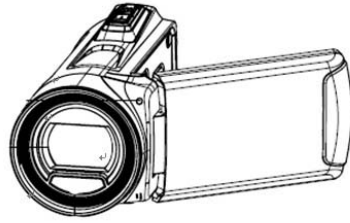


USER'S MANUAL

Haier

使用说明书 USER'S MANUAL



DV-V20

数码摄像机
Digital Camcorder

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感谢您购买本数码摄像机，在使用前请认真阅读本说明，请将本说明书妥善保管，以便以后阅读。

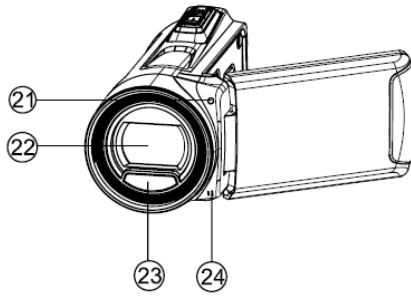
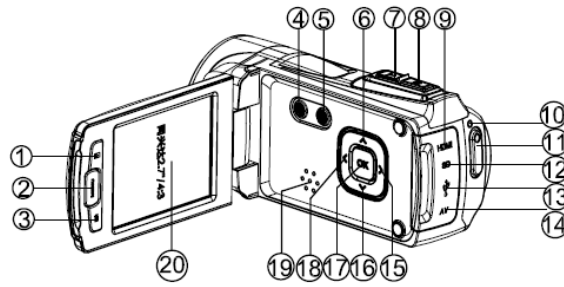
安全信息

在使用摄像机前，请确保阅读并了解以下安全措施。

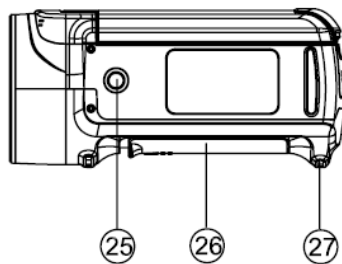
- 请勿试图打开摄像机外壳或以任何方式改变摄像机。只有授权的维修人员才能对本摄像机进行维修。
- 使用本摄像机时请远离水和其他液体. 不要用湿手使用本摄像机。切勿在雨中或雪中使用摄像机。潮湿容易导致电击。
- 仅使用推荐的电源附件，使用非推荐的电源可能导致过热，设备变形，着火，电击等。

1. 摄像机部件

- 1: 回放按键
- 2: 菜单按键
- 3: 删除按键
- 4: 电源按键
- 5: 模式按键
- 6: 向上
- 7: 放大按键
- 8: 缩小按键
- 9: HDMI 接口
- 10: 电源/充电指示灯
- 11: 快门按键
- 12: SD 卡插槽
- 13: USB 接口
- 14: AV 输出接口
- 15: 向右/补光 LED 开/关
- 16: 向下
- 17: 确认按键
- 18: 向左/显示按键
- 19: 扬声器



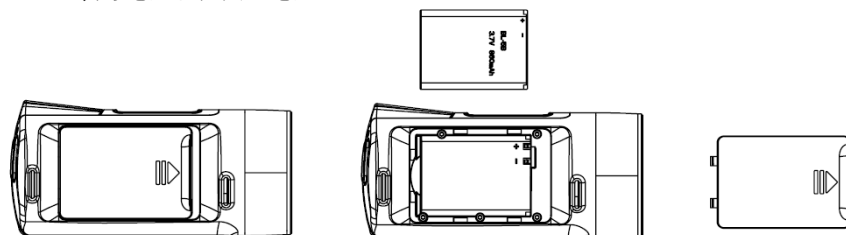
- 20: 液晶显示屏
- 21: 自拍指示灯
- 22: 镜头
- 23: LED 灯
- 24: 麦克风
- 25: 三角架底座
- 26: 电池盖
- 27: 手腕带



2. 使用准备

插入电池

1. 滑动电池盖，打开电池门。
2. 将附带的锂电池装入电池箱中。请注意电池安装方向。
3. 装好电池后，关上电池盖。



对电池充电

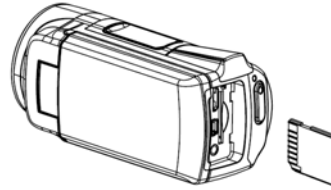
第一次使用该充电电池时，请至少对该电池充电 8 小时以上。

- a) 请将摄像机处于关机状态，用附带的 USB 线将摄像机与计算机相连。
- b) 连接成功后充电指示灯变蓝，表示充电开始。充电指示灯熄灭，表示充电完成。
- c) 断开摄像机。

插入存储卡

本摄像机没有内置的存储器，不能拍照和录像。如果您想要拍照和摄像，请使用 SD 卡或 MMC 卡（本摄像机支持 SD/MMC 卡的最大容量达 32GB）。在插入或拿出存储卡前请先关机。在插卡前请确保插卡的方向正确。当插卡感觉有阻力的时候请不要强制插卡。存储卡有个写保护开关，可以防止数据被意外的删除。因此，如果你想存储或删除文件，请使写保护开关处于关的状态。

1. 使摄像机处于关机状态。
2. 在摄像机的侧面可找到橡胶盖，
打开该橡胶盖可以看到 SD 卡卡槽。
3. 如图所示插入存储卡。
4. 关闭橡胶盖。



- 如果想要取出存储卡，请轻轻按存储卡的边缘，然后松开，存储卡弹出。

格式化存储卡

第一次使用本摄像机时，请记得对存储卡进行格式化。格式化会将存储卡中所有的数据删除(包括被保护的文件)。所以在格式化前请对重要的文件进行备份。

- 1: 开启摄像机，按【菜单】键显示菜单，再按向【右】键进入【设置】菜单。
- 2: 按向【上】或向【下】键选择【格式化】，然后按【确认】键进入到该项的子菜单。
- 3: 按向【上】或向【下】键选择【是】，然后按【确认】键将清除所有数据。

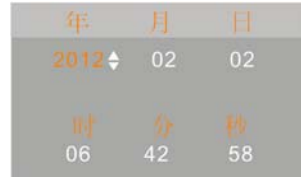
设置语言

购买后第一次使用本摄像机，请在使用前务必选择一种语言并设置日期和时间。

- 1: 开启摄像机，按【菜单】键显示菜单，再按向【右】键进入【设置】菜单。
- 2: 按向【上】或向【下】键选择【语言】，然后按【确认】键进入到该项的子菜单。
- 3: 按向【上】或向【下】键来选择您需要的语言，然后按【确认】键确认其设置并退出菜单。

设置日期和时间

- 1: 开启摄像机，按【菜单】键显示菜单，再按向【右】键进入【设置】菜单。
- 2: 按向【上】或向【下】键选择【日期和时间】，然后按【确认】键进入到日期和时间的子菜单。
- 3: 按向【上】或向【下】键来改变日期时间的数值，按向【左】或向【右】键来来选择年、月、日、时、分、秒的设置。
- 4: 按【确认】键来确认日期与时间的设置并退出菜单。

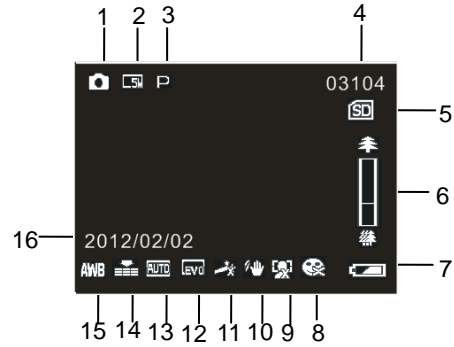


LCD 显示屏






拍照模式[📷]

1. 相机模式

-  拍摄静止图片
-  视频录制
-  音频录制
-  回放







2. 图片大小

	4000X3000
	3648x2048
	2592x1944
	2048x1536
	1920x1080

4. SD 卡可拍照的张数

6. 数码变焦图标

7. 电池电量水平

	满
	一半
	低
	耗尽



9. 人脸侦测

	开
	关

3. 场景模式

	自动
	运动
	夜景
	人物
	风景
	背光
	派对
	海滩
	高感光度

5. 插入SD卡图标

	非写保护状态
	写保护状态

8. 笑脸拍摄

	开
	关

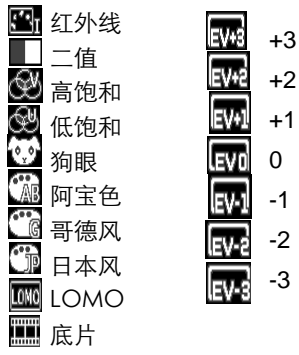
10. 防抖动

	开
	关

11. 摄影效果



12. 曝光



13. 感光度



14. 画质



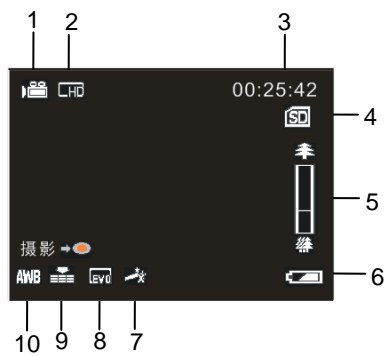
15. 白平衡



16. 日期印记

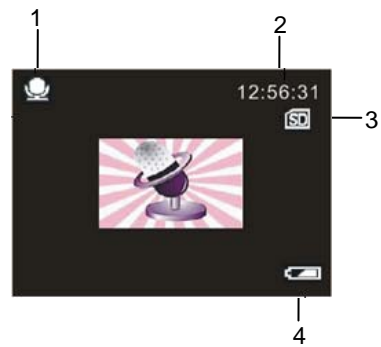
视频录制模式 [📹]

1. 视频录制图标
2. 视频尺寸
3. 可录制视频的时间
4. 插入 SD 卡图标
5. 数码变焦图标
6. 电池电量水平
7. 摄影效果
8. 曝光值
9. 画质
10. 白平衡






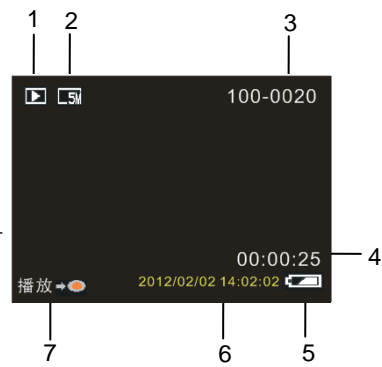
音频录制模式 [🎤]

1. 音频录制图标
2. 可录制音频的时间
3. 插入 SD 卡图标
4. 电池电量水平



回放模式 []

1.  回放图片图标
2.  回放录像图标
3.  回放音频图标
2. 图片/视频尺寸
3. SD 卡的文件目录/当前图片序号/视频序号
4. 视频录制时间
5. 电池电量水平
6. 日期印记
7. 按快门键播放视频文件



3. 基本操作

打开和关闭摄像机

- 1). 打开液晶显示屏，摄像机自动开启。闭合液晶显示屏，摄像机将关闭。
- 2). 您也可以按【电源】键开启摄像机，再次按【电源】键3秒可关闭摄像机。

为了节省电池电量，您可以通过【设置】菜单中的【自动关机】功能来设置自动关机的时间。


模式转换

本摄像机有四种模式。按【模式】键来改变本摄像机的录制模式。每按一次【模式】键摄像机的模式将改变一次。

图标	模式	描述
	拍照模式	拍摄静止的图片
	视频模式	录制视频片断或剪辑
	音频模式	录制音频文件
	回放模式	回放预览照片，视频，音频文件


注：按【回放】键进入回放模式。

录像

- 1: 开启摄像机，将摄像机设置为录像模式()。
- 2: 数字变焦：
按【放大】或【缩小】键来放大或缩小液晶显示屏上的图片。数字变焦的倍数级别将显示在液晶显示屏上。
- 3: 按【快门】键开始录像。
- 4: 按【确认】键暂停录制，再次按【确认】键继续录制。
- 5: 再次按【快门】键停止录制。如果存储卡的内存已满，本摄像机将自动停止录制。

- 液晶显示屏的上方显示已录制的时间。
- 当光线不足时，可按【向右/补光 LED】键来打开补光灯，当光线足够时，再次按【向右/补光 LED】键将关闭补光灯。

拍照






- 1: 设置摄像机为拍照模式，液晶显示屏显示图标()。
 - 2: 数字变焦:
按【放大】或【缩小】键来放大或缩小液晶显示屏上的图片。数字变焦的倍数级别将显示在液晶显示屏上。
 - 3: 稳稳地握住摄像机并按【快门】键进行拍照。
- 当光线不足时，可按【向右/补光 LED】键来打开补光灯，当光线足够时，再次按【向右/补光 LED】键将关闭补光灯。

使用自拍功能

使用自拍来设置按下快门之后和拍摄图像之前的延时时间。


- 1: 开启摄像机，将摄像机设置为拍照模式。
- 2: 按【菜单】键显示拍照菜单，然后按向【左】或向【右】键来选择【拍摄模式】菜单。
- 3: 按向【上】或向【下】键来选择【自拍】或【连拍】选项，然后按【确认】

键进入自拍的子菜单:

-  关闭: 没有延时, 正常拍摄。
-  自拍 2 秒: 快门释放延迟 2 秒。
-  自拍 5 秒: 快门释放延迟 5 秒。
-  自拍 10 秒: 快门释放延迟 10 秒。
-  连拍: 按快门键一次连续拍三张照片。

- 4: 按向【上】或向【下】键来选择您需要的自拍延迟时间, 然后按【确认】键确认其设置并关闭菜单。
- 5: 按【快门】键进行拍照。

录音

- 1: 开启摄像机并将摄像机设置为录音模式()。
- 2: 按【快门】键开始录音。
- 3: 再次按【快门】键停止录制。如果存储卡的内存已满, 本摄像机将自动停止录制。

4. 设置摄像机

当屏幕显示菜单时, 使用向【上】/【下】/【左】/【右】/【确认】键来对该选项进行设置。录音模式没有菜单。

拍照模式下菜单

- 1: 开启摄像机使摄像机处于拍照模式。
- 2: 按【菜单】键显示拍照模式菜单，然后按向【左】或向【右】键选择需要设置的项目。
- 3: 按向【上】或向【下】键来选择一个选项。
- 4: 按【确认】键进入到该选项的子菜单。
- 5: 使用向【上】或向【下】键来选择您需要的项目。
- 6: 按【确认】键确认设置并关闭菜单。

拍照菜单列表

菜单项目	可用选项及功能
模式设置	根据您所拍摄的图片可选择场景模式。场景模式有 10 种： [自动]/[运动]/[夜景]/[人物]/[风景]/[背光]/ [派对]/[海滩]/[高感光度]/[取消]
尺寸	有六个选项供选择： [12M]: 4000x3000; [7MHD]: 3648x2048 HD; [5M]: 2592x1944; [3M]: 2048x1536; [2M]: 1920x1080 [取消]。
人脸侦测	在拍照过程中使用此功能来侦测我们的脸部表情。有 3 个选项供选择。[关]/[开]/[取消]。
笑脸拍摄	设置笑脸拍摄开启，人脸侦测自动打开。一旦它侦测到笑脸，本摄像机将会自动拍照。[关]/[开]/[取消]

拍摄模式	连拍	使用该功能来按一次快门连拍三张照片。 [单张]: 按一次快门只拍一张照片。 [连拍]: 按一次快门连续拍三张照片。 [取消]: 取消本次操作。
	全景拍摄	使用此功能来拍摄整个周围环境, 对准水平方向 180 度和垂直方向 90 度的位置。 [关]/[往上]/[往右]/[取消]
	多重曝光	使用此功能是将两张场景图片叠加到一张图片的特殊效果。即在同一照片上进行两次或更多次的曝光, 以使照片达到特殊的效果。 [关]/[两次曝光]/[长曝光]/ [立体拍摄]/[取消]
	自拍	使用自拍功能来设置按下快门之后和拍摄图像之前的延时时间。本摄像机有五种拍照模式: [关]/[2 秒]/[5 秒]/[10 秒]/[取消]
	取消	取消本次操作。
拍摄设定	感光度	感光度菜单允许您设置主题附近的四周光的敏感度, 敏感值越大, 允许您在黑暗地点拍照的敏感设置越高。 [自动]/[100]/[200]/[400]/[取消].
	防抖动	使用该功能是在拍照时避免我们的手抖动。有三个选项:

		[关]/[开]/[取消]
	拍照防手振	拍照时用于防手抖动。有三个选项： [关]/[开]/[取消]
	日期打印	利用该功能在拍照时将日期和时间添加到照片上，有四个选项： [关]：照片上没有添加日期和时间。 [日期]：仅增加日期到照片上。 [日期和时间]：增加日期和时间到照片上。 [取消]：取消本次操作。
	取消	取消本次操作。
影像设定	白平衡	调整白平衡以适用各种光源。 白平衡有六个选项： [自动]/[太阳光]/[阴天]/[灯泡]/ [日光灯]/[取消].
	曝光	手动设置曝光补偿值以在特殊光线下进行补偿例如室内光线条件，背光条件，或强光条件。曝光补偿值的范围是 -3 至+3.
	光频	根据您所在的地区，光频应设置成 60HZ 或 50HZ. [50HZ]/[60HZ]/[取消].
	画质	选择较低的图像质量可以减少图像所占用的空间，来拍摄更多的图片。画质有四个选项： [超高画质]/[高画质]/[普通]/[取消].

	锐度	您可设置摄像机中图片的锐利度级别。锐利度级别对照片中物体的边缘有截然不同的效果。 [柔和]/[普通]/[锐利]/[取消].
	摄影效果	选择一种数字特效为图片增加特殊效果。 [普通]/[黑白]/[老照片]/[红色]/ [绿色]/[蓝色]/[日落]/[暖色]/[冷色]/ [过曝]/[红外线]/[二值]/[高饱和]/ [低饱和]/[狗眼]/[阿宝色]/[哥德风]/ [日本风]/[LOMO]/[底片]/ [取消].
	饱和度	设置图像的饱和度。 [高]/[普通]/[低]/[取消]
	取消	取消本次操作。

录像模式下菜单

- 1: 在录像模式下按【菜单】键显示视频菜单。然后按向【左】或向【右】键选择需要设置的项目。
- 2: 按向【上】或向【下】键来选择一个选项。
- 3: 按【确认】键进入到该选项的子菜单。
- 4: 使用向【上】或向【下】键来选择您需要的项目。
- 5: 按【确认】键确认设置并关闭菜单。

菜单项目	可用选项及功能	
尺寸	选择较小的尺寸在内存空间大小一样的情况下可以录制的 时间越长。有五个选项： FHD:1920x1080 HD; HD:1280x720 HD; VGA: 640x480; QVGA: 320x240; 取消 .	
影像设定	白平衡	调整白平衡以适用各种光源。 白平衡有六个选项： [自动]/[太阳光]/[阴天]/[灯泡]/ [日光灯]/[取消].
	曝光	手动设置曝光补偿值以在特殊光线下进行补偿 例如室内光线条件，背光条件，或强光条件。 曝光补偿值的范围是 - 3 至+3.
	光频	根据您所在的地区，光频应设置成 60HZ 或 50HZ. [50HZ]/[60HZ]/[取消].
	画质	选择较低的图像质量可以减少图像所占用的空 间，来拍摄更多的图片。画质有四个选项： [超高画质]/[高画质]/[普通]/[取消].
	锐度	您可设置摄像机中图片的锐利度级别。锐利度 级别对照片中物体的边缘有截然不同的效果。 [柔和]/[普通]/[锐利]/[取消].
	拍摄效果	选择一种数字特效为图片增加特殊效果。 [普通]/[黑白]/[老照片]/[红色]/[绿色]/ [蓝色]/[日落]/[暖色]/[冷色]/

		[过曝]/[红外线]/[二值]/[高饱和]/ [低饱和]/[狗眼]/[阿宝色]/[哥德风]/ [日本风]/[LOMO]/[底片]/ [取消].
	饱和度	设置图像的饱和度。 [高]/[普通]/[低]/[取消]
	取消	取消本次操作。

设置菜单

您可以通过设置菜单设置系统项目。

- 1: 开启摄像机，按【菜单】按键显示菜单。然后按向【右】键来选择【设置】菜单。
- 2: 按向【上】或向【下】键来选择一个选项。
- 3: 按【确认】键进入到该选项的子菜单。
- 4: 使用向【上】或向【下】键来选择您需要的项目。
- 5: 按【确认】键确认设置并关闭菜单。

菜单项目	可用选项及功能
自动关闭	为了节省电量，本摄像机在一段时间不工作后自动关机。 该功能有六个选项： [关]/[1 分钟]/[3 分钟]/[5 分钟]/[10 分钟]/[取消].

动作音	设置操作按键音的开与关。
语言	选择一种语言来显示菜单和其它信息。
日期和时间	允许您为本摄像机设置日期和时间。
电视制式	您可用附带的AV线在电视屏幕上浏览图像。根据您所在的区域，电视输出应设置成NTSC或PAL。 [NTSC]: 美国，日本及其它； [PAL]: 欧洲，大洋洲及其它。 [取消]: 取消本次操作。
格式化	格式化将会永久删除存储卡或内置存储器的所有数据。包括被锁定的文件。在格式化前请对重要的文件备份。 [是] / [否]。
恢复默认设置	使整个菜单和按键设置恢复到初始设置状态。 [是] / [否]。
取消	取消本次操作。

5. 回放

回放录像

- 1: 按【回放】键将摄像机设置为回放模式。
- 2: 按向【左】或【右】键来选择您要播放的视频。
- 3: 按【快门】键开始播放，按【确认】键暂停播放，再次按【确认】键继续播放。按向【右】键以 2 倍或 4 倍的速度快进播放影像，按向【左】键以 2 倍或 4 倍的速度快退播放影像。

- 4: 按【快门】键结束播放视频。
- 5: 按向【上】或向【下】键来调整音量大小。

回放照片

- 1: 按【回放】键将摄像机设置为回放模式。
最后录制的文件将显示在液晶显示屏上, 如果存储卡里没有文件液晶显示屏将显示“无文件”。
- 2: 按向【左】或向【右】键来浏览上一张或下一张图像。
- 3: 缩放键:
按【放大】或【缩小】键来放大或缩小照片。当照片放大后, 您可按【确认】键进入移动模式, 使用向【左】/【右】/【上】/【下】键来查看浏览图片的细节。
- 4: 按【确认】键返回到缩放模式。

回放音频文件

- 1: 按【回放】键将摄像机设置为回放模式。
- 2: 按向【左】或【右】键来选择您要播放的音频文件。
- 3: 按【快门】键开始播放, 按【确认】键暂停播放, 再次按【确认】键继续播放。按【快门】键结束播放。
- 4: 按向【上】或向【下】键来调整音量大小。

缩略图模式

在回放模式下按【向下/缩小】键进入缩略图的浏览文件模式。使用向【左】/【右】/【上】/【下】键来选择某个文件，按【确认】键全屏浏览文件。

回放模式下菜单

- 1: 在回放模式下按【菜单】键显示菜单。然后按向【左】或【右】键来选择需要设置的项目。
- 2: 按向【上】或向【下】键来选择一个选项。
- 3: 按【确认】键进入到该选项的子菜单。
- 4: 按向【上】或向【下】键来选择您需要的项目。
- 5: 按【确认】键确认设置并关闭菜单。

菜单项目	可用选项及功能
删除	使用该功能来删除单个或所有文件。 [这张照片]: 删除当前单个文件。[否] / [是] [全部]: 删除所有文件。[否] / [是] [取消]: 取消删除文件操作。
幻灯片回放	间隔几秒钟自动播放文件。 [3 秒]/[5 秒]/[10 秒]/[取消].

旋转	<p>使用该功能来旋转图片。</p> <p>[90°]: 顺时针旋转图片 90 度。</p> <p>[180°]: 顺时针旋转图片 180 度。</p> <p>[270°]: 顺时针旋转图片 270 度。</p> <p>[取消]: 取消旋转图片操作。</p>
裁剪图片	<p>使用该功能来裁剪图片上某一块区域。此功能仅用于静态的图片。</p> <p>[裁剪]: 按【确认】键进入裁剪窗口，按【放大】或【缩小】键来放大或缩小裁剪的区域。按【确认】键向上/下/左/右方向移动裁剪区域。按【快门】键确认其修剪范围，再次按【快门】键保存裁剪区域，按【菜单】键退出裁剪功能。</p> <p>[取消]: 取消裁剪图片操作。</p>
保护	<p>使用该功能以防止文件被不小心删除。</p> <p>[锁定]: 锁定当前文件。</p> <p>[解锁]: 对当前已锁定的文件解锁。</p> <p>[锁定全部]: 锁定所有的文件。</p> <p>[解锁全部]: 对所有已锁定文件解锁。</p> <p>[取消]: 取消本次操作。</p>
打印	<p>使用该功能是在没有计算机的情况下打印照片。需确保有台支持图片连结功能的打印机。然后通过 USB 线将打</p>

印机与摄像机相连。 [执行]/[取消].

6. 建立连接

将摄像机与普通电视机相连

将电视机和摄像机相连，摄像机的液晶显示屏将关闭，电视机相当于摄像机的液晶显示屏。

1. 用附带的AV线将电视机和摄像机相连。
2. 开启摄像机和电视机，将电视机的模式设置为“AV”模式。
3. 当摄像机设置为录制模式时（包括拍照、录像、录音模式）你可以通过电视机来浏览被拍摄的物体。
4. 当摄像机处于回放模式时，你可以通过电视机来浏览和播放已录制的图片，录像和录音文件。

将摄像机与高清电视相连

1. 用高清数据线连接摄像机和高清电视。
2. 打开高清电视，将电视的模式调整为 HDMI 模式。
3. 开启摄像机，当摄像机设置为拍照模式时（可选择五种分辨率尺寸：

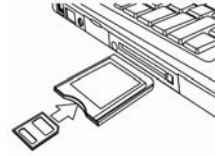
[12M]: 4000x3000; [7M]: 3648x2048; [5M]: 2592x1944;
[3M]: 2048x1536; [2M]: 1920x1080 你可以通过电视机来浏览被拍摄的物体。

4. 将摄像机的模式调整为回放模式。你可以通过电视机来浏览和播放已录制的图片，录像和录音文件。
5. 按向【左】或向【右】键来选择你要播放的文件。
6. 按【快门】按键开始播放，再次按【快门】按键停止播放。
7. 按【确认】按键暂停播放，再次按【确认】按键继续播放。
8. 按向【右】键快进播放选择的文件，向【左】键快退播放选择的文件。
9. 向【上】或向【下】键来调整音量。

将图像下载到计算机

有两种方法可以将图像从摄像机的存储卡下载到计算机中：

- 将 SD 卡插入读卡器中
- 用附带的 USB 线将摄像机和电脑相连。



使用读卡器

1. 从摄像机中弹出存储卡然后将其插入到电脑的读卡器中。
2. 打开【我的电脑】或 windows 资源管理器，然后双击代表存储卡的可移动图标。

3. 将图像从存储卡上复制到计算机中你选择的目录下。

通过 USB 线将摄像机连接到计算机

- 1: 用附带的 USB 线将摄像机连接到计算机的 USB 端口上, 开启摄像机, 当摄像机与计算机成功连接后, 液晶显示屏上显示”移动硬盘”的图标。

注:

- 若要进入 PC CAMERA 模式, 请按以下步骤操作:
 - 首先长按快门键几秒, 然后用 USB 线将摄像机与电脑相连。开启摄像机, 当摄像机与计算机成功连接后, 液晶显示屏上显示"PC CAMERA"图标。
 - 2: 打开【我的电脑】或 windows 资源管理器, 然后双击代表存储卡的可移动图标。所有的文件存储在一个名为"DCIM" 的文件夹中。
 - 3: 将图像文件从 “DCIM” 文件夹中复制到计算机中您选择的目录下。

7. 技术指标

感光器	500 万像素 CMOS
显示屏	2.7" (4:3) TFT 液晶显示屏
拍摄范围	标准: 1.5m ~ 无穷
镜头	F/3.1, f=7.5mm
快门	电子快门: 1/2 ~ 1/1800 秒.

分辨率	静态图片: [12M]: 4000x3000; [7MHD]: 3648x2048 HD; [5M]: 2592x1944; [3M]: 2048x1536; [2M]: 1920x1080 视频文件:: FHD:1920x1080 HD; HD:1280x720 HD; VGA: 640x480; QVGA: 320x240;
感光度	自动 /100/200/400
白平衡	[自动]/[太阳光]/[阴天]/[灯泡]/[日光灯]
曝光补偿	-3EV to +3EV 以 1.0 为间隔
连拍	连拍 3 张
照片效果	[普通]/[黑白]/[老照片]/[红色]/[绿色]/[蓝色]/ [日落]/[暖色]/[冷色]/[过曝]/[红外线]/[二值]/ [高饱和]/[低饱和]/[狗眼]/[阿宝色]/[哥德风]/ [日本风]/[LOMO]/[底片]
自拍	2/5/10 秒.
存储器	外置: SD/MMC卡
输出电视制式	NTSC / PAL
数码变焦	4 倍数码变焦
电源	锂电池
环境温度	操作温度: 0° C 至 40° C; 存储温度: -20 至 60°

麦克风	内置
扬声器	内置
尺寸	120.2x58.3x56 (mm)
重量	单机: 约285g

合格证
Certificate of Quality

检验员:

苏州海尔信息科技有限公司
制造商地址：玉山镇城北环庆路15号
执行标准：Q/320583 ALHE003-2008
JB/T 10362-2010
全国服务电话：4006 999 999-3
Suzhou Haier Information Technology Co.,Ltd.
Address:No.15 North Huan Qing Road,Yushan Town,
Kunshan, Jiangsu,P.R.China
Standard: Q/320583 ALHE003-2008
JB/T 10362-2010

版次:2012年7月第一版

Haier

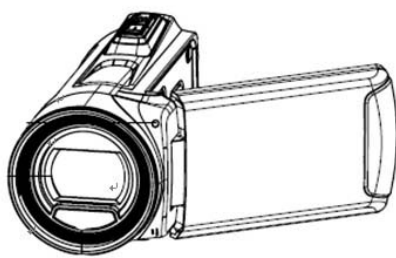
USER'S MANUAL

DV-V20

Digital Camcorder

Haier

USER'S MANUAL



DV-V20

Digital Camcorder

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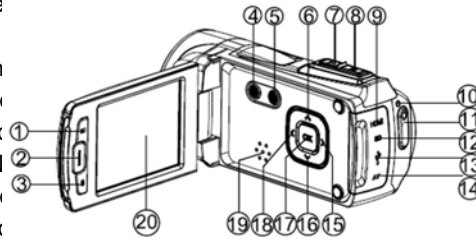
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Thank you for purchasing this product. Please read these operating instructions carefully in order to use the digital video camera correctly. Keep the instructions in a safe place after reading so that you can refer to them later.

Precautions

Before using the camcorder, please ensure that you read and understand the safety precautions describe

- Do not try to open the case camcorder in any way. Main only by authorized service pr
- Keep the camcorder away fr
- Use only the recommended p

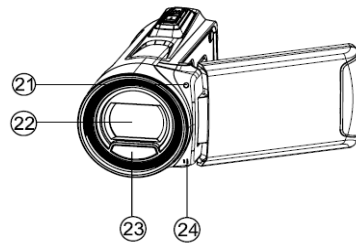
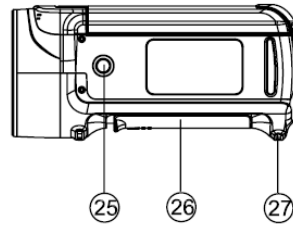


- Moisture creates the danger
- expressly recommended for this equipment may lead to overheating, distortion of the equipment, fire, electrical shock or other hazards.

1. Parts of the camcorder

- 1: Playback button
- 2: Menu button
- 3: Delete
- 4: Power button
- 5: Mode button

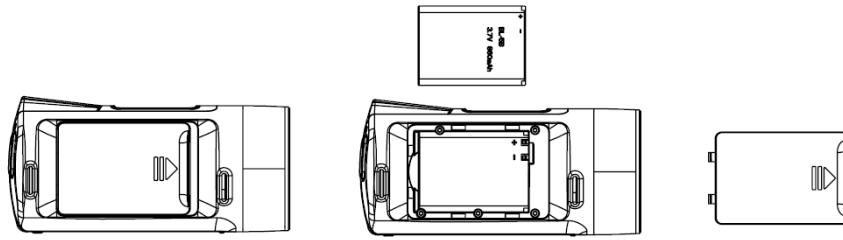
- 6: Up button
- 7: Zoom in button
- 8: Zoom out button
- 9: HDMI jack
- 10: Power/Charging indicator light
- 11: Shutter button
- 12: SD Card slot
- 13 :USB jack
- 14: AV out jack
- 15: Right/LED On/Off button
- 16: Down/Zoom out button
- 17: OK button
- 18: Left/Display button
- 19: Speaker
- 20: LCD screen
- 21: Self-timer LED
- 22: Lens
- 23: LED light
- 24: Microphone
- 25: Tripod socket
- 26: Battery cover



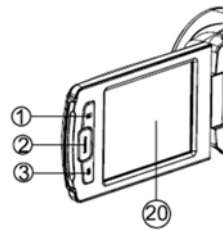
2. Preparing for using

Installing the Battery

1. Slide the battery cover and open it.
2. Place the accessory li-ion battery into the compartment. Note that the metallic contacts must be aligned with the contacts in the compartment.
3. After the battery is properly installed, close the battery cover.



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Charging the battery

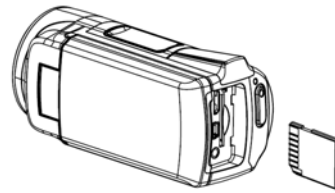
Please charge the battery at least 8 hours for first time use.

- a) Power OFF and connect the USB cable to the camcorder and the computer for battery charging.
- b) Charging starts when charging LED turns BLUE. The charge indicator light turns OFF when charging is completed.
- c) Disconnect the camcorder.

Inserting the Memory Card

This camcorder has no internal memory, it can't record pictures or movie clips. **If you want record more you have to use a SD or MMC card (The MAX.SD/MMC card that this camcorder could support is up to 32GB). Turn off the camcorder before inserting or removing the memory card. Be sure to orient the card correctly when inserting it. Never try to force the memory card into the slot when you feel resistance. The memory card has a write protect switch which used to protect data from accidental deletion. Therefore, whenever you want to record, format or delete files in the SD card, disable the write protection beforehand.**

7. Turn off the camcorder.
8. Find the rubber cover at the side of camcorder and then you will see the SD card slot.



9. Insert the memory card as illustrated.
 10. Close the rubber cover.
- **To release the memory card, press the edge of the card gently.**

Format the memory card

It is important to format the memory card when first time use this camcorder. All data will be deleted including protected files. Be sure to download the important files to your computer before formatting.

- 1: Turn the power on, and set the camcorder to the Setup Menu.
- 2: Press the **UP** or **DOWN** buttons to select [**Format**], then press **OK** button to launch the submenu.
- 3: Press the **UP** or **DOWN** buttons to select the item [YES] and then press the **OK** button to erase all data.

Setting the Language

Be sure to choose a language and set the date & time before first time using the camcorder.

- 1: Turn the power on, and set the camcorder to the Setup Menu.
- 2: Press the **UP** or **DOWN** buttons to select [**Language**] then press **OK** button to launch the submenu.
- 3: Press the **UP** or **DOWN** buttons to select the desired language and then

press the **OK** button to confirm the setting and exit the menu.

Setting the date and time

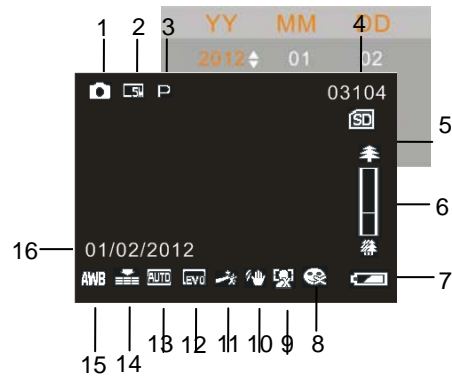
- 1: Turn the power on, press the **MENU** button to display the menu, and then press the **RIGHT** button twice to select [Setup] Menu.
- 2: Press the **UP** or **DOWN** buttons to select [**Set Date**] then press the **OK** button to launch the submenu.
- 3: Press the **UP** or **DOWN** buttons to change the highlighted value. Press the **LEFT** or **RIGHT** buttons to move the cursor between settings.
- 4: Press the **OK** button to confirm the setting and close the menu.

Monitor screen display

Capture mode [📷]

1. Camera Mode

Still Image Capture



14. Image Size

4000X3000 12M

3648x2048 7M

2592x1944 5M


2048x1536 3M

1920x1080 2M

4. Number of pictures
Available in SD Card

6. Zoom Value Level

7. Battery Power Level

-  Full
-  Medium
-  Low
-  None



9. Face Detect

-  On
-  Off

3. Scene Mode

-  Auto
-  Sport
-  Night
-  Portrait
-  Landscape
-  Backlight
-  Party
-  Beach
-  High Sensitivity

5. SD Card inserted

-  No protect status
-  Protect status

8. Smile Capture

-  On
-  Off

10. Anti-Shake

-  On
-  Off

11. Effect

- Normal
- B & W
- Sepia
- Red
- Green
- Blue
- Sunset
- Warm
- Cool
- Over Exposure

12. Exposure

- IR
- Binary
- Vivid
- Undertone
- Dog Eye
- Aibao
- Gothic
- Japan Style
- LOMO
- Negative

- +3
- +2
- +1
- 0
- 1
- 2
- 3

8. ISO

- Auto
- 100
- 200
- 400

14. Image Quality

- Super Fine
- Fine
- Normal

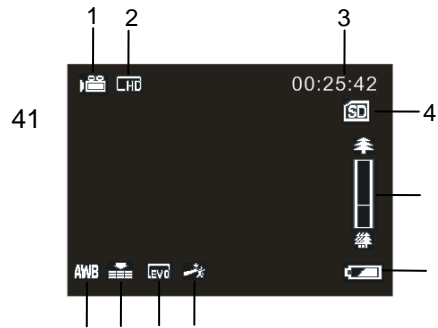
15. White Balance


- Auto
- Daylight
- Cloudy
- Tungsten
- Fluorescent

16. Date Imprint

Video record mode

5. Video recording icon

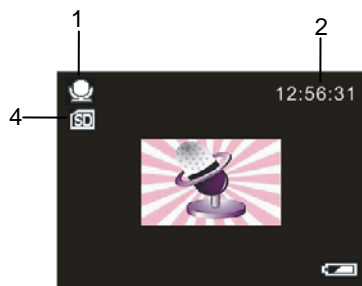


- 6. Video size 
- 7. Recording time available
- 8. SD Card inserted
- 9. Zoom value level
- 10. Battery power level
- 11. Effect
- 12. Exposure
- 13. Video Quality
- 14. White Balance





Audio mode []

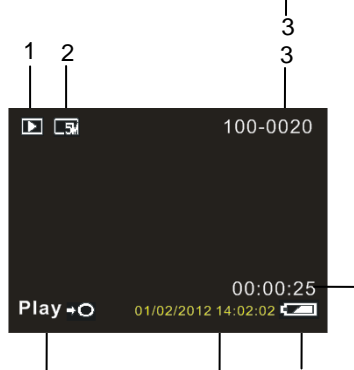
- Audio recording icon
- Audio recording time available
- Battery power level
- SD Card inserted



Playback mode []

- 1.  Playback still image icon
-  Playback movie clips icon

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Playback audio recording icon

2. Image/Video size
3. File catalogue on SD card/
Current Image Number#/Video#
4. Video recording time
5. Battery Power Level
6. Date Imprint
7. Press the shutter button to playback video file







3. Using this camcorder

Turning the Camcorder On and Off

- 1). Open the LCD panel to power on the camcorder and close the LCD panel to turn off the camcorder.
 - 2). You can also press the **POWER** button to turn on the camcorder and press it again for 3 second to turn the camcorder off.
- To save battery power, you can change the power-off time by setting the function [Power Save] in the Setup menu.

Change the record mode

There are four modes in this camcorder. Press the **MODE** button to change the mode, each time the **MODE** button is pressed the mode is changed.

Display	Title	Description
	Capture mode	For taking still photos.
	Video mode	For recording movie clips.
	Audio mode	For recording audio files.
	Playback mode	For previewing record files.

Note: Press the playback button to enter playback mode.

Recording a video clip

1: Turn on the camcorder and set the camcorder to video record mode ().

2: Zooming:

Press the **UP** or **DOWN** buttons to zoom in or zoom out the subject. The value of magnification level appears on the LCD monitor.

3: Press the **SHUTTER** button to start recording.


4: Press the **OK** button to pause and press it again to continue to recording.

5: Press the **SHUTTER** button again to end the recording. If the memory is full the video camera will stop recording automatically.

- On the upper of the LCD monitor displays the recorded time.

- When the light is insufficient press the **RIGHT/LED ON/OFF** button to turn on the compensating lamp and when the light is enough press the **RIGHT/LED ON/OFF** button again to turn off.

Taking still images

- 1: Set the camcorder to capture mode, the icon  appears on the LCD screen.
- 2: Zooming:
Press the **ZOOM IN** or **ZOOM OUT** buttons to zoom in or zoom out the screen. The value of magnification level appears on the LCD monitor.
- 3: Hold the camcorder steady and then press the **SHUTTER** button down to take a picture.

- When the light is insufficient press the **RIGHT/LED ON/OFF** button to turn on the compensating lamp and when the light is enough press the **RIGHT/LED ON/OFF** button again to turn off.

Using the Self-timer

Use the self-timer to set a delay from the time the shutter button is pressed to the time the image is shot.

- 1: Turn the power on, and set the camcorder to the Capture mode.
- 2: Press the **MENU** button to display the capture menu, and then press the **LEFT** or **RIGHT** buttons select [Shooting] Menu.
- 3: Press the **UP** or **DOWN** buttons to select the items [Self Timer] or [Multi-Snapshot]. And press the **OK** button to launch the submenu:



Off: Don't use self-timer without delay.



Self-timer 2S: The shutter release will delay for 2 seconds.



Self-timer 5S: The shutter release will delay for 5 seconds.



Self-timer 10S: The shutter release will delay for 10 seconds.



Burst: Press the shutter button once to take three pictures continuously.

- 4: Press the **UP** or **DOWN** buttons to select the desired item, and then press **OK** button to confirm the setting and close the menu.
- 5: Press the **SHUTTER** button to take picture.

Recording audio

- 1: Turn on the camcorder and set the camcorder to audio record mode ().
- 2: Press the **SHUTTER** button to start recording.
- 3: Press the **SHUTTER** button again to end the recording. If the memory is full the video camera will stop recording automatically.

4. Using the menu in record mode

When a menu is displayed, the **UP**, **DOWN** and **OK** buttons is used to make the desired setting.

Menu in capture mode

- 1: Turn on the camcorder and set it to capture mode.
- 2: Press the **MENU** button to display the menu, and press the **LEFT** or **RIGHT** buttons to select the desired menu.
- 3: Press the **UP** or **DOWN** buttons to select an item.
- 4: Press the **OK** button to enter the submenu.
- 5: Use the **UP** or **DOWN** buttons to select the desired item.
- 6: Press the **OK** button to confirm the setting and close the menu.

Capture menu list

Menu item	Function
Mode Set	You can select the scene mode according to the image you wish to capture. There are 10 available modes. [Auto]/[Sport]/[Night]/[Portrait]/[Landscape]/[Backlight]/ [Party]/[Beach]/[High Sensitivity]/[Cancel]
Size	There are six options for choice:

	[12M]: 4000x3000; [7M]: 3648x2048; [5M]: 2592x1944; [3M]: 2048x1536; [2M]: 1920x1080 ; [Cancel].	
Face Detect	Use this function to detect our faces when taking pictures. There are three options for choice. [On]/[Off]/[Cancel]	
Smile Capture	Sets smile capture is on, Face Detect will be automatically opened. Once it detects smile, the camcorder will auto take a picture. [On]/[Off]/[Cancel]	
Shooting	Multi-Snapshot	Use this function to take 3 pictures continuously. [Single]: Press the shutter button once to take one picture. [Continuous]: Press the shutter button once to take three pictures continuously. [Cancel]: Cancel this operation.
	Panorama	Use the function to shoot an entire surrounding area. Shooting the directional position at 180 degrees horizontally and 90 degrees vertically. [Off]/[Up]/[Right]/[Cancel]

		directional position at 180 degrees horizontally and 90 degrees vertically. [Off]/[Up]/[Right]/[Cancel]
	Multi-Exposure	Use the function to overlap two scene images into a image for the special effect. [Off]/[Double Exposure]/ [Long Exposure]/[3D Capture]/[Cancel]
	Self-Timer	Use the self-timer to set a delay from the time the shutter button is pressed to the time the image is shot. [Off]/[2 Sec.]/[5 Sec.]/[10 Sec.]/[Cancel]
	Cancel	Cancel this operation.
Capture Setting	ISO	The ISO menu allows you to set the level of sensitivity that your camera has to light in the surrounding environment. [Auto]/[100]/[200]/[400]/[Cancel].
	Anti-Shake	Use the function to avoid our hands shaking when taking pictures. There are three options for choice. [On]/[Off]/[Cancel]
	Best Shutter Selector	It is used to anti-shake for shooting images. There are three options for choice. [On]/[Off]/[Cancel]

	Imprint [Ⓟ]	This function can be used to add a date or time to your pictures as you take them. There are four items for option: [Ⓟ] [Off]: Do not add the recording date & time to printed images. [Ⓟ] [Date]: Only add the recording date to printed images. [Ⓟ] [Date & Time]: Add the recording date & time to printed images. [Ⓟ] [Cancel]: Cancel this operation. [Ⓟ]
	Cancel [Ⓟ]	Cancel this operation. [Ⓟ]
Image Setting [Ⓟ]	White Balance [Ⓟ]	Adjust the white balance to suit different light sources. There are six items for option: [Ⓟ] [Auto]/[Daylight]/[Cloudy]/[Tungsten]/[Fluorescent]/[Cancel]. [Ⓟ]
	Exposure [Ⓟ]	Set the exposure value manually to compensate for unusual lighting [Ⓟ] conditions such as indirect indoor [Ⓟ] lighting, dark backgrounds, and strong [Ⓟ] backlighting. The exposure value range [Ⓟ] is -3 to +3. [Ⓟ]
	Light Freq. [Ⓟ]	Light Frequency should be set to either [Ⓟ] 60Hz or 50Hz depending on your region.

		[50HZ]/[60HZ]/[Cancel].
Quality	Select a lower image quality to decrease the image size in order to capture more images. There are four options for choice:	[Super Fine]/[Fine]/[Normal]/[Cancel].
Sharpness	You can set the level of sharpness in the images taken with your camera. The sharpness level dictates if the edges of objects in the image are more or less distinct.	[Soft]/[Normal]/[Vivid]/[Cancel].
Effect	Set the color effect to add a color tone to the picture.	[Normal]/[B&W]/[Sepia]/[Red]/[Green]/[Blue]/[Sunset]/[Warm]/[Cool]/[Over Exposure]/[IR]/[Binary]/[Vivid]/[Undertone]/[Dog Eye]/[Aibao]/[Gothic]/[Japan Style]/[LOMO]/[Negative]/[Cancel].
Saturation	Sets the image's saturation.	[High]/[Normal]/[Low]/[Cancel].
Cancel	Cancel this operation.	

Menu in video mode

- 1: In video record mode press the **MENU** button to display the menu.
and press the **LEFT** or **RIGHT** buttons to select the desired menu.
- 2: Press the **UP** or **DOWN** buttons to select an item.
- 3: Press the **OK** button to enter the submenu.
- 4: Use the **UP** or **DOWN** buttons to select the desired item.
- 5: Press the **OK** button to confirm the setting and exit the menu.

Menu item	Function	
Size	Select small movie size to record longer time. There are five items for option: FHD:1920x1080 HD; HD:1280x720 HD; VGA: 640x480; QVGA: 320x240; Cancel.	
Image Setting	White Balance	Adjust the white balance to suit different light sources. There are six items for option: [Auto]/[Daylight]/[Cloudy]/[Tungsten]/[Fluorescent]/[Cancel].
	Exposure	Set the exposure value manually to compensate for unusual lighting conditions such as indirect indoor lighting, dark backgrounds, and strong backlighting. The exposure value range is -3 to +3.

Light Freq.↵	Light Frequency should be set to either ↵ 60Hz or 50Hz depending on your region. ↵ [50HZ]/[60HZ]/[Cancel].↵
Quality↵	Select a lower image quality to decrease↵ the image size in order to capture more↵ images. There are four options for ↵ choice: ↵ [Super Fine]/[Fine]/[Normal]/[Cancel].↵
Sharpness↵	You can set the level of sharpness in the↵ images taken with your camera. The ↵ sharpness level dictates if the edges of↵ objects in the image are more or less↵ distinct. [Soft]/[Normal]/[Vivid]/[Cancel].↵
Effect↵	Set the color effect to add a color tone to the picture.↵ [Normal]/[B&W]/[Sepia]/[Red]/[Green]/[Blue]/↵ [Sunset]/[Warm]/[Cool]/[Over Exposure]/[IR]/↵ [Binary]/[Vivid]/[Undertone]/[Dog Eye]/↵ [Aibao]/[Gothic]/[Japan Style]/[LOMO]/↵ [Negative]/[Cancel].↵
Saturation↵	Sets the image's saturation. ↵ [High]/[Normal]/[Low]/[Cancel].↵
Cancel↵	Cancel this operation.↵

Setup menu

You can set the system items in setup menu.

- 1: Turn the power on and press the **MENU** button to display the menu.
- 2: Press the **LEFT** or **RIGHT** buttons to select [Setup] Menu.
- 3: Press the **UP** or **DOWN** buttons to select an item.
- 4: Press the **OK** button to enter the submenu.
- 5: Press the **UP** or **DOWN** buttons to select the desired item.
- 6: Press the **OK** button to confirm the setting and exit the menu.

Menu item	Function
Power save	To save power, the camera is turned off automatically after a period of time. There are six options for choice: [Off]/[1Min.]/[3 Min.]/[5 Min.]/[10 Min]/[Cancel].
Beep	Set the operation sound on or off.
Language	Select a language for the Display menu and other information.
Set Date	Allows you to set the date and time for the camcorder.
TV Output	You can review images on a television with the supplied AV cable. TV Out should be set to either NTSC or PAL depending on your region. [NTSC]: America, Japan and others; [PAL]: Europe, Oceania and others. [Cancel]: Cancel this operation.
Format	To erase all data stored on the memory card if you are using a memory card, or all data stored in the internal

	memory if there is no card inserted. All data will be deleted including protected files. Be sure to download important files to your computer before formatting. [Yes]/[No].
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	memory if there is no card inserted. All data will be deleted including protected files. Be sure to download important files to your computer before formatting. [Yes]/[No].
Default Setting	To reset the entire menu and button operation settings to initial default. [Yes]/[No].
Cancel	Cancel this operation.

5. Playback

Playing back movie clips

- 1: Press the **PLAYBACK** button to set the camcorder to playback mode.
- 2: Press the **LEFT** or **RIGHT** buttons to select the movie clips you want to playback.
- 3: Press the **SHUTTER** button to start playing. Press the **OK** button to pause it and press it again to continue. Press the **RIGHT** button to fast forward and press the **LEFT** button to back forward.
- 4: Press the **SHUTTER** button again to stop playing.

Playback still image

- 1: Set the camcorder to playback mode.
The latest recorded file appears on the LCD screen. If there are no images stored, a message [NO IMAGE] appears.
- 2: Press the **LEFT** or **RIGHT** buttons to preview the previous or next image.
- 3: Zooming:

Press the **ZOOM IN** or **ZOOM OUT** buttons to zoom in or zoom out the image. When the picture is enlarged you can press **OK** button to enter move mode, use the **LEFT/RIGHT/UP/DOWN** buttons to browse the details of the image.

4: Press the **OK** button to resume the normal mode.

Playing back audio files

- 1: Press the **PLAYBACK** button to set the camcorder to playback mode.
- 2: Press the **LEFT** or **RIGHT** buttons to select the audio files you want to playback. Press the **OK** button to pause it and press it again to continue. Press the **RIGHT** button to fast forward and press the **LEFT** button to back forward.
- 3: Press the **SHUTTER** button to start playing.
- 4: Press the **SHUTTER** button again to stop playing.

Viewing Thumbnails

Press the **DOWN** button in playback mode to view the file in thumbnails mode. Use the **LEFT/RIGHT/ UP/DOWN** buttons to select a file. Press the **OK** button to view the file in full screen.

Menu in playback mode

- 1: In playback mode press the **MENU** button to display the menu, and

- press the **LEFT** or **RIGHT** buttons to select the desired menu.
- 2: Press the **UP** or **DOWN** buttons to select an item.
 - 3: Press the **OK** button to enter the submenu.
 - 4: Press the **UP** or **DOWN** buttons to select the desired item.
 - 5: Press the **OK** button to confirm the setting and close the menu.

Menu item	Function
Delete	Use this function to delete a single file or all files. [This Image]: Delete current single file. [All]: Delete all files except locked files. [Cancel]: No delete the file.
Slide	Plays the files automatically interval a few seconds. [3 Sec.]/[5 Sec.]/[10 Sec.]/[Cancel].
Rotate	Use this function to rotate the images. [90°]: Rotate the image 90 degrees in clockwise. [180°]: Rotate the image 180 degrees in clockwise. [270°]: Rotate the image 270 degrees in clockwise. [Cancel]: No rotate the image.
Crop Image	Use this function to crop the images. [Crop]: Use the UP or DOWN buttons to select a select a range, and then press the SHUTTER button to crop the selected range, at last press it again to save the cropped image. [Cancel]: No crop the image.

Protect	Use this function to protect the files from being deleted by accident. [Lock This]: Lock the current file. [Unlock This]: Unlock the current file. [Lock All]: Lock all files. [Unlock All]: Unlock all files. [Cancel]: Cancel this operation.
Print	Use this function to print a picture without a computer. Make sure you have a printer which supports picture bridge function and then connect it to the camcorder via the USB cable. [Execute]/[Cancel].

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-
-

■ 6. Making connections

■ Connecting the Camcorder to a TV

When plug in the TV-out cable (supplied) to the camcorder AV out jack the LCD screen turns black, Connect the camcorder to a TV and the TV screen now performs as the camcorder LCD screen.

1. Connect the camcorder to a TV via the TV-out cable (supplied).
2. Turn on the TV and the camcorder, and then set the TV to "AV" mode.
3. When the camcorder is set to record mode, you can preview the subjects you want to record on the TV screen.

4. When the camcorder is set to Playback mode, you can review all the pictures, video and audio clips stored in the camera on the TV.

Connecting the Camcorder to a HDTV

HD-TV hereby means the HDTV built-in component input ports, thus can perform HD (720P) high resolution quality while connected.

1. Connect the camcorder to HDTV by the HDMI-cable.
2. Power on HDTV and switch to HDMI-mode.
3. Power ON the camcorder. Set the camcorder in playback mode.
Push the joystick leftward or rightward to select the file demanded.
4. Press **SHUTTER** button to "Play" the selected video file on HDTV, press the **SHUTTER** button again to "Stop" the playing.
5. Press the **OK** button to "Pause", press it again to "Continue" the playing.
6. Press the **LEFT** button to reward, press the **RIGHT** button to forward.
7. Press the **UP** or **DOWN** button to adjust the volume.

Connecting the Camcorder to a PC

There are two ways to download files from the camcorder's internal memory or memory card to a computer:

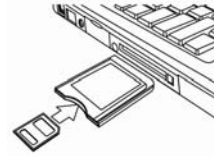
- By inserting the memory card into a card reader
- By connecting the camera to a computer using the supplied USB cable.

Using a Card Reader

1: Eject the memory card from the camcorder and insert it into a card reader that is connected to a computer.

2: Open [My Computer] or [Windows Explorer] and double-click the removable disk icon that represents the memory card.

3: Copy images from the card into a directory of your choice on the computer's hard disk.



Connecting the Camcorder to a PC with the USB Cable

1: Connect the supplied USB cable to the computer's USB port and turn on the camcorder. An icon "Mass storage" appears on the screen when

Connection to the computer has been successfully completed. Please ensure that there is SD card in the camcorder. Since the camcorder is without the internal memory, there will be no content to view connecting the camcorder to the PC.

Note: If you want to enter PC CAM mode, at first you have to hold and press the shutter button for a few seconds, then connect the camcorder to the computer with the supplied USB cable. An icon "PC CAM" will appear on the screen. If not, please continue to press the shutter button and press the power button as well. An icon "PC CAM" appears on the screen. Open [My Computer], there will be a file named "USB video tool". Double click the

icon. The camcorder will work as the webcam.

- 2: Open [My Computer] or [Windows Explorer]. A "Removable Disk" appears in the drive list. Double-click the "Removable Disk" icon to view its contents. Files stored on the camera are located in the folder named "DCIM".
- 3: Copy the photos or files to your computer.

8. Technical Specifications

Sensor	5.0MegaPixels CMOS
Display	2.7" (4:3) TFT Color LCD
Focus range	Standard: 1.5m ~ infinity
Aperture	F/3.1, f=7.5mm
Shutter	Electronic Shutter: 1/2 ~ 1/1800sec.
Resolution	Still Image: [12M]: 4000x3000; [7M]: 3648x2048 ; [5M]: 2592x1944; [3M]: 2048x1536; [2M]: 1920x1080 Video: FHD:1920x1080 HD; HD:1280x720 HD; VGA: 640x480; QVGA: 320x240;
Sensitivity	Auto /100/200/400
White balance	Auto/Daylight/Cloudy/Tungsten/Fluorescent
Exposure control	-3EV to +3EV in 1.0 step
Burst	Included
Photo effect	[Normal]/[B&W]/[Sepia]/[Red]/[Green]/[Blue]/ [Sunset]/[Warm]/[Cool]/[Over Exposure]/ [IR]/[Binary]/[Vivid]/[Undertone]/[Dog Eye]/ [Aibao]/[Gothic]/[Japan Style]/ [LOMO]/ [Negative]

Self-timer	2/5/10 sec.
Storage	External memory: SD / MMC
TV system	NTSC / PAL
Digital zoom	8x
Power Supply	Li-ion battery
Ambient temperature	Operating: 0° C to 40° C Storage: -20 to 60° C
Microphone	Built-in
Speaker	Built-in
Dimension	120.2x58.3x56 (mm)

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