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方正科技扫描仪系列产品服务承诺 (D版)

前言

尊敬的用户：

您好！

感谢您选购方正科技扫描仪系列产品，谨致谢意！为了保护您的合法权益，免除您的后顾之忧，方正科技集团股份有限公司（以下简称“方正科技”）依托“全程服务”品牌，秉承“关爱无限 完美体验”的服务理念，将以优质、规范、专业、快捷的服务答谢您对方正科技产品的信任！

方正科技除向您提供国家有关部门颁布的《微型计算机商品修理更换退货责任规定》的服务之外，还特别向您提供了更多、更为贴心的增值服务。

方正科技向您作出下述方正扫描仪系列产品的保修服务承诺（包含方正科技扫描仪系列产品三包承诺、方正科技扫描仪系列产品标准服务承诺、特别提醒三部分），并在您需要时依此为您提供服务。为了确保您及时获得方正科技提供的服务，请您在购买产品后立即阅读此服务承诺，详细了解方正科技为您提供的服务内容及获取方式。

一、方正科技扫描仪系列产品“三包”承诺

如果您是消费者用户（详见《消费者权益保护法》规定的定义），方正科技将全面执行国家有关部门颁布的《微型计算机商品修理更换退货责任规定》（以下称“国家电脑三包”）的细则条款，向您提供“国家电脑三包”规定的服务。

二、方正科技扫描仪系列产品标准服务承诺

方正科技除向您提供“国家电脑三包规定”的服务之外，还承诺提供以下标准服务：

1. 全国联保 统一报修

方正科技实行全国联保，统一报修。在产品免费保修期内，无论您在中华人民共和国境内(不包括港、澳、台地区) 何处购买并使用的方正科技扫描仪系列产品出现保修范围内的硬件故障时，请您拨打方正科技全程服务热线4006-600-601 寻求帮助。

自您购买方正科技扫描仪系列产品之日(以正式购机发票日期为准，以下称“购机日”) 起，方正科技将为您购买的扫描仪系列产品整机硬件故障提供一年免费保修，详情请见《方正科技扫描仪系列产品保修期限列表》。

附表：方正科技扫描仪系列产品保修期限列表

保修部件	保修时间	服务方式
主机（除机身外壳、玻璃面板等外）和电源适配器	自购机之日起一年内	自购机之日起一年内提供送修服务
机身外壳（含支架）、玻璃面板、主机连接线、使用说明书、随机光盘、包装、USB 线、片夹等附件	不在保修范围	不在保修范围

注：

1. 您购买的方正科技产品的具体配置以您的产品装箱单上所列各项为准。
2. 与方正科技扫描仪系列产品一起捆绑销售的其他产品或促销品，具体服务承诺请参照各自单独的保修证书。
3. 方正科技单独销售的扫描仪系列产品部件，请详见其单独配套的保修凭证。

2. 保修期的确认

保修凭证：您的购物发票及有效《产品三包卡》为保修凭证，请您务必妥善保管。（若您无法提供以上证明，我们将按照您所购买方正科技产品的出厂日期计算保修日期。出厂日期根据主机序列号（S/N）判断。）

保修期的确定：产品保修期自您购买的产品开具有效购物发票之日起计算，扣除因修理占用、无零配件待修延误的时间。保修期最后一天为法定节假日的，以节假日的次日为保修期的最后一天。

保修期限的顺延：在“国家电脑三包规定”有效期内更换后的整机及主要部件的保修期，按“国家电脑三包规定”执行。在“国家电脑三包规定”有效期外，但仍属于方正科技产品标准服务承诺范围的方正科技产品及其部件，经方正科技授权服务机构维修后在方正科技产品标准服务承诺规定的服务期限内继续享有规定的服务（修理及待修时间不单独计算）。维修部件如自修复之日起距方正科技承诺的服务期限结束不足三个月的，该部件的服务期限将延长至自修复之日起三个月止，服务方式为送修。届时，请您出具有效的维修记录。

当您需要按照“国家电脑三包规定”进行退货或更换时，请您务必携带购货发票、三包凭证、故障产品、使用说明书、包装等，到销售商（指直接向您出售方正科技扫描仪系列产品的销售商）所在地进行操作。

维修更换的整机或部件的所有权：方正科技授权服务机构为您更换整机或故障部件后，原机器或故障部件将由方正科技或方正科技授权服务机构收回并享有所有权。

3. 电话咨询服务

如果您在产品使用过程中遇到硬件以及预装软件方面的问题，或者想查询方正科技最新的销售、服务和产品信息，您可以拨打方正科技全程服务热线 4006-600-601，我们的工程师将为您提供电话支持。

4. 网上服务

现在，您只需上网连接到公司主页 www.foundertech.com，就可以在网上下载驱动程序、查询方正科技最新的销售、服务和产品信息等。进入“专家答疑”栏目还可以查找疑难问题的解决方案。

如果您已经购买了方正科技的产品，可以直接在网上注册成为方正科技用户俱乐部的会员。这样，您就可以进入特为方正科技用户开办的网上论坛、聊天室或学习园地等栏目。您也可以通过网络向我们的服务工程师寻求技术支持。

5. 不能享受“方正科技标准服务承诺”的情况

对于下列原因导致的产品故障，方正科技恕不提供本承诺中的标准服务：

- 非方正科技产品及部件
- 超过保修期的

- 使用了未经方正科技认可（以随机附赠的《用户使用手册》装箱单为准）的扩展部件或外围设备导致方正科技标准部件损坏或产生故障的
- 非正常原因（包括不良的电源环境、异物进入设备、运输、移动、磕碰等）造成的设备不能正常工作或部件损坏及故障
- 不可抗力：所有地震、火灾等自然灾害或意外事故(被盗、丢失等)等不可抗力因素引起的设备不能正常工作或部件损坏及故障
- 因使用自编或第三方软件导致产品不能正常工作
- 计算机病毒感染导致产品不能正常工作
- 下述违章操作造成的产品故障：
 - 带电插拔主机电源或其它附属设备
 - 自行拆卸、修理、安装
 - 自行性能升级
 - 使用指定之外的零件、附属品、消耗品

三、特别提醒

为了保障您能享受到方正科技为您提供的“包修、包退、包换”（简称“三包”）及本承诺中的服务，请您务必遵守以下说明与要求，否则您将无法享受三包及本承诺中的服务，且其后果由您自行承担。

1. 请您在购机时向销售商索要有效购机或购附件发票并妥善保管。
2. 有效的《产品三包卡》及购物发票是您享受三包及本承诺中服务的必备条件。请您在报修时向服务人员出示。
3. 核对资料：为保证您所购商品与装箱单一致，请您在购机时，按照“产品三包卡”的要求，逐一核对装箱单（装箱单在随机资料中）中所列各项与所购实物是否一致；随机资料、产品三包

卡是否齐全。如果一致请您在产品三包卡的相应空格处签字，如果不一致或有其它异议，请您当场、当面向销售商提出并协商解决，否则，您所购实物将视为与装箱单一致。

4. 请您妥善保管所有随机物品及资料，如出现退换货时，请您将其全套退返。
5. 方正科技系列产品只能由方正科技授权服务人员进行拆卸，请您保证封条完整，方正授权服务人员以外的任何人造成封条破裂的，将导致产品不能再享受“三包”及本承诺中的服务。
6. 方正科技否认的承诺

除非本标准服务承诺中明确表示，方正科技不做任何其它明示或暗示的承诺和保证，包括对产品的可销性和对某一特定用途的适用性的暗示保证。除非方正科技另外作出明确承诺，否则：

（1）本保修服务承诺仅适用于方正科技出厂时配置的主机和部件（参见装箱单）。任何机构或人员（如销售商）给您安装的一切非方正科技部件和软件，由该机构或人员或该部件生产厂家自行保修。

（2）任何机构和人员（如销售商）在本服务承诺之外就您购买的产品及其附属软硬件设备向您做出的任何额外承诺，方正科技将不承担责任；您应向作出该承诺的机构或人员索要书面证明，以保证这些额外承诺能够兑现。

7. 您的责任

机密信息：用户应对其机密信息的安全自行负责。

数据备份：用户应自行负责对机器上数据或程序进行机外备份，以防止因丢失或改动文件、数据或程序而使机器上的数据丢失后无法恢复。方正科技不负责任保持机器上数据的完整、安全性，因任何原因导

致用户数据丢失，而用户又未进行数据备份的，
由用户自行承担数据丢失的后果。

本承诺适用范围

1. 本承诺仅适用于在中华人民共和国境内（港、澳、台地区除外）销售和购买的方正科技扫描仪系列产品。
2. 本承诺仅适用于 2009 年 12 月 1 日(含)起购买的方正科技扫描仪系列产品，在此日期之前购买的产品，请参照方正科技同期发布的同系列产品的服务承诺。
3. 与方正科技扫描仪系列产品一起捆绑销售的其他方正科技产品或促销品，如属于“国家电脑三包规定”范围的则按“国家电脑三包规定”执行，如不属于“国家电脑三包规定”范围，则按照该商品所属方正科技系列产品的服务承诺执行。
4. 优先原则：在“国家电脑三包规定”适用范围和期限内，方正科技产品标准服务承诺如低于“国家电脑三包规定”标准或未做承诺的，按“国家电脑三包规定”执行，方正科技产品标准服务承诺如高于“国家电脑三包规定”标准的，按方正科技产品标准服务承诺执行；在“国家电脑三包规定”适用范围和期限外，按方正科技产品标准服务承诺执行。如果方正科技或方正科技经销商与您签定的方正科技扫描仪系列产品销售合同或其他依法有效的协议对您购买的产品或其任何软硬件设备的售后服务有其他约定的，应按相应约定执行。
5. 方正科技及方正科技认证服务机构仅承诺在本标准保修服务范围内为您提供规定的服务（包括法定“三包”服务及方正科技的厂商标准服务），如果在上述服务范围之外您有其他的需求，请选择方正科技认证服务机构的有偿服务或根据您的需要购买方正科技个性化的服务产品。

注：本承诺内容解释权属于方正科技集团股份有限公司，如其间有任何更改，恕不另行通知。如您想了解最新的方正科技服务信息可以登录 www.foundertech.com 查询相关内容，或请拨打方正科技全程服务热线 4006-600-601 咨询。

说明

1. 本承诺中所涉及的“**有效三包卡和购物发票**”是指：卡与发票中填写的内容全面、真实和正确，无涂改痕迹；有效购物发票还应当注明商品商标及型号、销售日期、销售者印章、金额等内容。

2. 方正科技服务提供时间

服务机构营业时间：**7*8 小时工作制**

方正科技授权服务机构的正常营业时间一般为：每周一至周日，每天 8 小时，节假日照常。

3. 热线咨询服务：

如果您在产品使用过程中，有相关问题需要咨询，欢迎您拨打服务咨询热线，有专业人员为您提供解答。

方正科技全程服务热线：4006-600-601

语音导航时间：**24 小时**

注：拨打方正科技全程服务热线 4006-600-601，需要承担相应的市话费用（未开通 400 地区请您拨打 0512-87182983，此时您需要支付相应的通话费用）

请您监督

为了向您提供更周到、更令您满意的服务，方正科技欢迎您的监督和批评。我们会主动回访以及时了解您的意见，迅速改变服务的不足之处。同时我们还设立了由专人负责的服务监督电话及信箱。您有三种方式与我们联系：全程服务热线电话 4006-600-601；电子信箱service@founder.com；或公司网站www.foundertech.com。

一、扫描仪的安装与设定¹

安全注意事项

使用本设备前，请仔细阅读如下重要信息，以避免或减少发生损坏和事故。

1. 如下情况可致使本设备受潮，从而导致故障：

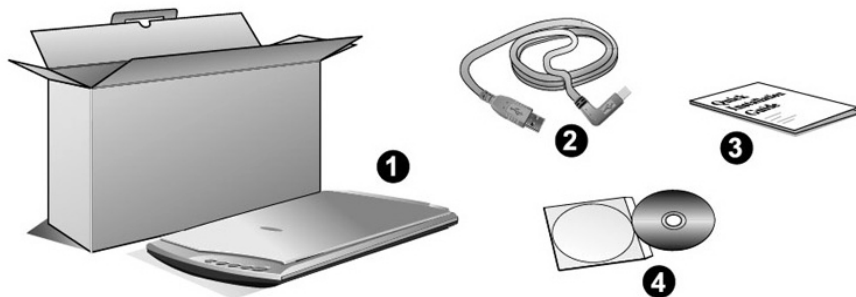
- 当您本设备由温度低的环境直接移到温度高的环境时；
- 当在寒冷的房间内开始供送暖气时；
- 当您本设备放置在潮湿的地方时；

请参照如下措施以防止本设备受潮：

- 1) 将本设备装入塑料袋密封；
 - 2) 1 到 2 个小时后，待塑料袋内外温度接近再启封使用。
2. 请在接插电源变压器的地方预留足够的空间，以备突发事件时能迅速拔下电源变压器。
 3. 损坏的电线可导致火灾或电击事故。确保电源连接线拉直且无缠绕、扭曲或破损。
 4. 如果将会有一段时间不使用本设备，例如过夜及周末，请断开本设备的连接线，以避免发生火灾。
 5. 请务必使用本扫描仪随机附赠之 **USB** 连接线和电源变压器。若使用其它 **USB** 连接线或电源变压器，将可能导致产品功能受损而无法正常工作。

¹ 本手册图例之扫描仪外观可能与您实际购买之机种外观略有不同。

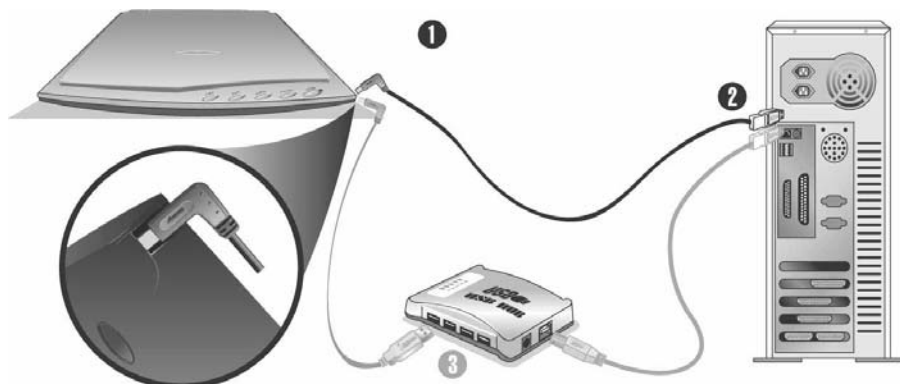
拆开扫描仪包装²



1. 方正扫描仪 T2400
2. USB 连接线
3. 快速安装指南
4. 安装光盘：包含扫描仪的驱动程序、附赠之应用软件和完整的使用手册电子文件。

² 请将包装盒和包装材料存放妥当，以备将来您可能需要长距离搬运此扫描仪之用。

安装扫描仪硬件



1. 将 USB 连接线的方形接头插入扫描仪右前方的 USB 端口（如上图所示）。
2. 将此 USB 连接线另一端的长方形接头插入计算机主机后方的 USB 端口。

注意：若已经有 USB 设备连接到计算机上，请将扫描仪接到空置的 USB 端口。

3. 如您欲将扫描仪连至USB集线器³，先确认集线器已连至计算机USB端口，接着再将扫描仪连接至USB集线器上。

注意：如果没有 USB 端口，您可能需要买一个。

³ USB 集线器并非本扫描仪附件，若您有需要，请自行购置。

安装扫描仪软件

1. 假如您计算机的 USB 部分功能正常，计算机会自动察觉到有新的设备连接到 USB 端口，屏幕上会出现 [找到新的硬件] 的窗口画面。注意：如果您在计算机关机时，接上扫描仪，打开计算机进入窗口时，也会出现 [找到新的硬件] 画面。
2. **Windows 98 & 2000**
 - a. 请按 [下一步] 继续。
 - b. 选择 [搜索适于我的设备的驱动程序（推荐）]，然后再按[下一步]。
 - c. 接下来的画面会问您选用哪个磁盘，请勾选光驱选项。
 - d. 将随机附赠的驱动安装光盘放入光驱内，然后再按 [下一步]。
 - e. 在随之出现的画面上按 [下一步]。Windows 98 用户请接下来跳至步骤 7。
3. **Windows Me & XP**
 - a. 请将随机附赠的驱动安装光盘放入光驱内。
 - b. 勾选 [自动安装软件（推荐）] 选项，然后再按 [下一步]。
 - c. 在随之出现的画面上按 [下一步]。Windows Me 用户请接下来跳至步骤 7。
4. **Windows Vista**
 - a. 当显示“找到新硬件”窗口时选择“定位和安装驱动程序（推荐）”。
 - b. 在弹出的“用户帐户控制”对话框中点击[继续]。
 - c. 当系统显示“放入您的 USB 扫描仪附带的安装光盘”，在光驱中放入扫描仪附带的安装/应用程序光盘，然后点击[下一步]。

- d. 在安装过程中，若您的操作系统发出硬件安装讯息“Windows 无法辨识该驱动程序的发布者”，指示您所安装的扫描仪尚未通过数字签章，请您直接略过该讯息，继续执行驱动程序安装，并请无须疑虑认证问题，您所选购的扫描仪仍可正常运作。接下来跳至步骤 7。

5. **Windows 7**

当安装光盘是给多种机型使用时

- a. 请将随机附赠的驱动安装光盘放入光驱内，在随后出现的”自动播放”窗口中点击[运行 **install.exe**]。
- b. 如果”用户帐户控制”对话框跳出的话，点击[是]。接着按照弹出的安装讯息进行安装。
- c. 在”设备管理器”窗口中，把鼠标光标移到”其它设备”项目下的此扫描仪旁并单击右键，接着从弹出的快捷菜单中点击[更新驱动程序软件]。在打开的窗口中点选[浏览计算机以查找驱动程序软件]，接着点击[浏览]按钮。
- d. 在打开的”浏览文件夹”窗口中，选取内含此扫描仪驱动程序的文件夹或光驱，并接着点击[确定]按钮以返回前一个窗口。点击[下一步]按钮，如果”Windows 安全”窗口出现，点选[始终安装此驱动程序软件]。接下来跳至步骤 8。

当安装光盘是给单一机型使用时

- a. 请将随机附赠的驱动安装光盘放入光驱内，在随后出现的”自动播放”窗口中点击[运行 **install.exe**]。
 - b. 如果”用户帐户控制”对话框跳出的话，点击[是]。如果精灵对话框跳出的话，按[下一步]按钮，接着在”Windows 安全”窗口中点选[始终安装此驱动程序软件]，然后在精灵对话框中按[完成]按钮。接下来跳至步骤 8。
6. 在安装过程中，若您的操作系统发出硬件安装讯息，指示您所安装的扫描仪尚未通过 **Windows Logo** 验证，请您直接略过该讯息，继续执行驱动程序安装，并请无须疑虑您所选购的扫描仪认证问题。

7. 当系统完成硬件安装，按下 [完成] 按键离开。
8. 遵循屏幕上的指示，安装扫描仪所需的所有程序。
9. 等软件安装完毕后，关掉所有开启的程序，按 [完成] 按钮重新启动计算机。

注意：若您在插入驱动安装光盘后，系统并未执行自动安装，请至 [开始] 选单中选择 [执行]，然后输入 d:\setup（d:为光盘路径）。

升级至Windows XP之扫描仪安装

假如您欲将操作系统由 Windows 98 或 Me 升级至 Windows XP，而之前已安装了本扫描仪，请您遵循下列程序：

1. 将扫描仪的电源变压器自交流电源插座上取下。
2. 将扫描仪的 USB 连接线接头自扫描仪后方的 USB 端口取下。
3. 于 Windows 选单，用鼠标左键按 [开始] / [程序] / [方正扫描仪 T2400] / [删除方正扫描仪]。遵循屏幕上的指示，删除扫描仪的所有程序。
4. 等扫描仪软件移除完毕后，关掉所有开启的程序，按 [完成] 按钮重新启动计算机。
5. 开始安装 Windows XP 升级版，请遵循 Microsoft 的相关 Windows 升级安装指示。
6. 当 Windows XP 升级安装结束，请重新安装扫描仪的硬件和软件。详参本用户手册的相关章节说明。

二、扫描仪的使用与维护

您的扫描仪其扫描范围最小可扫单张名片，最宽可扫杂志封面大小。但有些应用软件可能会限制扫描范围。另外计算机内存大小，及硬盘剩余空间也会限制实际的扫描区域。

操作扫描仪有两种方法：

1. 经由图像编辑软件，从扫描仪获取图像。
2. 经由『行动管理员 32』（此软件系于安装扫描仪驱动安装光盘软件时一并安装至您的计算机上）。

您的扫描仪需要由特定程序软件来驱动。因为不管文件或图片，计算机都会把从扫描仪输入的资料当成图像来处理，大多数的扫描动作都可在图像编辑软件中执行，让您预览、编辑、保存、以及输出扫描的图像。扫描仪随机附赠的驱动安装光盘内有图像编辑软件。您可以透过不同的滤镜、工具、及特效来更动或修改输入的图像。

那么要如何扫描文字稿件并在文字处理软件中编辑呢？这就要通过光学文字辨识软件（OCR）来达成。光学文字辨识软件可将扫描稿件所得的图像文件，转为文字文件供文字软件进行浏览、编辑、及保存。随机附送的驱动安装光盘内也有文字辨识软件，如您欲使用文字辨识软件，请安装这个软件程序。

『行动管理员 32』这个程序让您轻松地直接扫描图像与文字，而无须直接开启图像编辑软件来执行。『行动管理员 32』也包括传真和复制的功能。

请参阅『行动管理员 32』的帮助（以鼠标右键开启『行动管理员 32』，然后选取菜单的帮助），获得更多有关这些功能的信息。

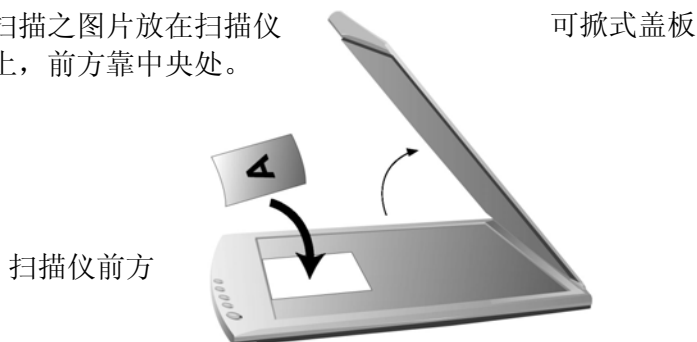
测试扫描仪

下述的测试程序系用来测试计算机和扫描程序是否能与扫描仪配合。测试前，请先确定所有接线都已接受。

请遵照下列步骤以正确地测试扫描仪：

1. 掀开扫描仪的盖板，将相片面朝下平放在玻璃上。相片正前方对着扫描仪前方（即靠按键处），如下图所示。

将欲扫描之图片放在扫描仪玻璃上，前方靠中央处。



2. 轻轻盖回盖板。
3. 开启扫描仪的图像编辑程序。在 Windows 下按 开始 – 程序 – ImageFolio。
4. 当 ImageFolio 程序开启后，请按 文件 – 扫描输入 – 选择设备，按『选定』。
5. 随后，在 ImageFolio 内，按文件 – 扫描输入 – 开始扫描。
6. 此时『方正扫描仪 T2400』TWAIN 窗口即开启。
7. 扫描向导窗口会出现在您的屏幕上，请按 『关闭』按钮，然后按下『预扫』按钮。
8. 假如屏幕上出现图像，表示您的扫描仪可正常运作。

维护

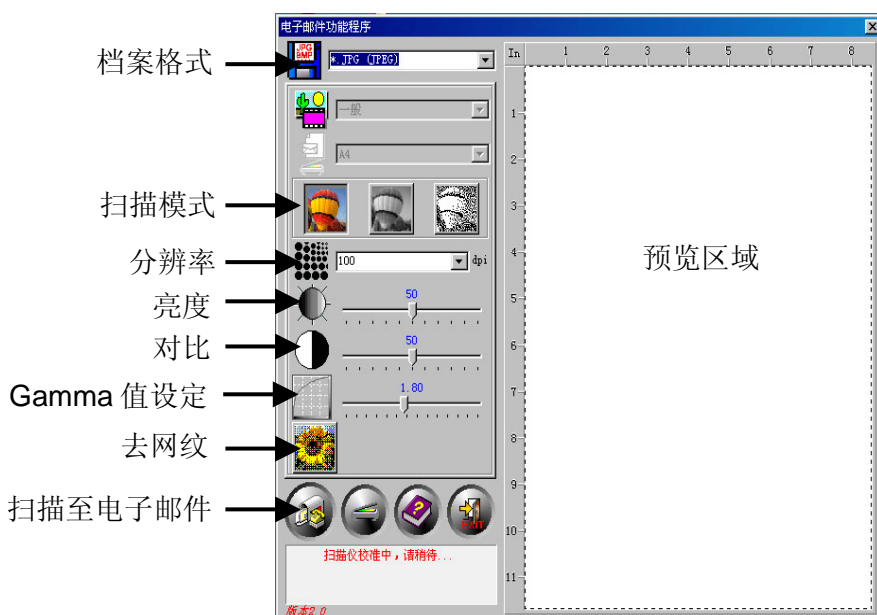
为了让您的扫描仪能顺利操作，请花些时间详读底下的保养小秘方。

- 避免在灰尘多的环境下操作扫描仪。如果不用扫描仪时，记得将盖板盖上。灰尘或异物可能会对机件造成损坏。
- 不要试图拆卸扫描仪。一来会有触电危险，二来会让您的产品保修失效。
- 不要让扫描仪受到过于剧烈的震动，如此可能会损坏内部零件。
- 避免撞击或敲打扫描仪的玻璃面板，因为玻璃脆弱易碎。
- 如欲清洁玻璃面板，找一块柔软无棉絮的布，喷上一些温和的玻璃清洁剂，然后轻轻地擦拭玻璃面板。请勿将清洁剂直接喷在扫描仪的玻璃面板上，勿使液体流入扫描仪内部。过量的溶剂残留会弄花玻璃面板或使之起雾，甚至会损坏扫描仪组件。
- 您的扫描仪的最佳操作温度是在摄氏 10° C 至 40° C。

三、扫描仪的按键使用

File存盘按键

File 存盘按键可扫描文件或图片，然后自动开启全能图像经理软件，让您可分门别类地放入电子相册、建立演练、制做幻灯片展示、设计屏幕保护和桌面图片、储存文件或图片后放到 Web。全能图像经理可支持许多常见的应用程序，包括 Microsoft Word、Corel WordPerfect、Microsoft Excel、Adobe PhotoShop、Eudora Mail、Lotus cc:Mail、Microsoft Mail、Internet Explorer 和 Netscape Navigator 等等。全能图像经理自动地搜寻您计算机中已安装的应用程序，并将它们的图标加入下方的应用软件列，您可拖曳文件或图片至打印机、电子邮件或其它应用软件图标，然后放开鼠标按键，即可将该文件或图片于选定的应用软件中开启。



请遵循下述步骤以使用 **File** 存盘按键：

1. 将文件或图片放入扫描仪。
2. 按下 **File** 按键。
3. 当『电子相册功能程序』窗口开启后，扫描仪将自动进行校正和预扫，接着扫描图像会出现在『电子相册功能程序』右边的预览区域。利用鼠标点按拖曳扫描边框来设定您实际想扫描的区域。。
4. 选择您希望将扫描图像送至哪个相册。
5. 由档案格式的下拉式选单点选。
6. 请点选『彩色照片模式』、『黑白相片模式』或『文字模式』按钮以选择适当的扫描模式。
7. 选择适当的分辨率。
8. 调整亮度，让文件或图片暗沉些或明亮些。
9. 调整对比，增加或减少文件或图片的明暗区域差异。
10. 若需要的话，调整 **Gamma** 值设定。
11. 若需要的话，点按去网纹按钮。
12. 点按扫描至 **File** 按键，即开始扫描文件或图片。

在扫描结束后，全能『图像经理程序』即自动开启，您可执行其它图像编修工作。



注意

若您在使用此文件管理软件时有任何问题，请让全能图像经理的辅助说明导引您。全能图像经理使用手册在安装扫描仪光盘软件时即自动安装至您的计算机，您亦可随时参阅之。

Copy复印按键

Copy 按键让您的扫描仪和打印机结合变成您个人的复印机，只要按下 Copy 按键，扫描的文件或图像即直接传送至打印机复印出来。**注意：打印机硬件和驱动程序必须事先妥善安装，您的扫描仪 Copy 按键才能作用。**

请遵循下述步骤以复印文件或图像：

1. 将文件或图片面朝下放置在扫描仪的玻璃上。
2. 按下 Copy 按键，然后『复印功能程序』窗口将会出现。
3. 请在最上方按箭头于下拉式选单内点按您想使用的打印机。
4. 于纸张大小的下拉式选单内点按您想扫描使用的范围。您亦可勾选 [自动剪裁] 选项的方块，即可让扫描仪程序自动辨认扫描图像大小，而自动框选范围。剪裁框的形状不是正方形就是矩形，无法框认不规则形状之图像。这个指令在扫描较小图片如照片时非常有用。
5. 选择适当的扫描模式。请调整一些必须的设定。
6. 按下开始键。



SCAN 扫描按键

SCAN 按键将您的照片或文件扫描入本机附赠的图像软件 Presto! ImageFolio，您接着可视个人需要而修饰图像并存盘。

请遵循下述步骤以扫描文件或图像：

1. 将文件或图片放入扫描仪。
2. 按下 Scan 按键。
3. 图像软件 Presto! ImageFolio 即自动开启，『方正扫描仪 T2400』的 TWAIN 窗口接着出现在您的屏幕上。
4. 选择合适的扫描模式和分辨率。
5. 点按 『预扫』 按钮，扫描仪将自动进行预扫，接着扫描图像会出现在右边的预览区域。
6. 利用鼠标点按拖曳扫描边框来设定您实际想扫描的区域。您也可视需要而调整相关其它设定，详参本使用手册的『四、方正扫描仪的 TWAIN 窗口』说明。
7. 点按 『扫描』 按钮，即开始扫描文件或图片。

然后，扫描的图像即出现在 Presto! ImageFolio 软件，您可视需要而做其它进一步的图像修饰。

OCR光学文字识别按键

本扫描仪附赠的 ABBYY FineReader 文字识别软件，您可利用它来扫描印刷文字稿件，然后再转换成您的文档软件可读出的文字，这么一来节省您重新打字的时间。文字识别软件将扫描的图像文件转成文字文件，可供文字处理软件进一步浏览、编辑和储存。

如何使用 OCR 按键

1. 将文件放于扫描仪玻璃上。
2. 按下 OCR 按键。
3. 文字识别功能窗口随即开启。
4. 选择适当的纸张大小、分辨率并且调整亮度，按[OCR]按钮开始进行扫描及文字识别过程。
5. 文字识别结果会以*.doc 格式在 Microsoft Word 文字编辑器中开启。
6. 请记得储存识别的文字文件。


有关文字辨识的一些重点

1. 『ABBYY FineReader』文字识别软件是市场上最佳的文字辨识软件之一，若您在使用此软件时有任何问题，请让其辅助说明导引您。
2. OCR 是 Optical Character Recognition（光学文字辨识）的缩写。

E-Mail电子邮件按键

E-Mail 按键让您轻松便利地扫描文件或图像、接着以电子邮件方式传送给同事或亲朋好友。请注意：您的电子邮件软件必须是 MAPI 兼容的（例如 Microsoft Outlook、Netscape Mail、Eudora 等），且必须事先妥善安装于您的计算机。

请遵循下述步骤以扫描欲电子邮件传送的文件或图像：

1. 将文件或图片面朝下放置在扫描仪的玻璃上。
2. 按下 **E-Mail** 按键。
3. 当『电子邮件功能程序』窗口开启后，扫描仪将自动进行校正和预扫，接着扫描图像会出现在电子邮件功能程序右边的预览区域。利用鼠标点按拖曳扫描边框来设定您实际想扫描的区域。
4. 由档案格式的下拉式选单点选。
5. 选择适当的扫描模式：，图标由左至右排列为『彩色照片』、『黑白照片』、或『文字』。
6. 请视需要而调整其它设定。
7. 点按扫描至电子邮件按钮 ，即开始扫描文件或图片。

扫描仪上的文件或图像随即被扫描，您的电子邮件软件也开启，接着会产生一封新邮件，内含此扫描图像的插入附件。

四、方正扫描仪的TWAIN程序

方正扫描仪的TWAIN程序简介

您扫描仪随机附赠软件中的『方正扫描仪』的 TWAIN 是很重要的程序。它介于扫描仪硬件与图像编辑软件之间。您可以从『方正扫描仪』的 TWAIN 窗口调整设定选项，界定扫描图像品质。下面章节描述此 TWAIN 程序，当您从与 TWAIN 兼容的扫描程序或图像编辑软件中，按下开始扫描或扫描输入按钮时，这个窗口即自动跳出。

方正扫描仪的 TWAIN 程序让您能在扫描前调整重要设定，比方说，您可以选择不同的图像模式（黑白、灰阶或彩色），增加或减少分辨率（图像中每英吋的像素点数）、调整亮度或对比度。预扫功能让您借着加大或缩小预览窗口中的剪裁框，调整扫描的区域范围。方正扫描仪的 TWAIN 程序也提供您图像的资料，比如图像扫描后的图形大小与档案的大小。



方正扫描仪的TWAIN程序功能

设定正确的 [扫描模式] 非常重要，才能成功地执行每一次扫描。所有其它项目则为选择性的，并可让您依扫描图像的特性而量身定做。



扫描模式：

此选项告诉扫描仪您想扫描什么。下拉式选单内会有下列五种模式让您选择：

- **文字：**黑白模式，适合扫描文件稿。
- **黑白相片（灰阶）：**256 色灰阶扫描，带给黑白图像或相片层次感与明暗感。此模式可自动过滤稿件中的红色色素。您可以使用此模式过滤票据（比如税票）上的红色印章保留清洁原件；如果您欲保留红色印章，请使用“16 位黑白相片”、“彩色照片”或“48 位彩色照片”模式。
- **16 位黑白相片（灰阶）：**超过 65,000 色灰阶的扫描，重现黑白图像的真实感。
- **彩色照片：**百万色素扫描，重现真实感。选择此模式扫描彩色照片或图形。
- **48 位彩色照片：**上亿色素扫描，使用于要求精准色彩重现的专业图像。

注意：必须使用专业级图像软件才能接收处理由扫描仪输出的 48 位的图像，例如 Adobe PhotoShop、Corel PhotoPaint 8.0 等等，通常都能够接收处理高达 48 位的图像。（本扫描仪所附赠的软件并未包含支持 48 位彩色图像的专业级应用软件。）



分辨率：

分辨率是以每英寸多少像素点来测量（dpi）。分辨率越高，图像会越细致。但为了节省内存，又要有良好图像品质，我们推荐下列设定模式。

扫描稿件	分辨率
文字（打印用）	300
文字（传真用）	200
文字（OCR 用）	300
黑白或灰阶图像	150
彩色图像或照片	150

这些推荐值只供参考，如果图像不够清晰，或要观看更多画面细节，则必须提高分辨率。



亮度：

这是扫描时投射到稿件的光源量。在箭头两端内调整滑动钮，提升亮度会增加图像的白色量，图像会有被“洗掉”的感觉；降低亮度可让较淡或模糊的字迹稍微清晰些。我们推荐您从进阶窗口内，来调整彩色图像的亮度（色彩饱和度）。



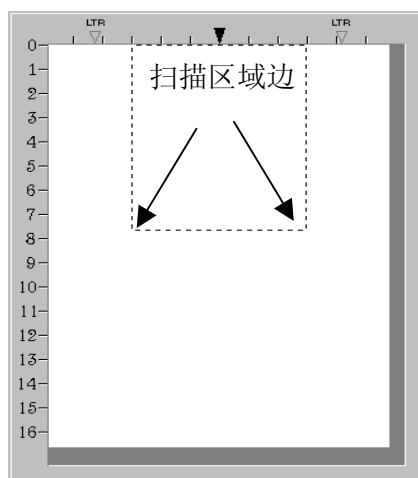
对比：

对比越高，图像越清晰；对比越低，图像越模糊。对比调整改变图像的色调值范围，降低中间色调，提升高低两头色调，即提高图像对比。一般利用对比来消除黑白或灰阶扫描时出现的图像噪声或暗影，或是在彩色扫描时“洗净”图像。移动滑动钮来调整对比。

预览区域：

预览区域（左图）是方正扫描仪的 **TWAIN** 程序窗口中白色的大区域。预扫文件或图像会显示在这里。图像预扫很有用，能让您对扫描后的文件或图像先有个概念。

您可以使用放大镜功能键来放大预览的图像，只要按下方正扫描仪的 **TWAIN** 程序窗口右上方的放大镜按钮，然后将鼠标在您想放大处，点一下即可。



假如您更改方正扫描仪的 **TWAIN** 程序窗口或任何进阶窗口中的设定，更改的效果（除了滤镜、去网点以外）会自动出现在预览区域的预扫图像上，让您立即判断更改设定所得的效果。

扫描区域范围，也就是预览区域内的点状方框，可以调整大小或位移。这对于尽量缩小图像是很重要的设定（节省计算机内存），将文件或图片放在扫描仪上，按下预扫按钮进行预扫，等到图像出现在预览区域时，移动或调整点状方框的大小，覆盖住要扫描的图像。



将鼠标移入扫描区域方框内，鼠标会变成如图所示形状，此时您就可以移动鼠标来拖拉整个剪裁框。



将鼠标移至扫描区域的边框上，光标会变成如左图所示的形状，此时您就可以移动鼠标来缩小或放大扫描区域框。




鼠标：

将鼠标由放大镜改为鼠标功能。要变成这个鼠标形状，才能调整扫描区域框或更改设定。



放大镜：

按下放大镜按钮会将鼠标变成放大镜的模样，让您可以轻易放大或缩小预览区域内的预扫图像。如要放大，在预扫图像上按一下鼠标左键；如要缩小，按一下鼠标右键即可。如要停止图像放大缩小的动作，按一下放大镜钮上方的鼠标按钮 。

注意：放大镜只是对预览区域内的预扫图像做出观看动作而已，它对扫描过程或最终扫描图像，一点都没有影响。

扫描 (S)

扫描按钮：

接受所有设定，开始扫描。

预扫 (P)

预扫按钮：

按下预扫按钮，您可以将源稿件扫入方正扫描仪的 **TWAIN** 程序窗口中的预览区域内。这让您可以更改变扫描区域范围（扫描小张图像如照片时），并让您预知扫描出来的图像大概会是什么样子。

高级控制 (A)...

高级控制按钮：

按下高级控制按钮，可开启 [高级控制设定窗口] 让您可做更精确的扫描设定。

取消

取消：

按下取消钮，储存目前设定，并关闭方正扫描仪的 **TWAIN** 程序窗口。

帮助 (H)

帮助：

按下此按钮进行帮助功能。

状态栏:

状态栏包含方正扫描仪的 TWAIN 程序窗口设置的重要信息。



扫描区域坐标:

以 X 与 Y 轴坐标来显示扫描区域的位置。

扫描区域大小:

显示扫描区域正确的长宽尺寸。

图像大小:

显示您的图像将占用多少内存。图像愈大，所需的扫描时间愈长。较大的图像，占掉较多的内存，也会让您的图像编辑软件得花更久的时间才能完成图像的修正编辑。

缩小图像大小的诀窍:

- 更改扫描模式— 彩色模式所含的图像信息最多，所以比黑白或灰阶需要更多的内存。
- 降低分辨率 — 参阅本章末的扫描小秘诀。对于如何选择适当的分辨率，有详细的说明。
- 缩小扫描范围 — 如果不是扫描全尺寸的图像，记得先预扫图像，然后在预览区域调整扫描区域的范围。
- 有些如 **GIF** 和 **JPEG** 图文件格式可以压缩图像数据，大幅减低图像文件所占用的硬盘空间。

单位:

显示预览区域内所用的测量单位。测量单位可按下 [高级控制] 按钮来更改。

版本:

显示您所用程序的版本。

高级控制设定窗口

高级控制设定窗口上面有 4 个卷标钮 - *偏好*、*色调分布图*、*色彩浓度*、以及 *Gamma*，这些会在本章后文有详尽说明。选按其中一个卷标钮，就会出现相关的进阶设定。按下窗口下面的帮助（*Help*）钮，您就可以通过方正扫描仪的 *TWAIN* 窗口的帮助功能，了解所有方正扫描仪的 *TWAIN* 程序窗口的功能。

这里绝大部分的选项都属于高级控制的功能。我们建议您先熟悉扫描动作和一般方正扫描仪窗口的设定，再来尝试下面要说明的功能。许多这些高级控制的功能也能在您的图像编辑软件中找到。

偏好窗口

偏好设定窗口有几项设定是用来控制图像扫描和预览区内的预览动作。

屏幕Gamma值

屏幕 *Gamma* 值定义图像色彩要如何呈现在您的屏幕上（而非图像本身的实际色彩资料）。屏幕 *Gamma* 值设定让您更改屏幕的 *Gamma* 值。

屏幕 *Gamma* 值只能影响预览区域内的预扫图像。这是因为图像编辑软件有其自己的屏幕 *Gamma* 设定值。这里所定义的设定应该要与您用来浏览、编辑扫描图像的图像编辑软件中的设定相同。

要正确地调整屏幕 *Gamma* 值，您计算机和工作环境必须先要稳定，包括室内光线。将屏幕亮度、对比和颜色都调整妥当后，拖曳滑动杆来调整屏幕 *Gamma* 值。完成后按确定钮。

确定您所设定的屏幕 *Gamma* 值与您图像编辑或图形软件的屏幕 *Gamma* 值相同，这样才能确保预览区域中预扫图像的颜色，与加载图像编辑程序中的图像颜色完全相同。

如果方正扫描仪的 TWAIN 程序窗口程序的屏幕 Gamma 值，与您所有图像编辑程序中的屏幕 Gamma 值相同，您就只需要调整图像 Gamma 值来调整扫描图像的色彩明亮度。

更改图像的 Gamma 值（选按『高级控制窗口』上方的 Gamma 卷标钮）即更改图像本身的色彩明亮度，且让您的程序内的所有屏幕 Gamma 值保持恒定。这样就能确保颜色显示的一致性。

自动密度

勾选这个方块会自动调整色阶分布，使图像更清晰。原理是加大色调间的差异来达成这种效果。

反转

若勾选这个选项，整个图像的颜色会倒置过来。黑白图像看来会像相片底片。



反转前



反转后

滤红

滤红功能可让您在扫描时滤除红色。

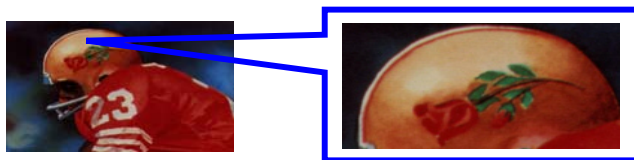
例如，如果您的源稿件包含红色或红色印章（如，帐单或发票），而您并不希望将红色部分显示在扫描结果中，那么可以选取"滤红"。

去网点

去网点（**Descreen**）是用滤镜处理含有网点（或鱼脊纹）的图像。网点是扫描杂志照片或印刷品所产生的。当扫描原始照片或黑白图像和文字时，并不需要套用去网点滤镜；但若扫描彩色印刷页面如杂志时，则推荐使用，以去除网点。



去网点前



去网点后

滤镜

滤镜选单下有 7 个滤镜选项。滤镜能使图像锐利，去除黑点和变形，有效改善图像品质。

- **无**：完全不加任何滤镜效果。
- **均化**：限定图像的中间深度和像素间的平均距离，使图像看起来更柔和些。
- **模糊**：让您柔化图像边缘，减低对比，让暗边亮些，亮边暗些。
- **更模糊**：增加模糊程度。
- **锐利**：突出图像边缘线条，让图像看来更锐利。锐利滤镜也增加对比，让暗边更暗，亮边更亮。
- **更锐利**：增加锐利程度。

- **反锐利：**加强图像边缘的锐利度以去除朦胧感。

总在最上层显示

勾选这个方块时，方正扫描仪的 **TWAIN** 程序窗口会一直保持在桌面的最上层。

启动时自动预扫

勾选这个方块后，只要一打开方正扫描仪的 **TWAIN** 窗口程序，就会自动进行预扫。执行图像自动预扫可让调整设定变得更快、更容易，因为更改方正扫描仪的 **TWAIN** 窗口中的任何设定，都会立即显示在预扫图像上。

预扫后自动剪裁

勾选这个方块时，方正扫描仪的 **TWAIN** 程序会辨认扫描图像大小，而自动框选范围。剪裁框的形状不是正方形就是矩形，无法框认不规则形状之图像。这个指令在扫描较小图片如照片时非常有用。

单位

这个区块是用来选择预览区域的长度单位。

颜色校正的进阶窗口

进阶窗口的其它 3 个卷标钮：色调分布图、色彩浓度、及 **Gamma**，皆为方正扫描仪的 **TWAIN** 程序的颜色校正选项。这些项目是针对高阶的使用者，已熟悉图像编辑工具，且知道如何运用。假如您才刚开始学习扫描，我们强烈建议您先不要使用这些工具，直到您熟悉扫描仪及其专业术语后，再来使用这些选项。许多图像编辑软件也都包含这些功能。但如果您必须调整扫描图像的色阶时，则选按适当的卷标钮，开始进行调整。

注意：在调整色调分布图、色彩浓度、及 **Gamma** 之前，请先进行预扫，以便观看调整的效果。

信道

在色调分布图、色彩浓度、及 Gamma 的上方是信道选项。



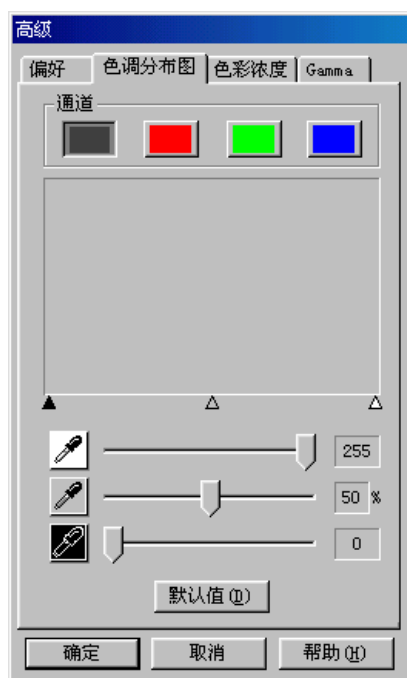
第一个信道是主信道，也是唯一对灰阶图像有影响的信道。当主信道套用在彩色图像时，会平均影响到另外三个信道。另三个信道分别影响图像中的红、绿、蓝（RGB）。按下其中一个信道，会启动窗口中心的图表。

注意：更改个别信道的效果会套在主信道的效果之上。

色调分布图

色调分布图是由矩形坐标来呈现统计资料：宽代表分级间格、高代表近似频率。只有在扫描图像的色彩平衡与图像来源不符时，才需调整色调分布图。

如果扫描图像色彩不清晰，可以利用色调分布图来调整。色调分布图显示图像色彩的明暗度，并进而调整之。



色调分布图于预扫图像很有用。在色调分布图所做的更动，会实时显示在预览区域的图像上，让您能立即看到调整的效果。

色调分布图是用图标来呈现图像色调分布的情形（色彩的明暗位阶），利用像素点数绘出明亮度波形。色调分布图显示四个信道的明亮位阶。

色调分布图的 X 轴代表色调值，从最左边的 0（最暗）到最右边的 255（最亮）；Y 轴代表该数值的像素总数。一个阴暗图像的色调分布图，大部分像素点集中在图表的左侧；而一个明亮图像的色调分布图，其像素点则大量集中在右侧。

您可以借着拖曳窗口底下的亮色调、中色调、和暗色调的滑动杆，来调整色调分布图中的颜色。



亮色调

亮色调代表颜色光谱的高域（明亮）端。如果主信道的亮色调值低于 245，所有色调值介于 245 到 254 的颜色，皆会调成 255（白色）。因此调低主信道的亮色调值，会让图像变得较明亮；如此也会增加色彩对比，因为介于中间色调和亮色调间的所有剩余像素，将自动重分布于中间色调至 255。这项重分配会加大颜色阴影间的差异。

如果调整红、绿、蓝色调其中一个信道的亮色调，受影响的只有该颜色的像素。另外混色像素（比方说包含绿色和蓝色的黄色）中，只要更改其中一个信道，就会影响到整体效果。



中间色调

中间色调是用来调种中间的色调值。提高中间色调会让图像变暗，降低中间色调会增加图像亮度。平衡色调的中间色调值应设为 50%。



暗色调

暗色调代表颜色光谱的低阶（阴暗）端。如果主信道的暗色调值为 **10**，所有其它介于 **1** 到 **10** 的颜色，其色调值都会变成 **0**（黑色）。因此提升暗色调会加深整个图像；提升单一信道的暗色调则加深该颜色的像素。提升暗色调也会增加较暗颜色的对比（介于中间色调和暗色调之间）。

按下位于窗口底下的默认值按钮，会将暗色调设为 **0**、亮色调设为 **255**、中间色调设为 **50%**——对比最低的设定。

注意：勾选偏好设定窗口的自动密度方块，会自动调整色调分布图，获致高品质的图像，而无须手动调整色调分布图窗口中的设定。

色彩浓度

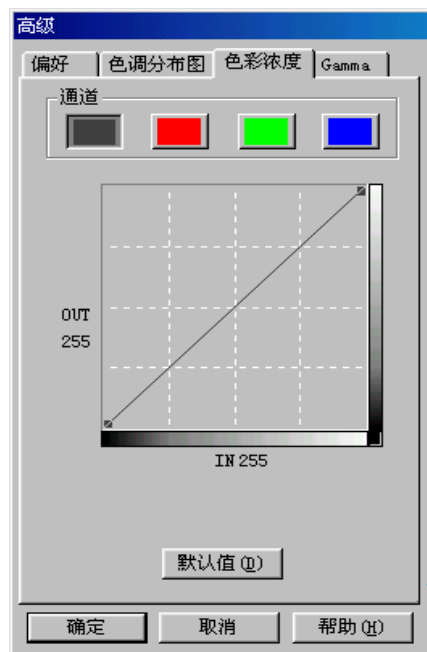
跟色调分布图一样，色彩浓度让您调整图像的色调范围。改变色调分布图是透过调整 **3** 个变量（暗色调、中间色调、亮色调）来达成，在此您可以调整色调阶尺的任何一点，最多可达 **20** 点。

图形的 **X** 轴代表像素的原始亮度值（输入位准）；**Y** 轴代表新的亮度值（输出位准）。代表默认值的对角线显示输入与输出位准的关系，所有颜色色调都未变，所有像素的输出入值都相等。

曲线从左边的暗色区（色调值为 **0** 的黑色）移到右边的亮色区（色调值为 **255** 的白色），所有颜色的色调都落在这两个值之间。

当您将鼠标光标移到色彩浓度图上，您会发现 **IN** 和 **OUT** 各出现数值。数值 **IN** 代表原始的色调值；如果您点按图表重新定义，数值 **OUT** 代表新的色调值。

在色彩浓度图中调整色调前，最好先进行预扫。当预扫的图像出现在预览窗口时，任何对色彩浓度图的变更，都会立即显现在预扫图像上，让您看到调整后的效果。如果您满意调整结果，按下扫描键进行图像扫描，扫描后的图像会包含您刚才所定义的颜色属性。



调整颜色浓度的色调有两种方法：

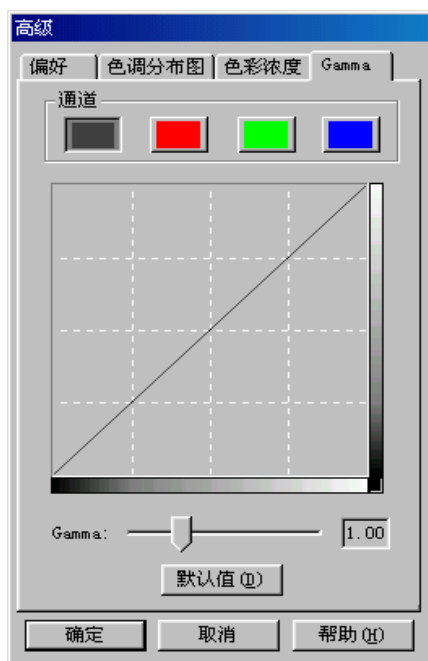
如上所述，在图表上按下鼠标左键，重新调整色调值符合 IN 与 OUT 方块所呈现的数值。其它颜色的色调也会跟着变动，以得出平滑曲线，使色彩维持平顺。

第二种调整色彩浓度的方法（也可能是最有效的）是用鼠标点按图表的对角线，按住鼠标不放移动鼠标。光标停在图窗体一点上，鼠标按着不放，容许计算机重新计算改变量，结果会出现在预览区域的预扫图像上。其它颜色的色调也会跟着变动，以得出一个平滑曲线，让图像色彩维持平顺。当您觉得满意时，即可放掉鼠标按键。这种方式提供调整色彩浓度的最大弹性，可以重复施行在对角线的其它点上，最多可达 20 个重调点。

按下默认值按钮，清除所有改变，将色彩浓度还原为原始值。

Gamma

Gamma 用来调整扫描入计算机图像的颜色。**Gamma** 如图所示是个平滑曲线。经由调整 **Gamma**，您可以改变所选取信道的色调范围。**Gamma** 主要是用来测量颜色的明亮度。**Gamma** 愈大，该颜色就愈明亮。调整主信道的 **Gamma**，会平均影响所有颜色的色调。调整个别信道如红、绿、蓝的 **Gamma**，只影响到该颜色的像素。选暗窗口底下其中一个信道，拖曳其滑动杆来调整图像的 **Gamma**。



如果已做图像预扫，您就可以在预览区内，立即看到调整后的效果。

按下窗口底下的默认值按钮，所有颜色的 **Gamma** 会重设回 1.00。

注意：更改 **Gamma** 会改变图像内在资料，影响到计算机屏幕和打印机的输出。

扫描小秘诀

- **多并不一定好：**在扫描前先决定您的应用目标。在大多数的时候，一个高分辨率的图像并无多大好处，只能让图像变得很大、占据过多硬盘空间、拖慢处理速度。
- **网络应用：**若要 email 彩色照片或将图像贴在网页上，最佳分辨率为 75 dpi。这是因为一般屏幕正常可视分辨率是 72 dpi，如此也可以缩短下载时间。
- **输出至喷墨打印机：**查阅您打印机文件所推荐的分辨率。我们建议的范围是 75-300 dpi。只有在放大小块扫描区域的细节时，才使用高扫描分辨率（301 dpi 或以上）。
- **激光与商业打印机：**当使用激光打印机或商业印刷机打印图像时，打印过程讲究“列网”（line screen 也就是一般的 LPI）。列网是半色调图像每吋的网纹数。半色调化是将图像打散成一系列的像点，来产生连续色调的图像，供印刷打印用。使用上述两个方法打印的一般通则是：扫描一倍半到两倍的列网。激光打印机的分辨率范围 300 到 600dpi，列网数为 50 到 100。一般商业印刷所用的平均列网数为 150，因此最佳的扫描分辨率为 225 到 300 dpi。

附录：规格⁴

方正扫描仪 T2400	
实体尺寸	373 x 256 x 32 mm
重量	1.4 kgs
使用温度	10℃ 至 40℃
扫描面积	反射稿： 216 mm x 297 mm
扫描模式	彩色：输入 48-Bit；输出 24/48-Bit 灰阶：输入 16-Bit；输出 8/16-Bit 黑白：1-Bit
分辨率	光学分辨率 600 dpi 硬件最大分辨率 600 dpi x 1200 dpi 软件程序最大分辨率 19200 dpi
TWAIN	完全与 TWAIN 兼容
传输接口	USB1.1
光源	三色 RGB LEDs
电源	计算机的 USB 端口 不需外接电源变压器
耗电量	操作中 – 最大 2.5 Watts 待机 – 1.0 Watts

⁴ 扫描仪硬件规格实际可能有所差异，恕不另外通知。

I. How to Set Up Your Scanner⁵

Safety Precautions

Before using this device, please read the following important information to eliminate or reduce any possibility of causing damage and personal injury.

1. Moisture condensation may occur inside this device and cause malfunction at these conditions:

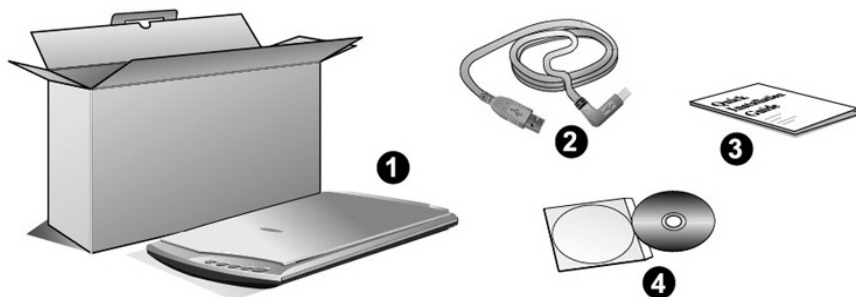
- when this device is moved directly from a cold to a warm location;
- after a cold room is heated;
- when this device is placed in a damp room.

To avoid the moisture condensation, you are recommended to follow the procedure:

- ①. Seal this device in a plastic bag for it to adapt to room conditions.
- ②. Wait for 1-2 hours before removing this device from the bag.
2. Keep the space around the AC adapter clear in case you need to quickly unplug the AC adapter during emergencies.
3. Damaged wire could cause fire or electrical shock. Keep the power cord straight and without being twisted, bended, or scraped.
4. Unplug the device if you don't need to use for a certain period of time, such as, during night or long weekend, to avoid any risks of causing fire.
5. Do use the power adapter and USB cable provided with the scanner. Use of other power adapter and cables may lead to malfunction.

⁵ The scanner illustration(s) may appear different than from the actual scanner itself.

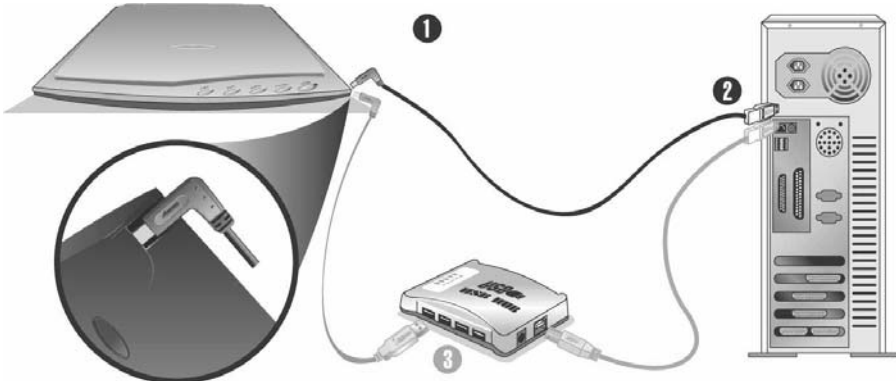
Box Contents⁶



1. Founder T2400
2. USB Cable
3. Quick Guide
4. Setup/Application CD-ROM (The complete scanner user's guide is available on the included CD-ROM)

⁶ Save the box and packing materials in case you need to transport this scanner in the future.

Install the Scanner's Hardware



1. Plug the square end of the included USB cable to the USB port of the scanner.
2. Plug the rectangular end of the USB cable to the USB port on the back of your computer.

Note: If there is another USB device connected to the computer, connect the scanner to an available USB port.

3. If you plan to connect your scanner to a USB hub⁷, make sure that the hub is connected to the USB port in your computer. Next, connect the scanner to the USB hub.

Note: If you do not have a USB port available, you might need to buy a USB port.

Install the Software

1. If the USB components on your computer are functioning correctly, they will automatically detect the scanner causing the "Add New Hardware Wizard" or "Found New Hardware Wizard" to be launched.

⁷ The USB hub is not included with the scanner.

2. **For Windows 98 & 2000**

- a. Click on the NEXT button when the “Add New Hardware Wizard” window is displayed.
- b. Select “SEARCH FOR THE BEST DRIVER FOR YOUR DEVICE [RECOMMENDED]” and click on the NEXT button.
- c. The next window will ask you where to search to find the drive. Select “CD-ROM drive”, and deselect “Floppy disk drives” if it is checked.
- d. Insert the Setup/Application CD-ROM, included with your scanner, into your CD-ROM drive and then click on the NEXT button.
- e. Click on the NEXT button when the next window displays. Afterwards, for Windows 98 users, please skip to Step 7.

3. **For Windows Me & XP**

- a. Insert the Setup/Application CD-ROM, included with your scanner, into your CD-ROM drive.
- b. Select “INSTALL THE SOFTWARE AUTOMATICALLY [RECOMMENDED]” and click on the NEXT button.
- c. Click on the NEXT button when the next window displays. Afterwards, for Windows Me users, please skip to Step 7.

4. **For Windows Vista**

- a. Select “Locate and install driver software (recommended)” when the “Found New Hardware” window is displayed.
- b. Click on the [Continue] button when the “User Account Control” dialog pops up.
- c. Insert the Setup/Application CD-ROM, included with your scanner, into your CD-ROM drive when the system prompts you “Insert the disc that came with your USB Scanner”, and click on the [Next] button.
- d. During the process of the installation, a message “Windows can’t verify the publisher of this driver software” might be prompted. Please ignore it, and click on [Install this driver software anyway] to continue the installation without any

misgiving at your scanner functioning. Afterwards please skip to Step 7.

5. **For Windows 7**

When the Setup/Application CD is for several scanner models

- a. Insert the Setup/Application CD-ROM, included with your scanner, into your CD-ROM drive. Click [Run install.exe] in the “AutoPlay” window.
- b. Click on the [Yes] button if the “User Account Control” dialog pops up. Follow the instructions in the pop-up installation message.
- c. In the “Device Manager” window, right-click on this scanner under “Other devices” and select [Update Driver Software] from the pop-up menu. Click [Browse my computer for driver software] in the window that appears, and click the [Browse] button.
- d. In the “Browse For Folder” window, select the folder or the CD-ROM drive that contains this scanner’s driver and click the [OK] button to return to the previous screen. Click the [Next] button and click [Install this driver software anyway] if the “Windows Security” window appears. Afterwards, please skip to procedure 8.

When the Setup/Application CD is for one scanner model

- a. Insert the Setup/Application CD-ROM, included with your scanner, into your CD-ROM drive. Click [Run install.exe] in the “AutoPlay” window.
 - b. Click on the [Yes] button if the “User Account Control” dialog pops up. If the pop-up wizard window appears click [Next], and click [Install this driver software anyway] in the “Windows Security” window then click [Finish] in the wizard window. Afterwards, please skip to procedure 8.
6. Windows XP & 2000 Users: During the process of the installation, a message “Windows Logo authorization required” or “Digital Signature required” might be prompted. Please ignore it, and click on “CONTINUE ANYWAY” to continue the installation without any misgiving at your scanner functioning.

7. When the system completes the installation, click on the "FINISH" button.
8. Follow the on-screen instructions to install all software that your new USB scanner requires.
9. After the software is installed, close all open applications and click on the FINISH button to restart your computer.

Note: If the scanner installation is not started and displayed automatically on the screen, click START, select RUN and type in "d:\install" (where d: is the drive letter assigned to the CD-ROM drive of your computer.)

Founder Scanner Setup After Windows XP Upgrade

If you plan to upgrade your operating system from Windows 98 or Me to Windows XP after having installed the scanner software, please follow the instructions below:

1. Unplug the scanner's AC power adapter from the electrical outlet.
2. Unplug the scanner's USB cable from the rear of the computer.
3. From the Windows START menu, click on [Programs] and then [Founder T2400]. In the pop-up menu that opens, click the [Uninstall Founder Scanner]. Follow the on-screen instructions to remove all the scanner software.
4. After uninstallation completes, close all open applications and click the FINISH button to restart your computer.
5. Start installing your Windows XP upgrade software by following Microsoft's related procedures.
6. When the Windows XP upgrade is done, re-install the scanner's hardware and software. Refer to the hardware and software setup sections of this manual for details.

II. Operating the Scanner

Your scanner accepts documents as small as business cards and as large as A4-sized documents. However, some software programs have limitations as to the information they can handle. The capacity of the computer's memory and free space on your hard drive can also limit the physical size of the document that you scan.

There are two different ways to operate the scanner:

1. From within an image-editing program that can acquire images from the scanner.
2. By using the Action Manager 32 program that is automatically installed as your scanner software.

Your scanner needs to be driven by some type of software program. Since all documents or images (whether text or pictures) that are acquired from the scanner are treated by your computer as images, most scanning will probably be done from an image-editing program where you can view, edit, save and output the scanned images. An image-editing program has been bundled with your scanner on the included Setup/Application CD-ROM. It will allow you to alter and correct any scanned images by using a variety of filters, tools and effects.

What about scanning text documents and editing them in a word processor? This is the role of Optical Character Recognition (OCR) software. OCR software converts the image files that are created from scanning text documents into text files that can be viewed, edited and saved by word processors. An OCR program has also been bundled on the included Setup/Application CD-ROM, and if you wish to use the scanner in this way you should install the OCR software that is included.

Action Manager 32 is a program that allows you to conveniently scan images and text without the need to work directly within any image-editing application (i.e. Presto! ImageFolio). Action Manager

32 also includes features to allow you to use your scanner as fax⁸ and copy machines⁹.

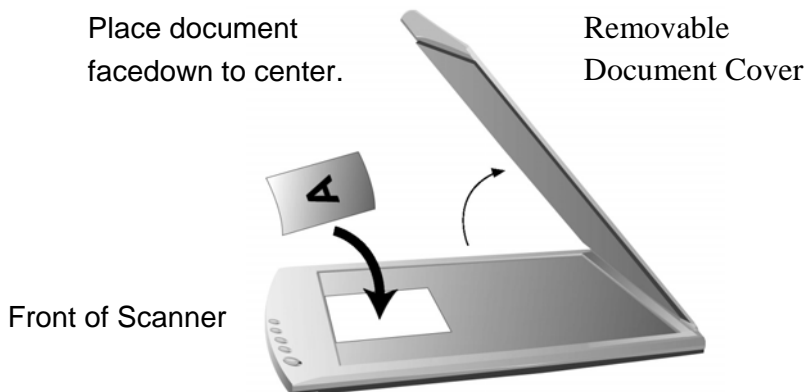
Please refer to the Action Manager 32 on-line Help (accessible by right-clicking on the Action Manager 32 window and choosing Help) for more information about these functions.

Testing the Scanner

The following test procedure checks to see if the scanner is properly functioning with your computer and the scanning software. Before testing your scanner, double check to make sure that all connections are securely fastened.

To properly test your scanner, please perform the following steps:

1. Open the scanner's document cover and place a picture face-down onto the scanner glass. The picture should be placed headfirst toward the front of the scanner, as illustrated below:



2. Gently close the document cover.
3. Next, open the scanner's image-editing program. From the Windows START menu, click on PROGRAMS and then Founder

⁸ A fax/modem and fax software is required to send faxes.

⁹ A printer is required for the copy utility.

Artworld.

4. When the Founder Artworld program opens, click on FILE and then SELECT TWAIN SOURCE.
5. In the window that opens, choose Founder scanner. Click on the SELECT button to close the window.
6. Within Founder Artworld program, click on FILE, ACQUIRE and then choose ACQUIRE.
7. The Founder T2400 TWAIN window will open. Close the Guide Scan window and click the SCAN button.
8. If an image appears on your screen, your scanner is working properly.

Maintenance

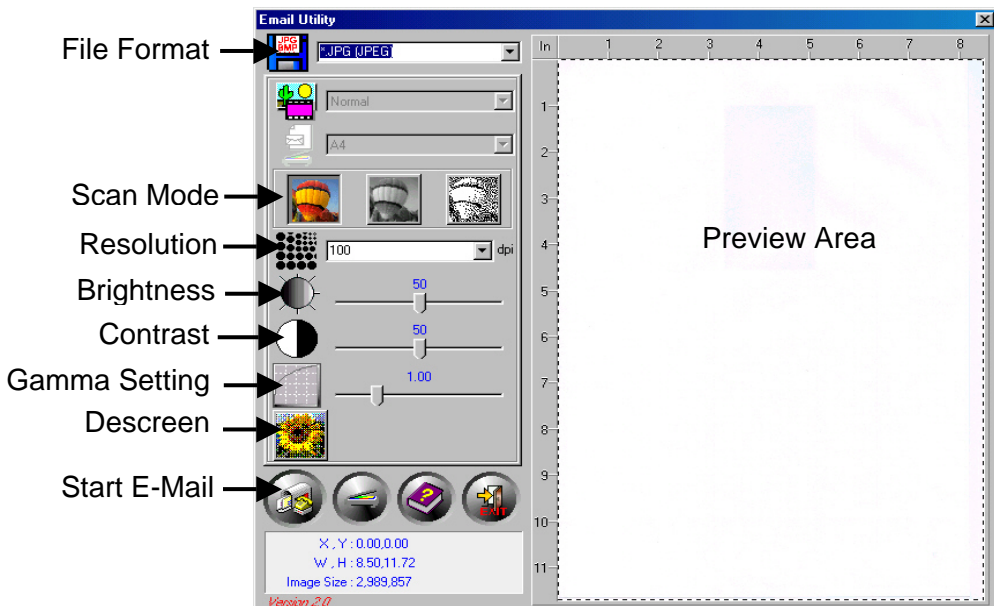
To keep your scanner working smoothly, take a moment to review the following maintenance tips.

- Avoid using the scanner in a dusty environment. When it is not in use, keep the scanner covered. Dust particles and other foreign objects may damage the unit.
- Do not attempt to disassemble the scanner. There is danger of an electrical shock and opening your scanner will void your warranty.
- Do not subject the scanner to excessive vibration. It may damage the internal components.
- Be sure not to bump or knock the scanner glass as it is fragile and could break.
- Clean the scanner glass by lightly spraying a non-abrasive glass cleaner onto a soft lint-free cloth. Then, wipe the glass thoroughly with the cloth. DO NOT SPRAY CLEANER DIRECTLY ONTO THE SCANNER GLASS. Excess liquid residue may fog or damage the scanner.
- Your scanner operates best in temperatures between 10° C to 40° C (50° F to 104° F).

III. Scanner Buttons

File Button

The File Button scans images and opens them in the Presto! PageManager program for cataloguing into albums, creating presentations, making slide shows, designing screensavers and wallpaper, and saving images and documents to be used in Web publishing. Presto! PageManager supports lots of popular applications, including Microsoft Word, Corel WordPerfect, Microsoft Excel, Adobe PhotoShop, Eudora Mail, Lotus cc:Mail, Microsoft Mail, Internet Explorer and Netscape Navigator. Presto! PageManager automatically searches for installed programs and adds them to the Application Bar, enabling you to drag-and-drop documents and photos to your printer, fax, e-mail, and frequently used applications.



The following describes how to scan a document with the File Button.

1. Place a document or image on the scanning glass.
2. Click the File Button in the Action Manager 32 menu.
3. Once the File Utility is opened, the scanner automatically starts the calibration and prescan process. Afterwards, the scanned image appears in the Scan Area of the File Utility window. To define the margins and crop out sections of the image you don't want scanned, use the mouse to click and drag the corners or sides of the scan area borders.
4. Select which File you wish the image to be scanned to.
5. Select the File Format from the drop-down menu.
6. Choose the desired Scan Mode by clicking the appropriate button: Color Photo Mode, B/W Photo Mode, or Text Mode.
7. Select the desired Resolution.
8. Adjust the Brightness to make an image or document darker or lighter.
9. Adjust the Contrast to increase or decrease the difference between the lightest and darkest areas on an image or document.
10. Adjust the Image Gamma, if necessary.
11. Click the Descreen button, if desired.
12. Click the Scan to File button to begin scanning the document or picture.

After you have scanned the image, the Presto! PageManager program opens, and you can perform other image editing tasks.



Attention

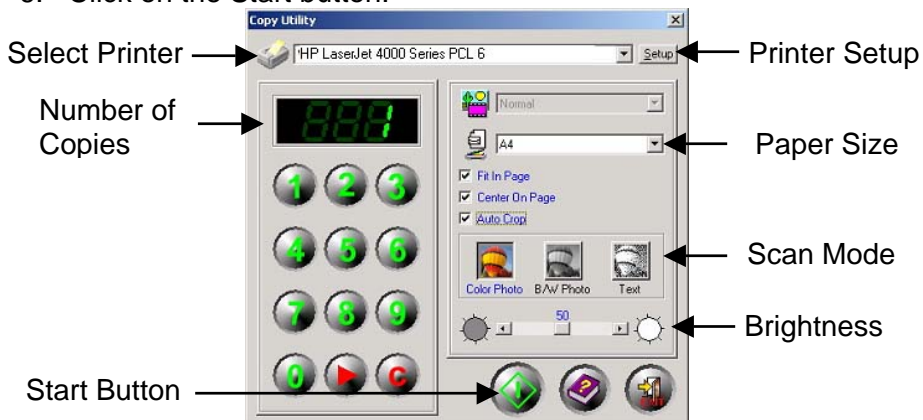
Refer to the Presto! PageManager online help to guide you through any questions you may have while using this document management software. You may also consult the Presto! PageManager User's Manual automatically installed to your computer with the scanner software.

Copy Button

The Copy button will allow you to make copies of your photographs and text documents much like a normal office copier. Copies can be made on any printer previously installed in Windows.

To make a copy

1. Place a document or picture face down on the scanning glass.
2. Press the Copy button and then the Copy Utility will open on your computer.
3. Select a printer from the drop-down menu.
4. Select the appropriate Paper Size to define the area to be scanned. Alternatively you may check the "AUTO CROP" option to have the scanner program automatically identify the dimensions of the image you scanned and crop around the edges. The crop shape will be a square or rectangle and it will not trace the edges of oddly-shaped images. This command can be useful when scanning smaller images such as photographs.
5. Choose a Scan Mode, and adjust other settings if necessary.
6. Click on the Start button.



SCAN Button

The Scan Utility will scan your photos or text documents into the image editing software (Presto! ImageFolio), ready for you to edit and save.

To use the SCAN button:

1. Place a document or image on the scanning glass.
2. Press the Scan button.
3. The image editing software, Presto! ImageFolio, will be automatically launched with the Founder T2400 TWAIN window appear on it.
4. Select the desired Scan Mode and Resolution.
5. Click the Prescan button. The scanner starts the prescan process. Afterwards, the scanned image appears in the Prescan Window.
6. Adjust the scan area and change any other settings you deem necessary. (Refer to *IV. The Founder TWAIN Interface* section of this manual for more information.)
7. Click the Scan button to begin scanning the document or picture.

The scanned image will be displayed on the Presto! ImageFolio program, and you can perform other image editing tasks.

OCR Button

The OCR button is used to convert images of text documents created by the scanner into text files that can be edited within a word processor. When you press the OCR button, a text document will be scanned, transferred to the OCR software included with your scanner (called ABBYY FineReader OCR System) for optical character recognition, and converted into a format supported by your word processor.

To use the OCR button:

1. Place a typewritten text document face down on the scanning glass.
2. Press the OCR button.
3. The OCR Utility window will open.
4. Set proper Paper Size, Resolution, and Brightness. Click the [OCR] button to start scanning and recognition process.
5. The OCR result will opened in the word editor, such as *.doc supported by Microsoft Word.
6. Remember to save the new text document that has been created!

Some key points about OCR

1. Refer to the online help of ABBYY FineReader OCR System to guide you through any questions you may have while using this program.
2. OCR stands for Optical Character Recognition and is designed to read text characters only.


E-Mail Button

The E-Mail button lets you scan documents and images directly to your MAPI-based E-Mail programs (which currently include Microsoft Outlook, Eudora, etc.) that have already been installed on your computer.

To scan images and send them to your E-Mail program:

1. Place a document or image face down on the scanner glass.
2. Press the E-Mail button.
3. Once the E-mail Utility is opened, the scanner automatically starts the calibration and prescan process. Afterwards, the scanned image appears in the Scan Area of the E-mail Utility window. To define the margins and crop out sections of the image you don't want scanned, use the mouse to click and

drag the corners or sides of the scan area borders.

4. Select the File Format from the drop-down menu.
5. Choose a Scan Mode by clicking on the appropriate button: [Color Photo], [B/W Photo], or [Text] from left to right.
6. Adjust the resolution, brightness or other settings, if needed.
7. Click on the E-Mail button  to accept all settings and begin the procedure.

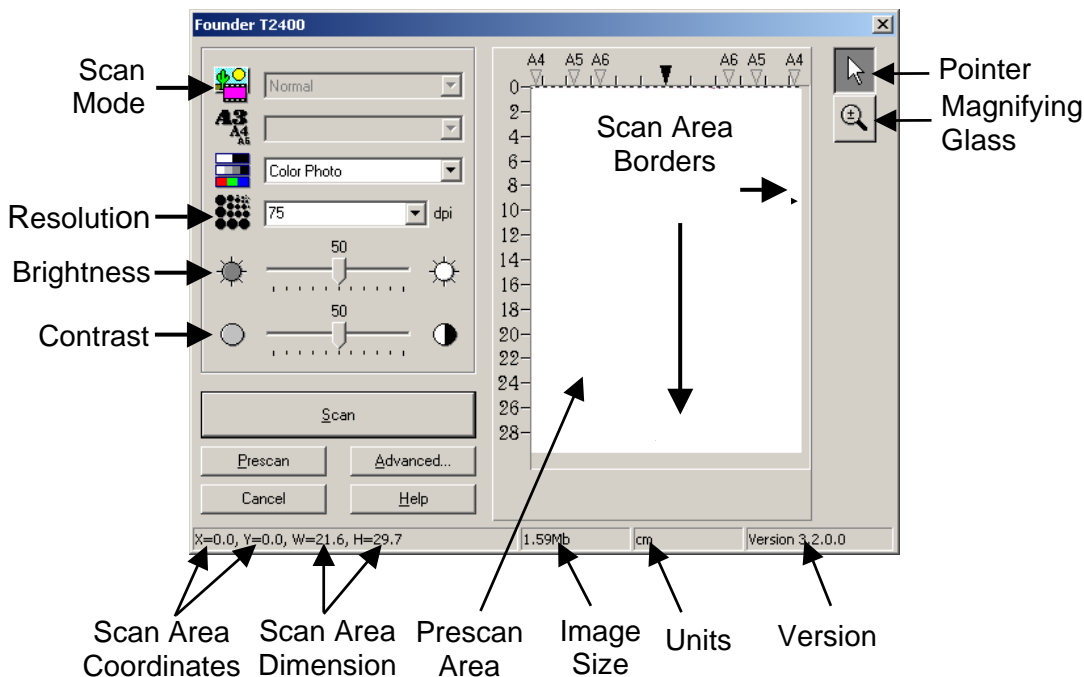
The document or image in the scanner will now be scanned, your E-mail program will be launched, and a new message will be created with the scanned image already inserted as an attachment.

IV. The Founder TWAIN Interface

Introduction

The Founder TWAIN program is a very important piece of software that comes with your scanner. This program acts as an interface between the scanner hardware and the image-editing software you are using to view and edit images. The Founder TWAIN program allows you to adjust a number of settings to define the quality of the scanned image. The following chapter describes the Founder TWAIN interface, which automatically opens when you click SCAN, or ACQUIRE from within a TWAIN compatible scanning program or image-editing application.

The Founder TWAIN interface allows you to make important adjustments before scanning. For example, you can scan in different modes: black and white, grayscale or color; increase or decrease the resolution (dots per inch of an image), and adjust the brightness and/or contrast. The Prescan option allows you to adjust the borders of the scan area by increasing or decreasing the size of the crop box located inside the Prescan Area. The Founder TWAIN interface also provides you with statistics such as how large an image will be after scanning, in terms of both file size and physical dimensions.



Founder TWAIN Dialog Box Features

This section describes all of the options available in the Founder TWAIN interface. It is very important to correctly configure the Scan Mode in order to successfully perform a scan. All other items are optional and allow you to tailor the characteristics of the scanned image.



Scan Mode - Tells the scanner the type of document you are scanning. There are five settings to choose from:

- **Text** - scans in black and white and is suitable for scanning text.
- **B/W Photo (grayscale)** - scans in 256 shades of gray, giving black and white images or photos depth and shadow.
- **16-bit B/W Photo (grayscale)** - scans in more than 65,000 shades of gray, improving the realism of b/w images.

- **Color Photo** - scans in millions of colors for photo-realism. Choose this mode when scanning color pictures or graphics.
- **48-bit Color Photo** – scans in billions of colors for professional imaging requiring precise uniformity of color.



Resolution - Resolution is measured in dots per inch (dpi). The higher the resolution, the more detailed the image, and the more memory and drive space the image will use.

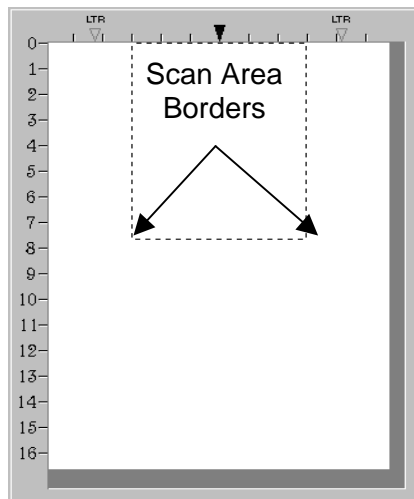


Brightness - This is the amount of light that is concentrated onto a document while it is being scanned.



Contrast - Contrast adjusts the tonal range of an image by lowering mid-tone values and increasing values for high and low tones.

Prescan Window - The Prescan Window is the large white area in the middle of the FOUNDER TWAIN window. Documents or images that are prescanned will be displayed there.



Prescanning images is very useful as it gives you an idea of how a document or image will look after it is scanned. You can use the Magnifying Glass to zoom the view of the prescanned image by clicking on the magnifying glass button towards the upper right of the Founder TWAIN window and then clicking on the part of the image you wish to view in detail.

If you change any settings either in the Founder TWAIN window or in any of the Advanced windows, the effects of the changes (except for Filter and Descreen) will immediately appear on the prescanned image in the Prescan Area. This allows you to instantly judge the effects of almost any setting you change.

The Scan Area Border, designated by the dotted box in the Prescan Area, can be resized and moved. This is very important for keeping the image size (in terms of computer memory) as small as possible. To do this, first prescan the document or image you wish to scan by loading it in the scanner and clicking on the Prescan Button. After it appears in the Prescan Area, resize and move the dotted box so it fits snugly around the edges of the prescanned image. In this way, only the actual image, or the desired portion of an image will be scanned, and extraneous white spaces (which take up computer memory) will be removed. This feature is especially useful when scanning 3x5 photos, for example.



Placing the mouse pointer **INSIDE** the Scan Area Border box will change the cursor as shown to the left and allows you to move the entire frame by dragging the mouse.



Placing the mouse pointer at the **EDGE** of any side of the margin will change the cursor as shown to the left and allows you to reduce or expand the frame around the image.



Pointer - Changes the cursor from magnifying glass to pointer. The pointer must be used to adjust the Scan Area Border or change settings.



Magnifying Glass - Clicking on the magnifying glass button changes the cursor to a magnifying glass and lets you easily zoom in and out of the prescanned image in the Prescan Window.

To zoom in, click the left mouse button. To zoom out, click the right mouse button. To stop zooming in and out of the image, click on the Pointer button just above the Magnifying Glass button.

Note: The magnifying glass only affects the view of the prescanned image in the prescan area and in no way affects the scanning process or the final scanned image.

Scan Button - Accepts all settings and begins scanning.

Prescan Button - By clicking on the Prescan button, you can scan the source document into the Prescan Area in the middle of the Founder TWAIN window. This allows you to modify the scan area (for smaller images such as photographs) and gives you a rough idea of what the scanned image will look like before you scan.

Advanced Button - Advanced controls for precision scans. See below for detailed explanations about the Advanced Settings window that appears when you click on this button.

Cancel - Clicking on the Cancel button saves your current settings and closes the Founder TWAIN window

Help - Clicking on this button runs the on-line help program

Status Bar - The status bar contains important information about the settings in the FOUNDER TWAIN window.

X=0.00, Y=0.00, W=8.50, H=11.36	24.8Mb	Inch	Version 4.2
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Scan Area Coordinates shows the position of the Scan Area Border in terms of X and Y coordinates.

Scan Area Dimension shows the exact width and height of the Scan Area Border.

Image Size displays the amount of memory your image will use. The larger the image size, the longer it takes to actually scan the image. Larger images, due to their memory requirements, will also take longer for your image-editing applications to process when making any corrections.

Tips for reducing the file size of an image:

- Change the scan mode – Color mode collects the most amount of information and therefore requires more memory than grayscale or black and white.
- Reduce the resolution –See Scanning Tips later in this chapter for detailed information about selecting the proper amount of resolution.
- Reduce the scan area - When scanning images that are smaller than a full page, make sure you prescan the image and adjust the scan area borders in the Prescan Area window.
- Some file formats such as GIF and JPEG can compress image data, greatly reducing the amount of space an image takes up on your hard drive.

Units shows the measurement units used in the Prescan Area. The measurement units can be changed by clicking on the Advanced button.

Version displays the version of the Founder TWAIN program you are using.

Advanced Settings Window

The Advanced Settings window has 4 tabs running along the top - Preferences, Histogram, Tone Map and Gamma, all of which will be explained in detail below. Click on one of the tabs to display settings. For additional instructions click on the Help button at the bottom-right of the window to view the on-line Founder TWAIN help.

Most of the menu options are considered advanced features. We strongly suggest that you first become familiar with scanning and using the settings in the Founder TWAIN window before attempting to use any of the following features. Many of these advanced features will also be available to you in your image-editing software after you scan.

Preferences Window

The Preferences window has a number of settings that control how the image is scanned and how it is viewed in the Prescan Area.

Monitor Gamma

Monitor gamma defines how the colors in an image will be displayed on your monitor (not the color data in the image itself). The monitor gamma setting allows you to change the gamma values for your monitor.

The monitor gamma only affects the prescanned image in the prescan area. This is because image-editing applications have their own monitor gamma settings. The settings defined here should be exactly the same as the settings in the image-editing application you will use to view and edit the scanned image.

To correctly adjust the monitor gamma, you must first have your computer and working environment stable. This includes the lighting in the room, and making sure your monitor brightness, contrast and colors are properly adjusted. Next, drag the slider bars to alter the monitor gamma. When finished, click OK to exit.

Make sure that the monitor gamma values you set correspond to the monitor gamma values in your image-editing/graphics program. This ensures that colors in the prescanned image you see in the Prescan Area will be exactly the same as the colors in the final scanned image in the image-editing program.

When the monitor gamma in the Founder TWAIN program and all your image-editing applications are the same, you will only need to adjust the Image Gamma to change the color brightness for scanned images in all applications.

Changing the image's gamma value (by clicking on the Gamma tab at the top right of the Advanced window) allows you to change the brightness of the colors in the image itself, and keeps all monitor gamma values in your programs consistent. This ensures that colors will always be displayed in the same way.

Auto Density

Checking this box automatically adjusts the Histogram to make the scanned image clearer. It does this by increasing the difference between color tones.

Inverse

When inverse is checked, the colors of an entire image will become reversed. A black and white image will look similar to a photo negative.



Before

After

Red Color Dropout

Red Color Dropout allows you to remove the Red color while scanning.

For example, if your original document contains red texts or a red stamp (e.g., a bill or invoice) and you want to discard it from your image, you may select **Red Color Dropout**.

Descreen

Descreen applies filtering to images that contain moiré patterns (or herringbone). A moiré pattern is created from scanning pictures in magazines, or printed material that use color dithering. The descreen filter is not needed when scanning original photographs or black and white images and text, but is recommended when scanning any printed color graphics, such as a page from a magazine, in order to remove the unsightly interference patterns which may occur.



Before



After

Filter

There are five filter choices located under the Filter menu. Filters help you improve your scans by allowing you to sharpen images as well as remove excessive dots and distortion.

- **Average:** Determines the medium depth of an image and averages adjacent pixels to make images appear softer.
- **Blur:** Lets you dull the edges within an image, and decreases the contrast by making dark edges lighter and light edges darker.
- **Blur More:** Adds additional blurring.
- **Sharpen:** Allows you to sharpen the edges within an image by making the edges in an image more distinct. The Sharpen filter also increases contrast by making dark edges darker and surrounding light edges lighter.
- **Sharpen More:** Adds additional sharpening.
- **Unsharpen:** Sharpens the edges in an image to remove the blurriness.

Always on Top

When this box is checked, the Founder TWAIN program will always be on top of the other windows open on your desktop.

Auto Prescan at Startup

Clicking this checkbox will cause the Founder TWAIN program to perform a prescan immediately, whenever it is opened. Doing this allows the image to be automatically prescanned -- making settings adjustments quicker and easier, since any changes to settings made in the FOUNDER TWAIN window will immediately be shown on the prescanned image.

Auto Crop after Prescan

When this box is checked, the Founder TWAIN program will identify the dimensions of the image you scanned and crop around the edges. The crop shape will be a square or rectangle and it will not trace the edges of oddly-shaped images. This command can be useful when scanning smaller images such as photographs.

Unit

This area is used to choose the measurement units to be used in the Prescan Window.

Advanced Windows for Color Correction

The Advanced window has 3 other tabs: Histogram, Tone Map and Gamma used for the Founder TWAIN color correction options. These items are intended for users who are familiar with image editing tools and how they affect images. If you are just learning how to scan, then we strongly recommend not using these features until you become familiar with your scanner and its terminology. Many image-editing programs already have these features. However, if the need arises to adjust the color level of your scanned images, then click on the appropriate tab and perform the adjustments.

Note: Before adjusting the Histogram, Tone Map and/or Gamma, perform a PRESCAN so you can view the changes before you scan.

Color Channels

Along the top of the Histogram, Tone Map and Gamma windows are the color channels. This can be useful in comparing color ranges between the color values, and in identifying methods when editing specific areas.

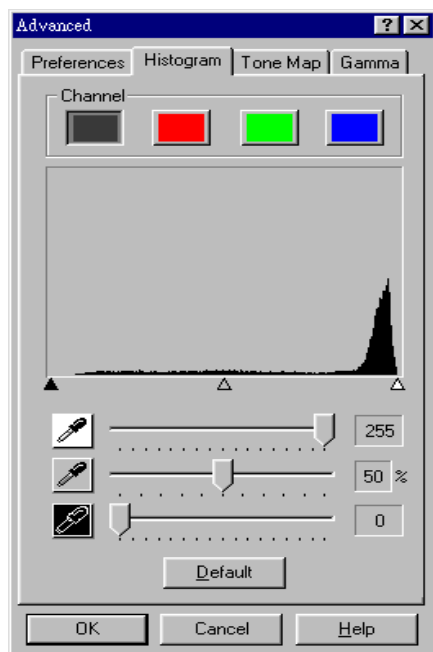


The first channel is the Master channel, the only active channel for gray images; and for color images it affects the three other channels evenly. The other 3 channels affect the Red, Green and Blue (RGB) colors in an image, respectively. Clicking on one of the color channels activates it in the graph in the center of the window.

Note: Changes made to the individual color channels will be added on top of changes made to the Master channel.

Histogram

Histogram is a representation of statistical data by rectangles: widths represent class intervals and heights represent similar frequencies. Make adjustments to the histogram only when the color balance of your scanned image does not match the original picture.



However, if the colors in a scanned image appear unclear, the histogram can be used to make them more to your liking. A histogram shows how bright or dark colors in the image are, and can be used to adjust these levels.

When using the histogram, it is very helpful to prescan the image. Changes made to the histogram will instantly be shown on the image in the Prescan Area, allowing you to immediately judge the effects of the changes!

A histogram is a graphic representation of the tonal distribution (the brightness and darkness levels) in an image. It plots the number of pixels (dots) at each brightness level. The histogram

displays these levels in the 4 color channels.

The x-axis of the histogram graph represents the color values from darkest (0) at the far left to the brightest (255) at the far right; the y-axis represents the total number of pixels at that value. A histogram for a dark image shows most of the pixels at the left side of the graph. A histogram for a bright image is more heavily weighted to the right side.

You can manipulate colors in the histogram by changing the values in the highlight, midtone and shadow slider bars towards the bottom of the window.



The highlight represents the high (bright) end of the color spectrum. If the highlight value of the Master channel is lowered to 245, all color values between 245 and 254 will be given the value of 255 (white). Thus, lowering the highlight of the Master channel brightens the whole picture. Doing this also increases the color contrast because all the remaining pixels between the midtone and the highlight will be automatically redistributed over the midtone to 255 range. This redistribution serves to increase the difference between shades of color.

If the highlight for one of the Red, Green or Blue channels is adjusted then the results will only affect pixels of that color or containing combinations of that color (i.e. Yellow contains Green and Blue and would thus also be affected by changes to one of these channels).



The midtone is used to adjust the mid-range of color values. Raising the midtone darkens the image and lowering the midtone brightens the picture. For balanced color, the midtone should be set at 50%.



The shadow represents the low (dark) end of the color spectrum. If the shadow value on the Master channel is raised to 10, all color values between one and ten will be given the value of zero (black). Thus, raising the shadow darkens the entire image and raising the shadow in a specific color channel darkens pixels of that

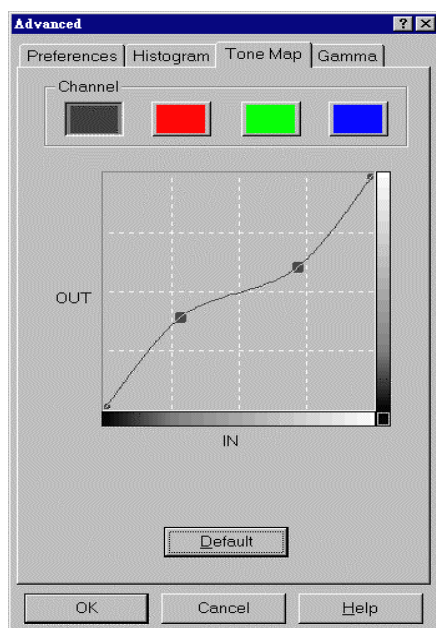
color. Raising the shadow also increases the color contrast of darker tones (the range between the midtone and the shadow).

The Default button at the bottom of the window sets the shadow to 0, the highlight to 255 and the midtone to 50% - the lowest contrast settings.

Note: Checking the Auto Density box in the Preferences window will automatically adjust the histogram to give high quality images without needing to manually adjust the settings in the Histogram window.

Tone Map

Like the histogram, the tone map lets you adjust the tonal range of an image. However, instead of making the adjustments using just three variables (shadows, midtones and highlights, in the histogram), you can adjust any point along the tonal scale, and up to 20 points in all.



The x-axis of the graph represents the original brightness values of the pixels (input levels); the y-axis represents the new

brightness values (output levels). The diagonal line that appears by default shows the current relationship between the input and output values; no color tones have been changed, so all pixels have the identical input and output values.

The curve moves from shadows on the left (black with a value of 0) to highlights on the right (white with a value of 255). All color tones appear somewhere in between.

When you move the cursor onto the map you will notice the IN and OUT values showing specific numbers. The in value represents the original value of the color tone. The out value represents the new value of the color tone if you were to click on the graph and thus redefine it.

Before adjusting color tones on the tone map, it is a good idea to prescan the image. When this is done and the image appears in the Prescan Area, any changes made to the tone map will immediately appear on the prescanned image. This enables you to see the effects of the changes you make. When you are satisfied with the results and finally click on the Scan button to scan the image, the scanned image will contain the color properties you have defined.

There are two ways to adjust tones on the tone map:

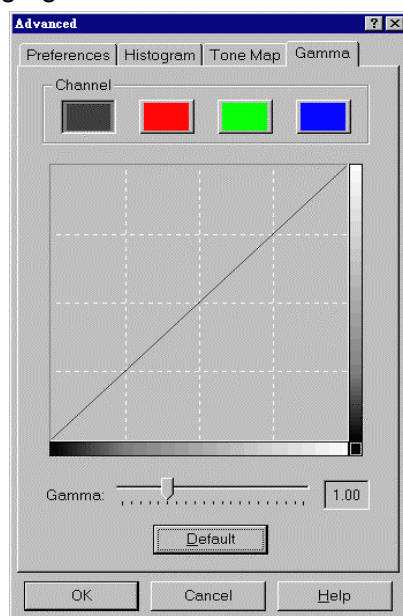
Clicking with the left mouse button on the graph as mentioned above, remaps the color values to the numbers shown in the In and Out boxes. All other color tones will also be remapped to create a smooth curve in order to keep the color of the image smooth.

The second way to alter the tone map (and possibly the most useful) is to click on the diagonal line on the graph and while keeping the mouse button pressed, move the mouse. Let the cursor hover over a single point on the graph while keeping the button pressed to give your computer time to recalculate the changes, and the results will show up on the prescanned image in the Prescan Area. All other color tones will also be remapped to create a smooth curve in order to keep the color of the image smooth. Release the mouse button when you are satisfied with the results. This action provides the most flexibility in adjusting the tone map and can be repeated on other parts of the line to create up to 20 remapping points.

Clicking on the Default button removes any changes you have made and resets the tone map to the original values.

Image Gamma

Image Gamma is used to adjust the colors in the image that will be scanned into the computer. Gamma values follow a smooth curve, as seen below Figure. By adjusting the gamma, you can change the tonal range of the selected color channel. Gamma values are primarily a measure of the brightness of a color. The larger the gamma value, the brighter the color becomes. Adjusting the gamma on the Master channel affects the tonal range for all colors equally. And adjusting the gamma for the individual Red, Green or Blue channels only affects pixels containing that color. Click on a color channel and then drag the slider bar near the bottom of the window to adjust the image gamma.



Remember, you can immediately view the effects of any changes you make in the Prescan Area by first prescanning the image.

Clicking on the **Default** near the bottom of the window causes the gamma values in all color channels to be reset at 1.00.

Note: By changing the gamma values you affect the image data, and influence how the image displays on your computer's monitor, and printer.

Scanning Tips

- **More is not always best.** Determine what your final application will be BEFORE you scan. In many cases a high resolution image will do nothing more but dramatically increase the file size, take up more disk space, and slow down the process.
- **Internet Applications:** For e-mailing color photos or pasting images on Web sites, a resolution of 75 dpi is the best choice. This is because the actual viewable resolution of the average monitor is 72 dpi. Additionally, download times are dramatically reduced.
- **Printing to Ink Jet Printers:** Check your printer documentation for recommended printer resolution settings. We recommend ranges between 75-300 dpi in general. Only use a higher scanning resolution (301 dpi and above) for smaller images when detail must be captured in a small area because it will be enlarged later.
- **Laser and Commercial Printers:** When printing an image to a laser printer or commercial printing press, it is important to understand the process in terms of line screen (a.k.a., LPI). Line screens are the number of screen lines per inch when an image is halftoned. Halftoning is the process of breaking the image down into a series of dots to reproduce continuous-tone art when printing on a press. A general rule when printing in one of these two manners is to scan one and a half to two-times the amount of the line screen. Laser printers that have resolution ranges of 300 and 600 dpi will have line screens between 50 and 100. Typical commercial printing is done at an average line screen of about 150. Therefore, an optimal scanning resolution would be from 225 to 300 dpi.

Appendix: Specifications¹⁰

	Founder T2400
Physical Dimensions	373 x 256 x 32 mm
Weight	1.4 Kgs
Operating Temp.	10° C to 40° C
Max. Scan Area	Reflective: 216 mm x 297 mm
Scan Method	Single-Pass
Scan Modes	Color: Input 48-bit; Output 24/48-bit Grayscale: Input 16-bit; Output 8/16-bit Black & White: 1-bit
Resolution	Optical Resolution: 600 dpi Max. Hardware Resolution: 600 dpi (main scan) x 1200 dpi (sub scan) Max. Interpolated Resolution: 19200 dpi
Scanning Materials	Reflective color or black-and-white originals
Protocols	TWAIN Compliant
Connection	USB Port
Light Source	Three-colour RGB LEDs
Power Requirements	Powered through USB port No AC adapter required
Power Consumption	Operation: 2.5 watts maximum Idle: 1.0 watts

¹⁰ Hardware specifications may change at any time without prior notice.