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TrueNet Enterprise

User Guide

Version 2.1

TrueNet ™

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TrueNet v2.1 System Requirements

Microsoft Windows

Minimum System

Windows 2000 or Windows XP
800Mhz Pentium 3 or faster
128MB of RAM
1GB of Hard Disk space.
100Mbit Ethernet connection (TCP/IP)
Display 800x600 with 65536 Colors
CD-ROM drive (for installation)

Recommended System

Windows XP
2Ghz or faster Pentium 4
512MB RAM
100Mbit/1Gbit Ethernet connection (TCP/IP)
Display 1024x768 or higher with 16M Colors
CD-ROM drive (for installation)

Things that effect system requirements

- The system requirements shown above assume a small network of duplicators running basic jobs via the TrueNet software. When the API is used to create dynamic ISO and/or print images targeting several duplicators at the same time, the system requirements will increase.

- The requirement for any given network will depend on the size and number of simultaneous duplicators being targeted (and dynamic images being created).

- The memory requirement when building print images depends on the printer being targeted. The lowest memory requirements are for the PowerPro thermal printer, with the largest memory requirements being for the Signature Pro. When building images for the Signature Pro, a minimum of 256MB is recommended.

- Building print images is very processor intensive, so a fast CPU is recommended.

- Building ISO images can be very processor and I/O intensive for short periods of time, so a fast CPU and fast hard disk are also recommended.

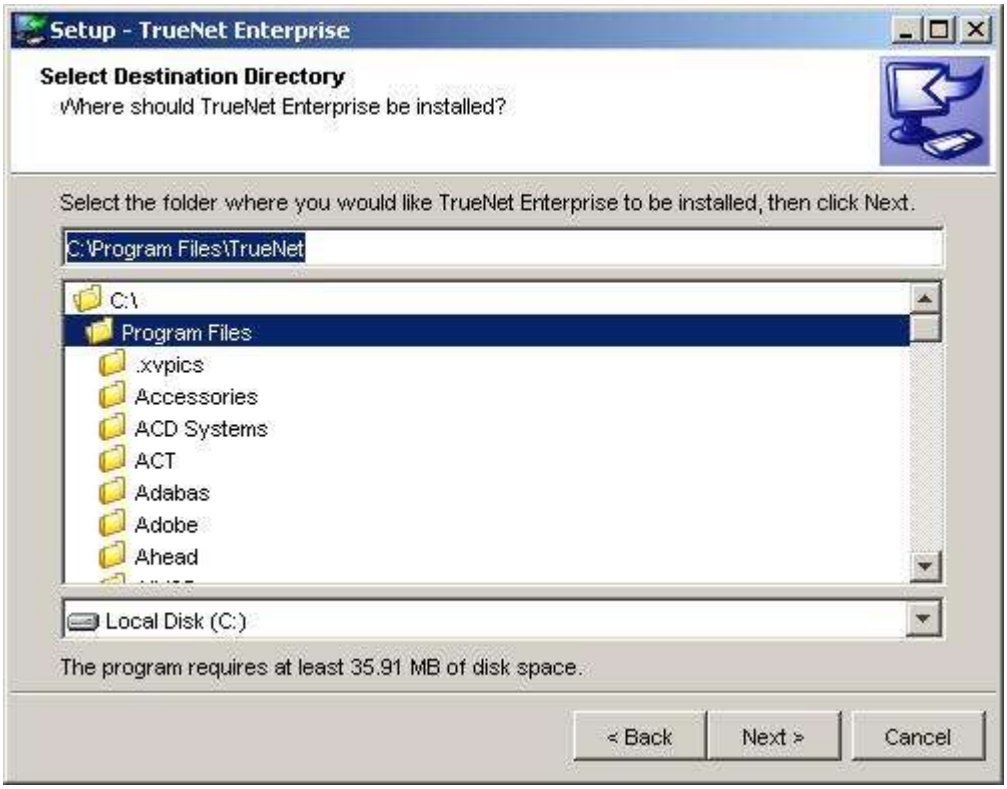
- For more information on system requirements, please contact R-Quest, or an authorised R-Quest Distributor.

Software Installation

To install TrueNET, run the Installer, and follow the on-screen instructions.

You will be guided through the installation process by the Setup Wizard.

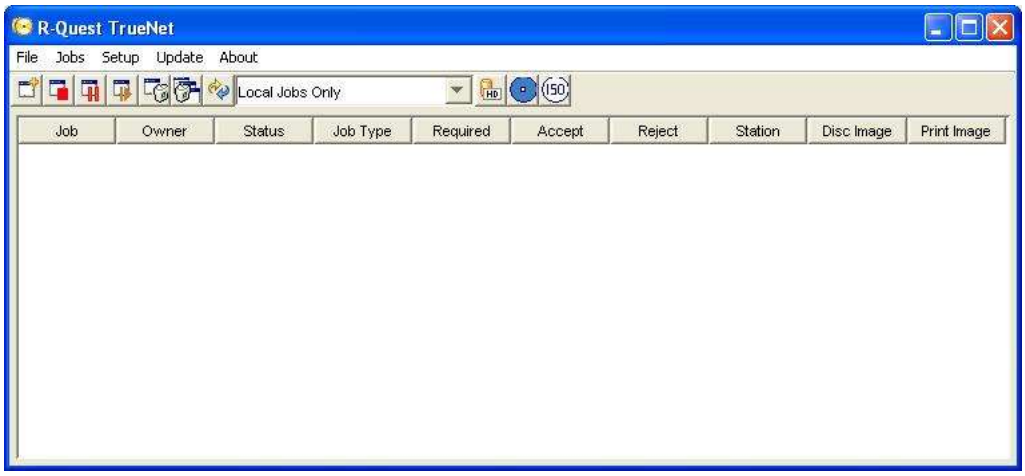
During the installation you will be given the option to change the installation location should you wish to.



The default installation directory is shown above.

Once file transfer is complete – you will get a message indicating installation status.

TrueNet™ Configuration



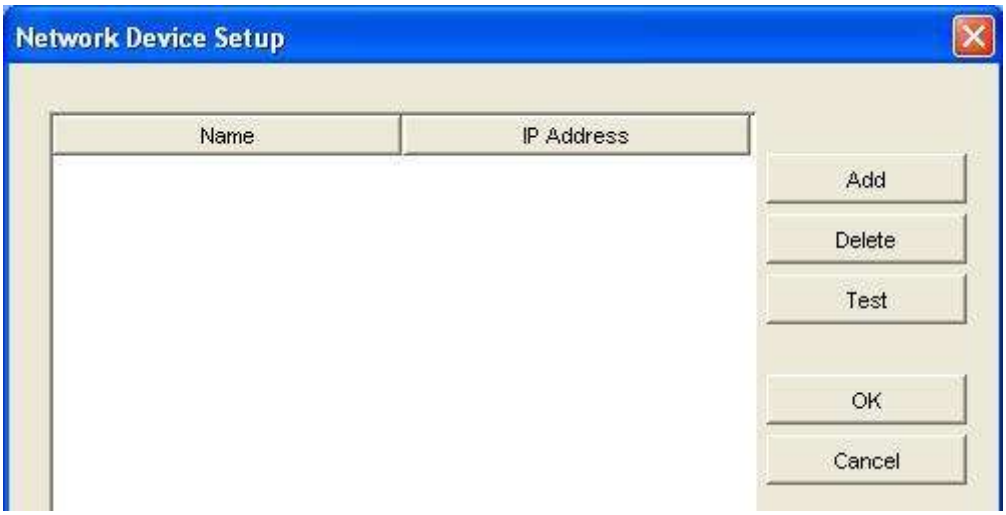
Before TrueNet™ can be used to run duplication or print jobs you will need to tell TrueNet™ about every device on the network that you plan to use. When TrueNet™ is first installed, no network devices are defined, and the following dialog will appear:

Selecting 'Yes' takes you to the Network Device Setup. See below:

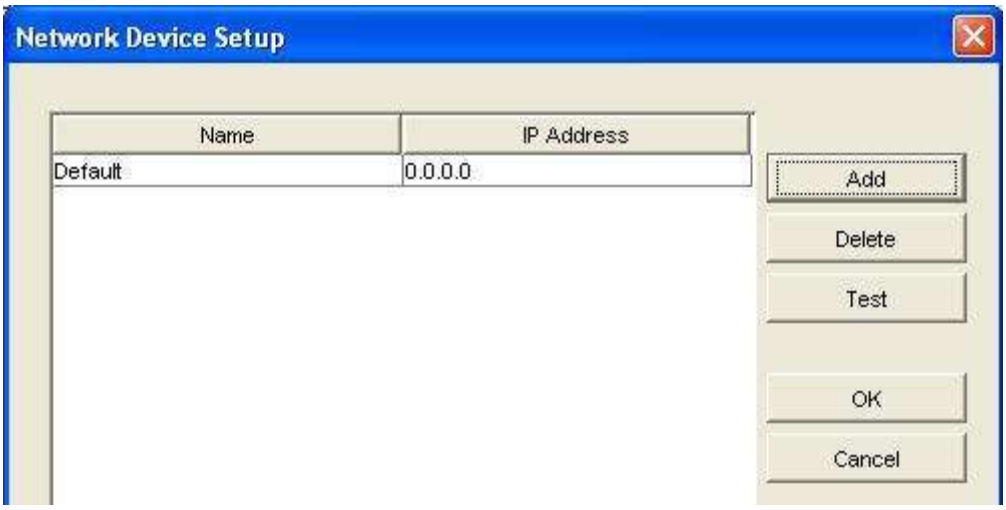
Selecting ‘No’ returns to the application without setting up any devices – but you will not be able to start any jobs or view any devices until you have completed the setup procedure. If you selected ‘No’ then you can setup the Network Devices later by selecting the “Network Devices” from the “Setup” menu.

You will need to know the fixed IP address of the network device, and if you are unsure of this address, please see Appendix A or check with your system administrator.

You will also need to choose a name for the device. This can be any alphanumeric name, but you should avoid using spaces within the name if you plan to use the API. If your naming convention expects a space, use the ‘_’ underscore or a hyphen ‘-‘ in place of the spaces.



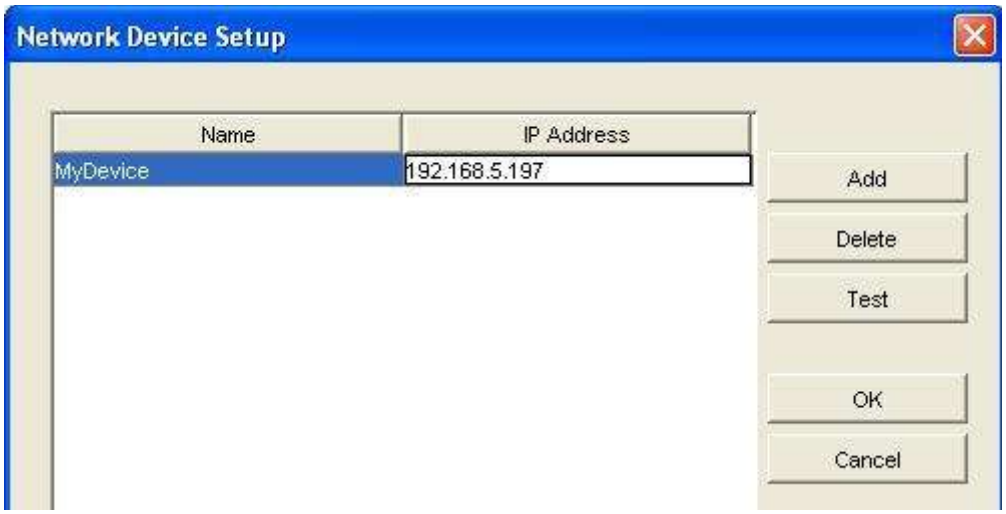
Click the ‘Add’ button to define a new network device. A new device will appear in the device list, with ‘Default’ as the name and an IP address of ‘0.0.0.0’. You could leave the name as ‘Default’, but adding a second device (also inserted as ‘Default’) may cause confusion at a later time, so we recommend choosing a unique and meaningful name for your environment. Typical names could be “Station_1” or “Duplicator_1” etc. Many people choose to give their Devices cherished names.



Double click on the name entry (currently ‘Default’), and delete the current contents before entering the required name. Next, double click on the IP Address entry (currently ‘0.0.0.0’), delete it, and enter the fixed IP address of the network device. Click on the name entry once more, and then click on the ‘Test’ button.

This will test communications between your computer and the Network Device, and requires that your Network Device is already configured, connected to the network and is powered on.

An example of a device setup is shown below. The name given to this device was "MyDevice", and an IP address of 192.168.5.197 entered. The name you chose, and the IP address will probably be different on your system.



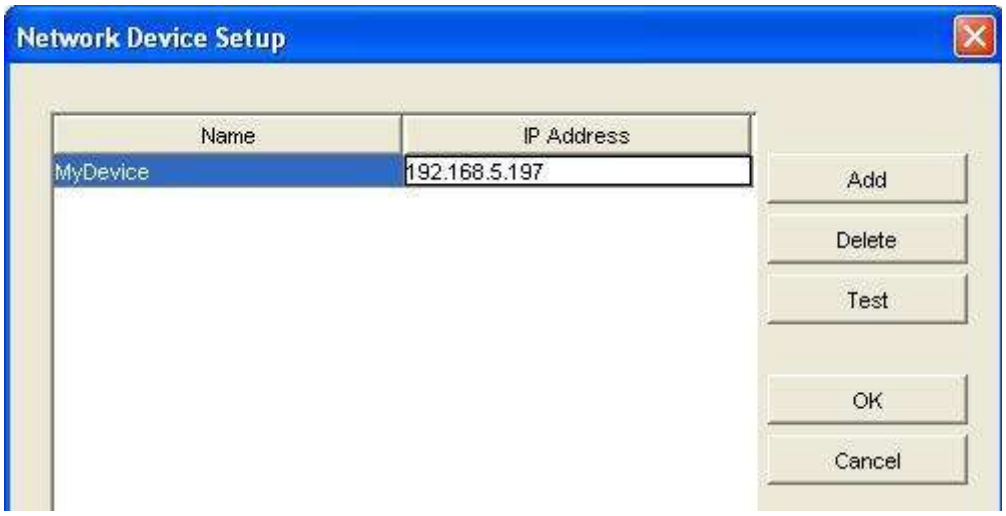
Once a device has been successfully found – a box will appear displaying device information. The exact device details will vary with the type of Network Device you have, but will look something like this:

If no device is found, then a warning will appear as follows:

To add another device, repeat these steps starting with the “Add” button. Once you have added all the required devices, click the OK button to exist the setup mode.

Changing Network Device Name

A device name can be changed at any time by clicking on the name, deleting the current name and replacing it with the new name.



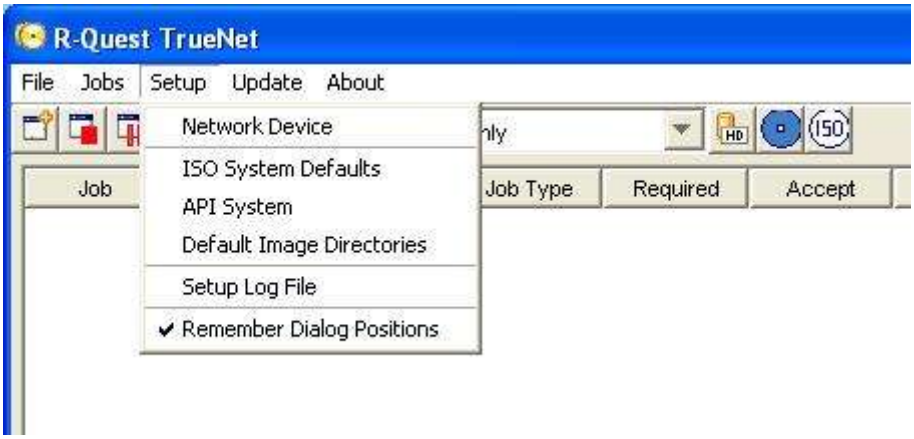
You can change the name assigned to a Network Device at any time. Any changes made will take effect immediately – and any pending jobs – or jobs in progress assigned to the old device name will now display the new name instead. However, it is recommended that a device only be renamed when no jobs are running, to avoid any problems with possible running API jobs.

Note:

The name assigned to a network device is used by the API to identify Network Devices. Ensure that no current or future API job will be prevented from running because of a name change. More details for the API can be found in the API section of this manual. Ensure that all Network Devices have unique names.

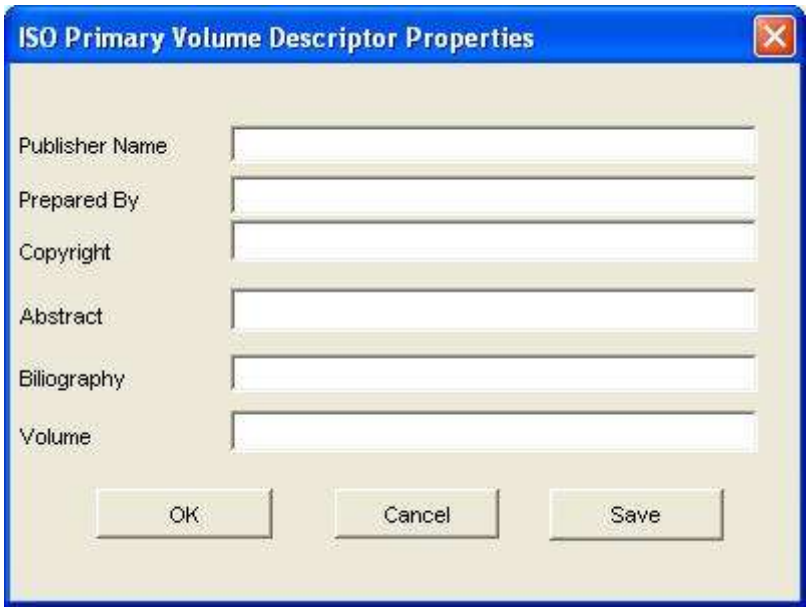
Setup System defaults

All the options for setting defaults are accessed via the Setup menu.



ISO System Defaults:

When creating ISO images, users may choose to have some default values for settings such as a Copyright Message (e.g. 'Copyright 2004 My Company'), instead of having to enter the same text information every time and ISO master image is created. This can be setup via the 'ISO System Defaults' menu.



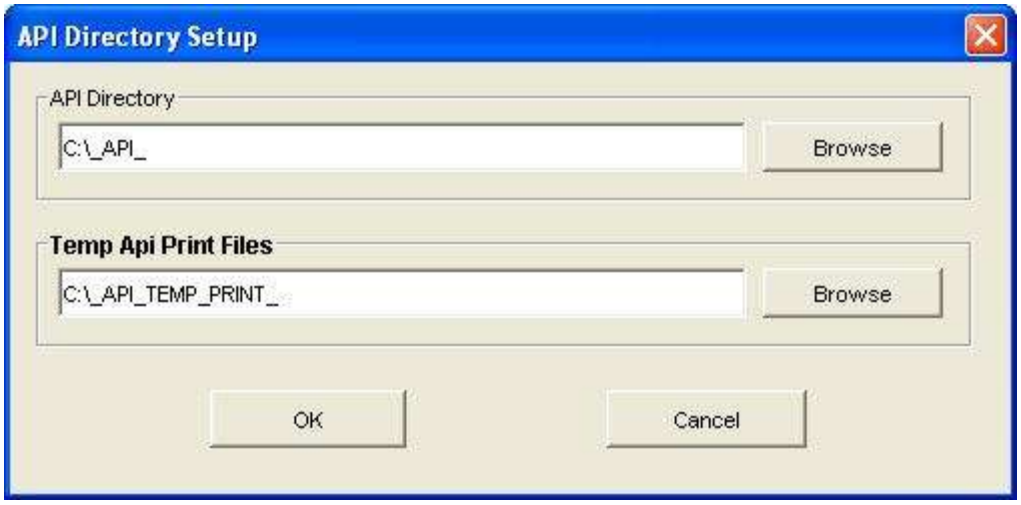
The defaults set here are used every time an ISO image is created, unless manually changed at the time of creating the image, or by API commands.

API System:

When using the API to create automated duplication and/or print jobs, TrueNet™ needs to know where to find the API scripts. It is recommended that a directory be created and reserved only for API scripts. An example would be **'C:_API_'**, and all API script files would then be saved in **'C:_API_'**. To setup where TrueNet™ looks for these script files, browse for, and select the chosen API directory. The directory should already exist.

If the API is used to create dynamic labels (labels with different text on each disc - see Label Designer and API Keywords for more information) then temporary print files are created for the duration of the running API job. These files are automatically deleted at the end of the job. However, for easy maintenance of your system we recommend that you create and reserve a directory specifically for these temporary print files.

An example would be **'C:_API_TEMP_PRINT_'**. This is not mandatory, but is recommended. Using the underscores (_) at the start of the names places the directories together at the start of an alpha sorted directory listing.

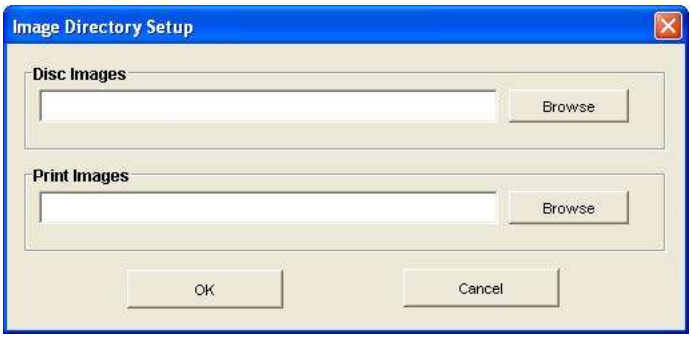


For further details, please see the API section of this manual.

Default Image Directories:

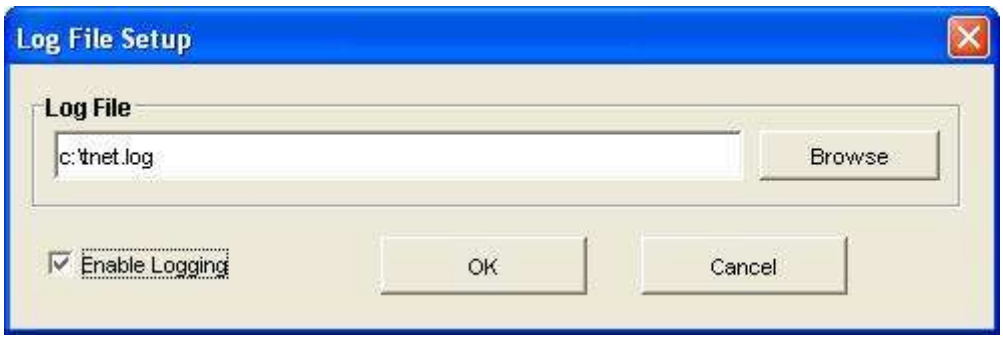
When using TrueNet™ there may be many tasks that are performed on a regular basis, such as selecting Disc Image files, or Print Image files. Most users will choose to store these images in specific directories on their hard disk, and TrueNet™ allows you to configure where to start browsing for these files, as the 'default directory'. This saves changing directories and hunting for the images every time you need to select one. Many

users will chose to store all the images in the same directory, while others will choose to separate the disc and print images. Either way, setting these defaults can save a lot of time when browsing for images to start a job.



Log File Setup:

TrueNet™ has the ability to keep a log file for all jobs sent to network devices, and this information includes the start of a job, together with completion or error status. Each entry carries a system time stamp, the User name (system login name) that started the job, and the device that was used. The log file is a simple CSV (comma separated values) - which can be easily imported in to a database or spread sheet for further analysis. To enable this feature select the 'Log file' menu item within the Setup Menu.



If the file does not exist, it will be created next time an entry is generated. The log file does not have a size limit, so you should check the log file size periodically, and delete the file if required. The file will be recreated again when the next log entry is generated.

Dialog positions:

By default, TrueNet™ dialogs will open near the top left corner of the screen. These dialogs can be moved to a 'preferred' location if required. TrueNet™ will remember the new location of the dialog when it is closed, and the next time that dialog function is selected, the dialog will open at the same place it was last closed. This feature allows you to customise where dialogs open to suit your own way of working. This feature can be disabled by 'un-checking' the "Remember Dialog Positions" menu item.

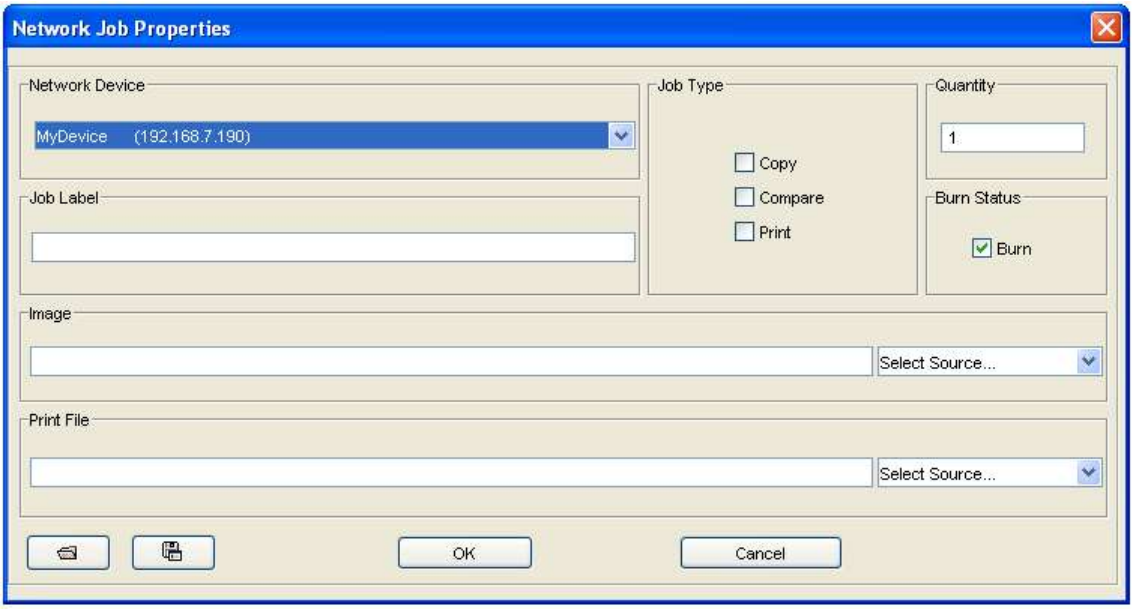
Creating a New Job

The capabilities of the Network Device you have will depend on the model and options purchased. Some models have CD recorders, while others have DVD recorders (capable of both CD and DVD recording). Some models have in-line printing capabilities, while others may be Print-Only (no recorders installed).

TrueNet will configure the job start dialog box based on the capabilities reported by your Network Device. Where options are not available (e.g. Printing), those capabilities will be disabled, and you will not be able to select them.

To create a new job, select 'New Job' from the 'Jobs' menu, or click on the 'Create New Job' button on the toolbar.

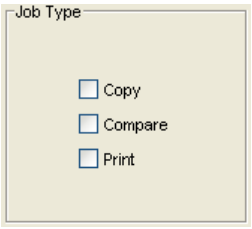
Selecting either of these options will generate the TrueNet Job Properties Dialog.



On systems where only one Network Device is configured, that device is automatically selected for you. On systems where multiple devices are configured you will need to select your chosen device from the drop down list box in the "Network Device" area.

The job type can be selected by clicking on the check box next to the function, e.g. to

select a copy function click on the check box next to “Copy”.



TIP! *Selecting a Disc Image will automatically select Copy for you! Selecting a Print Image (or Template) will also select the Print option for you automatically!*

The 'Quantity' area allows the required number of discs to be set. A value between 1 and 9999 is required. The default value is 1.

For jobs involving recording – the ‘Burn’ setting determines if the discs are actually recorded, or are just simulated. The default option is to burn discs. Note that DVD+R/RW discs cannot be simulated.

The 'Image' section is used to choose the image to record to the disc – and/or to be compared if the compare function is selected.

There are four options when selecting the image:

Selecting Local HD Image will allow you to browse your local hard disk (starting at the default Disc Images directory – if setup) in order to select an image. The image can be either an RQI file (R-Quest Image) or an ISO file (a raw data CD/DVD file). If you select an ISO file you may be asked to confirm if the file is a CD or DVD.

Selecting Device HD will launch the Remote Device Hard Disk dialog, and allow an image to be selected that is already on the device hard disk.

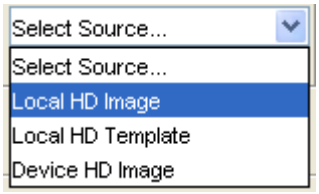
Selecting 'Create ISO-9660' will launch the ISO create dialog that allows you to specify a source directory path. When selecting this option, a 'virtual' image is created and sent to the Network Device. No image is created on the local hard disk. This saves both the build time, and local hard disk space. If you want to create an image file to keep for later use, select the ISO button on the toolbar instead, then select the built image when starting a job. See creating ISO images for more information.

'Create Audio CD' will enable the user to build an Audio CD from suitable .WAV files located on the local HD. Once again – no image is created on the local hard disk – but sent directly to the device. If you want to keep the Audio CD image for later use, select the Audio CD button on the toolbar instead, then select this built image when starting a job. See Audio CD creation for more details.

Selecting any image source will automatically select the "Copy" job type option.

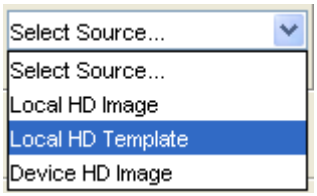
The Print File section is used to select the print file required for the job.

Local HD Image (Print Files)



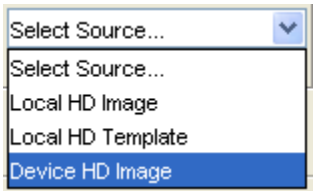
Selecting print files is very similar to disc images for local "PRN" files. PRN files are 'pre-built' binary print files that contain all the information a specific printer will need. However, each printer type will require a different PRN file, so care needs to be taken when creating and sending PRN files if you have multiple Network Devices with different printer types installed.

Local HD Template (Print Files)



TrueNet has the ability to produce PRN files 'on-demand' for a range of supported printers. This allows you to create a print file template that can be used on any of the supported printers, and have the actual PRN data generated when the job starts. This has two main advantages. A template file will generally require less storage space than a PRN file on the local hard disk and TrueNet will always build the correct PRN file type for the installed/configured printer type on your Network Device. The disadvantage of using a template file is that the time take to build the PRN data can vary from just 3 or 4 seconds (on a fast computer) to more than 25 seconds, and so delays the start of the job. You may find the convenience out weighs the small time delay.

Device HD Image (Print Files)



Selecting the Device HD will launch the Remote Device Hard Disk dialog and allow you to select a PRN file that is already on the Network Device hard disk.

Selecting any print source will automatically select the "Print" job option.

Saving a Job

The job can be saved as an API file for future (single or repeated) use. The job will be stored as an API compatible '.JOB' file in the directory of your choice. First create the job as described above, then click on the 'Save As' button as found in the bottom left of the Job Properties Window (shown below, right).

Saved files can be opened at a later time by clicking on the 'Open' button (shown above, left).

In each case – choose the location of the file you wish to save / open – and select. The job will be reloaded and all the parameters setup.

Jobs that use images stored on a Network Device hard disk cannot be saved.

TIP!

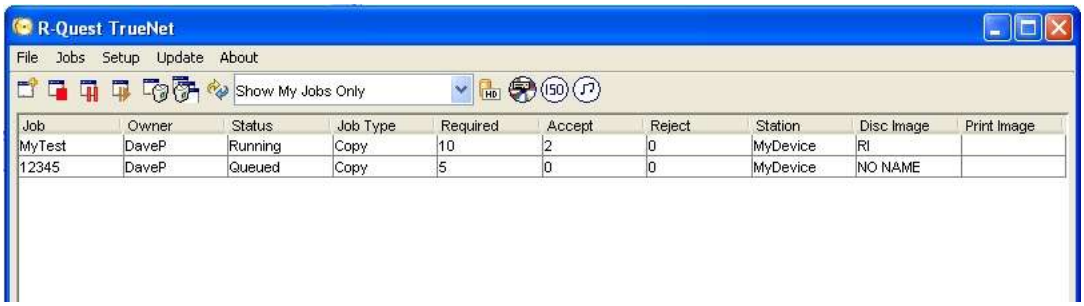
One advantage of using saved jobs is that you can select a disc and print image once, and each time you load the job, the same images will be used.

TIP!

If you want to see how API files are built, saving a job file is a good way to learn. Once saved, a job file can be opened in any plain text editor, such as Notepad.

Getting going…

Once the disc and/or print images are selected, the Quantity and Job Options set, click the OK button to start the job. Within a few seconds the job will appear in the main job queue in the main application window.

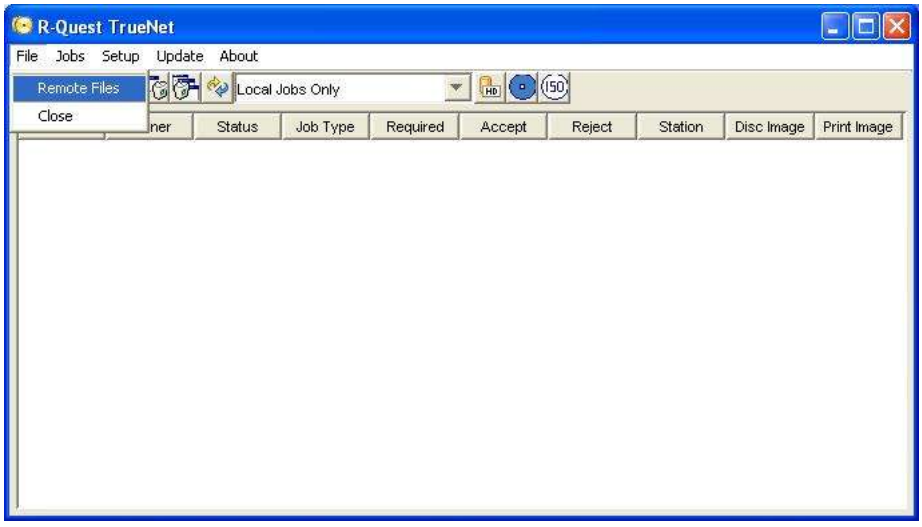


Disc / Print Image File Transfer

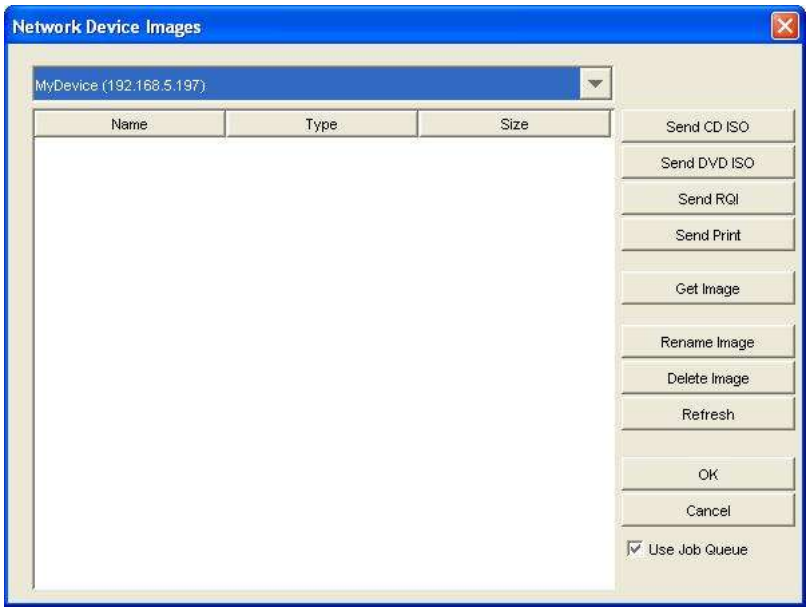
Using 'Remote Files' to transfer disc & print images to and from the device:

Disc & Print images can be sent to the Network Devices whenever they are powered on, correctly attached and configured for the network – and in network mode. The device HD can be viewed at any time, but image files can only be transferred when the Network Device is in Network Mode.

To view the images currently stored on the device HD – select FILE | REMOTE FILES



If the machine does not currently hold any images, then you will have a blank list – as displayed below:



The drop-down at the top contains the name assigned to the duplicators in the earlier section. If you have more than 1 device configured, use this to select the desired unit, and view the images (if present) on the HD.

HD Image View buttons

This button sends a CD ISO file from the host computer to the device.

This button sends a DVD ISO file to the device.

Use this button to send an RQI file to the device.

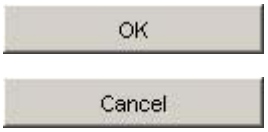
Use this button to send a Print Image to the device.

Retrieves the selected image from the network device and allows the image to be saved on the local hard disk.

Renames the selected image.

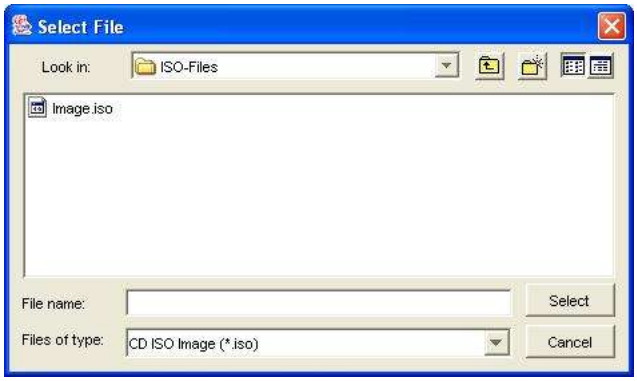
Deletes the selected image(s) from the network device.

Refreshes the image file list.

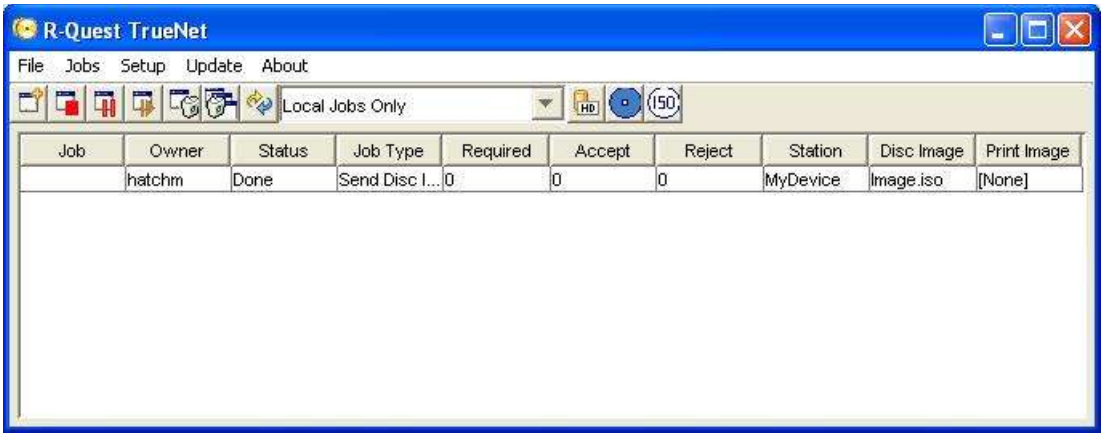


Click either OK or Cancel to exit the Remote HD view

To send a CD ISO image to the device – click 'Send CD ISO' button, then browse your local hard disk for the desired ISO file. Click on the file - then choose 'Select'.



The File-transfer is then added to the job queue, and it's status is displayed

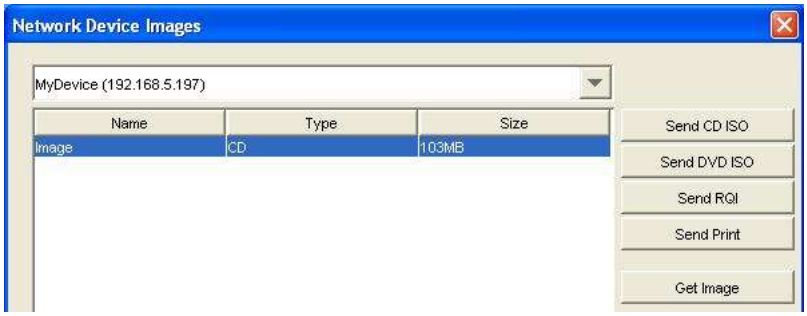


TrueNet™ differentiates between DVD and CD ISO images – so for DVD ISO files, follow the above process – but start with the 'Send DVD ISO' button option.

Saving RQI Files

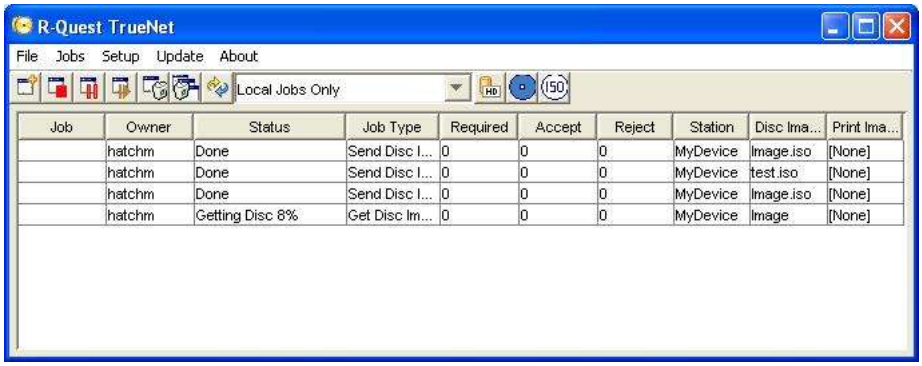
Disc images stored on the HD of the duplicator can be copied to your local hard disk, and stored as RQI files. An RQI file is a native TrueNet™ file – which can be later sent back to the same device – or another device on your network.

To save an RQI file to your local file system, select the required image from the list - then click 'Get Image'.



As with sending the ISO files earlier – by default, this task is added to the Job Queue – so the progress can be watched while other tasks can be performed.

By default, all ‘send’ and ‘get’ jobs are done via the system job queue. This allows you to schedule several transfers at once, without having to wait for each one to complete in turn. By un-selecting the “Use Job Queue” check box on the low right corner of the dialog, all following transfers will complete before allowing the selection of another image.



RQI files can contain any disc image type, e.g. data, audio and/or video, but ISO files can only contain data (Mode 1).

Masters read on the Network Device can be retrieved from the device and saved on the

local hard disk for future use. It is not possible to read a master disk on your computer; all masters must be read on the Network Device.

Shortcut buttons

Some of the most often used features of TrueNET can be accessed directly from the main window by the use of the button bar.

These buttons are described below:

New Job button:

This button is equivalent to selecting 'Jobs | New Job' from the top menu dropdowns. Clicking this button directly brings up the New Job dialogue previously described.

Stop Job button:

This button is a shortcut to 'Jobs | Stop Job' – described earlier.

Pause Job button:

Pauses the selected job. Can be used to 'bump' job priorities for jobs lower down the list.

Resume Paused Job button:

Resumes the selected (paused) job.

Delete Job button:

Deletes the selected job. Running jobs cannot be deleted

Delete 'Done' button:

Removes jobs with status 'Done' from the list.

Refresh view button:

Causes the job list to update.

Device HD view button:

View the contents of the selected TrueNet device HD

Disc Label Designer button:

Opens the CD ISO image builder.

Create ISO Image button:

Opens the CD ISO image builder.

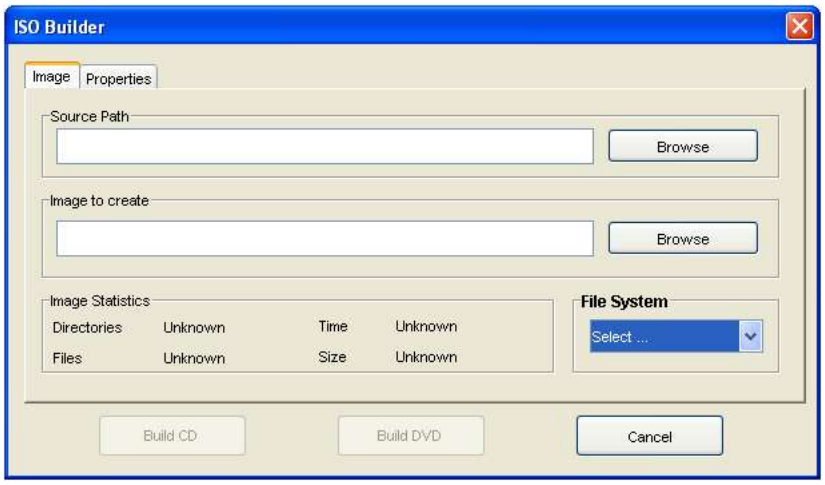
Create Audio Image button:

Opens the Audio CD image builder.

ISO CD Image Builder

This feature is used to create a CD ISO image file (.ISO file) from a directory tree within your local file-system.

To use this utility, select the ISO icon from the toolbar. 

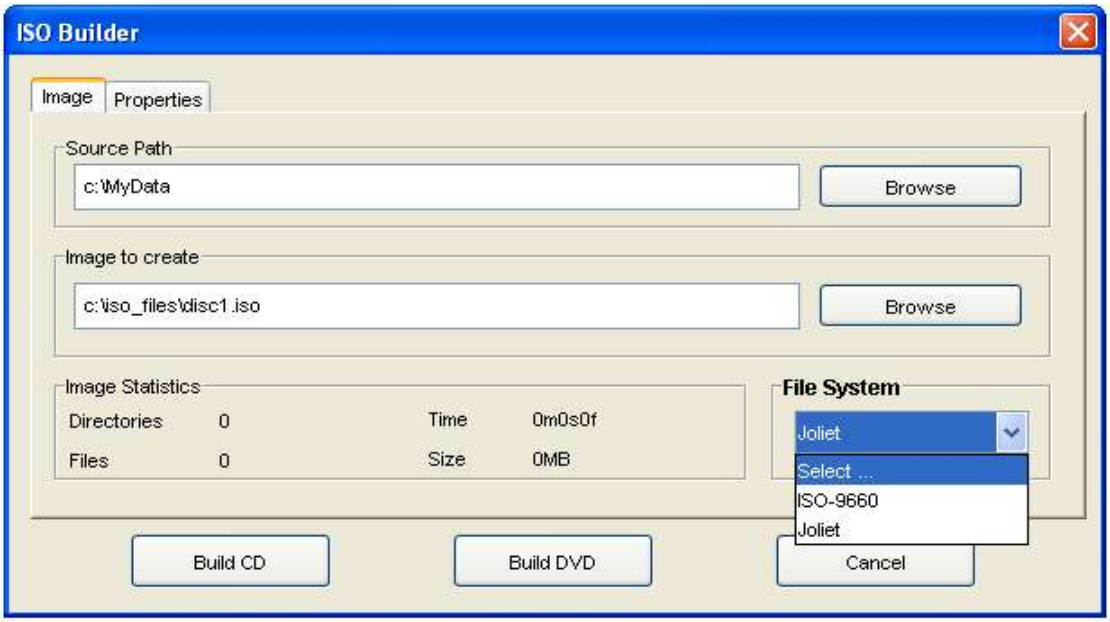


In the 'Image' tab click on the Browse button within the “Source Path” area to browse for, and select the source path for the ISO image you want to build. This source path will become the root directory of the CD image you are creating.

Click on 'Select' when the required directory has been located.

With the source (root) directory selected, select the output location for the CD ISO Image. This caneither be manually entered, or you can browse for the required directory to create the ISO file in.

In the example below, the dedicated folder 'C:_ISO-FILES_\ has been used as the target directory, and disc1.iso is the output file.



Before you are able to build the image file, you must choose the File System to use for the image file – either ISO-9660 or Joliet. Joliet supports long file names – ISO-9660 imposes a strict 8.3 filename limitation – so any longer names will be truncated. In addition, ISO-9660 imposes a limit of 8 directories deep (in the directory tree).

When all options have been selected, click the build button to create the ISO image.

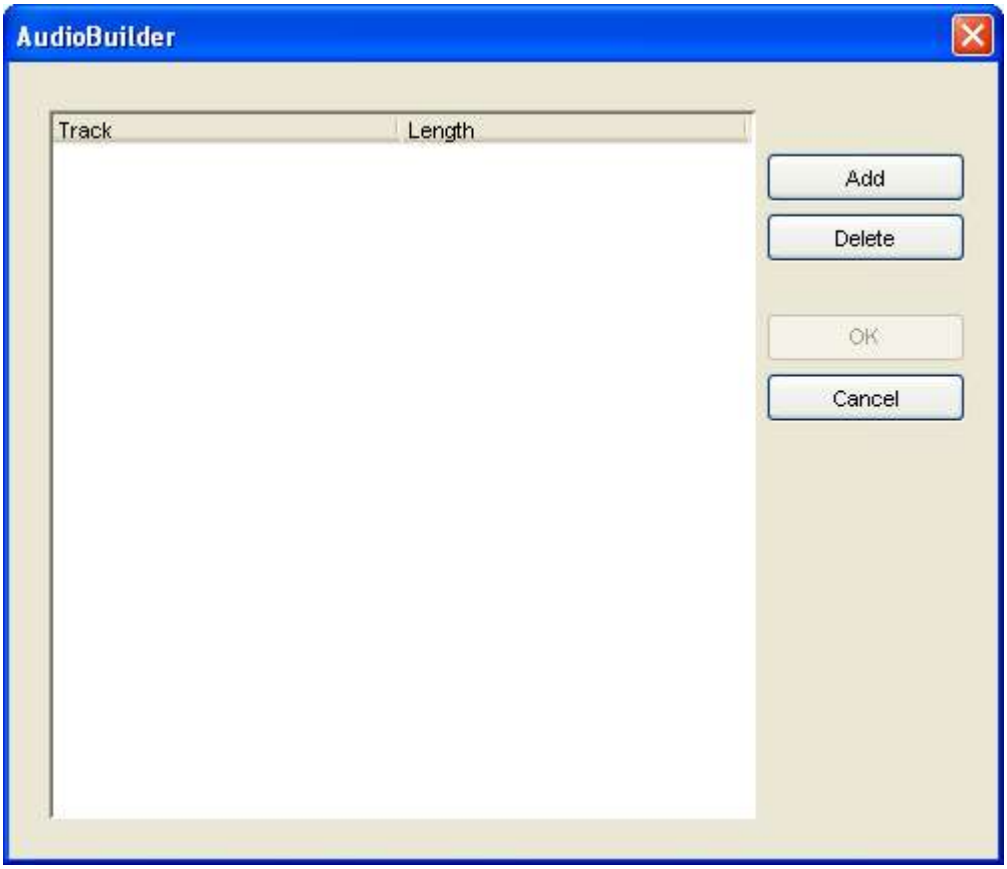
A progress bar will appear – the time needed to complete the operation will depend upon the type (size, number) of files selected, and the host system specification (free RAM, CPU & HD speed, etc.). Building images from Network located files is possible – but please note that the build speed may be limited by the network load, etc. - and would normally be slower than building from local files.

The properties tab allows you to enter volume descriptor information, including the author and copyright messages.

Audio CD Image Builder

This feature is used to create an audio CD image built up from one or more '.WAV' files from your local file-system. The '.WAV' files must be uncompressed, 16 bit 44.1Khz stereo files.

To use this feature, select the 'musical notes' icon from the toolbar. 



To add wave files to the disc, click the 'Add' button, and select each file in turn or drag files from Windows Explorer and drop on to the list box. These files will become the tracks of the audio CD in the order that you add them. When you are happy with the track (file) listing, selecting 'OK' will prompt you to save the CD Image as an '.RQI' image file. This file can then be sent to the duplicator in advance for use in Stand Alone mode – or as part of a TrueNet generated job.

Other Features

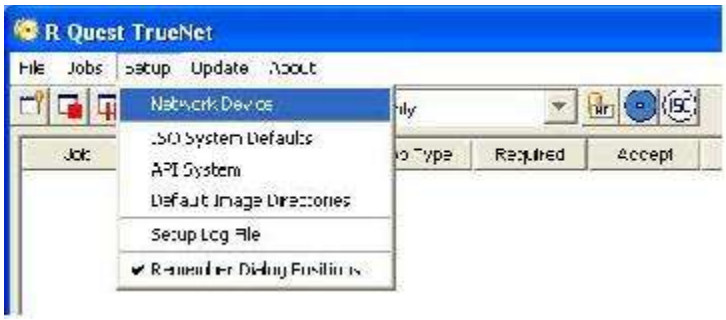
'Jobs' Menu

The 'Jobs' dropdown contains other entries useful for handling Jobs under the control of TrueNet™.

Here you can stop a job, delete a stopped or non-running job, and pause or restart all jobs.

'Setup' Menu

TrueNet™ setup is accessed via the 'Setup' option from the TrueNet™ main window. Earlier on in this guide, we accessed the Network Device setup from a shortcut. This is how to access it normally at other times.



'Default Image Directories' set the 'home' locations for selecting 'Local HD' images and Print files.

'Update' Menu

Network device firmware can be updated via the TrueNet™ 'Update' option. Firmware that can be updated includes: Network device System, Loader (Robotics), and Recorder. Suitably prepared firmware files are available from your Distributor or our web-site. Only install firmware sourced from an authorised website in conjunction with these options.

Firmware obtained from other sources may not be suitable for use with this or future versions of TrueNet™.

'About'

Information about the running version of TrueNet™ can be found using the 'About' box. This may be important should you need to contact support.

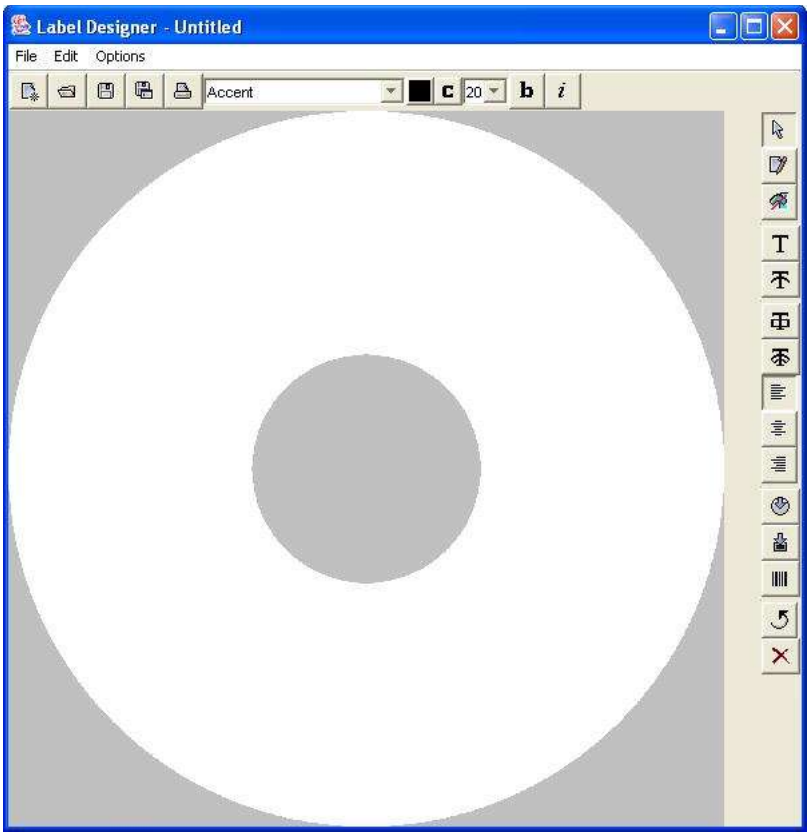
TrueNet™ Label Designer

The Label Designer view (below) enables creation of a label design which can be sent to any of the supported printer types (*) attached to TrueNet™ compatible network devices, without the need to install printer drivers.

The Label Designer is not intended to be a fancy graphics design tool. If you need advanced graphics features for your design, select your favourite graphics design tool to create your label, and export the label as a JPEG file. This can be imported in to the Label Designer as a background image, and automatically scaled, with the edges and center hole being masked for the printer type.

Text, and graphics can then be added to create custom disc labels, which can be sent to network devices. Alternatively, complete labels can be created within the Label designer.

Clicking the Label Designer icon will launch the Label Designer component of TrueNet™. After a few seconds, the window will be displayed.



There are several toolbar buttons along the top, and also in the right side.


New design button.


Open an existing design.


Save design button.


Save design As... button.


Print button.


Character Map button.


Bold Text button.


Italicise Text button.


Pointer / Selection


Edit pointer


Show / Hide Graphics Toolbar


Add Text


Add Curved Text


Add Text Box


Add Curved Text Box


Left Justify


Centre Justify


Right Justify


Insert JPEG as Background


Insert Graphic


Insert Barcode


Rotate Selection


Delete Selection

When the Graphics Toolbar is visible – an additional set of buttons are visible at the bottom of the Label Designer window. These are:

 Line Tool

 Curve Tool

 Box Tool

 Filled Box Tool

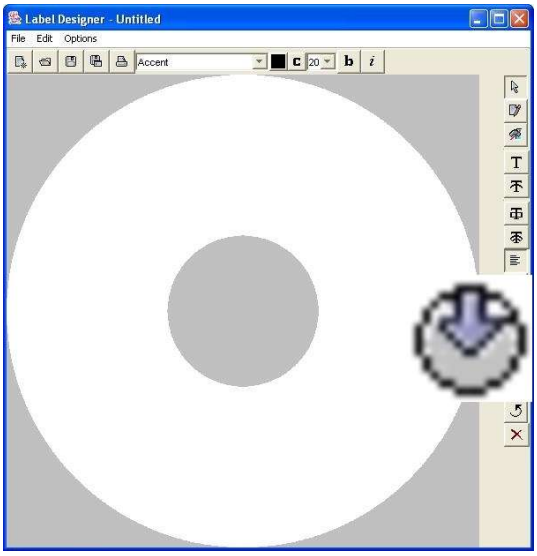
 Curve Area Tool

 Filled Curve Area Tool

Creating a basic label

In the simplest usage of the label designer, use your preferred design application to create the desired label layout – then export this from within your third party application as a JPEG image. This can then be imported directly into the Label Designer as a background. Note that any imported JPEG image will be centred within the label designer view – so this must be considered when preparing the file for export.

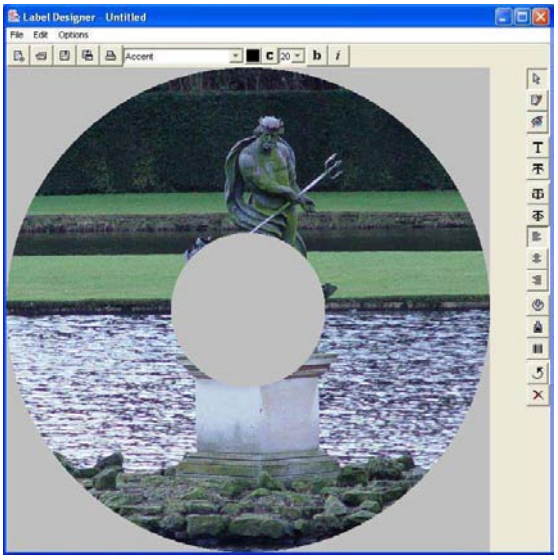
To do this, once you have exported your design as a JPEG image – make a note of the location the file is exported to.



Next, from the main Label Designer window (left), select the insert JPEG background button.

Browse for the JPEG file you wish to use, and set it as the background image.

Once the background image is set, you can either use the design as is, or you can add further text and / or graphics to further customise the label.



The simplest next step would be to create a print file output of the currently displayed disc background.

Click the printer Icon in the top left of the displayed window – then choose the output location for the print file.

Creating a Print Image

Select the printer model, and print options followed by the required output directory. It may be worth creating a dedicated print file directory – which can be used to store all print files created in Label Designer application.

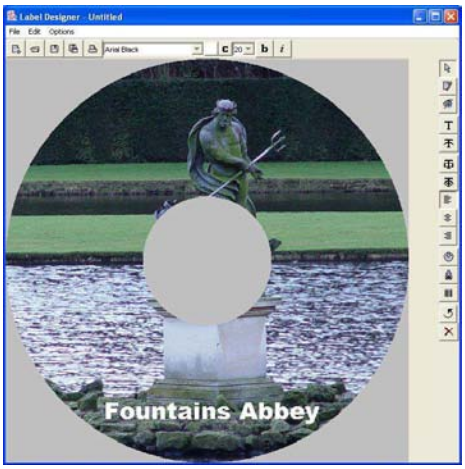
Note: This output directory can be set as the default location that the main TrueNet™ application goes to for print images when starting a job involving print files. To create the print file as specified by the options within the dialogue box, Click 'Print'.

Adding text to a design

On the top bar above the design, first choose the desired font, font size and colour for the text you are about to add to the design.

Next click the: T Text button. In the following screen shots, then place the cursor on the design where you wish to place the text. Type on-to the design.

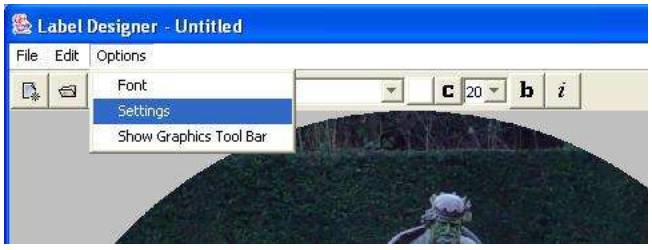
Note: *As you enter the text, it will be displayed in the edit mode – and so will not appear as desired until after you have pressed return.*



Tip: *If you want to edit text that you have already committed to the design, select the edit pointer - then select the text box you wish to alter.*

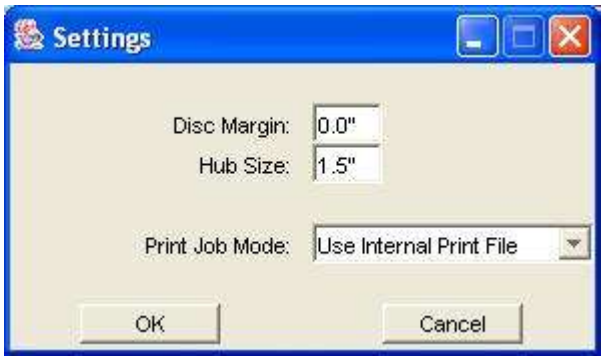
Adjusting the centre hole size

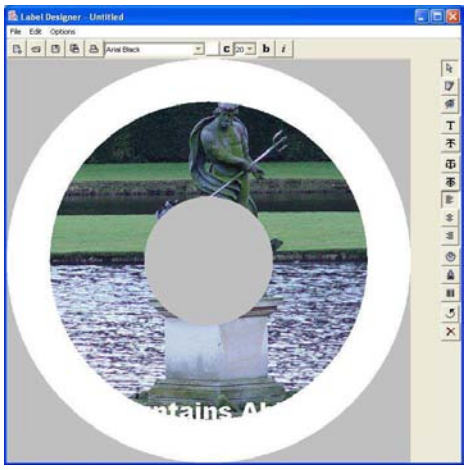
The Default setting for the centre hole size is 1.5". With some media / Printer combinations – it may be possible to print closer to the centre of the disc. For this reason – the centre mask is a user definable size. The size is set using the OPTIONS | SETTINGS menu:



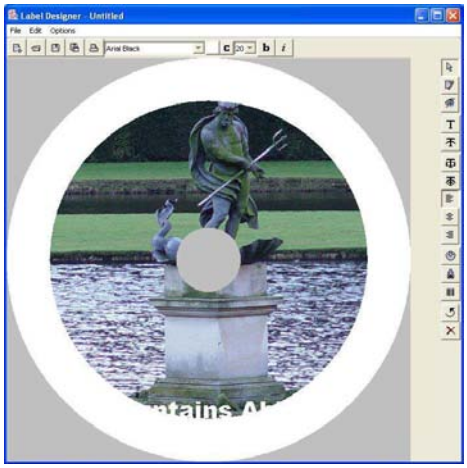
When you select the settings option – the following window is displayed:

The image to the right shows the default settings. The Disc Margin is the outer edge of the disc, and the Hub Size is the central circular mask displayed in the centre of the design window.





Setting the disc Margin to 0.5 results in the outer mask ‘closing in’ around the design (see right).



Setting the Hub size to a smaller value will reduce the size of the centre mask on the design.

Saving as a Template

Templates can be used instead of '.PRN' Print Image files when starting a job involving a print file. The advantage to this is that the print file is generated, based on the printer type TrueNet™ finds on the device – and so if you change the type of printer on your network device, you will not necessarily need to change the artwork file.

To save a design as a template - use **File | Save As** then choose a location and name for the file. TrueNet™ will automatically save the file with a ***'.RPT'*** extension. When selecting a print source file for a job within TrueNet™ – either a '.PRN' or '.RPT' file is valid.

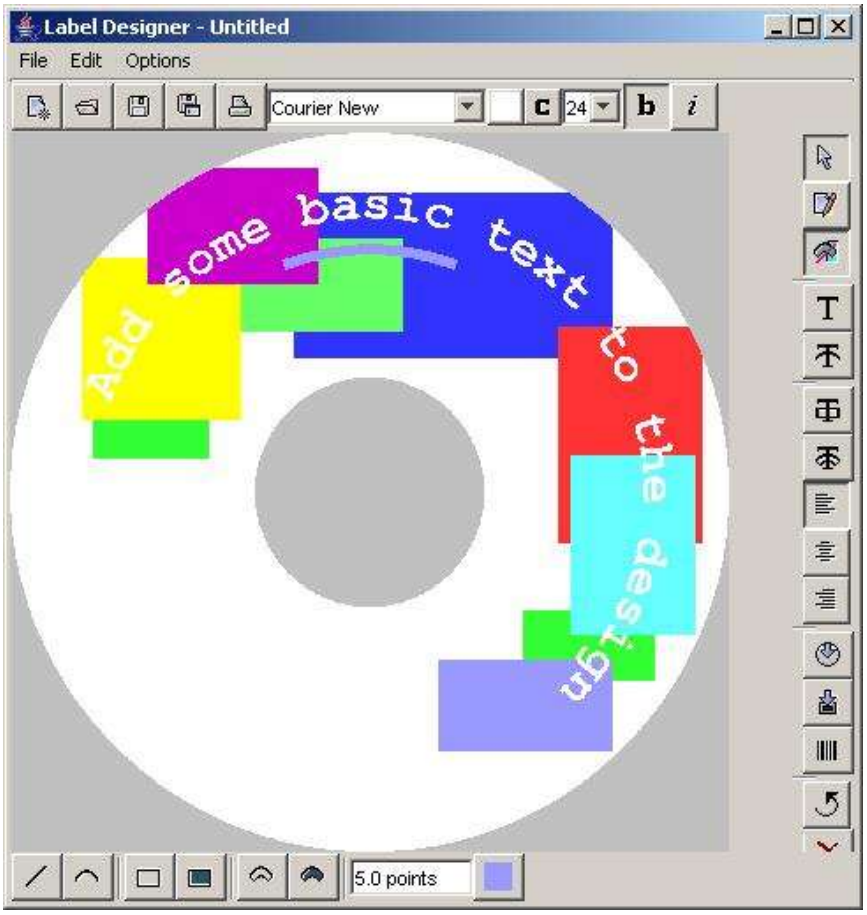
Another advantage to using a template file – is that dynamic text is possible. Please see

the later 'Dynamic Text Entry', and API sections for further details of this.

Creating a design from Scratch

Basic blocks of colour can be added to the design using the Graphics Toolbar functions. These can be used to create a design (of sorts) by themselves or by using these to create backgrounds for text and text boxes within your design.

An example can be seen below:



Dynamic Text Entry

When combining the TrueNet™ API with a user program, the Label Designer allows powerful 'dynamic' labels to be created, allowing for unique labels to be produced easily, using the output of a database or other text program (via the user supplied program). See the API section for more information on how to call these functions via the API.

By adding markers within text boxes – or within text strings, the print file generator used by the API can insert a text string in place of the marker.

To do this, create a label design with markers at the required text positions and save as a template file (described earlier).

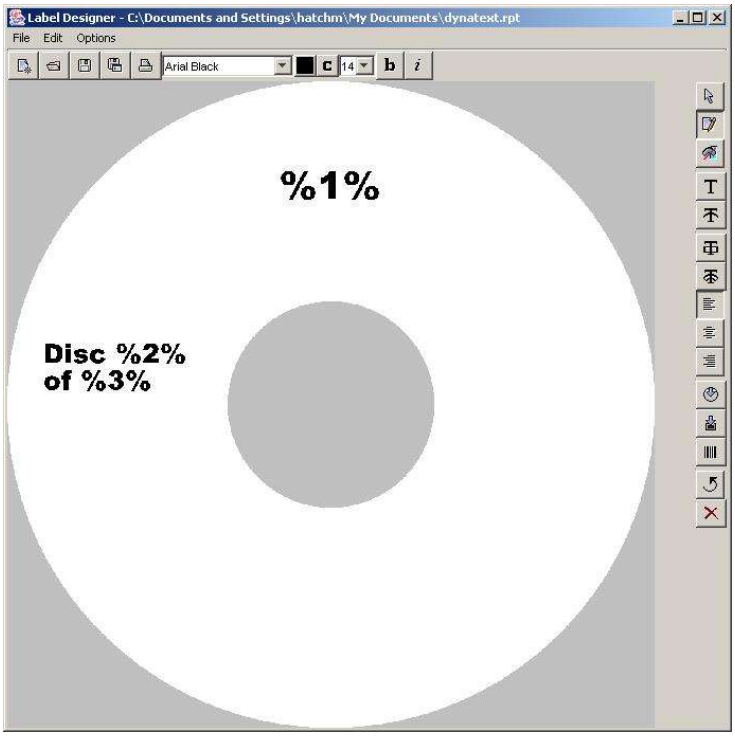
Text markers take the form of a number, delimited by percentage (%) signs – like the following:

%1%

%2%

%3%

The following image is of a screen shot showing a disc design containing dynamic text markers which will be later populated by user specified text from the API.



In the example shown, the top marker - **%1%** - will be the disc title.

The second - **%2%** - will be the disc number.

The third - **%3%** - will be the total number of discs in the series.

When this file is saved as a template, and called by the TrueNet™ API – the makers will be replaced in sequence with the following API commands:

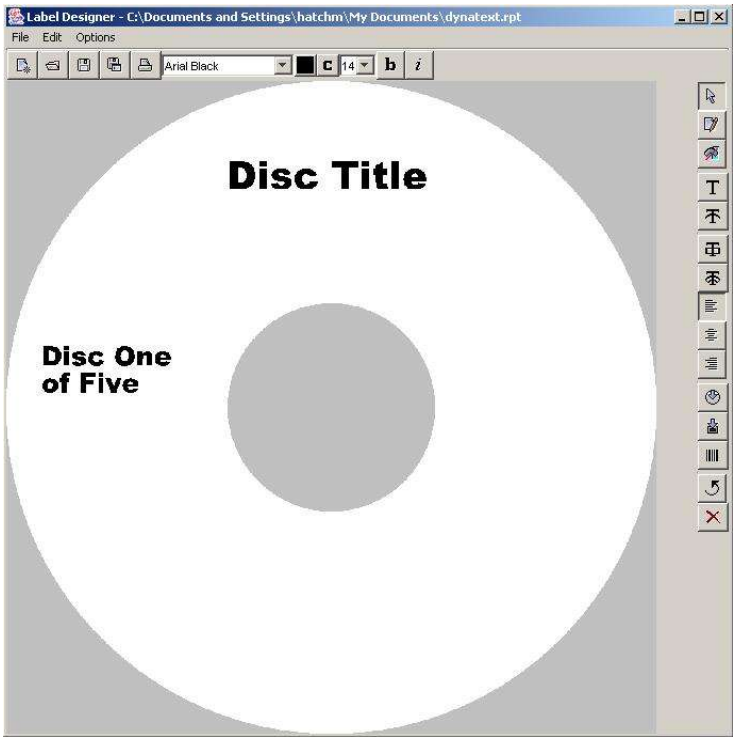
PRINT_ENTRY_1=”Disc Title”

PRINT_ENTRY_2=”One”

PRINT_ENTRY_3=”Five”

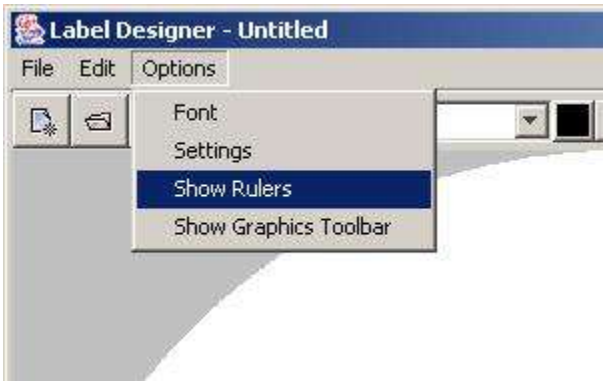
When a label is created from the above example, the end result would appear as though the following label had been created:

More examples can be found in the API section of this manual.



Displaying Rulers

To aid with lining up multiple components, it is possible to display a pair or 'rulers' – one at the top, and one to the left of the design. To enable this option, select 'Show Rulers' from the 'Options' menu.



TrueNet™ API

TrueNet API is an application programming interface that allows custom job requests to be sent to the TrueNet software, including copying, comparing, custom ISO 9660 mastering, custom Audio CD mastering and custom printing.

The API command files (think of these as “job scripts” or “order files”) are plain ASCII text files that can be created by a user provided program, or created by a user with any plain ASCII text editor, such as Windows Notepad.

The command files contain information about the task required, and are in the form of IDENTIFIER=PARAMETER. The command files are placed in a predetermined sub directory (configure this via the Setup/Api System menu), which is scanned every 5 seconds by TrueNet. So that TrueNet does not start a job from a file that is currently being written (and incomplete) the file should initially be created without a file extension, or a file extention other than “.job”.

Once the file is completely written (and closed) the file should be renamed with a file extension of “.job”. As soon as a new “.job” file is detected by TrueNet, the file is read, and if there are no errors, the file is renamed with a file extension of “.bsy” (busy). If there are errors the file is renamed with a “.err” extension. Errors are reported in the command file, and this should be helpful in diagnosing the cause of the error.

When the job is completed, the file is renamed with the extension “.don” (done) (or automatically deleted – depending on the state of the “AUTO_DELETE” setting).

The file can be monitored by the user application, and the status assessed via the following keywords: ACCEPTED (shows the number of good discs so far), REJECTED (shows the number of discs rejected) and STATUS.

API files allow for a very flexible solution based approach to disc production and/or printing. Customised mastering (e.g. Unique files / serialisation) is both possible and practical to do, as is customised printing. Custom printing allows each disc to be printed with different text and/or graphics simply by changing the commands sent in each file.

By combining the custom build and custom print options, every disc can be unique and tailored to your exact requirments.

If you are unsure of how commands are used, most commands can be seen in operation by creating a job using the job start dialog, and ***saving*** the job to a job file. The save job function creates API compatible job files. However, not all commands can be saved this way, and you should check out the numerous examples later in this section.

Lines beginning with # are comments, and are ignored by the file parser.

API Keywords

DEVICE (Required)	Specifies the target network device. This is the same name that was given to the network device as part of the network device setup. Do not include the IP address in this name. An example is: DEVICE=MyDevice
JOB_TYPE (Required)	This is the type of job required. There are four types of job; COPY, COMPARE, BUILD, PRINT. Copy is implied by the Build command. There are no requirements for spaces or other delimiters, but the preferred method, for ease or reading by humans is to add a '+' between the words. An example of Copy and Print would be: JOB_TYPE=COPY+PRINT
BUILD_TYPE (Required if JOB_TYPE includes BUILD)	This allows the creation of custom (or unique) CDs or DVDs via the API. ISO_CD & ISO_DVD allow the user to master an ISO9660 compliant data discs (see JOLIET) - and AUDIO_CD allows the creation of customer audio CDs from WAV files. Examples are: BUILD_TYPE=ISO_CD BUILD_TYPE=ISO_DVD BUILD_TYPE=AUDIO_CD The BUILD keyword must be specified in the JOB_TYPE, otherwise BUILD_TYPE will be ignored.
BUILD_PATH (Required if JOB_TYPE includes BUILD)	When BUILD_TYPE=ISO_CD or ISO_DVD, this specifies the source parent directory where the files are located. TrueNet will not actually create an ISO image on your local hard disk, but will build the ISO image as the files are moved across the network to your duplicator. This saves the time to build the file, and also local hard disk space.

MERGE_SOURCE_# (Optional)	When BUILD_TYPE=ISO_CD or ISO_DVD, a Merge Source specifies an optional merge source path for files to be merged when the ISO image is built. This is ideal for use in creating unique discs, when only a small number of files change. Create the main part of the disc from a static directory structure and merge only the changed files. See the notes on Building/Merging ISO.
MERGE_TARGET_# (Optional)	Used to specify where files from a Merge Source will be merged in to on the target ISO file system. See the notes on Building/Merging ISO.
JOLIET (Optional)	JOLIET acts as a modifier to ISO_CD and ISO_DVD when set via BUILD_TYPE. If this is not present, it defaults to JOLIET=NO. JOLIET=YES will add a Joliet file structure to an ISO9660 master. Joliet provides a relaxed structure for long files names and other directory naming conventions, together with Unicode directory information.
PUBLISHER (Optional)	Publisher is a text element of an ISO9660 volume descriptor, and is a place holder for publisher information. This field is optional, but when used has a maximum 128 characters.
PREPARER (Optional)	Preparer is a text element of an ISO9660 volume descriptor, and is a place holder for preparer information. This field is optional, but when used has a maximum 128 characters.
COPYRIGHT (Optional)	Copyright is a text element of an ISO9660 volume descriptor, and is a place holder for copyright information. This field is optional, but when used has a maximum 128 characters.
ABSTRACT (Optional)	Abstract is a text element of an ISO9660 volume descriptor, and is a place holder for abstract information. This field is optional, but when used has a maximum 128 characters.
VOLUME (Replaces VOLIDENT *) (Optional)	This is a text element of an ISO9660 volume descriptor that is the VOLUME name. This field is optional, but when used has a maximum 128 characters.

IMAGE_FILE (Required if JOB_TYPE does NOT include BUILD))	Full path & name of the image file. Where the COPY parameter is used with the JOB_TYPE, and BUILD is NOT used, then TrueNet needs a completed image file. This can be one of three different types (see IMAGE_TYPE). The parameter is the full path and file name of the image file, e.g. IMAGE_FILE=c:\images\image.rqi If you are building an image using JOB_TYPE=BUILD then this field is ignored.
IMAGE_TYPE (Required if JOB_TYPE does NOT include BUILD)	There are three types of image file that can be used by TrueNet. They are: RQI - The native R-Quest Image File RAW_CD – a complete binary image of a mode 1 CD. All blocks must by 2048 bytes. An ISO file is typically a 2048 byte binary image. RAW_DVD- a complete binary image of a DVD (2048 byte blocks), e.g. an .ISO file. RQI files can contain any type of discs that are supported by the duplication system, including Data, Audio, Video, Mixed mode, Multi session etc. Examples: IMAGE_TYPE=RQI IMAGE_TYPE=RAW_CD IMAGE_TYPE=RAW_DVD This field is mandatory when using COPY with IMAGE_FILE, but ignored when using the BUILD command.

FIXATE (Optional)	TrueNet can produce CDs that are either fixated (additional sessions cannot be added to the copied disc) or not fixated (additional sessions can be added to the copied disc). This is optional, and when not present defaults to FIXTATE=YES. To allow additional sessions to be added to copied discs, use FIXATE=NO.
PRINT_QUALITY (Optional)	Optional parameter. Defaults to HIGH if not present. This is only used when a PRINT_TEMPLATE is specified. Example: PRINT_QUALITY=HIGH PRINT_QUALITY=DRAFT
PRINT_FILE (Optional)	When PRINT is specified as part of the job then either a PRINT_FILE or a PRINT_TEMPLATE is required. PRINT_FILE allows you to specify the binary print data (normally a .prn file) to send with the job. Example: PRINT_FILE=c:\files\print.prn
PRINT_TEMPLATE (Optional)	When PRINT is specified as part of the job then either a PRINT_FILE or a PRINT_TEMPLATE is required. PRINT_TEMPLATE allows you to specify the print template to use. Example: PRINT_TEMPLATE=c:\files\print.rpt R-Quest Print Template files (.rpt) are produced using the Label Designer within TrueNet. Print Templates allow for dynamic text and backgrounds to be created, and also allow for print files to be created that match the unique properties of an installed printer, i.e. printer x/y offsets, print brightness, thermal strobe settings etc. These parameters are set on the Network Device, and checked by TrueNet prior to producing the PRN file used in the job.

PRINT_ENTRY_# (Optional)	Using a print template with embedded 'dynamic tags' allows TrueNet to produce dynamic (or unique) print files. # = a number starting at 1 and incrementing by 1 for each field. Where a text string in a template file has "%#%" included (where #=a number) the corresponding PRINT_ENTRY_# supplies the substitute text. These are completely optional, and are only used with PRINT_TEMPLATE. Example: PRINT_ENTRY_1=First text to replace PRINT_ENTRY_2=This is the second line
PRINT_BACKGROUND (Optional)	When using a print template, a JPG (jpeg) file can be specified as a replacement background. The JPG file will be automatically scaled to fit the disc size. Example: PRINT_BACKGROUND=c:\images\print.jpg This is optional, and only used with PRINT_TEMPLATE.

TRACK_#
 	
(Optional)
	Specifies an Audio WAV file to be added to an Audio CD when using the BUILD command, and BUILD_TYPE=AUDIO_CD. # is a track number starting at 1, and incrementing by 1 for each additional track. Example:
	TRACK_1=c:\Audio\Track01.wav
	TRACK_2=c:\Audio\TrackTwo.wav
	TRACK_3=c:\Audio\ThirdTrack.wav

BURN (Optional – defaults toYES)	BURN=YES – discs will be written. BURN=NO – discs will be simulated. This is an optional parameter, and if not present defaults to YES.
QUANTITY (Optional if Quantity=1)	Optional - defaults to 1 if not present. Valid quantities are 1-9999.

WRITE_SPEED (Optional)	Optional. Sets the write speed for this job. Note that if a speed is requested that is not valid, the next lowest valid speed will be used. In addition, most CD-R/RW recorders produced today will not record at 1x, and most have a minimum record speed of 4x. Example: WRITE_SPEED=16 will set the record speed to 16x. If WRITE_SPEED is not specified, the default write speed set on the network device will be used.
MAX_CONSECUTIVE_REJECT (Optional)	Sets the maximum number of rejects that the network device (not recorder) will process before flagging the need for attention. If this threshold is reached, the job status will change from running to Check Media, and the job will be Paused. Once the job has paused, the job can be restarted (or stopped and deleted) via the TrueNet GUI. Valid settings are 2-16. Example: MAX_CONSECUTIVE_REJECT=10
AUTO_DELETE (Optional)	This parameter is optional, but when set to YES, TrueNet will delete the job file on completion instead of renaming the job file to .don.
#	All lines that begin with the '#' character are ignored by TrueNet and can be used as comment fields.

* VOLIDENT is deprecated. The use of VOLIDENT is now discouraged, and should be replaced by VOLUME where possible. VOLIDENT is not guaranteed to be compatible with future versions of TrueNet.

Building / Merging ISO File Systems.

Building an ISO file system is usually very straight forward, requiring only the BUILD job type and BUILD_TYPE=ISO_CD (or ISO_DVD) coupled with the BUILD_PATH.

When creating a number of unique discs based upon the same core file system, it is often the case that most of the files remain the same, with only a single file, or a small number of files that change. This requires the entire image to be built and ***sent*** to the duplicator before any changes can be made to the file system for the next build. This can be both time consuming and difficult to program.

MERGE files can resolve this problem by allowing the 'static' core file system to remain in one place, while creating the unique files elsewhere, and merging them as the target ISO file system is built. This allows many jobs to be scheduled at the same time, and each unique ISO file created independently of the others. Take the following example local hard disk file system; the core file system is held within the **MyIsoDir**, with the unique files held in seperate **MyTempNumbers** and **MyTempPics** directories. The root of the target ISO image is within the **MyIsoDir** directory, so the **MyTempNumbers** and **MyTempPics** directories will not be included.

MyIsoDir

    Directory

        SerialNum

MyTempNumbers

    SN_10000

        Serial.txt

    SN_10001

        Serial.txt

MyTempPics

    PIC_1000.JPG

    PIC_1001.JPG

If the files in the SerialNum directory are to be unique on the target disc, build the above

file system using the **MyIsoDir** as the BUILD_PATH. Now MERGE the files from another directory (e.g. **MyTempNumbers\SN_10000**), and target them to the **\Directory\SerialNum** so that they appear on the final image in that position. Use the Build and Merge commands as follows:

JOB_TYPE=BUILD+COPY

BUILD_TYPE=ISO_CD

BUILD_PATH=c:\MyIsoDir

MERGE_SOURCE_1=c:\MyTempNumbers\SN_10000

MERGE_TARGET_1=\Directory\SerialNum

Note that **MyIsoDir** was not specified in the MERGE_TARGET command, because the root of the ISO file system that is built comes from within the **MyIsoDir**.

Using the above example, the final ISO file system would look like this:

Directory

    SerialNum

Serial.txt

Placing unique files in their own temporary directories allows the building of identical named files but with unique content, which can be merged with the main files when the ISO file system is built, without affecting the other unique files.

It is also possible to use multiple merge commands, simply increment the number following the MERGE_SOURCE and MERGE_TARGET commands by one each time.

Example:

JOB_TYPE=BUILD+COPY

BUILD_TYPE=ISO_CD

BUILD_PATH=c:\MyIsoDir

MERGE_SOURCE_1=c:\MyTempNumbers\SN_100000

MERGE_TARGET_1=\Directory\SerialNum

MERGE_SOURCE_2=c:\MyTempPics\PIC_1001.JPG

MERGE_TARGET_2=\Directory

Note that the directory specified by the MERGE_TARGET command must already exist. The MERGE_SOURCE can be either a single file, or a directory. When a directory is specified, all files and sub directories within that merged directory will also be merged.

Use MERGE_TARGET_#=\ to merge files to the root of the target ISO file system, where # is the merge number.

Example Command Files

Following are some example command files to show how to use the API.

Example 1:

Make a single copy of an ISO CD image. Note that many optional parameters are not included, e.g. QUANTITY, because the default value (i.e. 1) is what was required.

```
DEVICE=MyDevice
JOB_TYPE=COPY
IMAGE_FILE=c:\Images\image.iso
IMAGE_TYPE=RAW_CD
```

Example 2:

Simulate 5 copies of an RQI image.

```
DEVICE=MyDevice
JOB_TYPE=COPY
IMAGE_FILE=c:\Images\image.rqi
IMAGE_TYPE=RQI
QUANTITY=5
BURN=NO
```

Example 3:

Build and copy an ISO 9660 CD, with a custom print label (3 replacement fields), compare the disc after writing. Also shows the use of the comments fields.

```
#Set Device Type
DEVICE=MyDevice
#Set Build Type
JOB_TYPE=BUILD+COPY+COMPARE+PRINT
BUILD_TYPE=ISO_CD
BUILD_PATH=c:\MyBuildDirectory
# Set the Print information
PRINT_TEMPLATE=c:\Prints\MyLabel.rpt
PRINT_ENTRY_1=My Line 1
PRINT_ENTRY_2=Line 2 Here
PRINT_ENTRY_3=This is Line 3
```

Example 4:

Print a single disc using a pre-built PRN print file.

```
DEVICE=MyDevice
JOB_TYPE=PRINT
PRINT_FILE=c:\PrintFiles\PrintImage.prn
```

Example 5:

Print 1 disc from a Template file – no fields replaced

```
DEVICE=MyDevice
JOB_TYPE=PRINT
PRINT_TEMPLATE=c:\PrintFiles\PrintFile.RPT
```

Example 6:

Build and copy an ISO 9660 DVD with a merged file (e.g. Serial number etc) in to a directory called \Install\SN, produce a custom print label (3 replacement fields), and compare the disc after writing. Also shows the use of the comments fields.

```
#Set Device Type
DEVICE=MyDevice
#Set Build Type
JOB_TYPE=BUILD+COPY+COMPARE+PRINT
BUILD_TYPE=ISO_CD
BUILD_PATH=c:\MyBuildDirectory
# Merge the following file
MERGE_SOURCE_1=c:\SnFiles\SN356465.txt
MERGE_TARGET_1=\Install\SN
# Set the Print information
PRINT_TEMPLATE=c:\Prints\MyLabel.rpt
PRINT_ENTRY_1=My Line 1
PRINT_ENTRY_2=Line 2 Here
PRINT_ENTRY_3=This is Line 3
```

Example 7:

Print 1 Disc from a Template file with 2 dynamic fields and the background replaced.

```
DEVICE=STATION_1
JOB_TYPE=PRINT
PRINT_TEMPLATE=c:\PrintFiles\PrintFile.rpt
PRINT_ENTRY_1=”Field 1”
PRINT_ENTRY_2=”Field 2”
PRINT_BACKGROUND=c:\images\background.jpg
```

Example 8:

Copy from a DVD ISO with Compare after Write and Print from a Template with 3 fields replaced.

```
DEVICE=MyDevice
JOB_TYPE=COPY+COMPARE+PRINT
IMAGE_FILE=C:\Images\SampleDVD.iso
IMAGE_TYPE=RAW_DVD
PRINT_TEMPLATE=c:\PrintFiles\PrintFile.RPT
PRINT_ENTRY_1=”This is Field 1”
PRINT_ENTRY_2=”This is Field 2”
PRINT_ENTRY_3=”This is Field 3”
```

Example 9:

Build and copy an ISO9660 CD disc from the c:\source directory, and do not fixate the copies.

```
DEVICE=MyDevice
JOB_TYPE=BUILD
BUILD_TYPE=ISO_CD
BUILD_PATH=c:\source
FIXATE=NO
```

Example 10:

Build and copy an ISO9660 DVD disc from the c:\source directory, and do not fixate the copies.

```
DEVICE=MyDevice
JOB_TYPE=BUILD
BUILD_TYPE=ISO_DVD
BUILD_PATH=c:\source
FIXATE=NO
```

Example 11:

Build an audio CD with 4 tracks and sets the write speed to 16x.

```
DEVICE=MyDevice
JOB_TYPE=BUILD
BUILD_TYPE=AUDIO_CD
TRACK_1=c:\Audio\Track1.wav
TRACK_2=c:\Audio\SecondTrack.wav
TRACK_3=c:\Audio\TrackThree.wav
TRACK_4=c:\Audio\04-Track.wav
WRITE_SPEED=16
```

Additional Status Added By TrueNet

Once TrueNet has read and accepted the command file, additional information will be added to the file, and where appropriate updated during the course of a job. For example, if the job calls for more than 1 disc to be produced, the current "Accepted" and "Rejected" count will be updated to the file while the job is running, so that a user application can read this information for 'near real time' job status.

The added identifiers are:

ACCEPT	This will be initialized to 0, and incremented each time a disc is accepted. There may be a few seconds lag between the disc actually dropping on the accept hopper, and the file being updated, so this is not 'real time', but it is close. Example: ACCEPT=5
REJECT	This will be initialized to 0, and incremented each time a disc is rejected. There may be a few seconds lag between the disc actually dropping on the reject pile duplicator, and the file being updated, so this is not 'real time', but it is close. Example: REJECT=0
STATUS	This indicated the current status of the job. This should reflect (in near real time) the status displayed on the TrueNet screen. Examples: STATUS=Queued or STATUS=Running

Error Codes

If the command file is rejected, an error code will be added to the command file - together with a plain text description of the error type. The file will also be renamed with a '.err' extension.

ERROR_CODE	This is a numeric value as detailed in the following table. Example: ERROR_CODE=1
ERROR_TEXT	This will be an ASCII description of the error. Example: ERROR_TEXT=DEVICE NOT FOUND

A full list of the error codes is:

ERROR_CODE	**ERROR_TEXT**	**CAUSE**
1	DEVICE NOT FOUND	The device specified in the DEVICE= statement was not found on the system. Check the name against those on the system.
2	OPTION NOT SUPPORTED	There are some reserved keywords (for possible future feature expansion) that TrueNet will report as unsupported.
3	BAD IMAGE FILE TYPE	An unknown or incompatible image file type was specified.
4	BAD FIXATE PARAMETER	Only YES or NO are valid
5	IMAGE FILE NOT FOUND	The disc image file could not be found.
6	PRINT FILE NOT FOUND	The print image file could not be found.
7	TEMPLATE FILE NOT FOUND	The print template could not be found.
8	UNSUPPORTED BUILD TYPE	TrueNet is unable to produce dynamic print files for the installed printer type.

9	PRINTER IS NOT DYNAMIC	The print quality parameter is invalid. Only HIGH or DRAFT is allowed.
10	INVALID PRINT QUALITY	Only HIGH and DRAFT are supported.
11	INVALID BUILD PATH	The specified build path cannot be found.
12	BACKGROUND FILE NOT FOUND	The replacement print background could not be found.
13	INVALID BACKGROUND FILE	The back ground file is not useable with TrueNet
14	NO AUDIO TRACKS	BUILD_TYPE=AUDIO_CD was selected, but no audio tracks were specified.
15	BAD AUDIO	One (or more) of the audio files was not 44.1khz, 16 bit Stereo WAV files.

Notes:

Network Device Configuration Record:

Device Name:	Device IP:	Device Location:

Mediatechnics Systems Inc.
270 Hanford Street, Unit C
Sutter Creek, CA 95685
Technical Support: 800-497-8996
Sales: 1-800-474-8996