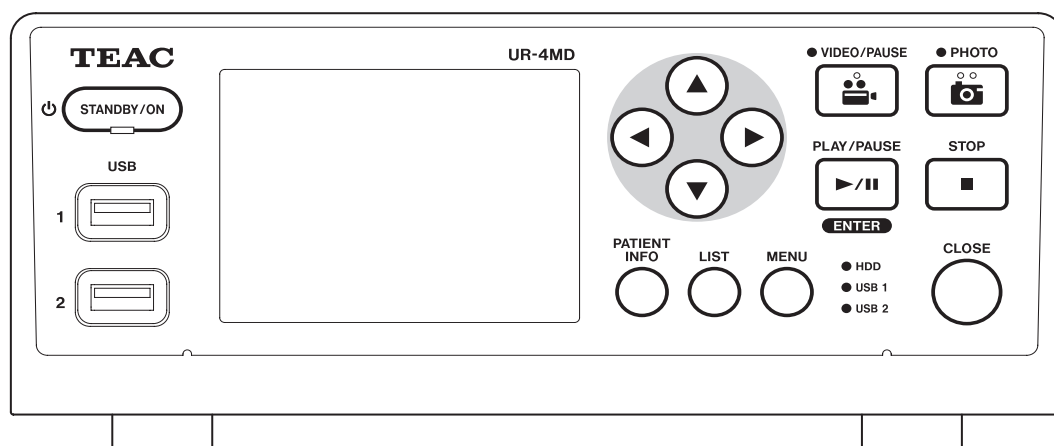


TEAC

用户手册

UR-4MD

数字式录影机



说明书发行日期: 2017 年6 月
执行标准: GB8898, GB13837, GB17625.1, GB9254

各种符号的含义

以下类型的符号被使用在UR-4MD的包装及用户手册内。
当您阅读相关信息时, 必须确保您已完全理解符号的含义。



目录编号



使用时请参考说明。



内容



生产日期



序列号



如果包损坏, 请不要使用。



注意: 请参考随附的文件。

Rx ONLY

注意: 联邦法令(美国)限制医师对本产品的使用或订购。



表示制造商的名称和地址。




表示欧洲代表的姓名和地址。




CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



注意:为降低触电风险,请勿拆除护罩(或后板)。设备内部未包含用户自行维修的部件。仅允许专业维修人员进行维修。

- 

等边三角区域内带有箭头的闪电标识旨在提醒用户:产品壳体內的未绝缘“危险电压”等级可能导致人员触电危险。
- 

等边三角区域内的感叹号旨在提醒用户:遵守产品随机资料中的重要操作和维护(维修)操作说明。
- 1) 请阅读此类操作说明。

2) 请妥善保管此类操作说明。

3) 注意所有警告事项。

4) 遵守所有操作说明。

5) 严禁在有水区域附近使用本设备。

6) 仅允许使用干布清洁设备。

7) 严禁堵塞设备通风口。按照产品制造商操作说明中的相关规定进行安装。

8) 严禁在散热器、热风调节器、烘箱或其他可产生热量的仪器(包括放大器)等热源附近安装设备。

9) 严禁破坏极性插头或接地式插头。极性插头包含两块插片。接地式插头包含两块插片和第三个接地插脚。宽型插片或第三个接地插脚主要用于确保使用安全。如果随机附带的插头与您所使用的插座不匹配, 请向电气技术人员咨询废旧插座的相关更换事宜。


10) 保护电源线免受踩踏或挤压, 特别是插头、电源插座和电源线等从设备伸出的部位。

11) 仅允许使用设备制造商指定的附件 / 配件。

12) 仅允许使用设备制造商指定或随机销售的推车、支架、三脚架或工作台。使用推车移动设备过程中, 为避免发生倾覆, 必须严格遵循相关注意事项。

13) 雷雨天气或长时间未使用时, 应拔除设备电源插头。

14) 仅允许专业维修人员进行维修。设备出现任何形式的损坏时必须进行维修, 例如: 电源线或插头损坏、液体溅入或异物落入设备内、设备受到雨淋或受潮、操作不正常或发生掉落。



- 严禁将本设备放置在滴水或溅水区域。
 - 严禁在本设备上放置装有液体的物品, 例如:花瓶。
 - 严禁在密闭空间内安装本设备, 例如:书柜或类似物品。
 - 在设备的POWER 或STANDBY/ON 开关未处于ON 位置时, 设备从交流电源插座获取公称非运行功率。
- 本设备应安装在紧邻交流电源插座的位置, 以便您可随时很容易地握住电源线的插头。
 - 电源插头可作为断开装置, 断开装置应随时处于可用状态。
 - I类设备配有带接地插头的电源线。此类设备的电源线必须与带有接地保护的交流电源插座相连。
 - 如果本设备使用电池(包括电池组或内置式电池), 严禁将其放置在阳光下、火源或高温区域。
 - 注意使用可更换锂电池的产品:如果更换不正确类型的电池有爆炸的危险。只能更换相同或同等类型。
 - 由于来自于耳机的过大声压(音量)可能导致听力受损, 因此, 在产品使用过程中, 佩戴耳机时, 应遵守相关注意事项。
- 警告:**为避免发生火灾或触电, 严禁使本设备受到雨淋或受潮。
- 注意
- 勿拆卸外壳或机身让电子零件暴露。里面没有用户能修复的部件。
 - 如果您遇到了此产品的问题, 请联系您购买此产品的经销商商。故障设备完成维修前, 严禁使用。
 - 使用控制, 调整或不按此处指定的步骤可能会导致危险的辐射。
-
- 仅适用于海拔2000m 以下地区安全使用。
-
- 仅适用于非热带气候条件下安全使用。
-
- 环境保护使用年限
- 预期用途：
- 本产品是一种用于医疗设施录像机。它适用于检查和操作的备份记录。
它适用于诊断。
- 处理方法：
- 按照当地法规妥善处置。
- 3

简介

本产品受AVC专利组授权, 用于消费者个人使用或者其他未收取报酬的应用(i)视频编码复合AVC标准(“AVC”视频)和/或(ii)被消费者从事个人活动而解码的AVC视频和/或从视频提供商许可提供的AVC视频。未经许可或授权, 不得用于任何其他用途。可从MPEG LA, L.L.C.获取其他信息
查看网址[HTTP://WWW.MPEGLA.COM](http://www.mpegla.com)

本手册内所包含的其他公司名、设备名和标识为相应厂商的商标或注册商标。

有关开源版权和许可的信息包含在本手册最后的“关于软件的重要通知”中

版权和免责声明

本手册内有关产品的信息仅用于举例的目的, 并不保证第三方的知识产权和与之相关的其他权利。TEAC不会承担第三方产权侵权或因使用这些产品的责任。

产品有毒有害物质或元素的名称及含量

机种：UR-4MD		有毒有害物质或元素					
	品名	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
1	CHASSIS部份	○	○	○	○	○	○
2	FRONT PANEL部份	○	○	○	○	○	○
3	螺丝部份	○	○	○	○	○	○
4	线材部份	○	○	○	○	○	○
5	PCB Assy部份	×	○	○	○	○	○
6	电源部份	×	○	○	○	○	○
7	附属品部份	○	○	○	○	○	○
8	LABEL部份	○	○	○	○	○	○
9	包装部份	○	○	○	○	○	○


○：表示该有毒有害物质在该部件所有均质材料中的含有量均在 GB/T26572-2011 标准规定的限量要求以下。
×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T26572-2011 标准规定的限量要求。
(针对现在代替技术困难的电子部品及合金中的铅)

特点






- 自动感应分辨率和输入连接便于连接到其他设备
- 可快速启动的录制按钮, 方便操作
- 可以延长时间录制播放视频和图片
- 录制视频的同时可以拍照
- 外部的连接开关可用来录制
- 同时录制到内部硬盘和U盘能提供高可信度数据保存
- 内置LCD能够检查输入图像和显示播放状态
- 通过Transfer contents over a network
- 自我监测、分析及报告技术信息 - 内置硬盘状态能够检查出故障
- 当电源断开时, 短暂保留电源可以防止数据丢失
- 轻巧紧凑设计
- 支持高达WUXGA的高清晰度

设备指示灯

前面板

指示灯	功能
 STANDBY/ON	使用此按钮开启或关闭本设备

后面板

指示灯	功能
 IN	使用连接器为本设备供电。连接随附的电源线。
	这是一个潜在的均衡电位平衡连接器。将电位平衡线与符合DIN42801的连接器相连接。
	使用此连接器来连接网络。
	使用此连接器来输入视频信号。
	使用此连接器来输出视频信号。

感谢选用TEAC。

仔细阅读本手册，以让本机达到最佳效能。阅读本手册以后，请妥善保管以备日后参考需要。

重要安全操作说明	2
简介	3
特点	4
设备指示灯	4
在使用之前	6
随机配件	6
使用注意事项	6
内置硬盘驱动器	6
内置电池	6
注意相关的可用介质	6
内置风扇相关的注意事项	6
前面板	7
后面板	9
接通电源前的准备工作	11
连接输入线	11
连接输出线	11
连接音频输入	11
连接音频输出	11
连接外部开关	11
连接录制设备	11
连接电源线	11
基本操作	12
开启本机	12
关闭设备	12
节能模式(省电)	12
待机模式	12
格式化录制介质	13
录制	13
进行录音设置	13
有关保存录制数据的设置	13
外部开关设置(视频)	14
录制视频	14
拍摄照片	15
输入患者信息	15
使用键盘输入患者信息	15
用卡/条码输入患者信息	16
退出录制模式	16
移除USB录音设备时的注意事项	16
播放录制	17
播放最新图像	17
播放操作	17
播放及暂停	17
停止	17
改变播放速度	17
跳转到索引	18
移到下一个图像文件	18
移到下一个文件夹	18
播放过程中的音频	18
显示和播放最新文件夹列表的文件	19
按条件搜索文件并播放	19
按ID搜索	19
按名称搜索	20
按日期搜索	20

改变使用的设备进行搜索(播放)	20
停止搜索	20
保存已经录制好的图像到外部设备	21
记录图像的文件夹结构(内部硬盘驱动器或USB驱动器)	23
文件夹结构	23
编辑现有文件夹的信息	24
删除现有文件夹的数据	25
在电脑上观看录制图像(使用介质内的HTML文件)	26
录制文件夹列表	26
文件夹里的图像列表	27
设备的设置和各种功能	28
基本操作	28
设置	29
设置	29
视频输入	29
音频输入	29
视频输出	29
录制到	30
播放	30
时钟	30
语言	30
照片	30
图像质量	30
格式	30
视频	31
图像质量	31
自动索引	31
外部开关	31
高级-1	31
患者信息输入	31
自动文件拆分	32
格式化记录装置	32
从内部磁盘复制	32
高级-2	33
擦除内置硬盘驱动器(保留)	33
存储设备信息	33
自我监测、分析及报告技术信息	33
蜂鸣器	34
固件更新	34
网络	35
模式选择	35
IP地址	36
当前IP地址	36
维护	37
建议检查	37
清洁设备	37
故障排除	37
产品规格	38
关于软件的重要通知	40
GPL	40
LGPL Version 2	42
LPLG Version 2.1	45

随机配件

检查及确认包装内包含所有如下所示的项目。如果包装内的物品出现缺失或由于运输导致损坏时, 请致电设备经销商。

电源线 × 2
用户手册 × 1

使用注意事项

- 为了保证正常操作, 请在以下条件下使用本设备。
温度: 5 – 40°C
湿度: 5 – 80%RH (无冷凝)
最大湿球温度计温度 29°C
- 水平位置安装, 避免振动。
设备底部放置橡胶脚垫并将其安装在水平面上。
- 避免将设备放置在阳光直射的地方, 避免靠近加热器或其他可能发热的地方。此外, 不要将其放置在会产生热量的放大器或其他设备顶部。这样做可能会导致变色或变形, 或导致故障。
- 在包装设备搬迁或运输前, 例如, 断开所有连接线和和其他设备。不这样做可能会损坏连接器。
- 根据电视广播频率, 电视机靠近电源已开的本设备可能会出现色彩不均匀的现象。但这不是本设备或电视机出现了故障。如果出现这种情况, 移开受影响的设备再使用本设备。
- 避免在以下地方使用, 因为这样做可能会导致故障或其他故障。
靠近产生高频波的设备
存在有强磁力或静电的地方。

内置硬盘驱动器

本设备具备一个内置硬盘驱动器(HDD)。这个硬盘容易受到冲击力、振动和环境变化的影响, 包括温度, 这可能会影响到正在录制的视频。

请遵守以下注意事项。

- 不要让本设备受到振动或冲击。
- 在水平面上安装并使用本设备。
- 当硬盘正在存取时, 不要关机。

重要通知

不能保证长期储存在内置HDD上录制内容。此外, 由于空间的需要, 最早的录制将被自动删除。例如, 我们建议您使用LAN或USB驱动器来传输储存重要视频数据在计算机或DVD上。

重要通知

硬盘驱动器最终无法运作。根据使用的情况, 问题可能会在几年内开始发生。如果风扇坏了, 请与您购买本设备的零售商或本手册封底的联系人联系要求维修。

内置电池

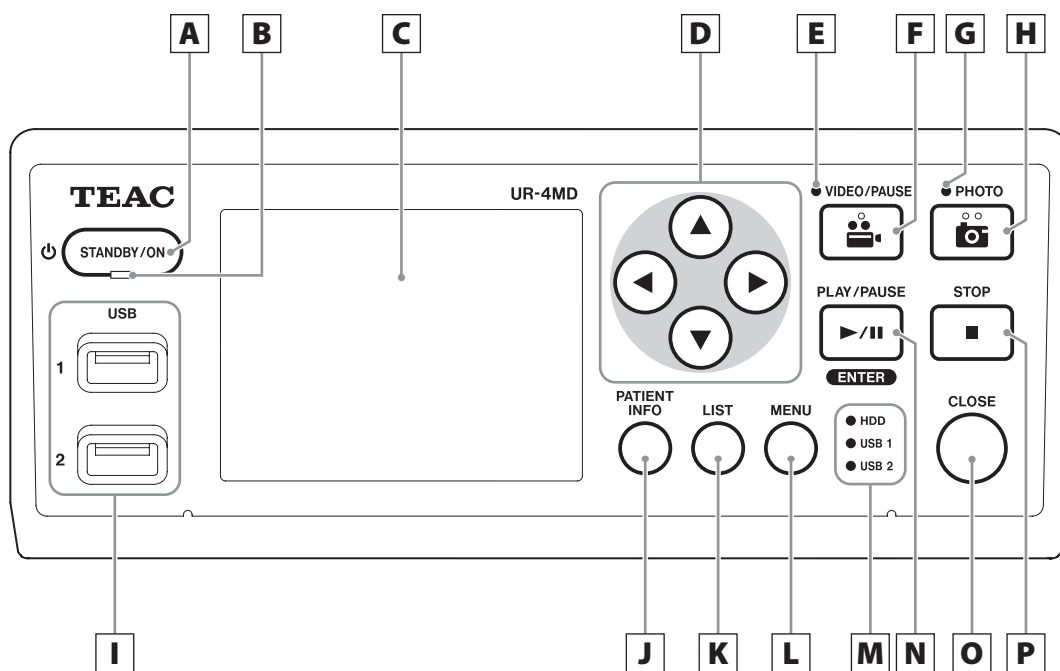
本设备具有一个电池来运行其内部的时钟。如果电池寿命已尽, 不能保证准确的时间, 这将影响到录制图像的时间信息。我们建议在电池用完之前, 每五年更换电池。如果需要更换电池, 请与您购买本设备的零售商或本手册封底的联系人联系要求更换。

注意相关的可用介质

您可以连接USB闪存驱动器和USB硬盘到本设备上。录制前请将介质格式化。

内置风扇相关的注意事项

本设备的内置风扇的寿命是有限的。如果风扇坏了, 请与您购买本设备的零售商或本手册封底的联系人联系要求维修。



A STANDBY/ON 按钮

按下按钮开启本设备。液晶显示屏点亮。
当电源开启时, 按下它, 本设备进入节能模式。

注释

- 按住至少1秒钟时间, 关闭本设备。
- 按住大约4秒钟时间强行关闭本设备。
- 如果本设备背面的主电源没有设置为ON (|), 按下STANDBY/ON按钮时, 本设备无法启动。

B STANDBY LED

亮绿色:ON
亮琥珀色:待机

C 液晶显示屏

显示输入图像(预览), 播放图像, 状态信息和设置菜单。

D ▲, ▼, ◀, ▶ 按钮

使用这些来更换和选择菜单项, 并查看录制的图像和视频。

E VIDEO LED

点亮:正在录制视频
闪烁:视频录制暂停

F VIDEO/PAUSE 按钮

按下开始视频录制。
视频录制过程中, 按下此按钮暂停录制。
按多一次恢复录制。

注释

当视频录制暂停时, 在此创建索引。

G PHOTO LED

当录制图片时这里会亮灯。

H PHOTO 按钮

用来录制图片。

I USB 端口 (USB 1/USB 2)

在这里连接USB闪存驱动器和硬盘驱动器。

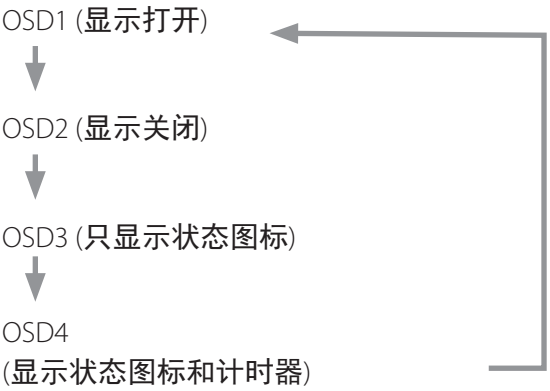
注释

不要连接USB集线器。

J PATIENT INFO 按钮

注释

- 按住(一秒钟)可以在以下四种外部显示OSD之间切换(屏幕显示病人信息、剩余容量、时间等)。切换时,当前的OSD模式在LCD显示和外部显示屏上以弹出窗口出现。



- 如果设置“患者信息输入”为“关闭”,将不显示患者信息。

K LIST 按钮

按下显示已录制文件夹的列表。列表画面在外部显示屏上也以弹出窗口出现。

L MENU 按钮

按下打开菜单,设置本机。菜单画面在外部显示屏上也以弹出窗口出现。当文件夹列表打开时按下此按钮,弹出窗口显示可复制、编辑和删除文件夹。

M 状态灯

这些显示内部硬盘驱动器和连接到USB1和USB2的驱动器的访问状态。

内部硬盘

- 亮绿色: 正常
- 熄灭: 错误

USB 1/2

- 亮绿色: 设备连接已识别
- 亮琥珀色: 正在写入或格式化(或者设备正在连接中)
- 熄灭: 没有设备

N PLAY/PAUSE 按钮

ENTER 按钮

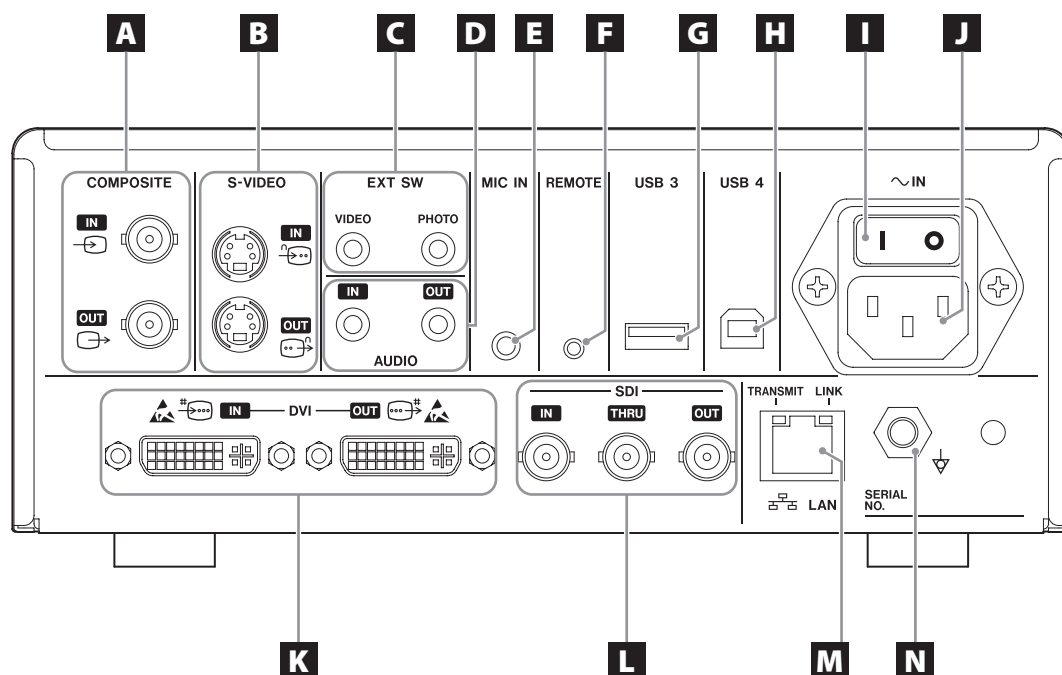
按下播放已录制的文件。
视频播放过程中,按下此按钮暂停播放。
当进行菜单设置时,按下此按钮确认所选的项目。

O CLOSE 按钮

按下退出录制、播放、菜单、搜索列表和患者信息输入模式。
在录制时,按下CLOSE按钮前的视频和静止照片将被保存到同一个文件夹中。当您按下CLOSE按钮时,患者信息被清除,本设备将等待下一个录制或播放操作。
当下一次开始录制时,会创建一个新的文件夹。

P STOP 按钮

视频录制过程中按下此按钮停止录制。视频在播放时按下此按钮停止播放。



A COMPOSITE 输入/输出接口

IN (→)

输入复合视频(NTSC/PAL)信号。(BNC)

OUT (←)

输出复合视频(NTSC/PAL)信号。(BNC)

B S-VIDEO 输入/输出接口

IN (→)

输入S-VIDEO(NTSC/PAL)信号。

(S 接口)

OUT (←)

输出S-VIDEO(NTSC/PAL)信号。

(S 接口)

C 外部开关输入接口(EXT SW)

连接外部视频和图片开关。(3.5mm 立体声迷你插孔)

B AUDIO 输入/输出接口

IN

输入音频信号(3.5mm 立体声迷你插孔)。

OUT

输出音频信号(3.5mm 立体声迷你插孔)。

E MIC IN (输入)接口

输入麦克风音频信号(3.5mm 单声道迷你插孔)。
当使用立体声插头时,将声音输入到左(L)侧。

F 遥控接口

连接TASCAM RC-10有线遥控器或TASCAM RC-3F脚踏开关(另售)用于控制本设备(2.5mm 迷你插孔)。

G USB端口(USB 3)

您可以连接USB键盘、读卡器或条形码阅读器来输入患者信息。

(USB 2.0 A类)

使用读卡器或具有键盘接口规格的条形码阅读器。

有关详细信息,请联系我们或我们的分销商。

注释

不能连接USB集线器。

H USB 端口(USB 4)

用于在本机上从外部设备(设置为USB大容量存储时)访问数据或以外部设备命令控制本机(没有设置为USB大容量存储时)。要以命令控制本机,您必须创建通信程式。有关详细信息,请联系我们或我们的分销商。(USB 2.0 B型)

注释

不能连接USB集线器。

I 主电源开关


本设备的主电源开关。

J 电源线接口(~IN)

连接随附的电源线。

始终将电源线连接到接地的电源插座。

K DVI输入/输出接口

IN ()

输入DVI(DVI-D)视频信号。

OUT ()

输出DVI(DVI-D)视频信号。

L SDI 接口

IN

输入SDI视频信号(BNC)。

THRU

通过输入SDI视频信号(BNC)。

OUT

输出SDI视频信号(BNC)。

M LAN 接口

将设备连接到网络上。遵循由网络管理员提供的有关连接和设置的说明(10BASE-T/100BASE-TX/1000BASE-T (RJ-45))。

LINK LED

当检测到有链路脉冲时,此灯亮。

TRANSMIT LED

传送时此灯会闪烁。

N 电位平衡连接器 (ϕ)

将电位平衡线连接到符合DIN 42801的连接器。

当与医疗设备结合使用时,请使用专用线来连接设备。

注意

显示此标记的连接器容易受到静电造成内部损坏。注意,不要用手直接触摸连接器的接触点。

接通电源前的准备工作。

连接输入线

本设备具有S-VIDEO和复合视频标准视频输入接口和DVI 和SDI高清视频输入接口。
连接输入线到将要使用的连接器上。

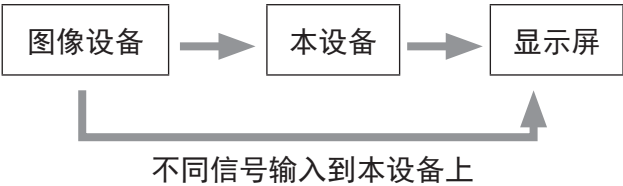
连接输出线

本设备具有S-VIDEO和复合视频标准视频输出接口和DVI 和SDI高清视频输出接口。
如以下连接示例1所示, 当本设备处于关闭状态时, 显示屏上无法看到输入图像。
如果如连接示例2所示, 尽管本设备处于关闭状态时, 显示屏上仍可以看到输入图像。

连接示例 1



连接示例 2



连接音频输入

本设备带音频输入接口。如需要, 请连接音频输入接口。
SDI音频, 可以与SDI图像输入连接器一起使用。
有关详情信息, 请查阅第30页的音频输入项目。

连接音频输出

本设备带音频输出接口。如需要, 请连接音频输出接口。
SDI音频, 可以与SDI图像输出连接器一起使用。

连接外部开关

本设备具有外部开关连接器。如需要, 请连接外部开关连接器。

连接录制设备

录制到USB驱动器
连接USB驱动器到前面板的USB1或USB2端口。当USB驱动器处于开始状态时, 相关的LED灯会呈绿色。
按下CLOSE按钮可断开连接。对应的USB指示灯停止闪烁(变成再次点亮绿色)后断开连接。有关详细信息, 参阅第17页的“移除USB录音设备时的注意事项”、第14页的“进行录音设置”和第31页的“录制到”内容。
录制到网络
使用连接线连接到通信网络。
有关设置的安装细节, 请参阅第36页的“网络”。

连接电源线

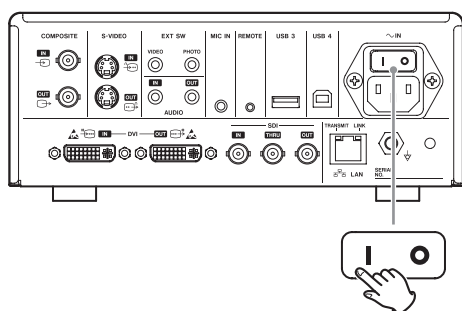
注意

本设备要求100–240V 交流电 $\pm 10\%$ (50/60Hz)的电源。其他任何电源可能会引起火灾或触电。
为了防电击, 请始终使用隔离变压器。

电源线有一个三脚插头。为了保证安全使用, 请不要将其连接到一个两脚(接地)插座。

开启本机

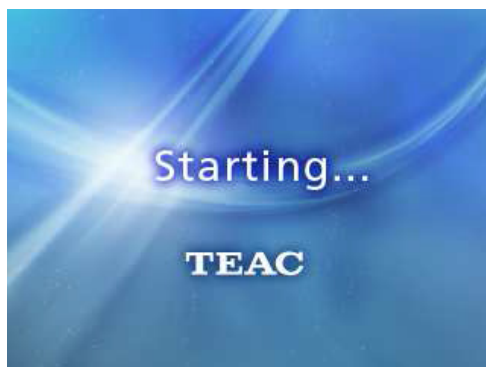
将本设备后面的主电源开关设置在(I)位置上。



注释

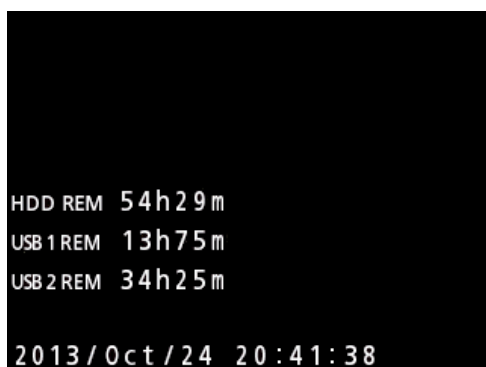
当主电源开关设置在 (I) 位置上时, 按下前面板上的 STANDBY/ON 按钮。

当本设备处于开启状态时, 前面板上的 LCD 灯点亮, 然后出现 “Starting...”。



设备开启后, 显示输入视频。如果没有输入, 会显示黑屏。

当前面板液晶显示屏上显示的是各种状态项目的文字, 设备为下一个用户操作做好准备。

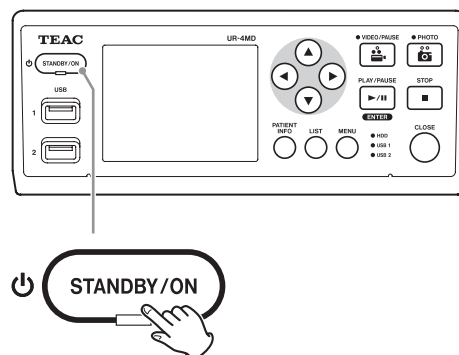


- 如果视频被输入, 该视频将出现在背景中。

关闭设备

关闭本设备之前, 停止录制或播放。

按下前面板的 STANDBY/ON 按钮, 直到出现 SHUTDOWN (约1秒钟)。



进行内部关机程序后, 本设备进入待机状态, 设置后面板上的主电源开关到关闭(O)位置。主电源关闭后, 电源按钮 STANDBY LED 会持续亮几分钟。这属于正常现象, 并非故障。

节能模式(省电)

按下 STANDBY/ON 按钮, 本设备进入节能模式。在这种状态下, 您可以按下 STANDBY/ON 按钮再次快速重启设备。

- 在节能模式下, 风扇持续转动。

待机模式

按下前面板的 STANDBY/ON 按钮, 直到出现 SHUTDOWN (约1秒钟)。

- 重启设备需要约30秒钟。

当设备不是长时间使用时

当设备不是长时间使用时, 请按照下面的步骤将后面板上的主电源开关设置到关闭位置。

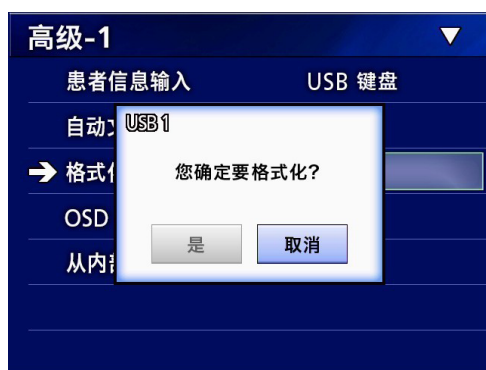
1. 按住前面板上的 **STANDBY/ON** 按钮, 本设备进入待机状态。
2. 将后面板上的主电源开关设置到关闭(O)位置。
 - 主电源关闭后, STANDBY LED 保持亮灯, 这是因为在停电时短期功率保持使用。当备用电源耗尽时, STANDBY LED 会熄灭。

重要通知

设备进入待机模式或节能模式前, 停止录制, 并等待几秒钟以便停止介质访问。如果电源被突然中断, 节能模式将继续进行, 但不能保证数据的保存。特别是, 当任何介质正在被访问时关闭电源会破坏数据, 使其无法使用。

格式化录制介质

按下**MENU**按钮打开主菜单。依次选择“高级-1”
→ “格式化记录装置” → “USB 1/USB 2”。



重要通知

注意这样做会删除所有介质上的数据。
如果已经选择了HDD, 那么本设备硬盘上的数据将被删除。

录制

进行录音设置

例如, 开始录制前, 请设置好录制数据保存的地方及其分辨率。

有关保存录制数据的设置

录制到USB驱动器

打开“主菜单”, “设置”, 然后“录制到”, 并设置如下。

USB1 + USB2

录制相同的数据到USB1 和 USB2中。

USB1

只录制到USB1。

USB2

只录制到USB2。

- 当设备被连接到相应的USB端口时, 录制开始从图像中进行。连接之前录制的图像不会被转移到连接的设备中。
- 录制时, 请不要连接或断开USB驱动器, 否则, 不仅会造成正在录制的数据丢失, 而且还会丢失已经录制好的数据。甚至, 会导致其他故障。

保存网络

打开“主菜单”, “网络”, 然后“模式选择”, 并设置如下。

- 设备总是录制到内部硬盘内。

CIFS客户端

本设备是一个CIFS客户端, 录制将被保存到CIFS服务器中。

FTP客户端

本设备是一个FTP客户端, 录制将被保存到FTP服务器中。

注释

按住PATIENT INFO按钮(1秒), 打开/关闭外部监视器屏幕上的显示(患者信息, 剩余容量, 时间等)。按住选择下一个项目, 四个选项顺序为“显示打开”、“显示关闭”、“只显示状态图标”, 和“显示状态图标和计时器”。

外部开关设置(视频)

您可以连接外部开关到后面板的EXT SW连接器上,使用它们来操作本设备。

1 按下**MENU**按钮打开主菜单,选择“视频”。

2 选择“外部开关”。

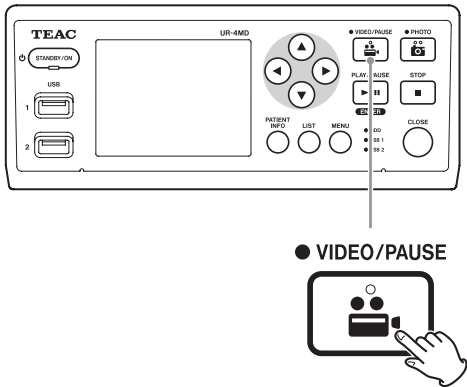
3 设置所要的操作,
更多详情,请见第32页的“视频”内的“外部开关”。

注释

没有静止图像的外部开关设置。

录制视频

按前面板上的**VIDEO/PAUSE**按钮开启录制视频。



再次按**VIDEO/PAUSE**按钮暂停录制。

按**STOP**按钮停止视频录制。

- 如果录制在患者信息被输入前已经开始,视频将不会显示患者信息。如果需要患者信息,参考第16页的“输入患者信息”,在您开始录制前输入患者信息。

在录制的过程中,会发生如下情况。



- 如果视频被输入,该视频将出现在背景中。
- 在录制过程中,VIDEO/PAUSE按钮上的VIDEO LED灯会点亮琥珀色。
- 一个状态指示灯会呈现在显示屏的右上角。
- 当捕捉视频录制时,可以按**PHOTO**按钮拍摄照片。

录制过程中出现的图标

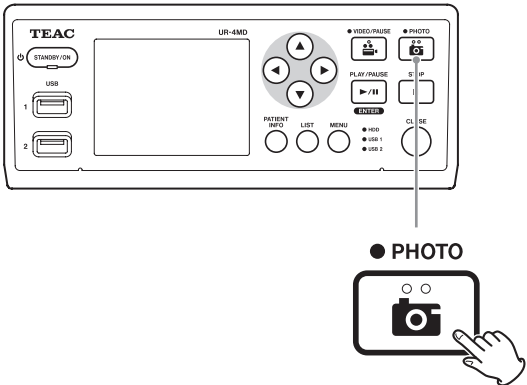
信息	解释说明
	停止
	正在录制视频
	视频录制中暂停
	视频录制停止时拍摄照片
	录制视频时拍摄照片
	视频录制停止时拍摄视频 录制暂停时拍摄照片

注释

当长时间录制时,文件会自动被分拆。拆分的大小取决于您的设置(详情请参阅第33页)。
即使文件被拆分,其录制在本设备中的内容照样可以播放而不会被中断。

拍摄照片

按下前面板上的PHOTO按钮, 可以进行拍照。



- 如果这是发生在输入患者信息之前, 图片将不会有患者信息。如果需要患者信息, 参考第16页的“输入患者信息”, 在您拍摄图片之前输入患者信息。

当拍摄照片时, 会发生如下情况。

- PHOTO按钮上面的PHOTO LED灯会短暂亮橙色。
- 相机图标会短暂出现在显示屏的右上角。

当拍摄照片时, 会出现的图标

信息	解释说明
	拍摄照片中

输入患者信息

需要USB键盘, 读卡器和条形码阅读器来输入患者信息。

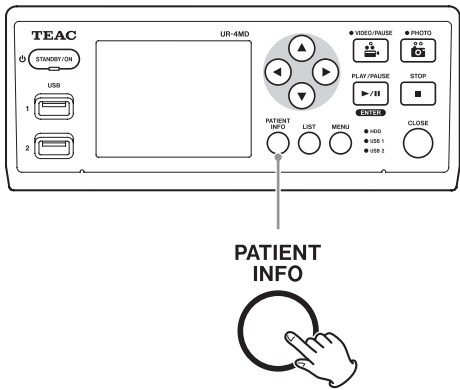
- 参考第32页的“患者信息输入”, 设置正使用中的输入装置。

使用键盘输入患者信息

您可以使用连接到本设备背面USB3端口的USB键盘输入患者信息。

使用USB键盘输入患者的ID姓名, 性别和出生日期。

1 按下PATIENT INFO按钮。



2 使用键盘输入信息。

患者信息

ID : _

名称 :

出生日期 :

性别 :

日期 : 2015/12/24

+信息

医院 : _

医生 :

程序 :

情态 :

手术室 :

评论 :

当第二页的医院、程序、情态或手术室被输入时, 数值立即被保留。不需要擦除项目。

3 按下ENTER按钮确认。

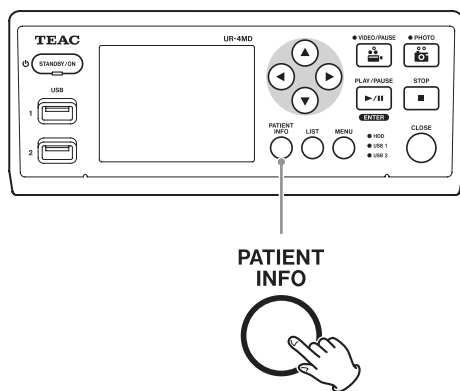
确认后, 会创建一个根据患者ID的新文件夹。按钮和相应的**USB**键盘按键。

操作	按钮	USB键盘
新患者	PATIENT INFO 按钮	F10
移至上面字段	▲ 按钮	↑ 键
移至下面字段	▼ 按钮	↓ 键

向左移动光标	◀ 按钮	← 键
向右移动光标	▶ 按钮	→ 键
确定和录制	ENTER 按钮	ENTER 键 F1 键
取消患者信息输入	CLOSE 按钮 PATIENT INFO 按钮	ESC
取消光标处字符	—	DEL
删除字符到光标的左边	—	BS
字符输入	—	字符代码

注释

- 如果您不按前面板的ENTER按钮或键盘的ENTER键的话, 输入值将不被确认。
- 只能输入英文字母或数字。
- 使用键盘设置语言种类。
- 只支持能兼容Windows的USB键盘。
不支持其他类型的USB键盘, 包括Mac键盘。
- 取消患者信息的输入
在患者信息输入显示屏上, 按下CLOSE 或 PATIENT INFO按钮。

用卡/条码输入患者信息**1 按下PATIENT INFO按钮。****2 阅读卡/条码****3 按下ENTER按钮确认和录制视频。**

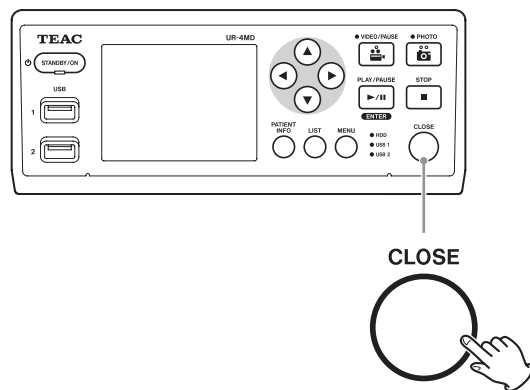
确认后, 会创建一个根据患者ID的新文件夹。

注释

- 如果您不按前面板的ENTER按钮或键盘的ENTER键的话, 输入值将不被确认。
- 只能输入英文字母或数字。
- 除了英文字母和数字外, 无法正常显示字符。

退出录制模式

按下CLOSE按钮清除患者信息和退出录制模式。



在录制时, 按下CLOSE按钮前的视频和静止照片将被保存到同一个文件夹中。文件夹内最大的图像数为999, 包括静止和视频像图像。如果达到此数目, 您想继续录制, 按下CLOSE按钮完成录制一次。当下一次开始录制时, 会创建一个新的文件夹。

移除USB录音设备时的注意事项

由于本机会有一段时间持续写入到USB设备, 按下CLOSE按钮停止录制的视频或照片后, 请不要立即断开USB设备。

写入时断开USB设备, 可能会导致一些已录制图像和管理文件损坏, 导致图像数据损失。断开USB设备时应遵循上述程序。

1 按CLOSE按钮停止录制并等待所有状态指示灯点亮绿色。

根据不同的录制时间, 可能几分钟过后才会亮起绿色。

2 确认在点亮所有LED后, 按LIST按钮, 并确认已录制的图像是否在列表的最顶部。

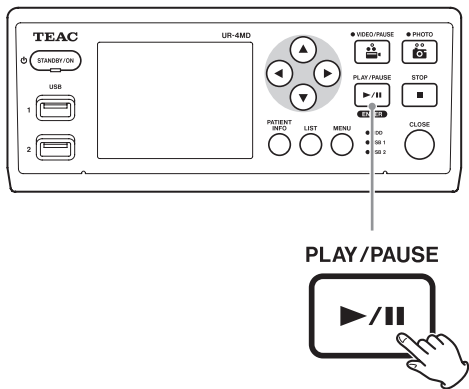
下一步, 确认显示屏的左下方显示的播放设备是USB设备(USB1或USB2)。

3 确认您可以播放已录制图像。**4 按CLOSE按钮停止播放。播放图标从显示屏消失后, 断开USB设备。**

播放录制

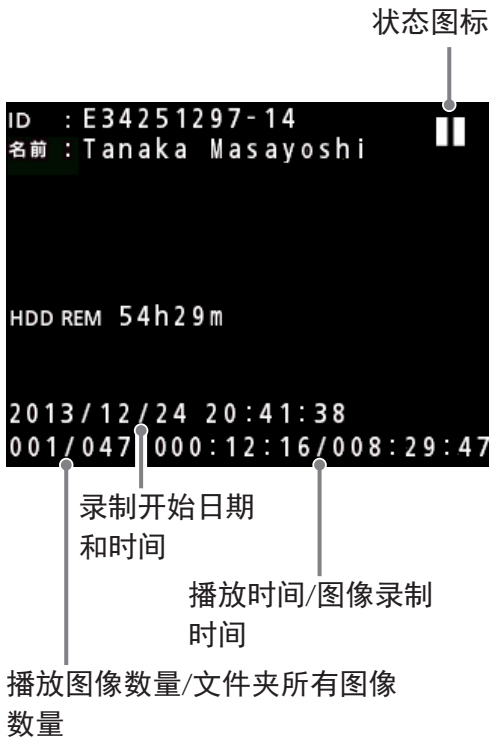
播放最新图像

按下前面板的PLAY/PAUSE按钮播放新录制的数据。



播放过程中出现的图标

信息	解释说明
	普通的视频播放
	暂停播放
	根据视频播放速度出现1, 2, 3, 4 或5
	显示中的图片



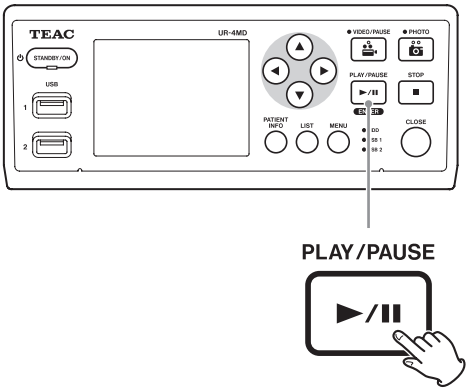
警告

开机或录制后, 可立即播放最后一张图片。
打开列表或开始播放将改变播放文件夹。

播放操作

播放及暂停

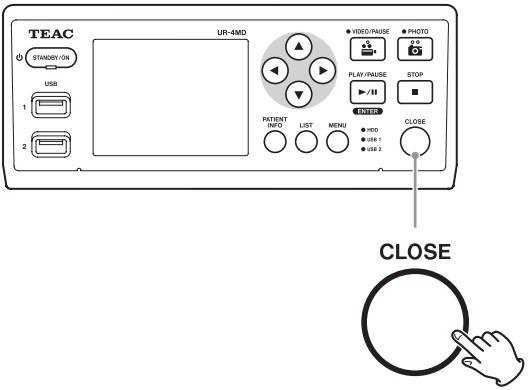
按下PLAY/PAUSE按钮。



- 在普通视频播放的过程中, 可以暂停播放。
- 在其他时间, 可开启普通播放 (正常为1X速度)。
- 当观看图片时, 不起任何作用。

停止

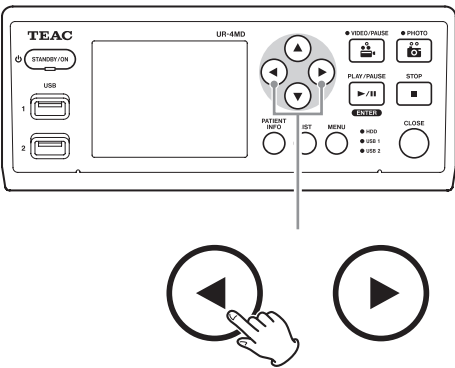
在播放的过程中, 按下CLOSE 或 STOP 按钮可以停止播放。



改变播放速度

在视频播放过程中, 按下▶按钮可以一次加快一级播放速度。

按下◀按钮减慢一级播放速度。



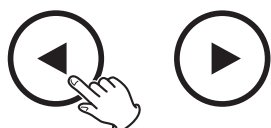
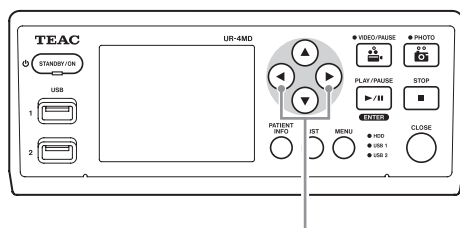
注释

- 本设备没有“快退”功能。
- 当快速播放视频时，视频可能会变得没规则。此时，请以正常速度重启再试。

跳转到索引

当观看视频时，按住 ► 按钮可以跳转到下一个索引，并从那里开始播放视频。

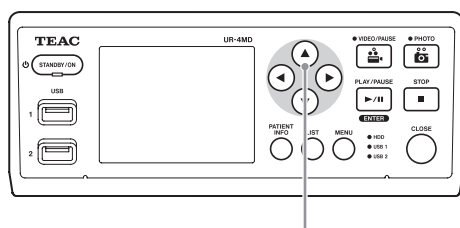
按住 ◀ 按钮可以跳转到前索引并从那里开始播放。



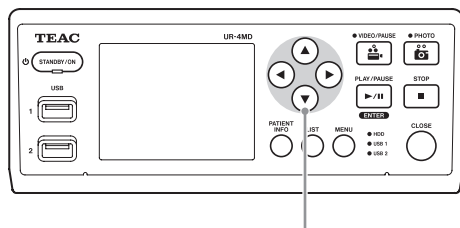
按住至少2秒钟

移到下一个图像文件

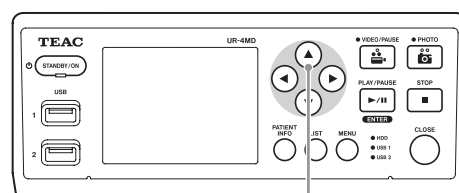
当观看图片或视频播放结束时，按下 ▲ 按钮可以移到下一个文件。



按下 ▼ 按钮移动到上一个文件。

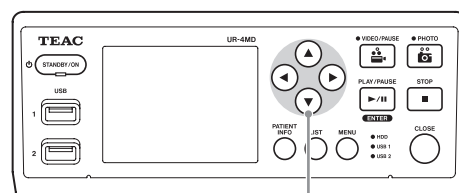
**移到下一个文件夹**

在播放过程中或播放停止时，按下 ▲ 按钮至少2秒钟，移到下一个图像文件夹。



按住至少2秒钟

按住 ▼ 按钮2秒或多于2秒，移动到上一个图像文件夹。



按住至少2秒钟

播放过程中的音频

音频只在普通播放中播放。

注释

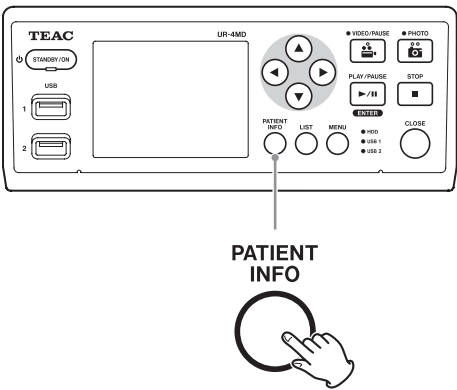
在高速播放中，无法播放音频。

显示和播放最新文件夹列表的文件

按下LIST按钮或USB键盘F3可以显示最新文件夹里的录制数据。



按条件搜索文件并播放



按ID搜索

- 1 按下PATIENT INFO按钮。
- 2 移动光标到ID字段。
- 3 使用USB键盘输入ID。
- 4 按下LIST按钮或USB键盘F3开始搜索。

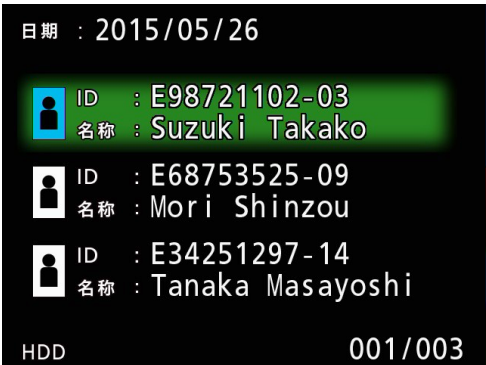
按名称搜索

- 1 按下PATIENT INFO按钮。
- 2 移动光标到“名称”字段。
- 3 使用USB键盘输入姓名。
- 4 按下LIST按钮或USB键盘F3开始搜索。



按日期搜索

- 1 按下PATIENT INFO按钮。
- 2 移动光标到“日期”字段。
- 3 使用USB键盘输入日期。
- 4 按下LIST按钮或USB键盘F3开始搜索。



注释

如果设置PATIENT INFO为OFF，搜索功能将不能使用。

按钮和相应的USB键盘按键。

操作	按钮	USB键盘
新患者	PATIENT INFO 按钮	F10
移至上面字段	▲ 按钮	↑ 键
移至下面字段	▼ 按钮	↓ 键
向左移动光标	◀ 按钮	← 键
向右移动光标	▶ 按钮	→ 键
确定和录制	ENTER 按钮	ENTER 键 F1 键
停止搜索	CLOSE 按钮	ESC
取消光标处字符	—	DEL
删除字符到光标的左边	—	BS
字符输入	—	字符代码
开始搜索	LIST 按钮	F3 键

改变使用的设备进行搜索(播放)

在搜索显示屏上, 按下 ◀ 或者 ▶ 按钮, 或者USB键盘 ← 或 → 键可以按以下顺序更改设备。



停止搜索

搜索时按下CLOSE按钮可以停止搜索。

保存已经录制好的图像到外部设备

您可以使用本机录制这个设备上的数据到一个外部设备。请参阅第33页中的“高级-1”画面上的“从内部磁盘复制”功能。

使用列表画面复制指定的文件夹 (请参阅第 22页)。

复制到USB1或USB2

- 1 按下**MENU**按钮。
- 2 选择“高级”。
- 3 选择“从内部磁盘复制”。
- 4 选择“USB1”或“USB2”。
- 5 选择复制文件夹的次序。



注释

- 文件里面的所有音频和图像将会被复制。不可能选择单个文件进行复制。

警告

- 确定复制的大小有足够的空间。
如果内部HDD有大量的数据, 那么复制需要花费几个小时。
当您不需要长时间使用本设备时, 建议您复制。

复制到FTP服务器上

- 1 按下**MENU**按钮。
- 2 选择“高级”。
- 3 选择“从内部磁盘复制”。
- 4 选择“网络(FTP)”。
- 5 选择复制文件夹的次序。



注释

有关详细信息, 请查阅“FTP客户端模式”和第36页的“模式选择”内容。

复制到CIFS服务器上

- 1 按下**MENU**按钮。
- 2 选择“高级”。
- 3 选择“从内部磁盘复制”。
- 4 选择“网络 (CIFS)”。
- 5 选择复制文件夹的次序。

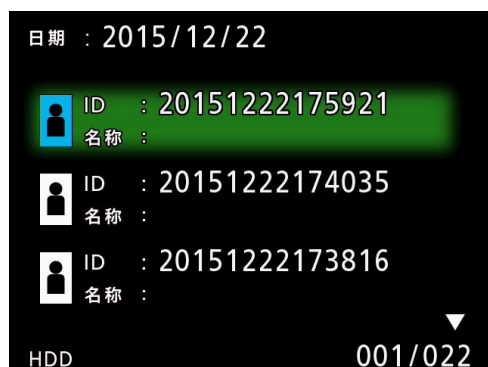


注释

更多关于CIFS服务器设置的信息, 请查阅第 37页“模式选择”内的“CIFS客户端模式”。

复制指定的文件夹

1 按**LIST**按钮打开列表。



- 如果没有显示内部HDD列表, 用d和e按钮设置搜索(播放)设备为HDD。

2 使用**↑**和**↓**按钮来选择您想要复制的文件夹, 然后按**MENU**按钮。

弹出式菜单出现。

3 使用**↑**和**↓**按钮来选择复制, 然后按**ENTER**按钮。



这将打开“从iHDD复制”弹出式菜单。

4 使用**↑**和**↓**按钮来选择要复制的目的地, 然后按**ENTER**按钮。

当前可用的复制中设备显示为复制目的地。



- 选择“取消”取消操作。

5 当确认弹出式菜单出现时, 请按**←**选择“是”, 然后按**ENTER**按钮。



- 如果复制目的地没有足够的开放空间, 不能开始复制。



- 当复制进行时按**ENTER**键可以取消复制。

6 当复制完成信息出现, 按下**ENTER**按钮回到列表。



记录图像的文件夹结构(内部硬盘驱动器或**USB**驱动器)

文件夹根据每个患者的信息输入来创建。
文件夹根据年月日时分秒和ID的格式来命名。

yymmddhhmmss_ID

注释

如果ID中有一个字符不能在文件名中使用, 那么这个字符将会被#代替。

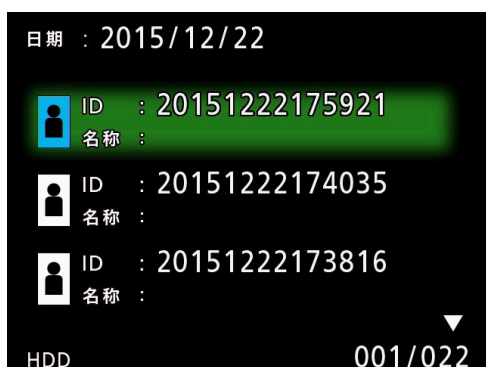
当录制完成时文件夹信息得以更新(按下CLOSE按钮可退出录制模式)。

文件夹结构

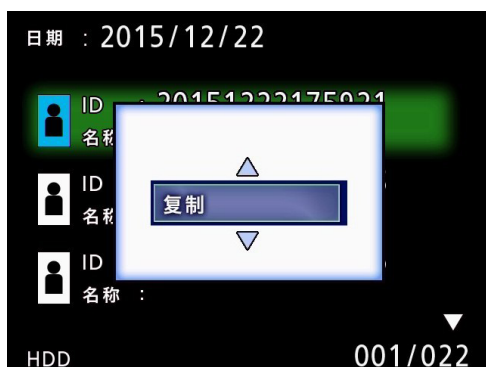
¥(根目录)	
PatientList.html	(html 文件)
20131216154525_000012345	(患者管理文件夹)
├video_files	(视频储存文件夹)
│ 000001-001.mov	(视频文件)
│ 000002-001.mov	(视频文件)
│ 000004-001.mov	(视频文件)
│ 000005-001.mov	(拆分的视频文件)
│ 000005-002.mov	(拆分的视频文件)
│ 000007-001.mov	
├photo_files	(图片储存文件夹)
│ 000003.jpg	(图片文件(按编号拍摄))
│ 000006.jpg	(图片文件)
└Files.html	(文件夹中的图像列表)
20131216181554_0000112255	(患者管理文件夹)
├video_files	(视频储存文件夹)

编辑现有文件夹的信息

1 按**LIST**按钮打开列表。



2 使用**↑**和**↓**按钮选择您想编辑的文件夹, 然后按**MENU**按钮。
弹出式菜单出现。



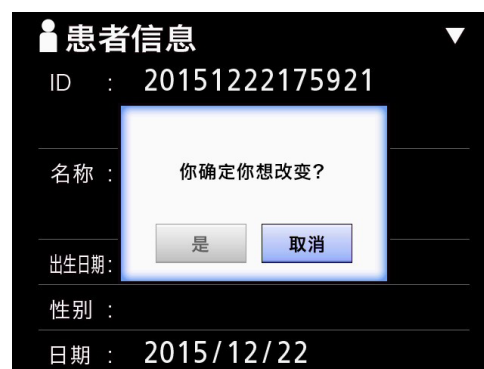
3 使用**↑**和**↓**按钮选择编辑, 然后按下**ENTER**按钮。



文件夹(患者信息画面)将打开。



4 更改文件夹信息, 按下**ENTER**按钮。
改变确认画面显示。



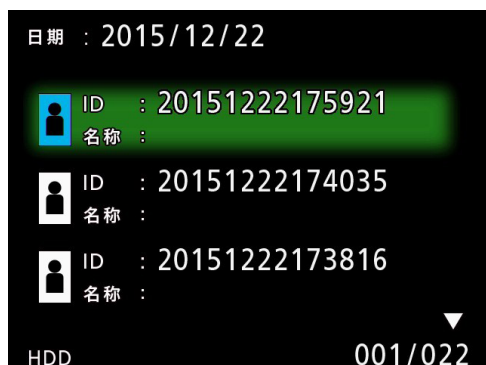
5 选择“是”, 然后按**ENTER**按钮保存编辑的信息。

警告

当被用作**USB**大量存储或在网络上, 可能不能编辑文件夹的信息。此种情况下, 将网络模式设置为关闭。

删除现有文件夹的数据

1 按**LIST**按钮打开列表。



2 使用**↑**和**↓**按钮来选择要删除的文件夹，然后按**MENU**按钮。

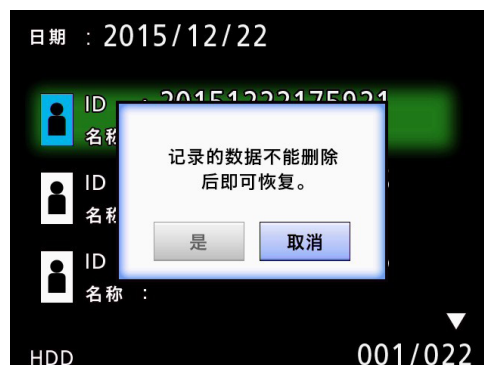
弹出式菜单出现。



3 使用**↑**和**↓**按钮来选择删除，然后按**ENTER**按钮。

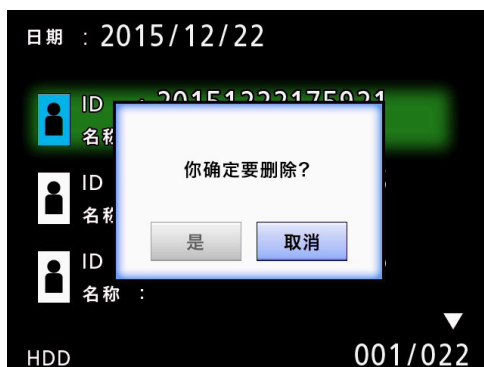


弹出式菜单出现。



4 选择“是”并按**ENTER**按钮。

确认弹出式菜单再次出现。



5 如果确定可以删除，选择“是”，然后按**ENTER**按钮。

已选择的文件夹数据将会被删除。

警告

- 无法恢复删除的数据。要小心使用此功能。
- 当被用作USB大容量存储或在网络上，有可能不能删除文件夹。此种情况下，将网络模式设置为关闭。

在电脑上观看录制图像(使用介质内的HTML文件)

录制的文件夹(患者)信息和图像信息可以通过电脑浏览器进行观看。

录制文件夹列表

可以创建录制在内部硬盘中的文件夹HTML列表(患者列表.html)。

此外,当复制数据到外部USB驱动器时,也可以创建文件夹的HTML列表到该设备中。

UR-4MD						
Folder List (Patient)						
						Total 3 folder
No	Date	ID	Name	D.O.B.	Sex	Num of image
1	2014/May/29	00001206	Tanaka Masayoshi	1950-Jun-18	M	6
2	2014/May/28	00002457	Yamada Taro	1955-Mar-19	M	1
3	2014/May/25	00001822	Suzuki Hanako	1960-Dec-25	F	4

NO:	媒介上的文件夹数量 它们根据复制顺序显示。
Date:	录制日期
ID:	患者ID, 链接(到文件夹里的图像列表中)
Name:	患者姓名, 链接(到文件夹里的图像列表中)
D.O.B.:	患者的出生日期(显示为储存的字符串)
Sex:	患者性别
Num of image:	文件夹里图像的数量(连接到文件夹里)

文件夹里的图像列表

点击文件夹(患者)显示图像列表如下。

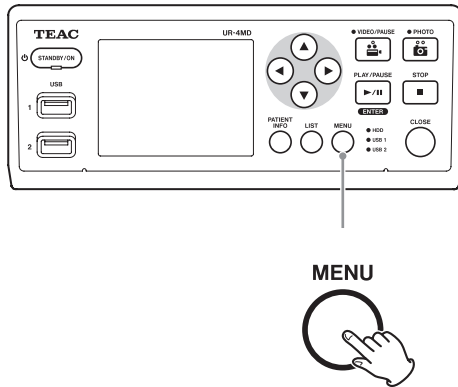
Video/Photo List			
Folder	: 00001206		
Date/Time	: 2016/03/22 12:21:38		
ID	: 00001206		
Name	: Nakamura Masayoshi		
D.O.B.	: 1966-06-18		
Sex	: M		
			Num of image : 6
No	File	Size (Byte)	Length
1	000001-001.mov	14,420,173	00:00:09
2	000002-001.mov	15,204,545	00:00:08
3	000003.jpg	221,841	Photo
4	000004.jpg	91,937	Photo
5	000005.jpg	159,773	Photo
6	000006-001.mov	35,745,617	00:00:25

NO: 文件夹里图像的数量, 拆分的视频显示为“-”
 File: 文件名(链接)
 Size: 文件实际大小
 Length: 录制时间或“图片”(如果是静止图像), 拆分的视频显示为“-”

您可以为本设备设置, 也可以使用各种功能, 包括格式化和复制。

基本操作

1 按下**MENU**按钮打开主菜单。



2 使用 ▲, ▼, ◀和▶ 按钮更改选择。

3 按下**ENTER**按钮打开选择的菜单

4 按下**CLOSE**按钮或当选择“退出”时, 按下**ENTER**按钮可关闭主菜单。

- 按下MENU按钮返回上一画面。

设置

设置	
视频输入	SDI
音频输入	SDI
视频输出	1920 x 1080
录制到	USB1 + USB2
→ 播放装置	USB1
🕒 2015/05/26 10:54:15	
语言	中文

将光标移到要设置的项目, 然后按下ENTER按钮更改项目。

视频输入

当输入多个视频信号时, 设置具有最高优先级的视频输入。

- SDI
- DVI
- S-VIDEO
- COMPOSITE

自动视频输入切换

当检测到视频信号输入时, 将自动切换视频输入。当输入多个视频信号时, 本设备将优先切换到视频输入。

输入的视频信号按以下顺序进行检测。



例如, 如果设置的是DVI, 优先次序如下。

DVI → SDI → S-VIDEO → COMPOSITE

- 如果视频输入的是COMPOSITE, 将不会切换到S-VIDEO。
- 如果视频输入的是S-VIDEO, 将不会切换到COMPOSITE。
- 此外, 在录制过程中视频输入不会进行切换。

手动视频输入切换

当没有录制或播放时, 请按住▲或▼按钮搜索具有视频信号的不同输入连接器, 并切换到它。如果没发现视频信号, 不会有任何更改。

音频输入

当输入多个音频信号时, 设置具有最高优先级的音频输入。

- SDI
- AUDIO
- MIC

自动音频输入切换

当音频输入和视频输入被一起检测到时, 会自动切换。

音频输入信号按以下顺序进行检测。



例如, 如果设置的是AUDIO, 优先次序如下。

AUDIO → SDI → MIC

- 检测到有数字信号存在会设置为SDI, 而且检测连接插头会设置为AUDIO和MIC输入插孔。
- 此外, 在录制过程中, 音频输入不会进行切换。
- 只有当视频输入是SDI时, SDI音频才会被选择。
- 当使用SDI视频输入时, SDI音频才会起作用。此外, 如果视频输入是带有音频数据的SDI信号时, SDI音频才会被设置, 而且不能更改(不能使用AUDIO和MIC)。

视频输出

当没有输入视频信号时, 设置输出视频信号的分辨率。

- NTSC:从COMPOSITE和S-VIDEO OUT接口输出
- PAL:从COMPOSITE和S-VIDEO OUT接口输出
- 1024x768:从DVI OUT接口输出
- 1920x1080:从DVI和SDI OUT 接口输出

- 在播放过程中, 即使有一个输入视频信号, 如果视频信号和播放图像不同, 设置的视频信号会被输出。

录制到

使用此项目将连接器设置为已连接的录制装置。

- USB1 + USB2
- USB1
- USB2

- 设备总是录制到内部硬盘内。
- 当设置到USB1+USB2时, 相同的视频被录到两个USB内。

播放

此按钮选择播放模式。

- USB1
- USB2
- iHDD(内置硬盘驱动器)

- 在播放过程中, 如果已设置的装置不可用, 本设备会按照上面顺序检查搜索一个装置。

时钟

显示当前日期和时间。

所选的设备(光标位置)呈高亮显示。

- ◀, ▶: 移动光标更改所选设备。
- ▲, ▼: 移动光标增大或减小音量。
- ENTER: 确定设置日期和时间。
- MENU: 取消日期和时间的更改。

备注

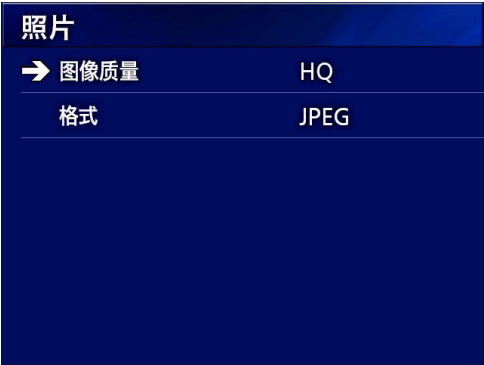
本设备的内置时钟不会一直保持精准。我们建议定期检查和调整时钟设置。

语言

根据菜单设置语言。

- English
- 日本語
- Français
- Deutsch
- L'italiano
- Español
- 한국어**
- 中文
- Português
- Türkçe

照片



图像质量

设置拍摄图片的质量。

- HQ: 高品质
- SQ: 标准品质
- EQ: 经济品质(小文件)

格式

JPEG: 压缩JPEG

JPEG(信息开启):

- 以下文件夹信息嵌入在使用压缩的JPEG图像顶部
- 嵌入式文件夹信息: 日期, ID, 名称, 出生日期, 性别, 医院, 手术医生
- DICOM (.dcm): DICOM文件格式(图像是JPEG格式)

警告

不支持未压缩的DICOM图像。只支持压缩JPEG图像。

视频

视频	
→ 图像质量	HQ
自动索引	1 分钟
外部开关	↔ 按下开关
外部开关 (模式)	休止符

图像质量

用于设置录制音频的质量。

- HQ: 高品质
- SQ: 标准品质
- EQ: 经济品质(小文件)

自动索引

设置如何在录制过程中添加指标到视频中。

- 关闭: 未创建索引。
- 30 秒钟: 每30秒创建一次索引。
- 1分钟: 每1分钟创建一次索引。
- 5分钟: 每5分钟创建一次索引。
- 10分钟: 每10分钟创建一次索引。
- 每文件20 视频录制后, 录制被拆分成20个相等的间隔, 并创建索引。

外部开关

用于设置外部开关的操作(外部开关)。

- 按下切换: 按下交替切换到启动和暂停录制。
- 按住以纪录: 按下时纪录。

外部开关 (模式)

可设置外部开关模式(外部开关)的操作。

- 休止符(暂停): 录制, 暂停
- 停止: 录制↔停止

高级-1

高级-1	
→ 患者信息输入	USB 键盘
自动文件分割	1GB
格式化记录装置	取消
OSD	开启
从内部磁盘复制	取消

患者信息输入

选择装置输入患者信息。(此设置仅适用于患者信息的输入。)

当使用磁卡/条码时, 设置字符的位置(范围)以便读取。

- 关闭: 患者信息将不被输入。
- USB键盘: 使用USB键盘输入患者信息。

卡/条形码读取器: 使用USB卡/条形码读取器输入患者信息。使用该设置时, 下面的字符范围会出现在设置显示屏上。设置每一组信息的范围。

- 支持加强标准的美式键盘。

卡/条形码读取器 (开始 - 结束参数)	
→ ID (开始 - 结束)	000 000
名称 (开始 - 结束)	000 000
出生日期 (开始 - 结束)	000 000
性别 (开始 - 结束)	000 000
显示所有信息	

范围设置为从第一个字符(开始)到最后一个字符(结束)。当只有一个字符使用时, 开始和结束值是一样的。

- ID: 设置用于该ID的字符范围。
- 名称: 设置用于该名称的字符范围。
- 出生日期: 设置出生日期的字符范围。
- 性别: 设置性别的字符范围。
- 显示所有信息: 在显示屏上, 显示出所有由卡/条形码读取器输入的数据。



- 连接患者信息输入的USB装置到本设备背面的USB3端口上。

自动文件拆分

当录制视频时, 设置使用的自动文件拆分尺寸。

4 GB
1 GB

- 由于文件系统的限制, 文件需要被拆分。
当使用FTP传输时, 设备越小效果越好。
- 根据视频质量设置和输入的视频信号的分辨率, 实际的文件拆分尺寸可能会比设置的尺寸要小。

格式化记录装置

将记录装置(介质)格式化(初始化)。

取消
USB1
USB2
iHDD

重要通知

格式化装置将删除里面所有的录制数据。请注意, 一旦格式化后不能撤消。

OSD

ON: 显示打开
OFF: 显示关闭
ICON: 只有状态图标显示
ICON+TIMER: 状态图标和时间计数器显示

从内部磁盘复制

可以从内部硬盘复制录制的照片。选择复制目标装置后, 复制选项会被显示。(详情请参阅第22页)

取消
USB1
USB2
网络(FTP)
网络(CIFS)

选择装置后, 选项在下面显示。

选择一个选项将开始复制。

从较旧的文件夹: 从最旧的文件夹开始, 所有的数据将被复制。

从较新的文件夹: 从最新的文件夹开始, 所有的数据将被复制。

使用列表画面复制指定的文件夹
(详情请参阅第22页)。

高级-2



擦除内置硬盘驱动器(保留)

设置如何从内部硬盘擦除数据。根据设置, 当设备开始时, 数据将被删除。

- 关闭: 不会擦除。当硬盘已满时, 不能再进行录制。
- 保留200GB: 首先从最旧的文件夹开始删除, 以腾出大约200GB的内存空间。
- 保留100 GB: 首先从最旧的文件夹开始删除, 以腾出大约100 GB的内存空间。
- 保留50 GB: 首先从最旧的文件夹开始删除, 以腾出大约50 GB的内存空间。
- 保留最后24小时: 超过24小时的旧文件夹(从录制开始时间算起)会被删除。
- 保留最后7天: 超过7天的旧文件夹(从录制开始时间算起)会被删除。

警告

如果本机保持长时间开启状态, 开机擦除硬盘功能将无法使用, 内置硬盘的可用空间将越来越少。当硬盘没有更多可用空间时, 录制将被迫中断和停止。请每天关机一次, 以保证本机能够正常使用。

存储设备信息

这里显示选定存储设备的各种信息。

iHDD 信息	
容量	
499,863,715,840	Bytes
可用空间	
499,842,203,648	Bytes
已用空间	
0,021,512,192	Bytes

iHDD信息: 这里显示内置硬盘信息。

- 容量: 显示总容量。
- 可用空间: 显示可用空间。
- 已用空间: 显示已用空间。
- iHDD 自我监测: 这里显示内置硬盘自我监测、分析及报告技术信息。
- USB 1 自我监测: 这里显示连接到USB 1的装置的设备的自我监测、分析及报告技术信息。不会出现在不支持SMART(自我监测、分析及报告技术信息)功能的设备上。
- USB 2 自我监测: 这里显示连接到USB 2的装置的设备的自我监测、分析及报告技术信息。不会出现在不支持SMART(自我监测、分析及报告技术信息)功能的设备上。

自我监测、分析及报告技术信息

iHDD 自我监测、分析及报告技术信息			
ID 属性名	当前值	最糟糕值	阈值
01 读取错误率	100	100	062
02 吞吐性能	100	100	040
05 重新映射扇区计数	100	100	005
07 寻道错误率	100	100	067
0A 旋转重试计数	100	100	060

iHDD 自我监测、分析及报告技术信息			
ID 属性名	当前值	最糟糕值	阈值
C4 再分配事件计数	100	100	000
C5 当前待映射扇区计数	100	100	000
C6 无法校正扇区计数	100	100	000
C8 写入错误率	200	200	000
DF 加载 / 卸载重试次数	100	100	000

这里显示每个项目“当前”, “最差”和“阈值”的值。这些值是由硬盘供应商提供。因此, 如果当前或最坏的值小于阈值, 我们建议您备份数据, 更换硬盘, 并采取其他必要的措施。

- 01 读取错误率
- 02 吞吐性能
- 05 重新映射扇区计数
- 07 寻道错误率
- 0A 旋转重试计数
- C4 再分配事件计数
- C5 当前待映射扇区计数
- C6 无法校正扇区计数

- C8 写入错误率
- DF 加载/卸载重试次数

蜂鸣器

用于打开或关闭内置蜂鸣器声音。

- ON: 蜂鸣器响。
- OFF: 蜂鸣器不响。

- 例如, 当使用按钮, 开始录制和出现警告时, 会发出蜂鸣声。

固件更新

请按照这些步骤来更新本设备的固件。
正确按照步骤来更新。不这样做可能会造成设备故障。

- 联系您购买本设备的零售商获取固件更新的信息。

准备USB闪存驱动器的更新

- 1 使用本设备将**USB**闪存驱动器进行格式化。
- 2 从计算机复制更新固件到**USB**闪动驱动器的根文件夹。

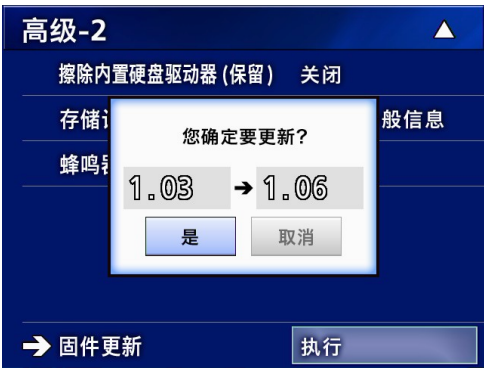
固件更新

警告

- 更新前, 请务必对已录制的数据进行备份。更新后, 本设备可能不能播放较早的文件。而且, 更新后, 您应该对内置的硬盘驱动器进行格式化。(请参阅第33页的“格式化纪录装置”。)
- 开机后, 在进行更新前, 不要使用录制或播放功能。
- 按照下面的程序进行一个稳定的更新。

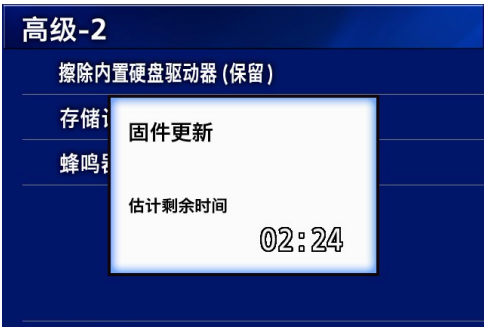
- 1 按住**STANDBY/ON**待机按钮一秒关闭本机。
- 2 断开连接到本机背面的**LAN, USB 3, USB 4**和视频(**SDI, DVI, 复合, S-VIDEO**)的连接线。
- 3 按**STANDBY/ON**按钮来开启本机。
- 4 连接本机的**USB**闪存驱动器到**USB 1**端口。
- 5 从高级-2画面进行固件更新。

在以下所示的例子中, 本设备将更新版本从1.03到1.06。



- 取消: 不作更新。
- 是: 更新固件。

- 6 移动光标到“执行”处并按下**ENTER**按钮开始更新。将会出现以下屏幕。



- 更新需要几分钟时间。
- 当更新完毕, 本设备将自动重启。等待设备重启。
- 更新过程中, 不要中断电源或移除USB驱动器。如果这样做可能会导致本设备运行得不规律。

网络



模式选择

用来设置网络模式。

关闭

FTP客户端：文件将被自动发送到设置的FTP服务器上。

CIFS客户端：文件将被自动发送到设置的CIFS服务器上。

CIFS服务器：本设备成了CIFS服务器, 其文件可从CIFS客户端读取。

USB 大容量存储：作为服务器, 本设备只能唯读, 在录制的过程中不能读取。使用本设备作为一个USB大容量存储设备, 可以从USB主设备中读取文件。

作为服务器, 本设备只能唯读。将其连接到本设备背面的USB 4端口上。

在录制的过程中不能读取。不能同时使用外部命令控制功能。使用此设置, USB大容量存储功能将被用于操作。没有设置USB大容量存储时, 外部命令控制功能将被用于操作。

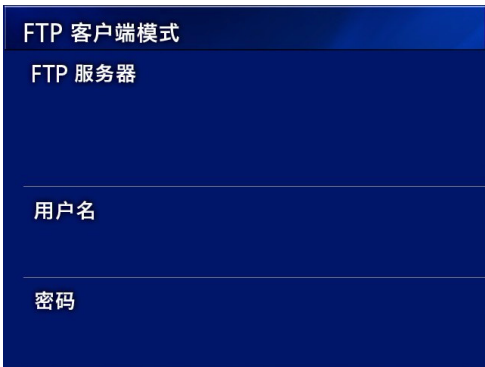
这些选项有屏幕显示以便进行详细设置(请参阅第36及37页)。

根据所选的设置, 会出现一个详细设置的屏幕。使用USB键盘输入。连接USB 3端口到本设备背面。

重要通知

- 请与负责网络管理员查询有关网络设置和操作的信息。
在不可靠的网络上操作有可能导致图像数据的丢失。
- 例如, DNS服务器需要对每个模式的设置进行计算机和IP地址的名称解析。
- 切换到USB大容量存储设置或从USB存储设备切换到另一个设置, 必要时请重新启动设备。(必需从USB大容量存储功能切换到外部命令控制功能。)

FTP客户端模式



FTP服务器：使用USB键盘输入服务器名称。您也可以输入以下服务器的文件夹名称。

用户姓名：使用USB键盘输入用户姓名。

密码：使用USB键盘输入密码。

设置例子：

FTP服务器： 192.168.0.001/dvr_ftp

用户名： dvr

密码： abcde

重要通知

当使用多个录制时, 如果录制数据的录制地址被设置到同一个服务器上, 那么数据有可能会丢失。不要设置在相同的位置。

需要使用者名称及密码。在服务器上必需进行相对使用者设置。

CIFS服务器模式

CIFS 服务器模式
型号名
—
用户名
密码

型号名称(或机器名称):

使用USB键盘输入模式名称。

用户姓名:使用USB键盘输入用户姓名。

密码: 使用USB键盘输入密码。

设置例子:

型号(或机器名称): video_recoder

用户名: dvr

密码: abcde

CIFS客户端模式

CIFS 客户端模式
路径
用户名
密码

路径: 使用USB键盘输入用户姓名。

用户名: 使用USB键盘输入用户姓名。

密码: 使用USB键盘输入密码。

设置例子:

路径: 192.168.0.101/dvr_mount

用户名: dvr

密码: abcde

重要通知

当使用多个录制时, 如果录制数据的录制地址被设置到同一个服务器上, 那么数据有可能会丢失。不要设置在相同的位置。

需要使用者名称及密码。在服务器上必需进行相对使用者设置。

IP地址

用来设置本设备的网络地址。

当前IP地址: 使用USB键盘设置IP地址。

子网掩码: 使用USB键盘设置子网掩码。

默认网关: 使用USB键盘设置默认网关。

DNS服务器1: 使用USB键盘设置DNS服务器1.

DNS服务器2: 使用USB键盘设置DNS服务器2.

WINS服务器: 使用USB键盘设置WINS服务器。

注释

如果IP地址设置发生改变, 新的设置将在本设备重启后使用。

当前IP地址

IP 地址	
当前 IP 地址	192.168.0.121
子网掩码	255.255.255.0
默认网关	
DNS 服务器 1	
DNS 服务器 2	
WINS 服务器	
(00:02:2E:00:00:02)	

显示当前的IP地址。

最底一行显示设备的MAC地址。

建议检查

每天使用前检查以下项目。这样做有助于您迅速找到问题并防止故障发生。

检查项目

- 电源线是否正确连接?
- 各种连接器是否正确连接?

我们建议对设备进行定期检查以维护其功能和提高安全性。请联系您购买本设备的零售商获取有关设备维护检查, 包括定期检查和维护合同以及其他服务信息。

清洁设备

⚠ 注意

为了您的安全,请在清洁前从插座拔下电源插线。

- 使用合适的清洁剂进行表面消毒以清洁本设备的外壳。
- 规定的清洁方法是擦拭消毒。
- 对于擦拭消毒,我们建议使用擦拭清洁剂的软纸巾/抹布。



采取适当措施确认清洗结果。

故障排除

在以下情况下,请在请求维修前检查所列出的项目。

电源没有开启。

- ➔ 确认电源插头已连接。
(确保设备已正确连接到电源插座,而且没有断开连接。)

设备已开启但没有视频输出。

- ➔ 确认后面板的连接器没有断开连接,并且您正在使用的电缆没有损伤。
确认已正确选择了输入。

当外部**USB**设备连接时,即使它之前能够正常使用,但仍在**LCD**上显示“您确定要进行格式化?”

- ➔ 尝试重新连接外部**USB**设备。如果接口插如不当,外部**USB**设备可能不能被正确识别。
- ➔ 当外部**USB**设备的文件系统发生矛盾时,也可能导致弹出这项提示。文件系统之间的矛盾同样会阻止录制工作。停止使用外部**USB**存储设备,并在电脑的磁盘检查工具上对该存储设备进行检查和文件系统修复。取消而不进行格式化也是可以的。但是此外部**USB**设备将不会被识别,系统会提示错误消息,并且此设备将不再能被用来录制。

重要通知

选择“是”,格式化将擦除所有的数据。因此,您应该在格式化之前尝试检查文件系统。

录制到外部**USB**设备时意外停止;录制文件不显示或不能播放。

- ➔ 当**USB**设备文件系统出现矛盾时会发生录制问题。
在计算机上使用磁盘检查工具检查和修理外接**USB**设备的文件系统。
每种操作系统都有不同的磁盘修复方法。所以请遵循已连接的计算机的操作系统中的磁盘修复程序对该设备进行修复。

注释

搜索“检查磁盘”查找指令。

即使按下录制按钮,录制图标和录制的时间有时也不会出现。

- ➔ 可能发生于使用计算机后首次的录制,例如,在外部**USB**设备上添加或删除**UR-4MD**已用于录制的文件。
这只是显示问题。录制实际上已开始,画面将会在录制到外部**USB**设备20-120秒钟后恢复正常。保持此状态直到它恢复。

内部硬盘没有更多的开放空间,不可以进行录制。

- ➔ 是否已设置“高级 -2”设置页上的“擦除内置硬盘驱动器(保留)”为“关闭”?将它设置为“关闭”以外的任何其他设置,并重新启动本机。如果已经设置它为“关闭”以外的任何其他设置,请确保本机不保持开机。当本机启动后内部开放空间才可以恢复。请每一天关机一次,而不是总是把它开启。当没有足够的内部开放空间时,如果你想录制一段很长时间,请预先重新启动本机恢复开放空间。

剩余录制时间急剧增加或下降。

- ➔ 所显示的剩余时间取决于输入的视频信号(或当前选择的信号,当多个信号正在输入)的分辨率。

一般事项

录制媒体

内置 2.5英寸HDD
(大约450GB数据内存)

外部介质 USB驱动器
(闪存驱动器和硬盘驱动器)

水平面上安置操作

电源: AC 100 – 240 V \pm 10% 50/60 Hz
0.62 A – 0.35 A

操作环境

温度 5 – 40°C

湿度 5 – 80%RH(无冷凝)

最大湿球温度 29°C

气压 750 – 1040 hPa

存放环境

温度 -20 – 60°C

湿度 5 – 80%RH(无冷凝)

最大湿球温度 29°C

气压 600 – 1040 hPa

运输环境

温度 -30 – 60°C

湿度 5 – 90%RH(无冷凝)

最大湿球温度 29°C

气压 600 – 1040 hPa

外部尺寸 210.5 W \times 88.5 H \times 235 D (mm)
(包括橡胶垫脚, 不包括后面板上的突起部分)

重量 2.6 kg

标准

安全标准 IEC 60601-1
CSA60601-1
EN60601-1
GB8898

EMC IEC 60601-1-2
CSA60601-1-2
EN60601-1-2
FCC B类
GB17625.1
GB13837
GB9254

证书 CSA NRTL/C

医疗设备规格

防电击 1类设备

防止水的有害侵入 普通

在空气, 或氧气或一氧化二氮可燃麻醉剂混合物环境中的安全等级。

不适合在空气, 或氧气或一氧化二氮可燃麻醉剂混合物环境下使用。

操作模式连续操作设备

视频/音频输入信号

模拟(NTSC/PAL)

复合 1.0 Vp-p, 75 Ω 终止
S-VIDEO 1.0 Vp-p, 75 Ω 终止, 亮度信号
NTSC 0.286 Vp-p, 75 Ω 终止, 彩色信号
PAL 0.3 Vp-p, 75 Ω 终止, 彩色信号

数字(高清晰度视频)

SDI 1080p, 1080i, 720p, 480i, 576
DVI-D 640 \times 480 – 1920 \times 1200
● 1920 \times 1200 缩小到 1728 \times 1080 并录制

音频

音频 3.5mm立体声迷你插孔
-8 dBs, 10 k Ω 或更高, 非平衡型
单独SDI视频输入接口
MIC 3.5mm单声道迷你插孔

视频/音频输出信号

模拟(NTSC/PAL)

- 复合 1.0 Vp-p, 75 Ω 终止
- S-VIDEO 1.0 Vp-p, 75 Ω 终止, 亮度信号
- NTSC 0.286 Vp-p, 75 Ω 终止, 彩色信号
- PAL 0.3 Vp-p, 75 Ω 终止, 彩色信号

数字(高清晰度视频)

- SDI 1080p, 1080i, 720p, 480i, 576
- DVI-D 640 × 480–1920 × 1200

音频

- 音频 3.5mm立体声迷你插孔
- 8 dBs, 1 kΩ, 非平衡型
- 单独SDI视频输出接口

视频数据处理

- 压缩图片格式 JPEG
- 压缩视频格式 H.264
- 文件格式 mov

音频数据处理

- 格式 LPCM
- 采样频率 48 kHz
- 量化比特深度 16-bit

外部录制介质

- USB驱动器 闪存和硬盘
- 格式 FAT32

接口

- LAN RJ45 (100Base-TX/1000Base-T)
- USB-A 录制用 × 2 (USB 2.0)
- 用于字符输入 × 1 (USB键盘)
- USB-B 用于连接电脑
- REMOTE 2.5-英寸迷你插孔
- 触点开关 3.5-英寸迷你插孔

The software used in this product includes software that TEAC Corporation (hereafter, "TEAC") has received permission to use from third parties either directly or indirectly. We request that you read the notice about this software without fail.

Notice regarding software that uses the GNU GPL

This product includes software covered by the following GNU General Public License (hereafter, "GPL") or GNU Lesser General Public License (hereafter, "LGPL").

In accordance with the attached conditions of the GPL/LGPL, we are informing you that customers have the right to obtain, change and redistribute the source code of this software.

Package list

linux-3.0.35
kernel-3.0.35-imx_4.0.0
u-boot-2009.08-imx_3.0.3
gst-plugins-base-0.10.35
gst-plugins-good-0.10.30
gst-plugins-ugly-0.10.11
gstreamer-core-0.10.35-1
imx-lib-3.0.35-4.0.0
imx-test-3.0.35-4.0.0
smartmontools-6.3

If you wish to obtain the source code for this software, you may request it by accessing the following URL and filling out a registration form.

<http://teac-global.com/support/opensource/form/>

Please understand that we are unable to respond to questions about the source code contents and similar matters.

The original texts of the GNU General Public License and GNU Lesser General Public License are provided below.

GPL

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
51 Franklin St, Fifth Floor, Boston, MA 02110-1301
USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public

License is intended to guarantee your freedom to share and change free

software—to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to

using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights.

These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the

Program (independent of having been made by running the Program).

Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

关于软件的重要通知

These requirements apply to the modified work as a whole.If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works.But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3,You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code.(This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it.For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable.However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4,You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License.Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5,You are not required to accept this License, since you have not signed it.However, nothing else grants you permission to modify or distribute the Program or its derivative works.These actions are prohibited by law if you do not accept this License.Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6,Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions.You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7,If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License.If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all.For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices.Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8,If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded.In such case, this License incorporates the limitation as if written in the body of this License.

9,The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time.Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number.If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation.If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10,If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission.For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this.Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11,BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU.SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12,IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>
```

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for
details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the
program
`Gnomovision' (which makes passes at compilers) written by
James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

GNU LIBRARY GENERAL PUBLIC LICENSE Version 2, June 1991

Copyright (C) 1991 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users.

This license, the Library General Public License, applies to some specially designated Free Software Foundation software, and to any other libraries whose authors decide to use it. You can use it for your libraries, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library, or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link a program with the library, you must provide complete object files to the recipients so that they can relink them with the library, after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

Our method of protecting your rights has two steps: (1) copyright the library, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the library.

Also, for each distributor's protection, we want to make certain that everyone understands that there is no warranty for this free library. If the library is modified by someone else and passed on, we want its recipients to know that what they have is not the original version, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license.

The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library.

Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

GNU LIBRARY GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Library General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a

关于软件的重要通知

portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is made without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1, You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2, You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- The modified work must itself be a software library.
- You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in

themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3, You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4, You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5, A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library); rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a

derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6, As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on

which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7, You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8, You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9, You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10, Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

11, If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then

the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12, If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13, The Free Software Foundation may publish revised and/or new versions of the Library General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14, If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15, BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY

KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16, IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Library General Public License for more details.

You should have received a copy of the GNU Library General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990

关于软件的重要通知

Ty Coon, President of Vice

That's all there is to it!

LPGL Version 2.1

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2,
hence
the version number 2.1.]

Preamble

The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General
Public
Licenses are intended to guarantee your freedom to share and
change
free software—to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some
specially designated software packages—typically libraries—of
the
Free Software Foundation and other authors who decide to
use it. You
can use it too, but we suggest you first think carefully about
whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the
explanations below.

When we speak of free software, we are referring to freedom
of use,
not price. Our General Public Licenses are designed to make
sure that
you have the freedom to distribute copies of free software
(and charge
for this service if you wish); that you receive source code or
can get
it if you want it; that you can change the software and use
pieces of
it in new free programs; and that you are informed that you
can do
these things.

To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender
these
rights. These restrictions translate to certain responsibilities for
you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether
gratis
or for a fee, you must give the recipients all the rights that we
gave
you. You must make sure that they, too, receive or can get the
source
code. If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink
them
with the library after making changes to the library and
recompiling
it. And you must show them these terms so they know their
rights.

We protect your rights with a two-step method: (1) we
copyright the
library, and (2) we offer you this license, which gives you legal
permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that
there is no warranty for the free library. Also, if the library is
modified by someone else and passed on, the recipients should
know
that what they have is not the original version, so that the
original
author's reputation will not be affected by problems that
might be
introduced by others.

Finally, software patents pose a constant threat to the
existence of
any free program. We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder. Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License. This license, the GNU
Lesser
General Public License, applies to certain designated libraries,
and
is quite different from the ordinary General Public License.
We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

When a program is linked with a library, whether statically
or using
a shared library, the combination of the two is legally speaking
a
combined work, a derivative of the original library. The ordinary
General Public License therefore permits such linking only if the
entire combination fits its criteria of freedom. The Lesser
General
Public License permits more lax criteria for linking other code
with
the library.

We call this license the "Lesser" General Public License because
it
does less to protect the user's freedom than the ordinary
General
Public License. It also provides other free software developers
less
of an advantage over competing non-free programs. These
disadvantages
are the reason we use the ordinary General Public License for
many
libraries. However, the Lesser license provides advantages in
certain
special circumstances.

For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that
it becomes
a de-facto standard. To achieve this, non-free programs must be
allowed to use the library. A more frequent case is that a free
library does the same job as widely used non-free libraries.
In this
case, there is little to gain by limiting the free library to free
software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free
programs enables a greater number of people to use a large
body of
free software. For example, permission to use the GNU C Library
in
non-free programs enables many more people to use the
whole GNU
operating system, as well as its variant, the GNU/Linux
operating
system.

Although the Lesser General Public License is less protective
of the
users' freedom, it does ensure that the user of a program that is
linked with the Library has the freedom and the wherewithal
to run
that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and
modification follow. Pay close attention to the difference
between a
"work based on the library" and a "work that uses the library".
The
former contains code derived from the library, whereas the
latter must
be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND
MODIFICATION

0. This License Agreement applies to any software library or
other

program which contains a notice placed by the copyright
holder or
other authorized party saying it may be distributed under the
terms of
this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

A "library" means a collection of software functions and/or
data
prepared so as to be conveniently linked with application
programs
(which use some of those functions and data) to form
executables.

The "Library", below, refers to any such software library or work
which has been distributed under these terms. A "work based
on the
Library" means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or
translated
straightforwardly into another language. (Hereinafter,
translation is
included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the
work for
making modifications to it. For a library, complete source code
means
all the source code for all modules it contains, plus any
associated
interface definition files, plus the scripts used to control
compilation
and installation of the library.

Activities other than copying, distribution and modification
are not
covered by this License; they are outside its scope. The act of
running a program using the Library is not restricted, and
output from
such a program is covered only if its contents constitute a work
based
on the Library (independent of the use of the Library in a tool
for
writing it). Whether that is true depends on what the Library
does
and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's
complete source code as you receive it, in any medium,
provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep
intact
all the notices that refer to this License and to the absence of
any
warranty; and distribute a copy of this License along with the
Library.

You may charge a fee for the physical act of transferring a copy,
and you may at your option offer warranty protection in
exchange for a
fee.

2. You may modify your copy or copies of the Library or any
portion
of it, thus forming a work based on the Library, and copy and
distribute such modifications or work under the terms of
Section 1
above, provided that you also meet all of these conditions:

- The modified work must itself be a software library.
- You must cause the files modified to carry prominent
notices
stating that you changed the files and the date of any
change.
- You must cause the whole of the work to be licensed at no
charge to all third parties under the terms of this License.
- If a facility in the modified Library refers to a function or a
table of data to be supplied by an application program that
uses
the facility, other than as an argument passed when the
facility
is invoked, then you must make a good faith effort to ensure
that,

in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3, You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4, You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5, A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6.

Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6, As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2)

will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7, You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8, You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9, You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

关于软件的重要通知

10,Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions.You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11,If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License.If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all.For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices.Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12,If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded.In such case, this License incorporates the limitation as if written in the body of this License.

13,The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number.If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and

conditions either of that version or of any later version published by the Free Software Foundation.If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14,If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission.For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15,BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU.SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16,IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change.You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library.It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public

License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary.Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

TEAC

生产商: 东莞蒂雅克电子有限公司

地址: 广东省东莞市长安镇上角村

TEAC CORPORATION	1-47 Ochiai, Tama-shi, Tokyo 206-8530, Japan 电话: +81-42-536-9154
------------------	--

蒂雅克商贸(深圳)有限公司	中国广东省深圳市福田区深南大道 6021 号喜年中心 A 座 817 室, 邮编: 518040 电话: +86-755-88311561-2
---------------	---
