

All My Papers

# ***All My Checks Plus***<sup>TM</sup>

**System for extracting check  
images from documents and  
creating ICL Files**

## **User Manual**

**Version - 1.1, November 2018**



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#### Revision History

Revision	Changes
1.0	First Edition
1.1	Updated scanner support and configuration information

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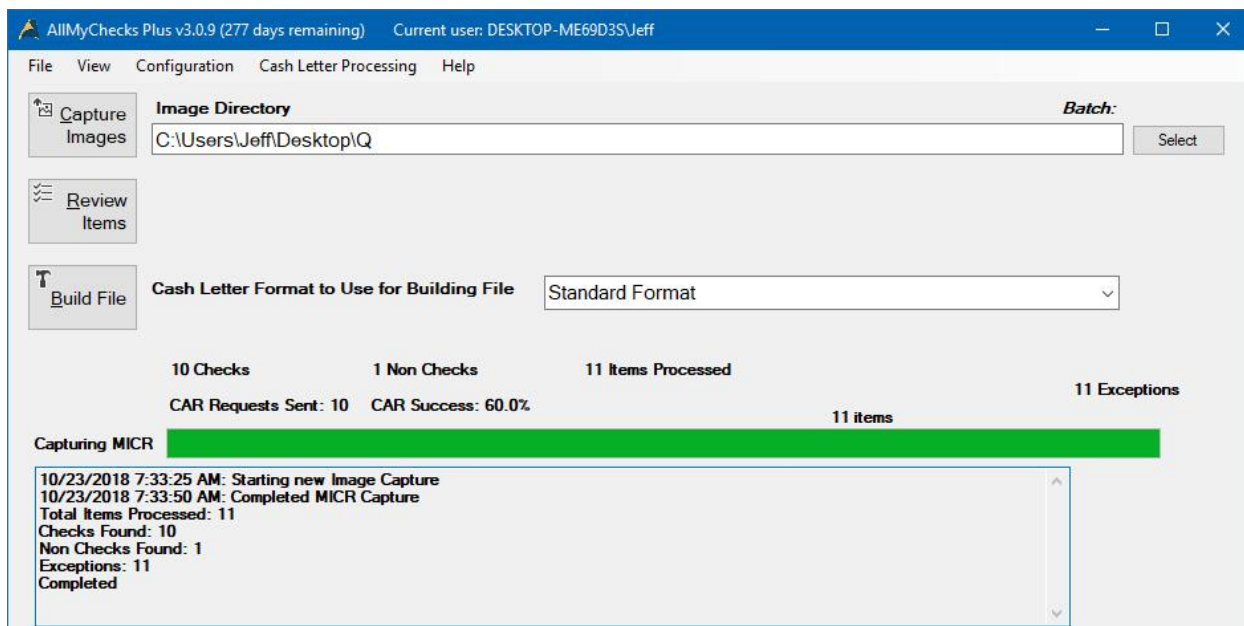
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# 1 ALL MY CHECKS PLUS

All My Checks Plus (AMC+) is a Windows based, single or multi-user software application that provides the back-end processing for Remote Deposit Capture and Lockbox workflows.

At this highest level, AMC+ finds and extracts check images from a variety of scanned, photographed and PDF document images and outputs Image Cash Letter (ICL) files ready for deposit to the financial institution of your choice.

AMC+ provides an easy-to-use user interface which divides the remote deposit capture process into three basic steps which are; Capture Images, Review Items and Build (ICL) File.



The **Capture Images** button imports a batch of input documents, extracts check images, processes the check images for conformance with ICL file standards, and performs MICR and other data extraction in preparation for incorporation of the check images into ICL files.

Items that exhibit image quality assurance issues, items that do not appear to be checks and items that return low CAR/LAR or other data verification confidence levels are placed in the review queue.

The **Review Items** button takes you to a screen that shows each open batch of check items with links to open the batch's review queue. The review queue lists items that do not meet IQA standards for check items or that have missing or low confidence data. Drilling down into the item permits viewing front and rear images of the check item and editing of the extracted MICR line data and dollar amount for the item. Here you have options of exclude non-check items from the ICL file, edit the item's data, crop the item's images and/or edit the MICR line and dollar amount data as needed before accepting the item for incorporation into an ICL file.

The **Build File** button initiates building of an ICL file using items marked for inclusion in the batch or batches you select for this process. The ICL file will be built to match the specification selected in the 'cash letter format' dropdown box.

At a little more detailed level, AMC+ performs the following functions:

- Read document images from a variety of sources including check scanners, flatbed scanners, cell phone cameras and other devices

- Extract check images from within those document images – cropping and bursting the check image from larger document images as needed.
- Image process the check images to banking industry exchange standards
- Optically read, parse and verify a variety check item data from check images including the MICR line, dollar amounts, check serial numbers, check date and others.
- Optionally, accept dollar amounts and other data associated with the check image from a CSV file
- Optionally endorse check rear images with a customizable deposit endorsement.
- Detect and flag duplicate checks, check images that do not meet IQA requirements or check items that have missing or low confidence check item data. Present these items to the user for review and acceptance, repair or rejection.
- Build Image Cash Letter (ICL) files incorporating the check items into files that conform to the requirements for clearing through the Federal Reserve Bank's clearing system and other industry exchanges.
- Format ICL files for conformance with any financial institution's Remote Deposit Capture requirements.

## 2 INSTALLATION

Installation of All My Checks Plus consists of two steps; licensing for the host system and application installation.

### 2.1 System Requirements

All My Checks Plus requires at a minimum, a PC running Microsoft Windows 7, 10 or Windows Server 2008R2 or later, a 2GHz or better processor, 8GB RAM, 100GB of available hard disk space and the Microsoft .NET Framework Version 4.6.

AMC+ requires Microsoft SQL Server Express Version 2014 or above, which is included in the installation package. AMC+ supports the full version of Microsoft SQL Server 2014 or above. The AMC+ installer will install SQL Express as a default option. Users are responsible for periodically backing up their AMC+ database.

The supplied Microsoft SQL Server Express is sufficient for small and medium sized single-user installations where the All My Checks Plus Database will not exceed 10GB (approximately 1 million check items). Beyond these limits, All My Checks Plus should be run under the full Microsoft SQL Server.

### 2.2 License Install

To begin licensing, download and install the All My Papers License Manager from the All My Papers website at:

<https://allmypapers.com/licensemanager/>

The License Manager application is used to install licences on the host system. When you evaluate or purchase All My Checks Plus your All My Papers sales or support representative will provide license codes and guidance for license installation.

### 2.3 Application Installation

The All My Checks installer is a single, 250MB-300MB file that includes the application and communications modules for access to the All My Papers' cloud-based CAR/LAR servers as well as the Microsoft SQL Server Express installer. Once you have installed the AMC+ licenses, simply double-click the installer icon to install AMC+. When installation is complete, find the All My Checks Plus application icon on your desktop.

If Microsoft SQL Server Standard Edition will be used to host the database, after AMC+ installation, the application configuration file must be edited to reflect the database connection parameters specific for your database. This configuration file can be found in the \bin folder in the location where AMC+ is installed.

To edit the database connection information, open the file named AllMyChecksPlus.exe.config in a text editor such as Notepad. Modify the line show below to reflect the database connection information for your SQL Server setup:

```
<connectionStrings>

    <add name="AllMyChecks" connectionString="Data Source=localhost\SQLEXPRESS;Initial Catalog = AllMyChecks; Integrated Security=SSPI;" providerName="System.Data.SqlClient" />

</connectionStrings>
```

## 3 CONFIGURATION

All My Checks Plus provides extensive configuration features that will allow you to tailor its behaviour to you particular remote deposit capture or lockbox workflow. All AMC+ configurations is entered into a series of 6 dialog boxes. Configuration is stored in the AMC+ database when the save button for each configuration dialog is clicked.

For customers depositing items to more than one account at a financial institution or sending ICL files to multiple financial institutions, multiple ICL file format definitions may be created and saved. The target ICL file format may then be selected from a drop-down menu at ICL file creation time.

### 3.1 Before you Start Configuration

Before configuring AMC+, it will be helpful to know or determine:

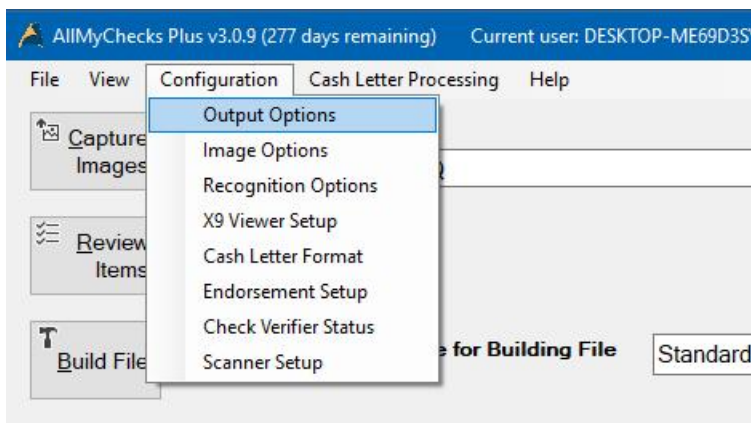
- Where AMC+ will place its output files
- Where AMC+ will find input document/check images
- Whether AMC+ will read ancillary check item data captured from an external file. An example might be Dollar amounts for each check item captured at an earlier workflow step.
- Whether AMC+ will be capturing check front images only or front and rear images
- What image file format (TIFF, .JPG, .PDF) will be used for the input check images
- Will there be non-check items interspersed in the input data stream
- What kind of scanner was used to acquire the source document/check images
- Whether you will be capturing dollar amounts and other check item data using All My Papers' cloud-based data capture and verification services. If so, which features?

### 3.2 Configuring AMC+

Configuration settings are defined per user. Each user will have their own specific settings which are stored in the database.

#### 3.2.1 Output Options

To begin configuration, start AMC+ and Select **Output Options** from the Configuration Menu



The **Output Options** dialog will be displayed as shown below.

Output Options

Output Directory:

Output File and Directory Name Format

☒ Date and Time Stamp ☐ Base Name   Extension

Use MM, DD, YY, YYYY, HH, MI, SS to insert current date/time (case sensitive)

Bundle Limit:  Enter 1 to 9,999 max, or 0 for no limit

☒ Auto Convert ICL to Deposit Format

☒ Add Payee Endorsement to Check Images

☐ Format MICR for Canadian CRD

☐ Add Non-Check Items to Cash Letter File

☐ Create Test (Non Production) Cash Letter File

☐ Call External Process on Completion

External Process:

Command Line Arguments:

**Output Directory** - Decide where you want AMC+ to place its output files and create a folder if needed. Now click the yellow Select button next to Select Output Directory and navigate to the desired output folder.

**Output File and Directory Name Format** - Here you specify how AMC+ names its output files and associated directories. Shown is the default setting which uses the date and time of file creation for the output ICL file and directory names and .937 as the ICL file extension. Clicking the Base Name radio button enables you to type in a custom file name which can include time stamp elements (use %YYYY, %YY, %MM, %DD, %HH, %MI, and %SS for the year, month, day, hour, minute and second of file creation, respectively) and/or a custom extension name as desired. See Appendix B for a summary of output files generated by AMC+.

**Bundle Limit** - Sets a limit to the number of items in a bundle within the output ICL file. Permissible values are 1 to 9999. Leave blank if you do not want to limit bundles. Users should refer to the target financial institution's companion document for this limit.

**Auto Convert ICL to Deposit Format** - Checking this box applies the currently selected cash letter format to the output ICL file. Otherwise, a generic (DSTU 2003) ICL file is created.

**Add Payee Endorsement to Rear Image** - Select this option to add a payee or other endorsement to each check image. There is no limit to the number of endorsements that can be added, other than space on the back of an image. Endorsements are defined by selecting Endorsement Setup from the Configuration Menu.

**Format MICR for Canadian CRD** - Select this option to capture checks drawn on Canadian Banks. Allows the 5-3 routing number format.



**Add Non Check items to Cash Letter File** – Items not identified as checks will still be added to the output ICL file. Useful for processing with remittance coupons.

**Create Test (Non Production) Cash Letter Files** – Image Cash Letters generated are marked as test files (Record 01, Field 3)

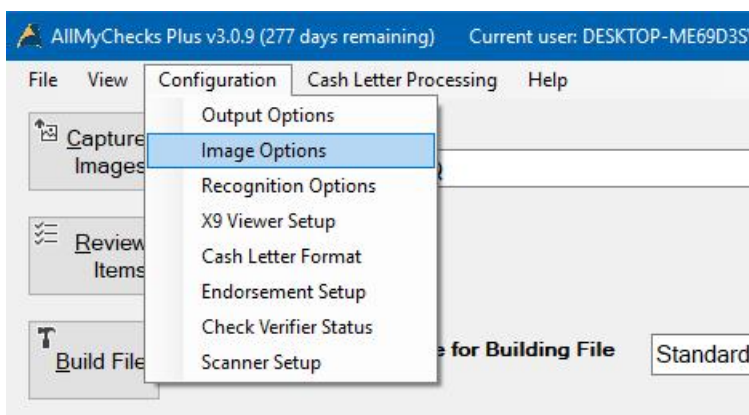
**Call External Process on Completion** – Select this if you want to invoke another process upon completion of image processing or generation of the ICL file if the latter is selected.

**Select External Process** – Use this to select the external process to be invoked. This process will be called with the ICL pathname as the first argument

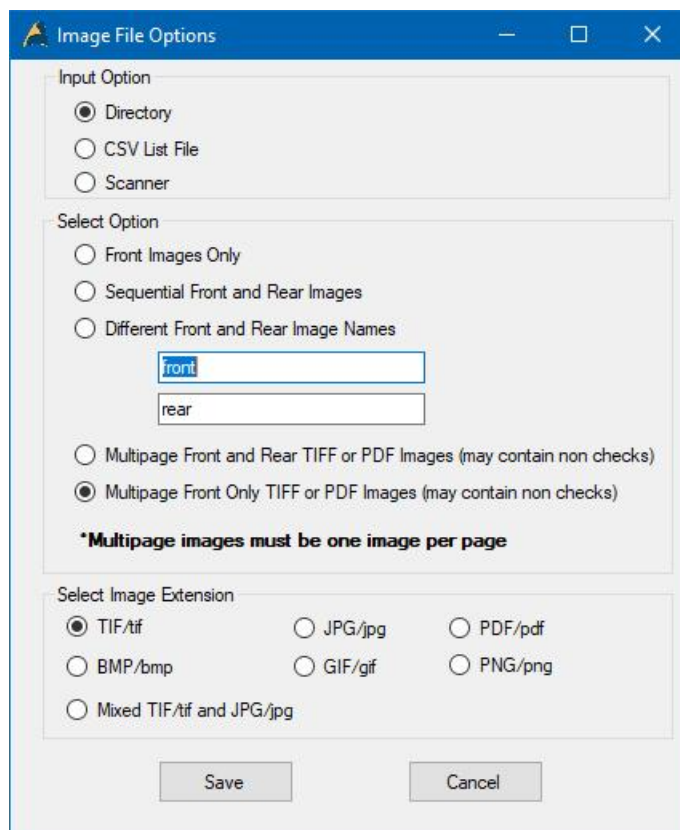
**Command Line Arguments** – You can add additional arguments if required for the external process call.

**Saving Output Options** – Click the Output Options dialog Save button to save your selections. Your choices will be written to the database and become part of the default setting for your user ID.

### 3.2.2 Image Options



Select **Image Options** from the Configuration Menu. The Image Options dialog will be displayed as shown below.



**Input Option** - This tells All My Check where to get source images

**Directory** - Lets you to enter a directory path on the main screen where AMC+ will look for input images.

**CSV List File** – Instead of specifying a directory for check image input files, a CSV list file is used to associate check image file paths with related data such as Dollar amounts, MICR line data and other information that may already have been captured at a previous workflow step. Note that the CSV list file supports all image file types, with the exception that multipage tif or pdf files can only contain a pair of images (front and back).

The CSV List File feature supports the following data items:

- Check Dollar amount
- MICR line data
- Sequence Number
- Payee Name
- Payee account
- Deposit Branch ID
- Location of front image
- Location of rear image

Please refer to Appendix A for a full description a CSV List file contents.

**Scanner** – Selects the currently configured check scanner (see Scanner Setup) as an input device to capture check images. When *Scanner* is selected, all other options in the Image File Options dialog are greyed-out.

**Front Images Only** - Specifies that only front of check images will be encountered in the input image stream

**Sequential Front and Rear Images** - Specifies that front and rear of check images will be interleaved in the input image stream per the default operating system order by file name.

**Different Front and Rear Image Names** - Specifies that the front of check and back of check images will follow a naming convention which includes the two strings specified in the front and rear fields, respectively. For example `checkimage01_front.tif` and `checkimage01_rear.tif` would be seen as a valid pair of image file names for this option if “front” and “rear” were entered as the strings for this option.

### Multipage TIFF or PDF Options

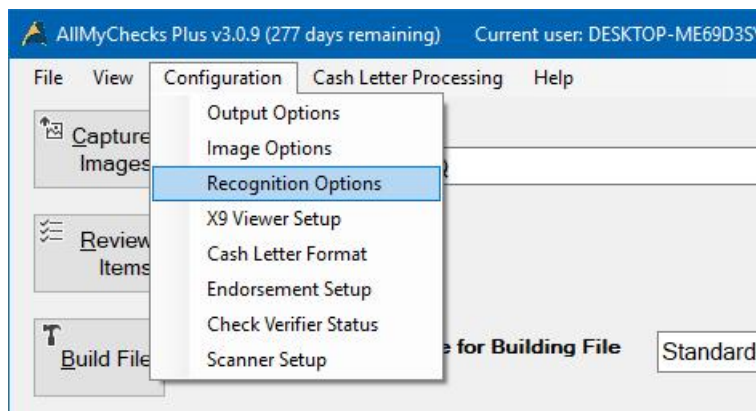
**Multipage Front and Rear** - All input images are contained in multipage TIFF or PDF files with each file containing sequential pairs of front and rear images – non-check items may be interleaved between check image pairs.

**Multipage Front Only** - All input images are contained in multipage TIFF or PDF files with each file containing front of check images which may be interleaved with non-check items.

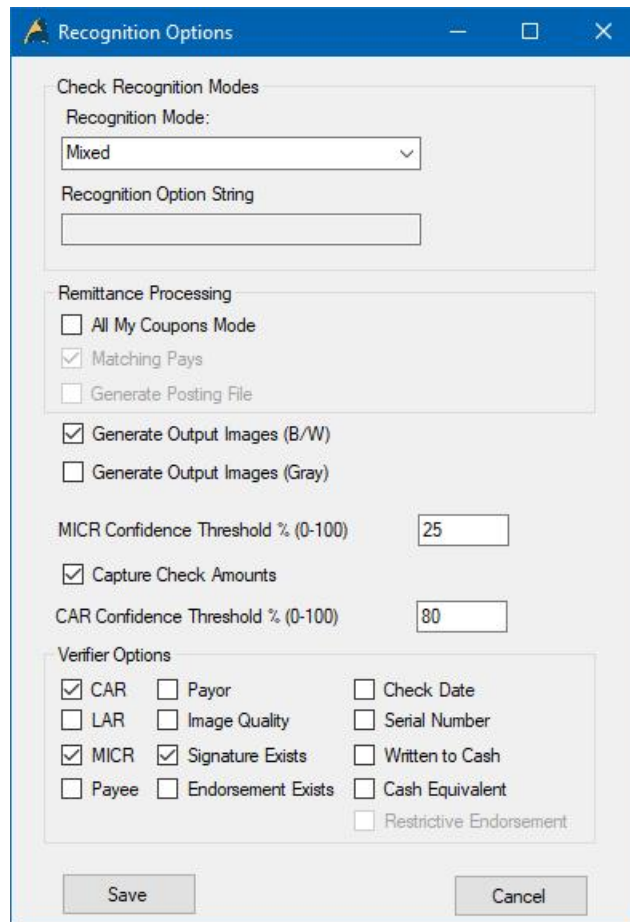
**Select Image Extension** - If known, select or specify appropriate type. If you have mixed JPEG and TIFF images you can select the MIXED TIF/tif and JPG/jpg option. Your images can have extensions of: TIF, tif, TIFF, tiff, JPG, jpg, JPEG and jpeg, and pdf.

**Save Image File Options** - Click the Image File Options dialog’s Save button to save your selections. Your choices will be written to the database and become part of the default settings for your user ID.

## 3.2.3 Recognition Options



Select **Recognition Options** from the Configuration Menu. The Image Options dialog will be displayed as shown below.

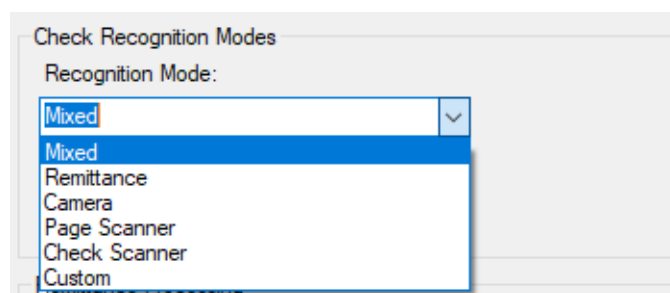


The 'Recognition Options' dialog box is shown with the following settings:

- Check Recognition Modes:**
  - Recognition Mode: **Mixed**
  - Recognition Option String: (empty)
- Remittance Processing:**
  - ☐ All My Coupons Mode
  - ☒ Matching Pays
  - ☐ Generate Posting File
  - ☒ Generate Output Images (B/W)
  - ☐ Generate Output Images (Gray)
- MICR Confidence Threshold % (0-100):** **25**
- ☒ Capture Check Amounts
- CAR Confidence Threshold % (0-100):** **80**
- Verifier Options:**
  - ☒ CAR ☐ Payor ☐ Check Date
  - ☐ LAR ☐ Image Quality ☐ Serial Number
  - ☒ MICR ☒ Signature Exists ☐ Written to Cash
  - ☐ Payee ☐ Endorsement Exists ☐ Cash Equivalent
  - ☐ Restrictive Endorsement

Buttons: Save, Cancel

**Recognition Mode** – If your input check image stream is comprised mostly of images captured on a particular kind of capture device, you can use this option to optimize AMC+ operation to recognize that kind of image. Choosing a document type here will insert a text string into the Recognition Option String field. See Appendix D for more information on Recognition Option Strings.



The 'Recognition Mode' dropdown menu is shown with the following options:

- Mixed
- Remittance
- Camera
- Page Scanner
- Check Scanner
- Custom

**Mixed** – Select this option if your input stream contains a variety of check image types and sources.

**Remittance** – Select this option when most check images are contained within larger business documents. An insurance explanation of benefits with an embedded check would be considered a remittance document.

**Camera** – Select this option for check images captured with a cell phone camera.

**Page Scanner** - Select this option for check images captured with a page scanner.

**Check Scanner** - Select this option for check images captured with a check scanner.

**Custom** – Choose this option to enter a custom recognition string. Please refer to Appendix D for more information on Recognition Option Strings.

**Generate Output Images (B/W)** – Causes black and white output check images to be generated. This option should always be checked as black and white output images are a central requirement for the generation of ICL files. However, if you are using AMC+ solely to extract MICR lines from check images, you may uncheck this box.

**Generate Output Images (Gray)** – Causes grayscale output images to be generated.

**MICR Confidence Threshold** – Sets the MICR confidence threshold between 0% and 100% with 25% being the default. For each check item captured, AMC+ will compare the confidence value returned from its internal MICR OCR engine with the confidence level set here. Any check item whose MICR confidence is below the level set will be flagged for user review.

**Capture Check Amounts** – This checkbox enables the group of check image item recognition and verification features detailed below. All features in this group perform OCR recognition and verification using All My Papers cloud-based services.

**CAR Confidence Threshold** – Sets the CAR confidence threshold between 0% and 100% with 80% being the default. For each check item captured, AMC+ will compare the confidence value returned from its All My Papers cloud-based CAR OCR engine with the confidence level set here. Any check item whose CAR confidence is below the level set will be flagged for user review.

**CAR** – Turns on CAR (Courtesy Amount Recognition) which will populate the check item's Dollar amount with the value returned from the CAR recognition engine. A confidence value is also returned. Both values are also stored in the AMC+ database and in the transaction log.

**LAR** – Turns on LAR (Legal Amount Recognition) which will read the Legal Amount from the check image and associated confidence values, both of which are stored in the AMC+ database and in the transaction log.

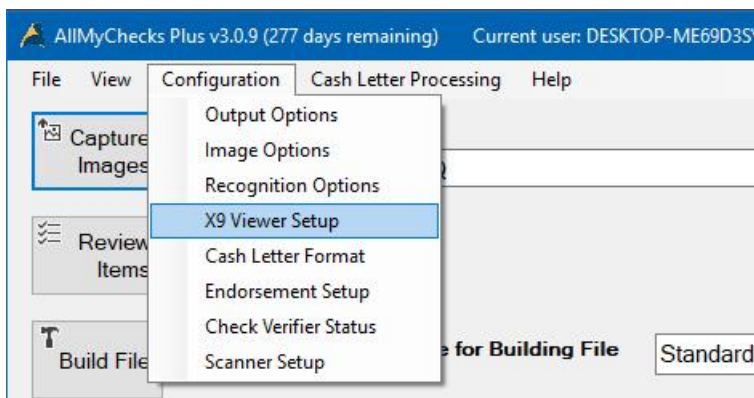
**MICR** – Turns on MICR recognition as read by the CAR engine. Currently not used in AMC+.

**Payee, Payor, Check Date and Serial Number** – These turn on OCR recognition of the specified check item data and store both the result and associated confidence values in the AMC+ database and in the transaction log.

**Signature Exists, Endorsement Exists, Written to Cash, Cash Equivalent** - These turn on OCR verification of these check item properties and store both the result and associated confidence values in the AMC+ database and in the transaction log.

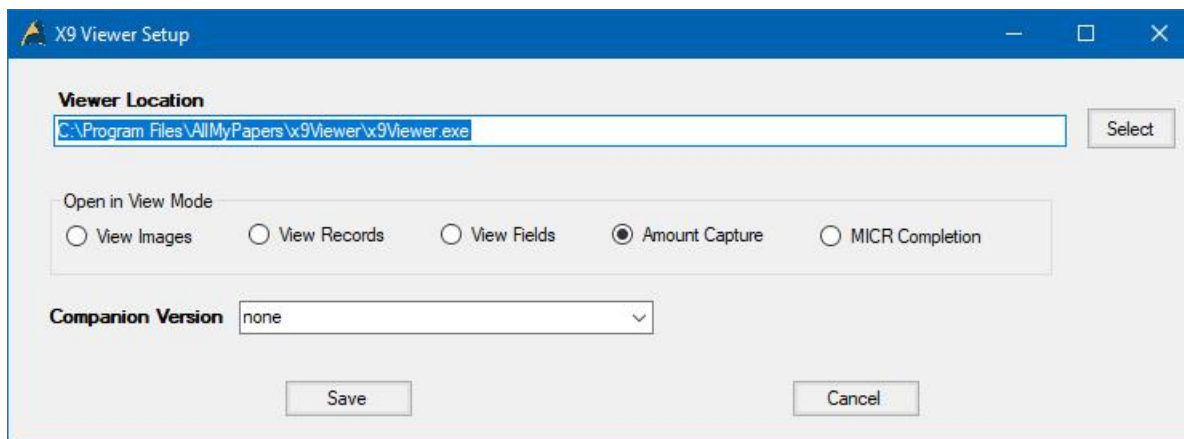
**Save Recognition Options** - Click the Recognition Options dialog's Save button to save your selections. Your choices will be written to the database and become part of the default settings for your user ID.

### 3.2.4 X9 Viewer Setup



Select **X9 Viewer Setup** from the Configuration Menu. A dialog will be displayed as shown below.

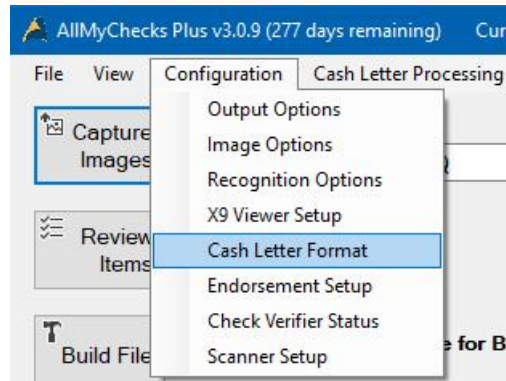
AMC+ can invoke the All My Papers X9 VIEWER application to view and edit ICL files after building an ICL file. The function requires an installation of the All My Papers X9 VIEWER Application. If the X9 VIEWER is installed in its default location, you need specify only the desired view mode. Otherwise, navigate to and select the path to the X9 VIEWER executable.



**Open in View Mode** - Here you can specify which viewing/editing panel will be active when you invoke the X9 VIEWER. This can be useful when for example, you use the X9 VIEWER to fill-in or edit dollar amounts after image processing. Selecting Amount Capture will cause the ICL file to open at the first item that does not contain a valid dollar amount for easy entry or editing.

**Companion Version** – Select which companion document version you want the Viewer to display and validate the ICL file.

### 3.2.5 Cash Letter Format



AMC+ may be configured to create ICL files for any bank proprietary Image Cash Letter format. Before you can configure AMC+ to produce such a file, you will need to obtain your target bank's companion document. You will also need business relationship-specific information such as the source and destination routing number, deposit account numbers and the like.

Armed with this information, All My Papers can guide you through the Cash Letter Format process.

The AMC+ Cash Letter Format Setup dialog is shown below.

**Cash Letter Format Setup**

Select Cash Letter Format: Standard Format with Record 61 Save

☒ Enabled Save As

Cash Letter Format Name: Standard Format with Record 61 Add

Immediate Destination Routing Number: 125100089 Cancel

Immediate Origin Routing Number: 123456780 Delete

Immediate Destination Name: Bank61

Immediate Origin Name: Origin61

Remove Records: 54,26,28

Remittance Coupon Routing Number: 999999992

☐ Is Canadian Format? Institution Routing Number (Canadian only):

☒ Add Credit Record

Destination Format: 27 ☒ Update Credit Image

Credit Account/On-Us: 1008961211 ☐ Include MICR Codeline

Credit Routing Number: 125100089 ☐ Summary includes Credit Item

Credit Account Name: Customer1 ☐ Summary Includes Credit Amount

Credit Sequence Number:  ☐ Include Record 26

[Front Image Template-Select](#): C:\Program Files\AllMyPapers\AllMyChecks\Co ☐ Include Record 28

[Rear Image Template-Select](#): C:\Program Files\AllMyPapers\AllMyChecks\Co

Credit Serial Number:

**Cash Letter Record Fields** [Add Record Field](#)

Record	Field	All Records?	After Conversion?	Cash Letter	Bundle	Item	Value	Save	Delete
10	11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				contact	<a href="#">Save</a>	<a href="#">Delete</a>

**Endorsement Fields (if payee endorsement is enabled)**

Payee Name: PAYEE NAME

Payee Account Number: 999999999

Branch:

Bank:

**Select Cash Letter Format** – Selects an existing cash letter format for review or editing.

**Enable/Disable this Configuration** – checking this box make the current cash letter format available on the main page of AMC+.

**Cash Letter Format Name** – Lets you add a descriptive name for the current cash letter format.

**Immediate Destination Routing Number** – This is provided by your bank and is used to populate Record 1, Field 4 for most cash letter formats.

**Immediate Origin Routing Number** – This is provided by your bank and is used to populate Record 1, Field 5 for most cash letter formats.

**Immediate Destination Name** – This is provided by your bank and is used to populate Record 1, Field 9 in most cash letter formats.

**Immediate Origin Name** – This is provided by your bank and is used to populate Record 1, Field 10 in most cash letter formats.

**Remove Records** – Used to modify the default set of included records specified by the destination selected Format (see Destination Format below). Enter one or more record numbers separated by commas.

**Remittance Coupon Routing Number** – If an item is detected as a coupon, and this routing number is provided, the item's routing number will be set to this value.

**Is Canadian Format?** – Checking this box enables entry into the adjacent Institution Routing Number field box. The institution RT is output in record 26 and 50 field 3. Record 26 field 9 is set to 'Y'.

**Add Credit Record** – Enables entry of all credit-record and virtual deposit slip related data items.

**Destination Format** – This is a two or three digit code provided by All My Papers after review of your target bank's companion document. Entry of the Destination Format causes AMC+ to generate ICL files with most or all of the records and fields required by your target bank's companion document.

**Credit Account OnUs** – Allows you to specify the OnUs portion of the virtual deposit slip MICR line.

**Credit Account Routing Number** – Allows you to specify the routing number portion of the virtual deposit slip MICR line.

**Credit Sequence Number** – If a destination format is specified, and this sequence number is provided, this number will be used for the credit record sequence number.

**Front and Rear Template Selects** – Lets you specify the paths to the graphical templates for the virtual deposit slip.

**Credit MICR Serial Number** – Lets you specify static contents for the serial number section of the virtual deposit slip MICR line.

**Update Credit Image** – Ensures that the total dollar amount and check item count of a deposit slip image is properly updated when building a cash letter.

**Include MICR Codeline** – Causes a MICR line to be printed on the deposit slip image.

**Summary Includes Credit Item** – Select this option if your bank requires that the ICL file summary records (Records 70, 90 and 99) include the deposit record/slip in the total item count.

**Summary Includes Credit Amount** – Select this option if your bank requires that the ICL file summary records (Records 70, 90 and 99) include the amount of the deposit slip in the total dollar amount of the ICL file.

**Include record 26/28** – Check these if your bank requires these records.

**Endorsement Fields** – These spaces allow you to establish defaults for the endorsement variables when endorsing check images. These defaults will be used in the endorsement definitions associated with this cash letter format when the payee name and account number are not available via the CA Engine nor a CSV file input.



**Cash Letter Fields** – This section allows you to override the default field level settings for cash letter creation. This is often necessary to meet the requirements of a particular bank's companion document.

**Add Record Field** – This link adds a new line item to the Cash Letter Records Fields window. The columns are described below.

**Record** – The record hosting the field you wish to modify

**Field** – The field you wish to modify

**All Records** – If checked, modify all occurrences of the field, else, modify only the first occurrence.

**Cash Letter, Bundle, Item** – Lets you target specific occurrences of the field by Cash Letter, Bundle and Item numbers.

**Value** – Value to be placed in the field. If value is to be blanked out, enter a space. To insert the current date, use \$DATE8 for yyyyymmdd format, \$DATE6 for yymmdd format, or \$TIME for HHMMSS.

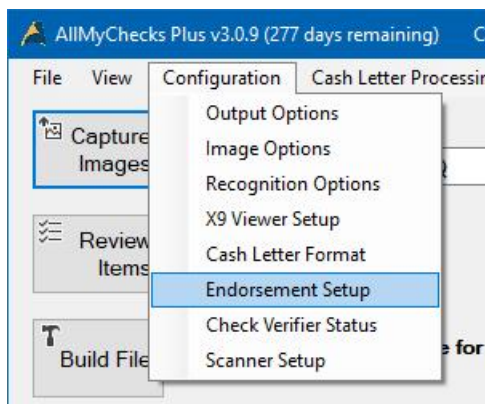
**Save** – Save the field definition currently being edited

**Delete** – removes the field definition

### 3.2.6 Endorsement Setup

AMC+ lets you define endorsements – think of them as electronic stamps that may be applied anywhere on the front or back of a check item. The primary use of this feature is to create deposit endorsement stamps. Endorsements can be defined using static text and/or text from a range of variables.

You can turn on endorsement stamping



Select **Endorsement Setup** from the Configuration Menu. The Endorsement Zone Setup dialog will be displayed as shown below.

Select Endorsement Zone: View: back, Zone: payee\_endorsement, Cash Letter Format: Standard Format Save Save As Add Cancel Delete

View	back	Bold?	<input type="checkbox"/>
Zone Name	payee_endorsement	Font	MS Reference Sans Serif
X	0.25	Font Size	10
Y	0.50	Justification	center
Width	2.00	Orientation	vertical
Height	0.60	Cash Letter Format	Standard Format

**Endorsement Zone Lines** [Add Zone Line](#) Valid tokens for replacement in line text field: %payee\_name, %payee\_account\_nbr, %branch\_id, %bank\_name

Line #	Line Text	Font Size	Bold	Save	Delete
1	For deposit to the account of		<input type="checkbox"/>	<a href="#">Save</a>	<a href="#">Delete</a>
2	%payee_name		<input type="checkbox"/>	<a href="#">Save</a>	<a href="#">Delete</a>
3	Account Number		<input type="checkbox"/>	<a href="#">Save</a>	<a href="#">Delete</a>
4	%payee_account_nbr		<input type="checkbox"/>	<a href="#">Save</a>	<a href="#">Delete</a>

**Select Endorsement Zone** – This drop-down menu lets you select an existing endorsement to edit. To create a new endorsement definition, click Add New

Endorsements are named based on their View (front or back of the check image plus their Zone Name which you can create or edit.

**View** – Select front or back to assign an endorsement to the front or back of the check item.

**Zone Name** – Lets you create a unique name for an endorsement.

**X and Y** – Sets the starting point (upper-left hand corner) in inches of the endorsement zone relative to the upper right hand corner of the selected view.

**Width and height** – Sets the width and height of the endorsement zone in inches. Regardless of how you define the content in terms of string length, font size, etc, the endorsement will not print outside of the defined area.

**Bold** – Check this box to cause the endorsement to print in boldface type.

**Font and Font Size** – Sets the default typeface for the endorsement

**Justification and Orientation** – Sets these parameters for the endorsement.

**Cash Letter Format** – Links this endorsement to a Cash Letter Format which does two things:

1. Makes this endorsement definition the one that will be printed when you select Add Payee Endorsement to Check Images in the Output Options dialog.
2. Makes the static data entered in the Endorsement Fields area of the Cash Letter Format dialog be the default data for endorsements when no data is available from either the CAR engine or the CSV list file.

**Add Zone Line** – Creates a new blank endorsement line that may be populated with explicit text or with one of 4 variables that carry check-item-specific data. The following replacement tokens can be used to insert specific values when the endorsement is created:

%payee\_name : inserts the payee name if detected via the CAR engine, or the payee name indicated on the cash letter format

%payee\_account\_nbr: inserts the payee account number if input via a CSV file, otherwise will use the payee account number specified in the cash letter format

%branch\_id: inserts the branch information input via a CSV file, or the branch specified in the cash letter format

%bank\_name: inserts the bank name specified in the cash letter format

- Endorsement line 1 in the previous illustration shows an example of explicit text
- Endorsement Line 2 in the previous illustration shows example shows the use of an endorsement variable.

**Font Size** – Enter a font size for the current line overriding the default setting for the endorsement definition.

**Bold** – Check or uncheck to control bolding for the current line overriding the default setting for the endorsement definition.

**Save** – save the endorsement zone line currently being edited.

**Delete** – delete the selected endorsement zone line.

**Save Button** – Saves the current endorsement definition.

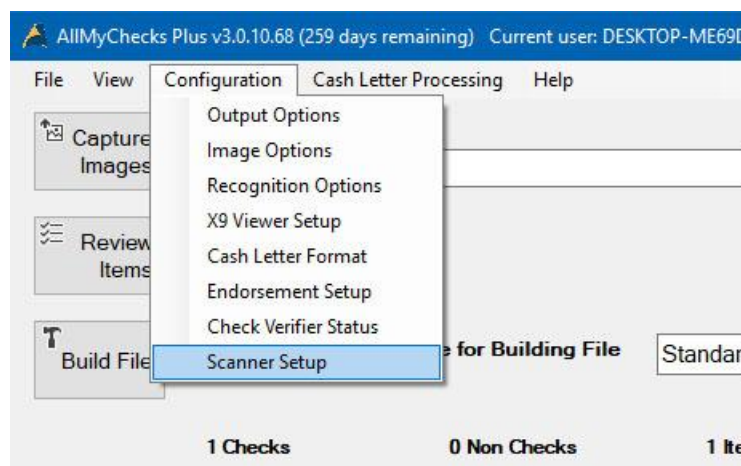
**Save As Button** – Saves the current endorsement definition with a new name.

**Cancel Button** – Abandons the current endorsement definition.

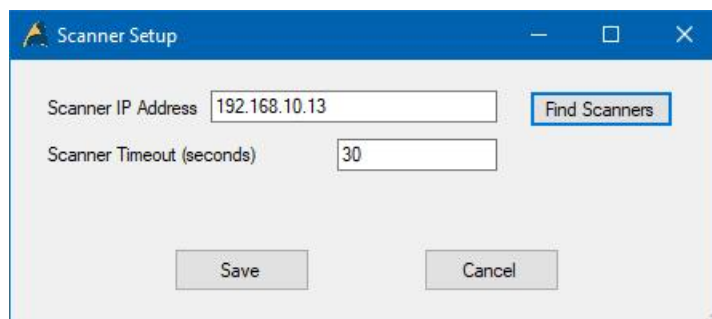
### 3.2.7 Check Verifier Status

Pings the All My Papers Cloud-based CAR/LAR verification service to make sure that the system is available.

### 3.2.8 Scanner Setup



AMC+ supports direct scanning of checks using the Panini mI:Deal Scanner. The Scanner Setup option will find mI:Deal scanners installed in your system or network and let you select it as the input source for check images. Selecting Scanner Setup brings up the Scanner Setup Dialog as shown below.



**Find Scanners** – Will search the local network by IP address and list any available scanners. Clicking on an available scanner selects it for use by AMC+.

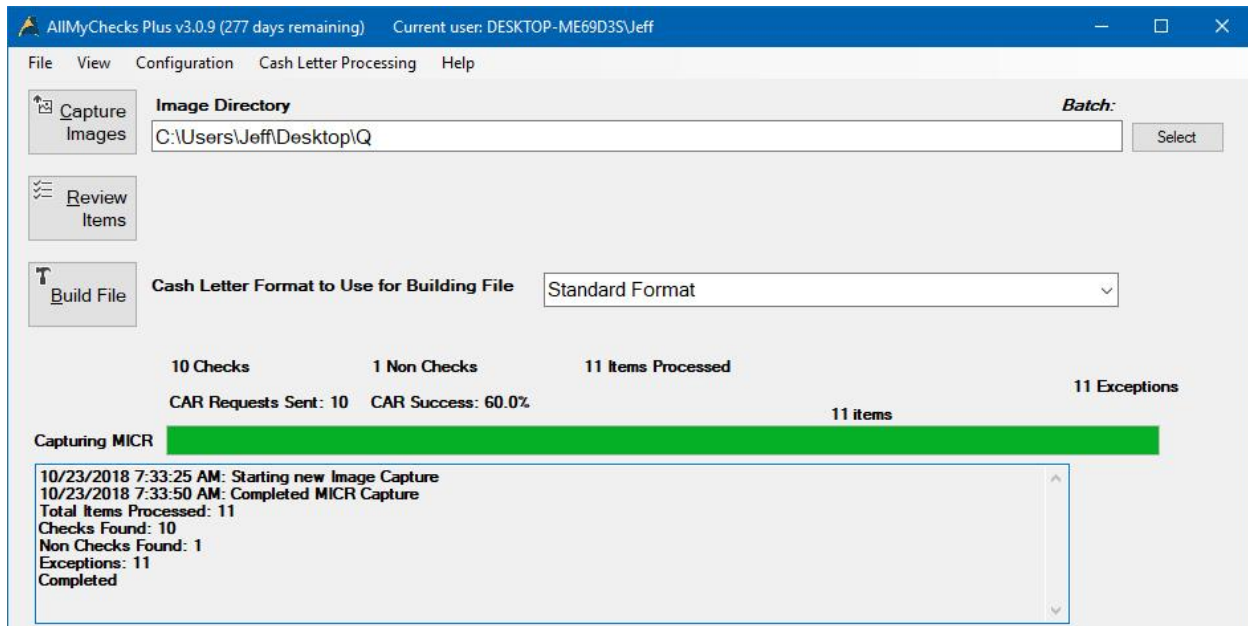
**Scanner IP Address** – If you know the IP Address of your Panini ml:Deal scanner, you can type it in here allowing you to skip the Find Scanners step which can take some time to run.

**Scanner Time Out** – Lets you specify how long AMC+ will wait after the previous check was scanned before it offers the user an opportunity to complete scanning.

**Save** – Saves the current setup.

**Cancel** – Abandons any changes you have made to the current scanner setup.

## 4 OPERATION



Once configured, AMC+ is ready for operation. The three steps of operation are:

**Capture** – Clicking the Capture Images button imports a batch of input documents, extracts check images, processes the check images for conformance with ICL file standards, and performs MICR and other data extraction in preparation for incorporation of the check images into ICL files.

Items that exhibit image quality assurance issues, items that do not appear to be checks and items that return low CAR/LAR or other data verification confidence levels are placed in the review queue.

**Review Items** – Clicking The **Review Items** button takes you to a screen that shows each open batch of check items with links to open the batch's review queue. The review queue lists items that do not meet IAQ standards for check items or that have missing or low confidence data. Drilling down into the item permits viewing front and rear images of the check item and editing of the extracted MICR line data and dollar amount for the item. Here you have options of exclude non-check items from the ICL file, edit the item's data, crop the Item's images and/or edit the MICR line and Dollar amount data as needed before accepting the item for incorporation into an ICL file.

**Build File** – Clicking the Build File button initiates building of an ICL file using items marked for inclusion in the batch or batches you select for this process.

### 4.1 Capture

Before you capture images make sure that AMC+ is pointing to the directory of input images you wish to capture by clicking on the Select button to the right of the Image Directory control and navigating to the desired directory. Please note the following:

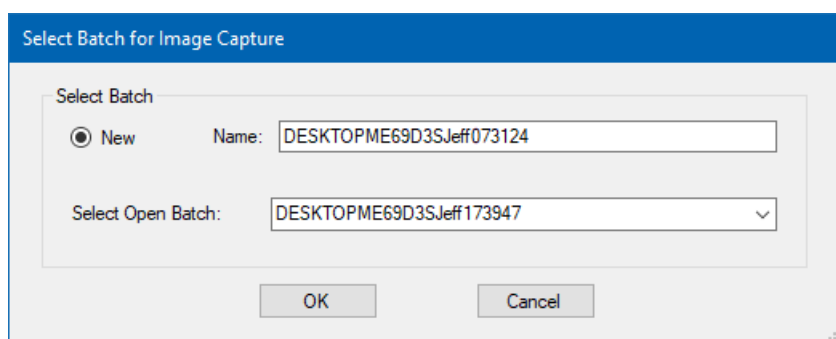
- If you are using the CSV list file, the text *Image Directory* will be replaced with *CSV Input List*. In both cases, the navigation process is the same.
- If you have selected Scanner in the Image File Options dialog then this is where AMC+ will pick up images and MICR data produced by the currently selected scanner.

Click Capture Images to begin image import and processing. You will be given the opportunity to add the new images to an existing batch or to create a new batch for the images to be captured. Batches allow you to separate groups of images for various purposes:

- For assignment to different users for review
- To keep separate, images being processed for various customers in a lockbox environment
- To keep separate, images being processed for deposit into different banks or bank accounts.

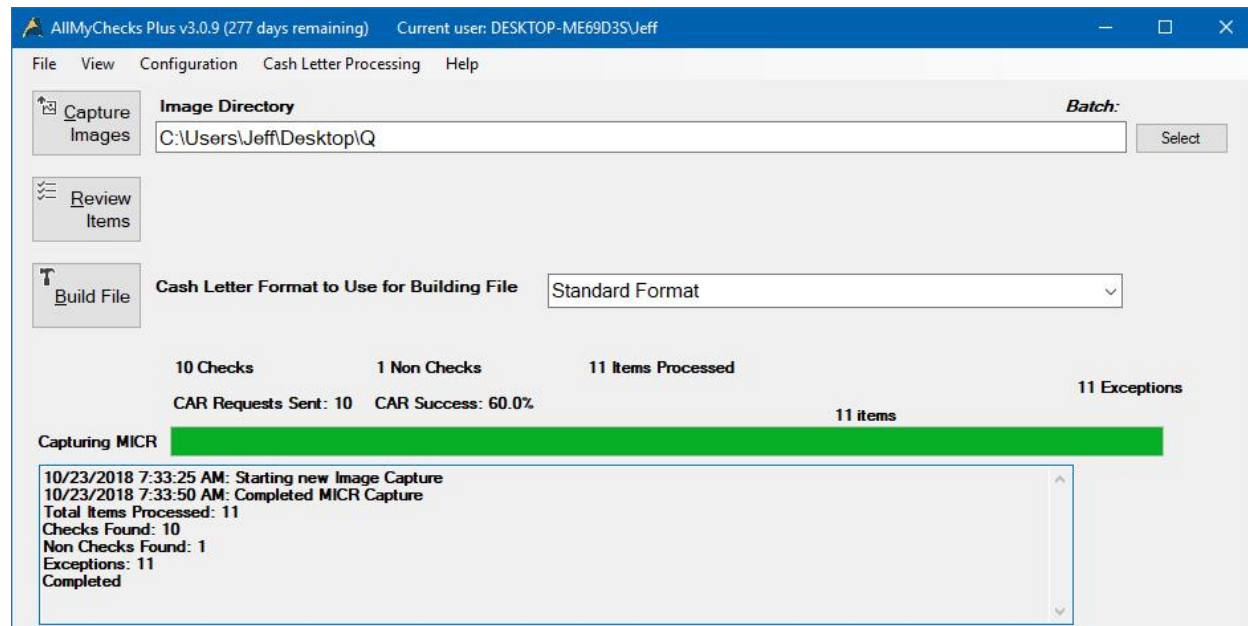
AMC has an automatic batch naming convention consisting of the computer and user names with the current time as HHMMSS appended to the end of the name.

You may want to create your own system of batch names that reflect some combination of operator, customer and bank or account name.



Clicking OK will then start the capture process.

During capture, a progress bar and progress statistics will be displayed as shown below.



When all images have been captured, a summary and completion message will be displayed in the lower portion of the window. That will look like this:

```
9/28/2018 7:08:02 AM: Starting new Image Capture
9/28/2018 7:08:26 AM: Completed MICR Capture
Total Items Processed: 19
Checks Found: 19
Non Checks Found: 0
Exceptions: 19
Completed
```

If you are using a check scanner for input capture then the scanner should be active and will accept hand-fed checks or will process all checks in the input hopper depending on the style of scanner you are using. When no checks have been scanned for the duration specified in the Scanner timeout setting of the Scanner Setup dialog, you will be asked if scanning is complete and you will have the option to end the Capture session or continue scanning.

## 4.2 Review Items

When the capture process has finished, the next step is to review exception items. The review process lets you view each exception item, make corrections to the item and mark it for inclusion into the ICL file or to mark it for exclusion from the ICL file. The categories of exception items include:

**IQA Errors** – This class of exceptions includes items that were not recognized as checks or items that are incorrect size, too dark or light, or missing a front and/or rear image.

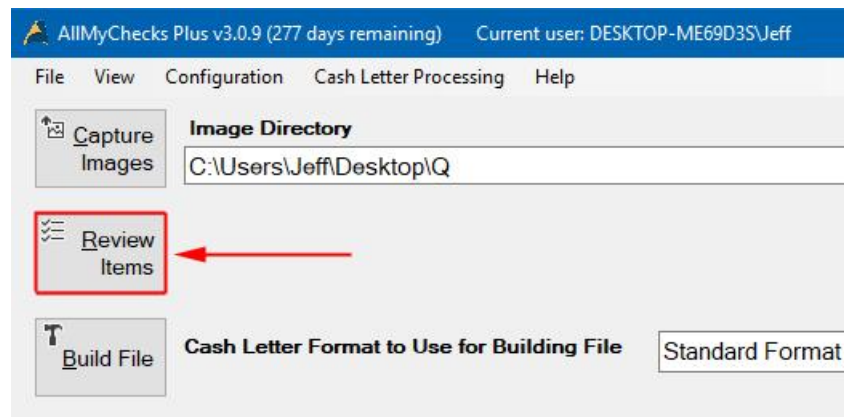
**MICR Errors** – Check items with one or more unreadable MICR line characters will be flagged as MICR exceptions and be presented to the reviewer for correction. If the confidence of the Micr read is below the user configurable threshold, the item will also be flagged as a Micr exception. If the Micr contains an amount and the amount does not agree with the amount determined by the Car engine, a Micr Amount Mismatch exception will result.

**Dollar Amount Error** – Items without a Dollar Amount or items returned with CAR Confidence values below the CAR Confidence Threshold set in Recognition Options Dialog (see Section 3.2.3 for details) will be flagged for review.

**Other Errors** – Any items with errors that do not fall into the previous categories will be showing in the Other Errors category. Other Errors include Duplicate Items within the database and within the current captured batch.

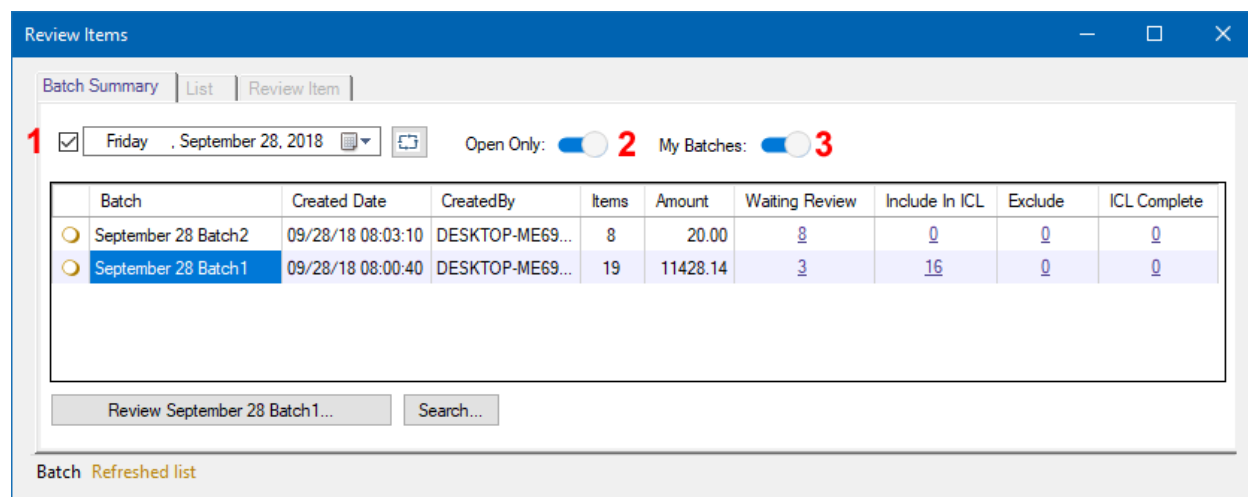
### 4.2.1 Begin Review

To start reviewing exception items, click the yellow Review Items button as shown.





This will open the Review Items window with the Batch Summary tab selected.



As shown, this window provides a number of options for filtering which batches are available for review:

- 1** The date filter provides a check box and a calendar control. Unchecking the box shows batches from all dates. Checking the box limits the display of batches to those on the date shown in the calendar control. The calendar control defaults to the current date. Clicking the small drop-down arrow in the control allows you to choose another date for available batch display.
- 2** The: Open Only switch filters for batches that have items waiting for review.
- 3** The: My Batches switch filters for batches that you (the current user) have created. This is applicable in multi-user installations.

For each available batch which is represented by a row in the table, the following information is displayed in columns. Clicking on a column label will sort the list of available batches by the data in a column. Clicking on the column label again will reverse the sort order.

- The batch name
- The batch creation date
- The name of the user who captured the batch
- The total number of items (this will include non-check items)
- The total Dollar amount of items captured and recognized as checks

The next four columns provide links to review items in the selected batch.

**Waiting Review** – Here you will find a number indicating how many items are in the waiting for review queue – these are all the items that fall into one or more of the exception categories described earlier. Clicking on this linked number will take you to the list of items waiting for review and disposition.

**Include in ICL** – This linked list will take you to all of the items that were captured and did not trigger one of the 4 categories of exception and are therefore presumed to be ready for incorporation into an ICL file. Once you review, correct and accept items in the Waiting Review queue, they will automatically be moved to the Include in ICL queue.

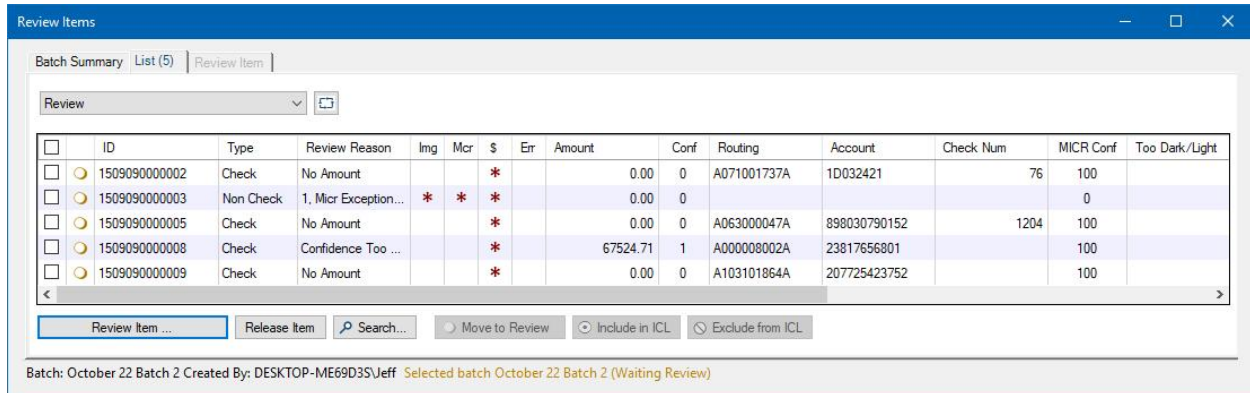
**Exclude** - this linked list takes you to all items that have been explicitly marked for exclusion from the ICL creation process by you or another reviewer.



**ICL Complete** – This linked list contains items from this batch which have been completely processed in included in an ICL file.

## 4.2.2 Waiting Review Queue

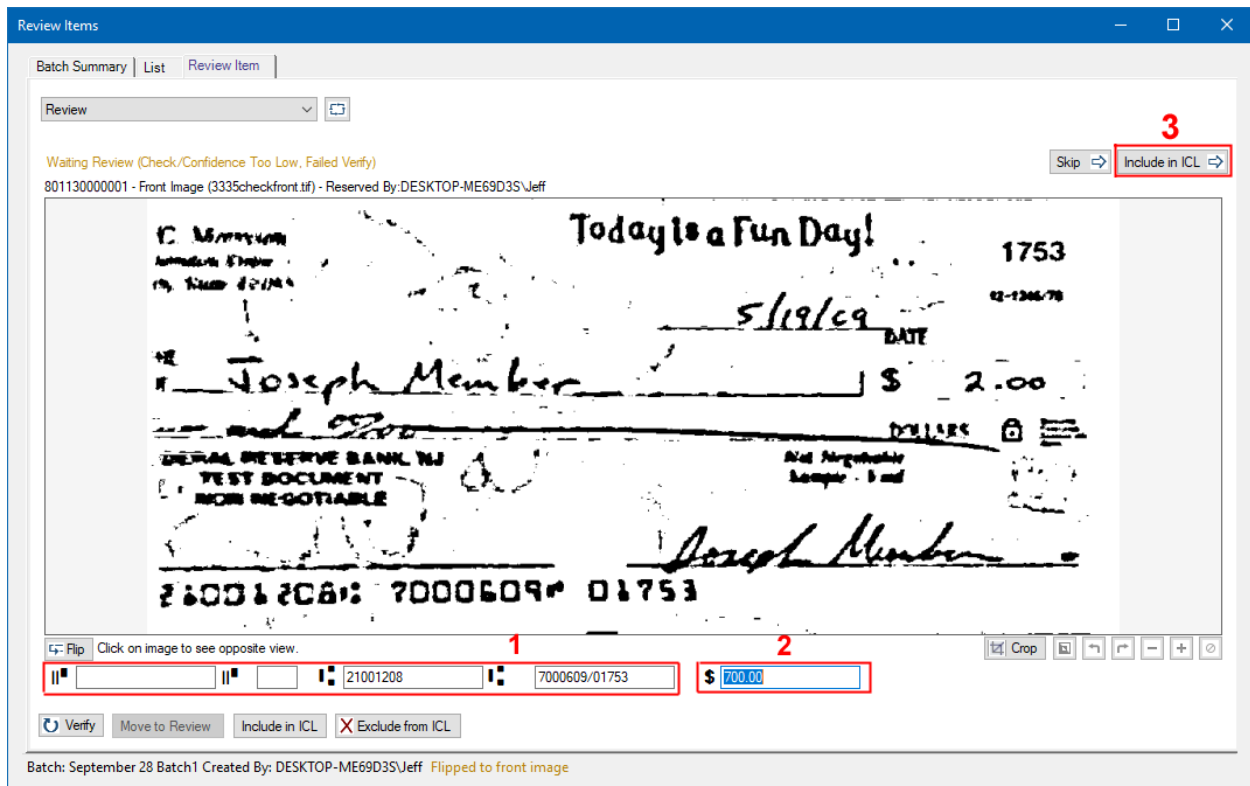
To review items in the Waiting Review queue, click on one of item quantity links in the Waiting Review column. This will open the queue in the List tab of the Review Items window as shown below.



This window lists each exception item, the reason(s) for review, and one or more categories of exception (denoted by the red plus marks) along with some of the specifics of the data captured for this image. As with the Batch Summary view, you can sort items by clicking on the column names.

## 4.2.3 Review a Check Item

Double-clicking on an item drills down to the Review Item screen as shown.



## Correcting MICR and Dollar Amounts

In the illustration above, a check item is shown along with the associated capture MICR and Dollar amount data. In this window, you can compare the MICR and Dollar amount captured by the MICR/CAR/LAR recognition engines (1 and 2) with the actual values written/printed on the check image. If discrepancies are found, corrected values may be typed-in. When correction is complete, click the 'Save' button to save changes, and then click the include in ICL button in the upper right corner of the window to accept the item, move it to the Include in ICL queue and display the next exception item.

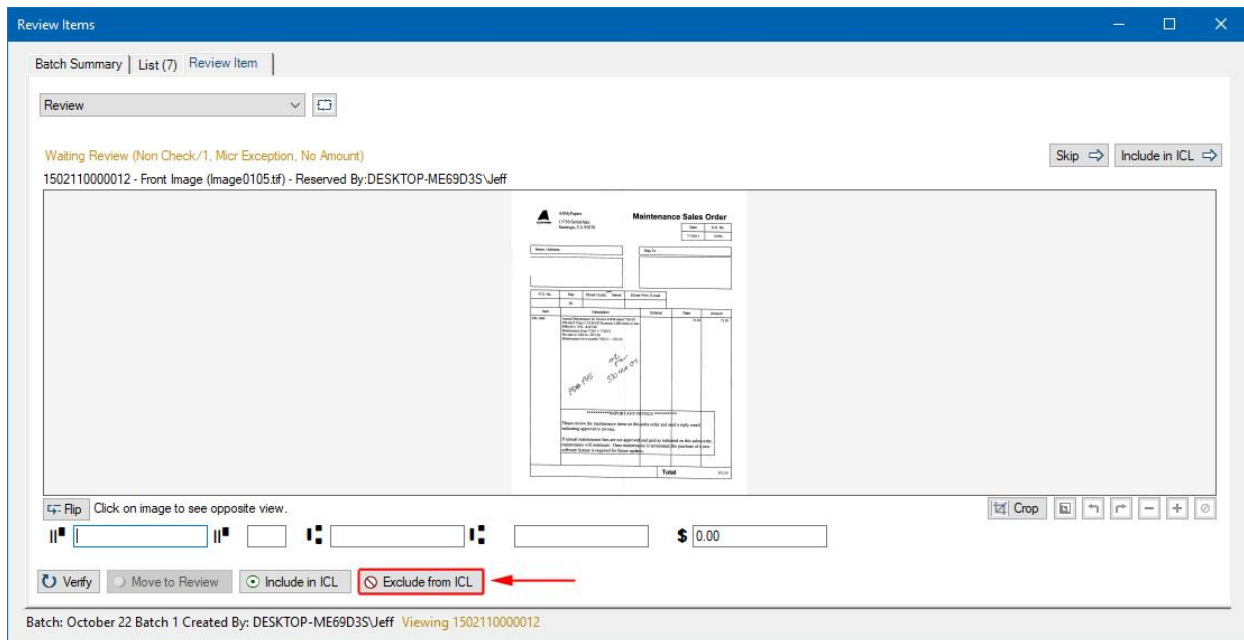
@@@@@

An item can be sent to the analysis engine(s) by clicking the Verify button. This will send the item to the recognition and CAR engine and the results of the analysis will update the item status.

If the image quality is unacceptable, an item may be rescanned by pressing the Rescan button. The scanner setup must be completed in order to successfully use this feature.

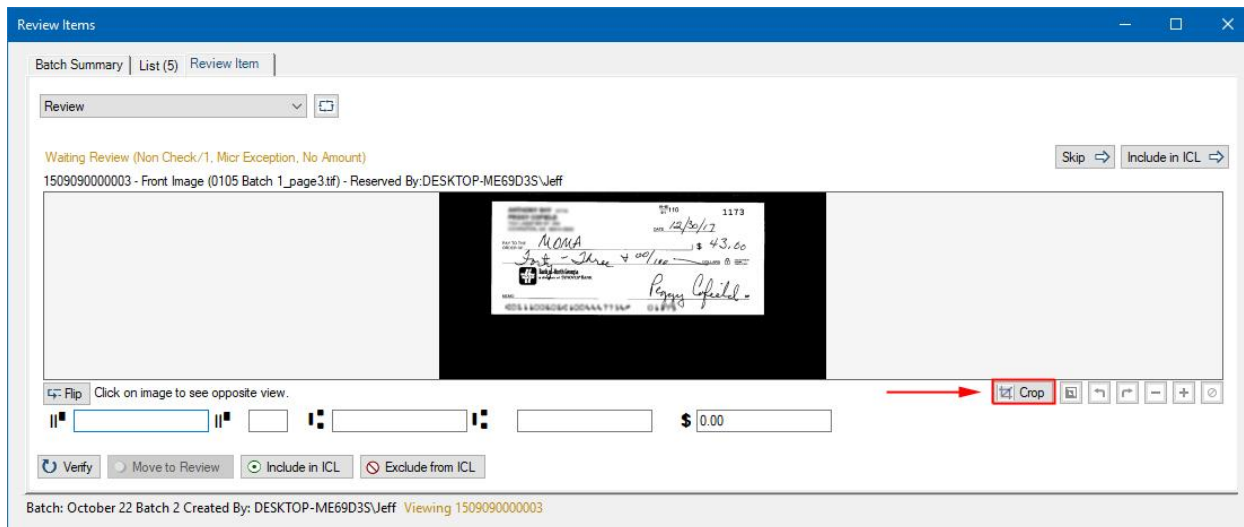
## 4.2.4 Review a Non-Check Item

Some items will be marked as non-checks. An item may be marked as a non-check either because there is no check in the image or because there is a check but it is not recognized as such because the MICR line is unreadable. Double Clicking a non-check item again opens the review screen and displays the item. The item shown below is indeed a non-check item and therefore should not be included in an ICL file. Exclude the item by clicking on the Exclude from ICL button as shown and then clicking on the Next button.



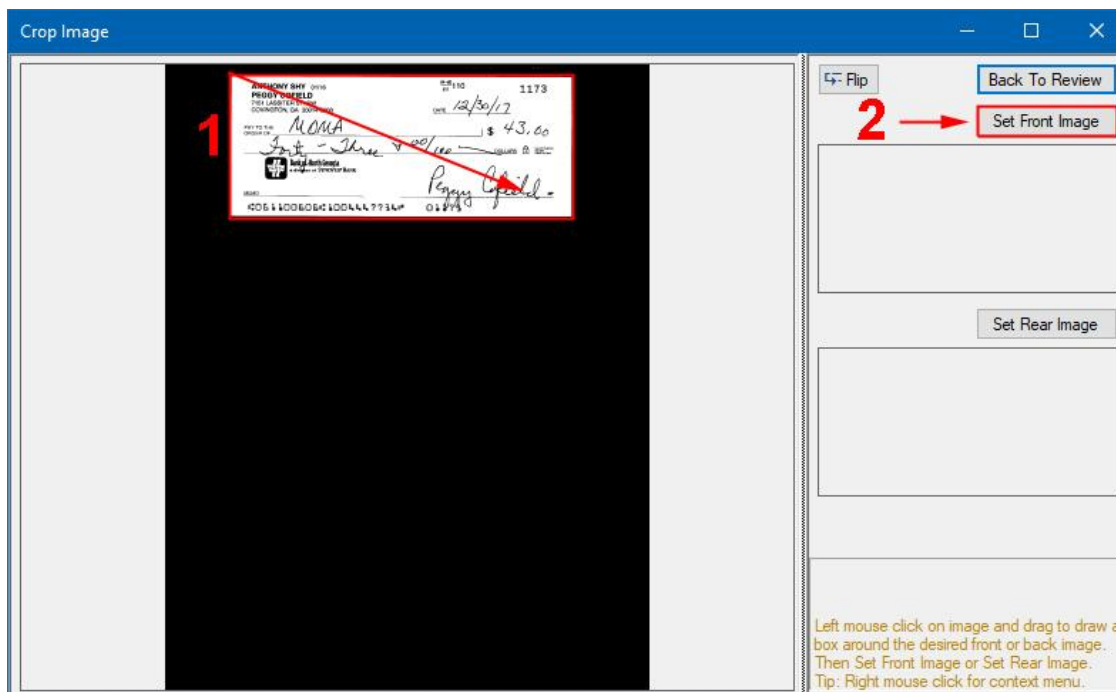
## 4.2.5 Review a Check Marked as a Non-Check Item

In the example below, a check item is marked as a non-check either because its resolution was too low or because the MICR line was occluded by an image artefact such as a signature. When the MICR line cannot be read by the MICR OCR engine, even though a check image is present, AMC+ will be unable to crop the image to the check boundaries. You may be able to recover this item using the following procedure.



**Crop the Image to Check Boundaries** – Clicking the crop button brings up the Crop window shown below. Now:

1. Left-click and drag across the check image boundaries to define the crop area, and;
2. Click the Set Front Image button.



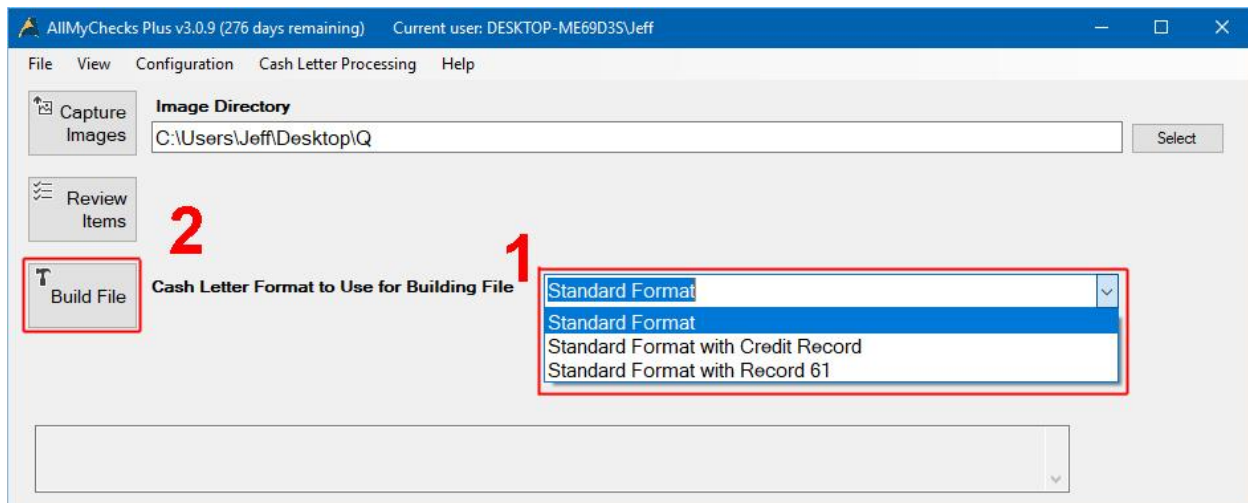
You will be returned to the Item review screen as shown below with the check item now properly cropped.

Here you can:

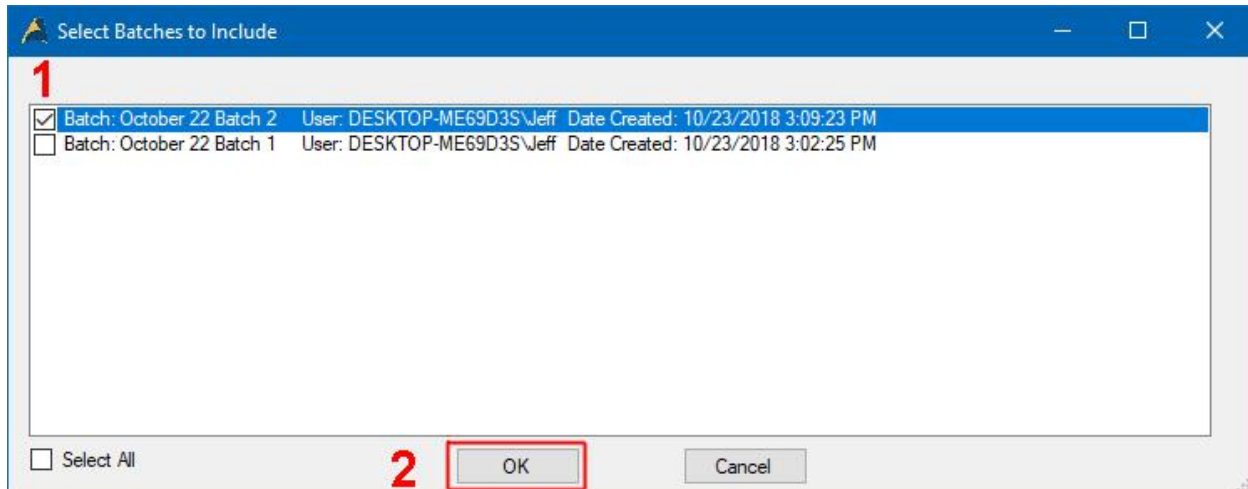
- ### 4.3 Build ICL File

From the main screen:

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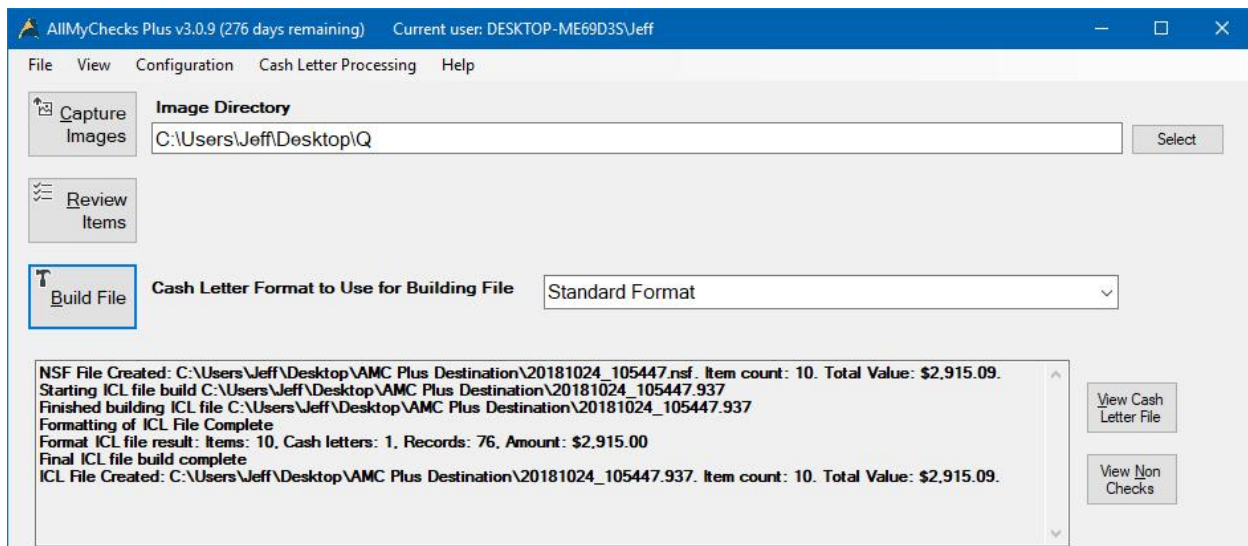


You will be presented with a list of all batches containing items that are ready for incorporation into ICL files as shown below.



1. Click in the checkboxes for the batch(es) you wish to process.
2. Click the OK button.

AMC+ will display progress in the message box as shown below.



When the ICL file build is complete the View Cash Letter File and View Non Checks buttons will be available.

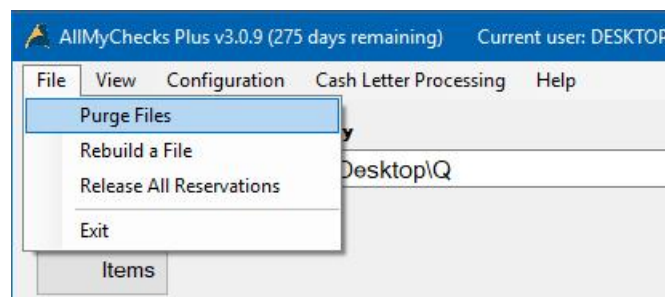
**View Cash Letter File** – Opens the most recently created ICL file in the All My Papers X9 Viewer if it is installed.

**View Non Checks** – Opens a folder window for the nonchecks.data folder within the designated AMC+ destination folder so that you can view non-check images from the most recently processed batch.

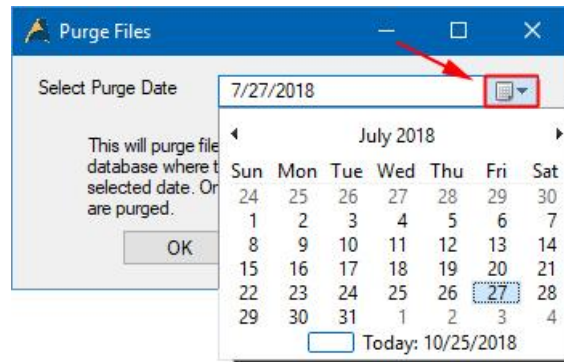
## 4.4 File Menu Options

The File menu provides several maintenance options.

### 4.4.1 Purge Files



Use this option to remove completed batches and associated database records for items that have cleared processing through the banking system. We recommend retaining items/files for at least 90-days so that if items are resubmitted, they are flagged by the AMC+ duplicate detection feature in the review process. Selecting Purge Files from the File menu brings up the dialog shown below.



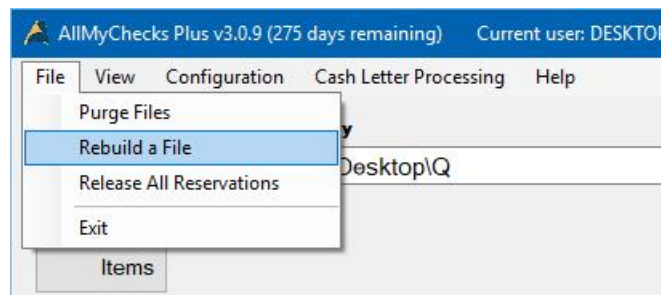
The default purge date will be 90-days in the past meaning that, if accepted, files and items older than 90-days will be removed from the database.

Clicking on the calendar drop-down (red outline) brings up the purge selection date calendar. Use this control to select a purge date other than 90-days in the past.

#### Notes

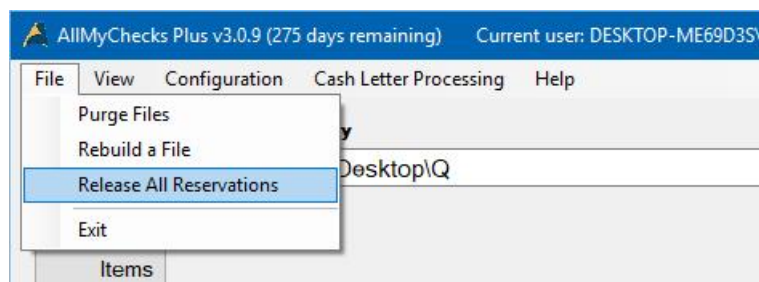
1. In multiuser environments, only files and items created by the current user will be removed.
2. You may not remove files or batches created on the current date.

### 4.4.2 Rebuild a File



Any file currently in the database can be regenerated by selecting this option. A new file will be created with a new name.

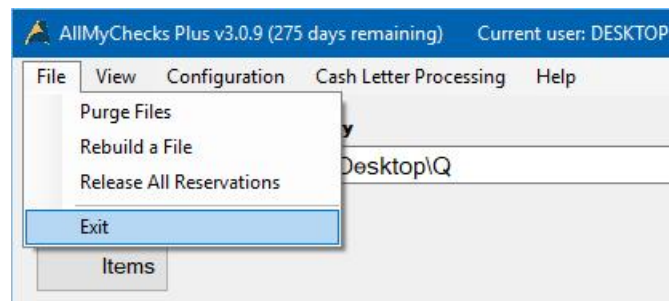
### 4.4.3 Release All Reservations



In a multi-user installation of AMC+, 2 or more users may have access to the same pool of items waiting for review. When a user opens an item in the review window, it is locked so that no other user may modify the item at the same time. If an item is abandoned by a user e.g. the user closes the review window without saving the open item, the item could become locked. The Release All Reservations allows a user to release any such locks on his or her items.

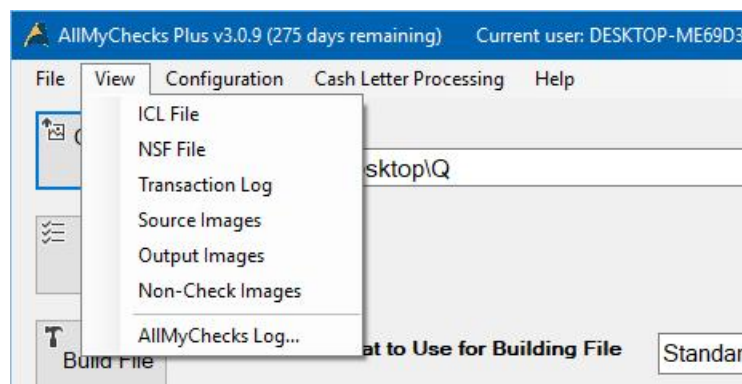


#### 4.4.4 Exit



**Exit** - Closes AMC+.

#### 4.5 View Menu Options



**ICL File** - Opens the most recently created ICL file in the All My Papers X9 VIEWER application if installed.

**NSF File** - Opens the most recently created NSF file in the default text editor - usually Notepad. An NSF file is a text file used by AMC+ when building ICL files and contains all of the textual data for the ICL file.

**Transaction Log** - Views the most recently created Transaction Log file in the default spreadsheet program. See Appendix D for details of this file.

**Source Images** - Opens a Windows folder containing the input images

**Output Images** - Opens a Windows folder containing the output images

**Non Check Images** – Opens a folder window for the nonchecks.data folder within the designated AMC+ destination folder so that you can view non-check images from the most recently processed batch.

**All My Checks Log...** - Opens a database window with a recent history of events, processing actions and errors.

#### 4.6 Cash Letter Processing Options

This option provides a utility to merge and convert cash letter files.

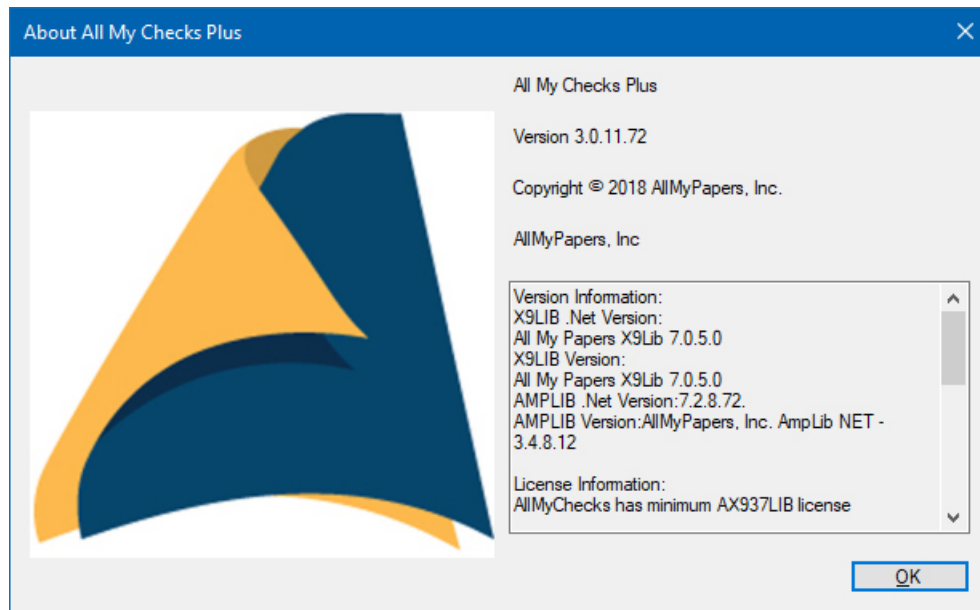
#### 4.7 Help Menu Options

The help menu has two options

**License Agreement** – Displays the All My Checks Software License Agreement



**About** - The About box displays version and licensing information for your installation of All My Checks.



## APPENDIX A - LIST FILE DETAILS

List files are Comma Separated Value (CSV) files that may be employed to provide additional data not supplied through the GUI or by the All My Papers Cloud-based CAR/LAR service. A list file may contain front and back check image file locations and names, dollar amount, MICR line data and assignable sequence or reference numbers. Below is some typical list file data:

```
C:\AllMyChecksDemo\Image0001.tif,C:\AllMyChecksDemo\Image0002.tif,0,,1001,John B. Goode,1234567812345678,12345
C:\AllMyChecksDemo\Image0003.jpg,C:\AllMyChecksDemo\Image0004.jpg,100,,1002,John B. Goode,1234567812345678,12345
C:\AllMyChecksDemo\Image0005.jpg,C:\AllMyChecksDemo\Image0006.jpg,13,,1003,John B. Goode,1234567812345678,12345
C:\AllMyChecksDemo\Image0007.jpg,C:\AllMyChecksDemo\Image0008.jpg,150.65,,1004,John B. Goode,1234567812345678,12345
```

### Uses for List Files

List files are useful when any of the following conditions exist:

- When check image files have arbitrary locations or names
- When you have access to item dollar amount and/or MICR line data which can be customer entered or extracted using OCR/CAR/LAR in a front-end process prior to AMC+.
- When you need to append a sequence or reference number to each item.
- When you will use a single ICL file to deposit items into multiple Payee accounts.

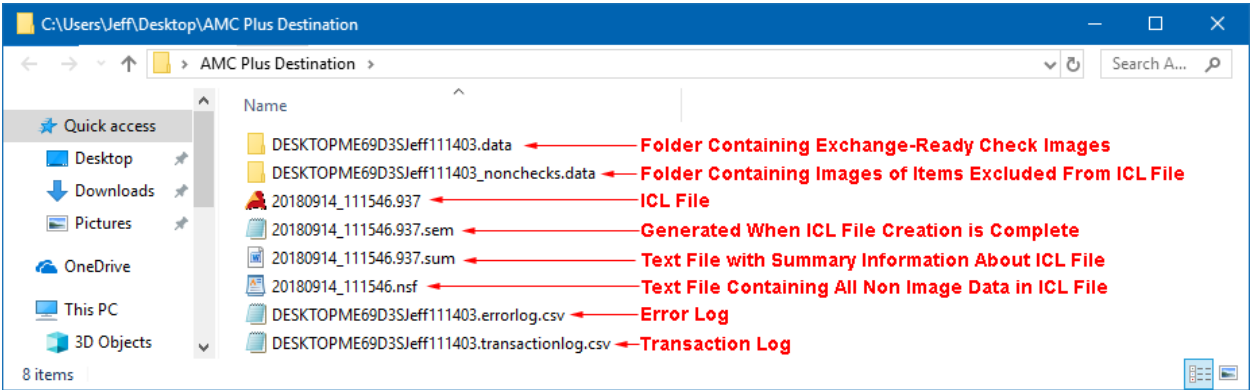
### File Layout

Data for each item are separated by commas and items are separated by carriage returns.

Field	1st	2nd	3rd	4th	5 <sup>th</sup>	6 <sup>th</sup>	7th	8th
Contents	Path and file name for front of check image	Optional Path and file name for back of check image	Optional Dollar amount	Optional MICR line data	Optional sequence or reference number	Optional Payee Name	Optional Payee account number	Optional Deposit Branch ID
Formatting requirements			Digits only, decimal point optional, no more than 2 digits to the right of DP	Digits and MICR Symbols: A – Transcode symbol B – amount symbol C – ONUS symbol D – Dash symbol				
Max character length			99999999.99		15	15	18	5
Comment	Can be Multipage TIFF file containing front and back pair or multiple items.		If not entered, then you will need to obtain using CAR/LAR or hand enter during the Review step.	If not entered, All My Checks will supply using it internal OCR engines	If entered, will populate (record and field ID) in output ICL file.	If entered will populate this information into the BOFD record (Record 26). Will also use this information for the Payee Endorsement (if used)		If entered will populate this information into the BOFD record (Record 26).

## 5 APPENDIX B – OUTPUT FILE SUMMARY

The illustration below summarizes the output files generated by AMC+.



## APPENDIX C - THE TRANSACTION LOG

A CSV formatted Transaction Log file generated by All My Checks for each processing run and is placed in the output directory. It may be opened and viewed in a spreadsheet program and contains the following information for each document or check item processed. The file is arranged with each document or check item occupying one row. An overview of the columns are detailed in the following table.

Column	Title	Comment
1	Item Id	Unique identifier of each item as stored in the database
2	Batch Id	Unique identifier of batch as stored in the database
3	Item Date	Date of check
4	Date Added	Date added to database
5	Sequence Number	Assigned sequence number of item
6	Front Image Path	Location of front input image
7	Front Image Index	Page number where image is located if multipage file
8	Rear Image Path	Location of rear input image
9	Rear Image Index	Page number where image is located if multipage file
10	Micr line	MICR line data extracted from front image
11	Scanner Micr Line	MICR line data extracted from front image by scanner if using
12	Amount	Dollar amount if captured. Set to 0 if not captured.
13	Routing Number	
14	Account	
15	Check Number	
16	Aux On Us	
17	On Us	
18	Epc	
19	Item Type	Code indicating check, coupon, non-check
20	Item Status	Code indicating current item state (captured, waiting review, waiting to be written to ICL, Excluded from ICL, Written to ICL)
21	Branch	If input via CSV file
22	Serial	If detected from CAR engine
23	Payee Name	If detected from CAR engine
24	Payee Account	If input via CSV file
25	Payor Name	If detected from CAR engine
26-33	Image Analysis Data	From AmpLib recognition
34-37	Focus Codes	Codes indicating image quality results
38	Duplicate Id	Item Id of duplicate item if detected
39	Review Date	Date item was reviewed
40-172	CAR engine Analysis Data	From CAR Engine
173	Review User Id	Id of user that reviewed item
174	Last Access User Id	Id of user last updating item
175	Error Message	If item caused an error, details of condition

## APPENDIX D - BUILDING A CUSTOM RECOGNITION STRING

"A" uses a more advanced cropping approach for mobile captured items

"T" instructs the function to test and correct for trapezoidal shape errors in the check images (Do not use with the "A" option)

"M=nn" Sets the MICR OCR character confidence level to "nn". "nn" is a value set from 01-99. Characters with a read confidence level below this value will be output as a reject symbol ("\*\*"). The recommended value is "85".

"R" instructs the function to rotate 180 and reread the check if a MICR codeline is not found on the first attempt.

"B" instructs the function to leave blanks in data.

"Q=#" Sets the Resolution detection method.

"#=0" detects the resolution

"#=nnn" uses resolution value of nnn.

"#=-n" uses resolution value in image header

"I" instructs the function to apply image repair filters to output images if used during recognition

"O=nnn" sets the minimum resolution that AMC will accept an item for processing