TEST MODE

● **How to enter the test mode**

Press and hold the [1] and [3] keys and reset.
(While "– – – –" is being displayed, power can be ON for 30 minutes.)

● **How to clear the test mode**

Reset, momentary power down, Acc OFF, Power OFF, detach the panel.

● **Test mode default condition**

- Source is STANDBY.
- Display lights are all turned on.
- The volume is at 30 (-10dB).
- LOUD is OFF.
- CRSC is off regardless of the availability of switching function.
- SYSTEM Q is NATURAL (=FLAT).
- BEEP should always function when the key is pressed briefly.
- AUX is ON (Internal AUX supporting model).

● **Specication of the test mode for tuner sourse**

The frequency of 98.3MHz is received when the [4] key is pressed in the TUNER FM mode

● **Specification of FST soft mute adjustment mode**

1. Receive the TUNER FM mode in the VOLUME 30 and LOUD OFF condition.
2. Press and hold the [▶II] key for 2 seconds to enter the FST soft mute adjustment mode.
3. In the adjustment mode, the following display is shown. Adjust the mute between 0 (18dBu) and F (36dBu) with the [FM] / [AM] keys.
   (Display) SMD–x_ _ _ (Adjustment value, 0~F is displayed in "x").
4. When the adjustment is "OK", press and hold the [▶II] key for 2 seconds again to write the adjustment value in the E2PROM, and after the successful writing-in the "EP_WRITE" is displayed.
5. Press the [▶II] key briefly to exit from the FST soft mute adjustment mode.
   (The test mode continues.)

● **RDS automatic measurement**

Add the process to replace the visual inspection of PS display previously done in the production line.
When it is confirmed that the PS data has been received and that the content of the PS is "RDS_TEST", force to OFF the P-CON terminal. (The symbol, "_" indicates the blank.)
→ Make this as the process dedicated for the test mode.
   P-CON is recovered by Power OFF→ON.

● **Special display in tuner mode**

Error is found in front-end, etc. if indications below are displayed while in tuner mode.
- "TNE2P_NG" : E2PROM (in front-end: A500 of X34-) values are still default (not determined)
- "TNCON_NG" : Cannot communicate with the front-end.

● **K3I forced switching**

Every time when [6] key is pressed in tuner FM mode, switched in the following order: AUTO→Forced WIDE →Forced MIDDLE→Forced NARROW→AUTO. Default status is AUTO, and displayed as shown below.
- AUTO: FM1_98.1A
- Forced WIDE: FM1_98.1W
- Forced MIDDLE: FM1_98.1M
- Forced NARROW: FM1_98.1N

● **CD source test mode specification**

- Display mode default setting shall be P-TIME.
- Jumps to the following tracks by pressing the [▶▶I] key.
  No.9→No.15→No.10→No.11→No.12→No.13→No.22→ No.14→No.9 (recursive)
  Note that when playing a CD-DA disc and MP3 / WMA / AAC / WAV discs with 8 files or less, the disc is played from the 1 track in the normal order.
- Pressing the [I◀◀] key goes back by 1 track from the track being played.
- When playing an MP3 / WMA / AAC/WAV disc, display the file format before starting to play each file.
  ("MP3", "WMA", "AAC", "WAV")
- While in CD source, press the [1] key briefly to jump to No.28.
- While in CD source, press the [2] key briefly to jump to No.14.
- While in CD source, press the [3] key briefly to display CD mechanism model name and the version.
  Press the [3] key briefly again to return to the normal display. (Time code display)

```
6 C 2 0 : 0 1 2 3
```
Model name   Version

- While in CD source, press the [6] key briefly to jump to No.15. At this time, the volume value is set to 25 (2V PRE), 27 (4V PRE).

TEST MODE

● **AUDIO adjust mode**

- Press the [AUD] key and enter the audio adjustment mode.
- Press the remote control [∗] key and [AUD] key to enter the audio adjustment mode.
- Both AUDIO FUNCTION MODE and SETUP MODE adjustment items are included.
- By pressing [AUD] and [FM] key briefly, switch the item to be adjusted in the following order. (Only in forward rotation)
  The default item shall be Fader, and then the item is forwarded in the following order: Balance → Bass Level → Middle Level → Treble Level → HPF Front → HPF Rear → LPF Sub Woofer. (thereafter arbitrary)
- Continuous forwarding by remote control is prohibited.
- Fader is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 3 steps: R15 ↔ 0 ↔ F15. (Default value: 0)
- Balance is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 3 steps: L15 ↔ 0 ↔ R15. (Default value: 0)
- Sub Woofer Level is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 3 steps: -15 ↔ 0 ↔ +15. (Default value: 0)
- Bass/Middle/Treble Level are adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 3 steps: -8 ↔ 0 ↔ +8. (Default value: 0)
- HPF Front / Rear is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 2 steps: Through ↔ 180Hz. (Default value: Through)
- LPF Sub Woofer is adjusted by the VOL knob and [I◀◀] / [▶▶I]] keys in 2 steps: 60Hz ↔ Through. (Default value: Through)
- Sub Woofer Phase is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 2 steps: Reverse ↔ Normal. (Default value: Normal)
- Volume Offset (other than the internal AUX) is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 2 steps: -8 ↔ 0. (Default value: 0)
- Volume Offset (the internal AUX) is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 3 steps: -8 ↔ 0 ↔ +8. (Default value: 0)
- Loudness ON/OFF is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 2 steps: OFF ↔ ON. (Default value: OFF)
- Dual Zone ON/OFF is adjusted by the VOL knob and [I◀◀] / [▶▶I] keys in 2 steps: OFF ↔ ON. (Default value: OFF)
- Bass f / Bass Q / Bass EXT / Middle f / Middle Q / Treble f are not displayed in the audio adjustment menu.
- SYSTEM Q (dB EQ) curve selection is not displayed in the audio adjustment menu.

● **MENU**

- Press [MENU] key briefly to enter the MENU.
- Press the remote control [DNPP/SBF] key and the [DIRECT] key to enter the MENU.
- Continuous forwarding by remote control is prohibited.
- Only in the test mode, make the USB source MENU show the F/W Version check item and make the F/W Version be shown as the initial items in the test mode.

● **Dual Zone (Dual Zone specification supporting model)**

- If the [AUTO] or [TI] keys is pressed briefly while in a source other than STANDBY, Dual Zone is switched between ON / OFF.

● **Backup current measurement**

If reset while in Acc OFF (Back Up ON) condition, MUTE terminal goes off 2 seconds later, rather than 15 seconds. (During this time, the CD mechanism does not function.)

● **Special displays while all lights are on**

When all lights are on with STANDBY source, if the following keys are pressed, the following messages are displayed.

[1] key	Key pressed briefly: Version is displayed (forwarding) (Display) TYPE : xx _ _ _ → 632K–1.02 → All lights are on → ("xx" is displayed in hexadecimals.) ["Development name" – "version"] ∗ TYPE indicates μ-com destination, and shows real-time condition of the destination terminal.
[2] key	Key pressed briefly: Serial No. is displayed (8 digits) (Display) xxxxxxxx
[3] key	Key pressed briefly: Power ON time is displayed. Press and hold: To clear Power ON time (Press and hold for 2 seconds while the Power ON time is displayed.) (Display) PON_0Hxx (00~50 is displayed for "xx". When less than 1 hour, display by increment of 10 minutes.) xxxxx (00001~10922 is displayed for "xxxxx") MAX 10922 (hours)
[4] key	Key pressed briefly: CD operation time displayed. Press and hold: To clear CD operation time (Press and hold for 2 seconds while the CD operation time is displayed.) (Display) CDT_0Hxx (00~50 is displayed for "xx". When less than 1 hour, display by increment of 10 minutes.) xxxxx (00001~10922 is displayed for "xxxxx") MAX 10922 (hours)

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[5] key	Key pressed briefly: Number of CD EJECT times is displayed. Press and hold: To clear CD EJECT times (Press and hold for 2 seconds while the CD EJECT time is displayed.) (Display) EJCxxxxx MAX 65535 (times)
[6] key	
[FM] key	Key pressed briefly: ROM correction version is displayed. When E2PROM is not installed: ERR_ When not written in: R − − − − _ _ _ (Display) R1234 _ _ _ When data not matching: R∗∗∗∗_ _ _
[▶▶ɪ] key	Key pressed briefly: AUDIO data initialization (Display) AUD_INIT

[ɪ◀◀]
key
	Key pressed briefly: Forced Power OFF data displayed.
	Press and hold: To clear the forced power OFF information.
	(Press and hold for 2 seconds while the forced power OFF data is displayed.)
	(Display) POFF _ − − − (No Forced Power OFF)
	               SEC (Forced Power OFF because of missing Security Code)
	               PNL (Forced Power OFF because of system μ-com and panel communication error)

[AUD] key	Key pressed briefly: iPod authentication IC installation status display (iPod 2Wire supporting model) (Display) iPOD_OK_ (Installation status OK) NG (Installation status NG)
[▶ɪɪ] key	Key pressed briefly: CD information display mode ON ∗Please refer to the next table.

● **CD information display mode**

[AM] key ↑	I2C communication condition display (Display) I2C_OK_ _ NG
	CD mechanism error log display [switched by [ɪ◀◀] / [▶▶ɪ] keys] (Display) MCERR1: xx ↔ MCERR2: xx ↔ MCERR3: xx ↔ MCERR1: xx ↔ ("− −" or an error code is displayed for "xx".)
	CD loading error log display [switched by [ɪ◀◀] / [▶▶ɪ] keys] (Display) LDERR1: xx ↔ LDERR2: xx ↔ LDERR1: xx ↔ MAX 99 (times) (Number of times is displayed for "xx".)

	CD ejection error log display [switched by [ɪ◀◀] / [▶▶ɪ] keys]
	(Display) EJERR1: xx ↔ EJERR2: xx ↔ EJERR3: xx ↔
	               EJERR4: xx ↔ EJERR1: xx ↔
	                                             MAX 99 (times)
	(Number of times is displayed for "xx".)

↓
 	
[FM]
key
	CD time code error count data display (missing counts)
	                              [switched by [ɪ◀◀] / [▶▶ɪ] keys]
	(Display) CNT_LOSE ↔ CDDA_ _xx ↔ CDROM_xx ↔
	               CNT_LOSE ↔
	                                             MAX 99 (times)
	(Number of times is displayed for "xx".)

	CD time code error count data display (count not updated)
	                              [switched by [ɪ◀◀] / [▶▶ɪ] keys]
	(Display) CNT_STAY ↔ CDDA_ _xx ↔ CDROM_xx ↔
	               CNT_STAY ↔
	                                             MAX 99 (times)
	(Number of times is displayed for "xx".)

[▶ɪɪ] key	Key pressed briefly: CD information display mode OFF Press and hold: To clear entire CD information (Press and hold for 2 seconds)

● **Initializing AUDIO-related setting value**

Press the [▶▶ɪ] key briefly in the STANDBY source and reset the AUDIO setting value to the test mode default value.

● **Fluorescent tube short-checking**

Change the process in the following order by pressing [ATT] key briefly while in STANDBY source.

1. All lights off.
2. Every 125msec, light the odd and even number terminals of the grid with the largest numbers.
3. Lights only odd number terminals.
4. Lights only even number terminals.
5. All lights on.
   ∗ After the step 5 above, return to the step 1 and repeat thereafter.

● **Other**

- When Power ON, do not display "CODE_NG", "CODE_OFF", and "CODE_ON".
- When the source is STANDBY, press [AUTO] or [TI] keys briefly to switch key illumination between GREEN and RED (GREEN ↔ RED). (in the model with ILLUMI switching function)
- When the source is STANDBY, press and hold the [AUTO] or [TI] keys for 1 second to switch the PREOUT between Rear and Sub Woofer (Rear ↔ Sub Woofer). (1PREOUT & 2PREOUT model)
- When started in the test mode, duration of prohibiting LINE MUTE shall be changed from 10 seconds to 1 second.
- When in the test mode, do not write security code by security jig.

TEST MODE

- When in the test mode, serial number is not written with a serial-number-writing jig.
- When in the test mode, when DC offset error detection is run, the detection information is not written into the E2PROM.
- When in the test mode, even if the specified time has passed, back-up memory items are not written into E2PROM.
- DEMO mode shall not be operated while in the test mode, CD Mechanism Information & Service Information & DC Offset Error Detection Information Clear Mode, or DC Offset Error Detection Information Clear Mode.
- Also, do not display DEMO ON/OFF option items in the MENU in STANDBY source in the above modes.

● Clearing CD mechanism information & service information & DC offset error detection information (Clearing E2PROM data)

1. While pressing and holding the [MENU] and [ATT] keys, reset-start to start initializing the CD mechanism information, service information and DC error detection information.
   (While "– – – –" is being displayed, power can be ON for 30 minutes.)
   [CD mechanism information]
   - Displays I2C communication condition
   - Displays CD mechanism error log
   - Displays CD loading error data.
   - Displays CD ejection error data.
   - Displays CD time code error count data (missing count).
   - Displays CD time code error count data (count not updated).
   [Service Information]
   - Displays power ON time is displayed.
   - Displays CD operation time.
   - Displays number of CD EJECT times.
   - Displays number of times panel was opened/closed.
   - Displays forced Power OFF data.
   [DC offset error detection information]
   - DC offset error detection display 1
   - DC offset error detection display 2

2. After the initialization process is completed, the following is displayed.
   When successfully completed: "CD_O_ _ _"
   When finished but unsuccessful: "CD_X_ _ _"

3. This mode is cancelled by resetting. (The last screen will not be retained.)
   (Note) In this mode, the DC offset error detection display, "PROTECT" is not shown.

● Clearing DC offset error detection information (E2PROM data clearing)

1. Press and hold [3] and [6] keys and reset-start to go into the DC offset error display mode.
   (While "– – – –" is being displayed, power can be ON for 30 minutes.)

2. While in STANDBY source, the current overall DC offset error detection condition is displayed.
   When not detected: "DC_ _OK_ _" : None of capacitor leak, improper connection, etc. has been detected.
   When detected: "DC_ _ERR_" : Any one of capacitor leak, improper connection, etc. has been detected.

3. Use the following procedure to check the details of DC offset error detection information.

[1] key	Key pressed briefly: DC offset error detection display 1 (To show such detection as the improper connection and other detection) Key pressed and held for 2 seconds: Clear the information that indicated if there was such an error as improper connection and other error. (Display) DC1_OK_ _ (No error was detected) 　　　　　　ERR_ (Improper connection or other error is detected.)
[2] key	Key pressed briefly: DC offset error detection display 2 (To show the number of capacitor leaks.) Key pressed and held for 2 seconds: Clear the information that indicates the detected number of capacitor leaks. (Display) DC2_0_ _ _ (No error was detected) 　　　　　1　(Leak was detected once.) 　　　　　2　(Leak was detected 2 times.) 　　　　　3　(Leak was detected 3 times.) 　　　　　4　(Leak was detected 4 times or more.)

4. DC offset error display mode is cancelled by resetting. (The last screen will not be retained.)
   (Note) In this mode, the DC offset error detection display "PROTECT" is not shown.

● FM/AM channel space switching (KDC-MP4036U/MP435U/X491 only)

While power is OFF, press and hold [1] and [5] keys, and press [SRC] key to power ON.

● Security

- **How to enter the forced POWER ON mode**
  While "_ _ _ _" is being displayed, while simultaneously pressing [MENU] key and [4] key, press [RESET] button, With this, it is possible to turn the power on for 30 minutes only.

TEST MODE

• **How to register the security code on the "Car Audio Passport" sheet after replacing E2PROM (in the front-end: A500 of X34-) (KDC-MP4036U/ W4537Uxx/W4737Ux only)**

1. Enter the test mode. (Refer to "How to enter the test mode".)

2. In the test mode, press [MENU] key briefly to enter the MENU mode.
   When "CODE_SET" is displayed, press [▶II] key for 1 second or longer to enter the security registration mode.

3. Input the security code, using [FM] / [AM] / [I◀◀] / [▶▶I] keys.
   [FM] key : number up / [AM] key : number down
   [▶▶I] key : cursor to right / [I◀◀] key : cursor to left

4. After inputting the code, press [▶II] key for 3 seconds or longer which causes "RE-ENTER" to be displayed. This is for "confirming" the code. Use the method in the step 3 to re-enter the code.

5. Then, press [▶II] key for 3 seconds or longer, which will display "APPROVED". This completes the security code registration.

6. Release the test mode. (Refer to "How to clear the test mode".)

 * **Note**: All clear cannot be used to clear the security code.

• **How to clear the programmable security code (KDC-MP435U/X491 only)**

1. While "_ _ _ _" is being displayed, press [▶▶I] key for 3 seconds or longer while pressing the [AUTO] or [TI] keys. (This makes the "_ _ _ _" display disappear.)

2. Input "KCAR", using the remote controller.
   Press [5] key of the remote controller 2 times (Input for "K") and press [▶▶I] key.
   Press [2] key of the remote controller 3 times (Input for "C") and press [▶▶I] key.
   Press [2] key of the remote controller once (Input for "A") and press [▶▶I] key.
   Press [7] key of the remote controller 2 times (Input for "R") and press [▶▶I] key.

3. The security is cleared and the unit enters STANDBY source.

4. If wrong codes are input, "_ _ _ _" will be displayed again.

DC OFFSET ERROR

● **Purpose**

Prevent customer's vehicle speakers damages, burnouts, and smoking.

Avoid the connected speakers to be burned out, damaged, or to smoke when DC occurs between the audio power amp. + and - outputs.

● **Processing after detection**

• **System status**

• At the detection of DC error, error data is to be saved immediately (E2PROM error log save area).

• Display the error message on the display. The system shall maintain the current condition, including the operation. Shut down audio system power supply. Set Mute to ON.

• Although switching between Power OFF and ON (ACC, BU, and Key operation) is valid, switching from Off to ON shall be error until the μ-com is reset.

  ∗ While power-on, even if the IC2VI DCErr output terminal logic recovered to normal level value, the error condition shall continue.

• Prohibit to save the backup/installer memory to E2PROM (nonvolatile memory).

• **Controlling μ-com terminal**

• Set Mute for all channels including for pre-out.

• Turn off power IC control system power supply. (Set AMP-Standby function to valid)

• Set P-Con output to OFF (Logic by which external AMP unit is turned off).

  ∗ The purpose is to shut down audio output. Basically, the logic sets the audio output system signal line when in Standby source.
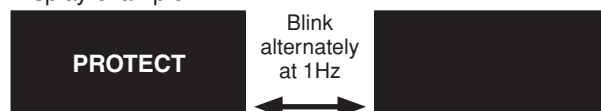
• **Key specification**

• Other keys than eject and power keys are invalid.

• **Display specification**

• Display the "PROTECT" string and blink all characters at 1Hz.

  ∗ Use the indication below with the highest priority (error message), and maintain the error message even when the source is changed.

Display example

● **Cancel Condition**

• Press the Reset terminal on the main body. Or set Backup to OFF (Unplug and plug back in the DC connector). The history is maintained (E2PROM data is saved).

• If DC error is detected during the capacitor leak detection period, the clearing the error by the reset is limited to 4 times. The startup is inhibited for the 5th time and later reset. ("PROTECT" display has to be blinked.)

● **Note while in the test mode**

• While in the test mode, even if DC leak is detected, it is not written into E2PROM. When an error is detected, the display is enabled.

● **Other**

• Function for checking and clearing data in E2PROM by a given key shall be included. (Used at production dpt. and service center, etc.)