03 - 04	XM	(1)	
GMC	Canyon	05 - 10	DISC or XM	(1)
	Denali	03 - 06	DISC or XM	(1)
	Envoy	04 - 08	DISC or XM	(1)

GMC	Sierra	03 - 06	DISC or XM	(1)
	Sierra Classic	2007	DISC or XM	(1)
	Sonoma	2004	XM	(1)
	Yukon	03 - 06	DISC or XM	(1)
Hummer	H1	04 - 06	DISC or XM	(1)
	H2 / SUT	03 - 07	XM	(1)
	H3	06 - 09	XM	(1)
Pontiac	Grand Prix	2005	CDC or XM	(1)
	Vibe	05 - 06	XM	(1)

Note (1) To use XM control, radio must have a BAND button and is XM ready.

Note (2) Use interface model PA15-VETTE .

Note (3) If the car does not have XM receiver, order CAS-GNOX2 cable from **USA·SPEC (626-336-3836)**

Note (4) If a CORVETT has factory installed XM receiver, use model PA15-VETTE.

- ❖ **USA·SPEC** verified the published radio and vehicle application to the best of our ability. Due to uncontrollable factors, **USA·SPEC** can not 100% guarantee every published application. These factors include variables such as, anomalies within a factory radio, factory radio heretofore unknown to **USA·SPEC** and partial model year changes.

Section 2. Folder Mode, Direct Mode, Playlist Mode and AUX Option

PA15-GM provides two modes to control your iPod through car radio, namely (Playlist Mode + Direct Mode) and (Folder Mode and Direct Mode.)

2-1 Direct Mode (control on iPod directly)

Search and select music on iPod just as you would in portable use. Use the track up/down on radio and steering wheel to control.

- When PA15-GM is configured to XM control, a preset button on radio is dedicated to Direct Mode. See section 3-1 and section 4 of this manual for detail.
- When PA15-GM is configured to CD changer control, one of the six DISCs is dedicated to Direct Mode. See section 3-2 of this manual for detail.
- In Direct Mode, screen and keypad on iPod is unlocked and functional. You have control and access to everything on your iPod in Direct Mode. You also have Track Up/Down controls from the radio. No text will be displayed on radio in the mode.

❖ **Application Tip**

Direct Mode allows the playing of streaming music applications such as Pandora.com and SIRIUS XM Online from your iPhone or iTouch to car stereo.

2-2 Folder Mode (use with Band / XM Ready radios)

Access 4 Folders, namely Playlist, Artist, Songs and Album on iPod from radio. See section 3-1 (for non-navigation radio) or section 4 (for navigation radio) of this manual for more information.

- Folder Mode is applicable only when PA15-GM is configured to use radio's XM control. Hence, radio must have BAND button and is also XM ready.
- iPod FOLDERS are accessed with radio's preset buttons.

2-3 Playlist Mode (use with Non-Band / XM Ready radios)

Operates and controls the iPod like it is a CD changer. This mode allows you to access Playlists and Songs on iPod from radio. iPod screen always displays "OK to disconnect" or "Attached to accessory" and iPod's keypad is locked and not functional. See section 3-2 of this manual for more information.

- Radio does not display artist name and song title in Playlist Mode.
- Playlist mode is for radio that does not have a BAND button but can control an external CD changer.
- Use the DISC or CD/AUX button on radio to access iPod.
- If your iPod has more than 4 Playlists, see Playlist Naming in Section 6 of this manual.

2-4 AUX Input Option

In addition to the iPod, PA15-GM also can connect a second audio source to car radio. Connect the second audio source to the RCA jack labeled **AUX INPUT**. AUX input is enabled by setting the DIP switch #1 to ON position at the side of the interface adaptor. DIP switch #1 is only for the AUX INPUT and it is independent of other DIP switches on the PA15-GM adaptor.

DIP Switch # 1 Setting:

DIP # 1 = ON	RCA AUX Input is enabled
DIP # 1 = OFF	RCA AUX Input is disabled

Section 3. Regular or non-navigation Radio's Mode Setting and Function Control

3-1 Folder Mode + Direct Mode Configuration

(Note: this configuration supports text display but is applicable only to radio if it has a BAND button and also it is XM ready.)

3-1-1 DIP Switches Setting

DIP # 2	DIP # 3	DIP # 4
OFF	OFF	ON

(Note: DIP switch #1 is only related to RCA AUX setting and it is independent of switches #2, #3 and #4. See section 2-4 for DIP #1 setting instruction.)

3-1-2 Functions and Radio Buttons

- Press BAND button on radio to access iPod at XM1
- Press BAND button on radio to access XM channels at XM2
- Use radio Preset buttons to access iPod Folders, Direct Mode and RCA AUX as follow:

<i>Push.....</i>	<i>Radio Displays.....</i>	<i>Radio Plays</i>	<i>Remark</i>
Preset # 1	PL x y & Title	Playlist Folders	see note (a) (b)
Preset # 2	AR x y & Title	Artist Folders	see note (a) (b)
Preset # 3	AL x y & Title	Album Folders	see note (a) (b)
Preset # 4	ALL y & Title	All Songs Folder	see note (a) (b)
Preset # 5	iPod Direct	iPod Playing	
Preset # 6	AUX	RCA AUX	IF DIP #1 = ON

Note (a): x=folder's number; y=track's number

Note (b): FOLDER type abbreviations: PL = Playlist; AR = Artist;
AL = Album; ALL = Songs; Dir = iPod Direct

- Push DISPL or INFO or RCL button (usually it is the centre of the TUNING knob) on radio to view text information of music. Text display on radio is as follow: (Note: available on XM ready radio only.)

DISPL Button	Text from iPod	Note
no Push →	track number & Title	
1st Push →	Artist Name	
2nd Push →	Album Name	
3rd Push →	Folder Name	

- Turn the TUNING knob or press SEEK button to change tracks.

- Turn P-TYPE knob to change sub-folder (example: change to next Playlist while in Playlist folder; change to next Artist while in Artist folder).
Note (1): If radio is equipped with a TYPE turn knob, must press the TYPE button first and then turning the TYPE turn knob.
Note (2): If radio is equipped with a P-TYPE button, must press P-TYPE button and then turning the push AUDIO knob.
- Press-and-hold (until a beep sound is heard) preset button #6 to begin the RANDOM track play and press-and-hold the preset #6 button 2nd time to terminate the RANDOM play. When in RANDOM mode, “r” is displayed on radio.
- Pressing-and-hold the preset #3 or the preset #4 wil fast reverse or fast forward the track about 40 seconds respectively.
- Press-and-hold (until a beep sound is heard) preset #1 and preset #2 to retreat or advance 10 tracks respectively.
- Track change from steering wheel controls is supported.

3-1-3 iPod Connecting and Playing

- When iPod is connected to PA15-GM and radio is at XM1 BAND, iPod plays the track in ***the*** Folder which was played prior to the iPod being connected to the PA15-GM. When the playing of the last track in ***the*** Folder is complete, iPod will go to the first track in All Songs folder.

3-2 Playlist Mode + Direct Mode Configuration

(Note: Radio without a BAND button must use this configuration for PA15-GM. This configuration uses the radio’s CD changer controls)

3-2-1 Set DIP switches as follow:

DIP # 2	DIP # 3	DIP # 4
OFF	ON	ON

(Note: DIP switch #1 is only related to RCA AUX setting and it is independent of these DIP switches. See Section 2-4 for DIP #1 setting instruction.)

3-2-2 Functions and Radio Buttons

- Press DISC or CD/AUX button on radio to access iPod.
- Press preset button #5 button on radio to access Playlists, Direct Mode and RCA AUX as follow:

At....	Radio Plays	Remark
Disc 1	Playlist # 1	
Disc 2	Playlist # 2	
Disc 3	Playlist # 3	
Disc 4	Playlist # 4	IF DIP #1= OFF
	All Songs	IF DIP #1= ON
Disc 5	All Songs	IF DIP #1= OFF
	Direct Mode	IF DIP #1= ON
Disc 6	Direct Mode	IF DIP #1= OFF
	RCA AUX	IF DIP #1= ON

- Track up and down from steering wheel controls is supported.

3-2-3 iPod Connecting and Playing

- When iPod is connected to interface adaptor and CD button is pressed, iPod will automatically begin at DISC # 5 (if DIP #1 = ON) or DISC #6 (if DIP #1 = OFF). And, the iPod will continue to play the track in **the** Folder which was played prior to the iPod being connected to the PA15-GM. When the last track of **the** Folder is played, iPod will go to the first track of the All Songs folder.
- If iPod has more than 5 Playlists, see section 6 of this manual for the instruction for Playlist Naming.

Section 4. Navigation Radio's Mode Setting and Function Control

4-1 DIP switches Setting

4-1-A If the radio screen or graphic is the same as **Example A** below, set the DIPs as follows:

DIP # 2	DIP # 3	DIP # 4
OFF	OFF	OFF

4-1-B If the radio screen or graphic is the same as **Example B** below, set the DIPs as follows:

DIP # 2	DIP # 3	DIP # 4
ON	OFF	OFF

(Note: DIP switch #1 is only related to RCA AUX setting and it is independent of switches #2, #3 and #4. See Section 2-4 for DIP #1 setting instruction.)

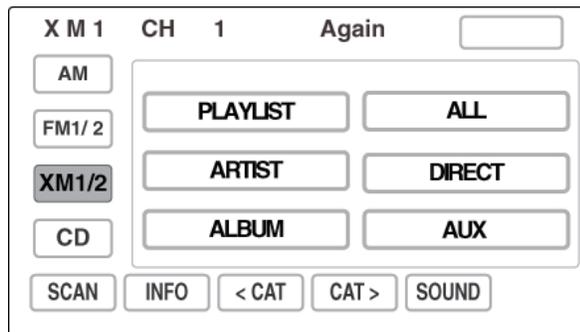
4-2 Program *Function* and *Text* to the Preset Buttons on Touch Screen

PA15-GM allows you to program a “control function” and its name to the preset buttons on navigatino touch screen. Examples are shown belows:

Example A



Example B



In the above examples, the preset buttons are programmed to the function of accessing Playlist folder, Artist folder, All Songs folder, Album folder, AUX INPUT and DIRECT Mode respectively.

4-3 Procedure of Programming Preset Buttons' Function and Text

Step 1- Complete PA15-GM wire connection steps described in Section 4 of this manual.

Step 2- **Disconnect iPod from PA15-GM!!!!**

- Step 3- Press XM button to find XM1 on radio.
- Step 4- **If your radio's touch screen is the same as in the Example A above, go to Step 5 of this section.**
If your radio's touch screen is the same as in the Example B above, go to Step 11 of this section first.
- Step 5- Long press SEEK button until the letter PLAYLIST is shown on the text line where CH (*channel number*) is displayed. *Note: before the SEEK button is long pressed, letter " iPod " is shown on this text line.*
- Step 6- Touch-and-hold anyone of the 6 preset buttons until letter PLAYLIST appears on the preset button.
- Step 7- Short press the SEEK button and next function will appear on the text line where CH is displayed. *Note: PA15-GM may provide more than 6 function and you can use only 6 of it due to radio has 6 preset button only.*
- Step 8- Touch-and-hold anyone of the not-yet-programmed preset buttons until the name of the function appears on the preset button.
- Step 9- Repeat Step 7 and Step 8 to **complete** the programming of all 6 preset buttons.
- Step 10- Ending this programming mode by either connect iPod to PA15-GM or long press the SCAN button (for Example A type radio) or touch the SCAN button (for Example B type radio).
- Step 11- Press the SCAN button and the letter PLAYLIST will show on the top of the screen.
- Step 12- Go to Step 6, 7, 8, 9 and 10 to complete the preset buttons programming.

Important!!!!

- (1) After the preset buttons are programmed, the text label on each buttons could be altered or modified with random or unwanted text when a preset buttons is press-and-hold **longer than 2 seconds**. Re-do above steps to **rename** preset button's text label when iPod is disconnected from PA15-GM.
- (2) When the text on preset button is altered as a result of being long pressed, the **FUNCTION** which had been programmed or assigned to the button would not be altered.

4-4 Functions and Radio Buttons

- Touch XM button on radio to access iPod at XM1
- Touch XM button on radio to access XM channels at XM2.
- Use radio Preset buttons to access iPod Folders, Direct Mode and RCA AUX.
- Press the SEEK button to change track.
- A long-press-n-hold the SEEK+ or SEEK- will fast reverse or fast forward the track about 40 seconds respectibely.

- Touch the SELECT or CAT < > buttons to select a sub-folder. (Example: change to next or previous Playlist while playing the Playlist Folder; change to next or previous Artist while playing the Artist Folder.)
- Touch INFO button to display Text Information of the playing track. (This is only applicable to Example B type radios.)
- Track change from steering wheel control is supported.

4-5 iPod Connecting and Playing

- When iPod is connected to PA15-GM and radio is at XM1 BAND, iPod plays the track in **the** Folder which was played prior to the iPod being connected to the PA15-GM. When the playing of the last track of **the** Folder is complete, the iPod will go to the first track of the All Songs folder.

Section 5. CABLE CONNECTION

Step 1- Decide which MODE to use and set DIP switches according to instructions in Section 3 or Section 4 of this manual.

Step 2- Must remove or eject all CDs out from radio.

Step 3- Remove radio out from dash or locate the XM receiver in your car. (See APPENDIX of this manual for the location of XM receiver in your car.)

Note: *Between the CAS-GM24 and CAS-GM2x cable, only one if it is required for installation. Use CAS-GM24 and connect it to radio if the car does not have factory installed XM receiver. Use CAS-GM2x and connect it to XM receiver if the car has a factory installed XM receiver. Use CAS-GM24 cable if radio does not have BAND button.*

Step 4a- To connect the **USA·SPEC** CAS-GM24 cable with radio: (see Fig. 1)

- (3) Plug the 12-pin male connector on **USA·SPEC** CAS-GM24 cable to radio. If a factory cable has the same identical 12-pin male connector already connected to radio, unplug the factory cable from radio and connect it to the 12-pin female connector on **USA·SPEC** CAS-GM24 cable first.

4b-

Unplug the factory 16-pin male connector from XM receiver and connect it to the 16-pin female connector on **USA·SPEC** CAS-GM2x cable. Connect the 16-pin male connector on **USA·SPEC** CAS-GM2x cable to XM receiver.

Step 5- Connect **USA·SPEC** CAS-GM2ext5 to CAS-GM24 or CAS-GM2x (depends on which cable is used at Step 4).

Step 6- Plug the 18-pin male connector on CAS-GM2ext5 to PA15-GM adaptor where is labeled RADIO.

Step 7- Connect the 2nd audio source to the RCA jacks on adaptor if AUX option is selected by DIP switch #1 = ON.

Step 10- Plug CB-PA105 cable to adaptor where is labeled iPod.

Step 11- Reinstall radio back to dash only after a successful test is completed.

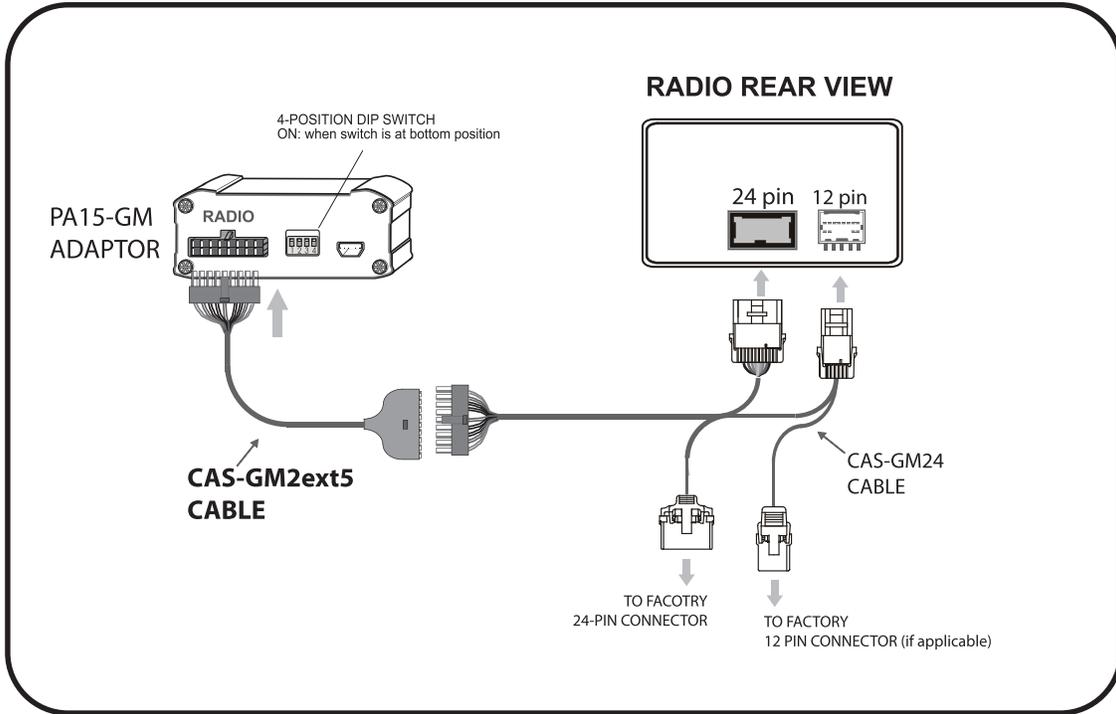


Fig. 1

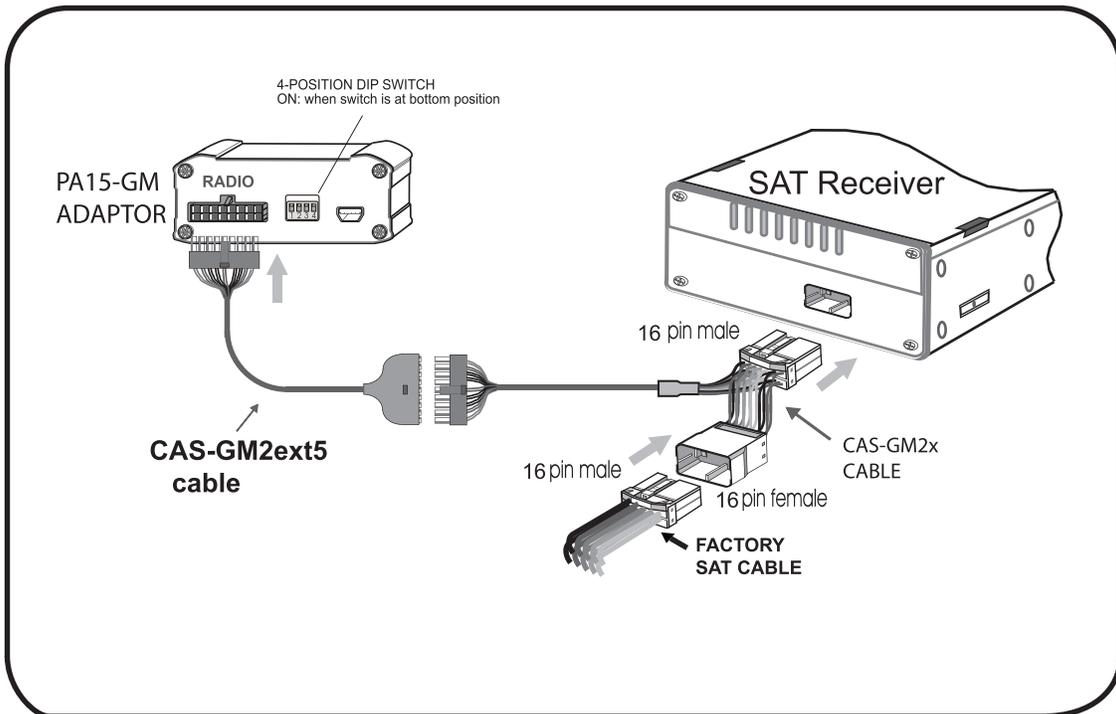


Fig. 2

Section 6. Playlist Naming

This Section ONLY relevant if using PLAYLIST MODE (or CD changer control mode).

If you are using FOLDER MODE (radio is BAND/XM ready), this section does NOT apply.

6-1 When the iPod is connected to your radio via PA15-GM, the adaptor scans all available Playlists and Folders on iPod and will automatically assign the first 4 Playlists in alphabetical order. They must be Playlists you created in iTunes. The Apple generated Playlists like “On The Go”, “90’s”, etc do not apply. If you want to pick the 5 Playlists you want to have access to, you will either need to arrange them to be in the top 5 OR you can name them as shown below:

Playlist #1: GM1

Playlist #2: GM2

Playlist #3: GM3

Playlist #4: GM4

The word GM must be in capital letters and there can be no spaces between the word GM and numbers.

You may append text to the designated GM Playlist names. Example: GM1-jazz, GM3_Favorite3, GM4 podcast, etc.

6-2 If less than 4 designated GM Playlists are created, PA15-GM will automatically fill up the rest of Playlist numbers beginning with the first available Playlist on iPod. Example: if only 3 designated GM1, GM3 and GM5 Playlists are created, the Playlist # will be:

Playlist #1: GM1....

Playlist #2: (the 1st available Playlist on iPod)

Playlist #3: GM3....

Playlist #4: (the 2nd available Playlist on iPod)

APPENDIX

XM Receiver location for most GM Vehicles

Make	Model	XM Receiver location
Buick	Rainer	Above Pass-side dash panel
	LaCross	Behind Rear-Left quarter panel in trunk
Cadillac	CTS	Under the rear deck
	SRX	Behind Rear-Right quarter panel
Chevy	Impala	Behind Rear-Left quarter panel in trunk
	Monte Carlo	Behind Rear-Left quarter panel in trunk
	Corvette Coupe	Rear-Left quart panel behind carpet
	Corvette Conv.	Between the seats inside the hatch cover
	Avalanche	Behind Glove-Box
	Equinox	Behind Rear-Left quarter panel
	Colorado	Above Pass-side dash panel
	Tahoe	Behind Glove-Box
	Suburban	Behind Glove-Box
	Silverado	Behind Glove-Box
	Trail Blazer	Above Pass-side dash panel
	Venture/Uplander	N/A
GMC	Canyon	Above Pass-side dash panel
	Envoy	Above Pass-side dash panel
	Sierra	Behind Glove-Box
	Yukon/Denali	Behind Glove-Box
Pontiac	Grand Prix	Behind Rear-Left quarter panel in trunk

PA15-GM design is subject to change without notice.
 XM is a registered trade name of XM Satellite Radio Inc.
 iPod, iTunes are the registered trade name of Apple Computer Inc.
 GM is registered trade mark of General Motor Corporation.