

Sunny Solutions

MS Access Repair & Compact: User Guide

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1 Introduction

MS Access DB's have a tendency to get corrupted by either user error or through other unforeseen circumstances. Regular database backup is essential and occasionally performing a **Repair & Compact (RC)** is also a good practice. MS Access does provide a **Compact & Repair Database** option in its user interface, but here are some issues administrators and users encounter, while using **MS Access'** RC function:

- Quite cumbersome to get to with passwords and other DB protective measures.
- If the DB is distributed as an **MS Access Application**, then the **Repair & Compact Database** menu item may not be available to end-users.
- It is a laborious process to RC, if the **Shift** key is disabled and a DB and/or user passwords are assigned.
- Frequently, this function fails, leaving behind the dreaded **db1.mdb** file!
- Users are required to be cognizant of exiting the DB, when they are done with an application within it.
- Leaving a DB open overnight is a sure way to corrupt it, when backups and other security policies are in place!

Note: There are several very powerful MS Access DB repairing applications available on the market. These have a very specific purpose and that is to restore a DB that will not respond to the MS Access Compact & Repair Database command. MSARC does not replace these sophisticated applications! It is a simple utility that attempts to keep an Access DB in optimum shape on a daily basis, if used appropriately.

2 Key Features

So, having an external application that can perform the RC operation is of considerable advantage to the DB administrator. This is where **MS Access Repair & Compact (MSARC)** utility comes into play. Here are some of its key features:

- Once set up, it does not require having to open the Access DB.
- Provides a simple user interface to RC the DB.
- Provides a console application that can be run each night through the **Windows Task Scheduler** or some other mechanism without user intervention.
- Provides backup of original and RC'd files.
- Provides zipping after the RC.

Note: The author has taken every precaution to ensure that the data is sufficiently backed up before and after the Repair/Compact process. The code called within the application is a single call to Microsoft JRO's (Jet Replication & Objects) CompactDatabase() method, so the responsibility is on them for the actual Repair/Compact of the DB. If you see problems with a db1.mdb file lying around, then it is a Microsoft Access issue, not with this application! If you do find any problems, please do not hesitate to contact the author at your earliest convenience!

3 MS Access Repair & Compact

MSARC consists of two applications. One is a Windows graphical user interface (GUI) application that allows a user to manually repair/compact (RC) the DB, and the other is a Windows Console application that runs automatically when launched. It can also be run unattended nightly using a scheduler such as the **Windows Task Scheduler**.

3.1 Source File

MSARC will RC any MS Access DB files of versions: **95/97, 2000, 2002/2003, and 2007**. The file extensions in the table below determine which DB engine is used to perform the RC:

File Extension	Resulting RC Operation
*.accdb	The Microsoft Office 12.0 Access Database Engine Object Library , using Data Access Objects (DAO) from the installed copy of Access 2007 is used to perform the RC. The Access file format contained in the file itself may be of any version; 95/97, 2000, 2002/2003, or 2007. The DAO engine determines if there are any issues. Note: Use this extension for all Access 2007 files formats.
*.mdb	The Microsoft Jet and Replication & Objects 2.6 Library (JRO) is used to perform the RC. Only Access file formats of 95/97, 2000, and 2002/2003 are supported. The Access 2007 file format is not supported with this extension. MSARC automatically determines what the MDB's file version is and uses the appropriate parameters to perform the RC. If the file is too corrupted to get this information, you will be informed and the process will not continue. Note: Use this extension for all non-Access 2007 file formats.

3.2 Backup Files

Basically, **MSARC** uses a MS Access DB source file and a backup folder. When you start the process, the original source file is copied to the backup folder with **_YYMMDD##** appended to the filename. This is done, so that if problems are encountered with RC, the file can easily be restored. The DB is then RC'd and this file is also backed up with an extension of **sss**, unless you disable the **Create backup file after RC** option. So, for each run either one or two backup files are created. E.g., if your DB is named **MyFile02.mdb**, then the backup files for **15-Jan-2008** would be **MyFile02_2008011501.mdb** and **MyFile02_2008011501.sss**.

In addition to this, the **Create ZIP file after RC** option creates a zip of the **mdb** file after RC. During the development cycle of an MS Access application, copying before and zipping after to a backup folder is recommended. In this case, turning **OFF** the **Create backup file after RC** option and turning **ON** the **Create ZIP file after RC** option creates pairs of files that are easy to keep track of. E.g., **MyFile02_2008011501.mdb** is usually very large, and **MyFile02_2008011501.zip**, which ends up being much smaller after RC and ZIP, and therefore, appropriate for backing up.

So, for any given run of the application, if both options are checked, then the resulting files would be:

Source File:	MyFile02.mdb
Original Backup:	MyFile02_2008011501.mdb
RC'd Backup:	MyFile02_2008011501.sss
Zip File:	MyFile02_2008011501.zip

The **##** is a two-digit counter that increments for each backup file from **01** to **99**.

3.3 Log Files

Two log files are provided, where the results of errors are recorded. They are called **MsAccessRepairCompact.log** and **MsAccessRepairCompactConsole.log** and are located in the application installation folder; usually **C:\Program Files\Sunny Solutions\MS Access Repair & Compact**.

Note: These files are not removed on program uninstall.

3.4 INI Files

INI files are used to store the RC settings which appear in the GUI. Multiple INI files are supported, so you can RC any number of Access DBs without much effort. Use the following command line to specify the INI filename in your shortcut(s):

MsAccessRepairCompact.exe /ini="My Ini Filename.ini"
MsAccessRepairCompactConsole.exe /ini="My Ini Filename.ini"

All INI files **must** be located in the installation directory where **MSARC** is run from; usually:

C:\Program Files\Sunny Solutions\MS Access Repair & Compact

If no INI filename is provided using the command line, the default of **MsAccessRepairCompact.ini** is used.

Note: These INI files are not removed on program uninstall!

3.5 Alternate Filename Prefix

If you are using a single DB file, whose name may change for each revision of the DB application (e.g., **MyFile01.mdb**, **MyFile02.mdb**, **Myfile03.mdb**, etc.), **MSARC** can use the **Alternate Filename Prefix** to locate the next file in order in the same folder on a subsequent run. This feature was added to facilitate the backup of a file, if the administrator forgot to update the INI file after deploying a new version of a DB.

E.g., if you are using the file **MyFile02.mdb** and the next version is **MyFile03.mdb**, and **MyFile02.mdb** is not present in the folder, then **MSARC** will locate and use **MyFile03.mdb** on the next run and inform you, if you enter **MyFile** as the prefix. Leave blank to ignore this feature.

Note: MSARC will only get the name of first file it finds alphabetically in the source file's folder, so it is best to only have a single DB file in the application folder starting with the provided prefix, if you want to use this feature!

3.6 DB Passwords

MSARC supports the presence of DB security. There can be three *different* types of security an MS Access DB, and are described below:

Database:	The DB Password protects the entire DB. There is no username associated with it. If set in the DB, all users need to use this password to access it and will also be required by MSARC . Note: It can be present in conjunction with Workgroup Security in non-Access 2007 versions.
Workgroup Security:	When Workgroup Security is being used, each user usually has their own user ID and password assigned to them. The Workgroup Information File (*.mdw) needs to be present and accessible by MSARC . Note: It can be present in conjunction with the DB Password. Ignored for Access 2007 DBs.
Visual Basic for Applications:	The VBA password protects the code modules and copying of other DB objects. It is not used by MSARC.

Note: Although, both passwords and the workgroup usernames are encrypted in the INI files, no level of security is implied by the author!

3.7 Workgroup Security

MSARC supports the presence of **MS Access Workgroup Security**. If you are using workgroup security in your DB, check **Use Workgroup Security**, and enter a **Username**, a **User Password**, and the location of the **Workgroup Information File**. This password is *not* the DB password, but the one associated with the workgroup user account. If the DB also has a DB Password, then provide this as explained in **Section 3.6 DB Password** as well.

Note: The workgroup user must have Database Administer rights, not just on other DB objects.

3.8 Presence of LDB File

Before running its process, **MSARC** checks for the presence of the DB's lock file (***.LDB** for **Access 95/97, 2000, 2002/2003**, and ***.LACCDB** for **Access 2007**) in the same folder. If the file exists, the entire process is aborted, the user is informed, and a log file entry is made. This applies to both the GUI and console applications.

3.9 Running the Applications

Instructions on running the applications follow.

3.9.1 MSARC Application

This is the Windows GUI application that allows you to manually run the process.

1. Launch the application from **Start Menu | All Programs | Sunny Solutions | MS Access Repair & Compact | MSARC Application**. The main application window will appear (**Figure 1**).

Note: The first time you run the program (and if you have not assigned values to any of the settings), you will get the message in Figure 2. Once you have selected valid targets for these, you will not get these errors again, unless the targets are invalidated in the future!

Note: The first time you run the program and you do not have Access 2007 installed, you will get the message in Figure 3. The CheckAccess2007 setting is then set to OFF in the INI file, and the check is not made again. Each new INI file will reset this setting.

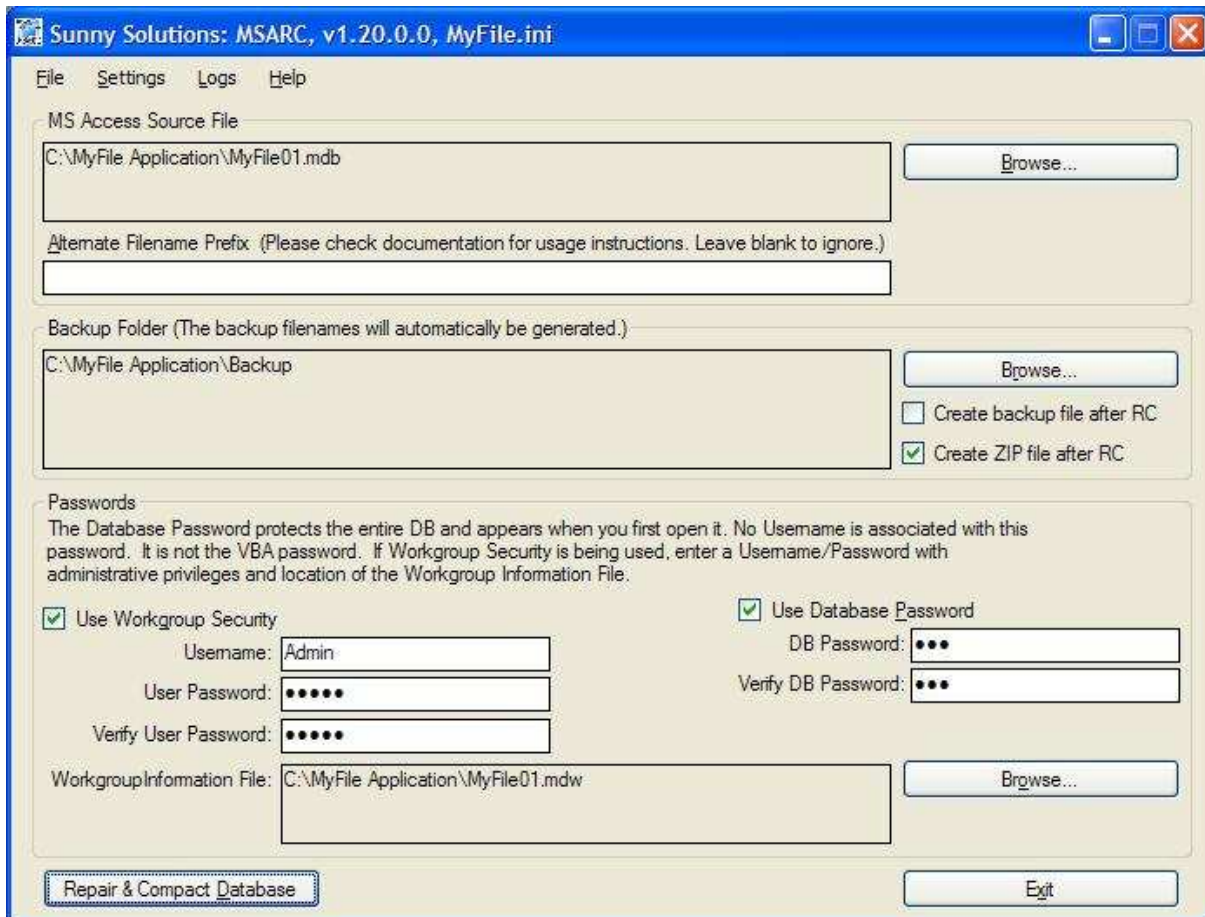


Figure 1: MSARC application window.



Figure 2: Error when no file or folder has been selected.



Figure 3: Error when Access 2007 is not installed.

2. For **MS Access Source File**, click **Browse...** on the right. You will be provided with an **Open** file window (**Figure 3**):

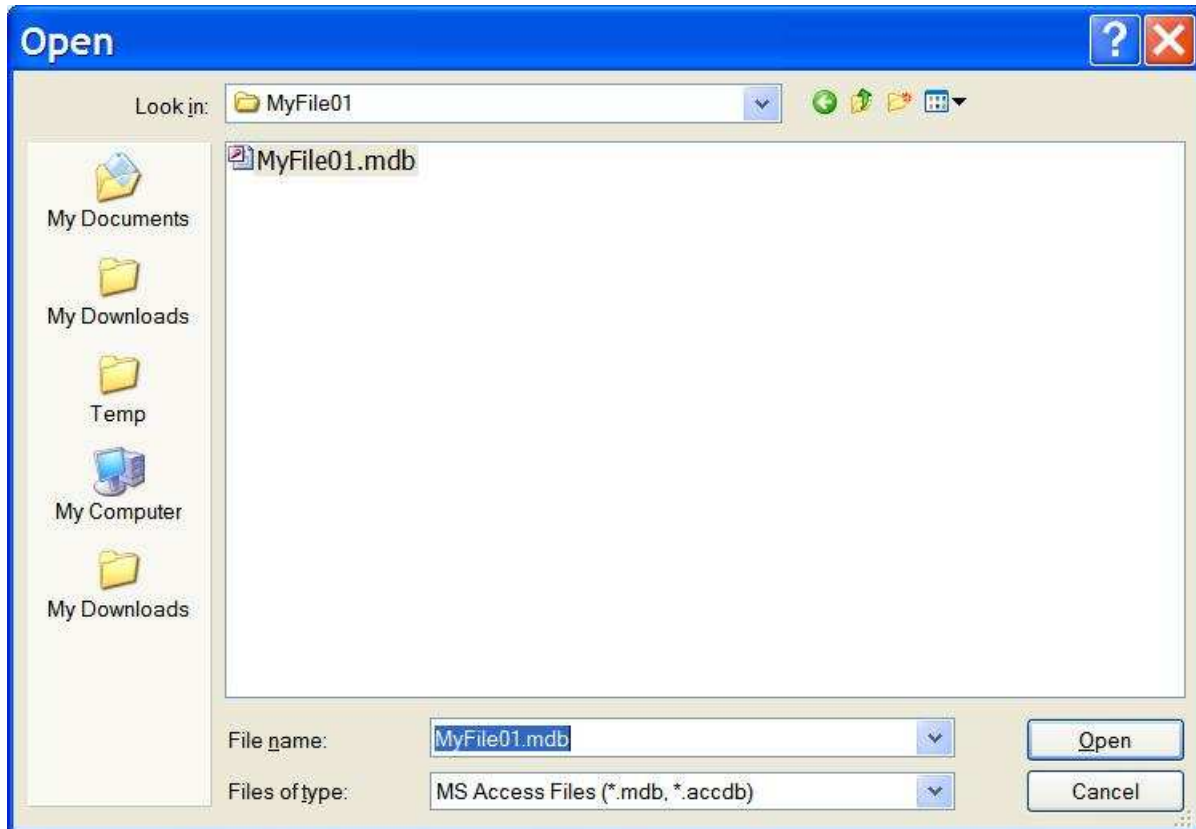


Figure 4: Open File window.

3. Locate your **MS Access DB** and click **Open**.
4. For **Alternate Filename Prefix**, enter the beginning of your DB's filename, so that if the original one does not exist anymore, it may try to locate a similar filename. See **Section 3.5 Alternate Filename Prefix**.
5. For **Backup Folder**, click **Browse...** on the right. You will be provided with a **Browse for Folder** window (**Figure 4**).



Figure 5: Browse For Folder window.

6. Locate the destination folder you would like to back your files up to and click **OK**.
7. Turn on/off the option to **Create backup file after RC**.
8. Turn on/off the option to **Create ZIP file after RC**.
9. If you are using workgroup security (non-Access 2007 DBs), then check **Use Workgroup Security**, and enter a **Username**, a **User Password**, and **Workgroup Information File (*.mdw)** using **Browse** to the right. Enter the password twice for verification. See **Section 3.7 Security**.
10. If you are using a DB password, then check **Use Database Password** and enter the password twice for verification. See **Section 3.6 DB Passwords**.
11. Select **Settings | Save INI File** to save the current selections to an INI file.
12. Click **Repair & Compact Database** to run the process. A message is provided at the end of the process indicating the names of the backup files.

3.9.1.1 File Menu

3.9.1.1.1 Repair Compact Database

Runs the RC process. Same as the **Repair & Compact Database** button.

3.9.1.1.2 Exit

Exits **MSARC**. Prompts the user to save changes, if changes have been made to the INI settings.

3.9.1.2 Settings Menu

3.9.1.2.1 Clear All

Clears all the settings on the screen to the defaults.

3.9.1.2.2 Open INI

Opens an INI file from the application folder.

Note: Please use the application folder only. INI files in other folders are not supported!

3.9.1.2.3 Save INI

Saves the onscreen settings to an INI file.

Note: Please use the application folder only. INI files in other folders are not supported!

3.9.1.2.4 Save INI As

Saves the onscreen settings to a user selectable INI file.

Note: Please use the application folder only. INI files in other folders are not supported!

3.9.1.2.5 Create Desktop Shortcuts

Use this to create desktop shortcuts, so they are easy to execute, or setup keyboard shortcuts for.

3.9.1.2.6 Copy Console Command Line to Clipboard

Use this to copy the command line necessary to run the console application with the currently selected INI file. Usually used for creating a task in Windows Task Scheduler.

3.9.1.3 Logs

3.9.1.3.1 View Application Log

Open the **MSARC** GUI application's log file in your default text editor (e.g., **Notepad**).

3.9.1.3.2 View Console Log

Opens the **MSARC** Console application's log file in your default text editor (e.g., **Notepad**).

3.9.1.4 Help

3.9.1.4.1 User Guide

Opens this file in **Adobe Acrobat**.

3.9.1.4.2 Release Notes

Opens the latest **Release Notes** in **Adobe Acrobat**.

3.9.1.4.3 Check for Access 2007

Provides a manual check to ensure that **Access 2007** is correctly installed and that MSARC has access to the **Microsoft Access 12.0 Access Database Engine Object Library** (Microsoft.Office.Interop.Access.Dao.dll).

3.9.1.4.4 About

Provides version information for this application.

3.9.2 MSARC Console Application

This is a Windows console application that allows you to automatically run the process without human intervention. You can provide the INI filename in the command line as specified in **Section 3.4 INI Files**, so you can RC multiple Access DBs without much effort. There is no user interface to this application, so errors and results are only written to the console application log file. The application can be run in two ways:

1. Launch the application from **Start Menu | All Programs | Sunny Solutions | MS Access Repair & Compact | MSARC Console Application**. There will be no user interface associated with it!
2. Set the application up in the **Windows Task Scheduler**. Recommendations:
 - The scheduled task is setup on the same computer as the hard drive that the DB is located on; for file integrity and performance.
 - The username/password provided for the task is an administrative level user on the same computer.
 - Ensure that users always close the DB file before the task runs [each night] as the presence of an LDB file will cause the process to abort completely.

If you want to view the console application's log file, you can view it from the GUI application, or you can launch it from **Start Menu | All Programs | Sunny Solutions | MS Access Repair & Compact | MSARC Console Log**.

4 Errors

Some specific errors are provided below. All other error descriptions are provided by the applications and in the error logs.

Error #	Description
5	Access Denied: This error usually occurs if the DB file is read-only. Only RC files that have read/write access to the user the applications are running under.
429	COM class factory error: This error usually occurs, if Access 2007 is not installed. If you are trying to RC an Access 2007 format DB, then you need to install Office/Access 2007. You will get this error if you try to run RC on the DB as well.

5 Installation

The installation process is very simple. If you are provided a ZIP file (e.g. **MsAccessRepairCompact_1_20_000.zip**), then extract to a folder on your hard drive. Launch **Setup.exe**, which will prompt you through the installation process. You only need to click **Next** on each step and then **Close** at the end.

You can install a newer version over an older version without running the uninstall program. It will just remove the older version.

Note: On uninstall, the INI and log files are not removed.

6 Technical Support

The best way to get technical support for **MSARC** is to contact **Sunny Jamshedji** at **Sunny Solutions**:

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Website: <http://www.SunnySolutions.Biz>
Skype: SunnyJamshedji