# 10.1" DIGITAL 3CH LCD
# ALL ROUND VISION MONITOR

MENU

SELECT

UP

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VOL

MXN10-TVI

**MXN**

# Model: MXN10-TVI

Design and specifications are subject to change without notice.

# INDEX

**MONITOR**

**MANUAL**

**CAMERA INPUT CABLE**
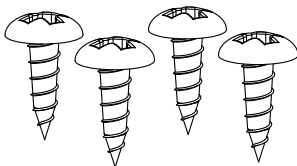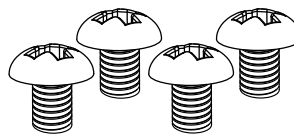
**BRACKET SCREWS**          **MOUNT SCREWS**          **HEAVY DUTY MOUNT**
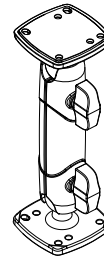
| ITEM | Q'TY |
|------|------|
| MONITOR | 1 |
| CAMERA INPUT CABLE | 1 |
| HEAVY DUTY MOUNT | 1 |
| MOUNT SCREWS (Machine Screw, M5 / 12mm) PH M5x12 | 4 |
| BRACKET SCREWS (Tapping Screw, M5 / 25mm) TH 1, M5x25 | 4 |
| MANUAL | 1 |
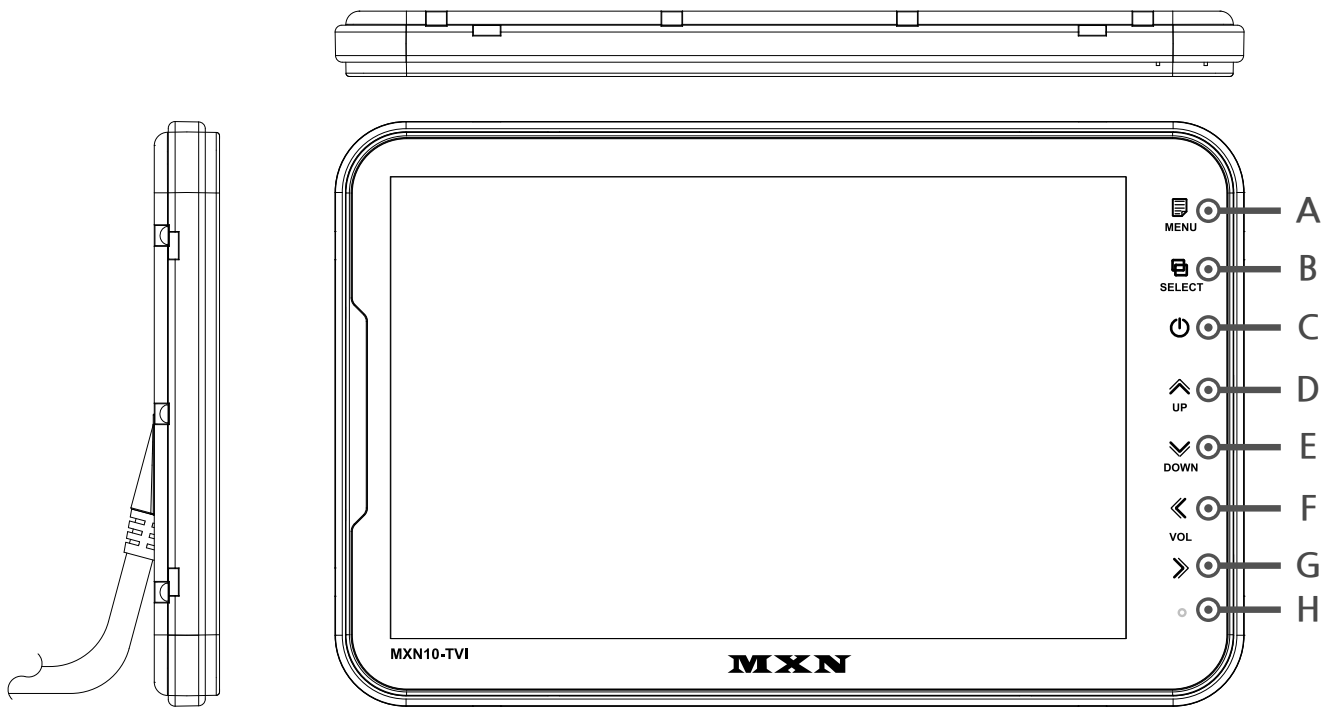
**A. MENU**

Press [MENU] button for system settings.

**B. SELECT**

Press [SELECT] button to select the respective channel.

[CAM1 - CAM2 - CAM3 - SPLIT].

**C. POWER**

Press [POWER] button to turn on/off the monitor.

**D. UP**

Press [UP] button to navigate the menu for system settings.

**E. DOWN**

Press [DOWN] button to navigate the menu for system settings.

**F. LEFT**

Press [LEFT] button to adjust the monitor volume.

Use [LEFT] button to change OSD setting during system settings.

**G. RIGHT**

Press [RIGHT] button to adjust the monitor volume.

Use [RIGHT] button to change OSD setting during system settings.

**H. DAY/NIGHT SENSOR (CDS)**

Automatic brightness control sensor

```
FUNCTION
PICTURE
NORMAL/MIRROR
AUDIO
TRIGGER AUDIO
CAMERA TRIGGER
DISTANCE MARKER
AUTO PICTURE SCAN
CAMERA NAME
SPEED SW
SPLIT
MANUAL SELECTION

                                    MENU
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```

## MENU STRUCTURE

Change the setting value by pressing the MENU button.

### FUNCTION

Set functions on the monitor.

### PICTURE

Set the color and brightness on the monitor.

### NORMAL/MIRROR

Input video can be reversed

### AUDIO

Set the audio ON/OFF.

### TRIGGER AUDIO

Set the audio ON/OFF when entering the TRIGGER signal.

### CAMERA TRIGGER

You can adjust the Screen settings with the corresponding TRIGGER signal is on.

### DISTANCE MARKER

DISTANCE MARKER can be set according to the TRIGGER signal input.

### AUTO PICTURE SCAN

Set the automatic sequence switching time.

### CAMERA NAME

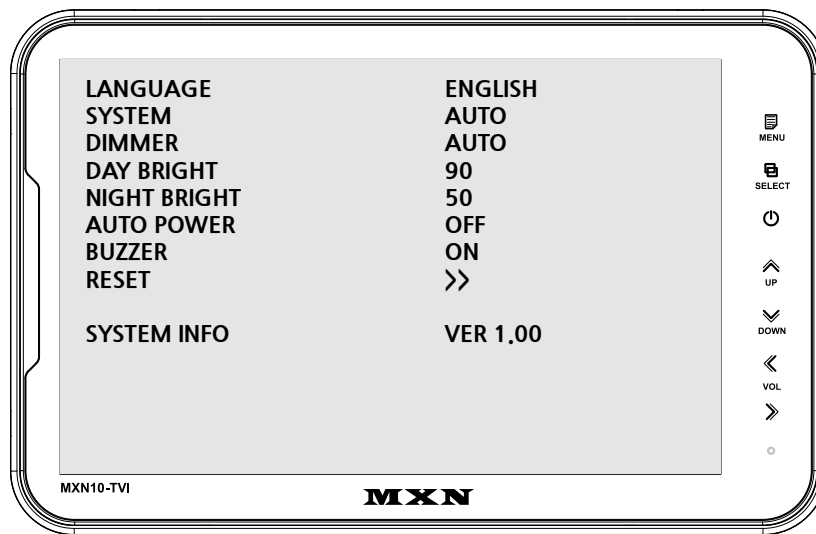Set the camera name.

### SPEED SW

By receiving TACHO signal, you can set the operation at the corresponding frequency.

### SPLIT

Display the camera video at the set position on the SPLIT screen.

### MANUAL SELECTION

When the SELECTION button is pressed, the output screen is set.

```
LANGUAGE              ENGLISH
SYSTEM                AUTO
DIMMER                AUTO
DAY BRIGHT            90
NIGHT BRIGHT          50
AUTO POWER            OFF
BUZZER                ON
RESET                 >>

SYSTEM INFO           VER 1.00
```

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# FUNCTION

### LANGUAGE

Provide 6 Multi-lingual OSD [ENGLISH, SWEDISH, DANISH, NORWEGIAN, DUTCH, FINNISH].
Select the preferred LANGUAGE.

### SYSTEM

Select AUTO/TVI/AHD/NTSC/PAL

### DIMMER (Automatic Brightness Control)

Select AUTO or OFF to enable Automatic or Manual brightness control.
    REMARK: By activating the DIMMER AUTO function,
                the monitor adjusts the brightness according to the environment.

### DAY BRIGHT

Select the DIMMER as 『AUTO』, set the value of backlight on DAY mode(0~100).

### NIGHT BRIGHT

Select the DIMMER as 『AUTO』, set the value of backlight on NIGHT mode(0~100).

### AUTO POWER

Select monitor activation functions as below.
  [AUTO] The monitor remembers the last settings from its memory.
  [ON] The monitor is turned on with the 『Power-ON』 mode automatically.
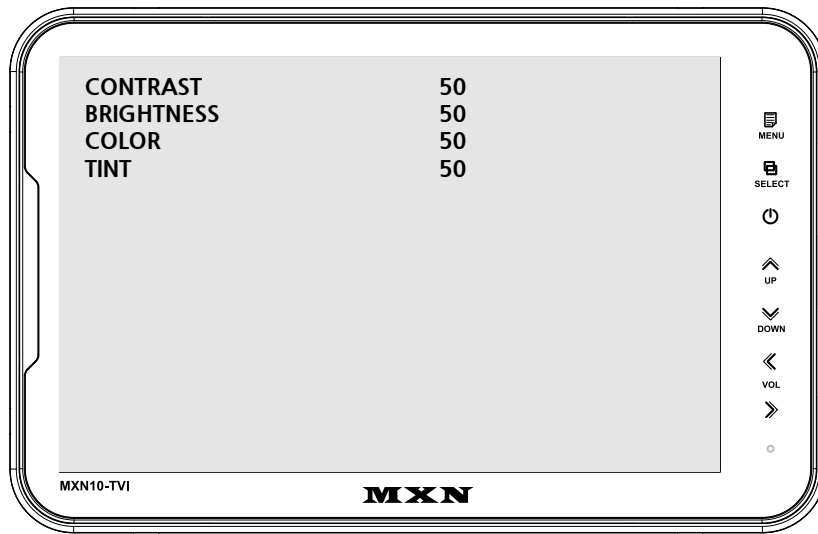  [OFF] The monitor is turned on with the 『tSand-By』 mode automatically.

### BUZZER

Select BUZZER sound 『ON』 and 『OFF』.

### RESET

Press ">>" button to enter the factory default settings.

### SYSTEM INFO

Refers to the system information of the monitor.

```
CONTRAST                    50
BRIGHTNESS                  50
COLOR                       50
TINT                        50
```
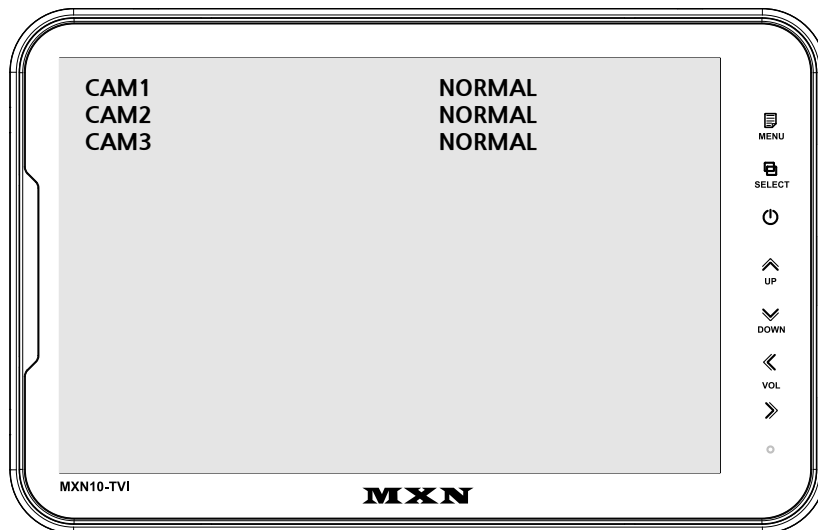MXN10-TVI   MXN

## PICTURE MENU

Press [LEFT/RIGHT] button to adjust the PICTURE of the monitor.
PICTURE MENU is for the settings of PICTURE from CAM1, CAM2, CAM3, SPLIT MODE.

FISHEYE

When using the FISHEYE camera, 『ON』 will calibrate the screen on the FULL screen.

```
CAM1                        NORMAL
CAM2                        NORMAL
CAM3                        NORMAL
```
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## NORMAL/MIRROR

Each camera picture (CAM1/CAM2/CAM3) can be switched between
NORMAL& MIRROR image.

```
CAM1  AUDIO                ON
CAM2  AUDIO                ON
CAM3  AUDIO                ON
SPLIT                      ON
```
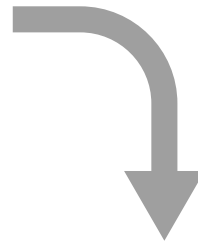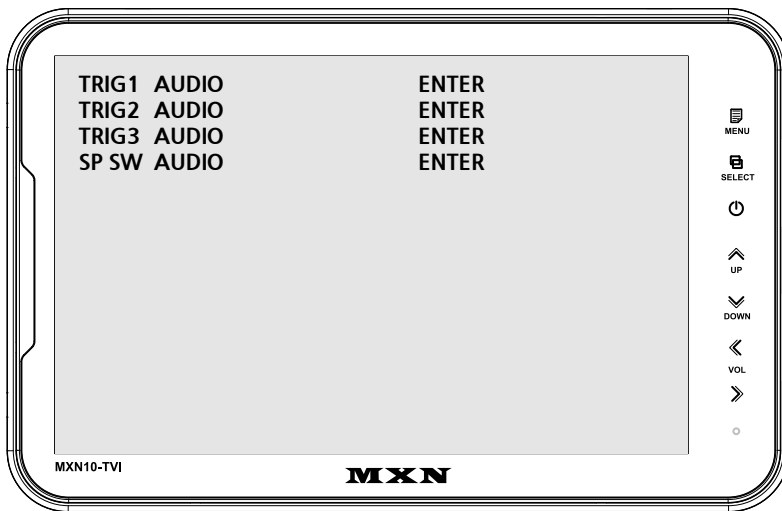MXN10-TVI  MXN

## AUDIO

Audio ACTIVATED Mode in normal mode.
When the mode is [ON], audio will be on (activated)
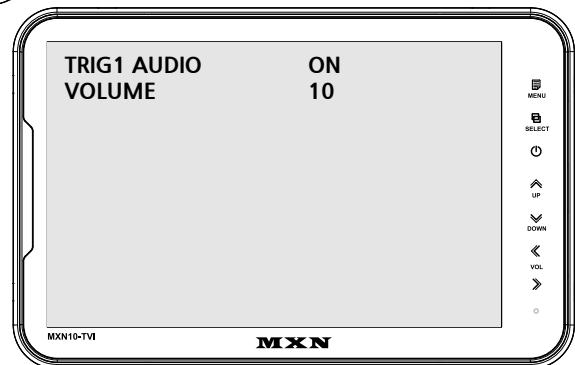When the mode is [OFF], audio will be off (mute).

```
TRIG1  AUDIO                ENTER
TRIG2  AUDIO                ENTER
TRIG3  AUDIO                ENTER
SP SW  AUDIO                ENTER
```
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## TRIGGER AUDIO

Audio ACTIVATED Mode in Trigger mode.
Choose the trigger and then press [ENTER].
The Audio settings menu will be shown as below.

```
TRIG1 AUDIO          ON
VOLUME               10
```
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When the mode is [ON], audio will be on (activated).
When the mode is [OFF], audio will be off (mute).
The user can adjust the volume.

| TRIGGER1 | CAM1 |
| TRIGGER2 | CAM2 |
| TRIGGER3 | CAM3 |
| TRIG1. DELAY | 2 |
| TRIG2. DELAY | 2 |
| TRIG3. DELAY | 2 |

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MENU

SELECT

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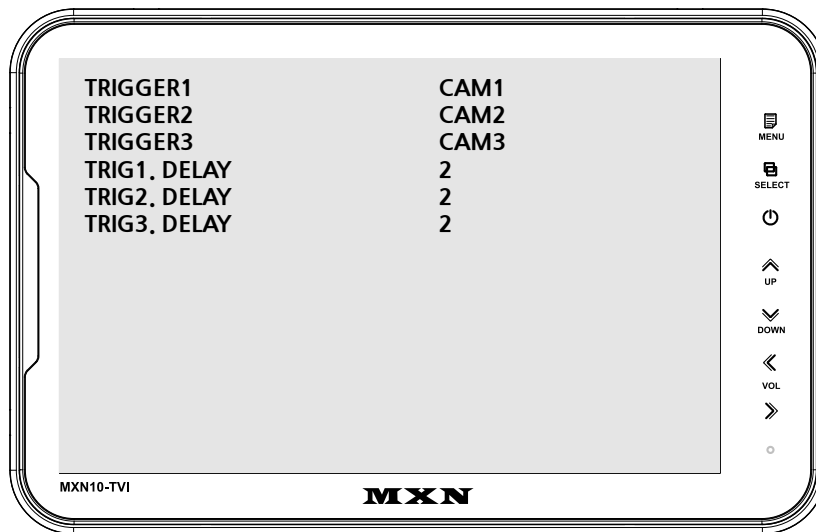
## CAMERA TRIGGER

TRIGGER 1/2/3 (Trigger source selection)

Select the required trigger source at CAM1/CAM2/CAM3/SPLIT

REMARK

TRIGGER PRIORITY: TRIGGER 1 > TRIGGER 2 > TRIGGER 3

TRIG. DELAY

When a TRIGGER wire is connected to a pulse DC power signal (e.g.direction indicator lights) then the [TRIGGER DELAY] function avoids repeating ON/OFF of the monitor.
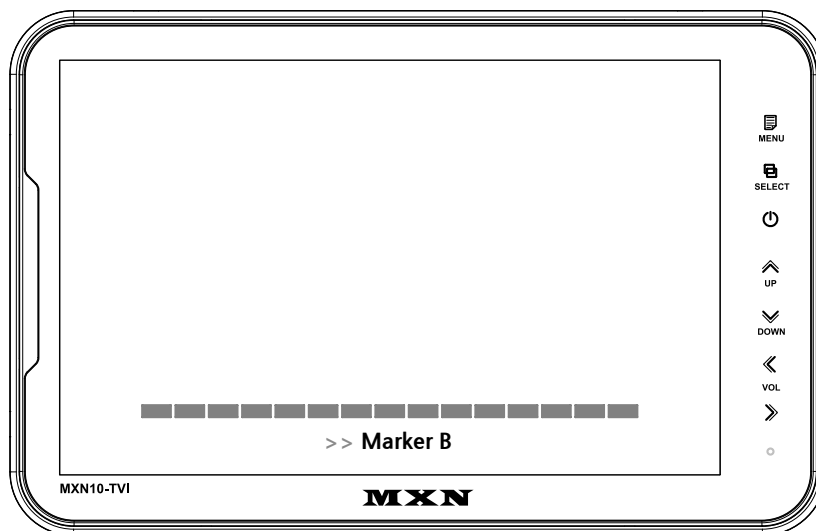
| TRIGGER1 | ON |
| TRIGGER2 | OFF |
| TRIGGER3 | OFF |
| MARKER | ⊩ ⊣ |

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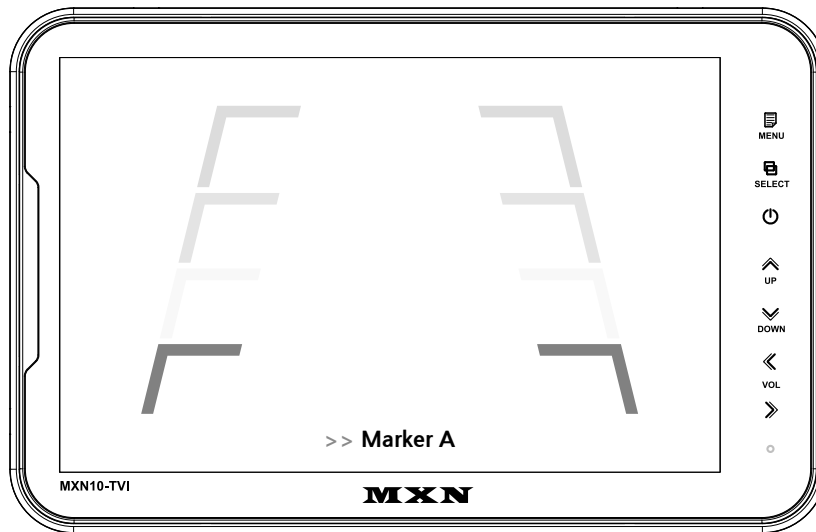MENU

SELECT

UP

DOWN

VOL
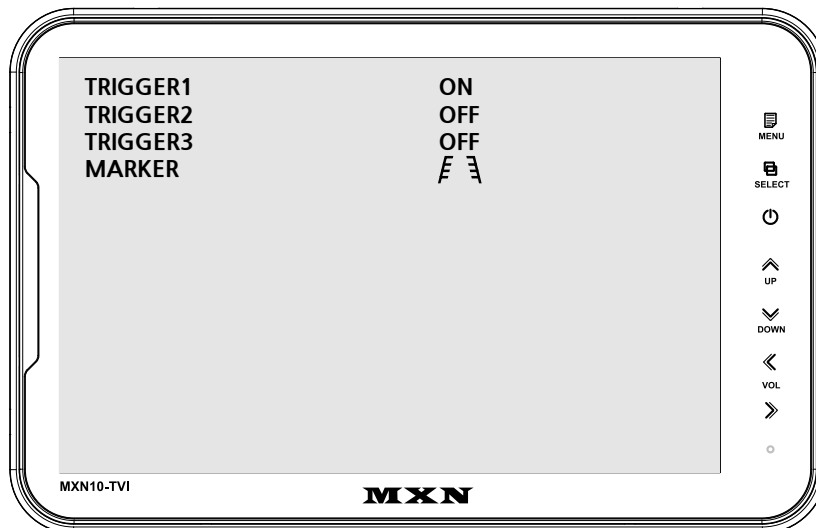
## DISTANCE MARKER

Select ON to have DISTANCE MARKER for CAM1, CAM2, CAM3
DISTANCE MARKER is displayed as the trigger signal is activated.

## MARKER

Select of DISTANCE MARKER. ⊩ ⊣ or ___

>> **Marker A**

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>> **Marker B**

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## DISTANCE MARKER ADJUSTMENT

Users can make adjustments by pressing the SELECT button in the menu.
(It is not available on the split mode screen)
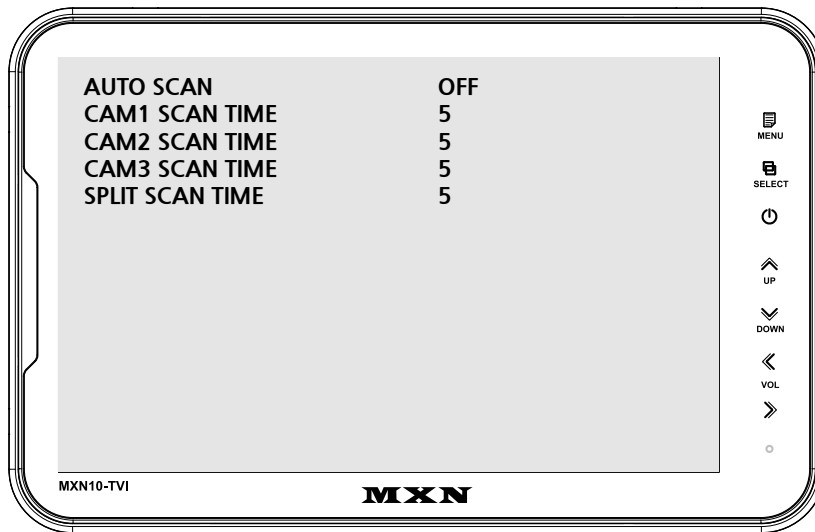
### Marker A- Parking line

The left/right/both markers will be selected in order each time you press the SELECT button.
When the marker is red it can be adjusted UP/DOWN or LEFT/RIGHT.

When both distance markers are RED, you can adjust both markers LEFT/RIGHT/UP/DOWN.
When the left distance marker is RED, the left marker can be adjusted LEFT/RIGHT.
When the right distance marker is RED, the right marker can be adjusted LEFT/RIGHT.

### Marker B- Horizontal line

Users can adjust the line UP/DOWN.
Users can adjust the horizontal line by pressing [UP/DOWN] buttons.

AUTO SCAN ............ OFF
CAM1 SCAN TIME ............ 5
CAM2 SCAN TIME ............ 5
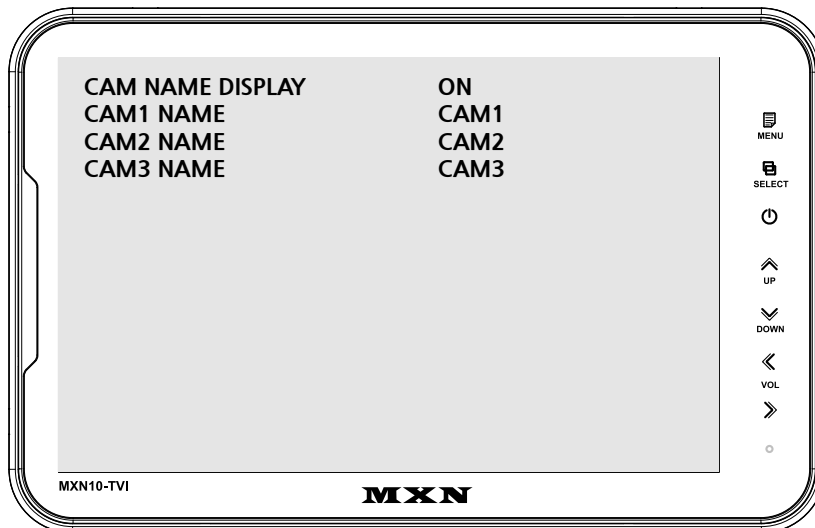CAM3 SCAN TIME ............ 5
SPLIT SCAN TIME ............ 5

## AUTO PICTURE SCAN

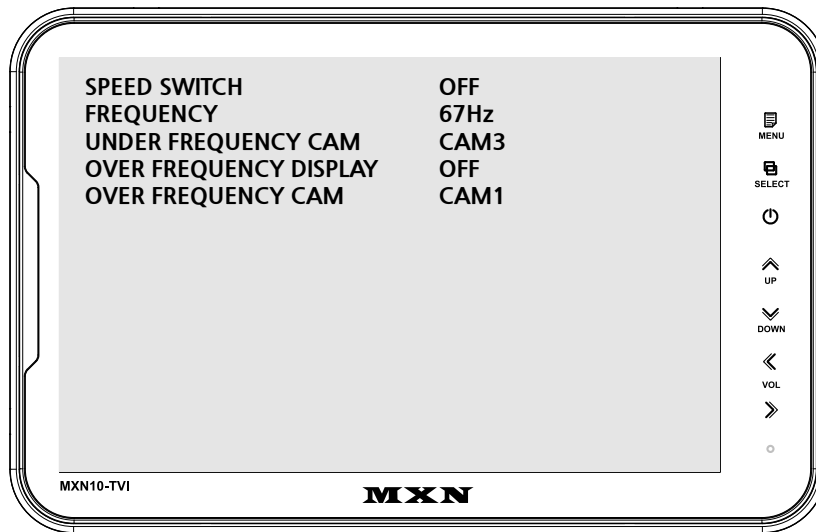Each scanning time of CAM1/CAM2/CAM3/SPLIT can be managed.

REMARK
If the SCAN TIME is set as[0], monitor skips its channel during scanning.
Press [UP] button for 4 seconds to ACTIVATE / INACTIVATE auto scanning function.



CAM NAME DISPLAY ............ ON
CAM1 NAME ............ CAM1
CAM2 NAME ............ CAM2
CAM3 NAME ............ CAM3

## CAMERA NAME

CAMERA NAME can be selected as CAM1, 2, 3/REAR/LEFT/RIGHT/FRONT.

```
SPEED SWITCH              OFF
FREQUENCY                 67Hz
UNDER FREQUENCY CAM       CAM3
OVER FREQUENCY DISPLAY    OFF
OVER FREQUENCY CAM        CAM1
```

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## SPEED SWITCH

The orange wire needs to be connected with the vehicle's tacho signal and via MENU the SPEED SWITCH needs to be selected ON. At FREQUENCY 67Hz setting (and the most common used tacho signal) the selected camera will be displayed during a speed of 0~33km/h.
Select the concerning camera via『UNDER FREQUENCY CAM』(At a different type of tacho signals the FREQUENCY needs to be adjusted higher or lower than the example)

Over 33km/h (72Hz) the selected camera will be switched OFF automatically. When the speed slows down, then the selected camera will be switched ON automatically again at 30km/h.
Instead of automatic switch OFF at a speed over 33km/h it is also possible to activate another video source, such as a navigation picture from an optional navigation computer.
In this case user needs to select『OVER FREQUENCY DISPLAY: ON』and user needs to select 『OVER FREQUENCY CAM』

In case of TRIGGER activation during『SPEED SWITCH ON』mode,
then TRIGGERS 1 ~ 3 will overrule the『SPEED SWITCH』function.

| SOURCE 1 | CAM1 |
| SOURCE 2 | CAM2 |
| SOURCE 3 | CAM3 |
| AUDIO | CAM1 |
| MODE | |

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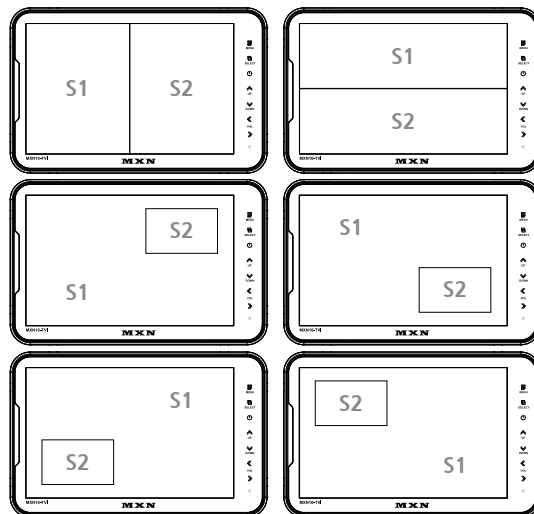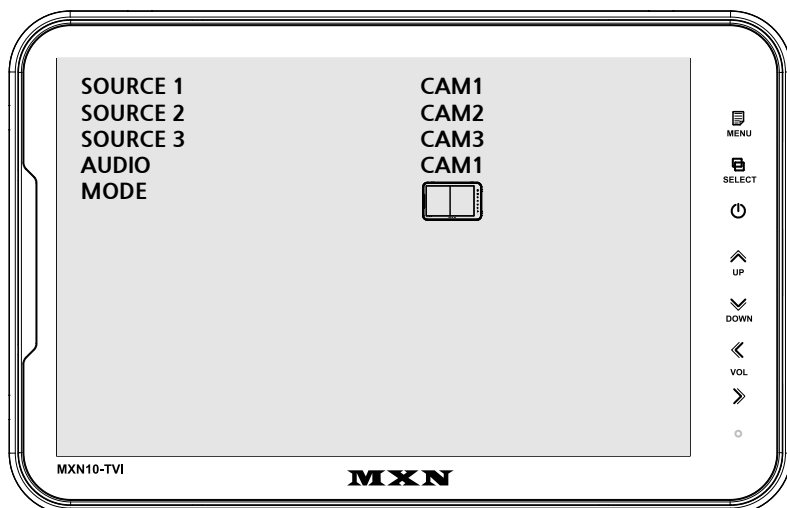
## SPLIT configuration

SOURCE 1    Select S1 Camera (CAM1~CAM3).

SOURCE 2    Select S2 Camera (CAM1~CAM3).

SOURCE 3    Select S3 Camera (CAM1~CAM3).

AUDIO       Select SPLIT of Audio (CAM1~CAM3).

MODE        Select SPLIT MODE

| CAM1 | ON |
| CAM2 | ON |
| CAM3 | ON |
| SPLIT | ON |

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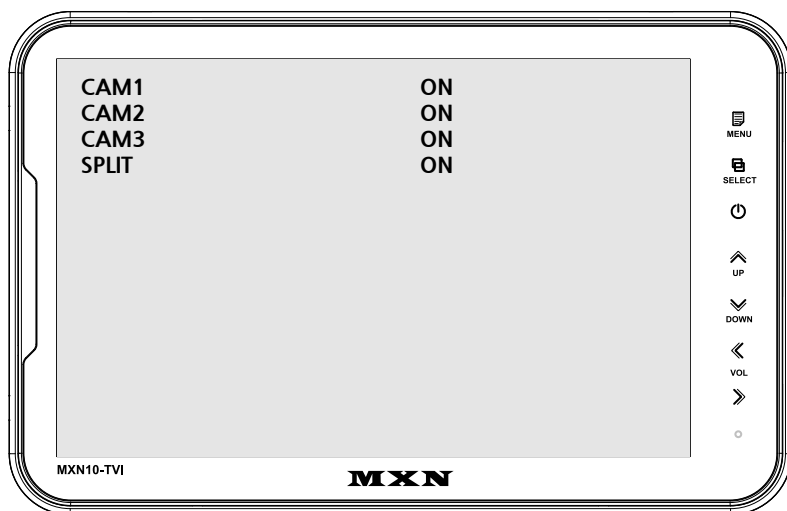
## MANUAL SELECTION

When you manually press the channel select button, only the camera selected ON and the display mode selected ON are displayed.
Manually pressing the channel select button skips the camera selected OFF and display mode selected OFF.

[ NOTE ]
Triggers neglect the MANUAL SELECTION settings. In case of Trigger activation, these ON/ OFF settings will be ignored.

## MENU LOCK ON/OFF FUNCTION

### LOCK ON/OFF FUNCTION

The setup menu can be locked to ban any unauthorized users.

### LOCK ON mode

At the Power-ON mode, press the [DOWN] button for 10 seconds to activate the LOCK ON function. When [LOCKED] is displayed on the screen, the user can use only [POWER, SELECT, VOLUME] buttons and the user can edit settings for the PICTURE menu.
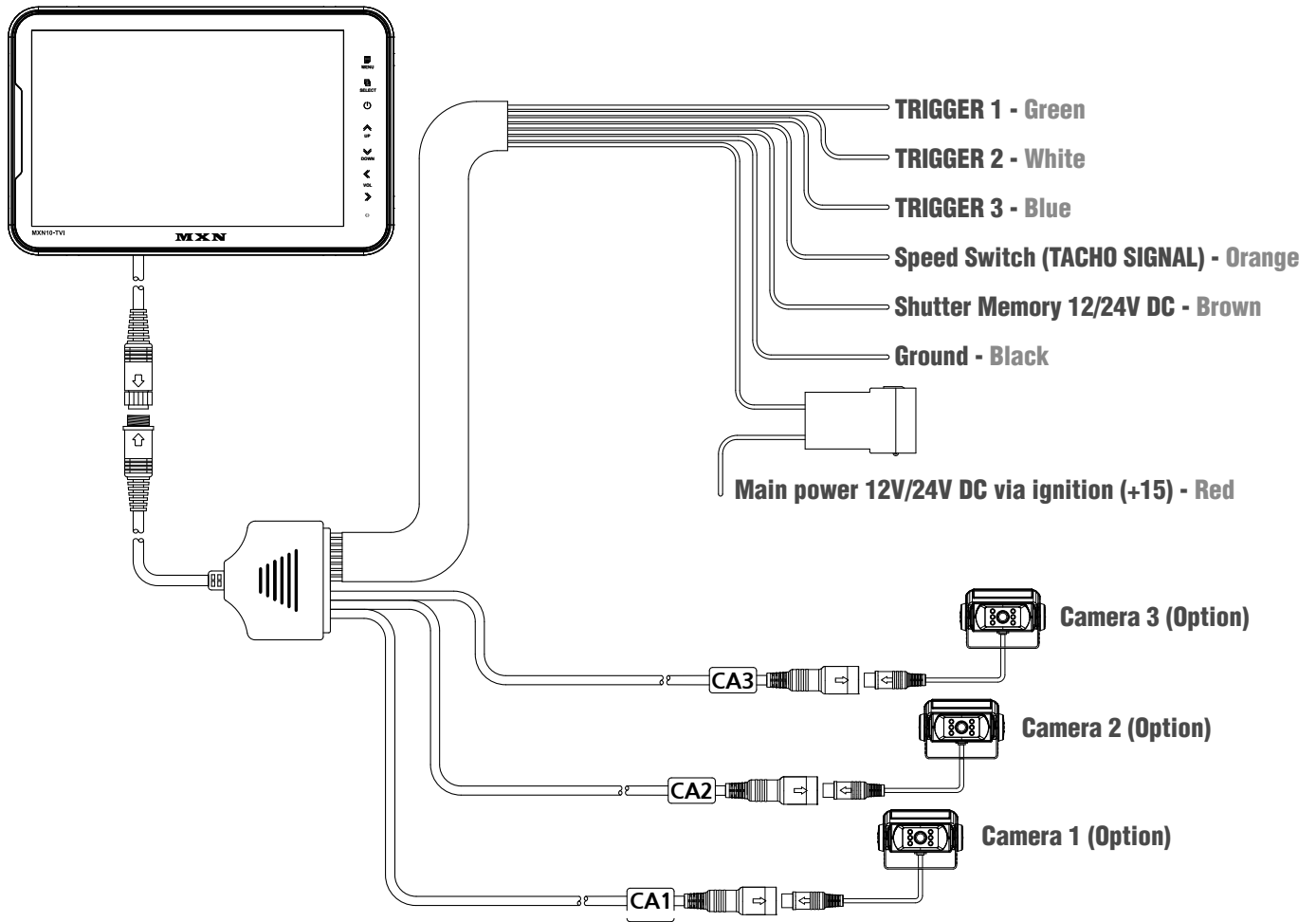
### LOCK OFF mode

At the Power-ON mode, press [DOWN] button for 10 seconds to activate the LOCK OFF function. When [UNLOCKED] is displayed on the screen, the user can use all the functions of the setup menu.
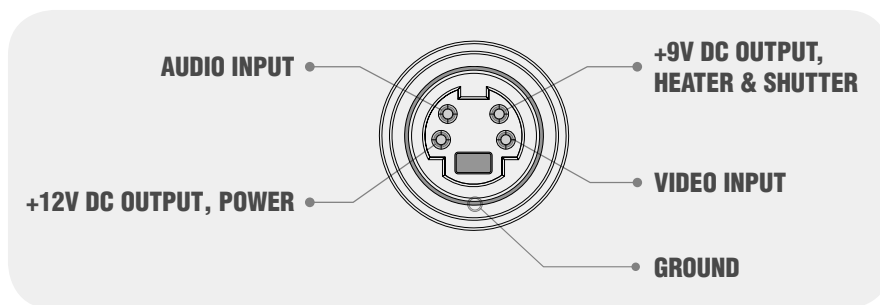
## SCAN ON/OFF FUNCTION

At the Power-ON mode,
press the [UP] button for 4 seconds to activate the Auto Scan Picture function.
During the Auto Scan Mode,
press the [UP] button for 4 seconds to deactivate Auto Scan Picture function.

SCAN CAM1 → SCAN CAM2 → SCAN CAM3 → SCAN SPLIT

TRIGGER 1 - Green

TRIGGER 2 - White

TRIGGER 3 - Blue

Speed Switch (TACHO SIGNAL) - Orange

Shutter Memory 12/24V DC - Brown

Ground - Black

**Main power 12V/24V DC via ignition (+15) - Red**

CA3    Camera 3 (Option)

CA2    Camera 2 (Option)

Camera 1 (Option)

CA1

## CAMERA INPUT

AUDIO INPUT

+9V DC OUTPUT, HEATER & SHUTTER

+12V DC OUTPUT, POWER

VIDEO INPUT

GROUND

## SHUTTER MEMORY FUNCTION

The function of "Shutter Memory" wire (brown wire) is to close the shutter of shutter camera when Main +DC Power (+15) at the monitor's red wire is disconnected while the camera's shutter is OPEN.

The "Shutter Memory" wire does not drain any current from the vehicle's battery within several seconds after the camera's motorized shutter(s) are closed.

## MONITOR installation with Standard Heavy Duty Mount Bracket

Fix the supplied Heavy Duty Mount Bracket into the monitor with the included screws.
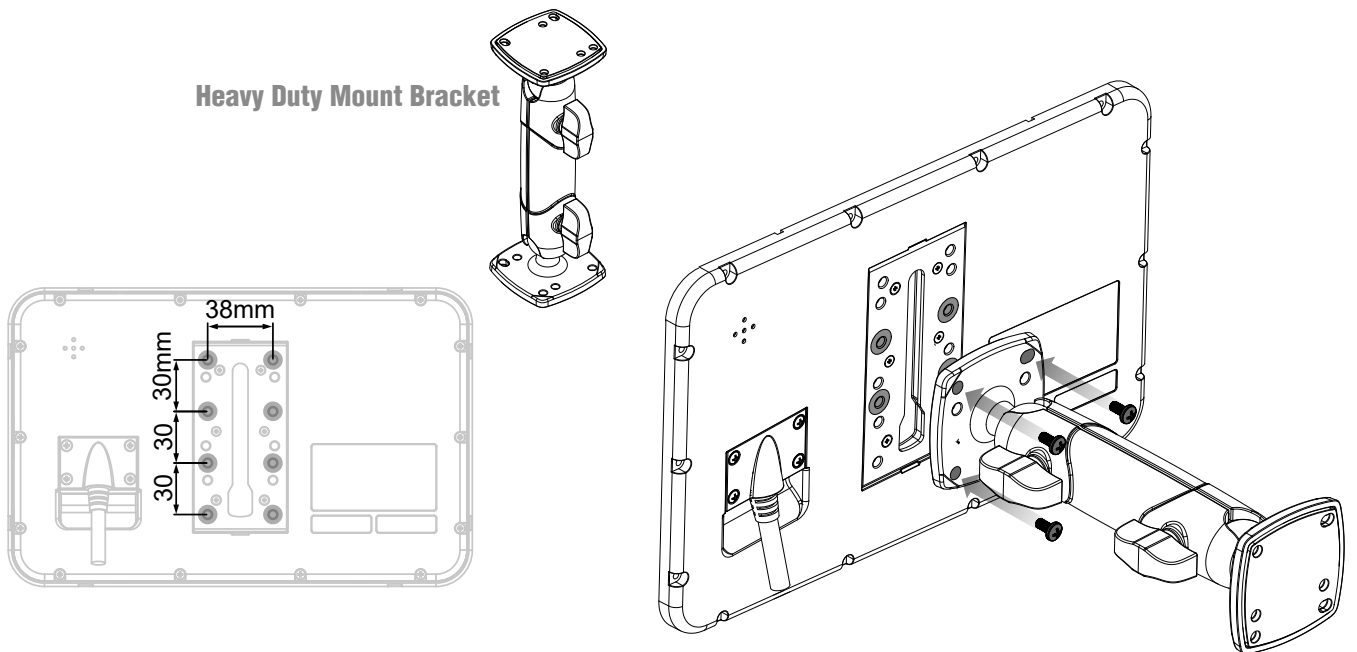Heavy Duty Mount Bracket's angle fixation can be adjusted  by tightening knobs.

[NOTE]
   • The screw type : Mount-screw type, M5 (diameter of 5mm).
   • The length of screw : Max. 12mm.
   • Screw thread : 0.8mm.

   Please make it sure to use the proper screws in order to avoid any damage into the monitor.

Heavy Duty Mount Bracket

38mm
30mm
30
30
30

184mm

26mm

42mm

40mm
38mm
60mm
40mm
30mm
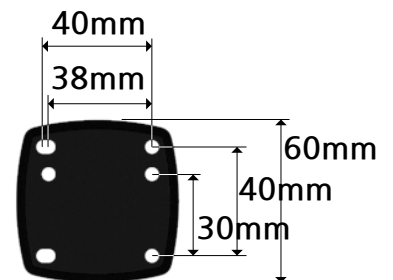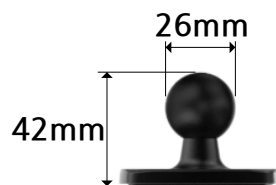
## Installation of Heavy Duty Mount Bracket

The MONITOR can be used with different types of HEAVY DUTY MOUNTING BRACKETS.
Please check the availability in advance, then please follow the instructions as below.
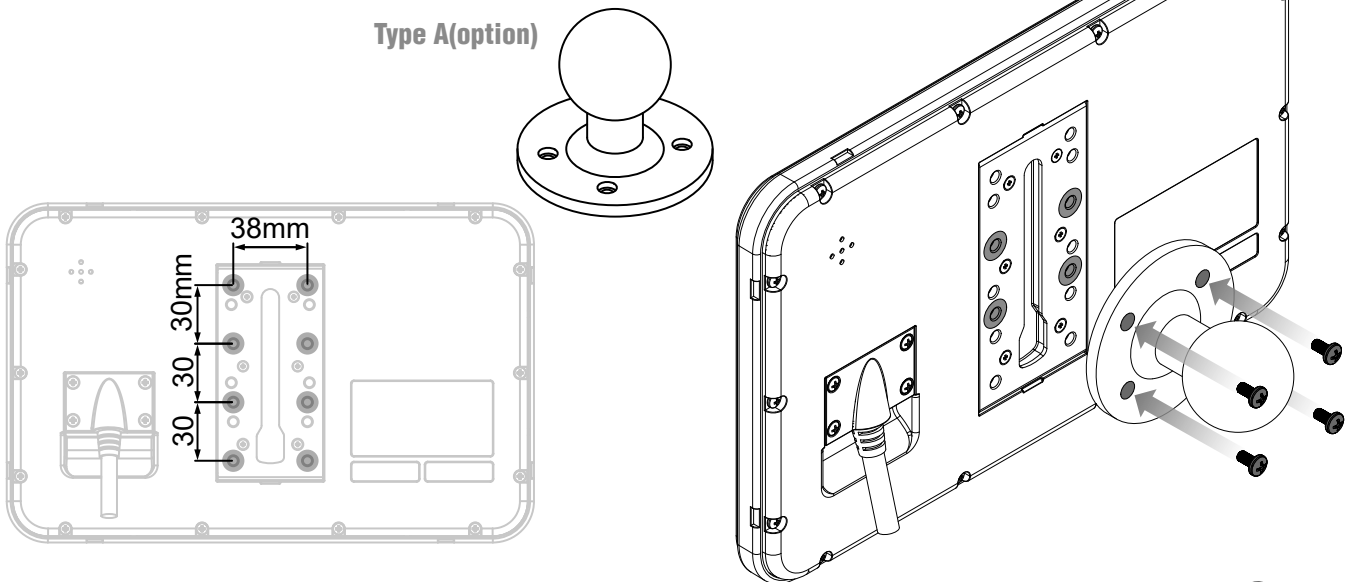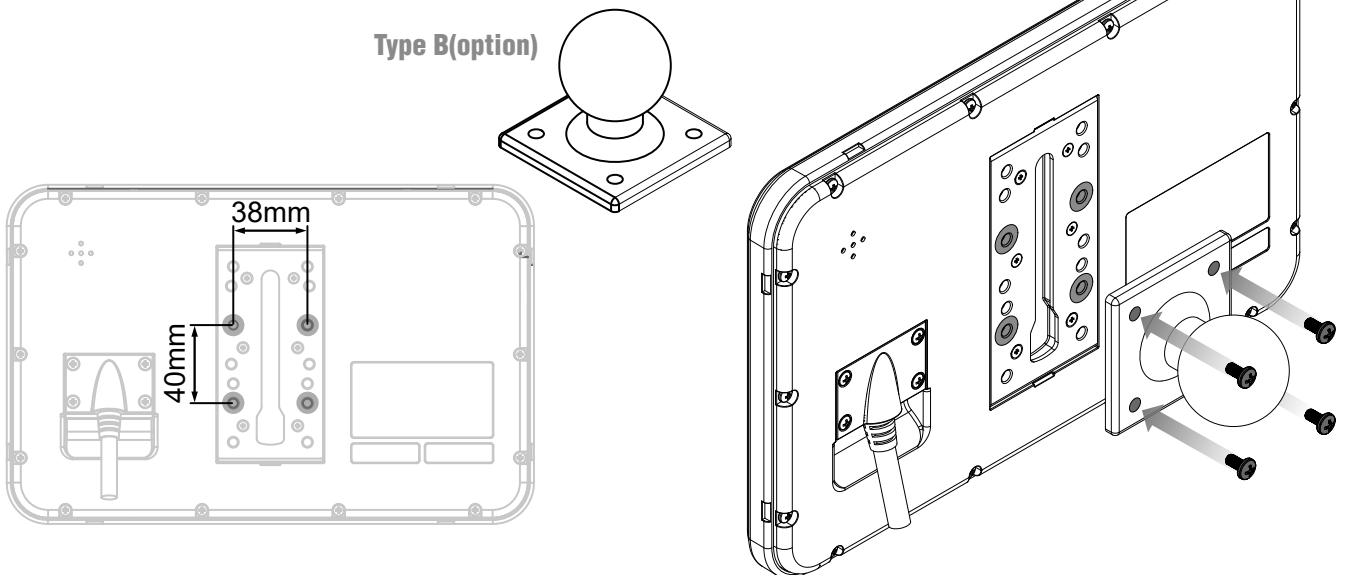
[NOTE]
- The screw type : Mount-screw type, M5 (diameter of 5mm).
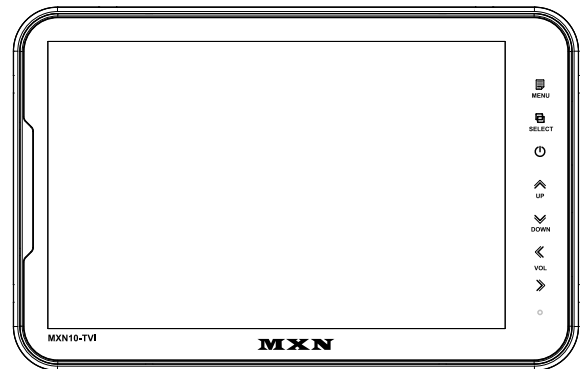- The length of screw : Max. 12mm.
- Screw thread : 0.8mm.

Please make it sure to use the proper screws in order to avoid any damage into the monitor.

Type A(option)

38mm

30mm

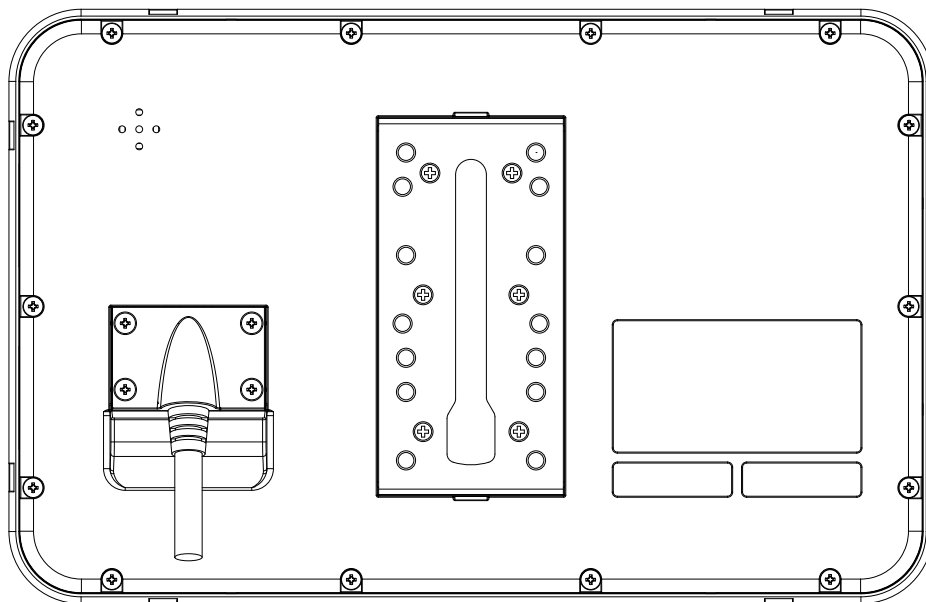30

30

30

Type B(option)

38mm

40mm

# SPECIFICATIONS



| ITEM | SPECIFICATIONS | |
|---|---|---|
| LCD SCREEN SIZE | 10.1 Inch Wide IPS Digital TFT LCD Panel | |
| DIMENSIONS | 270(W) x 174(H) x 20(D) mm | |
| DISPLAY DIMENSIONS | 216.96 X 135.6 mm | |
| POWER INPUT | DC 10V ~ 32V | |
| POWER CONSUMPTION | Max. 15W | |
| VIDEO SYSTEM | HD-TVI (25fps, 30fps, 50fps, 60fps), AHD (25fps, 30fps) CVBS-PAL, CVBS-NTSC | |
| SYNC. SYSTEM | Internal | |
| BRIGHTNESS | 350cd/m2 | |
| DISPLAY RESOLUTION | WXGA, 1280 X (RGB) X 800 | |
| VIEWING ANGLES | 178° horizontal / 178° vertical | |
| COLOR CONFIGURATION | RGB Stripe | |
| DIMMER | Automatic / Manual | |
| SPEAKER IMPEDANCE | Max. 8Ω / 1W | |
| OPERATING TEMP. | -20°C to + 70°C | |
| STORAGE TEMP. | -30°C to + 80°C | |
| IMPACT RATING | 5G | |
| CAMERA CONNECTOR | 4-Pin mini DIN (MXN configuration) | |
| HOUSING | Light Black (ABS) | |
| ON-SCREEN DISPLAY CONTROL FUNCTIONS | ■ Volume ■ Color ■ CAM 1/2/3, Split ■ Speedswitch ■ Distance marker ■ Dimmer ■ Reset | ■ Brightness ■ Contrast Tint ■ CAM Trigger 1/2/3 ■ Auto Power ■ Auto Picture Scan ■ Language |
| SUPPLIED ACCESSORIES | Bracket -1 pce / Screw Kit -1set / Manual  / Multi-cable-1 set | |
| WEIGHT | ± 850g (excluding bracket) | |

# MEMO

# 10.1" DIGITAL 3CH LCD
# ALL ROUND VISION MONITOR

# Model: MXN10-TVI

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