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1.0 Installation of the AUTO-CODE CAM Software

This document details the procedure to install the AUTO-CODE software inside AutoCAD. System requirements and other details related to the installation of the software on your computer are described.

*To obtain the latest version of AUTO-CODE,
please visit our INTERNET web site located at the following URL:*

<http://www.autocode.com>

1.1 System Requirements

AUTO-CODE requires AutoCAD. There are different versions of AUTO-CODE for different versions of AutoCAD.

AutoCAD Version	AUTO-CODE Version
Release 14	AC33
2000, 2000i, 2002	AC42
2004	AC50
2005	AC2005

Since this is a graphics system for AutoCAD, a larger video display may be in order if you find yourself zooming in and out of the drawing to select geometry. The money spent on the display unit will be recovered in the time saved not having to zoom in and out frequently.

1.2 Communications between Computer and Machine Tool

The output of AUTO-CODE is an ASCII text file containing the NC/CNC program codes. There are several technologies that exist for getting the program file from your computer to the machine tool. AUTO-CODE does not address this aspect of the integration directly and the following commentary is offered to guide users towards the proper solutions.

The NC/CNC file is typically transmitted via serial port communications to the machine tool or to a paper tape punch. It can also be placed on a floppy drive compatible with the machine tool if one is available. Most users of AUTO-CODE use serial communications [RS-232] between the computer and machine tool. Different software products are available for running this type of communications and one can obtain them at most computer stores. If you do not know how to connect the computer to the machine tool, it may be a good idea to hire a consultant who can help out in that regard. The AUTO-CODE software company can be contracted for these services.

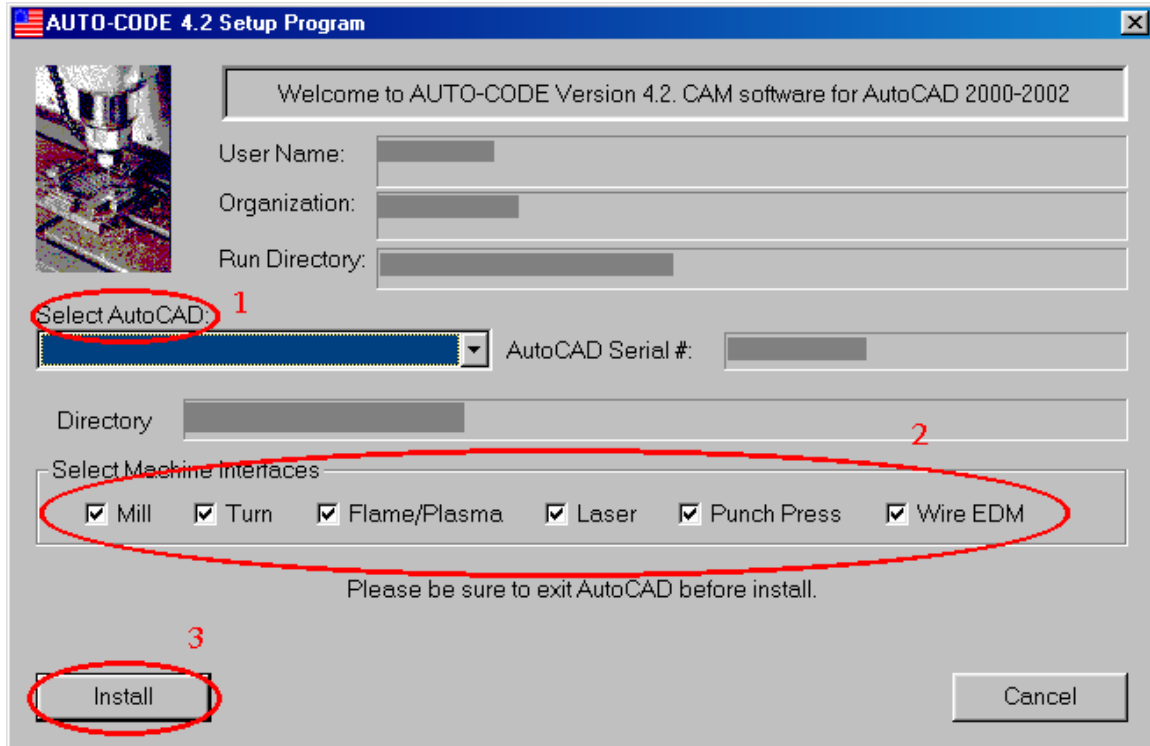
In most cases, an additional serial port beyond the one used for a pointing device will be required. Before making that determination, you must first figure out what form of communications you will be using between the computer and machine tool.

To learn more about communications with the machine tool, contact the tool vendor. They may have a program available to do the job or have documentation on how to set up an interface using popular modem communications software.

2.0 *Installing from the AUTO-CODE CD*

If a CD was supplied to you containing the AUTO-CODE software from a qualified distributor of the product, you can follow these simple instructions to install the software.

1. Insert CD into a CD drive.
2. Make sure the AutoCAD software is NOT running.
3. For Windows NT users, make sure you have administrator privileges before installing.
4. Using the Start-Run option, or Windows Explorer, start the SETUP.EXE program located on the floppy disk.
5. Select the version of AutoCAD (if more than one option is presented) AUTO-CODE is to be installed on. The version of AUTO-CODE shown in the figure supports AutoCAD 2000, 2000i, and 2002.
6. Select the Machine Interfaces you want to install. By default, all are selected. See #2 in figure.
7. Click on the "Install" button to complete the installation. The file copy and system manipulations should only require a minute or two. See #3 in figure.
8. Start AutoCAD (or Mechanical Desktop). The AUTO-CODE option should appear at the end of your pull down menu.



3.0 Installing from the AUTO-CODE Internet Edition

The file supplied from our web site on the Internet is an EXE compressed file set. Decompression and installation are accomplished in one step. AutoCAD should not be running while you install the AUTO-CODE software.

If you install AUTO-CODE as an update from the Internet, it will overwrite the same version on the disk. That is, if you install a newer release of Version 4.2 it will replace the existing 4.x on your system. If you install Version 4.2 over Version 4.x, both will be available from the AutoCAD menu system until you remove or uninstall the older version. (Note that versions prior to 4.0 did not include a menu entry option.)

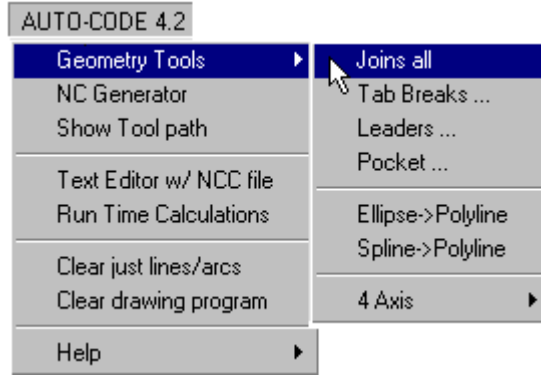
4.0 Running AUTO-CODE for the First Time

After installation of the AUTO-CODE software you can run it inside AutoCAD. Start AutoCAD and look for the AUTO-CODE menu selection in the pull down menu section of the screen. Select the **AUTO-CODE** pull down menu and then select the **NC Generator** option or one of the **Geometry Tools** options. AUTO-CODE will then load into memory and begin execution.

You will then be asked to select a machine tool interface. Select the machine tool type that you are interested in using. The choices presented include Flame, Laser, Mill (2 or 3 axis router/drill), 3Dmill (3 axis mill), Punch, Ppunch (Plasma/Punch combo), Turn, Wire, and Wire4 (4 axis wire EDM). If you selected to install all the modules then you will see the complete selection. If you selected to install only one module and there is only one sample for that module, then the

selection of a machine tool interface will be skipped and operation will continue to the next step automatically.

These machine tool interfaces are based on common machine tools frequently found in manufacturing facilities. Specific machine tool interfaces may be created by the AUTO-CODE software company for a nominal fee. You can also create your own. See the CUSTOM.HLP file supplied with the package for more details about creating your own custom interfaces for use with AUTO-CODE.



Depending on which type of machine tool you have selected, you will be presented with an **authorization request** dialog box. The authorization code is generated by the AUTO-CODE software company when you purchase the product. When evaluating the software, simply press the OK button to skip this screen and proceed into the evaluation.

If you decide to purchase AUTO-CODE or have already purchased the software, you will be supplied with an authorization code by the AUTO-CODE company. This code should be typed into the edit box provided and then the OK button clicked. The system will tell you in the command line of AutoCAD if the authorization code is accepted or rejected.

Once the authorization request form is passed, AUTO-CODE will ask for the **virtual zero point**. The virtual zero point is the point on the drawing where the machine tool's zero exists. You can draw your part so that the zero point of the machine matches the zero point of the drawing or you can place the zero point of the machine anywhere relative to your drawing.

AUTO-CODE is now running on your system and is ready to program a part. The type of machine tool and the customization performed to the interface you are using will dictate your next step. For most interfaces the next step is to the machine settings dialog box to define the first tool you will be using. For others the first step will be the AUTO-CODE main dialog box.

Each type of interface for AUTO-CODE is discussed in more detail later in this manual.

Note that if you received a custom interface from an integrator or directly from AUTO-CODE it must be copied to the NCG41\POSTS directory inside your AutoCAD directory.

5.0 Running from a Network Directory

AUTO-CODE will run from a network version of AutoCAD if you have full access to the drive where AutoCAD is stored. If you do not, the SETUP program will fail.

If you have full access to the network drive where AutoCAD is installed, then you can run the program from the network at your workstation without difficulty.

6.0 Installation Troubleshooting

Corrupted diskette or CD

Contact the vendor of the diskette or CD for a new copy. If you have access to the INTERNET, you can download the latest version of the software from <http://www.autocode.com> and install it following the directions for the INTERNET Edition.

Corrupted EXE file

Download another copy of the file from the INTERNET at our web site <http://www.autocode.com> or contact AUTO-CODE Mechanical for a diskette or CD.

System reports that other AUTO-CODE copies exist on this computer

Remove all previous copies of AUTO-CODE and install again. The only file(s) located outside of the AUTO-CODE directory structure will be NCGxx.CFG and NCGxx.LSP (xx is version ID number). These files can be found in the AutoCAD program directory and should be removed before installing AUTO-CODE again. The uninstall procedure of AUTO-CODE (see below) will remove these files.

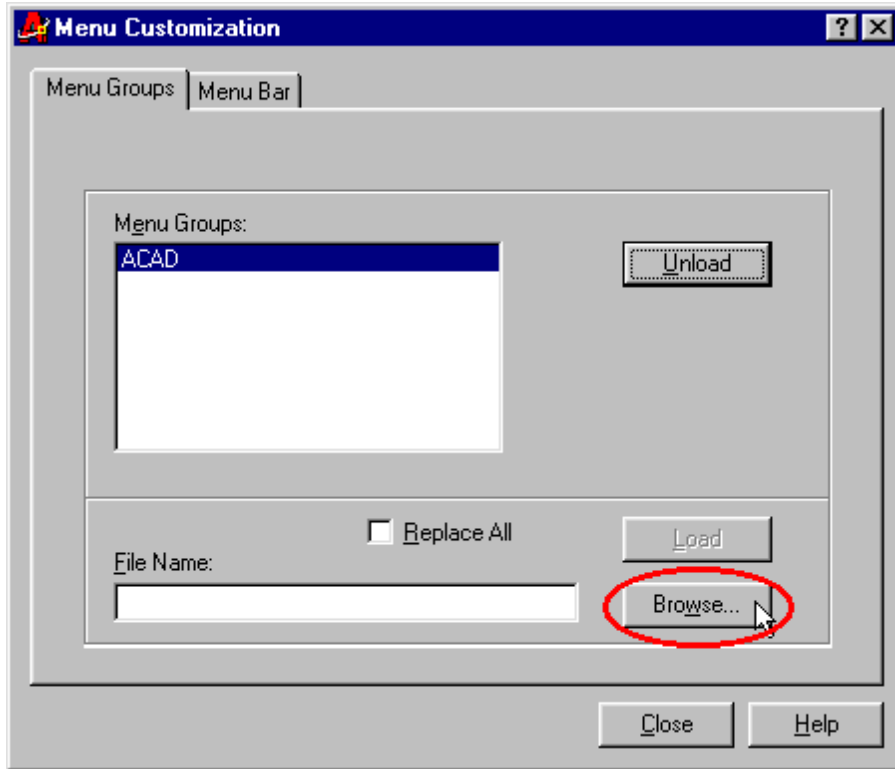
SETUP Program does not complete

Remove all copies of AUTO-CODE from your system and attempt to install again. If the installation fails once more, then your AutoCAD system environment may not be suitable for AUTO-CODE to run due to customization by some other software that does not follow the rules for integrated solutions inside AutoCAD. Contact technical support at AUTO-CODE Mechanical for more assistance with the installation.

AUTO-CODE does not appear in menu

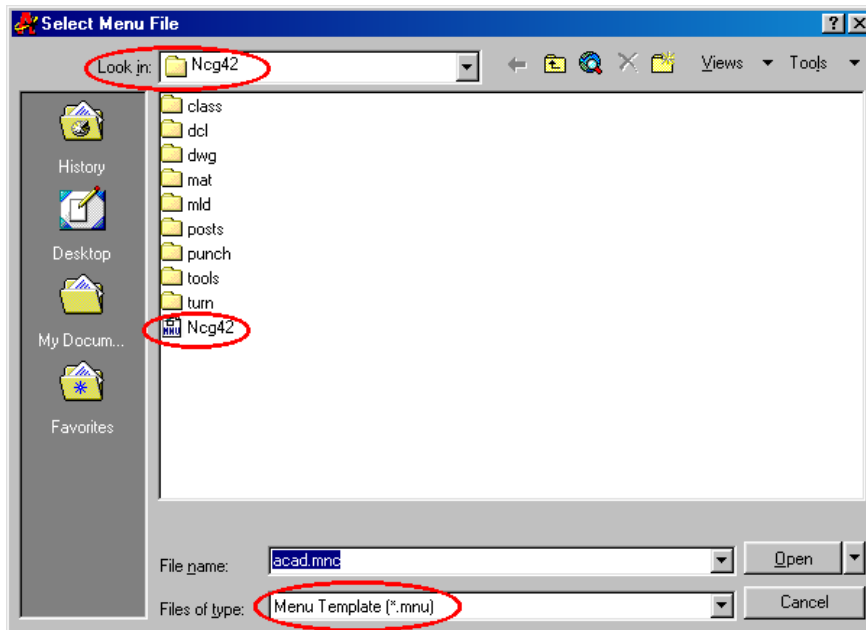
You probably had AutoCAD running when the installation was performed and the update done by the setup program was not saved as AutoCAD updated the system registry. The menu can be added with ease.

Use AutoCAD's menu customization command, MENULOAD, to load the AUTO-CODE menu from the NCGxx (xx is version number) subdirectory. The menu customization option can be found in the TOOLS pull down menu in AutoCAD or type the command MENULOAD at the command prompt. The following dialog box should appear.



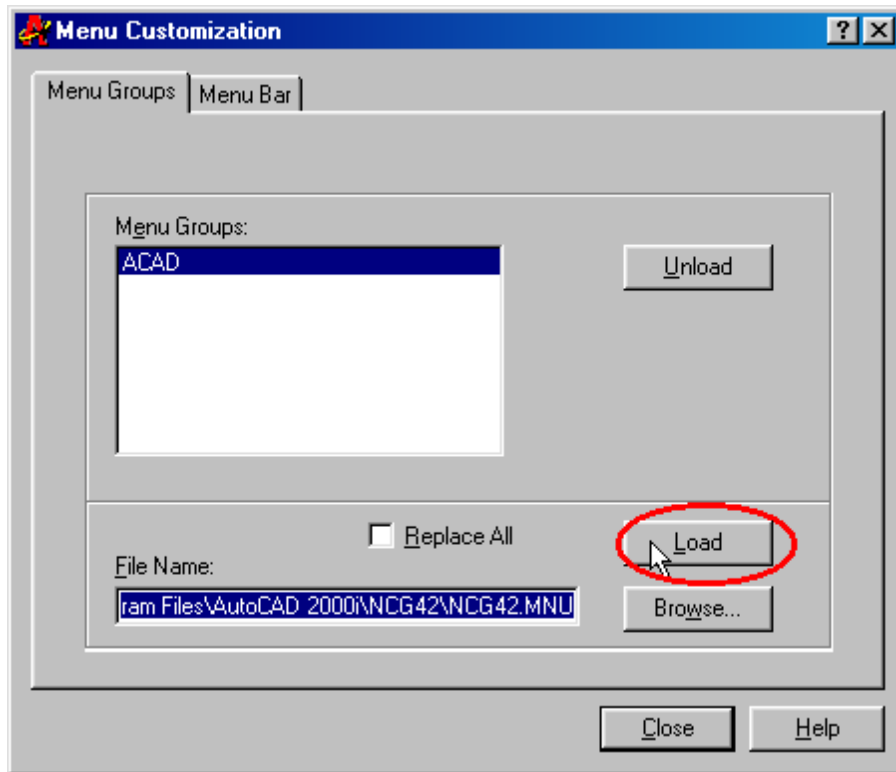
Select the Browse button to display the available menu files. In the file browser select the NCGxx (xx is version number) folder located in the AutoCAD program folder. Next select the option for “Menu Template” in the Files of type window. NCGxx.MNU should appear as one of the options in the directory. If it does not, you are either not in the NCGxx folder or the installation program has failed.

Select the NCGxx.MNU (xx is version number) file and then click on Open to open it.



The file NCGxx.MNU is supplied with the basic installation set. You can customize it if you desire and know what you are doing.

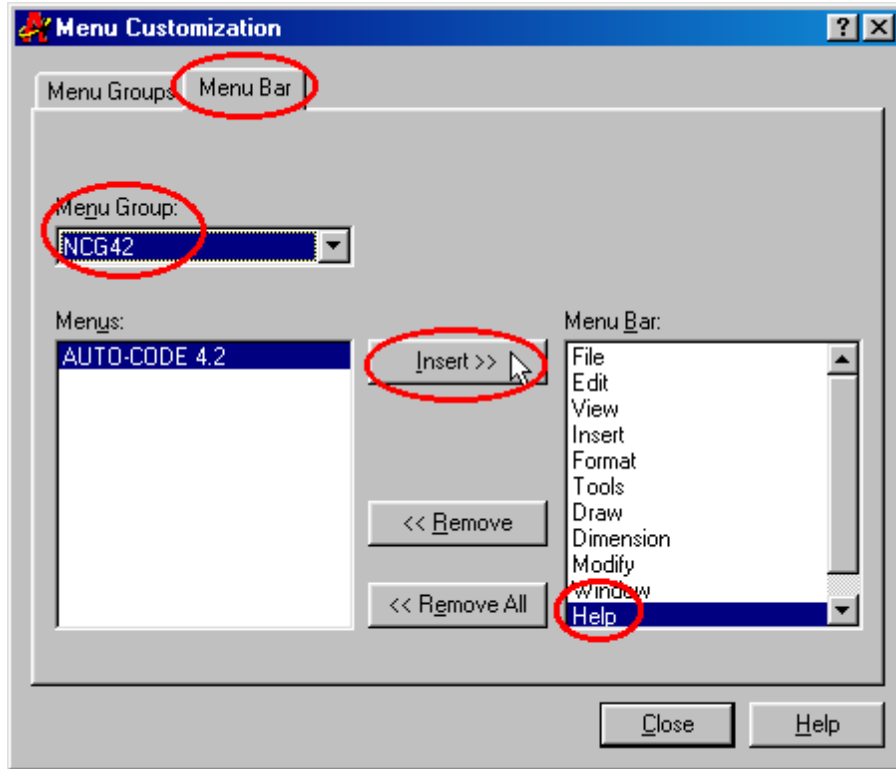
After selecting the MNU file, it will be displayed in the File Name field of the Menu Customization dialog box. Select the Load button to bring it into memory.



A warning message will be issued about loading menu templates. Click OK and proceed.

Next select the Menu Bar tab to display the pull down menus.

Within the Menu Bar panel select NCGxx from the Menu Group pull down list. If it is not visible, then the menu file was not loaded and you need to complete the previous steps. Next select the Menu Bar item "Help" and press the Insert >> button. This will insert the AUTO-CODE menu entry into the AutoCAD menu bar immediately.



Select the Close button to complete the menu update.

After loading, AUTO-CODE will not run

Try selecting a different machine tool interface after restarting AutoCAD with a blank drawing. If AUTO-CODE runs with this interface file, then the one you selected earlier that caused the failure must have errors in it. Check the files that make up the interface to make sure there are no typographic errors if you created them yourself or contact the supplier of the interface files for help. If none of the other interfaces will run either, then the installation is corrupted in some manner. Try removing AUTO-CODE from your computer and re-installing. If the problem persists, contact technical support at AUTO-CODE Mechanical.

AUTO-CODE requests an authorization code

When evaluating AUTO-CODE, it will request an authorization code every time you start a new run of AUTO-CODE in a drawing. When you purchase AUTO-CODE you will be supplied with an authorization code. After entry of this code, AUTO-CODE will not ask for another authorization code unless you install an update to AutoCAD with a new serial number, change the user name in the license file, or select an interface file for a different process than what has been authorized.

7.0 UNINSTALL Procedure

To remove AUTO-CODE from your computer system, select the Uninstall option from the AUTO-CODE pull down menu. The Uninstall option can be found in the Help sub-menu. After Uninstall is complete, erase the directory where you stored AUTO-CODE using the Windows file explorer.

Do note that this action will remove the program modules and any custom machine tool interfaces you may have created for the system.

8.0 Directory List of Files Installed by AUTO-CODE

Your AUTO-CODE program directory should contain the following files and directories. The names of the internal directories must match exactly for AUTO-CODE to operate correctly. The AUTO-CODE program directory will be located inside the AutoCAD program directory. In the following tables, xx is the version number.

NCGxx

NCGSET.TXT	Attribute extract template file
NCGINIT.LSP	Global variables settings - source code provided
NCGxx.VLX	Compiled Visual LISP modules for program, xx is version number
NCG.SLB	Slide library
NCG_P.ARX	ObjectARX program module for utility library
NCG_X.ARX	ObjectARX program module for translation
AUTOCODE.HLP	General help file
CUSTOM.HLP	Customizing help file
NCGxx.MNU	Pop up menu source
NCGxx.LIC	*Created when installation complete*

DCL

ACMILL.DCL	Dialog control language for Mill
ACEDM.DCL	Dialog control language for Wire
ACFLAME.DCL	Dialog control language for Flame
ACLASER.DCL	Dialog control language for Laser
ACTURN.DCL	Dialog control language for Turning
ACPUNCH.DCL	Dialog control language for Punch Press
CFGEDIT.DCL	Dialog control for CFG file editor
POCKET.DCL	Dialog control for advanced pocket module
WIZARD.DCL	Dialog control for CFG generator

DWG

NCGPNT.DWG Control point block
ORIGIN.DWG Origin figure - full scale
ORIG-QTR.DWG Origin figure - quarter scale
ORIG-TEN.DWG Origin figure - metric scale
TOOL.DWG Sample tool drawing

... there are more tool drawings to be found in this directory than are listed here.

MAT

MILL.MAT Feeds/speeds data file for mill work
TURN.MAT Feeds/speeds data file for turning

MLD

NCG12.ENG Prompts in English
NCG12ERR.ENG Error messages in English

... alternative language files may be found here as well.

POSTS

*.CFG Configuration files for interfaces
*.LSP AutoLISP functions for interfaces
*.CTL Machine control list for interfaces
*.PAT Pattern files for interfaces
*.DCL Dialog box controls for interfaces
*.HPN Hole pattern names for interfaces

TOOLS

*.TL Tool library files for milling machines

PUNCH

*.TL Tool library files for punch press

TURN

*.TL Tool library files for turning centers

9.0 Support

AUTO-CODE is supported directly by the AUTO-CODE software company. If you are having a problem with the software please report it to AUTO-CODE. It will be necessary for the technical support specialist who assists you to be able to duplicate the problem. As such, be ready to supply sufficient details so that the problem is clearly understood.

The majority of problems reported to AUTO-CODE have to do with installation issues. In these cases we need to know if AutoCAD is running under the control of a network, which version is being used, the operating system version and the directory structure currently in use. Because AutoCAD can be installed in a variety of manners, there are possibilities that the installation system will have difficulties although every effort has been made to predict these problems and provide solutions. When dealing with installation issues, the more you know about the operating system and how to use it, the better. Most problems of this nature are solved over the phone or via email contact with the developer.

To contact AUTO-CODE please use the following options:

Technical Support Phone Numbers:

614-792-3900 Operating hours are 9:00 AM to 5:00 PM eastern standard time
614-792-0956 Fax

Internet:

Web page: <http://www.autocode.com>

Technical Support Mailing Address:

AUTO-CODE
P.O. Box 723
Dublin, OH 43017
United States of America