

VBC-23



INSTRUCTION MANUAL

Thank you for purchasing our VBC-23 video monitor. Your unit has been manufactured and checked under the strictest possible quality control to ensure that each monitor leaves the factory in perfect condition. In the unlikely event you find any defects or have any problem, please contact your dealer, our branch or service center. Please read this manual carefully to obtain maximum performance & extended service life from the unit.

Features

- Long communication range of 1000 ft in open space
- 2 channels + 4 digital codes (total 8 sub-channels) provide high degree of immunity from interference
- Automatic night vision
- Camera can be set permanently ON or VOX (voice activated)
- Camera can be crib mount or stand alone
- Adjustable microphone sensitivity
- 2" colour TFT digital screen ensure clear and sharp picture
- Scanning function to monitor 2 camera units
- Automatic picture cut off when video is out-of-range to save battery power
- LED level meter for audio
- In-corporate intelligent rapid charging circuit in parent unit to charge up battery
- Out-of-range alarm once audio signal falls out of communication range
- AV output allows connection to TV for larger image
- Battery or AC adapter operated

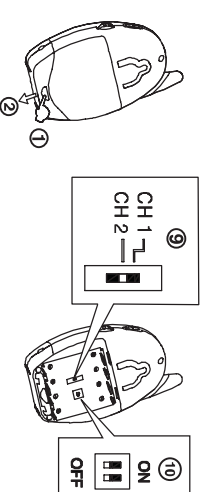
WARNING

The VBC-23 video monitor should not be regarded as a medical device. Premature babies or those considered to be at risk should be under the supervision of your doctor or health personnel.

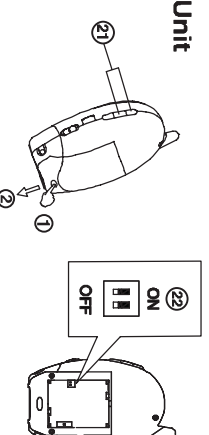
Direct supervision of your baby at a regular interval by a responsible adult is strongly recommended in addition to using the VBC-23.

SETTING OF CHANNELS AND DIGITAL CODES

Camera Unit

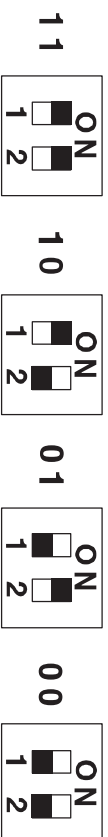


Parent Unit



Press down the lock button and slide open the battery cover in direction as shown. With help of a pointed object, select one of the two settings of the channel selector ⑨ & ⑩. Similarly, select one of the four settings of the white colour dip switches ⑪ & ⑫. This will set the digital code which purpose is to eliminate interference signal from other electrical devices.

Code Settings



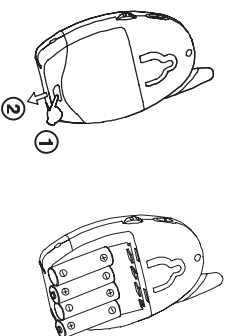
Make sure the settings are exactly the same in both camera and parent unit.
N.B. In case you still encounter interference in actual operation, either change to another channel or change the settings of the digital code dip switch to a new combination. Always make sure to keep the same settings in both camera and parent unit.

POWER SUPPLY (A) Camera Unit

1. Operation from batteries

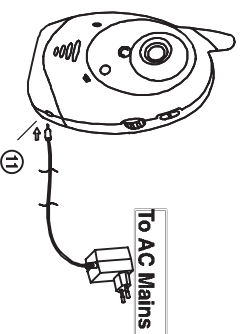
Press down the lock button and slide open the battery cover in direction as shown. Insert four pieces AA size (UM-3) alkaline batteries into the compartment. Observe correct polarities indication. Install back the battery cover.

N.B. For best performance, do not mix use old and new batteries or alkaline and rechargeable batteries.



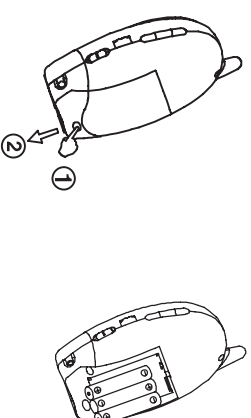
2. Operation using AC adapter

The camera unit can be operated on AC mains using the supplied 9V 300mA AC adapter. Connect the output plug of the adapter to DC jack ⑪ of camera unit, make sure the polarity is correct. The power supply from the battery will be cut off once the adapter's output plug is inserted into the DC jack ⑪.



The communication range is longest when the transmitter is operated on AC mains.

(B) Parent Unit



1. Operation from rechargeable batteries

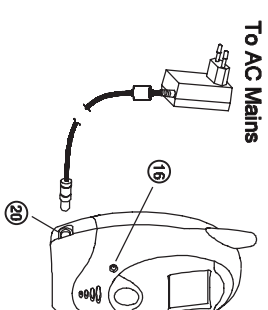
Press down the lock button, slide open the battery cover in the direction as shown. Insert the supplied three pieces AA size rechargeable Ni-MH batteries into the compartment. Observe correct polarities indication. Install back the battery cover.

2. Operation using switching power supply

The parent unit can be operated on AC mains using the supplied 6V 2A switching power supply. Connect the output plug of the power supply to DC jack ⑮ of parent unit, make sure the polarity is correct. With the rechargeable batteries installed and unit being switched off, the charge indicator ⑯ will start flashing red, showing the battery is under fast charging. Once the battery is fully charged up, the charge indicator ⑯ goes off. Now the parent unit can be switched on for operation. Either you disconnect the switching power supply or keep connecting will cause no damage to the battery. In the latter case, the battery power will not be consumed and the unit operates from power supplied from the switching power supply.

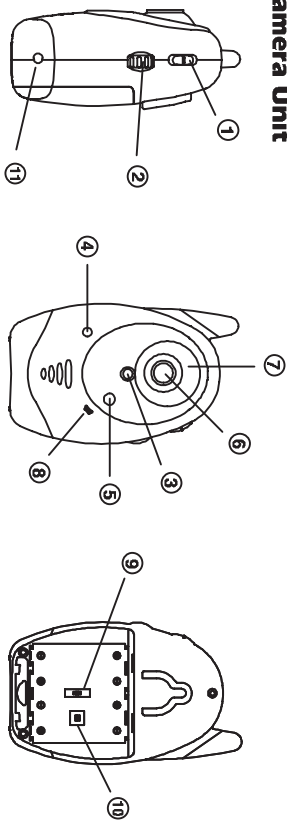
N.B. Before using the parent unit for the first time, charge up the supplied Ni-MH batteries using the switching power supply for at least 5 hours. Be sure to switch off the unit before charging.

CAUTION :BE SURE THE BATTERY IN THE PARENT UNIT IS RECHARGEABLE TYPE BEFORE YOU CONNECT TO THE SWITCHING POWER SUPPLY, OTHERWISE EXPLOSION MAY RESULT.

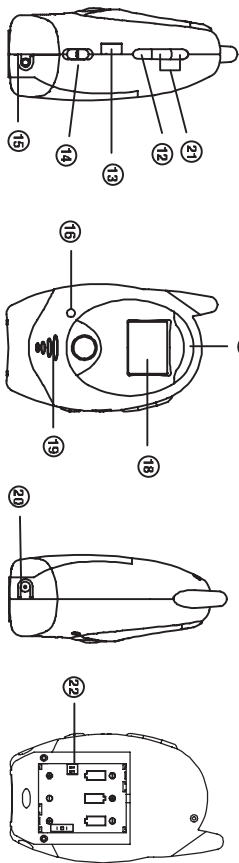


CONTROLS LAYOUT

Camera Unit



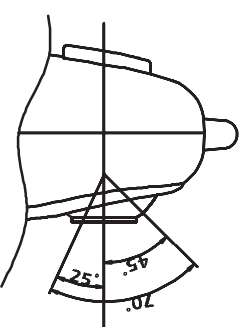
Parent Unit



- | | |
|--------------------------------|--|
| ①. Power ON/OFF and VOX switch | ⑫. Scan button |
| ②. Microphone sensitivity knob | ⑬. Volume control with ON/OFF switch |
| ③. Power ON indicator | ⑭. Manual ON/OFF/VOX switch for screen |
| ④. Transmit indicator | ⑮. AV output jack |
| ⑤. Light sensor | ⑯. Power /Charge indicator |
| ⑥. Lens | ⑰. LED level meter for audio |
| ⑦. Night vision IR LEDs | ⑱. Digital TFT screen |
| ⑧. Microphone | ⑲. Speaker |
| ⑨. Channel selector | ⑳. DC jack |
| ⑩. Digital code dip switch | ㉑. Channel selector |
| ⑪. DC jack | ㉒. Digital code dip switch |

OPERATION

- Place the camera unit about one meter away from the crib with the lens ⑥ and microphone ⑧ facing towards the baby.
- The camera unit can also be crib mounted using the supplied mounting fixture. Please refer to CRIB MOUNT section.
- Switch on the unit with the power ON/OFF switch ① set to ON position. The power ON indicator ③ will light up green. In case the batteries have run down, the indicator ③ will start flashing. Replace with new batteries or use the supplied 9V AC adapter as power supply.
- Now switch on the parent unit using the volume control ⑬. In case the unit is powered by batteries, the power/charge indicator ⑯ should light up green. If it starts flashing green and sounds an alarm, the batteries have run down and need to be recharged using the supplied 6V switching power supply.
- The images captured by the lens ⑥ should be shown on the screen ⑱ while the sound pick up by microphone ⑧ should be heard from speaker ⑲. Adjust the volume control ⑬ to obtain a comfortable listening level. Be sure to keep at least 3m apart between the camera and parent unit or otherwise a screeching sound will be heard at the speaker due feedback problem.
- Adjust the microphone sensitivity knob ② such that the microphone ⑧ can be activated by a sound at your desirable loudness level. Hi sensitivity means the microphone ⑧ is more easy to be activated by small sound. The transmit indicator ④ will light up red whenever audio signal is transmitted.
- The lens ⑥ can be tilted vertically within an angle of 70° to better capture the view of baby.

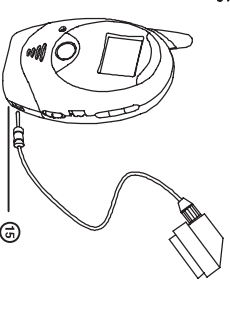


8. Whenever an audio signal is received, the LED level meter ⑩ will light up. The louder the baby's voice, the more number of LED will light up. This feature is useful in case the parents prefer to turn down the speaker volume to keep the environment quiet while still able to monitor the activity of baby.
9. Within the operating range of the video signal, a colourful picture is shown on the screen ⑪. However, as the distance between the camera and parent unit increases, the picture may become black / white and flickering. Further increase in distance will deteriorate the picture quality making it illegible until a point where the parent unit automatically switches off the ⑪ screen to save battery power.
10. Once the parent unit falls back within the operating range of video signal, the screen ⑪ switches on automatically. [subjected to switch ⑩ is set to ON or VOX] and a colourful picture will be displayed.
11. The Out-of-range alert function will provide an audible alarm whenever the parent unit is outside communication range of the camera unit. This means the parents now totally lose contact with the baby, both video and audio signal. Once the parent unit falls back within the communication range, the audible alarm stops automatically.
12. To minimize the radiation level from the camera unit, the power switch ⑫ can be set to VOX position. This means video and audio signal are only transmitted whenever the baby makes a sound. Under this mode, the battery life can be prolonged.
13. During night time, to monitor the baby sleeping, it is common the set the power switch ⑬ to ON position. This means the video signal will transmit continuously, no matter the baby is making sound or not.
14. The camera unit is equipped with automatic night vision function. Whenever the light sensor ⑭ detects a low light intensity in baby's room, it will automatically switch on the IR (Infrared) LEDs ⑮ as a source of illumination. The lens ⑯ capture the IR images of the baby and transmit to the parent unit which is displayed as a black/white picture on screen ⑪.
15. By using switch ⑯, the screen ⑪ can be switched ON / OFF / or VOX manually. This is particularly useful whenever the camera unit is set to transmit video signal continuously (power ⑩ switch set to ON position). The parents can select if they prefer to watch the picture on screen ⑪ or not. The battery life can be much prolonged when the screen ⑪ is switched OFF.

Switch ①	Switch ⑱	Screen Condition (within operating range of video signal)
ON	ON	Always ON
ON	VOX	Show baby's image whenever detect sound
ON	OFF	Always OFF
VOX	ON	Show baby's image whenever detect sound
VOX	VOX	Show baby's image whenever detect sound
VOX	OFF	Always OFF

16. The scanning feature allows the parent unit to monitor activities at two different locations. Set two camera units (the additional camera unit is available optionally) at different operating channels but ensure the digital codes are both set to be same as parent unit. Once the scan button ⑲ is pressed, the parent unit will sequentially scan signal from the two cameras. The corresponding video image is shown on screen ⑪ and audio is heard in speaker ⑳ for a duration of 8 seconds. Any press of the channel selector ㉑ (either CH1 or CH2) will stop scanning and the parent unit stays operating on that particular channel.

17. With the parent unit being switched on, once the supplied 6V switching power supply is connected to DC jack ㉒, the power/charge indicator ㉓ will act as charge indicator. The indicator ㉓ first flashes red and green alternately while it is detecting the battery status, the it flashes red only, showing the battery is under fast charging. When the battery is fully charged up, the indicator ㉓ turns steady green.

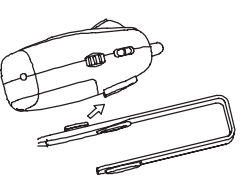
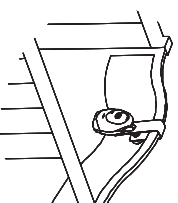


18. Using the supplied AV cable, the video and audio signal can be output to a TV to get a larger picture. Connect the cable as per diagram below and tune the TV to display AV input.

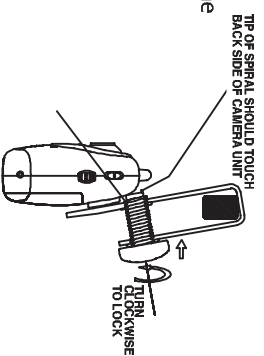
CRIB MOUNT

Using the supplied mounting fixture, the camera unit can be mounted on handrail of baby cot.

1. Insert protruding stud on fixture into the catch located at the back of camera unit.
2. Mount the fixture over the handrail of baby cot.



- Screw in the spiral rod clockwise until the tip of rod touches the back of camera unit. This will prevent the camera unit from sliding out.

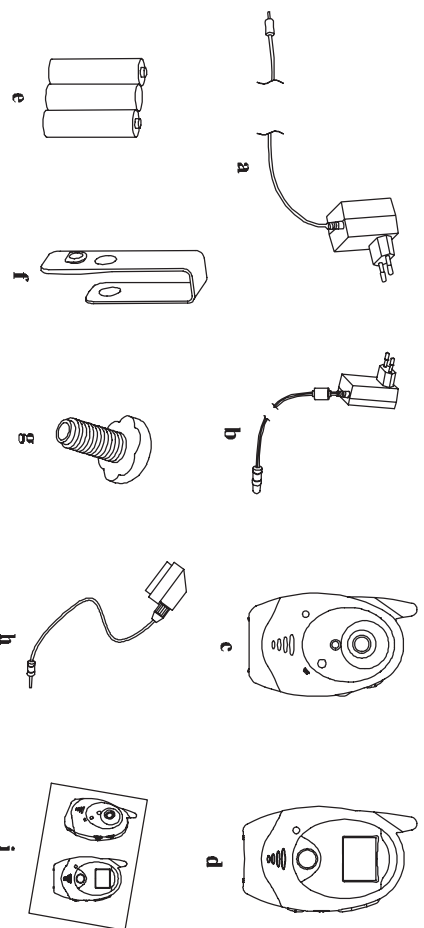


PRECAUTION

- Use only the supplied AC adapter and switching power supply, use of other adapters may cause damage to the video monitor
- When not using the monitor for a long period of time, remove all batteries from the camera and parent unit to avoid damage due to battery leakage
- Disconnect the AC adapter and switching power supply from the wall outlet when the monitor is not to be operated.
- The monitor is best performed within a temperature range of 0°C to + 55°C
- Do not leave the monitor expose to strong sunlight for a long time or nearby any heat source, moisture and excessive dusty environment.
- Do not open the cabinet, no serviceable part inside.

STANDARD ACCESSORIES

- 9V 300mA AC adapter for camera unit x 1 pce
- 6V 2A switching power supply for parent unit x 1 pce
- Camera unit x 1 pce
- Parent unit x 1 pce
- Rechargeable Ni-MH battery x 3 pcs
- Mounting fixture x 1 pce
- Spiral rod x 1 pce
- AV Cable
- Instruction manual x 1 pce



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TROUBLE SHOOTING GUIDE

Problem	Possible Causes	Solutions
No audio or video signal is transmitted when switch ① is set to VOX	<ul style="list-style-type: none"> - Mic sensitivity is too low - Battery has run down or AC adapter improperly connected - Mic sensitivity is too high 	<ul style="list-style-type: none"> - Adjust mic sensitivity higher using knob ② - Replace with new battery or check connection - Adjust mic sensitivity lower using knob ③ such that transmission become voice activated
Always Transmission	<ul style="list-style-type: none"> - Switch ② is set to Off 	<ul style="list-style-type: none"> - Set switch ② to ON or VOX
No picture on screen only audio is heard	<ul style="list-style-type: none"> - Channel or digital code setting is different in camera and parent unit - Camera unit battery has run down - Distance between camera and parent unit exceed operating range - Interference from other devices operating in same channel 	<ul style="list-style-type: none"> - Set the same channel and digital code in both in camera and parent unit - Replace with new battery or use AC adapter - Move cam era and parent unit closer together - Switch to another channel
Out-of-range alarm always on	<ul style="list-style-type: none"> - Reaches the operating range limit of video signal - Light intensity too low in baby's room camera unit operates under night vision mode using infrared LED as source of illumination 	<ul style="list-style-type: none"> - Move parent unit closer to camera unit - Increase light intensity of baby's room
Picture on screen becomes black while and/or flickering	<ul style="list-style-type: none"> - Battery has run down - Rechargeable battery is damaged 	<ul style="list-style-type: none"> - Recharge battery using switching power supply (parent unit). Replace with new battery or use AC adapter (camera unit) - Replace with new rechargeable battery
Always showing low battery	<ul style="list-style-type: none"> - Switch ③ is set to ON - Switch ④ is set to ON 	<ul style="list-style-type: none"> - Set switch ③ to VOX position - Set switch ④ to OFF or VOX (in case switch ③ is set to ON)
Battery life is short	<ul style="list-style-type: none"> - Camera unit is located near other electrical appliances - Many partitions between camera and parent unit - Camera unit battery has run down 	<ul style="list-style-type: none"> - Remove electrical appliances or relocate camera unit far away from source of interference or change to another channel - Relocate camera and parent unit - Replace with new battery or preferably use AC adapter
Many static noise and interference	<ul style="list-style-type: none"> - Scan button ⑤ is pressed and the parent unit is under scanning 	<ul style="list-style-type: none"> - Press either CH1 or CH2 to exit from scanning
Too short communication range		
Video and audio comes on and off at regular interval		

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FCC Notice To Users

Techwall is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.