

USA·SPEC

PA20-TOY

iPod to Toyota / Lexus car stereo Interface
with song title display

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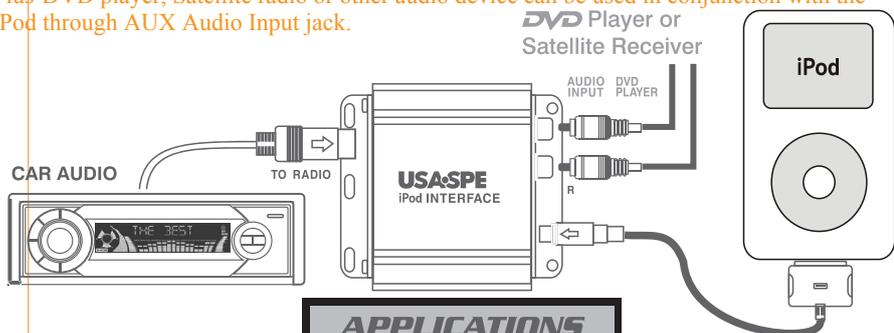
iPod to Toyota / Lexus car stereo Interface
with song title display

PLAY, CONTROL & CHARGE

Your iPod through Toyota Car Stereo System!

KEY FEATRES

- This interface connects an iPod or iPod mini directly to your Toyota audio system with following benefits:**
- Connect directly iPod's audio output to Toyota vehicle audio system for optimal sound quality playback.
 - Display artist name and song title on radios equipped with TEXT button. (*This features is supported in Playlist Mode and Hybrid Mode.*)
 - **Hybrid Mode:** Playlist and songs on iPod can be accessed either by using radio's CD change button, as well as by using iPod's klik wheel.
 - **Playlist Mode:** Select songs and Playlists on iPod with CD changer button on radio.
 - **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.



APPLICATIONS

PA20-TOY is applicable to following Toyota models:

4Runner	98-08	Land Cruiser	98-08	Sequoia, Taundra	98-08
Avalon	98-08	Matrix	05-08	Sienna	98-08
Camry	98-08	MR2, Celica	98-08	Solara	98-08
Corolla, Echo	98-08	MR2, Celica	04-08	Tacoma	98-08
F j Cruiser	2008	RAV4	98-08	Tundra	2008
Highlander	01-08	Scion	all models	Yaris	2008

PA20-TOY is applicable to following Lexus models:

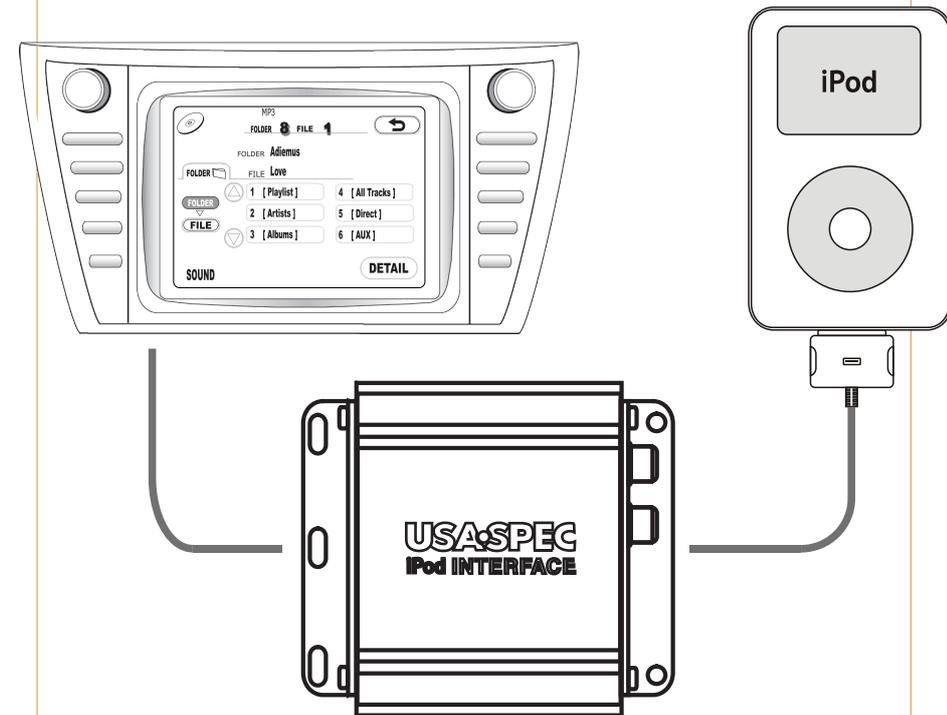
ES 300/330/350		ES 300/330/350	
02-03(requires CAS-LEX cable)		01-05(requires CAS-LEX cable)	
04-08		06-08	
GS 300/350/430/450		ES 300/330/350	
01-05(requires CAS-LEX cable)		01-03(NAV only(requires CAS-LEX cable)	
06-07		04-08	
GX 470	03-08	LX 470	04-08

For application to **earlier than 2005 Lexus vehicles**, a cable adaptor is required. Please contact **USA·SPEC @ 626-3363836** for detail.

iPod is a registered trade mark of Apple Computer Inc.
XM is a registered trade mark of XM Satellite Radio Inc.

Toyota and Lexus are registered trade mark of Toyota Motor Corporation.

LTI Enterprises, Inc. 167 Mason Way, Unit A2. City of Industry, CA91746
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OWNER'S MANUAL

TECH. SUPPORT
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Thank you for purchasing USA_SPEC product. This manual describes the functions and operation of PA20-TOY iPod interface for Toyota and Lexus cars. Please read this manual before installing the product in your vehicle.

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!!IMPORTANT!!

- ❖ It is strongly recommended that the unit is installed in an accessible location. You may need to access it for future upgrades, resets, dip switch settings, etc.
- ❖ **Eject ALL CDs from the built-in CDP player or CD changer before installation or disconnecting the power to the radio!!!**
- ❖ **USA_SPEC** distributes its products through authorized dealers so customers will receive proper services and information from the dealers. **USA_SPEC** reserves the right to offer technical support or warranty services only on products purchased through authorized **USA_SPEC** accounts.
- ❖ **SAFETY NOTE:** You should always give full attention to driving. Do not operate the features and functions of PA20-TOY in such a way that might distract you while you are driving.

!!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 equipment.
- Do not install in locations which may hinder vehicle operation or create hazards for vehicle occupants.
- Have 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.

SECTION 1. ABOUT YOUR INTERFACE PA20-TOY

This interface connects an iPod (includes iTouch and iPhone) directly to your Lexus and Toyota car audio system. Its on-board software translates commands from the CD changer or SAT controls into commands that the iPod understands. PA20-TOY provides the following benefits:

- Directs the iPod's audio output to Lexus/Toyota vehicles' audio system for optimal sound quality playback.
- Allows iPod to co-exist with Lexus/Toyota navigation system, CD changer, Satellite radio receiver, and DVD system.
- Controls the iPod via vehicle's radio and steering wheel controls.
- Charges iPod while it is playing. Charging stops automatically half hour after iPod is paused.

Compatibility

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

Package Contents

PA20-TOY contains one PA20-TOY interface adaptor and one each of the following cables: CAS-TYi, CAS-TA, and CB-PA105.

Text Display of Song information

Artist name and song title can be displayed on radios equipped with a “TEXT” button or a “TITLE” touch-key on navigation screen. Text display is supported in Playlist Mode only.

1. When using it with a MP3/WMA compatible navigation radio:

PA20-TOY will display **Album, Artist, Playlist, and All Songs** menu list on **Toyota and Lexus** navigation screen and therefore will allow song title based search with on-screen touch buttons. This feature is not available on Toyota navigation screen if the vehicle has a factory installed rear seat entertainment DVD system (RSE).

2. When using it with a non-MP3/WMA compatible navigation radio:

PA20-TOY will display song title and artist name on radios equipped with a “TITLE” touch-key on the navigation screen.

3. When using it with a radio with built-in CD changer or CD player:

PA20-TOY will display song title and artist name on radios equipped with a “TEXT” button.

Note: Song text information display is supported in Playlist Mode only regardless of the radio type.

SECTION 2. DIRECT MODE, PLAYLIST MODE, and AUX OPTION

PA20-TOY provides two ways to control and access your iPod through the car radio, namely ***Direct Mode and Playlist Mode.***

2-1 Direct Mode: Search and select music on iPod just as you would in portable use.

The music will play back through your car stereo. Use the track up/down, fast forward/reverse buttons on your radio to control music playback. DISC #8 is dedicated to Direct Mode. Use your iPod in Direct Mode by selecting DISC #8 with the disc up/down button on the radio (except MP3 navigation radio, see section 5-1 for MP3 navigation radio).

2-2 Playlist Mode: Operate and control the iPod like it is a CD changer. This mode allows you to access six playlists on iPod from the radio. iPod screen always display “OK to disconnect” or “Attached to accessory” and iPod’s keypad is not functional or locked. The instructions for Playlist naming and playback controls are in Section 5 of this manual.

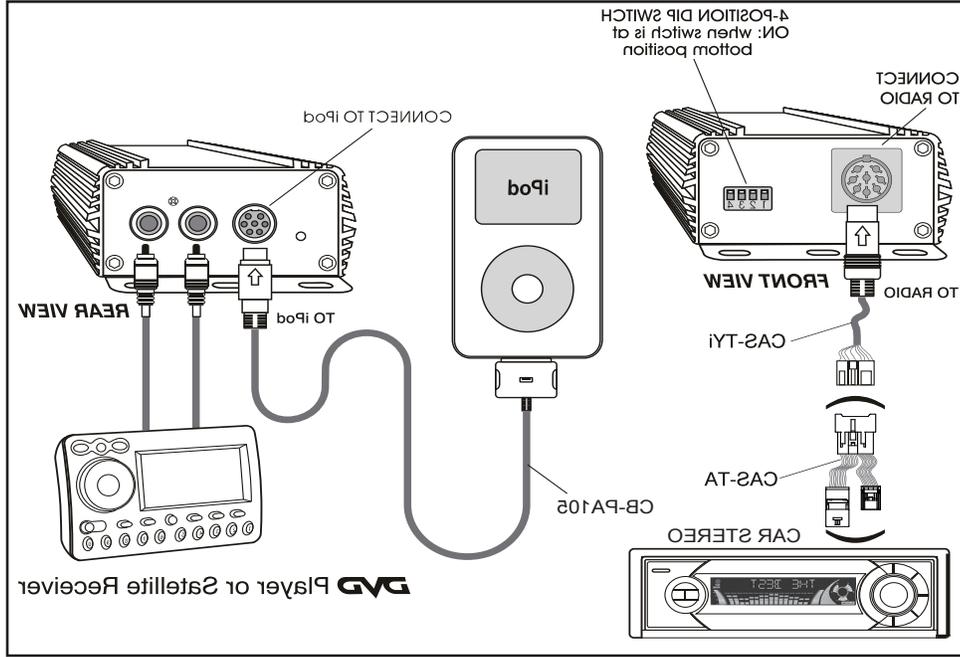
2-3 RCA AUX INPUT

In addition to the iPod, PA20-TOY can connect a second audio source to the radio. Connect the second audio source to the RCA jack labeled **AUX INPUT**. AUX input is enabled by setting the DIP switch #1 (on the side of the interface adaptor) to ON position. When radio is in CD mode, AUX input is accessed at CD9-1 (except for MP3 navigation radio, see section 5 - 1 for MP3 navigation radio).

SECTION 3. CABLE CONNECTION

- Step 1- Remove or eject ALL CDs from the in-dash CD player/changer.
- Step 2- Remove radio from the dash.
- Step 3- Plug the round din plug of the CAS-TYi to PA20-TOY interface adapter box where it is labeled "RADIO".
- Step 4- Plug the other end of CAS-TYi cable to the receptor at the back of the radio.
(for some of the more recent year models, plug the CAS-TA to the back of radio and connect the CAS-TYi to the other end of the CAS-TA.)
- Step 5-a- Connect the audio output of your auxiliary devices to AUX input jack on the PA20-TOY adapter box if the additional AUX option is selected by setting the DIP switch #1 to "ON" position.
- Step 6-b- Set the DIP switch #2, #3 and #4 according to the table in Section 4.
- Step 7- Plug the CB-PA105 cable to the PA20-TOY adaptor box where it is labeled "iPod".
- Step 8- Perform a test run before installing the radio back into the dash.

WARNING!!
 Use only the iPod connection cable which comes with PA20-TOY interface adaptor.
 iPod Connection cables from other sources may look similar, but they may damage your iPod.



SECTION 4. APPLICATION & DIP SWITCH SETTINGS

Part 1-for RCA AUX Input.....

DIP # 1	
ON	RCA AUX input ENABLED
OFF	RCA AUX input DISABLED

Note: DIP #1 is only related to RCA AUX setting and is independent of the other 3 switches.

Part 2- for radio recognition...

Make	Model	Year	Type of Radio	DIP Switch			Radio Button to	Note	
				#2	#3	#4			
T O Y O T A	4 Runner	98 - 08	NON NAV	ON	ON	ON	DISC	(1)	
		98 - 05	NAV	ON	ON	ON	DISC	(1)	
		06 - 09	NAV	OFF	OFF	ON	DISC		
	Avalon	98 - 04	ALL RADIOS	ON	ON	ON	DISC	(1) (2)	
			NON NAV w/ TAPE	ON	OFF	OFF	SAT or AM	(4)	
			NON NAV w/o TAPE	OFF	OFF	OFF	SAT or AM	(4)	
	Camry	05 - 10	NAV	ON	ON	OFF	SAT or AM	(4)	
			98 - 10	NON NAV	ON	ON	ON	DISC	(1)
			07 - 10	NAV	OFF	OFF	ON	DISC	
	Celica / MR2	98 - 04	ALL RADIOS	ON	ON	ON	DISC	(1)	
	Corolla / Echo	98 - 10	NON NAV	ON	ON	ON	DISC	(1)	
		09 - 10	NAV	ON	OFF	ON	DISC		
	FJ Cruiser	07 - 10	ALL RADIOS	ON	ON	ON	DISC		
	Highlander	01 - 10	NON NAV	ON	ON	ON	DISC	(1)	
			NAV w/BUILT-IN CDC	ON	ON	ON	DISC	(1)	
			08 - 10	NAV	OFF	OFF	ON	DISC	
	NAV w/ REAR DVD	OFF		ON	ON	DISC			
	Land Cruiser	02 - 09	NON NAV	ON	ON	ON	DISC	(1) (5)	
			03 - 04	NAV	ON	OFF	ON	DISC	(5)
			05 - 07	NAV	ON	ON	ON	DISC	
			08 - 09	NAV	OFF	OFF	ON	DISC	
	Matrix	05 - 10	ALL RADIOS	ON	ON	ON	DISC		
	Prius	04 - 06	w/ BUILT-IN MP3	OFF	ON	ON	DISC		
		04 - 06	w/o BUILT-IN MP3	ON	ON	ON	DISC	(1)	
		07 - 10	ALL RADIOS	OFF	ON	ON	DISC		
	Sequoia	05 - 06	ALL RADIOS	ON	ON	ON	DISC		
			07 - 10	NON NAV (NON DELPHI RADIO)	ON	ON	ON	DISC	
			07 - 10	DELPHI RADIO	ON	ON	OFF	SAT or AM	(4)
				NAV	OFF	OFF	ON	DISC	
	Sienna	06 - 10	NAV w/ REAR DVD	OFF	ON	ON	DISC		
			98 - 05	ALL RADIOS	ON	ON	ON	DISC	(1) (3)
			2005	NAV	ON	ON	ON	DISC	(1)
NAV			OFF	OFF	ON	DISC			
Solara	07 - 09	NAV w/ REAR DVD	OFF	ON	ON	DISC			
		98 - 09	ALL RADIOS (NON DELPHI RADIOS)	ON	ON	ON	DISC	(1)	
Tacoma	07 - 09	DELPHI RADIO	ON	ON	OFF	SAT or AM	(4)		
		98 - 10	ALL RADIOS	ON	ON	ON	DISC	(1)	
Tundra	98 - 06	ALL RADIOS	ON	ON	ON	DISC	(1)		
		07 - 10	ALL RADIOS (NON DELPHI RADIOS)	ON	ON	ON	DISC		
			DELPHI RADIO	ON	ON	OFF	SAT or AM	(4)	
			NAV	OFF	OFF	ON	DISC		
Yaris	07 - 09	NAV w/ REAR DVD	OFF	ON	ON	DISC			
		ALL RADIOS	ON	ON	ON	DISC			
Venza	09 - 10	NAV	OFF	OFF	ON	DISC			
Scion	xA, xB	04 - 09	ALL RADIOS	ON	ON	ON	DISC		
	tC	05 - 09	ALL RADIOS	ON	ON	ON	DISC		

** 2010 vehicles equipped with USB connectors are not compatible.

Make	Model	Year	Type of Radio	DIP Switch			Radio button to use	NOTE
				#2	#3	#4		
L E X U S	ES 300/330/350	02 - 03	NAV	ON	OFF	ON	DISC	(6)
		04 - 06	ALL RADIOS	ON	ON	ON	DISC	(1)
		07 - 09	NON NAV	ON	ON	ON	DISC	(1)
	NAV		OFF	ON	ON	DISC		
	GS 300/350/430/450H	05 - 06	ALL RADIOS	ON	ON	ON	DISC	(1) (6)
		07 - 09	ALL RADIOS	OFF	ON	ON	DISC	
	GX 470	04 - 06	NON NAV	ON	ON	ON	DISC	(1)
			NAV	ON	OFF	ON	DISC	
		07 - 09	NON NAV	ON	ON	ON	DISC	(1)
			NAV	OFF	ON	ON	DISC	
	IS 250/300/350	01 - 05	ALL RADIOS	ON	ON	ON	DISC	(1) (6)
		06 - 09	NON NAV	ON	ON	ON	DISC	(1)
			NAV	OFF	ON	ON	DISC	
	LS 430	01 - 06	ALL RADIOS	ON	OFF	ON	DISC	
	LS 460	07 - 09	NON NAV	ON	ON	ON	DISC	(1)
			NAV	OFF	ON	ON	DISC	
	LX 470	01	NAV	ON	OFF	ON	DISC	(6)
		02 - 08	ALL RADIOS	ON	OFF	ON	DISC	(6)
	LX 570	2009	ALL RADIOS	OFF	ON	ON	DISC	
	RX 300/330/350/400H	00 - 03	ALL RADIOS W/ EXT CDC	ON	OFF	ON	DISC	(7)
00 - 03		NON NAV W/O CDC	ON	OFF	ON	DISC	(8)	
04 - 06		ALL RADIOS	ON	ON	ON	DISC	(1)	
07 - 09		NON NAV	ON	ON	ON	DISC	(1)	
	NAV	OFF	ON	ON	DISC			

Note: (1) If PA20-TOY conflicts with CD changer or can not be recognized by radio, turn ACC (ignition) power ON and OFF 6 times within 15 seconds to complete the re-configuration of PA20-TOY.

Note: (2) In 2001 models, the built-in CDC may not be functional while iPod is connected to the PA20-TOY.

Note: (3) 98-02 Sienna requires adaptor cable CAS-TLC to retain steering wheel control. 98-05 with RSE: Connect PA20-Toy at ECU. ECU is located behind the rear quarter panel on the passenger side.

Note: (4) Adaptor cable CAS-SAT is required if the vehicle has factory SAT receiver.

Note: (5) 01-03 Land Cruiser requires cable adaptor CAS-TLC for installation.

Note: (6) 01-03 vehicles require adaptor cable CAS-LEX.

Note: (7) Requires adaptor cable CAS-TLC. Ext CDC must be disconnected to connect the CAS-TLC.

Note: (8) Requires adaptor cable CAS-LEX. Non-Nav radio without CDC is not compatible.

** CAS-LEX, CAS-TLC, CAS-SAT cables must be purchased seperately.

To purchase please call USA SPEC @ 626 336 3836.

* **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 applications. These factors include variables such as, anomalies within a factory radio, factory radio heretofore unknown to **USA·SPEC** and partial model year changes.

SECTION 5. CONNECTING & PLAYING of iPod

After iPod is connected to PA20-TOY, iPod will take a few moment to get into external control mode. During the initialization, iPod screen will change continuously for approximately 25 seconds

5-1 When using it with a MP3/WMA compatible navigation radio

5-1-1 Synchronization with radio

Press the AUDIO and DISC button on the radio and wait until either Fig. (1) screen or Fig. (3) screen is shown on the touch screen to indicate the completion of synchronization. Press the “**FOLDER LIST**” touch button to go to fig (2) screen. Note: in Toyota vehicles that have rear seat DVD, only Fig (1) screen is available.

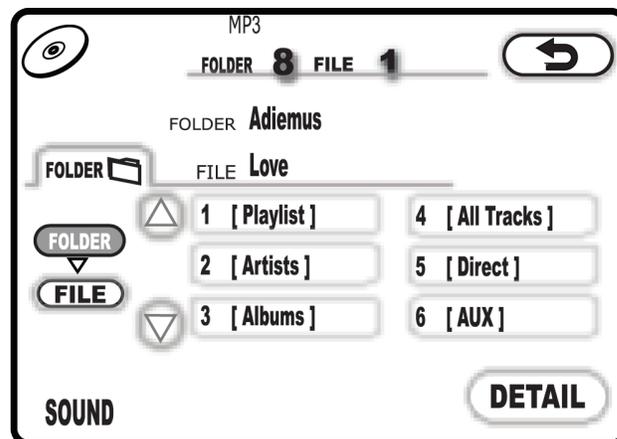


Fig (1) screen

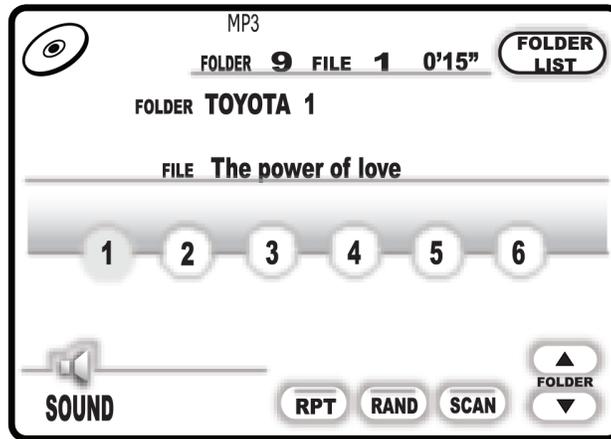


Fig (2) screen

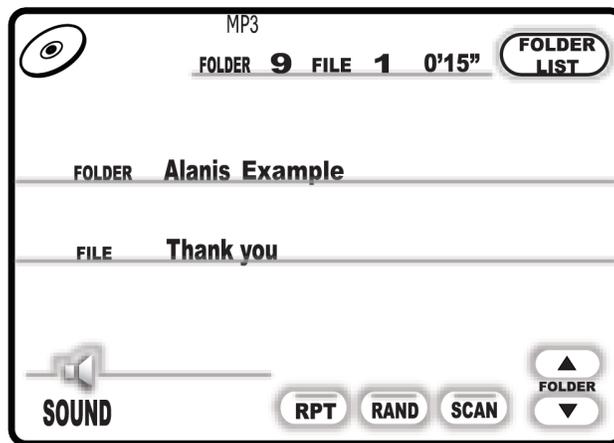


Fig (3) screen

In Fig (1) screen, function of the touch buttons are assigned as follow:

Touch Button	Function	
DISC 1	browse Playlists folders on iPod	
DISC 2	browse Artist folders on iPod	
DISC 3	browse Album folders on iPod	
DISC 4	browse All Song folders on iPod	
DISC 5	browse and search songs from iPod directly	
DISC 6	browse Genres folders on iPod if DIP switch #1 is OFF or access RCA jack AUX input if DIP switch #1 in ON	
FOLDER LIST	display folder list and select the desired folder	See note below
△ FOLDER	go to next folder	
▽	go to previous folder	

On Fig (2) screen, function of the touch buttons are as follow:

Touch Buttons	browse Playlists folders on iPod	
[Playlist]	browse Playlists folders on iPod	
[Artists]	browse Artist folders on iPod	
[Albums]	browse Album folders on iPod	
[All Song]	browse All Song folders on iPod	
[iPod Direct]	browse and search song from iPod directly	
[AUX]	access RCA jack AUX input	
FOLDER	display folder list and select the desired folder	See note below
FILE	display file (song) list and select the desired song	
DETAIL	display the details of "Playlist Song"	See note below
▽	list the next 6 folders or file	
△	list the previous 6 folders or file	

Note: Radio may only allow this function when vehicle is not moving.

5-1-2 Playback of songs on iPod

If iPod was playing a Playlist right before the connection with PA20-TOY, the same Playlist will continue to play at DISC 4 on screen Fig (1) after iPod is synchronized to the PA20-TOY. iPod will switch to "All Songs" after the last track in this Playlist is played.

If iPod was playing before the radio or ACC power was turned off and the iPod was not disconnected from the PA20-TOY, playback will resume from where it was stopped when the radio or ACC power is turned back on again.

5-2 When using it with a non-MP3/WMA compatible navigation radio or a non-navigation radio

5-2-1 Selecting iPod mode from the radio

Press the DISC button on radio repeatedly until "CD7-X" appears on the radio display (X is the track number of the "Now Playing" song on iPod). This display confirms that iPod and radio are synchronized. Synchronization time varies depending on the number of songs in your iPod

5-2-2 Playback of songs on iPod

Disc 7 is to playback “All Songs” and DISC 1 to DISC 6 is to playback six Playlists on iPod . If iPod was playing a Playlist right before the connection with PA20-TOY, the same Playlist will continue to play at DISC 7 and iPod will switch to “All Songs” after the last track in that Playlist is played.

If iPod was playing before the radio or ACC power was turned off and the iPod was not disconnected from the PA20-TOY, playback will resume from where it was stopped when the radio or ACC power is turned back on again.

5-2-3 Selecting a Playlist

Press DISC UP (Λ) or DISC DOWN (∇) button to select a Playlist. The Playlist number and track number will be displayed. Song title and artist name will be displayed too if the radio supports text display.

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

Playlist Naming (not required for MP3 navigation radio)

- When iPod is connected to your radio via PA20-TOY interface adapter, the adapter scans all available Playlists on iPod and will automatically assign the first 6 Playlist in alphabetical order. They must be Playlists you created in iTunes. The default Apple generated Playlists like “On the Go”, “90’s”, etc do not apply. If you want to pick the 6 Playlists you want to have access to, you will have to name them as shown below:

DISC 1: TOYOTA1...
DISC 2: TOYOTA2...
DISC 3: TOYOTA3...
DISC 4: TOYOTA4...
DISC 5: TOYOTA5...
DISC 6: TOYOTA6...
DISC 7: ALL SONGS on iPod

The word TOYOTA must be in capital letters and there can not be any spaces between the word TOYOTA and numbers.

You may append any text to the designated TOYOTA Playlist names: For example: TOYOTA1-Jazz, TOYOTA3_Favorite3, TOYOTA4podcast, etc.

If less than 6 designated TOYOTA Playlists are created, PA20-TOY will automatically fill the rest of the Disc numbers with the first available Playlists on iPod.

For example: if only three designated Playlists (TOYOTA1, TOYOTA3, and TOYOTA5) are created, the Playlist to DISC # assignment will be as followed.

DISC 1: TOYOTA1...

DISC 2: (1st available Playlist on iPod)

DISC 3: TOYOTA3...

DISC 4: (2nd available Playlist on iPod)

DISC 5: TOYOTA5...

DISC 6: (3rd available Playlist on iPod)

SECTION 6. Playback Function Controls

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

SCAN

Press the scan button, each track in the current Playlist plays for 10 seconds. If SCAN is pressed at DISC 7, it will play all songs in iPod for 10 seconds each.

Random (Shuffle)

Press the "RDM" random button, songs and Playlists 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 Toyota radio currently displays a maximum of two digits for track number. Track number 100 will be displayed as 01, track 101 as 02, track 102 as 03...

Fast Track search (X10)

Presses the fast forward or fast reverse button (◀◀ , ▶▶), it will advance or retreat through the tracks in the Playlist in increments of 10 (i, e, 04, 14, 24.....). When the end of the Playlist is reached, the search will stop at track 1, and the continue by increments of 10 (i, e, 19, 29, 1, 11.....)

When PA20-TOY is configured to SAT port. press on Fast Forward button starts the 10 track jump and requires a second on the FF button to stop the track jump, To stop the fast retreat, a second press on Fast Rewind button is required.

Changing source to AM/FM, CD, Cassette

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

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