E38 Multi-Information Display

One of the design parameters of the E38 was to create a more tranquil interior.

The objectives were:

- Reduce the number of control buttons
- Easier operation
- Displays that are easier to understand
- More precise information
- Higher visibility of text
- High Quality appearance

These objectives are achieved with the multi-information display (MID).

The MID incorporates the controls for the audio system, telephone and on board computer. Since the same format is being used to control each of these systems, operation is more convenient.

The MID doesn't perform any calculations. It is an input request / display unit using signals to and from the IKE.

The MID is designed with two displays

- **Main display**- A 32 character display for presentation of primary information

- **Menu Display**- 6 small displays for labeling the button functions.

MAIN DISPLAY

MENU DISPLAY
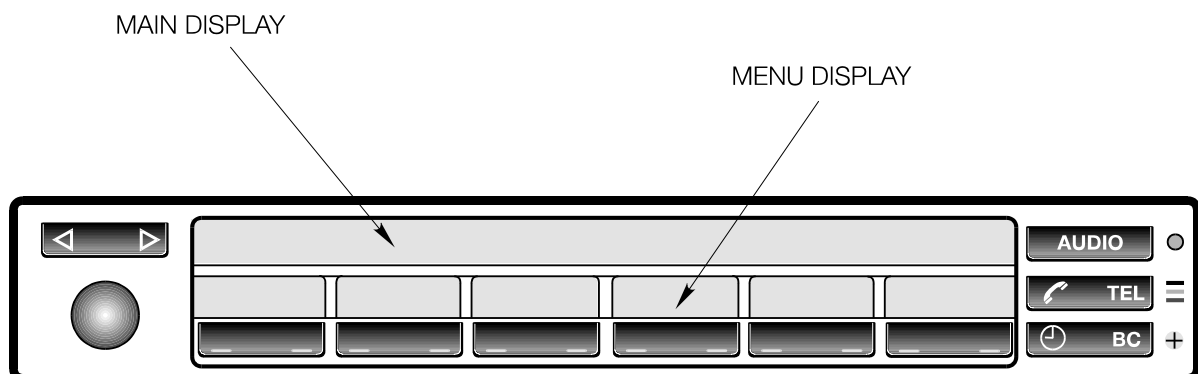
- **Menu buttons** - The buttons are designed as rover switches having a left side and right side contact. The function of each button changes as the different systems are selected.

- **Selector buttons-** These buttons are used to select the desired system to be used:
  - Audio - calls up radio, tape, and CD control for operation and programming functions.
  - Telephone - used to program and call up phone numbers.
  - Time/BC - calls up clock and BC function for programming and display.

- **Search Button -**
  - Radio - Will activate search for radio stations in either up or down scale directions.
  - Tape - activates music search in forward or reverse tape direction.
  - CD - activates title search up or down the title list.
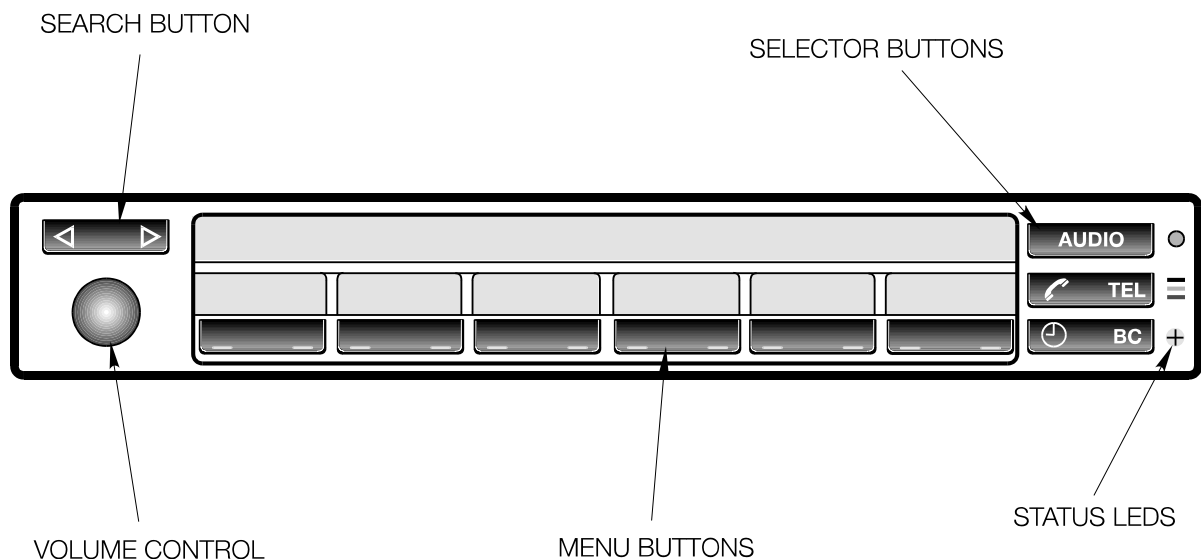
- **Volume control**
  - Push button that turns the audio system on and off.
  - Rotary knob that controls the volume of the audio system and telephone hands free speakers.

- **Status Led**
  - LEDs that are red, yellow, green for signaling the status of the telephone.
 - A red fan symbol that signals to status of parked car ventilation.

Because of the increase in size of the main display, information from more than one system can be displayed at the same time i.e. radio station and time.

MID Self Test

The MID test function is activated by pressing the first and last menu buttons while switching the ignition on. The following items can be tested.

Unit Identification - This information appears for approximately 3 seconds when the ignition is switched on. The ID information displayed is:

- Hardware number
- Software number
- Variant index
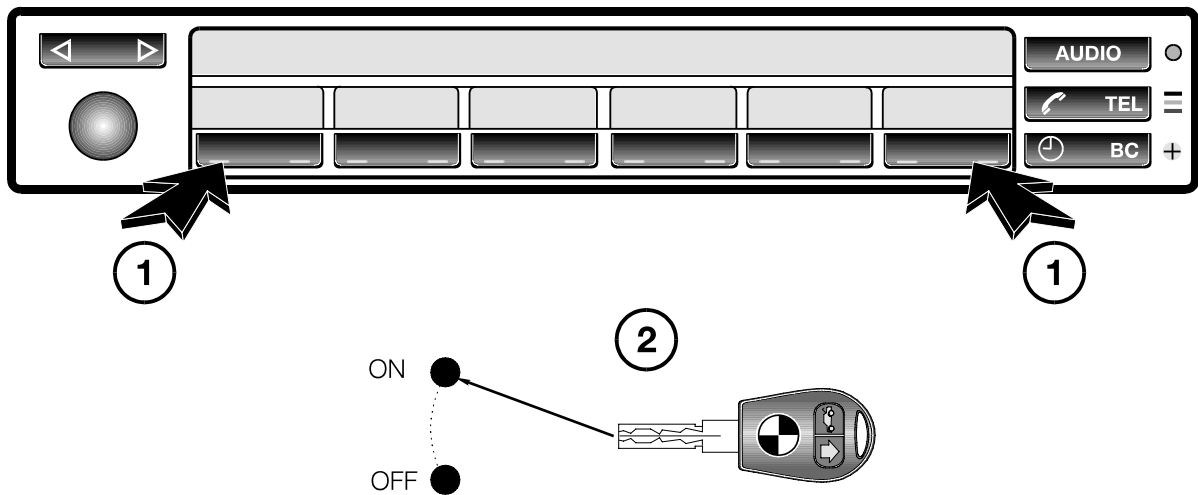
All other test functions must be activated while the ID information is displayed. If this is not done, the MID test is cancelled after the ID information is posted.

Display Test: Activate this test by pressing the display menu button. All elements of the main and menu displays are illuminated with different check patterns.

Button test: Start the test by pressing the button test menu button. All the buttons on the MID have been assigned an alphabetical letter that will appear when the button is pressed.

Volume control test: The test is carried out by pressing the menu button and turning the volume knob. Numbers from 01 to 36 appear on the display indicating each step of knob rotation.

Status LED test: Activate the test by pressing the menu button. All status LEDs are illuminated.

On-Board Computer (BC)

The processing and display of the on-board computer functions is carried out by the IKE.

The IKE receives and evaluates all of the BC required data. The BC functions can be called UP for display on the MID or the Instrument Cluster matrix.

The following BC functions are available for display.

- Time
- Date
- Average speed
- Range

- Distance
- Arrival Time
- Average fuel consumption

- Limit
- Timer/Stopwatch
- Code

The outside temperature measurement is not a BC function. The temperature is continuously displayed in the instrument cluster and is used to activate the freeze warning.

BC OPERATION

Operation and programming the BC functions has changed to suit the new MID layout.

Entering time/date

1. Press clock button
2. Set time with menu buttons
3. Press set button to start the clock
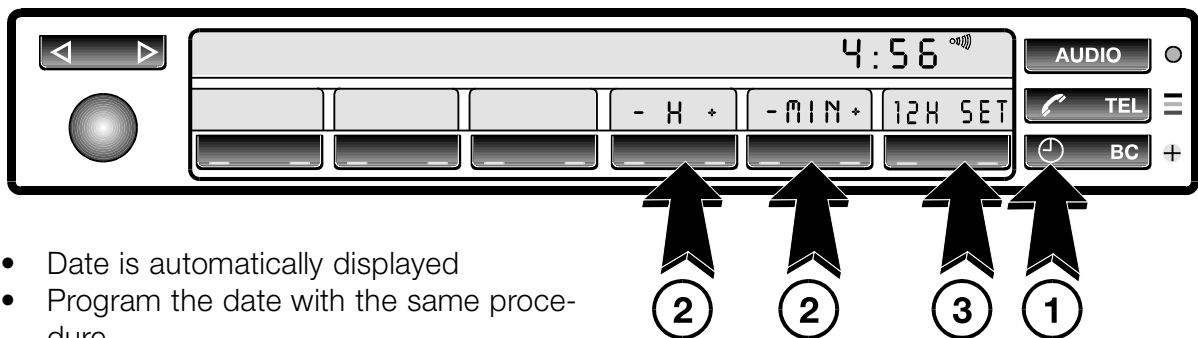
- Date is automatically displayed
- Program the date with the same procedure.

Reset time
1. Call up clock with clock button
2. Press clock button again
3. Press the "Set" button
4. Reset time
5. Press set button to restart clock

Reset date
1. Press the clock button twice
2. Select the date function
3. Press the "set" button
4. Reset the date
5. Press "set" button to acknowledge the new date

The remaining BC functions can be displayed by pressing the BC button. Each function is called up by pressing its menu button.

Programming functions
- Call up functions to be programmed
- Using menu button
- Press "set" button - menu switch to numbers for entering data
- Program function
- Press "set" button to acknowledge data

Resetting non-programming functions
- Call up function using menu button
- Press "set" button - function is reset

Change over button: The change over button is the left toggle of the set button.
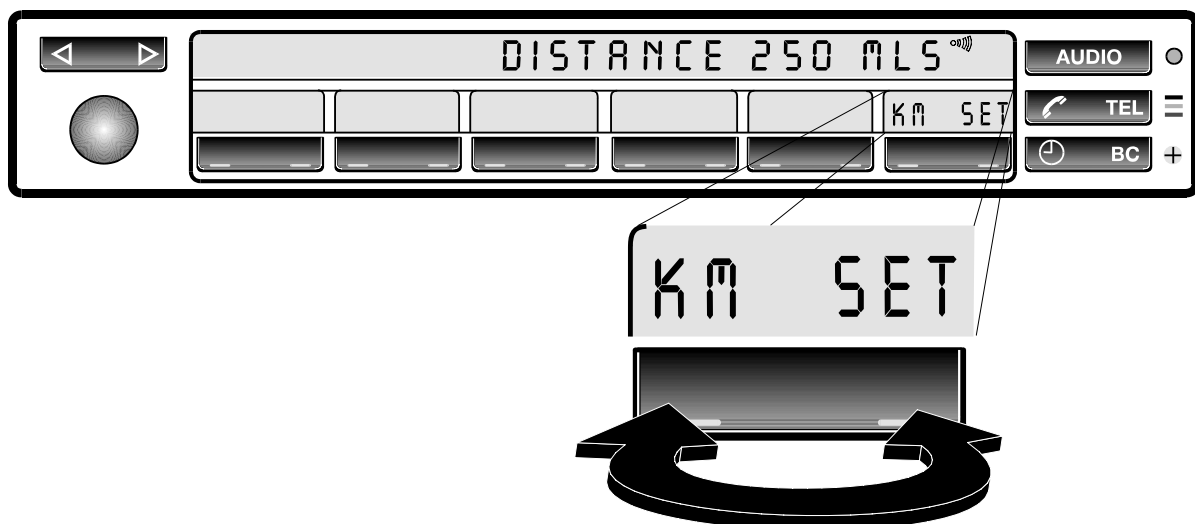
- *12H* or *24H* is displayed in the change over menu when resetting the time. Pressing the button will change all time calculations between a 24 hour and 12 hour clock display.

The date change over is activated with the clock change over. A 12 hour clock yields a month/day/year date display.

- *MLS* or *KM* is displayed in the change over menu when a distance or speed function is called up. Pressing the button will change all distance between kilometers and miles readings and speed.

- *MPG OR L/KM* is displayed in the change over menu when a consumption function is called up. Pressing the button will change both consumption displays at the same time.

BC information can be displayed in the instrument cluster by pressing the remote switch on the end of the turn signal lever. The matrix display is blacked out when the remote switch is pressed after the last function is posted. The order and quantity of functions to be displayed in the instrument cluster can be programmed.

1. Press and hold remote switch until "Prog 1" appears in both displays. The programming feature is now active.

2. Use MID buttons to select functions to be displayed in the cluster. The function title appears in the MID.

3. The programming function is acknowledged by pressing the "set" button on the MID.

E39/E53 Multi-Information Display (MID)

Both the E39 and E53 not equipped with Navigation will use the MID for control and display of the radio/tape/CD changer and On-Board computer.

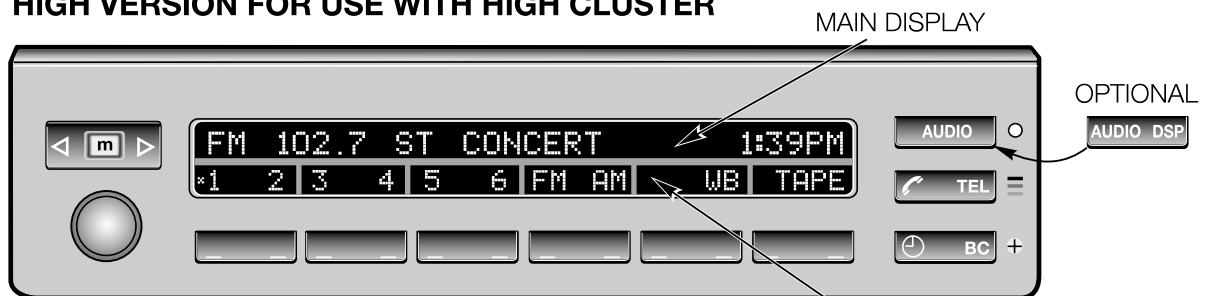If installed, the Digital Sound Processor (DSP) will also be adjusted and controlled through the MID.

The MID does not perform any calculations, it is only an input/display device.
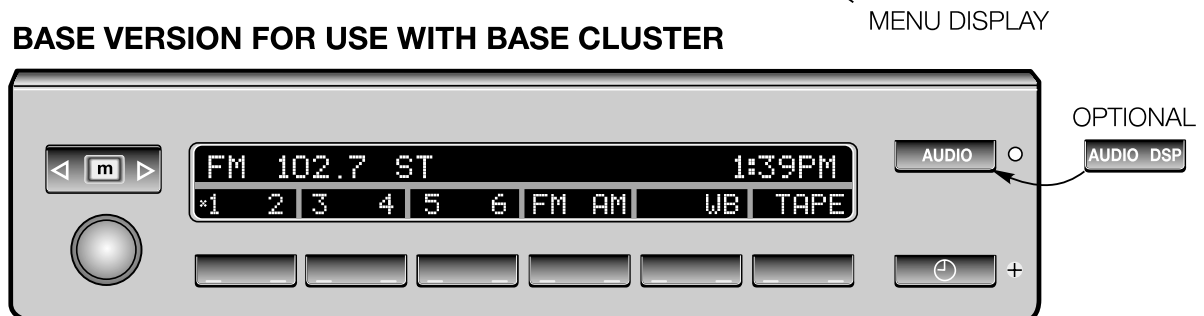
The MID contains two sets of displays:

MAIN DISPLAY - A 32 character display for presentation of primary information.

MENU DISPLAY - 6 small display blocks above each button switch for labeling the switch functions.

HIGH VERSION FOR USE WITH HIGH CLUSTER

MAIN DISPLAY

OPTIONAL

```
FM 102.7 ST CONCERT        1:39PM
×1   2  3   4  5   6 FM AM     WB  TAPE
```

AUDIO
AUDIO DSP
TEL
BC

MENU DISPLAY

BASE VERSION FOR USE WITH BASE CLUSTER

OPTIONAL

```
FM 102.7 ST                1:39PM
×1   2  3   4  5   6 FM AM     WB  TAPE
```

AUDIO
AUDIO DSP

Note: The Telephone button is installed on Base version MIDs as of 3/97 production.

MENU BUTTONS - the buttons are designed as rocker switches having a left and right side contact. The function of each button changes as the different systems are selected.

SELECTOR BUTTONS - These buttons are used to select the desired system to be used

- **Audio** - calls up the radio/tape/CD control functions for operation and programming.
- **Telephone** - used to program and call up stored telephone numbers.
- **Time/BC** - calls up the clock and BC control functions for programming and display.

SEARCH BUTTON -

- **Radio** - will activate the search for radio stations in either direction
- **Tape** - activates music search in forward or reverse directions.
- **CD** - activates title search up or down the music list.

The integrated "m" button is used to switch over to a "manual" search of the functions listed above. An "m" is posted in the display when in this mode. The "m" button is also used to activate the radio test.

VOLUME CONTROL

- Push button for ON/OFF control of audio system.
- Rotary knob for volume control on the audio system and telephone hands-free speakers.

STATUS LEDs

- Red, yellow and green LEDs indicate status of telephone operation.
- A red fan symbol indicates the status of the parked car ventilation system's operation.

MID Self Test

Operation of the MID can be checked through the test function sequence on the MID panel.
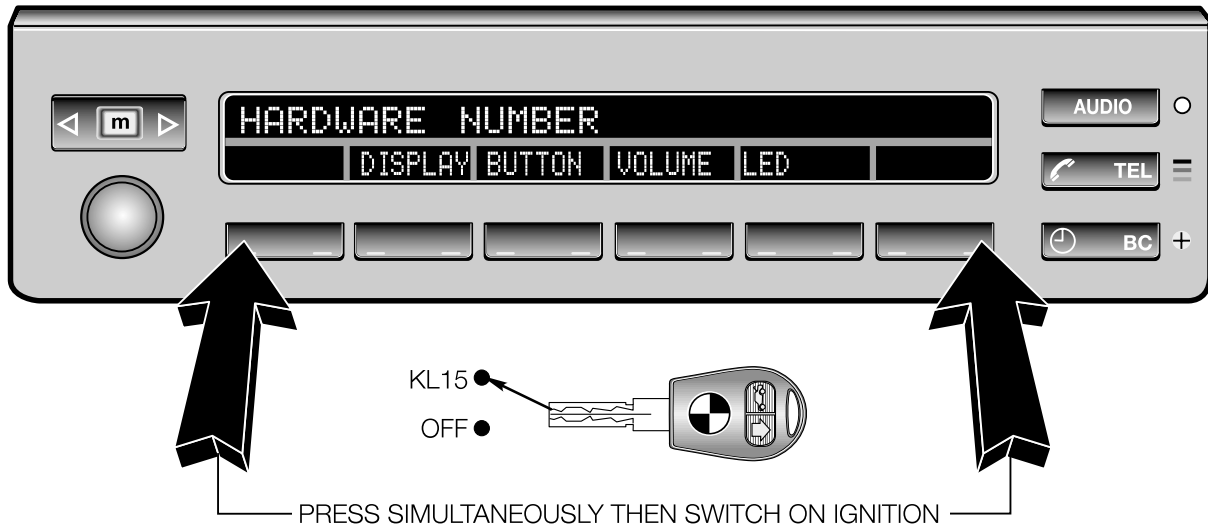
The following items can be checked:

UNIT IDENTIFICATION - The following information appears for approximately 3 seconds when the ignition is switched on

- Hardware number
- Software number
- Variant index

All other test must be started within three seconds, while the identification data is displayed. If not the MID will exit the test mode.

DISPLAY TEST - Activate this test by pressing the display menu button. All elements of the main and menu displays are illuminated with different check patterns.

BUTTON TEST - Start this test by pressing the button test menu button. All buttons on the MID have been assigned an alphabetical letter that will appear when the button is pressed.

VOLUME CONTROL TEST - This test is carried out by pressing the volume menu button and turning the volume knob. Numbers from 01 to 36 appear in the display indicating each step of the knob's rotation.
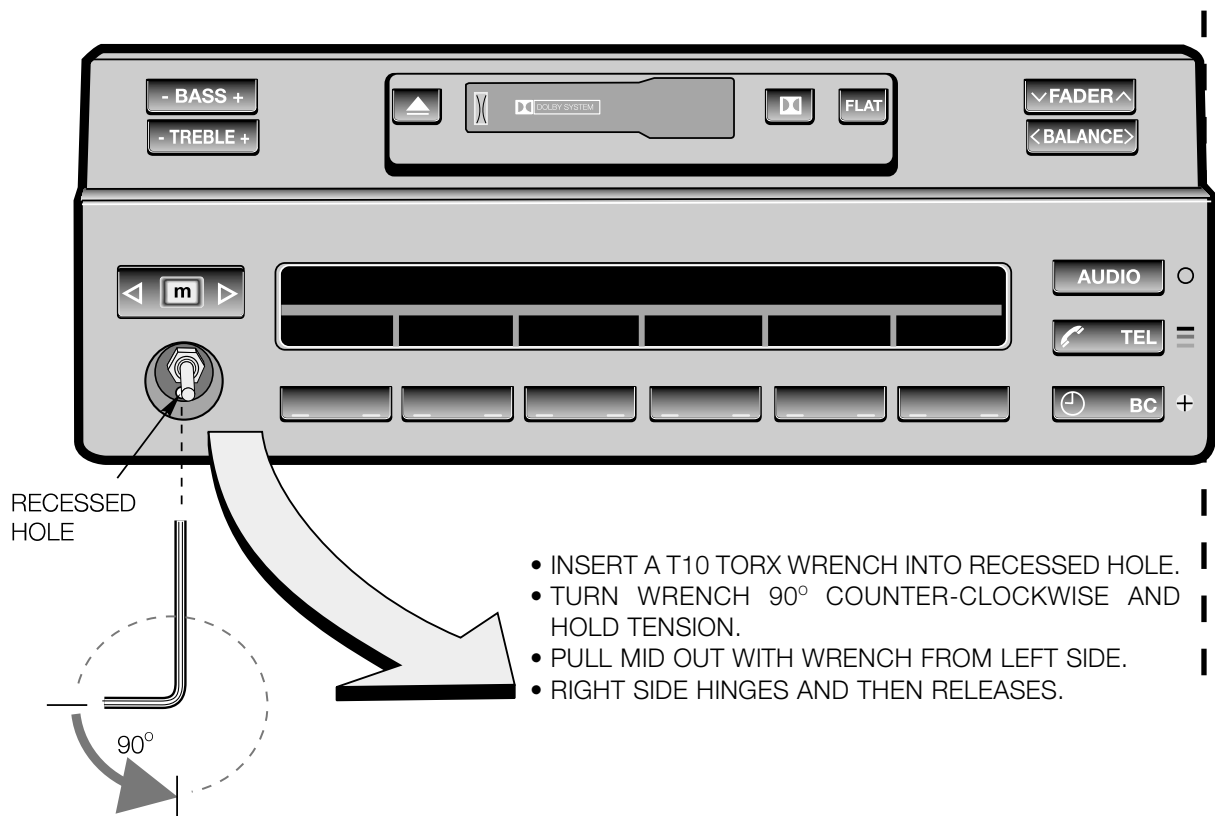
STATUS LED TEST - Activate this test by pressing the menu button. All status LEDs are illuminated.

MID Removal

The E39/E53 MID is removed from the center console as follows:

1. Pull the volume knob off the MID.

2. Insert a T10 torx wrench into the recessed hole beneath the volume knob shaft.

3. Turn the wrench 90° to the left until a stop is felt.

4. While maintaining tension on the wrench in the stopped position, use the torx wrench as a pull handle to pull the left side of the MID out of the center console. The right side of the MID acts as a hinge on the center console.

The radio/tape player is removed by turning the 2.5mm allen head bolts to unlatch it from the center console as on previous radios. The radio allen head bolts are visible once the MID is removed.

RECESSED HOLE

90°

- INSERT A T10 TORX WRENCH INTO RECESSED HOLE.
- TURN WRENCH 90° COUNTER-CLOCKWISE AND HOLD TENSION.
- PULL MID OUT WITH WRENCH FROM LEFT SIDE.
- RIGHT SIDE HINGES AND THEN RELEASES.

On-Board Computer (High version)

The BC processing is a function of the IKE and can be displayed in the cluster matrix display or on the MID.

The following BC functions are available for display:

- Time/Date
- Arrival Time
- Code
- Distance
- Stop Watch
- Range
- Limit
- Average Speed
- Average fuel consumption
- Two Timers for programming parked car ventilation

Operation and programming of the BC is carried out with the MID.

The menu displays change as each function is called up for programming/resetting purposes. this includes the changeover functions for the clock, mileage and MPG displays.

BC functions can be displayed in the cluster matrix by pressing the turn signal lever as in the past.

The cluster displays can be programmed for number of displays and order of appearance.

Setting a code with the BC will override the EWS cancellation of the drive away protection when the correct key is used.

An emergency deactivation is possible for the CODE function. A 10 minute wait time is required after disconnect/re-connection of the battery before the code is canceled.