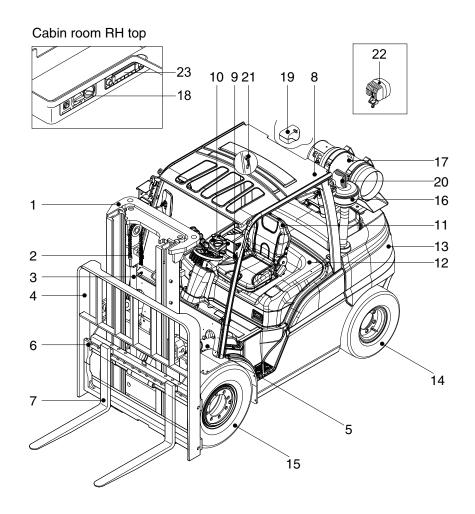
# 3. KNOW YOUR TRUCK

# 1. GENERAL LOCATIONS



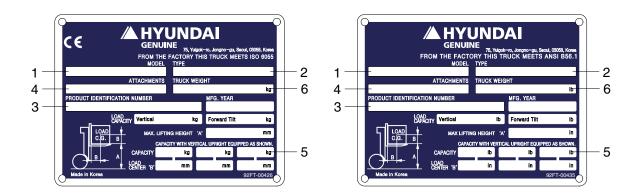
35L93KY01

1	Mast
2	Lift chain
3	Lift cylinder
4	Backrest
5	Tilt cylinder
6	Carriage
7	Forks
8	Overhead guard

9	Turn signal lamp
10	Head lamp
11	Operator's seat
12	Bonnet
13	Counterweight
14	Rear wheel
15	Front wheel
16	Precleaner

17	LPG tank
18	Aircon & heater (opt)
19	Camera (opt)
20	Rear work lamp (opt)
21	Rear handle with horn (opt)
22	Blue spot (opt)
23	Radio & USB player (opt)

## 2. NAME PLATE



## 1) TRUCK MODEL NUMBER OR REGISTERED NAME

#### 2) TRUCK TYPE

The type is indicated a type of the truck such as diesel, LPG or battery.

#### 3) TRUCK SERIAL NUMBER

An identification number assigned to this particular truck and should be used when requesting information or ordering service parts for this truck from your authorized HYUNDAI dealer. The serial number is also stamped on the frame.

## 4) ATTACHMENT DESCRIPTION (IF ANY INSTALLED)

The user must see that the truck is marked to identify the attachment (s), including the weight of the truck/attachment combination and truck capacity with the attachment.

### 5) CAPACITY RATING, LOAD CENTER, AND LIFTING HEIGHT DATA

Shows the maximum load capacity of this truck with relation to load centers and fork heights (See diagram on plate). Personal injury and damage to the truck can occur if these capacities are exceeded.

Do not exceed the maximum capacity specified.

## 6) TRUCK WEIGHT

The approximate weight of the truck without a load on the forks. This weight plus the weight of the load must be considered when operating on elevators, elevated floors, etc. to be sure they are safe.

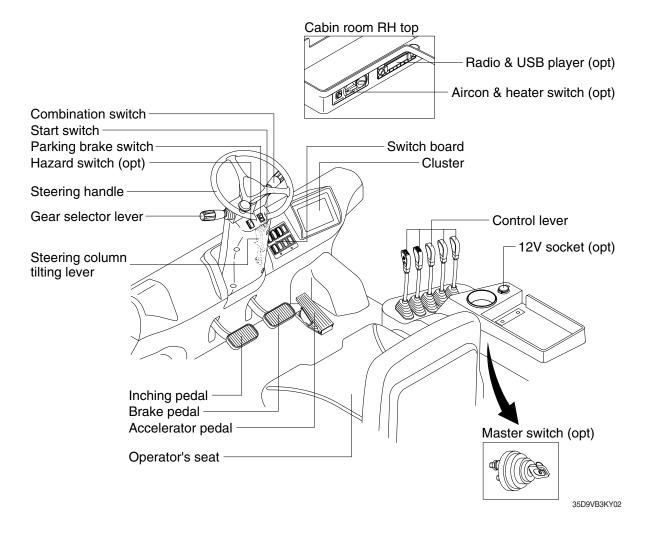
▲ Before modifications that affect the stability of safety systems are made written approval from HYUNDAI. Contact your authorized HYUNDAI dealer for a new nameplate showing the revised capacity.

## 3. CAB DEVICES

1) The ergonomically designed console box and suspension type seat provide the operator with comfort.

### 2) ELECTRONIC MONITOR SYSTEM

- (1) The centralized electronic monitor system allows the status and conditions of the truck to be monitored at a glance.
- (2) It is equipped with a safety warning system for early detection of truck malfunction.



## 4. CLUSTER

## 1) STRUCTURE

- Like following figure, cluster is consisted of LCD and buttons. LCD will indicate the operation and abnormal status of truck to the driver in order to use and maintenance. Also, LCD allows to set and indicate the various modes, monitoring, and gadgets.
- \*\* The cluster installed on this truck does not entirely guarantee the condition of the truck. Daily inspection should be performed according to chapter 7. PLANNED MAINTERNACNE AND LUBRICATION.
- \* When the cluster provides a warning immediately check the problem, and perform the required action.



## 2) GAUGE

### (1) Operation screen

Operating screen will be displayed if turn on the start switch.



- 1 Speed meter
- 2 Fuel gauge

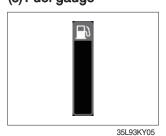
- Coolant temperature gauge 3
- Operating time

## (2) Speed meter

It indicates the speed of truck and is calibrated in kilometer per hour (km/h) or miles per hour

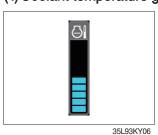
\* Speed unit can be set in the speed unit menu of display set up at page 3-29.

## (3) Fuel gauge



- · Fuel gauge displays the approximate amount of fuel remaining in the fuel tank.
- · It shall be obtained fuel as soon as warning lamp | lights on.
- \* For trucks using LPG fuel, the fuel gauge level is not displayed.

## (4) Coolant temperature gauge



· It indicates the temperature of the engine coolant.

- White zone : 40 ~ 120 °C (104 ~ 248 °F)

- Red zone : Over 120 °C (248 °F)

- Warning lamp on : Over 115 °C (239 °F)

· If the gauge display in the red zone, or warning lamp 🔄 comes on, please stop the engine and inspect the coolant system.

## (5) Clock



· It displays the usage time of the truck.

## 3) WARNING LAMPS



35L93KY08

No.	Warning lamp				Warning lamp
1	Fuel Level warning lamp		8		Transmission oil temperature warning lamp
2		coolant temperature warning lamp			Air cleaner fitler warning lamp
3	***	Engine oil pressure warning lamp	10		DPF regeneration warning lamp (only diesel)
4	<b></b>	Water in fuel warning lamp (only diesel)			DPF inhibit warning lamp (only diesel)
5	Engine check warning lamp		12	The state of the s	DPF high temperature warning lamp (only diesel)
6	Battery charge warning lamp		13	<b>((())</b>	Brake oil level warning lamp
7	COMM ERROR	Communication error warning lamp			

<sup>\*</sup> Warning and indicator lamp will display only items that were set as ON, and all warning and indicator will be displayed in the left or right side of screen. And directional indicator lamp will display at the center.

### (1) Fuel level warning lamp



- · Warning lamp will be displayed if fuel level is low.
- · Please refuel immediately if the lamp is on.

### (2) Coolant temperature warning lamp



- · Coolant temperature warning will lit up when temperature is over 115  $^{\circ}$ C (239  $^{\circ}$ F).
- · If the warning lamp is on continuously, please inspect the coolant system.

### (3) Engine oil pressure warning lamp



- · This warning lamp will be lit up when engine oil pressure is low.
- · Stop the engine immediately if the warning lamp is lit up.
- · Please check the engine oil.

## (4) Engine check warning lamp



- If the lamp ligts ON, check the engine and a failure code of cluster. If you have a proper action, the lamp will turn off within 4 times of restart.
- · Check the failure code of cluster.

### (5) Battery charge warning lamp



- · This warning lamp is lit up when battery charging voltage is low.
- · Please inspect the battery charging circuit if the warning lamp lights up.

### (6) Communication error warning lamp



- This warning lamp will be lit up if the communication between MCU and ECU is fail.
- · Please check the communication line if the warning lamp is lit up.

## (7) Transmission oil temperature warning lamp



- Transmission oil temperature warning lamp will be lit up and flashing when temperature is 120 °C (248 °F) or higher.
- · When this lamp lights up during operation, stop the engine and check the truck.

### (8) Air cleaner filter warning lamp



- When the filter of the air cleaner that purifies the air supplied to the engine is clogged and a vacuum is generated inside, the switch is activated and turned on.
- · If the lamp is on, check the filter and clean or replace it.

## (9) Brake oil level warning lamp



- This warning lamp wil be displayed if brake oil is low of reservoir tank.
- · Please refill immediately if the lamp lights up.

## 4) INDICATOR LAMPS



No.	Indicator lamp				Indicator lamp
1	<b>②</b>	Consumable replacement indicator lamp		OP SS	OPSS indicator lamp
2	<u>@</u>	Engine warming up indicator lamp	6	N	
3	Fuel warmer indicator lamp (only diesel) 7 F1 F2 Driving		Driving indicator lamp		
4	(P)	Parking brake indicator lamp	8	<b>++</b>	

<sup>\*</sup> Warning and indicator lamp will display only items that were set as ON, and all warning and indicator will be displayed in the left or right side of screen. And directional indicator lamp will display at the center.

## (1) Engine warming up indicator lamp



- The truck senses the engine coolant temperature and warms up engine when needed.
- · When it is happening, the indicator lamp is ON.

## (2) Consumable replacement indicator lamp



- · Lights up if consumables which must be replaced are exist.
- The indicator lamp will light up only 3 minutes since start switch ON, and then light OFF.
- · Please check the consumables management list in maintenance menu.

### (4) Parking brake indicator lamp



· Lights up when parking brake is ON.

## (5) OPSS indicator lamp



- · Lights up if driver leave seat during operation.
- · Truck driving and/or mast control will be blocked if lamp is lit up.
- \* Please refer to page 0-11 for details.

## (6) Driving indicator lamp

## ①Neutral



 This indicator lamp will be lit up when direction lever is located in neutral.

## ②Forward



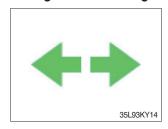
- $\cdot\,$  This indicator lamp is displayed if the forward gear is selected.
- · First gear will be displayed as  $\mathbf{F_1}$ , and second gear will be displayed as  $\mathbf{F_2}$ .

## ③ Reverse



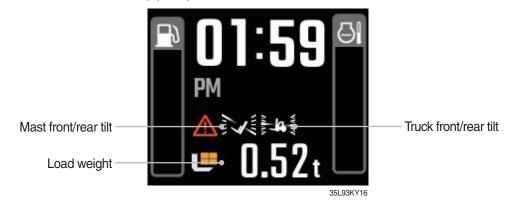
· This indicator lamp is displayed if the reverse gear is selected.

## ④ Right or left turning indicator lamp



· This indicator lamp will flash if turns on the right or left turn signal.

## 5) INFORMATION DISPLAY (option)



## (1) Mast front/rear tilt



· Display the real time tilt of mast.

## (2) Truck front/rear tilt



- · Display the front/rear tilt of truck in real time.
- · The red warning symbol turned on condition.
  - Stop: Tilt angle is higher than 2.3°
  - Driving: Tilt angle is higher than 10.2°

## (3) Load weight



- · Displays the weight of the cargo.
- · If the weight sensor is not attached, it is dimmed

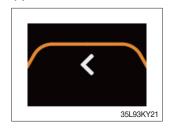
## 6) BUTTONS

## (1) Enter (select)



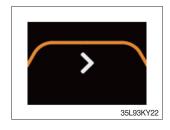
· This switch is used to enter into the menu or to select.

## (2) UP/Left



· This switch is used to move upward or leftward in menu or increase the value.

## (3) Down/Right



· This switch is used to move downward or rightward in menu or decrease the value.

## (4) Menu or Home



· This switch is used to enter into the menu or return to home.

## (5) Cancel (ESC)



· This switch is used to cancel or move to upper menu.

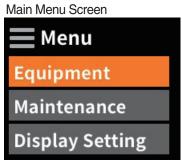
## 7) MAIN MENU

## (1) Structure

A menu consists of main menu and sub-menu.

Operation Screen





Sub-Menu Screen

Equipment

Model Select

Weight Sensor S...

ESL Setting

35L93KY26

35L93KY27

No.	Main menu	Sub menu	Explanation
1	<ul><li>Menu</li><li>Equipment</li><li>Maintenance</li><li>Display Setting</li></ul>	<ul> <li>Model select</li> <li>Tilt setting (option)</li> <li>Weight sensor setting (option)</li> <li>ESL setting</li> <li>DCSR setting</li> <li>HAC setting</li> <li>Vehicle max speed limit</li> <li>Clutch protection alarm</li> <li>Zero start setting</li> <li>Auto shift setting</li> <li>Information</li> </ul>	<ul> <li>Diesel, LPG</li> <li>Vehicle tilt Initialize</li> <li>Enter the cylinder cross section area, Adjust load weight, Weight display setup</li> <li>ESL setting, Engine start limit, Delay time</li> <li>DCSR on, Cut-off driving speed, Restore driving speed</li> <li>Maximum speed limitation</li> <li>Speed setting, Overlap time setting</li> <li>Cluster-Cl information</li> </ul>
2	<ul><li>Menu</li><li>Equipment</li><li>Maintenance</li><li>Display Setting</li></ul>	<ul><li>Failure History</li><li>Maintenance management</li><li>I/O information</li><li>User password change</li></ul>	Engine failure history     Change oil and filter replacement cycle     Analog Input, Digital input/output
3	<ul><li>Menu</li><li>Equipment</li><li>Maintenance</li><li>Display Setting</li></ul>	<ul> <li>Time Setting</li> <li>LCD brightness adjustment</li> <li>LED brightness adjustment</li> <li>Unit Setting</li> <li>Language</li> <li>ESL password change</li> </ul>	· Date, Time setting · Speed, Weight, Temperature, Pressure, Date

## (2) Equipment menu

- ① **Model select** (a required setting)
  - · How to check the Model Select (check under the start switch ON status)
  - · Selection will be canceled if pressed the cancel button.
- \* This is a required setting. Some functions may not be worked properly if you do not select the model.

### 1. Equipment



Enter to equipment menu.

2. Password



Enter the password.

Default password is "00000".

Password length must be 5~10 digits.

3. Model select



Choose model select

4. Disel or LPG



Please select the fuel type.

5. Choise model



Select the your model.

6. Model select



Select the your tire.

## 7. Model select



Change on select button.

8. Completion



\* If you want to move back to previous page, please enter ESC button in any stage.

\* It shall be selected right model to prevent malfunction of truck.

- 2) Tilt setting (option, as required setting)
  - How to check "Tilt reset" (Check under the start switch ON status.)
- The tilt sensor has already been initialized when deliver the truck from factory.
- \* Tilt reset if the tilt sensor figure or truck tilt is not horizontal in the flatland.
- A You must set tilt in the flatland since this is a horizontal set up.

#### 1. Tilt setting



Choose tilt reset.

#### 2. Instruction



Follow the instruction showing in the screen.

#### 3. Completion



Setting has been completed.

#### a. Check functions

- (a) Check the real time operation by changing angles of truck tilt and mast tilt.
- (b) Auto-leveling
- (a) Tilt mast inward or outward.
- (b) Start tilting mast toward its vertical position, pushing the auto tilt leveling switch.
- © Check if the mast stops traveling when it becomes vertical to ground.
- (c) Front/rear tilt warning (red)
  - Stop:  $\pm 2.3^{\circ}$  (1.5 tons ~ 5.0 tons)
  - · Driving :  $\pm 10.2^{\circ}$  (1.5 tons ~ 5.0 tons)
- (d) Left/right tilt warning (red)
  - Stop:  $\pm 3.4^{\circ}$  (1.5 tons~5.0 tons)
  - Driving

Truck weight	Warning angles (Red)
1.5 tons ~ 2.0 tons	±20.3°
2.2 tons ~ 3.3 tons	±20.8°
3.5 tons ~ 4.5 tons	±24.2°
5.0 tons	±28.0°

## ③ Weight sensor set up (option)

- · How to check "the weight sensor set up" (Check under the start switch ON status)
- · There are three settings for weight sensor. (unload, load, reset)
- \* The weight sensor has already been set when deliver the truck from factory.

### a. Setting cylinder cross section

1. Weight sensor setting



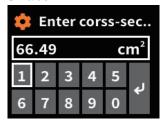
Choose weight sensor setting.

2. Cylinder cross-section



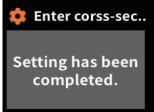
Choose Cylinder Cross-Section. If Cylinder Cross-Section is already set up, setting value is shown in initial screen.

3. Value



Enter cylinder cross-section value using up/down buttons.

## 4. Completion



Setting has been completed.

#### Cross-section value

Model	V-mast	TF-mast	TS-mast	VF-mast
35/40/45L-9	66.97	86.59	88.36	86.59
50L-9	76.97	86.59	88.36	86.59

#### b. Unloaded status adjustment

1. Weight sensor setting



Choose weight sensor setting and enter.

4. Instruction



Follow the instruction showing in the screen. After finish setting and press enter button

Load weight adjust



Choose load weight adjust and enter.

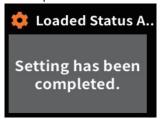


3. Unloaded status adjustment



Choose unloaded status adjustment and enter.

5. Completion



35I 93KY46

#### c. Loaded status adjustment

1. Weight sensor setting



Choose weight sensor setting and enter.

4. Instruction



Follow the instruction showing in the screen. After finish setting and press enter button. Please proceed the operation within 30 seconds. 2. Loaded status adjustment

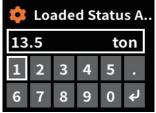


Choose loaded status adjustment and enter.

5. Completion



3. Value



Enter load weight using up/ down buttons.

- Must be prepared to lift up by locating the load on the fork before enter the weight.
- \* MCU recognizes the weight automatically by detecting the pressure change.
- Must be performed only the load lift task within 30 seconds. If it is not completed within 30 seconds, this process will be canceled automatically.
- \* Accurate weight value is not recognized if other pressure changes that are occurred besides salvage work.
- \* Re-perform the "Load/No-Load Adjustment", if the measurement malfunction is occurred.

#### d. Weight sensor reset

Initialize the all values of "No-Load Adjustment" and "Local Adjustment" that were entered previously. (Cylinder cross-sectional area is not initialized.)

1. Weight sensor setting



Choose weight sensor setting and enter.

4. Completion

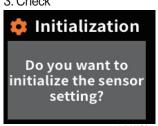


2. Reset



Enter to reset.

3. Check



Press the enter button.

## e. Weight display

Enable to adjust the digit-number of weight of main screen. Weight will be displayed as 0.5 tons if set as 100 kg unit. Weight will be displayed as 0.52 tons if set as 10 kg unit.

### 1. Weight sensor setting



Choose weight sensor setting and enter.

#### 100 kg unit



2. Weight display setting



Enter to weight display setting.

#### 10 kg unit





Choose unit what you want to use.

## f. Overload alarm

### 1. Weight sensor setting



Choose weight sensor setting and enter.

#### 2. Overload alarm



Enter to overload alarm.

#### 3. Select



Select on/off.

4 ESL setting (Startup control setting, standard): Default is "inactive"

1. ESL setting



Choose ESL setting and enter.

2-1. Active



Choose active.

2. Inactive



Choose inactive.

3-1. Change setting



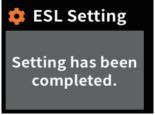
If you want to change setting, press enter button.

3. Change setting



If you want to change setting, press enter button.

4. Completion



35I 93KY6

#### a. Check functions

- (a) Set the active mode can be set when engine is starting.
- (b) Upon start switch ON, the password screen pops up and starting is prohibited until the right. password has been offered. (But, driver still can start the truck if starts within 10 seconds from start switch OFF)
- (c) Set the mode as 5 min of delay time and start switch OFF.
- (d) check if the truck can start within 5 min and start switch OFF.
- (e) check if the truck requests password after 5 min.
- Start switch ON screen (when startup control mode is ON)



### b. Delay time

1. ESL setting



Choose delay time.

2. Select value



Select value you want to apply.

3. Change setting



If you are sure to change ESL, press enter.

6. Completion



(5) DCSR setting (Direction Change Shock Relief)

Set the mode ON. Below is how this feature functions.

- · If you are driving at over the block drive speed and then change gear from forward to reverse (or reverse to forward), the gear stays as neutral until the truck reaches the restore drive speed.
- · The car changes direction and starts to travel.
- \* Restore drive speed cannot be set over the block drive speed.
- 1. DCSR setting



Choose DCSR setting and enter.

3. Mode



Select mode.

4. Setting



Select on/off.

5. Completion



6. Speed set (auto)



If you want to change speed set, enter speed setting.

6. Set road speed



35L93KY7

## 6 HAC setting (option)

Set the mode ON. Below is how this feature functions.

· If you are trying to drive in stop status on hill, the truck does not move backward.

### 1. HAC setting



Choose HAC setting.

#### 2. Setting



Select on/off.

### 3. Completion



35L93KY77

#### 7 Vehicle maximum speed limit

#### 1. Vehicle max speed limit



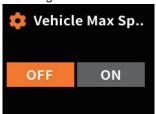
Choose vehicle max speed limit.

2. Mode



Enter to mode function.

3. Setting



Select on/off.

### 4. Speed limit



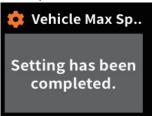
Enter to limit speed menu.

5. Setting limit speed



Set limit speed.

6. Completion



35L93KY83

· Driving speed < 10 km/h



· Driving speed ≥ 10 km/h



35L93KY85

## **® Clutch protection alarm**

1. Clutch protection alarm



Choose clutch protection alarm.

2. Setting



Select on/off.

3. Completion



### 

1. Zero start setting



Choose zero start setting.

2. Mode



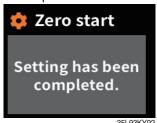
Enter to mode function.

3. Setting



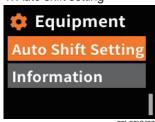
Select on/off.

#### 4. Completion



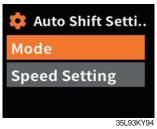
## 10 Auto shift setting (only LPG)

1. Auto shift setting



Choose auto shift setting.

2. Mode



Enter to mode function.

3. Setting

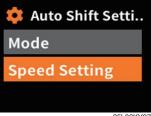


Select on/off.

### 4. Completion







Enter to speed setting.

#### 6. Gear shift setting



Select the desired change value.

#### 7. Speed setting



8. Completion



(11) Cluset information

#### 1. Information



Choose information.

2. Cluster



Enter to cluster.

### 3. Checking.





### (3) Maintenace

## ① Engine failure history

1. Maintenance

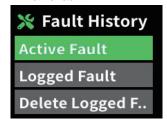


35L93KY1

Enter to maintenance menu.

#### a. Check active fault

4. Active fault



35L93KY108

Enter to active fault.

## b. Check logged fault

4. Logged fault



35L93KY110

Enter to logged fault.

## c. Delete logged fault

4. Delete logged fault



35L93KY112

Enter to delete logged fault.

2. Password



Enter the password.

3. Failure history



Choose failure history.

5. Check active fault



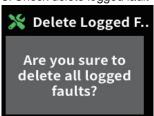
35L93KY109

5. Check Logged fault



35L93KY1

5. Check delete logged fault



35L93KY113

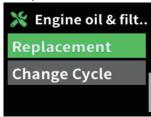
## 2 Maintenance management

- · If the consumables replacement cycle has been passed, alarm will be displayed as ON.
- · Press the "Replacement" if replaced the consumables.
- · Information about recent replacement (Max. 9) will be displayed.
- · If you want to change the cycle, please press the "Change cycle" button.
- 1. Maintenance mangement



Choose maintenance management and enter.

## 4. Replacement



If you are sure to replace supplies, press enter buttton.

## 7. Setting



Set the item value using Up/Down button and press enter button

#### Select replacement item.



Select the replace item.

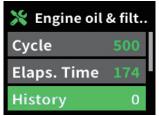
#### 5. Select the item.



Select the item you want to change maintenance interval.

## 8. Completion





Select replacement using Up/Down button and press enter button.

#### 6. Change



Select using Up/Down button and press enter button.

#### ③ I/O information

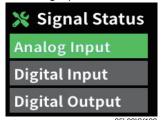
## a. Analog input

1. I/O information



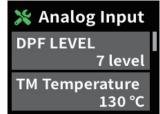
Choose I/O information.

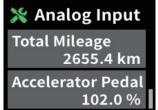
#### 2. Analog input



Eneter to analog input.

#### 3. Analog signal list

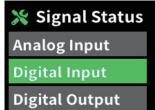




You can check the analog signal list.

## b. Digital input

1. Digital input

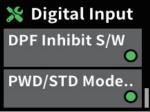


Enter to digital input.

2. Digital signal list



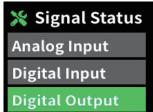
You can check the digital signal list.



35L93KY128

#### c. Digital output

1. Digital output



Enter to digital output.

2. Digital signal list



You can check the digital signal list.



## 4 User password change

- · This function is to allow to change password from default password to user defined password.
- · Password length must be 5~10 digits.
- Since, if you forget the password, you must request the A/S, do not forget the password.
- 1. User password change



Choose password change.

2. Enter current user password



Eneter current user password.

3. Enter new user password



Eneter new user password.

## (3) Display setting

## 1 Time setting

1. Display setting



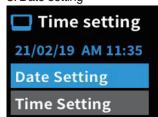
Enter to display setting.

2. Time setting



Choose time setting.

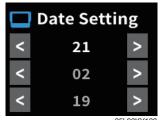
3. Date setting



35L93KY13

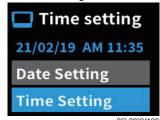
Choose date setting.

4. Date



Change time using R/L button and enter button.

5. Time setting



Choose time setting.

6. Change

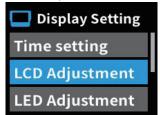


35I 93KY14

Change time using R/L button and enter button.

### 2 LCD brightness adjustment

1. LCD adjustment



Choose LCD brightness adjustment

2. LCD brightness



You can see this display when you choose Display Brightness is automatic.

## ③ LED brightness adjustment

1. LCD adjustment



Choose LED brightness adjustment

2. LCD brightness



You can see this LED when you choose LED Brightness is automatic.

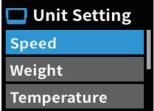
### 4 Unit setting

1. Unit setting



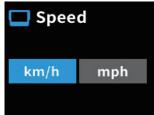
Enter to unit setting.

2. Select unit



Select the unit you want to change.

6. Unit

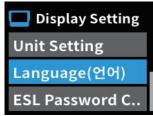


35L93KY147

Select the unit.

### **⑤** Language

1. Language



Enter to language.

2. Select



Select language.

## **6 ESL password change**

1. ESL password change



35L93KY150

Enter ESL password change and enter.

4. Completion



2. Enter cuurent ESL password



Enter current user password.

3. Enter new ESL password



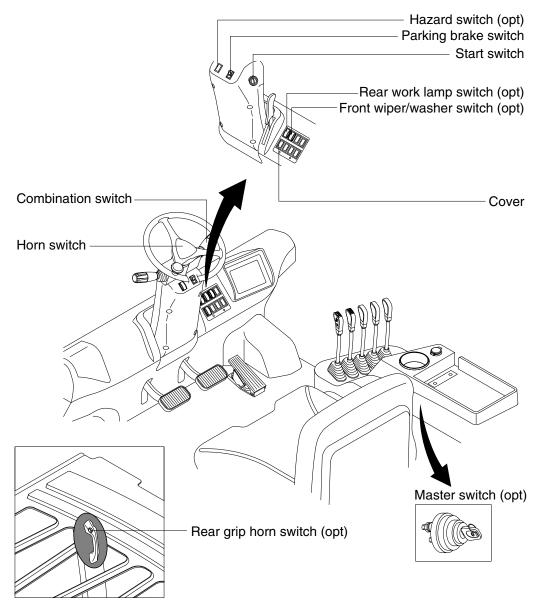
Enter new ESL password.

## 8) CAUSES AND CORRECTION OF CLUSTER WARNING LAMP

No.	Warning lamp types	Symbol	Warning and indicator lamp	Causes and correction
1	Engine oil pressure warning	***	Engine oil pressure warning lamp	Engine oil pressure is low. Please the engine oil refill.
2	Engine warming up indicator	<u></u>	Engine warming up indicator lamp	Warming up will be started.
3	Water in fuel warning		Water in fuel warning lamp	Please drain the water of the fuel filter. (only diesel)
4	Engine check warning	СНЕСК	Engine check warning lamp	Check the failure code of cluster.
5	DPF regeneration warning	= <u>-</u> -5	DPF regeneration warning lamp	DPF regeneration is required. (only diesel)
6	DPF inhibit warning	= <u>F</u> S;	DPF inhibit warning lamp	DPF regeneration is inhibited. (only diesel)
7	High Exhaust System Temperature		Exhaust system high temperature waring lamp	Exhaust system high temperature will be started. (only diesel)
8	Fuel warmer indicator		Fuel warmer indicator lamp	Warming up the fuel. (only diesel)
9	TM oil temperature warning		TM oil temperature warning lamp	TM oil is over temperature condition.
10	Parking brake indicator	(P)	Parking brake indicator lamp	Parking brake is operating.
11	Battery charging warning	- +	Battery charging warning lamp	Battery is not being charged. Please check alternator and wiring.
12	OPSS indicator	OP SS	OPSS indicator lamp	Lights up when the operator leaves the seat.
13	Fuel warning	Þ∰	Fuel warning lamp	Fuel level is low. Please refill the diesel oil.
14	Coolant temperature warning		Engine coolant temperature warning lamp	Engine coolant is over temperature condition.
15	Air cleaner filter warning	<u></u>	Air cleaner filter warning lamp	When the air cleaner needs to be checed and replaced.
16	Consumables replacement indicator	3	Consumables replacement indicator lamp	Consumables replacement cycle has been passed.
17	Communication error warning	COMM ERROR	Communication error warning lamp	Communication with between MCU and ECU has been failed. Check communication line.

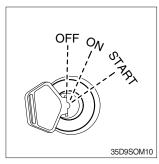
No.	Warning lamp types	Symbol	Warning and indicator lamp	Causes and correction
18	Break oil level warning	<b>(()</b>	Brake oil level warning lamp	Brake oil level is low. Please top up brake oil.
19	LH/RH turn	<b>+</b>	LH/RH turn indicator lamp	-
20	Forward 1st/2nd gear	F1 F2	Foward 1st/2nd gear lamp	-
21	Reverse gear	R	Reverse gear indicator lamp	-
22	Neutral gear	N	Neutral gear indicator lamp	-

## 5. SWITCHS



35L93KY162

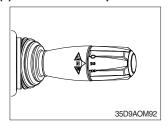
## 1) START SWITCH



- (1) There are three positions, OFF, ON and START.
- Before starting, set gear shift lever at NEUTRAL and pull parking brake lever to LOCK position.
  - · OFF : None of electrical circuits activates.
  - · ON : All electrical systems are ON.
  - START : Use when starting the engine.
     Release key immediately after starting.
- ※ Key must be in the ON position with engine running to maintain electrical and hydraulic function and prevent serious truck damage.

## 2) COMBINATION SWITCH

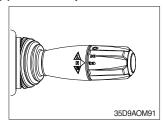
#### (1) Clearance lamp switch



- ① Clearance lamp lights up

  Twist the handle beneath steering wheel and make the notch align to ⇒∞.
- ② Clearance lamp goes out Twist the handle just opposite until the notch being aligned to ◎.
- \* When clearance lamp lights up, then the clearance lamp and all panel lamps light up too.

## (2) Head lamp switch

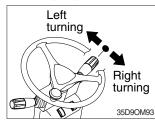


- ① Head lamp lights up

  Twist the handle beneath steering wheel and make the notch align to ■● .
- ② Head lamp goes out

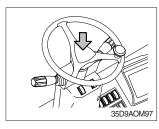
  Twist the handle just the opposite until the notch being aligned to ⑤.

## (3) Turning signal switch



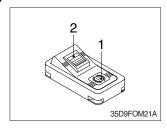
- ① This lever makes the turn signal lamp flash.
  - Turning left: Push lever forwardTurning right: Pull lever backward
- When the steering wheel is returned to straight, the turn signal is not cancelled. Return the lever to central position by hand.

## 3) HORN SWITCH



(1) The horn sounds when the button is pressed.

### 4) PARKING BRAKE SWITCH



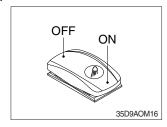
- Position 1
   Parking brake is applied and front wheel is locked.
- (2) Position 2
- Parking brake is released.
- Before moving the truck be sure the parking brake is released.

## 5) HAZARD SWITCH (option)



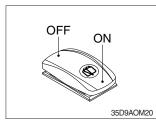
- (1) Use when emergency situation or while loading operation.
- If the switch is left on for a long time while the engine does not run, the battery would be dead(discharged).

## 6) REAR WORK LAMP SWITCH (option)



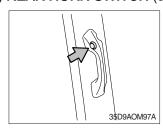
(1) This switch is used to operate work lamps. Press this switch to turn on work lamps.

## 7) FRONT WIPER/WASHER SWITCH (option)



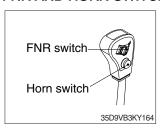
- (1) This switch is used to operate the front wiper and washer by two steps.
  - · First step : The front wiper operates.
  - · Second step: The washer liquid is sprayed and the front wiper is operated only while pressing. If release the switch, return to the first step position.

#### 8) REAR HORN SWITCH (option)



(1) The rear horn sounds when the button is pressed.

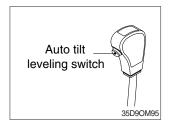
### 9) FNR AND HORN SWITCH (option)



- (1) FNR switch
  - If you move the FNR switch forward, the truck moves forward, but if you move the FNR switch backward, the truck moves reverse.
- FNR switch has no speed select switch, thus use autoshift "ON" only.
- (2) Horn switch

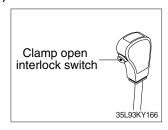
The horn sounds when the button is pressed.

### 10) AUTO TILT LEVELING SWITCH (option)



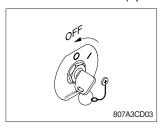
- (1) When the lever is operated on pressing this auto tilt leveling switch, the auto tilt leveling function is activated.
- (2) Auto tilt leveling function This function is mast tilt angle adjust to zero (0) degree (refer to the truck position).
- \*\* This function have to be used at the engine low idle rpm and stop position. If this function is activated at the high idle rpm or during starts, do not guarantee the mast stop at upright vertical position.
- \* Operate the auto tilt function with unload conditions.
- ♠ When used in load condition, the load on the fork can fall down.

#### 11) CLAMP OPEN INTERLOCK SWITCH (option)



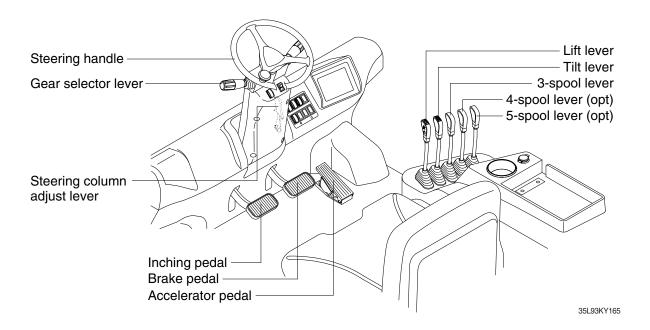
- (1) When the lever is operated on pressing this clamp release switch, the clamp opening or releasing function is activated.
- Safety standard ANSI/ITSDF B56.1, Section 7.25.7 covers all lift trucks with a load bearing clamp (paper roll clamp, carton clamp, etc.), and requires the driver to make two distinct motions before opening or releasing the clamp. For example, you must press a switch and then move a lever to unclamp the load.

#### 12) MASTER SWITCH (option)

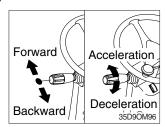


- (1) This switch is used to shut off the entire electrical system. When the truck is not operated for a long time, turn OFF the master switch for the safety purpose.
- (2) I : The battery remains connected to the electrical system.O : The battery is disconnected to the electrical system.
- Never turn the master switch to O (OFF) with the engine running. Engine and electrical system damage could result.

# 6. CONTROL DEVICE

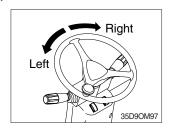


#### 1) GEAR SELECTOR LEVER



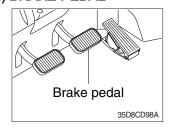
- (1) This lever is used for gear selection, forward 2 stages and reverse 2 stages.
- (2) If you push the gear selector lever, the truck moves forward, but pulling the gear selector lever, the truck moves backward.
- (3) If you turn the gear selector lever forward, the truck increases the speed, but if you turn the gear selector lever backward, the truck reduces the speed.

#### 2) STEERING HANDLE



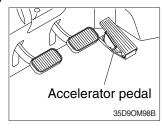
- (1) A steering cylinder in the center of the steering axle will operate the steering function.
- (2) Turning the steering wheel left, the truck moves to the left side and turning it right, the truck moves to the right side.

#### 3) BRAKE PEDAL



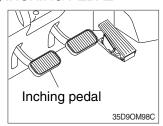
- (1) If the pedal is pushed, braking force is generated and bring the truck to a stop.
- \* Do not operate the truck with stepping on the brake pedal unnecessarily, or bring premature wear of brake disc.

#### 4) ACCELERATOR PEDAL



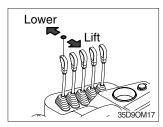
- (1) This pedal controls the engine speed. The engine speed will increase in proportion to the degree of force applied to this pedal.
- (2) Unless this pedal is pressed, the truck will run at low idling.

## 5) INCHING PEDAL



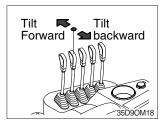
- (1) The inching pedal is used for fine control of forward and reverse movement when lifting up or putting down loads.
- \* Do not put your foot on the inching pedal or brake pedal unless using it.

# 6) LIFT LEVER



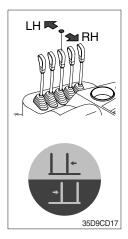
- (1) Lift
  PULL the lever BACK to LIFT the load.
- (2) Lower
  PUSH the lever FORWARD to LOWER the load.
- (3) Holding
  When the lever is released, the lifting or lowering action stops.
- Lifting speed is controlled by accelerator pedal.
   Lowering speed is controlled by lever only.

# 7) TILT LEVER



- Tilt forward
   PUSH the lever FORWARD to tilt mast FORWARD.
- (2) Tilt back
  PULL the lever BACK to tilt mast BACKWARD.
- (3) Holding When the lever is released, tilting action stops.
- \* Forward and backward tilting speeds are controlled by tilt lever and accelerator pedal.

# 8) LEVER FOR SIDE SHIFT (option)

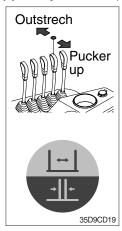


- (1) LH movement

  Push the lever forward to move the left hand for the side shift.
- (2) RH movement
  Pull the lever backward to move the right hand for the side shift.

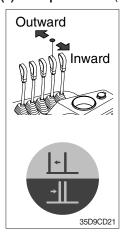
# 9) LEVER FOR SIDE SHIFT WITH FORK POSITIONER (option)

## (1) Fork positioner (synchronizer type)

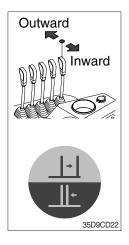


- ① Outstrech the forks
  Push the lever forward to outstrech simultaneously outward of the both forks.
- ② Pucker up the forks
  Pull the lever backward to pucker up simultaneously inward of the both forks.

#### (2) Fork positioner (independent type)



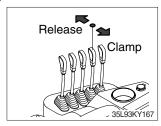
- ① LH fork movement
  - Push the lever forward to move outward for the LH fork.
  - Pull the lever backward to move inward for the LH fork.



#### 2 RH fork movement

- Push the lever forward to move outward for the RH fork.
- Pull the lever backward to move inward for the RH fork.

#### 10) CLAMP INTERLOCK LEVER (option)



#### (1) Clamp open and Release

Press the switch and push the lever forward to release the clamp.

#### (2) Clamp

Pull the lever backward to the clamp.

#### 11) STEERING COLUMN ADJUST LEVER

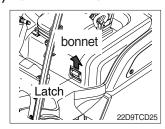


- (1) The angle of the steering column can be adjusted forward and backward to 13 degree.
- ① Release: Pull the lever backward.
- ② Lock : Release the lever.

## **\*\* METHOD OF ADJUSTING STEERING COLUMN ANGLE**

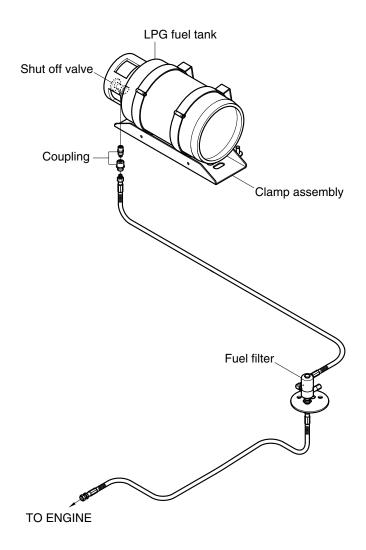
- (1) Pull the lock lever backward.
- (2) Move the steering column forward or backward to select the most suitable position.
- (3) Release the lever to lock the steering column in the desired position.
- \*\* After adjusting, try to move the steering column backward and forward to check that it is locked in the selected position.
- ▲ Always carry out the adjustment with the machine stopped. Never try to adjust the steering column when the machine is moving.

#### 12) BONNET LATCH



- (1) Pull the latch and raise the bonnet to open it.
- (2) Inspection and maintenance can then be carried out easily.

# 7. FUEL SYSTEM



35L7OM104

▲LPG is HIGHLY FLAMMABLE. Never smoke when changing tanks. Never change tanks with the engine running.

▲LPG is HEAVIER THAN AIR. It settles on your clothes and the ground around you, displacing oxygen vital for breathing. Open flames can cause fires.

If you truck uses liquefied petroleum gas (LPG), the fuel is stored in a tank mounted on the truck. A shut-off valve, a safety check valve, a relief valve and a pressure gauge are attached to the tank.

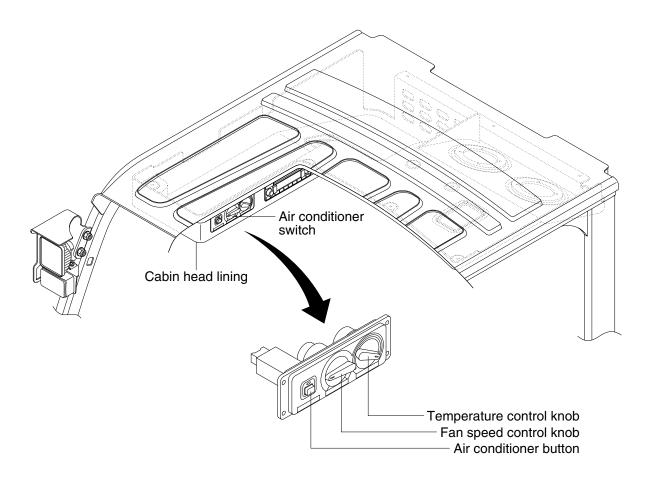
You manually operate the shut-off valve to control the flow of fuel from the tank. You must close this valve when the engine is not running. Close this valve by hand only to a firm tightness. Do not overtighten.

When you open the shut-off valve before starting the engine, turn the handle slowly: otherwise, the check valve will block fuel-flow for a two to three minute period.

▲ The tank must lock onto the locator pin before the fastener is secured. This is to make sure that the relief valve is in the proper orientation.

# 8. AIR CONDITIONER AND HEATER (OPTION)

Full auto air conditioner and heater are equipped for pleasant operation against outside temperature and defrost on window glass.



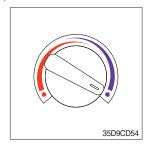
35D9CD90

# 1) AIR CONDITIONER BUTTON



- (1) When you push this button, air conditioner system is operated.
- (2) Determines whether to perform a cooling function of air conditioner.
  - ① Indicator lamp ON : Air conditioner operation
  - 2 Indicator lamp OFF: Fan only
- \* The indicator lamp ON when this button is pushed.

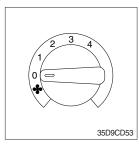
# 2) TEMPERATURE CONTROL KNOB



This knob regulates the temperature of air.

- ① Left side (red zone) : Heat up air temperature
- $\ensuremath{\bigcirc}$  Right side (blue zone) : Cool down air temperature

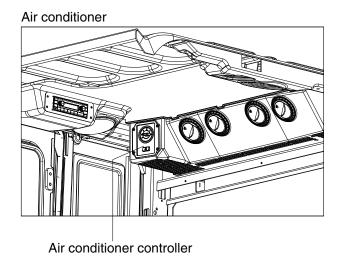
# 3) FAN SPEED CONTROL KNOB

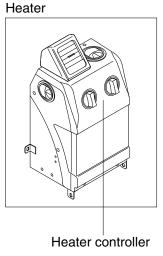


① It is possible to control the fan speed to four steps.

# 8. AIR CONDITIONER AND HEATER (OPTION)

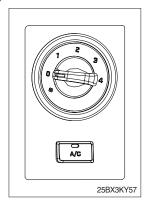
Full auto air conditioner and heater are equipped for pleasant operation against outside temperature and defrost on window glass.





35D9VB3KY169

## 1) AIR CONDITIONER CONTROLLER



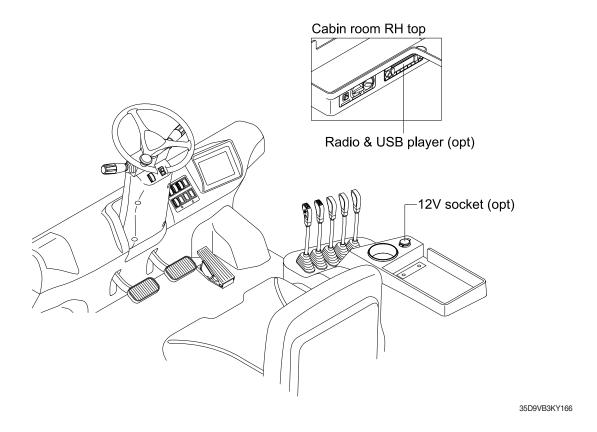
- (1) The A/C button determines whether to perform a cooling function of the air conditioner. Push the button and the A/C lamp is ON or OFF.
  - · A/C lamp ON : Air conditioner operation
  - · A/C lamp OFF : Fan only
- (2) The knob is possible to control fan speed to 4 steps.

#### 2) HEATER CONTROLLER

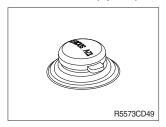


- (1) The left knob turns the system ON/OFF and controls fan speed to 3 steps.
- (2) The right knob controls the air temperature of the heater.

# 9. OTHERS



# 1) 12V SOCKET (option)



(1) Utilize the power of 12 V as your need and do not exceed power of 12 V, 120 W.

# 2) RADIO AND USB PLAYER (option)



9403CD101

# **■FRONT PANEL PRESENTATION**

I RONT FANLL FILISLINIATION			
1	NO.	······ Power ON/OFF, Volume UP/DOWN button	
2	$\mathbf{O}$	Manual UP/DOWN Tuning, File search, SEL button	
3	MODE MUTE	Mode button, Audio mute button	
4	SEEK	······ Radio seek up button	
5	SEEK	······ Radio seek down button	
6	1 DIS	······ Station preset 1 ······ Display button	
7	2	······ Station preset 2	
8	3 RPT	······ Station preset 3	

RPT ..... Repeat play button

4 RDM ..... Station preset 4
RDM ..... Random play button

10		Station preset 5     Directory down button
11	6 DIR+	Station preset 6 Directory up button
12	SCAN ESM	Scan play button (SCAN)  Best station memory (BSM) button
13	TRÂCK	······ Track up button
14	TRACK	······ Track down button
15	AUX	······ USB connector
16	4	······ AUX IN Jack

#### **■GENERAL**

## (1) Power and volume button



#### ① Power ON / OFF button

Press power button (1) to turn the unit on or off.

#### 2 Volume UP/DOWN control knob

Turn VOL knob (1) right to increase the volume level.

Turn VOL knob (1) left to decrease the volume.

After 5 seconds the display will return to the previous display mode.

#### ③ Initial volume level set up

I-VOL is the volume level the unit will play at when it is next turned on. To adjust the I-VOL level, press and hold VOL button (1) for longer than 2 seconds. The current volume level displays on the display panel.

Then turn button (1) right or left to set the volume level as the I-VOL level.

#### 4 Clock ON/OFF control

The CLOCK was default at off status. To turn CLOCK ON, press and hold VOL button (1) for longer than 2 seconds to display I-VOL, then short press VOL again, turn VOL knob while CLOCK OFF display, then the CLOCK ON will be displayed.

W Due to time tolerance, the clock display on the Audio unit might have slight difference.

#### ⑤ Clock adjustment

With CLOCK ON selected, press VOL knob again after CLOCK ON display, the hour will blink, turn VOL knob right or left to adjust hour. Simply press VOL again, the minute will blink, turn VOL knob to adjust minute. Then press VOL again to confirm the clock once finished.

#### (2) Menu Selection



① This button can adjust the effect of the sound and other things. Each time you press this button (2), LCD displays as follows:

BAS 
$$\rightarrow$$
 TREB  $\rightarrow$  BAL L=R  $\rightarrow$  FAD F=R  $\rightarrow$  EQ  $\rightarrow$  LOUD ON  $\rightarrow$  BEEP 2ND

On each setting, the level can be controlled by turning TUNE knob (2). When the last adjustment is made, after 5 seconds, the display will automatically return to the previous display mode.

#### ② Bass control

To adjust the bass tone level, first select the bass mode by pressing SEL button (2) repeatedly until BASS appears on the display panel. Then turn knob (2) right or left within 5 seconds to adjust the bass level as desired. The bass level will be shown on the display panel from a minimum of BASS-7 to a maximum of BASS+7.

#### ③ Treble control

To adjust the treble tone level, first select the treble mode by pressing SEL button (2) repeatedly until TREB appears on the display panel. Then turn knob (2) right or left within 5 seconds to adjust the treble level as desired. The treble level will be shown on the display panel from a minimum of TREB -7 to a maximum of TREB +7.

#### 4 Balance control

To adjust the left-right speaker balance, first select the balance mode by pressing SEL button (2) repeatedly until BAL indication appears on the display panel. Then turn knob (2) right or left within 5 seconds to adjust the balance as desired. The balance position will be shown by the bars on the display panel from BAL 10R (full right) to BAL 10L (full left).

#### ⑤ Fader control

To adjust the front-rear speaker balance, first select the fader mode by pressing SEL button (2) repeatedly until FADER indication appears on the display panel. Then turn knob (2) right or left within 5 seconds to adjust the front-rear speaker level as desired. The fader position will be shown by the bars on the display panel from FAD 10F (full front) to FAD 10R (full rear).

#### ⑥ EQ control

You can select an equalizer curve for 4 music types (CLASSIC, POP, ROCK, JAZZ). Press button (2) until EQ is displayed, then turn knob (2) right or left to select the desired equalizer curve. Each time you turn the knob, LCD displays as follows:

When the EQ mode is activated, the BASS and TREBLE modes are not displayed.

#### 7 Loud control

When listening to music at low volume levels, this feature will boost the bass and treble response. This action will compensate for the reduction in bass and treble performance experienced at low volume.

To select the loudness feature, press button (2) until LOUD is displayed, then turn knob (2) right or left to activate or deactivate loudness.

## 8 Beep control

To adjust the BEEP mode, first select the BEEP mode by pressing button (2) repeatedly until BEEP indication appears on the display panel. Then turn knob (2) left or right within 5 seconds to select BEEP 2ND, BEEP OFF or BEEP ON.

- · BEEP 2ND : You will only hear the beep sound when the buttons are held down for more than 2 seconds.
- · BEEP OFF: You can not hear the sound beep when you press the buttons.
- · BEEP ON : You can hear the beep sound each time you press the buttons.

#### (3) Mute control

① Press and hold MUTE button (3) for over 2 seconds to mute sound output and MUTE ON will blink on the LCD. Press the button again to cancel MUTE function and resume to normal playing mode.

#### (4) Mode selection

- ① Repeat press MODE button (3) to switch between FM1, FM2, AM, USB, AUX, BT MUSIC.
- If there is no USB, AUX, Bluetooth Phone connected, it would not display USB, AUX, BT when you press button (3).

#### **■**RADIO

#### (1) Mode button



① Repeat press MODE button to select FM1, FM2 or AM.

#### (2) Manual tuning button



① To manually tune to a radio station, simply turn encoder TUNE (2) left or right to increase or decrease the radio frequency.

#### (3) Auto tuning button



① To automatically select a radio station, simply press Seek up or Track down button.



#### (4) Station preset button



- ① In radio mode, pressing buttons (6) to (11) will recall the radio stations that are memorized. To store desired stations into any of the 6 preset memories, in either the AM or FM bands, use the following procedure:
  - a. Select the desired station.
  - b. Press and hold one of the preset buttons for more than 2 seconds to store the current station into preset memory. Six stations can be memorized on each of FM1, FM2, and AM.

## (5) Preset scan (PS) / Best station memory (BSM) button



- ① Press BSM button (12) momentarily to scan the 6 preset stations stored in the selected band. When you hear your desired station, press it again to listen to it.
  - Press BSM button (12) for longer than 2 seconds to activate the Best Station Memory feature which will automatically scan and enter each station into memory.
- If you have already set the preset memories to your favorite stations, activating the BSM tuning feature will erase those stations and enter into the new ones. This BSM feature is most useful when travelling in a new area where you are not familiar with the local stations.

#### **■USB PLAYER**

#### (1) USB playback



- ① The unit was equipped with a front USB jack and also a rear USB Jack.
  - With a USB device plugged in the front USB jack, it will be detected as front USB mode. And with a USB device plugged in the rear USB jack, it will be detected as rear USB. To get to a USB mode, press MODE (3) button momentarily or insert the USB device in front or rear USB jack.
- \* If there are no mp3 or wma files in USB device, it will revert to the previous mode after displaying NO FILE.

## (2) Track Up / Down button



① Press SEEK up (13) or TRACK down (14) to select the next or previous track. Press and hold the buttons to advance the track rapidly in the forward or backward direction.



# (3) MP3 directory / File searching



① Button (2) is used to select a particular directory and file in the device. Turn button (2) right or left to display the available directories. Press button (2) momentarily when the desired directory is displayed, then turn button (2) right or left again to display the tracks in that directory. Press button (2) to begin playback when the desired file is displayed.

#### (4) Directory Up / Down button



- ① During MP3/WMA playback, simply press DIR- button (10) to select the previous directory (if available in the device); simply press DIR+ button (11) to select the next directory (if available in the device).
- If the USB device does not contain directories, it would play MP3/WMA tracks at 10- file when you press DIR- button (10), and play MP3/WMA tracks at 10+ file when you press DIR+ (11) button.

#### (5) Track Scan Play (SCAN) button



- SCAN playback : Simply press SCAN (12) button to play the first 10 seconds of each track.
- SCAN folder: Press and hold SCAN button for longer than 2 seconds to scan play the tracks in current folder.
- SCAN off : Simply press it again to cancel SCAN feature.

#### (6) Track Repeat Play (RPT) button



- REPEAT playback : Simply press RPT (8) button to play current track repeatedly.
- REPEAT folder: Press and hold RPT for longer than 2 seconds to repeat play the tracks in current folder.
- REPEAT off: Simply press it again to cancel REPEAT feature.

## (7) Track Random Play (RDM) button



- RANDOM playback : Simply press RDM (9) button to play the tracks in the device in a random sequence.
- RANDOM folder: Press and hold RDM button for longer than 2 seconds to randomy play the tracks in the current folder.
- RANDOM off: Simply press it again to cancel RANDOM feature.

#### (8) ID3 v2 (DISP)



- ① While a MP3 file is playing, press DISP button (6) to display ID3 information. Repeat push DISP button (6) to show directory name / file name and album name / performer / title.
- If the MP3 disc does not have any ID3 information, it will show NO ID3.
- \* USB Information and Notice
  - a. Playback FILE SYSTEM and condition allowance.
    - FAT, FAT12, FAT16 and FAT32 in the file system.
    - V1.1, V2.2 and V2.3 in the TAG (ID3) version.
  - b. Display up to 32 characters in the LCD display.
  - c. No support any of MULTI-CARD Reader.
  - d. No high speed playback but only playing with normal full speed.
  - DRM files in the USB may cause malfunction to playback in the radio unit.
  - ※ In temperatures below -10℃ (14°F), the audio unit with USB hook up may be affected and not play well.

#### **■**AUX OPERATION

It is possible to connect your portable media player to the audio system for playback of the audio tracks via the cab speakers.

To get the best results when connecting the portable media to the audio system, follow these steps:

- Use a 3.5 mm stereo plug cable to connect the media player headphone socket at each end as follows.
- Adjust the portable media player to approximately 3/4 volume and start playback.
- Press the MODE button (3) on the audio unit to change into AUX mode.
- The volume and tone can now be adjusted on the audio unit to the desired level.
- \* The audio quality of your media player and the audio tracks on it may not be of the same sound quality as the audio system is CD Player.
- \* If the sound of the media player is too low compared with the radio or CD, increase the volume of the player.
- \* If the sound of the media player is too loud and/or distorted, decrease the volume of the player.
- \* When in AUX mode, only the Volume, Bass, Treble, EQ and Mode functions of the audio unit can be used.