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# **Assessment Printer V4**

**The Examiner**  
**Assessment Development Suite**

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# Examiner Print Utility V4

The Examiner Print Utility provides a means of producing paper and pencil assessment that have been developed with The Examiner's Item Bank utility. Assessments can be scored manually or via the Scanning Utility. It is assumed that the user is familiar with the concepts of item banking that are used in the main item banking system. The system is split into two main parts.

## Printing

This is where the user will spend most of their time. In this section the user can select what *kind* of print to make (Printed, PDF file, Word document) and *where* to send that print (what printer, what file). In addition the user will be able to select how many copies of the print to make, and whether unique or duplicate copies should be made.

## Configuration

This is where the user will specify *how* the print is to appear. Headers, footers, introductory pages and much more are set here. Multiple configurations can be stored to address different printing situations.

## Upgrading from Examiner Version 3

All files used in version 3 of The Examiner are compatible with version 4. A number of features in version 4 are *not* "backwards compatible" with version 3. However, using an item bank, key file, or template from version 3 inside of version 4 will *not* cause those files to "break" in version 3. The new features won't be available...but the older software will still function correctly.



# System Structure

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## Databases

The Utility relies on a number of databases for its operation. Two platforms are available for use:

### **SQL Server**

Microsoft™ SQL Server 2012 can be used as the repository and server for all files. The current release of the software only supports Microsoft Access™ files.

### **Microsoft Access**

Individual Microsoft Access™ files can be used as a repository for data. Microsoft Access itself need not be present on the computer. The Utility natively supports Access without needing the Microsoft Access program itself.

## Databases

There are three distinct databases used by the Utility.

### **Item Banks**

Item banks contain the items (questions) that make up the assessment and the profiles (test templates) that are used to design the assessment. They are created using The Examiner's Item Banking Utility. Many item banks can be used.

### **Key Files**

Key files contain the answer keys used to grade assessments. They are automatically created by the Examiner Assessment Printer when an assessment is printed, or they can be manually created using the Examiner Records System. Usually only one key file exists for each installation of the print utility.

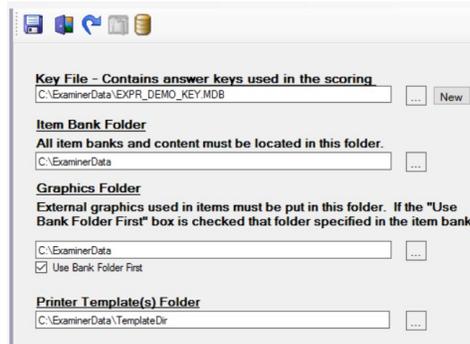
### **Template Files**

Template files contain stored printer configurations. Information such as page sizes, headers, text pages, and the like are contained in these files. Usually one template file exists for each installation of the print utility.

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## File Configuration

Before the system can be used a number of files must be attached. In addition, folders need to be specified that will be used during the printing process. To specify the files click on “Files” and then “Linked Files” on the main utility page.



In all instances where you are asked to specify a file or folder you should click on the  button to browse to a location.

### Key File

The key file contains a computer-based answer key that is used by the Examiner’s scoring and scanning utility to grade printed assessments. Even if you are going to be hand-grading assessments you must use a key file. You can use an existing key file or click on the “New” button to create a new file. Entries are automatically added to the key file when an assessment is printed.

### Item Bank Folder

The print utility can use any number of item banks. However, all the item banks used must be stored in a common folder. If multiple users are accessing the banks, the banks should be stored on a shared network folder. Never store an item bank in the same folder as the software itself (Usually c:\program files).

### Graphics Folder

New in this version is the ability to store graphics externally from the item bank. If you are using version 3 of the item banking system this option is not available. In version 4 graphics can be added to an item as an external file. This can be in the same folder as the item banks (use the check box to set this option) or the graphics can be in a different location. Note that if multiple users are accessing the system you need to make sure that all the users can reach the files.

### Temple Folder

The system-created template file will be created in this folder. If you want multiple users to share the same template file it should be located on a shared network location.





# Printing

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## Introduction

Assessment “prints” can be produced in three different ways. First the features that are common to all the output formats will be shown, next the details for each section will be discussed. You should set the configuration options (see page 11) before using any of these options.

The following output platforms are supported:

Printer	This outputs the assessment to any of the printers that are available to your computer.
PDF	This outputs the assessment an Adobe Acrobat™ compatible file. You do not need Acrobat to use this option.
Word Doc	This outputs the assessment to a Microsoft Word™ compatible file. You do not need Word to use this option.

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## Common Features

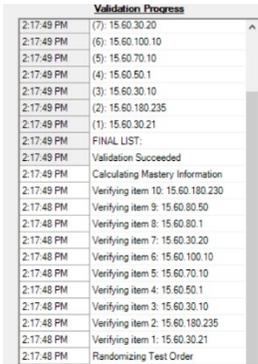
The features in this section are common to all of the print output types.

### Profile Selection

This option is used to select the assessment that is to be printed. Use the top drop down to select the item bank. All item banks must be located in the Item Bank Folder (see page 4) that was specified in the Files/Linked Files menu option. Once an item bank has been selected a Profile drop down will be shown where you can select a profile to use in creating your assessment. The buttons under the profile selection will limit the type of profile that is to be shown in the drop down.

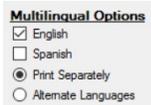
### Validate

Ideally a profile should be validated inside of the item bank manager to make sure that it can successfully be used to create an assessment. If you want to “be sure” that an assessment can be created you can click on the “Validate” button. The “Validation Progress” frame at the right of the screen will show the assessment creating process:



If an error is encountered during the creation process you should be able to see exactly what is causing the problem. Editing the item bank will usually be required to fix any problems.

## Multilingual Options



If an item bank has had its multilingual features activated this option will be shown. If that option has not been activated this option will not be shown. The two language available, as specified in the item bank, will be shown.

**Language Check Boxes** Check the box or boxes for the language to be printed. You must select at least one language.

**Separately/Alternate** This toggles how the assessment is printed. “Separately” will first print the complete assessment in the first language and then will print the complete assessment in the second language. “Alternate” will print each item first in the first language and then in the second language.

## Copies

**Copies** How many copies of the assessment are to be printed.

**Unique/Duplicate** If more than one copy is requested this determines if the assessment is generated anew for each copy or if the assessment is generated once and then duplicate copies are made.

## Preview

Clicking on the “Preview” button will generate an assessment and show it on the screen. If you have requested multiple copies only one copy will be created using the preview option. If there is a problem generating the assessment you will be notified and should run the “Validate” option to locate the fault.

Once a preview has been selected you will be shown a page where you can scroll through the document. You can click on the “Print” button to print the assessment. Clicking on “Cancel” will return you to the previous display.

## Printer

Selecting the “Printer” option will show the common features and provide a “Print” button. Clicking on this button will generate the assessment. If you have opted for multiple copies, all the copies will be generated before the final print options are shown.

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## PDF

The screenshot shows a software interface for exporting to PDF. It includes a dropdown for 'Item Bank' (EX\_DEMO\_BANK.xm3), a 'Profile' dropdown (Single) 0TestA: Test A, and radio buttons for 'All', 'Single', and 'Multi-Part'. There are checkboxes for 'Show Extended Progress Messages', 'Protect PDF With Password', and 'Validate'. A 'Copies' field is set to 1, with 'Unique' and 'Duplicate' options. Under 'Type of PDF files', 'Single File' is selected. The 'PDF File' field contains 'C:\temp\work.pdf'. There are 'Set' buttons for the PDF file and password. At the bottom are 'Create' and 'Preview' buttons.

You can print directly to an Adobe Acrobat™ PDF file. You do not have to have any Adobe software installed on your computer for this option. The common features will be show with these additions:

### Type of PDF File:

Single File

No matter how many copies you have requested, they will be combined into the single output file specified in the “PDF File” setting.

Separate Files

Each assessment will be saved in a uniquely named file. If, for example, you specified “work.pdf” in the PDF file setting, the files would be named “work\_001.pdf”, “work\_002.pdf” and so on. When you click on “Create” you will be told what the file names are.

### PDF File

Click on this option to specify the name of the output file.

### Password

If you want to protect the PDF file with a password, make a check in the box and click on “Set”. A password-entry box will be shown where you can enter your password.

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## Word Doc

The screenshot shows a software interface for exporting to Word Doc. It includes a dropdown for 'Item Bank' (EX\_DEMO\_BANK.xm3), a 'Profile' dropdown (Single) 0TestA: Test A, and radio buttons for 'All', 'Single', and 'Multi-Part'. There are checkboxes for 'Show Extended Progress Messages', 'Validate', and 'Print Separately'. A 'Copies' field is set to 1, with 'Unique' and 'Duplicate' options. Under 'Output Type', 'Single File' is selected. The 'Word File' field contains 'C:\temp\work.docx'. There is a 'Set' button for the Word file. At the bottom are 'Create' and 'Preview' buttons.

You can print directly to a Microsoft Word™ formatted file. You do not have to have any Word installed on your computer for this option. The common features will be show with these additions:

## Type of Output:

Single File

No matter how many copies you have requested, they will be combined into the single output file specified in the “Word File” setting.

Separate Files

Each assessment will be saved in a uniquely named file. If, for example, you specified “work.docx” in the Word file setting, the files would be named “work\_001.docx”, “work\_002.docx” and so on. When you click on “Create” you will be told what the file names are.

## Word File

Click on this option to specify the name of the output file.

# Configuration

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## Introduction

Before you can create prints you must configure the print utility. A number of defaults are provided, but you should review them to make sure that they meet your needs. The configuration options are under the “Configuration” setting on the left-hand side of the main screen.



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## Templates

A template contains specifications for all the printing characteristics of an assessment. A default template (named, of course, “Default Template”) is provided with the software. You can use this as-is, or copy it, modifying it for your own uses. Click on “Templates” in the Configuration section to access the template selection, creation, and copying process.

### Current Template

Use the drop-down to select a template from the set of existing templates.

### Duplicate

You can duplicate the existing template by entering a new template name and clicking on the “Duplicate” button. The current template will be copied and your duplicate will become your new template.

### New

You can create a new template by entering the new template name and clicking on the “New” button. The template will be created and your duplicate will become your new template. The new template will be a copy of the “Default” template.

---

## Page Setup

The page setup options are where you specify the paper type and print margins that will be used. If you use different margins and paper types for different types of assessments, use a separate template for each applications. After you click on “Page Setup” the system will take a few seconds to search and load information for the various paper sizes.

## Paper Size

A drop down will give you access to all the available paper sizes. Note that just because a paper size is “available” it doesn’t mean it will be suitable for printing an assessment!

## Orientation

Use this option to select landscape or portrait print orientation.

## Measurements

Use this option to switch between English (inches) and Metric (mm) units. When you change units the margin settings will be recalculated for your new units.

## Margins

Use the four drop-downs to set the page margins. The top and bottom margins have an effect on how the headers and footers are shown. If you they are not appearing correctly on your print, try adjusting these settings to provide more or less space.

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## Text Pages

While you can add informational text pages within the Examiner’s profile system, it is often advantageous to have standardized text pages that appear with every print. Again, if you have different pages for different types of assessments, create different templates for each of those assessment types. All the text pages are edited with a Word-like interface. You can place graphics on the page by cutting and pasting them. You can also insert tables.

## Embeddable Information

The utility of the text pages is expanded with the use of “embeddable” information. This information is added when the assessment is printed. For example, “!!TITLE” tell the printer to replace the text “!!TITLE” with the title that is part of the assessment’s profile. CAPITALIZATION IS IMPORTANT! If you don’t capitalize the “!!” tag, the replacement will not be performed. “!!DATE” will work; “!!Date” will not. These fields are available on both the text pages and the headers and footers. The following replacements are available:

Code	Replaced With	Example
!!#	Page number	Page !!# = Page 23
!!@	Total pages	Page !!# of !!@ = Page 19 of 24
!!E	Exam Code	Answer Key !!E = Answer Key 23043 (this is the key from the item bank)
!!DATE	Current Date	!!DATE = 3/15/2016 (auto-adjusted for current country)
!!LONGDATE	Current Date	!!LONGDATE = 15 March 2016 (auto-adjusted for current country)
!!PROFILE	Profile Name	!!PROFILE = MyCurrentProfile (this is the name of the profile in the item bank)
!!TITLE	Profile Title	!!TITLE = Advanced Auto Repair (this is the title within the profile)
!!BANK	Bank Name	!!BANK = AutoRepair (this is the bank file name without folders or extensions)
!!BNKTITLE	Bank Title	!!BNKTITLE = Auto Repair (this is the title of the bank from the bank’s property page)

## Options

**Text Setup for Template:**  
Default Template

Use Custom Title Page                       Use Profile Title Pages

Use Custom Introduction Page               Use Profile Introduction Pages

Page Eject after Custom Introduction Page       Page Eject after Profile Introduction Pages

Use Post-Assessment Document      C:\customer databases\vibration\2017 09 21\debugdoc.doc      ...

Use headers on post-assessment document.

These options control how and when the print utility’s text pages and the profile text pages are shown.

“Use ...” options                      When checked, these pages will be shown.

“Page Eject ...” options              When checked, a page eject will be performed after the introductory page. There is always a page eject after the title page has been printed.

## Title Page

This page will be printed at the start of the assessment before any other pages. If a profile title page is used it will be printed after the printer title page.

## Introduction Page

The custom introduction page will be printed after the title page. The profile’s introduction page will be printed right before the first item. If profile-level introduction pages are used in a multi-part test (this is controlled from within the profile itself) the introduction will be printed before the first item of each sub-test.

## Post-Assessment Page

After the assessment, but before the answer key, an optional set of pages can be printed. These pages can be in either Microsoft Word™ or Rich Text format. There is no limit to the number of pages that can be included. If you want to use the standard headers and footers make sure to check the “Use headers...” option.

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## Headers and Footers

The headers and footers are shown at the top and bottom of the pages. All the embeddable information described on the text pages (refer to page 12) can be included within the headers and footers.

### Use Headers...

By default the headers and footers do not appear on the title page of an assessment or on the introduction. Use these options to force the headers and footers to appear on these pages.

## Formatting

The easiest way to format a header or footer so that information appears in the left, center, and right, is to add a table. Format each of the table’s sections so that the text shows up appropriately. The table lines will not be shown. For example, this table inserted in a header:

Exam Key !!E	!!TITLE	Page !!# of !!@
--------------	---------	-----------------

Will be shown on the top of the page as:

Exam Key 10223

Aardvark Raising

Page 2 of 23

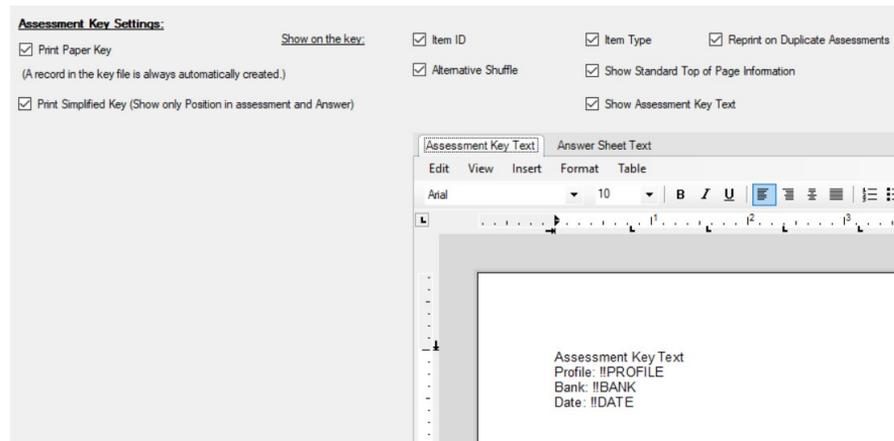
Note that the “!!” embeddable information has been replaced with the appropriate text.

---

## Keys and Answers

Keys and answer provide a page for examinees to answer on and a “sheet of record” giving the answer key for the assessment.

### Answer Key Settings



Checking the box will print an answer key at the end of the assessment. Note that an answer key is always stored in the key file after the assessment has been printed. If you print an answer key, *remember to remove it from the print before distributing the assessment to the examinees!* A number of options are available that will change the appearance of the key.

- |   |  |
|---|--|
| Print Simplified Key                    | If checked the answer key will show only the ordinal number of the item and the printed assessment answer. This option will <u>override all other options</u> . The “Print Paper Key”, however, still needs to be checked for this option to work.                           |
| Reprint on Duplicate...                 | If checked an answer key will be printed for each assessment. Otherwise, the duplicate assessments will be printed and a single key will be created for the set.   |
| Item ID, Item Type, Alternative Shuffle | These options will enable and disable the display of these columns.  |
| Show Standard Top...                    | If checked the default assessment information block will be printed.   |
| Show Assessment Key Text                | If checked, and if the text for the assessment key text has been entered, this text block will be displayed. The standard !!ABC type of annotations can be used on this page. This page can be edited by selecting the “Assessment Key Text” tab directly below this option. |

## Item Keywords Settings

Setting this option will add a list of keywords used in creating the assessment to the answer key file. This information can be used during the scoring process.

## Answer Sheet Settings

The answer sheet provides a form on which an examinee can record their responses. These options are available:

Print Answer Sheet	Select if a sheet is to be printed. If this is not selected the sub-options will not be available.
Item ID	Show the bank ID of the item.
Item Weight	Show the bank weight of the item.
Enter line for name...	Provide blanks at the top of the sheet for the examinee to enter the requested information.
Mastery and Scoring	Show the mastery and scoring information for the assessment as specified in the profile.
Default Instruction	Print the default instructions.
Custom Instructions	Print the custom instruction that has been entered in the text editor to the right of the options.
Reprint on duplicate...	If multiple copies of an assessment are printed, print the answer sheet at the end of each of the assessments. Otherwise, only one copy of the answer sheet is printed.

## Short Answer Settings

With short answer and essay items you can provide blank lines on which an examinee can record the responses. These options are available:

Page Eject...	Each item appears on a separate page.
Print line(s)...	For each short answer print the specified number of lines.
Fill page...	Fill the remainder of the page with lines. Only available on single-response items.

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## Sections and Feedback

These options affect how the assessment is presented. Each sub section of these options is accessed by clicking on the tab at the top of the page on the right.

### Index Options

The “trigger” line indicates when the following options will be invoked. Given this example set of items:

1.2.3  
1.2.5  
2.1.2  
2.2.3  
2.2.5  
2.3.4

If the trigger is set to “1”, the options will be invoked before items 1.2.3 and 2.1.2 are shown. If the trigger is set to “2”, the options will be invoked before 1.2.3, 2.1.2, 2.2.3, and 2.3.4.

Note that these options only make sense if the assessment is presented in item bank order. As noted on the screen, if a title is triggered and is set to “2”, only the second level title will be shown. In the above example, if the trigger is set to “2” and item 2.3.4 is encountered, and a title is available for index 2 and index 2.3, only the title for index 2.3 will be shown.

Additional options:

Title sections with...	Show the title if it is available.
Use extended...	If an extended title is available, use it. If not, use the short title.
Page eject before...	If an index trigger occurs, whether or not a title is available, do a page eject before printing the item.

### Sub-Assessment Options

When an assessment consists of sub-assessments, these options are active. Note that if sub-assessments are randomized in the full assessment these options are not active.

Page Eject...	If a new sub-assessment is encountered, do a page eject before the first item in that sub-assessment.
Show ... Title	Print the sub-assessment title before the first item in a sub-assessment.

### Case Studies

A case study is a series of questions that are always grouped together. This is controlled in the item bank. If a case study lead text block is available it will be printed before the first item. These options are available:

Page eject...	If a new case study is encountered, do a page eject before the first item of the case study.
Mark the start...	The specified line of text will be shown before the first item in a case study.
Repeat case study...	If a case study introductory text block is present, show it before each item. Normally the block is only shown before the first item.
Mark the end...	The specified line of text will be shown after the last item in a case study.
Page eject...	After the last item in a case study do a page eject.

## Short Answer

This option will provide an answer space for the examinee within the body of the assessment.

Page eject before...	Before a short answer item is shown do a page eject.
Page eject after...	After a short answer item is shown do a page eject. If both the previous option and this option are used each item will appear on a separate page.
Print lines...	Print this number of lines for the student to enter their response.

## Feedback

After the assessment has been printed item-level feedback will be printed. This is often used to provide the assessment administrator with a study reference or explanations on individual items.

Print Feedback	If set, print the feedback.
Show Item ID	Show the item's ID when the feedback is printed.
Show Item Weight	Show the weight of the item when the feedback is printed.

---

## Item Styles

Numerous item styles are available. Select the style that you want to use.



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