Dear Customers,

The **Playlist Mode** of USA SPEC iPod interfaces has been replaced by **Hybrid Mod.** **Hybrid Mode** combines the advantages of both **Playlist Mode** and **Direct Mode;** therefore USA SPEC iPod interface delivers a new level of convenience to use your iPod in car.

SAFETY NOTE: ALWAYS give full attention to driving. Do not operate iPod in such a way that will distract you while you are driving.

- In Hybrid Mode, the songs on iPod are accessed exactly in the same way as in the Playlist Mode been explained in the owner's manual. But, **iPod screen is NOT locked** to "ok to disconnect" and **iPod control keys are also fully functional.** Therefore, while playing your iPod at any DISC location of radio, you can manually change song, change artist, change album, fast forward, fast reverse, etc. through the keys on iPod.

- If the playback of a Playlist is manually "interrupted" through iPod's key pad and a song or music in a "new category" is played, the interface module memorizes the last played track number of the "new category". "New category" means folders, or Playlsit, or artist, etc. which is different from the Playlist being played. When you return to the same DISC on radio later, the interface module will use the "memorized" track number (note: just the track number, not the last played song in the new category) to playback the Playlist related to this DISC.

- Hybrid Mode is selected by setting the DIP switch #2 on interface module to ON position.

- When iPod is connected to interface module, the iPod will take approximately 30 seconds to complete its external control mode configuration. During this period of time, the iPod screen's display will continue change until the configuration is completed.

- The number of Playlist being supported and all other functions, including the naming of Playlsits for Hybrid Mode are the same as in Playlist Mode.

- In Hybrid Mode, you can fast forward and fast reverse the music with the fast forward and fast reverse buttons on your radio.

- For those USA SPEC iPod interface products which support TEXT display on radio, the TEXT display feature is continue supported.

- _G3 iPod is not compatible with Hybrid Mode. G3 iPods will be in Playlist mode when DIP switch #2 is at ON position._

- The operation of **Direct Mode** remains unchanged.

USA·SPEC

USA·SPEC
iPod INTERFACE

OWNER'S MANUAL

TECH. SUPPORT
(626)890-6410
9 AM ~ 4 PM PST

Thank you for purchasing **USA·SPEC** product. This manual describes the functions and operation of PA11-GM45 iPod interface for GM cars. Please read this manual before installing the product to your vehicle.

Section 1. ABOUT YOUR INTERFACE PA11-GM45

This interface connects an iPod directly to your GM audio system. Its on-board software translates commands from your GM CD changer controls into commands that the iPod understands. This interface enables the iPod to take the place of a GM CD changer and provides the following benefits:

- Directs the iPod's audio output to GM vehicle audio system for optimal sound quality playback.
- Controls the iPod via vehicle's radio and steering wheel controls.
- Charges the iPod's internal battery, and charging stops automatically at one hour after iPod is paused.

Compatibility
This PA11-GM45 interface is compatible with iPod (G3 and G4) and iPod mini models featuring a dock connector. The functionality and features of the iPod interface described in this owner's manual are confirmed with firmware version 1.3 for iPod mini, firmware version 2.3 and 3.0.2 for iPod and firmware version 1.1 for iPod photo.

Future firmware updates for your iPod or iPod mini may affect the features and functions described in this owner's manual.

Display of artist and song title information, track search by artist, song title, album or genre are NOT supported. Only the Playlist number and track number are displayed on radio.

This interface is designed as an alternative replacement to the GM 6 disc CD changer unit in your GM vehicle. Therefore it is not possible to have the slave GM 6 disc CD changer and PA11-GM45 iPod interface simultaneously connected to your GM radio.
The CD changer which is built-in the GM radio is not affected.

Package Contents
PA11-GM45 contains one each of PA11-GM45 interface adopter CAS-GCOS, CAS-F12, and CB-PA14 cables.

Applications
PA11-GM45 is applicable to the following GM vehicles:
Note: Radio must have AUX or SOURCE button.

Chevrolet	Camaro	00-02
	Impala	97-99
	Monte Carlo	97-99
	Malibu	
	Astro / Cargo Van	97-01
	Avalanche	2002
	Blazer	97-01
Chevy Trucks	S-10	97-01
	Silverado	97-02
	Tahoe/ Suburban	97-02
	Venture	97-99

	Jimmy	00-01
	Sonoma	00-01
GMC	Safari	97-01
	Cargo Van	97-01
	Sierra	97-02
	Yukon/ Denali	97-02
Oldsmobile	Bravada	97-99
	Silhouette	97-99
	Bonneville	97-99
	Firebird	97-02
Pontiac	Grand Prix	97-02
	Grand Am	97-00
	Montana	98-99
	Catera	97-01
Cadillac	Seville / Deville	97-01
	Escalade	99-02

Note: The cable required for Cadillac is not included in this package. Contact **USA&SPEC** or your dealer for purchase information.

Section 2. PLAYLIST MODE, DIRECT MODE AND AUX OPTION

PA11-GM45 provides two ways to control your iPod through car radio, namely **Playlist Mode** and **Direct Mode**.

2-1 Direct Mode: Search and select music on iPod directly just as you would in portable use. The sound of music will play back through your car stereo. Use the track up down, fast forward and reverse buttons on your radio to control music playback. All control functions on iPod are available to use too. Please see section 4 of this manual for additional information

2-2 Playlist Mode: Operate and control the iPod like it is a CD changer. This mode allows you to access up to five Playlists on the iPod . This is also referenced as External Control Mode of the iPod . Display of artist and song title on radio are not supported by PA11-GM45. The detail instruction of Playlist creation and playback controls are in sections 5 of this manual.

DIP switch #2 is for mode selection use. "ON" position is for **Playlist mode** and "OFF" position is for **direct mode**. It is preset to **Playlist mode** at factory.

Note: Disconnect iPod from PA11-GM45 before switching DIP switch #2 for mode change.

2-3 Additional AUX INPUT Option Selection
PA11-GM45 interface adaptor is capable of connecting two audio sources to your GM radio including the iPod . The additional audio source connects to the RCA input jack labeled as AUX INPTUT. If you choose to use AUX INPUT, the DIP switch #1 at the side of adaptor box must be set to "OFF" position (factory presets it at "ON" position).

The audio source at AUX INPUT can be accessed at CD 6 Track 1 after selecting CD changer SOURCE on the radio. CD 2 to CD 5 are for accessing Playlists and CD 1 is for accessing all songs on iPod .

Operation of AUX
If the "AUX INPUT" option is selected, radio will display "CD 6 Track 1" when **AUX** button is pressed. "CD 6 Track 1" gives access to the audio source connected to AUX INPUT port.
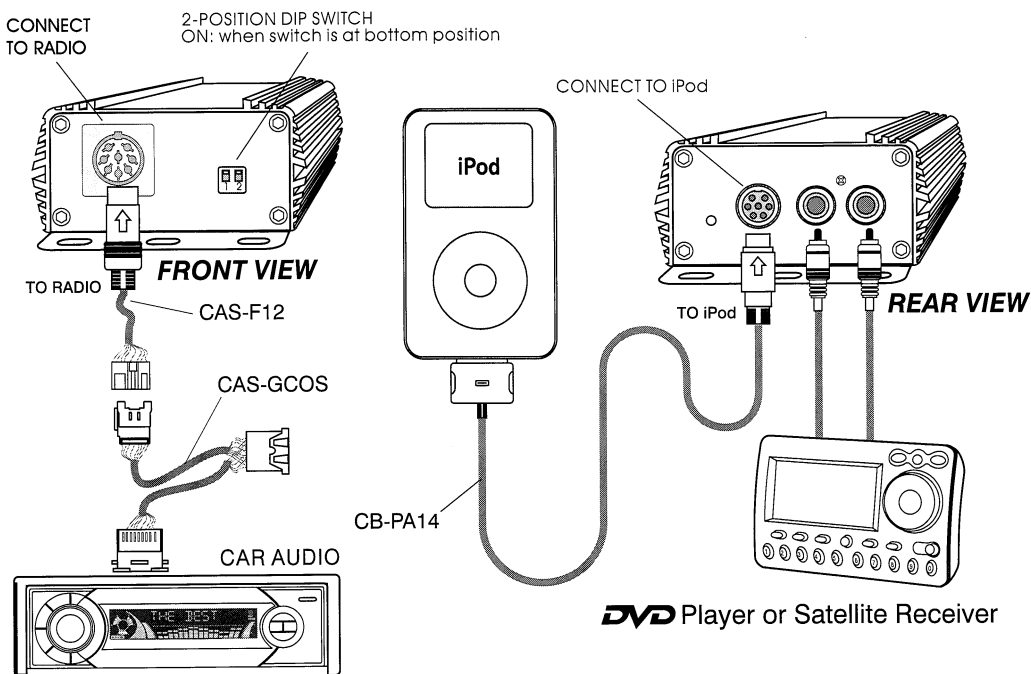
Adjust VOLUME, BASS, TREBLE and etc. as you would normally do for the other program sources on the radio.

Section 3. INSTALLATION

Step 1- Remove the radio from dash.
Step 2- Disconnect existing CD changer from the radio if there is one.
Step 3- Unplug the 9 pin connector from the radio and plug to white connection of
  USA&SPEC CAS-GCOS, Plug the black 9 pin connection of CAS-GCOS cable to the
  back of radio and connect the other end to CAS-F12 cable.
Step 4- Plug the round din plug on the CAS-F12 to PA11-GM45 interface box where
  labeled "RADIO" (ONLY connect your iPod to PA11-GM45 adapter after this
  installation step is completed.)
Step 5- If AUX is required, set the DIP switch #1 to "OFF" position and connect the audio
  output of your auxiliary devices to AUX input jack on PA11-GM45.
Step 6- Set the DIP switch #2 to "OFF" only if **Direct Mode** is preferred.
Step 7- Plug CB-PA14 cable to PA11-GM45 adapter box where labeled " iPod ".
Step 8- Reinstall the radio to the dash.

WARNING!!
Use only the iPod connection cable which comes with PA11-GM45 interface adaptor.
iPod connection cables from other sources may look similar, but they may damage
your iPod .

CONNECT TO RADIO

2-POSITION DIP SWITCH
ON: when switch is at bottom position

CONNECT TO iPod

iPod

FRONT VIEW
TO RADIO
CAS-F12

CAS-GCOS

TO iPod   **REAR VIEW**

CB-PA14
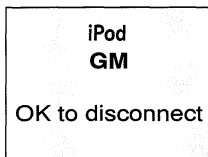
CAR AUDIO

DVD Player or Satellite Receiver

Section 4. CONNECTING & PLAYING OF iPod IN DIRECT MODE

When the iPod is connected to the adaptor, iPod's screen will go blank for few seconds
before the normal screen returns. Set SOURCE to CD changer on your radio, the audio
of iPod music will be played back at DISC 1 and Track 1. Adjust VOLUME, BASS, TREBLE
and etc. as you would normally do for the other program sources on the radio.

5-1 Connecting iPod to the interface

Turn your GM radio ON before connecting your iPod. After connection, the iPod will take a few moments to change to external control mode. On the screen of iPod will then show

```
iPod
GM

OK to disconnect
```
and you are now able to select iPod mode.

5-2 Select iPod mode on GM radio

Press the **AUX or SOURCE** button on radio repeatedly until "CD 1-x" appears on the radio display (x is the track number of "Now Playing" song on iPod). This display confirms that iPod mode has been completely synchronized and activated. Synchronization timing varies according to the number of Playlists on your iPod.

If iPod was playing previously before radio or ACC power was OFF, and the iPod was not disconnected, playback resumes from where it was stopped.

5-3 Disconnecting iPod from the interface

If your iPod is disconnected during playback in iPod mode, the radio will automatically switch to AM/FM mode.

After disconnecting, iPod screen changes from the external control mode screen back to the normal menu. Press and hold the Play/Pause button on iPod may get the normal menu back faster.

5-4 Playback of songs on iPod

All audio tracks on your iPod will be played at disc 1. Track order is determined by the default order on your iPod. Selecting disc 2 to disc 6 on radio will allow playback of 5 Playlists on iPod if adapter's AUX option is not selected.
Every time when iPod is connected to the interface adapter, the playback starts from "Now Playing" song at disc 1 by default.
If iPod was playing any of its Playlist right before the connection, the same Playlist will continue to play and repeated at disc 1 and iPod will switch to "All" as soon as fast forward button (►►) is pressed.

5-5 Selecting a Playlist

Press "PROG" or "5" (DISC UP) button to select a Playlist. The selected Playlist will begin playing and the Playlist number and track number will be displayed. In rare cases, this may take up to few seconds for the completion of synchronization.

After playing the last song in the current Playlist, playback will start again from the first track of this Playlist.

Playlist naming

● When iPod is connected to your radio via PA11-GM45 interface adapter, the adapter scans all available Playlists on iPod and look for designated "GM" Playlists which are created for direct access with the DISC controls on GM radio. The designated "GM' Playlists are related to DISC number in the following manner:

DISC 1: ALL SONGS on iPod
DISC 2: "GM2..."
DISC 3: "GM3..."
DISC 4: "GM4..."
DISC 5: "GM5..."
DISC 6: "GM6..."

The naming of designated "GM" Playlists in iTune for PA11-GM45 interface must be exactly as shown. "GM" must be in capital letters and there can be no spaces between "GM" text and number.

However, you may add any text after the correct naming of a Playlist. (i.e. "GM1-Jazz", "GM3_Favorite3" are acceptable Playlist names for PA11-GM45 iPod interface.)

- If no designated "GM" Playlists are created, PA11-GM45 adapter will automatically relate the first five Playlists on iPod to DISC number 2 to 6 regardless Playlist naming.

- If less than five designated "GM" Playlists are created, PA11-GM45 adapter automatically fills up the rest of DISC numbers beginning with the first available Playlist on iPod. Example: if only three designated "GM2", "GM4" and "GM6" Playlists are created, the disc number on radio will be:

DISC 2: "GM2..."
DISC 3: (1st available Playlsit on iPod)
DISC 4: "GM4..."
DISC 5: (2nd available Playlist on iPod)
DISC 6: "GM6..."

The iPod interface does not recognize a Playlists that contains no audio tracks regardless of Playlist naming. The iPod interface also does not recognize the "On-The-Go" Playlist on your iPod .

5-6 Playback function controls

You can control playback with several functions. These functions are generally cancelled when you press select radio buttons; disconnect the iPod , or POWER OFF the radio or ACC.

SCAN

Press the scan button, each track in the current Playlist play for 10 seconds. If SCAN is pressed at DISC 1, it will play all songs in iPod for 10 seconds each.

Random (Shuffle)

Press the "RDM" random button, songs and Playlist will playback in random order. Some radio models use the "P scan" button to activate random mode.

Repeat

Repeat of a song being played is not supported.

Track Up/Down

Press the "NEXT" button to advance to the next track in the Playlist. Press the "PREV" button to go to the beginning of the track that is being played. Press the track down button twice to go to the previous track.

If the track up or track down buttons is pressed quickly in repetition, the track numbers displayed may change unevenly. You may also hear short bits of audio during repeated presses of track up and track down buttons.

If your GM radio currently displays a maximum of two digits for track number. Track number 100 will be displayed as 01, track 101as 02, track 102 as 03...

Fast Track Search (x10)

Press the "FWD" (fast forward) or "REV" (fast reverse buttons) will advance or retreat through the tracks in the Playlist in increments of 10 (i.e. 04, 14, 24...). When the end of the Playlists reached, the search will stop at track 1, and then continue by increments of 10 (i.e. 19, 29, 1, 11...).

Press and hold the fast forward or fast reverse buttons for more than 4 seconds; the search will jump to the last track or the first track of the Playlist.

If you are in scan mode, the mode will be cancelled.

Fast Forward/Fast Reverse Play

This function applies only in random mode. Since engaging or disengaging the random mode does not stop playback of the current song, you can change into or out of random mode to do the fast track search (x10) function, or the fast forward/fast backward play function.

Press and hold the forward or backward button will cause only the current tack to skip through at speed.

During fast forward, when the end of the current track is reached, the iPod will start playing the next random track at normal speed. During fast backward, when the start of the current track is reached, the track will start playing again at normal speed. To continue fast forward or fast reverse play, release the button and press it again.

Changing source to AM/FM, CD, Cassette

When a source other then the iPod is selected on radio, the iPod will pause.

Section 6. CAUTION

- In general, iPod has not been designed to withstand temperature extremes in automobiles. Please consult your iPod Owner's Manual regarding acceptable operation and storage temperatures.
- Do not disassemble or alter the cable and interface box.
- Make the connections correctly.
- Do not cut away the wire sheath or use the power for other equipments.
- Do not install in locations which might hinder vehicle operation or create hazards for vehicle occupants.
- Having the wiring and installation done by professionals.
- Arrange wiring so it is not crimped or pinched.
- Do not use this product for purposes other than stated for the vehicle

Note: iPod, iPod mini, iPod photo and iTune are registered trade marks of Apple Computer, Inc.
XM is a trade mark of XM Satellite Radio Inc.
GM is a registered trade mark of General Motos Corporation.
Design and specifications are subject to change without notice.

USA•SPEC

Model PA11-GM45
iPod to GM car stereo Interface

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

KEY FEATURES

This interface connects an iPod or iPod mini directly to your Volvo audio system with following benefits :
- Connect directly iPod 's audio output to Volvo vehicle audio system for optimal sound quality playback.
- In Playlist mode-Select songs and Playlists on iPod with CD changer button on radio
- In Direct mode-Search and select songs directly on iPod .
- Maintain current Playlist when switching from portable to in-car use.
- Charge the iPod battery while playing, charging automatically ends at one hour after iPod is paused to prevent car battery drain.
- Plus-DVD player, Satellite radio or other audio device can be used in conjunction with the iPod through Aux Audio Input jack.
- Plug-n-Play : This complete package includes installation cables, mounting screws and user's manual.

COMPATIBILITY

This PA11-GM45 interface is compatible with
- iPod mini firmware version 1.3
- iPod firmware version 2.3 and 3.0.2
- iPod photo firmware version 1.1

Display of artist and song title information, track search by artist, song title, album or genre are NOT supported. Only the Playlist and track numbers are displayed.

APPLICATIONS

PA11-GM45 is applicable to the following GM vehicles:
Note: Radio must have AUX or SOURCE button.

Chevrolet	Camaro	00-02
	Impala	97-99
	Monte Carlo	97-99
	Malibu	
Chevy Trucks	Astro / Cargo Van	97-01
	Avalanche	2002
	Blazer	97-01
	S-10	97-01
	Silverado	97-02
	Tahoe/ Suburban	97-02
	Venture	97-99

GMC	Jimmy	00-01
	Sonoma	00-01
	Safari	97-01
	Cargo Van	97-01
	Sierra	97-02
	Yukon/ Denali	97-02
Oldsmobile	Bravada	97-99
	Silhouette	97-99
Pontiac	Bonneville	97-99
	Firebird	97-02
	Grand Prix	97-02
	Grand Am	97-00
	Montana	98-99
Cadillac	Catera	97-01
	Seville / Deville	97-01
	Escalade	99-02

Note: The cable required for Cadillac is not included in this package.
Contact USA•SPEC or your dealer for purchase information.

Each USA•SPEC iPod interface model is vehicle specific. USA•SPEC Makes iPod interface for BMW, Honda, Chrysler, GM, Ford, VW, Toyota, Volvo and many more!
Check applications on package or with salesperson to determine the correct vehicle fit.
Or go to www.usaspec.com for vehicle specific application information.

XM is a trade mark of XM Satellite Radio Inc.
GM is a registered trade mark of General Motors Corporation.

LTI Enterprises, Inc.
167 Mason Way, Unit A2
City of Industry, CA91746

MADE IN KOREA

LIMITED WARRANTY REGISTRATION CARD

Model No.:

Serial No.:

Name —————————————————————————

Address ————————————————————————

City ————————————————— State ——————— Zip —————————

Date of Purchase ——————————————————————

Dealer Name/Address ————————————————————

Vehicle Make: ————————————— Yr —————————— Model ———————————

LIMITED WARRANTY

Thank you for choosing a **USA SPEC** product. LTI Enterprises Inc., is committed to providing high quality defect free products. All **USA SPEC** products are tested before leaving the factory and are warranted against defects in materials and workmanship for a period of three year to the original owner. The three-year warranty period begins at the date of manufacture or the date of original installation.
Please see installation registration below.

PRODUCTS COVERED:
Products and related accessories supplied by LTI Enterprises Inc. with the brand name of **USA SPEC** are covered by this warranty. Only products purchased in the U.S.A. is covered.

WARRANTY DOES NOT COVER:
1. Damage due to improper installation, operation, accident, negligence, abuse, or not following instructions, warnings, and acceptable industry procedures.
2. Damage caused during the shipment or transportation of the product. All claims of this nature must be presented to the carrier.
3. Damage caused by acts of God, War, or civil disturbance, including without limitation, flood, fire, storms, earthquake or other acts of nature.
4. Any expenses or cost to remove or reinstall products.
5. Any product without the original serial number and factory seal, or has been serviced or modified without the authorization of LTI enterprises Inc.
6. Any product not distributed by an authorized LTI Enterprises Inc. dealer.
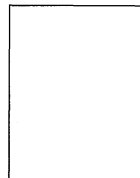
INSTALLATION REGISTRATION:
To provide warranty coverage from the date of installation the limited warranty registration card with this information must be completed and returned to LTI Enterprises Inc. within thirty(30) days of the installation.

TO OBTAIN WARRANTY SERVICE:
Contact the Customer Service center printed on the back of this warranty for assistance. A detailed description of the problem(s) is required for service. Proof of purchase is also required when sending a product for warrant service. If the problem cannot be resolved and the product must be returned for service you will receive an authorization from the service center. The product must be delivered pre-paid to the service center. LTI Enterprises Inc. will, at our option, repair the product or replace it with new or reconditioned product, and if it was shipped to the service center, the return shipping will be pre-paid free of charge provided the repairs are covered by the warranty. The product must be packed securely for shipment to the service center in order to preserve the warranty and prevent damage.

NO IMPLIED WARRANTY, INCLUDING MERCHANTABILITY AND FITNESS FOR USE, APPLIES TO THIS PRODUCT AFTER THE THREE YEAR PERIOD AS DEFINED ABOVE, AND NO OTHER EXPRESSED WARRANTY OR GUARANTEE, EXCEPT AS MENTIONED ABOVE, GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THIS PRODUCT SHALL BIND THE WARRANTOR. NEITHER THE WARRANTOR NOR ANY OTHER PERSON, FIRM OR CORPORATION, IS RESPONSIBLE FOR LOSSES OR INCONVENIENCES, OR FOR ANY CONSEQUENTIAL DAMAGES CAUSED BY THE PRODUCT. SOME STATES/PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, AND SOME DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTIAL OR CONSEQUENTIAL DAMAGES.

This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state and province to province. Some of the limitations or exclusions may not apply to you.

LTI Enterprises Inc.
167 Mason Way, Unit A2
City of Industry, CA 91746
Phone (626)336-3836
Fax (626)336-0115

5009695

Play your **iPod** through your car stereo system

MENU

PLUG in your **iPod** and directly access your Playlist with the CD changer buttons on your car radio.

It also **CHARGES** your **iPod**!

CAR AUDIO

USASPEC iPod INTERFACE

Aux audio input for DVD player or Satellite Receiver

iPod, iPod mini are registered trade marks of Apple Computer, Inc.