



## **User's Manual/Quick Reference Guide**

for

Computer Readable Form/Checker Version 4.4.0  
(CRF4/Checker)

Revision F

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### Record of Changes

Revision	Date	Pages Affected	Type of Change
	6/20/02	Throughout	Initial issue under Task Order 02-23.
A	10/7/03	Cover page, TOC, ROC, page 1-1 and page 2-1.	Updated software revision to 4.2.
B	9/15/04	Cover, ROC, and throughout. Pages 3-1, 3-2, and 3-9.	Update for CRF/Checker 4.3.1. Updated screen shots.
C	5/11/05	Cover and ROC  B-2	Updated revision reference from B to C. Updated message #310 content. This LMCO release did not go through QA.
D	5/18/05	Cover, ROC, and throughout.	CRF/Checker 4.3.1 updated the error message. Delete reference to Windows 95, 98, and ME.
E	5/27/05	Cover, ROC, 1.1, 2.2, 3.1 & 3.2.8	Updates from the SDM for 4.3.1
F	10/18/05	Cover, ROC, and throughout	Updated message #251 in Appendix B-2, Updated pictures for Figures: 2-1, 3-1, 3-2. Updated Version from 4.3.1 to 4.4.0 in the document.



## SECTION 1 TELL ME ABOUT CRF/CHECKER

### 1.1 Overview

The Computer Readable Form/Checker Version 4.4.0 (CRF4/Checker 4.4.0) system is a state-of-the-art Windows software program employing a logical and intuitive user interface to validate and convert patent applications to be compliant with 37 Code of Federal Regulations (CFR) 1.821 – 1.825 for both ‘old rules’ (October 1990) and ‘new rules’ (July 1998). CRF4/Checker replaces the previous DOS-based versions of CRF and Checker.

CRF4 is a patent application receipt system developed by the United States Patent and Trademark Office (USPTO) that reads, verifies, and validates electronic submission data from patent applicants prior to transmission of submitted sequence listings for incorporation into the Automated Biotechnology Sequence Search (ABSS) database of pending application files. Checker allows public users to check sequence listings before submitting them to the USPTO.

### 1.2 Features






The key features of the CRF/Checker system are listed below:

- Edit File – Allows the user to edit the sequence listing file.
- Process File – Allows the user to validate the sequence listing file and check for errors.
- View Errors Report – Allows the user to view a list of all errors encountered during the file processing.
- View Verification Summary Report (VSR) – Allows the user to view a report summarizing the verification process.

### 1.3 Conventions for this User's Manual

Consistent visual cues and standard keyboard operations are used throughout this manual. These conventions are listed in Table 1-1.

*Table 1-1 Manual Conventions*

Notation	Represents	Example
	Process the command with a mouse action.	 Select <b>Open</b> from the file menu.
	Process the command with the keyboard.	 Type changes into the <b>Edit</b> field.
<b>Bold type</b>	Name of a function, file, menu item, or programming construct.	 Click on <b>Exit</b> .



## SECTION 2 GETTING STARTED

### 2.1 Software Version

The software version of CRF/Checker covered in this user manual is identified as follows:

- *CRF/Checker 4.4.0*

#### 2.1.1 Getting the Software

To get the Checker software:

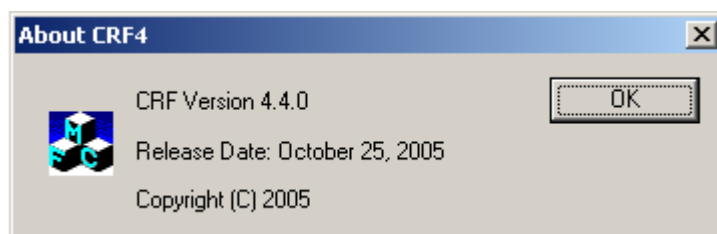
- Download Checker Version 4.4.0 software for Windows NT/2000/XP Personal Computers (PCs) [file size 1.31 MB] from the USPTO Web site, or

Purchase a diskette from the Catalog of Patent & Trademark Products & Services section of the General Information Home Page.

#### 2.1.2 Checking the Version

If you are currently running the CRF/Checker software, but do not know the version number of the software, follow these steps:

☞ Click Help or select Alt-H on the keyboard to view the Help Menu. ☞ Click **About Checker** to view the About dialog box (Figure 2-1). The About Checker dialog displays the version number and release date of the installed Checker application, as well as copyright information. The USPTO will periodically update Checker and the current version and release date will be displayed on the USPTO Web site at the following Uniform Resource Locator (URL): [www.uspto.gov/patents/software.htm](http://www.uspto.gov/patents/software.htm).



*Figure 2-1 About Checker Dialog Box*

### 2.2 Checker System Requirements

Checker Version 4.4.0 is a state-of-the-art Windows-based software application used for checking biotechnology sequence listings for compliance with format and content rules. Checker validates sequence listings generated for the original version of 37 CFR 1.821 – 1.825 effective October 1, 1990 (old rules) or the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 4.4.0 replaces the previous Microsoft Windows and DOS-based version of Checker. This version executes on the newest operating systems, Windows New Technology (NT), Windows 2000 and Windows XP. Checker allows public users to check sequence listings



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in CRF before submitting them to the USPTO. Use of Checker prior to filing the sequence listing is expected to result in sequence listings with fewer errors, thus saving time and money.

Checker can run on any personal computer that uses Windows NT, Windows 2000, or Windows XP. The recommended memory requirement for the Checker workstation is a minimum of 64 megabyte (MB) Random Access Memory (RAM). Disk space provided should be a minimum of 10 MB for temporary storage of the unzipped setup and installation program files. In addition, disk space must be allowed for user input files and Checker output reports (a total of twice [2X] the input file size.) To save space, setup files (6MB) can be deleted after the installation of the Checker application.

### **2.3 Access Information**

To access Checker,  click the **Checker** icon on your desktop.



## SECTION 3 HOW DO I ...?

### 3.1 Start Process

When you open the Checker application, the **Welcome** window, shown in Figure 3-1, displays. This window identifies the application and displays copyright information for the software.

Click  to work in the Checker application.



*Figure 3-1 Checker Welcome Window*











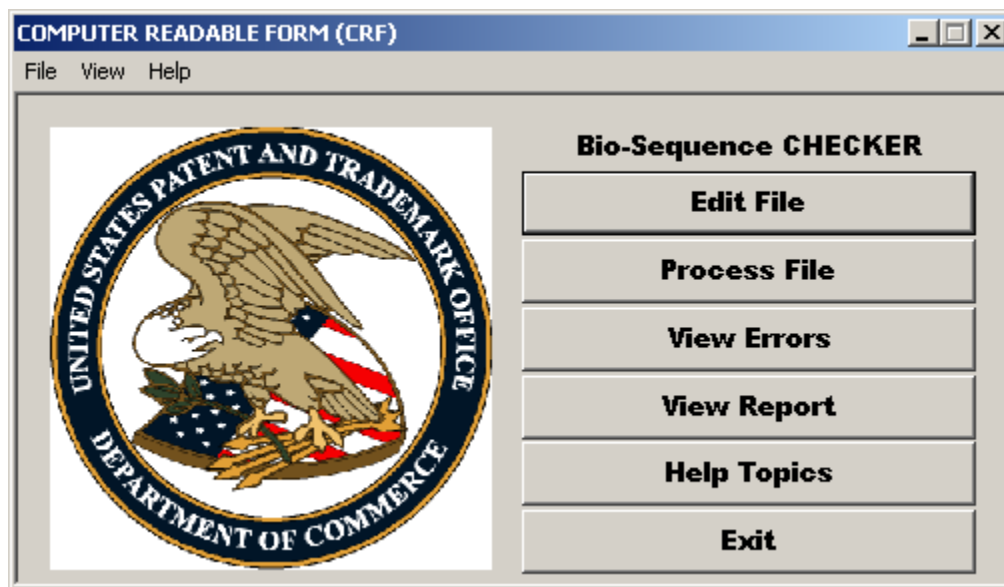
### 3.2 Work Process

When you open the Checker application, the Checker **Main Menu** window, shown in Figure 3-2, automatically displays.

The Checker Main Menu includes the following six buttons:

-  **Edit File**
-  **Process File**
-  **View Errors**
-  **View Report**
-  **Help Topics**
-  **Exit**

These buttons are discussed in more detail in Sections 3.2.1 through 3.2.6.

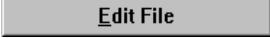


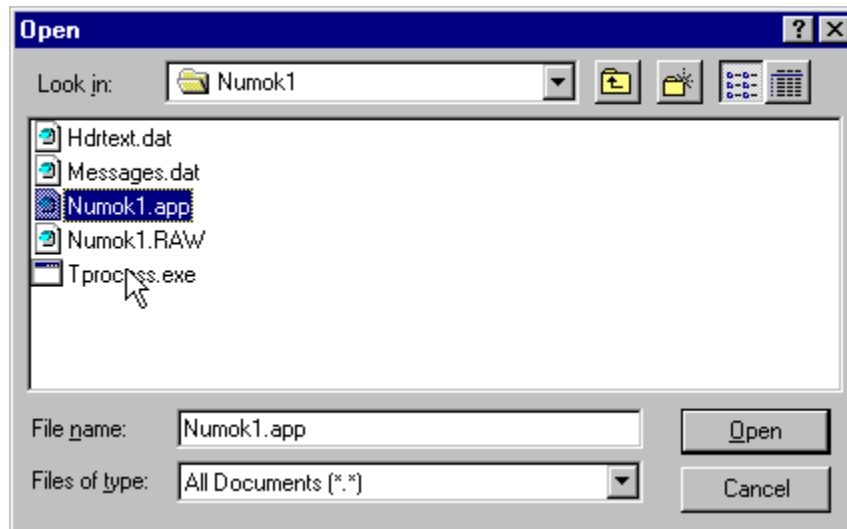
*Figure 3-2 Checker Main Menu Window*




### 3.2.1 Checker Edit File Button

#### To edit a file before running 'Process File':


1. Click  on the Checker **Main Menu**.
2. The WordPad document window displays. Select **File** and then **Open** from the **Main Menu**.  
The **Open** dialog box displays (Figure 3-3).



*Figure 3-3 Checker Edit File Open Dialog Box*

3. Click on the file to be edited.
4. Click .  
The file is opened in either Wordpad or the user's default editor.

#### To edit a file after running 'Process File':

1. Click  on the Checker **Main Menu**.
2. The WordPad document window displays the input file that was last processed (Figure 3-4).

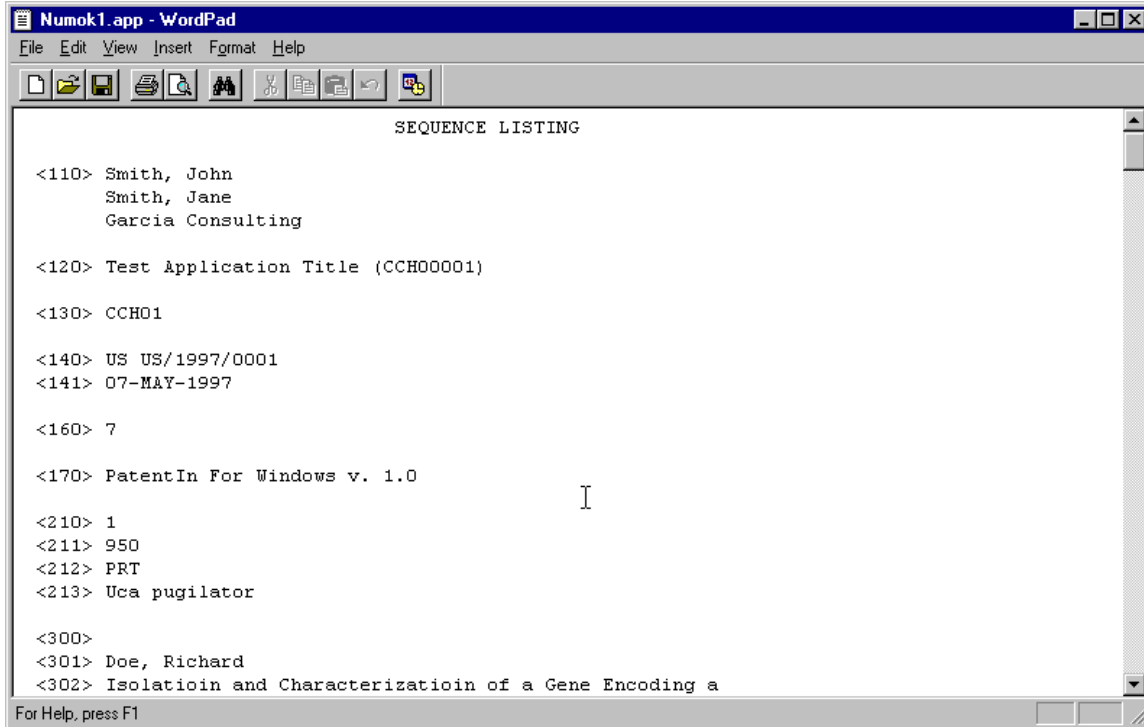


Figure 3-4 Checker Edit File Opened in Wordpad

3. Edit file and save.

### 3.2.2 Checker Process File Button

#### To process a file:

1. Click  on the Checker Main Menu. The **Open** dialog box displays (Figure 3-5).



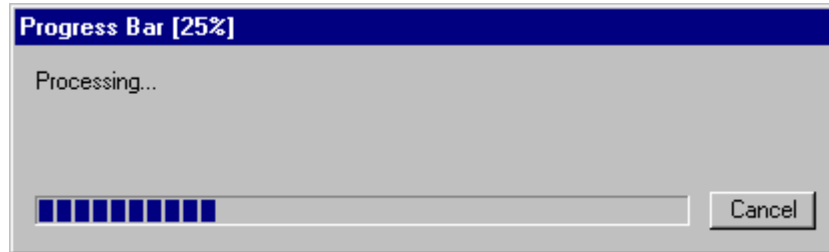
Figure 3-5 Checker Process File Open Dialog Box



2. Click on the file to be processed.

3. Click .

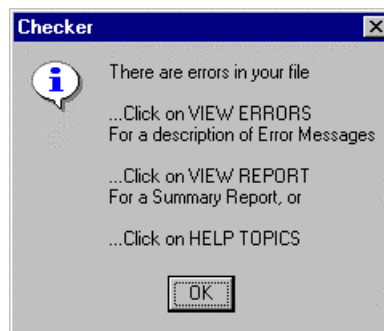
The **Progress Bar** dialog box displays (Figure 3-6).



*Figure 3-6 Checker Progress Bar Dialog Box*

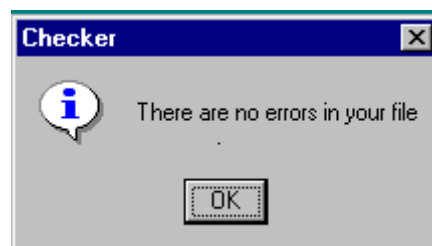
4. The Progress Bar dialog box closes when validation is complete.

If there are errors in the file, the **There Are Errors in Your File** dialog box displays (Figure 3-7).



*Figure 3-7 Checker There Are Errors in Your File Dialog Box*

5. If there are no errors in the file, the **There Are No Errors in Your File** dialog box displays (Figure 3-8).





*Figure 3-8 Checker There Are No Errors in Your File Dialog Box*

6. Click on either dialog box.

The Checker **Main Menu** displays.



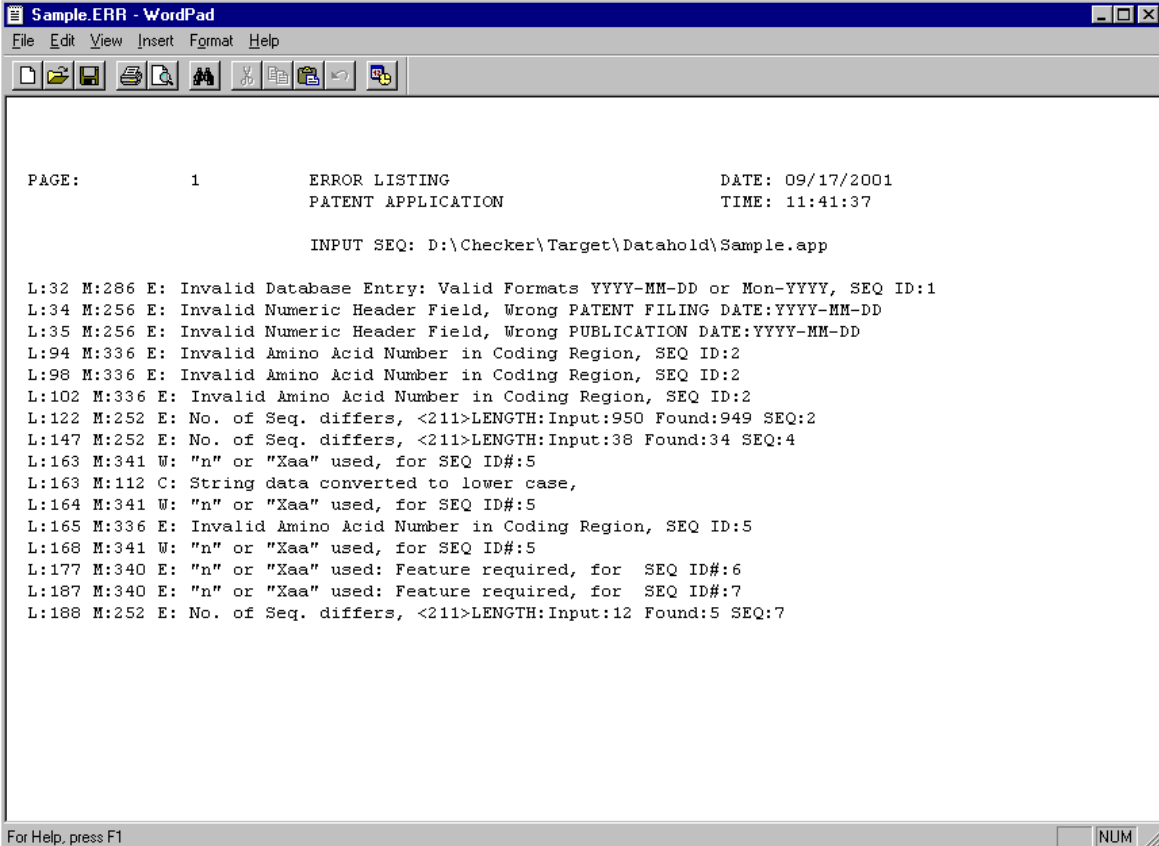
7. To view the file errors (if there are errors in your file),  click  on the Checker **Main Menu**. Please see Section 3.2.3 for more information on viewing errors.

### 3.2.3 Checker View Errors Button

#### To view errors:

 Click  on the Checker **Main Menu**.

The Errors Report, shown in Figure 3-9, is opened in Wordpad or the user's default editor.



```
Sample.ERR - WordPad
File Edit View Insert Format Help
[Icons]
PAGE:          1          ERROR LISTING          DATE: 09/17/2001
          PATENT APPLICATION          TIME: 11:41:37
          INPUT SEQ: D:\Checker\Target\Datahold\Sample.app
L:32 M:286 E: Invalid Database Entry: Valid Formats YYYY-MM-DD or Mon-YYYY, SEQ ID:1
L:34 M:256 E: Invalid Numeric Header Field, Wrong PATENT FILING DATE:YYYY-MM-DD
L:35 M:256 E: Invalid Numeric Header Field, Wrong PUBLICATION DATE:YYYY-MM-DD
L:94 M:336 E: Invalid Amino Acid Number in Coding Region, SEQ ID:2
L:98 M:336 E: Invalid Amino Acid Number in Coding Region, SEQ ID:2
L:102 M:336 E: Invalid Amino Acid Number in Coding Region, SEQ ID:2
L:122 M:252 E: No. of Seq. differs, <211>LENGTH:Input:950 Found:949 SEQ:2
L:147 M:252 E: No. of Seq. differs, <211>LENGTH:Input:38 Found:34 SEQ:4
L:163 M:341 W: "n" or "Xaa" used, for SEQ ID#:5
L:163 M:112 C: String data converted to lower case,
L:164 M:341 W: "n" or "Xaa" used, for SEQ ID#:5
L:165 M:336 E: Invalid Amino Acid Number in Coding Region, SEQ ID:5
L:168 M:341 W: "n" or "Xaa" used, for SEQ ID#:5
L:177 M:340 E: "n" or "Xaa" used: Feature required, for SEQ ID#:6
L:187 M:340 E: "n" or "Xaa" used: Feature required, for SEQ ID#:7
L:188 M:252 E: No. of Seq. differs, <211>LENGTH:Input:12 Found:5 SEQ:7
For Help, press F1 [NUM]
```

*Figure 3-9 Checker Errors Report Opened in Wordpad*

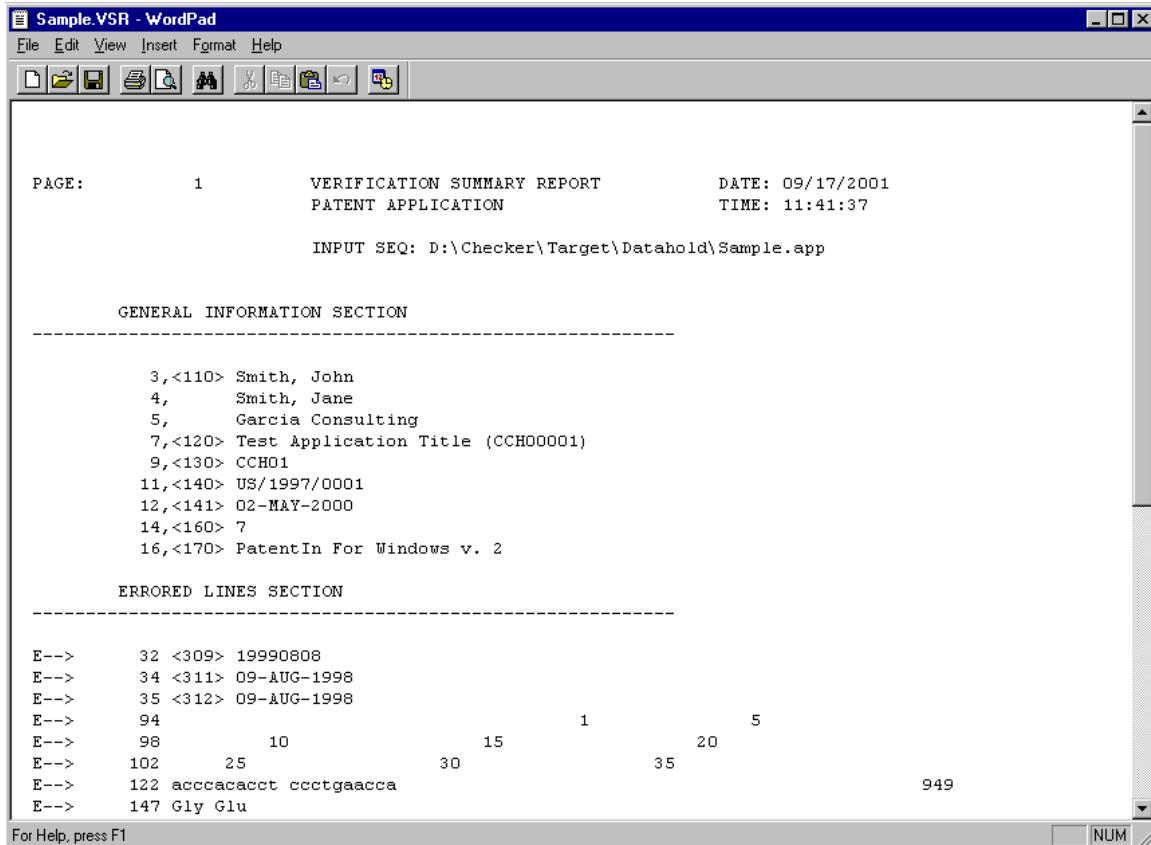


### 3.2.4 Checker View Report Button

#### To view the Verification Summary Report (VSR):

Click  on the Checker **Main Menu**.

The VSR, shown in Figure 3-10, is opened in Wordpad or the user's default editor.



*Figure 3-10 Checker Verification Summary Report Opened in Wordpad*

### 3.2.5 Checker Help Button

#### To access the Checker online help menu:

Click  on the Checker **Main Menu**.

The Checker **Online Help** menu, shown in Figure 3-11, displays.

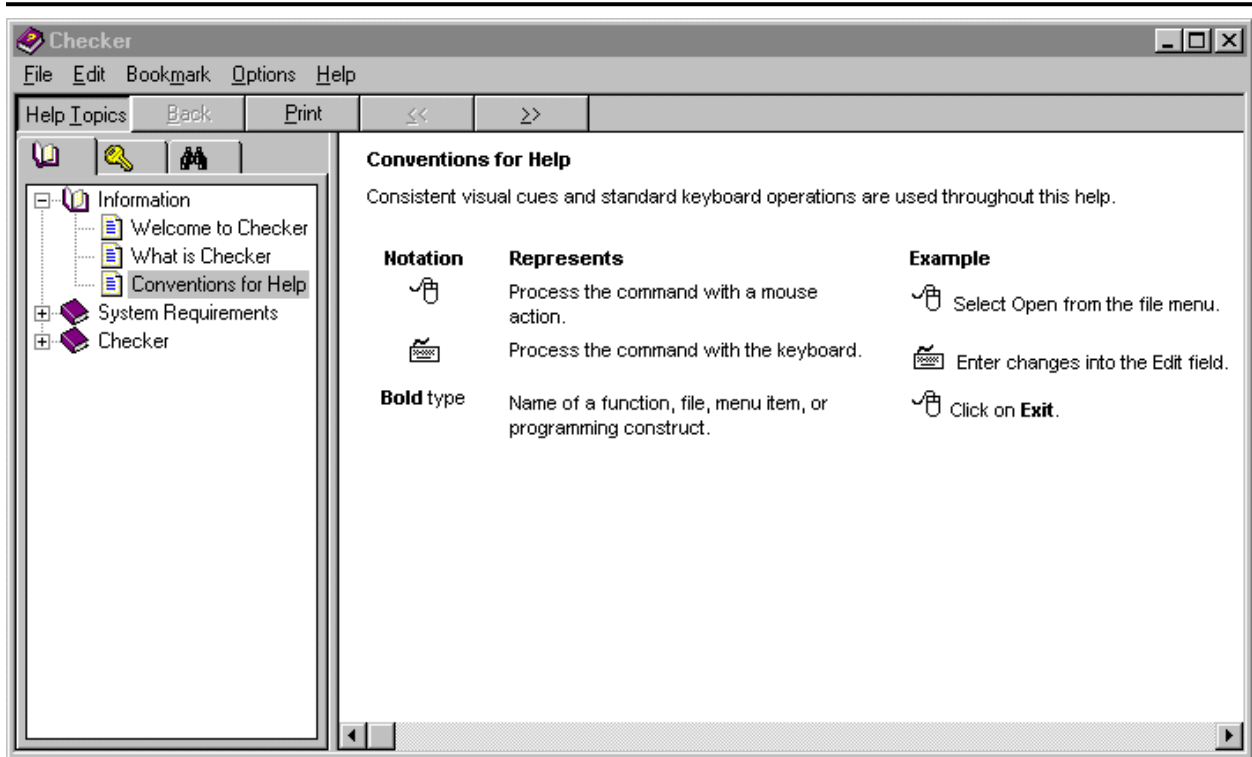
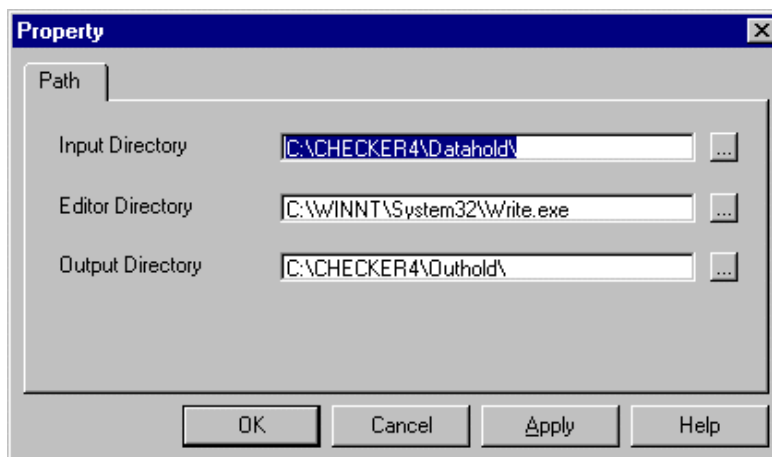


Figure 3-11 Checker Online Help Menu

### 3.2.6 Checker Properties Dialog Box

#### To view the Properties Dialog Box:

☞ Click **File** or select Alt-F on the keyboard. ☞ Click **Administration** and then **Properties** to view the Properties dialog box (Figure 3-12). The Properties dialog box allows the user to change the input and output directory paths as well as select an alternate ASCII file editor. To change file editor, the user must specify the path and executable file name of a suitable editor to replace WordPad.






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*Figure 3-12 Checker Administration Properties Dialog Box*

### 3.3 Shut Down Process

#### To exit Checker:

☞ Click  to exit the **Main Menu** and return to the main Checker application page. From here, you can use the Checker menu bar.





## **SECTION 4 GETTING HELP**

### **4.1 Solutions to Common Problems**

N/A

### **4.2 Getting More Help**

For Checker help, contact the Patent Electronic Business Center at 866-217-9197 or send an e-mail to:

[EBC@uspto.gov](mailto:EBC@uspto.gov)

Please provide a description of the problem or question.

**NOTE:** The procedure for activating MS Word line numbering (to view line numbers in a sequence listing) is included with the Checker distribution files and is automatically copied to the Checker installation folder. The name of the file is CrfMacros.doc.

### **4.3 Help Desk**

N/A



## APPENDIX A LIST OF ACRONYMS

The following acronyms were used in this document.

<b>Acronym</b>	<b>Definition</b>
ABSS	Automated Biotechnology Sequence Search
CFR	Code of Federal Regulations
CRF	Computer Readable Form
MB	Megabytes
NT	New Technology
PC	Personal Computer
RAM	Random Access Memory
URL	Uniform Resource Locator
USPTO	United States Patent and Trademark Office
VSR	Verification Summary Report
WIPO	World Intellectual Property Organization



## APPENDIX B ERROR MESSAGES

All possible error messages in the Checker software are included in the following table.

The legend for error messages is:

- C:** Corrected text string(s)
- E:** Error as defined in 32 C.F.R. 1.821 – 1.825 rules
- S:** System errors
- W:** Warning as defined in 32 C.F.R. 1.821 – 1.825 rules

<p><b><u>System Errors</u></b></p> <p><b>100 S:</b> Failure opening input file</p> <p><b>101 S:</b> Failure reading input file</p> <p><b>102 S:</b> Failure writing output file</p> <p><b>103 S:</b> Failure allocating memory</p>	<p><b><u>General Messages</u></b></p> <p><b>110 C:</b> Removed Non-printable characters</p> <p><b>111 C:</b> String data converted to upper case</p> <p><b>112 C:</b> String data converted to lower case</p> <p><b>113 C:</b> Missing blank line</p> <p><b>114 E:</b> Unexpected end of input file</p>
<p><b><u>General Header Messages</u></b></p> <p><b>200 E:</b> Mandatory header field missing</p> <p><b>201 E:</b> Mandatory field data missing</p> <p><b>202 E:</b> Value must be an Integer</p> <p><b>203 E:</b> Calc# of Seq. differs from actual; &lt;: Input (A), Counted (B)&gt;</p> <p><b>204 E:</b> Calc# of Bases differs from actual; &lt;: Input (A), Counted (B)&gt;</p> <p><b>205 E:</b> Calc Length of Seq. Differs from actual; &lt;: Input (A), Counted (B)&gt;</p> <p><b>210 E:</b> Invalid Number of Sequences</p> <p><b>212 E:</b> Invalid or duplicate Sequence ID Number</p>	<p><b><u>Alpha Header Messages</u></b></p> <p><b>220 C:</b> Keyword misspelled</p> <p><b>222 E:</b> Mandatory Keyword missing</p> <p><b>230 E:</b> Invalid or missing General Information</p> <p><b>240 E:</b> Invalid or missing Sequence Header field</p> <p><b>241 E:</b> Invalid Alpha Header field</p> <p><b>242 E:</b> Mandatory header field value missing</p> <p><b>243 E:</b> Alpha header field expected</p> <p><b>244 E:</b> Invalid beginning of sequence listing</p>



<p><b><u>General Header Messages</u></b> (continued)</p> <p><b>214 E:</b> Seq.# missing; &lt;: Seq.ID (A)&gt;</p> <p><b>216 E:</b> Seq.#s missing; &lt;: Seq.ID (A) thru (B)&gt;</p> <p><b>218 E:</b> Input File vs. Calc Seq. Length differ; &lt;: Input (A), Calc. (B)&gt;</p>	<p><b><u>Alpha Header Messages</u></b> (continued)</p> <p><b>245 E:</b> Invalid value of Alpha General Header field</p> <p><b>246 E:</b> Invalid value of Alpha Sequence Header field</p> <p><b>247 C:</b> Inserted Optional Header Field</p> <p><b>248 E:</b> Inserted missing Mandatory Header Field</p> <p><b>249 C:</b> Inserted Mandatory Field</p>
<p><b><u>Numeric Header Messages</u></b></p> <p><b>250 E:</b> Invalid Numeric Identifier</p> <p><b>251 E:</b> Invalid Description for Numeric Identifier, &lt;213&gt; ORGANISM has both "Artificial" and "Unknown" for SEQ ID#:n</p> <p><b>252 E:</b> Calc# of Seq. differs from actual; &lt;: Input (A), Counted (B)&gt;</p> <p><b>253 E:</b> Calc# of Bases differs from actual; &lt;: Input (A), Counted (B)&gt;</p> <p><b>254 E:</b> Number of Bases conflicts Running Total; &lt;:Input (A), Counted (B)&gt;</p> <p><b>256 E:</b> Numeric Identifier expected</p> <p><b>257 W:</b> Sequence data Name/Key Feature Missing</p> <p><b>258 E:</b> Mandatory Feature Missing</p> <p><b>259 E:</b> Field exceeds allowed number of lines</p>	<p><b><u>Sequence Data Messages</u></b></p> <p><b>300 W:</b> Intentionally skipped Sequence: Sequence Id ()</p> <p><b>301 E:</b> No Sequence Data was Shown</p> <p><b>302 E:</b> Unknown or Misplaced Identifier</p> <p><b>310 E:</b> Wrong or Missing Sequence Type, numeric identifier&lt;212&gt;, for SEQ ID#: n</p> <p><b>320 E:</b> Wrong Nucleic Acid Designator</p> <p><b>321 E:</b> "t" not allowed in the RNA Sequence</p> <p><b>322 E:</b> Invalid Residue in Sequence</p> <p><b>330 E:</b> Wrong Amino Acid Designator</p> <p><b>332 E:</b> Invalid/Missing Amino Acid Numbering</p> <p><b>333 E:</b> Wrong Sequence grouping; &lt;spacing&gt;</p> <p><b>334 E:</b> Invalid Amino Acid in Coding Region</p>



<p><b>270 C:</b> Current Application Number differs</p> <p><b>271 C:</b> Current Filing Date differs</p> <p><b><u>Numeric Header Messages</u></b> (continued)</p> <p><b>280 E:</b> Numeric Identified already exists</p> <p><b>281 E:</b> Numeric fields not Ordered</p> <p><b>282 E:</b> Numeric Field Identifier Missing</p> <p><b>283 E:</b> Missing blank Line separator; &lt;before this field identifier&gt;</p> <p><b>284 E:</b> Blank Line not allowed; &lt;before this field identifier&gt;</p> <p><b>285 E:</b> Invalid Journal Date: Wrong YYY-MM-DD, MMM-YYYY or Season- YYYY</p> <p><b>286 E:</b> Invalid Database Entry Date: Wrong YYYY-MM-DD or MMMM- YYYY</p> <p><b>287 E:</b> Invalid Date; &lt;Wrong YYY-MM- DD or MMMM-YYYY&gt;</p> <p><b>288 E:</b> Application Number is Repeated; &lt;PRIOR APPLICATION NUMBER:&gt;</p> <p><b>289 E:</b> Numeric Identifier Mission or Out-of-Order; &lt;PRIOR APPLICATION NUMBER&gt;</p>	<p><b><u>Sequence Data Messages</u></b> (continued)</p> <p><b>336 E:</b> Invalid Amino Acid Number in Coding Region</p> <p><b>340 E:</b> “n” or “Xaa” used: Feature required</p> <p><b>341 W:</b> “n” or “Xaa” used</p> <p><b>342 E:</b> Invalid Stop Code On Error</p> <p><b>344 W:</b> Removed Stop Code On Error</p> <p><b>351 E:</b> Sequence data Name/Key Feature Out-of-Range</p> <p><b>360 E:</b> Sequence data overflow</p> <p><b>361 E:</b> Invalid Split Codon</p>
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