

# Toolbox Crystal Class 1: How to create a basic AR invoice

## What is Crystal Reports?

Crystal Reports is a tool that allows a user to create reports that display information from a database.

## Why use Crystal Reports?

Almost all of the reports utilized by Toolbox were created in Crystal Reports. A Toolbox user with knowledge of Crystal Reports can modify currently existing reports in many ways. For example, a company logo or additional fields can be added to an AR Invoice report. Reports can also be made from scratch and plugged into Toolbox.

## What does this class teach?

Toolbox Crystal Class 1 familiarizes a Toolbox user with Crystal Reports and introduces them to the concept of a relational database. Crystal Class 1 will walk a user through the creation of a basic AR Invoice, and also cover some formatting basics.

## Setting Preferences:

Before starting, a few options in Crystal must be changed:

File | Options | Database | Check "Stored Procedures" | OK

File | Options | Database | Check "Perform Grouping on Server" | OK

File | Options | Database | Uncheck "Auto-Smart-Linking" | OK

File | Options | Reporting | Uncheck "Save Data with Report" | OK

File | Options | Reporting | Uncheck "Convert Null Field Value to Default" | OK

File | Options | Fonts | Fields | change Size to 8 | OK

File | Options | Fonts | Summary Fields | change Size to 8 |  
| Group Name Fields | change Size to 8 |  
| Text Objects | change Size to 8 |  
| Field Titles | change Size to 8 | OK

File | Options | Fields | Number | Number | select (1,123.00) | OK

File | Options | Layout | Show Gridlines in Design (View Options)  
File | Options | Layout | Show Grid in Design (Grid Options)

File | Options | New Report | Browse  
Browse to Toolbox report on your file server folder.  
Click OK

## Using the Report Expert to create a simple AR Invoice:

File | New  
"Standard" is highlighted  
Click OK  
Click Database | ODBC | Toolbox | Tables

### 1. Selecting Tables

Under Toolbox select the following tables by double clicking on them:

GL\_MASTER  
GL\_DETAIL  
GL\_DET\_AMT  
GL\_ACCOUNTS  
GL\_ACCOUNT\_TYPE  
JC\_JOB  
JC\_BUDGET\_ITEM  
JC\_BILLING\_ITEM

### 2. Establishing Links

Link the following fields together by clicking and dragging the desired fields onto one another:

GL\_MASTER.IDENTIFIER to GL\_DETAIL.TRAN\_ID  
GL\_DETAIL.IDENTIFIER to GL\_DET\_AMT.LINE\_ID  
GL\_DETAIL.JOB\_ID to JC\_JOB.IDENTIFIER  
GL\_DETAIL.COST\_CODE to JC\_BUDGET\_ITEM.IDENTIFIER  
GL\_DETAIL.COST\_CODE to JC\_BILLING\_ITEM.IDENTIFIER  
GL\_DET\_AMT.ACCT\_ID to GL\_ACCOUNTS.IDENTIFIER  
GL\_ACCOUNTS.TYPE to GL\_ACCOUNT\_TYPE.IDENTIFIER

All links must have a Left Outer SQL Join type when creating a report using a Toolbox database. To change the Join Type of a link, right click on the link and select "Link Options".

### 3. Selecting Fields to be displayed

Click on the "Fields" tab and add the following fields by highlighting them, then moving them to the box on the right side using buttons in the center of the menu:

GL\_DETAIL.ITEM\_DESC  
GL\_DET\_AMT.AMT\_QTY  
GL\_DET\_AMT.AMT\_RATE  
GL\_DET\_AMT.AMT\_VALUE

### 4. Selecting Fields to be used as Groups

Click on the "Group" tab and select the following fields to be used as groups:

GL\_MASTER.REF\_NUM  
GL\_DETAIL.LINE\_NUM

Groups are used to organize the data presented in a report. The field GL\_MASTER.REF\_NUM is actually the invoice number, and GL\_DETAIL.LINE\_NUM is the identifying number given to each line item in an invoice. By adding these fields as groups, we are narrowing the information presented by the report down to a single invoice, and presenting each line item in the same order that they were entered in Toolbox.

Click Finish. Crystal Reports will now generate a report based on the information entered.

## 5. Creating a Parameter

Next, a parameter must be created. Parameters are another necessary step of creating a report that only pulls up certain pieces of data.

Click on "Insert" at the top of the Crystal Reports Window. Select "Field Object". This menu is very important, as it contains all of the fields of the databases used in the report, and allows a user to create formulas, running totals, and parameters.

Right click on Parameter Fields, and select New. Enter "GL Identifier" as both the Name and Prompting Text, and set its value type to "Number".

## 6. Filtering Report data with the Select Expert

Currently if the report is left as is, it will display AP and Tax Items as well as AR data. To filter out the extra data, a number must be assigned to the GL\_DETAIL.ITEM\_TYPE field so that the report knows to only look at AR items.

Click on "Report" at the top of the Crystal Reports Window. Choose "Select Expert".

Find and select the field GL\_DETAIL.ITEM\_TYPE.

Click the drop down box and select Formula, and enter the following information:

```
{GL_DETAIL.ITEM_TYPE} <> 130.00 and  
{GL_DETAIL.ITEM_TYPE} <> 10.00
```

Click the "New" button and select the field "GL\_MASTER.IDENTIFIER"

Click the drop down box and select "equal to", then select "{?GL Identifier}"

Setting the GL\_DETAIL.ITEM\_TYPE to 130 (AR items) and 10 (Control Account entries) ensures that the report will only pull up invoice data. Setting the GL\_MASTER.IDENTIFIER to equal the parameter "GL Identifier" links those two fields together.

## 7. Cosmetic changes

Now that fields are in place and filters have been set, all that remains is to make the report more presentable. The GL\_DETAIL.LINE\_NUM field in the Details section can be deleted safely, as it is unnecessary for an AR Invoice. Simply click the field, and press the Delete button on the keyboard. The GL\_MASTER.REF\_NUM field is the invoice number, and can be moved to the Page Header section by dragging and dropping.

## Guidelines

Guidelines are an easy way to align and move objects in a report. To activate them, right click on an empty space on a report and select "Show Guidelines in Design". Horizontal and vertical dotted lines should now be visible. Objects that are moved near a guideline will "snap" to it, so that when the guideline's tab is moved, the attached objects will as well. Guidelines can be created by clicking on the horizontal and vertical rulers on the edges of the report.

## Adding Lines and Boxes

Lines and boxes can be added to a report for organization and style purposes. First, activate the supplementary toolbar by clicking on "View" at the top of the Crystal window. Then select "Toolbars". Ensure that the box next to "Supplementary Tools" is checked. If it is, there will be a small row of buttons along the bottom of the Crystal Reports window. The far left button activates the line tool. The button to the immediate right of the line tool activates the box tool. To use both tools, simply click a button then click and drag the mouse cursor across the report.

## Adding Text

To add text to a report, click the button at the top of the Crystal Reports window that looks like the lowercase letters "ab", and then click on the report to add a text box. Enter the desired text, and then click outside of the box to finalize it. Text boxes can be changed at any time by double clicking on them.

## Additional Formatting Options

By right clicking on an object in the report and selecting “Format...”, many formatting options can be accessed. Here are just a few of the options that can be accessed from that window:

- Font size and type
- Text color
- Line thickness
- Alignment
- Number display format
- Date display format
- Drop shadow
- Suppress

The basic AR Invoice is now complete. The report can now be saved and plugged into Toolbox for testing.