

**HTC-65GWD
WIDE DYNAMIC CAMERA
USER'S MANUAL**

1 INTRODUCTION

OSD function control

Day/Night function: Auto switch from Color to B/W with ICR

Camera ID: up to 12 characters

Adjustable function: Wide Dynamic Range, Back light compensation, Gain control,
White Balance, Digital Slow Shutter

Remote-control : RS-485

Dual Voltage: DC 12V / AC 24V

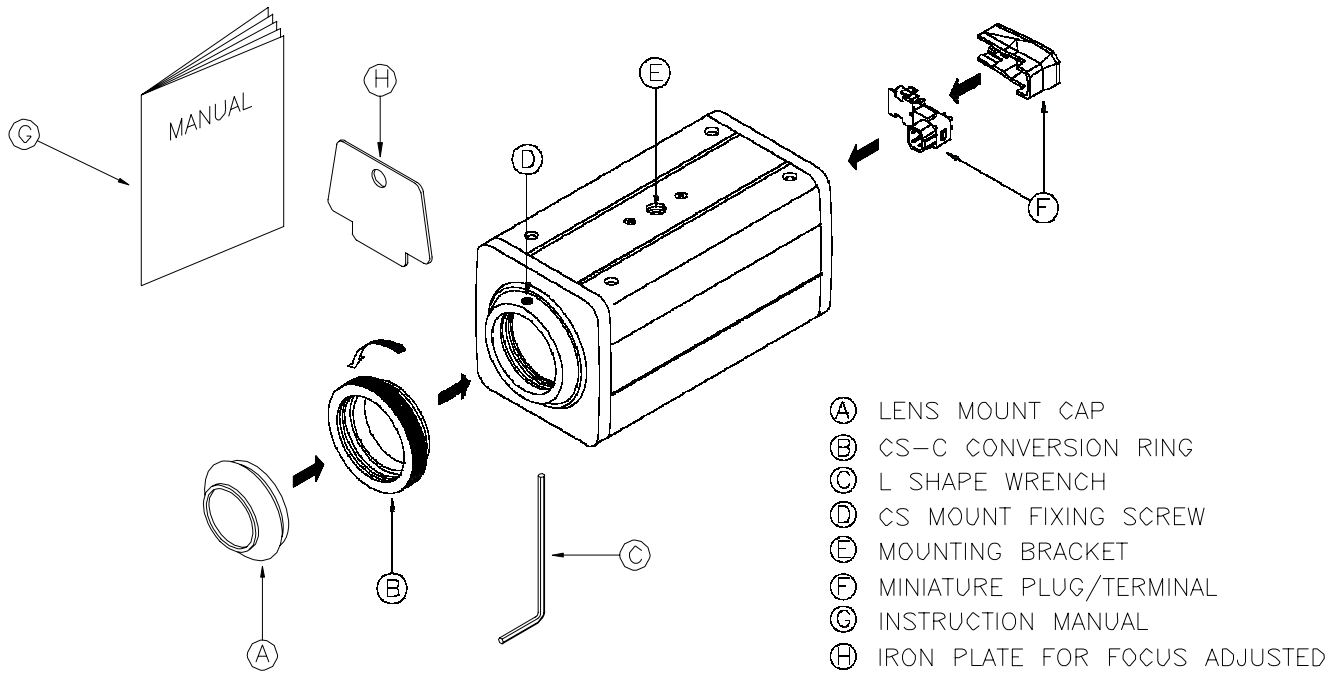
2 SPECIFICATION

ITEM NO.	HTC-65GWD
Pick-up Device	1/3" image sensor
Picture Elements (H*V)	742*554
H. Sync. Frequency	NTSC : 15.734KHz , PAL : 15.625KHz
V. Sync. Frequency	NTSC : 59.94Hz , PAL : 50Hz
Synchronization	Internal / Linelock
Sensitivity	0.5 Lux at F1.2
Camera ID	ON(12 characters , position setting) / OFF switchable
Day/Night	ON / OFF switchable
Wide Dynamic	High/Normal/Custom/Off
Dynamic Range	120dB Max. , 102dB typical
Auto White Balance Range	2000K~11000K
Resolution	480 TVL(Norma) / 520 TVL(High)
Back Light Compensation	ON/OFF switchable
Slow Shutter	Off , x2 , x4 , x8 , x16 , x32
Gain Control	High / Medium / Custom / Low
Lens	CS mount
Video Output	1Vp-p , 75Ohms
S/N Ratio	More than 48 dB
Power Supply	Dual Power DC 12V / AC 24V(±10%)
Power Consumption	240mA at DC 12V , 3W at AC 24V
Dimension(mm)	102*59*59
Weight	320g
Storage Temperature	-10 ~ +60
Operation Temperature	-10 ~ +60

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

3 HARDWARE OVERVIEW

3.1 SYSTEM ACCESSORIES



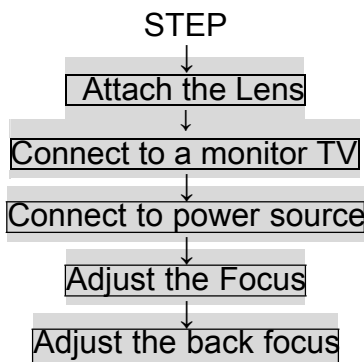
3.2 CONTROL PANEL



AC 24V/DC 12V
DUAL POWER

4 CONNECTION & ADJUSTMENTS

- A. Before connection, make sure that power of all units is OFF and cords are unplugged.
- B. Mount a lens onto the camera.
- C. Connect a video terminal of the camera and the video input terminal of a monitor TV with a 75 Ω coaxial cable.
- D. Connect the power terminal of the camera to a power supply.



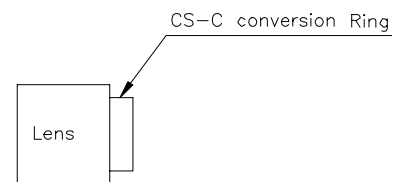
CAUTION:

Installation should conform to all local codes.
Lens, coaxial cable for video signal and power supply are not supplied with the camera.

Connect the power cord and turn the power ON. Adjust the iris and focus of the lens to obtain the optimum image.

4.1 USING NORMAL LENS

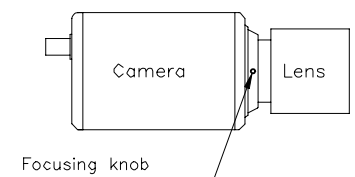
CS-mount lens mode is the standard type. When use C-mount lens, please use the CS-C conversion Ring.



4.2 USING THE ZOOM LENS

(Adjustment of the back focus)

The camera is set at the standard back focus position when shipped from factory. Depending on types of zoom lenses, however slight adjustment may be necessary.



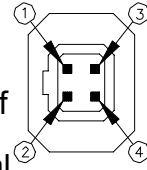
Adjust the lens back-focus by turning the focusing knob in either direction.

- A. Place an object at any fixed distance and set the focus ring of the zoom lens to be used with.
- B. Set the zoom lens to fully TELE position and obtain the best focus position by turning the focus ring of the zoom.
- C. Then set the zoom lens to fully WIDE position and obtain the best focus position by turning the focusing knob.
- D. Repeat the procedures B and C until focus remains in constant among the zoom range.

4.3 USING AN AUTO IRIS LENS

A. DC driver lens

When auto iris lens is used, set AI DRIVER switch to DC position and connect the plug of the lens (for iris terminal) to the IRIS terminal on the back of camera.



- DC
1. DAMP (-)
 2. DAMP (+)
 3. DRIVER (+)
 4. DRIVER (-)

B. DC Drive Level

When you use a DC Driver Lens you can adjust the DC Drive Level for the bright of video output.

RS-485 CONTROL CODES:

BAUD RATE	9600 bps
UP	20H,01H,02H,DCH
DOWN	20H,01H,03H,DBH
LEFT	20H,01H,04H,DAH
RIGHT	20H,01H,05H,D9H
ENTER	20H,01H,00H,DEH
DISPLAY MENU	20H,01H,06H,D8H
EXIT MENU	20H,01H,07H,D7H

FUNCTION KEY & OSD INDICATION :

- ☐ ▲ ▾ : UP key on OSD setting.
- ☐ ▼ ▾ : DOWN key on OSD setting.
- ☐ ▶ ▾ : RIGHT key for selecting or adding value on OSD setting.
- ☐ ◀ ▾ : LEFT key for selecting or decreasing value on OSD setting.
- ☐ SET ▾ : Menu/ Enter/ Confirm key.

NOTE: Please press the SET key more than 2 Seconds to get into MENU Setup.

OSD INDICATION :

If there is ☐ ◀ ▾ comes with each item of OSD, it means there is sub-menu. Please press SET key to execute, go to next page, or return to previous page.

MENU SETUP

Main Menu: Power on the WD Camera and press SET key for 2 seconds and then the following Main Menu will appear.

MAIN MENU	
>	PRESET NORMAL/CUSTOM/OUTDOOR/INDOOR
	EXPOSURE◀▾
	WHITE BALANCE◀▾
	VIDEO◀▾
	SYSTEM◀▾
	LOAD DEFAULT◀▾
	RESET CAMERA◀▾
	EXIT MENU◀▾

(I) PRESET : Set up the place of WD camera. Press UP or DOWN key to select PRESET and press LEFT or RIGHT key to select 4 kinds of preset modes as follows.

1. NORMAL : Default Setting.
2. CUSTOM : Customized Setting.
3. OUTDOOR : Setting for outdoor use.
4. INDOOR : Setting for indoor use.

(II) EXPOSURE :

EXPOSURE	
>	IRIS◀▾
	DAY/NIGHT ON◀▾/OFF
	WIDE DYNAMIC NORMAL/OFF/CUSTOM◀▾/HIGH
	AGC HIGH/MEDIUM/CUSTOM◀▾/LOW
	SLOW SHUT TIME OFF/X2/X4/X8/X16/X32
	BACKLIGHT ON◀▾/OFF
	RETURN◀▾

1. IRIS : Press UP or DOWN key to select IRIS and press SET key and then the following menu will appear.

IRIS	
>	LENS SELECT MANUAL/DC
	DC GAIN MIN ----- MAX
	RETURN◀▾

- Press UP or DOWN key to select LENS SELECT and press LEFT or RIGHT key to choose Manual or Auto IRIS.
- Press UP or DOWN key to select DC GAIN and press LEFT key to decrease value or press RIGHT key to increase value.
- Press UP or DOWN key to select RETURN and press SET key to return to previous page.

2. DAY/NIGHT : Press UP or DOWN key to select DAY/NIGHT and press LEFT or RIGHT key to enable (ON) or disable (OFF).

DAY/NIGHT FUNCTION:

- DAY/NIGHT function ON: Press SET key and then the following menu will appear.

	DAY/NIGHT
>	D/N THRESHOLD↵
	DELAY TIME MIN ----- MAX
	RETURN↵

Press UP or DOWN key to select D/N THRESHOLD and press SET key and then the following menu will appear.

	D/N THRESHOLD
>	D->N MIN ----- MAX
	N->D MIN ----- MAX
	RETURN↵

- Press UP or DOWN key to select D->N and press LEFT or RIGHT key to adjust value (this value will be changed by AGC setting).
- Press UP or DOWN key to select N->D and press LEFT or RIGHT key to adjust value (this value will be changed by AGC setting).
- Press UP or DOWN key to select RETURN and press SET key to return to previous page.

Press UP or DOWN key to select DELAY TIME and press LEFT key to decrease DELAY TIME and press RIGHT key to increase DELAYTIME.

Press UP or DOWN key to select RETURN and press SET key to return to previous page.

3. WIDE DYNAMIC : Press UP or DOWN key to select WIDE DYNAMIC and press LEFT or RIGHT key to adjust 4 kinds of WD modes as follows.

4 kinds of WD modes:

- HIGH.
- NORMAL.
- CUSTOM : Customized Setting.
- OFF.

- ◇ Select CUSTOM and press SET key and then the following menu will appear.

	WD RANGE
>	LEVEL MIN --- --- --- --- MAX
	RETURN↵

- Press UP or DOWN key to select LEVEL and press LEFT key to decrease WD level or press RIGHT key to increase WD level.
- Press UP or DOWN key to select RETURN and press SET key to return previous page.

4. AGC : Press UP or DOWN key to select AGC and press LEFT or RIGHT key to select 4 kinds of AGC level.

- HIGH.
- MEDIUM.
- LOW.
- CUSTOM : Customized Setting.

Select CUSTOME and press SET key and then the following menu will appear.

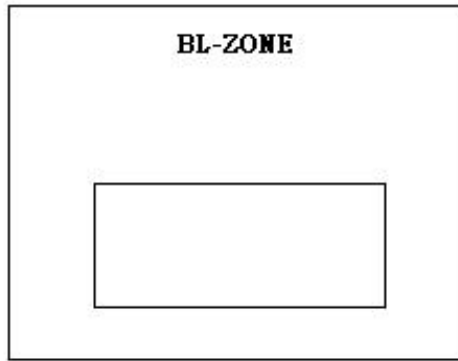
	AGC
>	LEVEL MIN --- --- --- --- MAX
	RETURN↵

- ◇ Press UP or DOWN key to select LEVEL and press LEFT key to decrease AGC level or press RIGHT key to increase AGC level.
- ◇ Press UP or DOWN key to select RETURN and press SET key to return to previous page.

5. SLOW SHUT TIME : Press UP or DOWN key to select SLOW SHUT TIME and press LEFT or RIGHT key to adjust SLOW SHUT TIME (6 choices).

6. BACKLIGHT : Press UP or DOWN key to select BACKLIGHT and press LEFT or RIGHT key to enable (ON) or disable (OFF) BACKLIGHT.

- BACKLIGHT function ON: Press SET key and then the following menu will appear.



When the frame is with WHITE color, press UP, DOWN, LEFT, or RIGHT key to move BACKLIGHT detection area. And then press SET key, the frame will be with Green color.

When the frame is with GREEN color, press UP, DOWN, LEFT, or RIGHT key to enlarge BACKLIGHT detection area. And then press SET key, the frame will be with RED color.

When the frame is with RED color, press UP, DOWN, LEFT, or RIGHT key to narrow BACKLIGHT detection area. And then press SET key, the frame will be with WHITE color.

Press SET key again to exit BACKLIGHT setting.

7. RETURN : Press UP or DOWN key to select RETURN and press SET key to return to previous page.

(III) WHITE BALANCE :

WHITE BALANCE	
>	WB MODE ATW←/AWB←/MANUAL←
	RETURN←

1. WB MODE : Press UP or DOWN key to select WB MODE and press LEFT or RIGHT key to select 3 kinds of WB modes).

- ATW : Auto Tracking White Balance. With ATW mode, it will adjust automatically in different environment. After ATW is selected and press SET key, the following menu will appear.

WHITE BALANCE LIMITS	
>	LOW LIMIT 2K --- --- --- --- 5.5K
	HIGH LIMIT 5.5K --- --- --- --- 11K
	RETURN←

Press UP or DOWN key to select LOW LIMIT and press LEFT or RIGHT key to adjust WHITE BALANCE LOW LIMIT.

Press UP or DOWN key to select HIGH LIMIT and press LEFT or RIGHT key to adjust WHITE BALANCE HIGH LIMIT.

Press UP or DOWN key to select RETURN and press SET key to return to

previous page.

- **AWB** : Auto White Balance. With AWB mode, it will save the current white balance value in a certain environment as a reference of the color temperature. Thus, no matter the environment is changed, it won't effect color temperature. After AWB selected, press SET key to get white balance value based on the current environment.
- **MANUAL** : Adjust white balance by Manual. After MANUAL is selected, press SET key, the following menu will appear.

	MANUAL WHITE BALANCE	
>	ADJ MODE	KELVIN↵ / R/B↵
	RETURN↵	

Press UP or DOWN key to select ADJ MODE and press LEFT or RIGHT key to adjust values of 2 kinds of MANUAL WB modes.

- ◇ After KELVIN selected and press SET key, the following menu will appear.

	KELVIN ADJUST	
>	KELVIN	MIN --- --- --- --- MAX
	RETURN↵	

- Press UP or DOWN key to select KELVIN and press LEFT key to decrease WB value or press RITHT key to increase WB value.
- Press UP or DOWN key to select RETURN and press SET key to return to previous page.
- ◇ After R/B is selected and press SET key, the following menu will appear.

	R/B ADJUST	
>	RED	MIN --- --- --- --- MAX
	BLUE	MIN --- --- --- --- MAX
	RETURN↵	

- Press UP or DOWN key to select RED and press LEFT key to decrease WB RED element value or press RIGHT key to increase WB RED element value.
- Press UP or DOWN key to select BLUE and press LEFT key to decrease WB BLUE element value or press RIGHT key to increase WB BLUE element value.
- Press UP or DOWN key to select RETURN and press SET key to return to previous page.

2. **RETURN** : Press UP or DOWN key to select RETURN and press SET key to return to previous page.

(IV) VIDEO :

	VIDEO
>	BRIGHTNESS↵
	SHARPNESS↵
	SATURATION↵
	RESOLUTION HIGH/NORMAL
	B/W MODE COLOR / BW
	RETURN↵

1. BRIGHTNESS : Press UP or DOWN key to select BRIGHTNESS and press SET key and then the following menu will appear.

	BRIGHTNESS
>	LEVEL MIN --- --- --- --- MAX
	RETURN↵

- Press UP or DOWN key to select LEVEL and press LEFT key to decrease BRIGHTNESS LEVEL or press RIGHT key to increase BRIGHTNESS LEVEL.
- Press UP or DOWN key to select RETURN and then press SET key to return to previous page.

2. SHARPNESS : Press UP or DOWN key to select SHARPNESS and press SET key and then the following menu will appear.

	SHARPNESS
>	SHARPNESS MIN --- --- --- --- MAX
	APERTURE MIN --- --- --- --- MAX
	RETURN↵

- Press UP or DOWN key to select SHARPNESS and press LEFT key to decrease SHARPNESS or press RIGHT key to increase SHARPNESS.
- Press UP or DOWN key to select APERTURE and press LEFT key to decrease APERTURE or press RIGHT key to increase APERTURE.
- Press UP or DOWN key to select RETURN and press SET key to return to previous page.

3. SATURATION : Press UP or DOWN key to select SATURATION and press SET key and then the following will appear.

	SATURATION
>	LEVEL MIN --- --- --- --- MAX
	RETURN↵

- Press UP or DOWN key to select LEVEL and press LEFT key to decrease SATURATION LEVEL or press RIGHT key to increase SATURATION LEVEL.
- Press UP or DOWN key to select RETURN and press SET key to return to previous page.

4. RESOLUTION : Press UP or DOWN key to select RESOLUTION and press LEFT or RIGHT key to select HIGH or NORMAL RESOLUTION.
5. B/W MODE : Press UP or DOWN key to select B/W MODE and press LEFT or RIGHT key to select COLOR or BW mode.
6. RETURN : Press UP or DOWN key to select RETURN and press SET key to return to previous page.

(V) SYSTEM :

SYSTEM	
>	SETUP ID↵
	LANGUAGE ENGLISH/TRADITIONAL CHINESE/ SIMPLIFIED CHINESE
	SYNC INTERNAL/LINELOCK↵
	FW VERSION
	RETURN↵

1. SETUP ID : Press UP or DOWN key to select SETUP ID and press SET key and then the following menu will appear.

CAMERA ID MENU	
>	DISPLAY ID ON/OFF
	CAMERA ID↵
	ID POSITION UP-LEFT/UP-CENTER/UP-RIGHT/DWN-LEFT/DWN-CENTER/DWN-RIGHT
	RETURN↵

- Press UP or DOWN key to select DISPLAY ID and press LEFT or RIGHT key to enable (ON) or disable (OFF) Camera ID.
 - Press UP or DOWN key to select CAMERA ID and press LEFT or RIGHT key to select the 1st character. After 1st character selected, press SET key to save and move to the 2nd character automatically and so on. After all characters selected, press UP or DOWN key to exit setup.
 - Press UP or DOWN key to select ID POSITION and press LEFT or RIGHT key to choose a place of Camera ID.
 - UP-LEFT.
 - UP-CENTER.
 - UP-RIGHT.
 - DWN-LEFT : DOWN-LEFT.
 - DWN-CENTER : DOWN-CENTER.
 - DWN-RIGHT : DOWN-RIGHT.
 - Press UP or DOWN key to select RETURN and press SET key to return to previous page.
2. LANGUAGE : Press UP or DOWN key to select LANGUAGE and press LEFT or RIGHT key to select ENGLISH, TRADITIONAL CHINESE or SIMPFIFIED CHINESE.
 3. SYNC : Press UP or DOWN key to select SYNC and press LEFT or RIGHT key to choose INTERNAL or LINELOCK.

After LINELOCK is selected and press SET Key, the following menu will appear.

	LINELOCK
>	V PHASE 0 --- --- --- --- 624
	RETURN↵

- Press UP or DOWN key to select V PHASE and press LEFT or RIGHT key to adjust VERTICAL PHASE.
- Press UP or DOWN key to select RETURN and press SET key to return to previous page.

4. FW Version : Firmware Version.

5. RETURN : Press UP or DOWN key to select RETURN and press SET key to return to previous page.

(VI) LOAD : LOAD Default.

	LOAD DEFAULT SETTINGS?
>	NO↵
	YES↵

1. NO : Press UP or DOWN key to select NO and press SET key to return to previous page. In the other words, it won't LOAD DEFAULT.
2. YES : Press UP or DOWN key to select YES and press SET key to LOAD DEFAULT. In addition, it will get back to previous page automatically.

(VII) RESET CAMERA : Press UP or DOWN key to select RESET CAMERA and press SET key to RESET. It will recover the previous setting.

(VIII) EXIT MENU : Press UP or DOWN key to select EXIT MENU and press SET key to EXIT OSD MENU. In addition, it will save all settings.