

# XG MANAGER



Version 1.6.1

# MANUAL

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MOUNTAIN UTILITIES



<https://mountainutilities.eu/>

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# 1. Overview

XG Manager is a utility by Mountain Utilities that can control any hardware or software synthesizer implementing the Yamaha XG protocol. It also offers support for the QS300 synthesizer as hosted on the DB50XG daughterboard, the stand-alone MU10 module and the SW60XG ISA card.

XG Manager is only available for Windows. (A future Linux edition is unlikely, but not impossible. There are no plans for a macOS edition.)

XG Manager is free, although donations are very welcome.

## 2. Version history

### Version 1.6.1 (2020-11-17)

- The application has become more user-friendly concerning data errors in ‘.stp’ and ‘.mru’ configuration files:
  - On startup, when the application encounters a data error in a configuration file, the application now mentions the exact name of the offending file, and no longer refuses to start. Hence it is no longer necessary to delete corrupt configuration files manually.
  - On exit, the application reports any errors while saving configuration files.
- The update check mechanism works again on Windows versions supporting TLS 1.2 but not TLS 1.3, i.e. Windows 7, Windows 8 and pre-TLS 1.3 Windows 10. (Windows XP and Vista (which don’t even support TLS 1.2) were not hit by this problem, and still work too.)
- The ‘XG synth options’ dialog box and this manual mention that XG Manager’s support for the QS300 synth also works for the QS300 as hosted on the stand-alone MU10 module and the SW60XG ISA card.

### Version 1.6.0 (2020-09-14)

- This manual is no longer a stub but fully featured.
- The update check mechanism should now work again on any operating system capable of running the application, including Windows XP.
- The installer allows you to deselect non-essential files: the manual and the skin definitions.
- Increased the application’s running speed by disabling some debugging safeguards. (From now on, this will apply to all Release Candidate and Release versions.)
- Skins: 39 alternative user interfaces, mainly color schemes.
- Full support for the ‘Per Monitor v2’ DPI awareness protocol introduced in Windows 10 Creators Update 1703: at high DPI settings all text characters look razor-sharp instead of blurry, and the resolution of each window automatically adapts to the monitor on which it is (mainly) being shown.
- Fixed the incorrect scaling of certain windows and dialog boxes if the operating system’s DPI setting isn’t its normal value of 96 DPI. (This problem was introduced in XG Manager 1.5.0 Alpha 1.)
- To always show the *full* application title on the main window’s title bar, the width of the main window now takes the minimize, maximize and close buttons into account. This is especially relevant to Windows 10: its huge buttons previously caused the application title to be truncated.
- For clarity, the ‘Send setup’ icon on the main window’s toolbar has been changed to the icon used by the ‘Send setup’ item in the MIDI pull-down menu.
- You can send an ‘XG System On’ message to a MIDI device from the MIDI pull-down menu of the main window.
- You can customize the delay after an ‘XG System On’ message from 50 to 1000 msec. (Previously this delay was fixed at 1000 msec.) This delay gives the receiving MIDI device time to set up its XG mode.

The MIDI specifications of all XG synthesizers I’ve seen specify that this XG device requires 50 msec to set up, so choosing a delay of 100 msec normally be sufficient.

However, confusingly the DB50XG manual elsewhere states that the DB50XG needs about 500 msec to switch between its XG and TG-300B modes, so for the DB50XG 1000 msec seems appropriate. Note though that XG mode is the DB50XG’s default, so unless you’ve somehow switched to TG-300B mode (which XG Manager currently doesn’t support), XG System On messages are superfluous anyway for the DB50XG.

- The ‘Revert to defaults’ operation now correctly resets the Master Tune parameter.

### **Version 1.5.2 Alpha 1 (2019-03-23)**

- By default, on startup the application sends the ‘XG System On’ message to the XG device. This is necessary for devices whose default mode isn’t XG. However, after sending this message, the application waits a full second to give the device time to switch, so if this message is *not* necessary (e.g. for devices for which XG mode is the default), you can suppress this message via the XG synth options dialog box.
- For clarity, ‘XGSendOnStartup’ has been renamed to ‘XGOnStartupSendSetup’ in the XGMan.stp configuration file. Consequently, the first time you run this version after updating an existing version, you’ll get a warning about this change. Simply click OK.

### **Version 1.5.1 Alpha 1 (2019-03-18)**

- The transmission of sound parameters to the target XG has been fixed. (Previously, transmission would become impossible after a restart of the application.)
- The MIDI Keyboard no longer automatically updates its selected MIDI output device upon a change to the XG device configuration. (This auto-update feature was intended as a courtesy, but turned out to be rather confusing.)

### **Version 1.5.0 Alpha 1 (2018-06-14)**

- The installer automatically installs the edition of XG Manager matching the operating system: the 32-bit edition on 32-bit Windows, the 64-bit edition on 64-bit Windows. (Previously there was only a 32-bit edition, which was installed on 32- and 64-bit Windows alike.)
- The XG Manager update mechanism allows you to specify in which update types you are interested: alpha (development) versions, (‘public’) beta versions, release candidates and release versions.
- New: this manual, although it’s currently mostly a stub.

### **Version 1.4.0 (2016-03-26)**

- If a previous version of the application has been installed, the installer skips the dialog box in which you can set the destination folder and the dialog box in which you can set the program group in the Windows menu. (So if you wish to install to a different folder or program group, you must uninstall the previous version first.)
- The new Restart operation terminates XG Manager and automatically starts a new instance of it. There is also a version of Restart that restarts XG Manager with its default setup.
- You can switch between different setups for the program (including MIDI I/O device states). (This requires restarting the program.)
- You can switch between different window layouts (‘desktops’). (This does not require restarting the program.)
- You can sanitize the lists of most-recently opened/saved files in the menus via two operations: ‘Remove absent files from list’ and ‘Clear list’.
- In the ‘Window list’ dialog box you can make all windows visible in one operation.
- Many internal improvements to MIDI input and output communication. In particular, the input system for SysEx messages has been redesigned completely, one consequence being that the maximum SysEx message length is now fixed at 65536 bytes, hence it is no longer editable via the Input tab of the MIDI devices dialog box.
- In the MIDI keyboard window, Middle C has a blue border.
- The MIDI keyboard updates its display immediately when you mouse-drag the ‘thumb’ in its horizontal scrollbar. (Previously the keyboard updated only when you released the mouse button.)
- Similarly, the grids in the Parts, Programs and ‘QS300 voice library’ windows update their displays immediately when you mouse-drag the thumbs in the scrollbars.
- The ‘Revert to defaults’ operation (available from the main window’s Edit pull-down menu)

- asks you if you really want to revert all parameters to their default values.
- The Donate item in the main window's Help pull-down menu no longer opens a dialog box, but makes your web browser open the Donate page at the Mountain Utilities web site.
- XG Manager no longer refuses to start if system.ini doesn't exist in the Windows system folder.

**Version 1.3.0 (2014-02-10)**

**Version 1.2.1 (2013-01-18)**

- The MIDI keyboard window has become more powerful.
- The user interface has been improved in several ways.

**Version 1.2.0 (2011-01-11)**

**Version 1.0.3 (2009-11-02)**

**Version 1.0.2 (2009-08-11)**

**Version 1.0.1 (2009-08-06)**

**Version 1.0.0 (2009-07-12)**

First published version.

### 3. Computer requirements

To run XG Manager, your computer must comply with the following requirements:

- Processor: Any Intel 80486- or Pentium-compatible CPU. Processor speed is relatively unimportant. The number of cores is irrelevant, since XG Manager only uses one core.
- Operating system: Windows 2000 or later (XP, Vista, 7, 8, 10 etc.).
- An SVGA-compatible graphical card and monitor:
  - The screen size should be at least  $800 \times 600$  pixels. (However, some of the bigger windows and dialog boxes may be cut off if the screen is too narrow, so  $1024 \times 768$  is the *practical* minimum.)
  - For best results, the color depth should be at least 16 bits. (At a depth of only 256 colors, some colors aren't rendered as intended.)
- A mouse.
- Free hard disk space: about 10 MiB.
- RAM: when running, XG Manager normally occupies roughly 8 MiB.

## 4. Installation of XG Manager

Three editions of XG Manager are available: an installer, a 32-bit portable edition and a 64-bit portable edition:

Installer:

1. Download [xgman-a.b.c-install.exe](#) (where *a.b.c* stands for the actual version number) to your computer from the XG page at the Mountain Utilities web site (<https://mountainutilities.eu/xg>).
2. Run [xgman-a.b.c-install.exe](#) and follow its instructions. The installer automatically installs the edition of the actual application ([XGMan.exe](#)) that matches the operating system: the 32-bit edition on a 32-bit Windows system, the 64-bit edition on a 64-bit Windows system.

Note: the installation includes an uninstaller. It can be run from the Windows start menu via Programs → Mountain Utilities → XG Manager, or via Settings → Control Panel → ‘Add or Remove Programs’ (Windows XP) or ‘Programs and Features’ (Windows Vista and later).

Note that when you install a new version of XG Manager, you do *not* have to uninstall any previously installed version first: the old version will be replaced with the new version automatically.

Portable (32- or 64-bit):

1. Download [xgman-a.b.c-xnn-portable.zip](#) (where *a.b.c* stands for the actual version number and *xnn* is ‘x64’ or ‘x86’) to your computer from the XG page at the Mountain Utilities web site (<https://mountainutilities.eu/xg>). The ‘x64’ (64-bit) edition only runs on 64-bit Windows, the ‘x86’ (32-bit) edition on 32- and 64-bit Windows.
2. Unzip [xgman-a.b.c-xnn-portable.zip](#) completely (maintaining the zip file’s tree structure) to any folder to which XG Manager itself ([XGMan.exe](#)) will have write-access (which is necessary for its configuration files). Crucially, in Windows Vista and later you should *not* unzip to a subfolder of [C:\Program Files](#) or [C:\Program Files \(x86\)](#), since these folders are subject to Windows’ UAC (User Access Control), which means that XG Manager would *not* have write-access.

### Running XG Manager itself

After installation, you can start XG Manager ([XGMan.exe](#)) itself, e.g. via the Windows start menu.

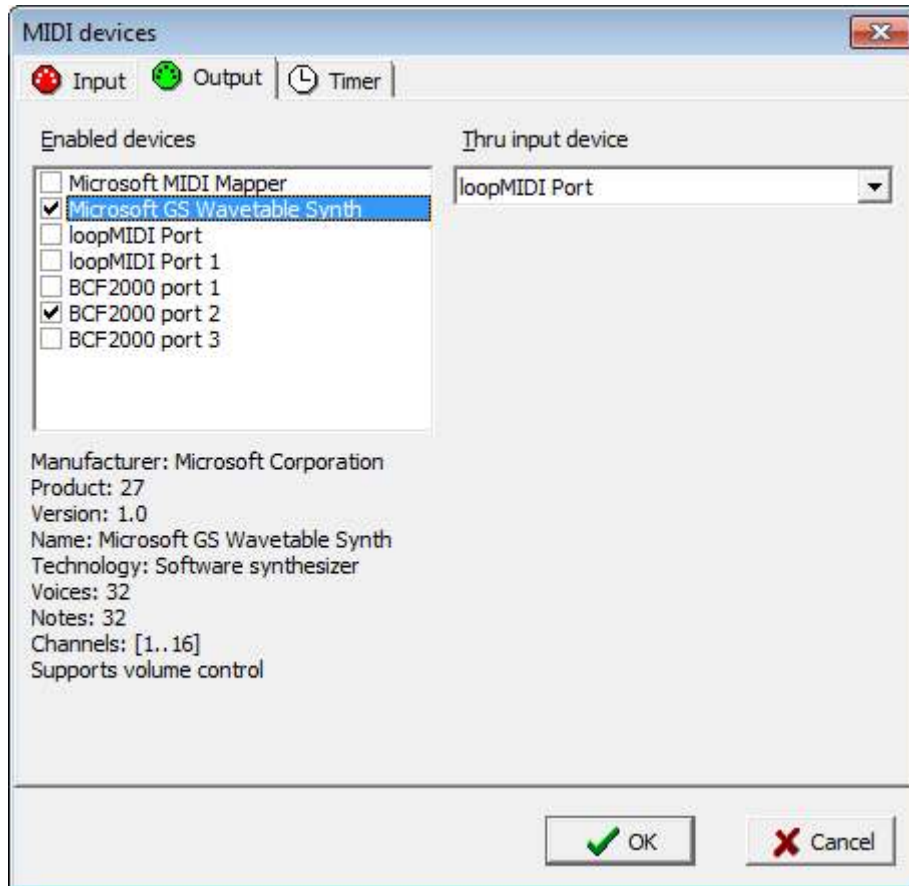
If you have never run XG Manager (in any version) from the installed operating system before, the program notifies you that it can’t find your configuration. This is normal: the program saves its configuration file ([XGMan.ini](#)) whenever the program *terminates*, so obviously this configuration file doesn’t exist yet when you start the program for the very first time. The program also notifies you if the configuration file does exist but belongs to a previous version; all existing settings are retained.



## 5. MIDI setup

You must tell XG Manager manually where to find a particular XG synth. This involves the following steps:

1. You must ensure that the pertinent MIDI I/O ports are *enabled* in XG Manager:  
From the main window's Options pull-down menu, 'MIDI devices' opens a dialog box in which you can select the MIDI I/O devices to which XG Manager connects:



Enabling the proper I/O devices is relevant in several ways:

- If you want XG Manager to communicate with an XG synth, the MIDI input and output ports connected to this XG synth need to be 'enabled' here.
- More in general, *all* XG Manager's MIDI utilities (including those not directly related to XG synths) can only exchange data via MIDI devices that are 'enabled'.
- If you want to run other programs using MIDI devices simultaneously, it may be a good idea to keep as many MIDI devices disabled as you can in XG Manager, in order to avoid access conflicts.

Tip: In the MIDI devices dialog box you can also set up a 'soft MIDI thru' link, by connecting an enabled MIDI input to an enabled MIDI output device. Any MIDI message received by the MIDI input device is then immediately passed on to the MIDI output device. In fact, you can set up as many links as there are devices; the only restriction is that each device can have only one connection.

2. You must set the XG synth's MIDI output device to the correct value:  
From the main window, open the 'XG synth options' dialog box via the Options pull-down menu, and select the MIDI output device to which the XG synth is connected.

## MIDI pipes

Of particular interest is the enabling/disabling of 'MIDI pipes'. 'MIDI pipe' is my term for what is commonly known as a 'virtual MIDI device'. This is software that manifests itself as a virtual MIDI output port plus a virtual MIDI input port: the driver passes any MIDI data sent to the output port to the input port. Hence, when a computer program sends data to the virtual MIDI output port, this data can be picked up at the corresponding input port by any other computer program. Thus, a MIDI pipe allows inter-program MIDI communication. If a MIDI pipe driver is 'multi-client', we can connect more than one program (up to a particular maximum) to the same virtual output or input port.

To my knowledge, the following free MIDI pipe drivers are available (please contact me if you know any others):

- **Hubi's Loopback Device:** 4 multi-client pipes, but for Windows 9x only.
- **Sony/Sonic Foundry Virtual MIDI Router:** 4 single-client pipes. Windows 32-bit only.
- **Hurchalla Maple:** 12 single-client pipes. Windows 32-bit only.
- **LoopBe1:** only 1 multi-client pipe, so not very useful. (No, you can't install more than one copy!) Windows 32-bit only.
- **LoopBe30:** 30 multi-client pipes, but the trial version only works for a brief period, and the full version is not free. Windows 32-bit only.
- **MIDI Yoke** (<http://www.midiox.com/>): the NT (/2000/XP/Vista/7/8(?)) version allows up to 16 multi-client pipes, so understandably this has been the most popular MIDI pipe driver for 32-bit Windows versions.
  - Problems:
    1. MIDI Yoke's NT version, even though it is 32-bit, *can* be installed under 64-bit operating systems, but (reportedly) the pipes are only accessible to 32-bit DAWs, not to 64-bit DAWs.
    2. To work with MIDI Yoke correctly under Windows versions with UAC (User Access Control) you must apply a manual tweak:

The MIDI Yoke installer tries to create MIDI Yoke's configuration file (MYOKENT.INI) in C:\Windows, but the operating system doesn't allow this and actually creates it in C:\Users\Username\AppData\Local\VirtualStore\Windows. On the other hand, the MIDI Yoke configuration applet under Control Panel *does* have write access to C:\Windows and will create a second copy of MYOKENT.INI there when you change the settings. However, the latter file will never be seen by the *driver* (because the operating system keeps redirecting it to the copy in ...\VirtualStore\Windows); in other words, the driver 'won't listen to you.'

To fix this, you must manually remove MYOKENT.INI from C:\Users\Username\AppData\Local\VirtualStore\Windows or move it to C:\Windows, using administrator rights.
    3. As discussed below, the NT version of MIDI Yoke may slow down the termination of MIDI

## Tools.

- **CopperLan** (<http://www.copperlan.org/>):  
Available for macOS and Windows (32- and 64-bit).  
This is primarily a MIDI-over-Ethernet system, so it's a bit of overkill if you only need local MIDI pipes. (CopperLan 1.4 for Windows installs *three* drivers, if I remember correctly!)  
It offers up to 32 virtual MIDI input ports and 32 virtual MIDI output ports; by default none of these are set up as 'pipes', but you can manually connect any output to any input (although the idiosyncratic user interface makes this much more difficult than it should be).
- **loopMIDI** (<https://www.tobias-erichsen.de/>):  
This allows you to create and destroy any number of MIDI pipes on the fly.  
Simple and effective, so probably the best choice on modern Windows versions (particularly 64-bit versions, given MIDI Yoke's problems on those).

If configured improperly, MIDI pipes can easily cause problematic MIDI signal paths. There are several dangers:

### **Duplication:**

If there is first a *split* in the signal path, and then a *merge*, two or more copies of the same MIDI message arrive at the end of the signal path (i.e. the target MIDI device). This is time-consuming at best, and may even lead to communication errors.

### **Feedback:**

In general, feedback involves the return of a sent MIDI message to the same MIDI hardware device or computer program that sent the message. Obviously this needlessly slows down operation, although it isn't necessarily disastrous. However, there may also be more sinister effects. For instance, feedback may interfere with the program's communication with the MIDI device; this can result in many types of error.

At the very least you should normally avoid enabling both the output port and the input port of the same MIDI pipe in the same program (e.g. XG Manager), because by definition anything you send to a MIDI pipe's *output* port (the pipe's starting point) is returned at the corresponding MIDI pipe's *input* port (the pipe's end point). So for instance, if you enable both 'Out To MIDI Yoke: 1' and 'In From MIDI Yoke: 1' in a program, then any MIDI data the program sends to 'Out To MIDI Yoke: 1' is returned to the program at 'In From MIDI Yoke: 1'. This type of feedback is usually undesired, except perhaps for monitoring purposes.

The most severe type of feedback occurs when the sender/recipient actually *re-sends* the returned MIDI message: this leads to an infinite loop, which may well grind the sender/recipient (and indeed the whole computer) to a virtual standstill.

In XG Manager this horror can happen if you enable the MIDI Thru feature in the MIDI devices dialog box for an input-output pair already exhibiting feedback. For instance, if you activate MIDI Thru from 'In From MIDI Yoke: 1' to 'Out To MIDI Yoke: 1' in XG Manager's MIDI devices dialog box, then any MIDI data sent to 'Out To MIDI Yoke: 1' not only comes back to XG Manager at 'In From MIDI Yoke: 1' (via MIDI Yoke's pipe 1), but is then automatically *re-sent* from 'In From MIDI Yoke: 1' to 'Out To MIDI Yoke: 1' via the MIDI Thru feature, in principle ad infinitum, although MIDI Yoke does perform some checks that spot and kill the infinite loop — but still...

### **Close delay:**

This problem only occurs with MIDI Yoke NT 1.75 (but *not* with MIDI Yoke for Windows 95/98/Me): closing any MIDI Yoke NT *input* port causes a delay of 1 second. (Certain earlier versions even 3 seconds.)

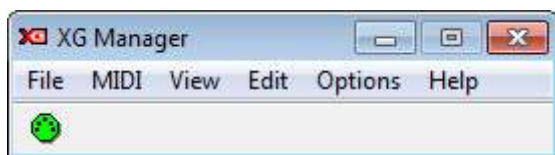
Concerning XG Manager this is mainly relevant during program exit. In principle XG Manager terminates almost instantly upon exit, but when all the input ports of MIDI Yoke NT 1.75 are enabled, termination of XG Manager takes some 16 seconds longer than normal! Therefore you should disable as many MIDI Yoke NT input ports as possible in XG Manager's MIDI devices dialog box, i.e. any MIDI Yoke NT input ports that XG Manager itself doesn't use. (Note that you can still use any MIDI ports disabled in XG Manager in *other* programs!)

To help you avoid some of the serious problems discussed above, XG Manager takes the following steps:

- On *first* startup, if XG Manager detects any of the MIDI pipes listed above (excluding CopperLan, since by default its virtual ports aren't interconnected), it asks you if you want to enable the I/O devices of these pipes. It's best to answer *No* (to avoid feedback loops, and to avoid MIDI Yoke NT's close delays during XG Manager's exit procedure), unless some other program (e.g. MIDI-OX) is routing an XG synth through a MIDI pipe.
- On *every* startup, XG Manager optionally warns you if any MIDI Yoke NT input ports are enabled and thereby cause extra delays during termination of XG Manager. You can enable/disable this warning on the Input tab of the MIDI devices dialog box.

## 6. The main window

XG Manager's main window only consists of a pull-down menu and a toolbar:



The toolbar merely contains a button duplicating the 'Send setup' menu item (in the MIDI pull-down menu).

The menu provides the following operations:

File → XG:

A submenu from which you can open/save the full set of XG parameters from/to a file (with extension '.xg'). Note that the application automatically maintains 'Current.xg', opening it upon startup and saving it on exit.

File → Restart:

Terminates XG Manager and starts a new instance of it. Beware: the application does not prompt you to save/send any changed data: all non-saved/sent data are lost upon restart.

File → Restart with default setup:

Functions like Restart (see above), with two differences:

- Since this operation is somewhat 'momentous', a dialog box requires you to confirm that you indeed want to do this.
- The default setup file XGMan.stp is deleted before the restart, so that all XG Manager's setup values (such as MIDI I/O device settings and window positions/sizes) are restored to their defaults. Consequently, XG Manager's new instance behaves as if you have never run the application before.

This operation may be useful when some setup problem has developed that you find yourself unable to fix quickly otherwise. However, the restoration of the default setup also has its drawbacks: for instance, you must configure all MIDI devices again.

Note: 'Restart with default setup' does not destroy the file lists in the application's menus (such as the Setup submenu — see below): these file lists are not stored in XGMan.stp but in XGMan.mru. If you want to clear these file lists, simply use their 'Clear list' operations, or (for a total clearance) remove XGMan.mru while the application isn't running.

File → Setup:

A submenu from which you can open and save setup ('.stp') files.

A setup file includes nearly all the application's customizable settings, including MIDI I/O device settings and window positions/sizes.

By opening a (previously saved) setup file you can quickly switch from one setup to another. However, opening a setup file involves restarting the application; thus you will lose transient data like unsaved recorded MIDI input messages. So if you only wish to change the window positions/sizes, it's simpler to use the desktop ('.dsk') file facility (see View → Desktop), because this doesn't involve restarting the application.

**Tip:** you can force XG Manager to use a specific setup file via the command line, as follows:

/s\_setupfile

**File → Exit:**

Terminates XG Manager. Beware: the application does not prompt you to save/send any changed data: all non-saved/sent data are lost upon restart.

Note that the associated hotkey (Alt+X) works from almost *any* location in the program, not just from the main window. Of course you can also terminate XG Manager by clicking on the X icon on the main window's title bar. Pressing Alt+F4 also works, but (unlike Alt+X) only from the main window.

**MIDI → Send XG System On message:**

Sends the 'XG System On' message to the XG device. This may be necessary for XG devices supporting multiple modes. See under Options → 'XG synth' for further discussion.

**MIDI → Send setup:**

Sends the full XG setup currently defined in XG Manager to the XG synthesizer.

**View → System/Reverb/Chorus/Variation/Parts/Programs/Drum setups:**

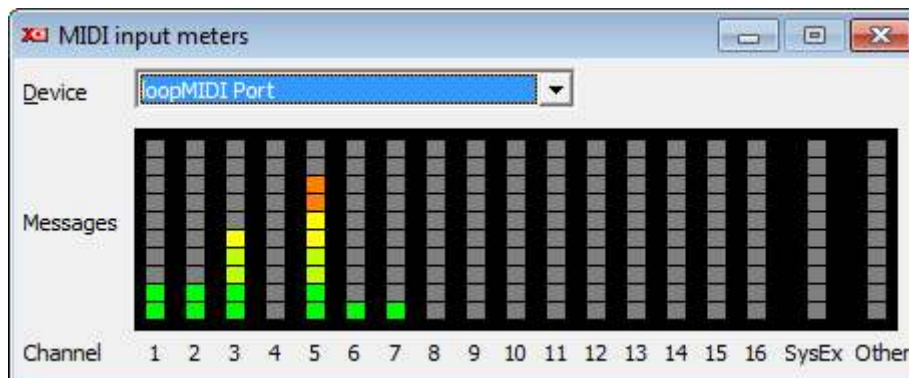
Opens windows for the respective XG parameter areas. Any parameter you change in these windows is automatically sent to the connected XG synth.

**View → QS300 voice library/common/elements:**

Opens windows for the respective QS300 parameter areas. Only available if QS300 support has been enabled in the 'XG synth options' dialog box (accessible from the Options pull-down menu).

**View → MIDI → Input meters:**

Opens a window showing the messages received recently from the MIDI input devices, via (logarithmical) LEDs per MIDI channel:

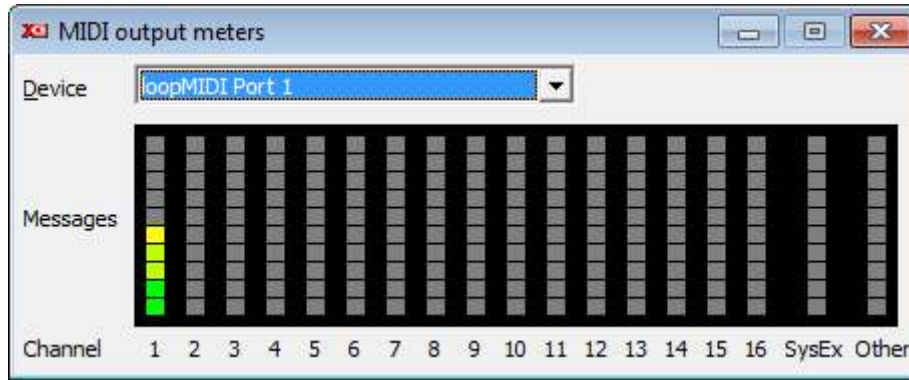


This window can be useful for troubleshooting your MIDI connections.

'DISABLED' in front of the selected MIDI input device indicates that the device is disabled, so no MIDI messages can currently be received from that device. (You can enable devices in the MIDI devices dialog box.)

**View → MIDI → Output meters:**

Opens a window showing the messages sent recently to the MIDI output devices, via (logarithmical) LEDs per MIDI channel:



This window can be useful for troubleshooting your MIDI connections. 'DISABLED' in front of the selected MIDI output device indicates that the device is disabled, so no MIDI messages can currently be sent to that device. (You can enable devices in the MIDI devices dialog box.)

View → MIDI → Keyboard:

Opens a window containing a virtual MIDI keyboard. See §7 for more information.

View → Desktop:

A submenu from which you can open and save desktop ('.dsk') files.

A desktop file contains the positions, sizes and states (hidden/visible/minimized) of all the windows in the application. Thus, a desktop file contains a subset of the data in a setup file: see File → Setup.

By opening a (previously saved) desktop file you can quickly switch from one desktop (i.e. layout) to another. Unlike opening a setup file, this does not involve restarting the application. By default the 'Keep numbers' option is off, so that opening or saving a file promotes the file name to position 1 in the list; when 'Keep numbers' is on, the list stays as it is, which can be useful when you're continually switching between particular desktops.

View → Stay on top:

When this menu item is checked, XG Manager's main window stays on top of any other windows belonging to XG Manager. The main window also stays on top of other applications (except of course those that have the stay-on-top property too).

View → Skin:

Opens a window in which you can select the 'skin' of the application; apart from the default skin (called 'Windows'), there are 39 alternative skins. Most prominently, a skin defines the colors of all the visual elements of the application's windows, but a skin may also change the font type and/or size, or the shape or size of buttons etc.

Some tips:

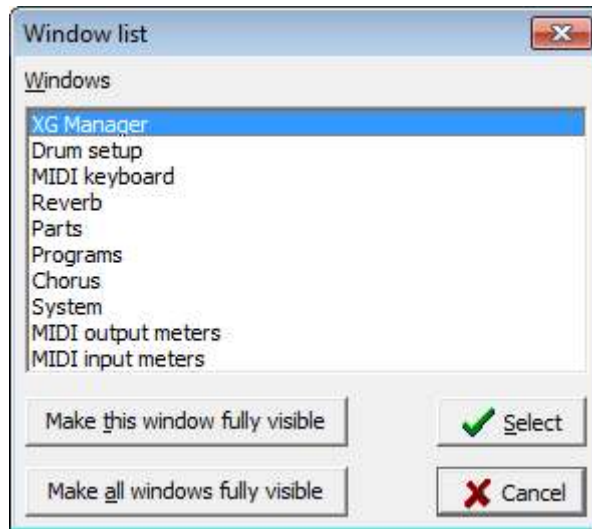
- The default 'Windows' skin isn't really a skin: it's simply the current interface of the Windows version you are running. So for instance if your computer is using an Aero theme on Windows 7, that's what the 'Windows' skin will give you; but on Windows 10 it will amount to the standard Windows 10 look.
- The six 'Windows 10 ...' skins are available on any Windows version, so you can make your Windows XP or 7 look like Windows 10! (However, there are subtle differences between these skins and the *actual* Windows 10 interface.)

Disclaimer: The 39 alternative skins were not developed by Mountain Utilities, but are part of the Delphi programming environment on which this Mountain Utilities application is built. So

these skins are offered on a take-it-or-leave-it basis. Some of these skins may cause undesired visual effects, such as certain screen elements disappearing behind others. However, due to the sheer number of these skins it would be a huge task to fine-tune every window of every Mountain Utilities application for every skin. So be prepared for some unpleasant and perhaps confusing surprises. If you encounter a ‘really bad’ problem, feel free to report it in the application’s forum at the Mountain Utilities web site.

View → Window list:

Opens a dialog box that allows you to quickly navigate to any open window:



Note that the hotkey (Alt+0) for opening this dialog box works from almost *any* location in the program, not just the main window.

If the highlighted window is partially or completely outside the current monitor(s), you can move it into full view by pressing ‘Make this window fully visible’. ‘Make all windows fully visible’ performs this operation on *all* windows in the list.

Edit → Revert to defaults:

Resets all XG parameters to their defaults and sends them to the XG synth.

Options → MIDI devices:

Opens a dialog box in which you can configure the MIDI devices that XG Manager monitors.

See §5 for more information.

Options → XG synth:

Opens a dialog box in which you can set various options related to your XG device:

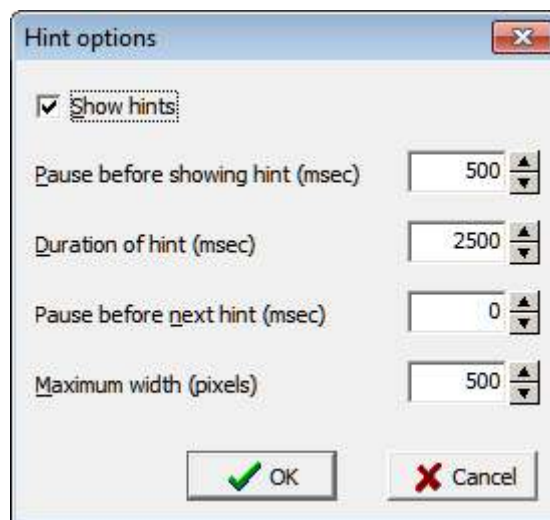




- **MIDI output device:**  
The MIDI device from where the XG synth can be controlled.
- **Delay after XG System On message (msec):**  
Determines the delay after any XG System On message sent by XG Manager. This concerns both the message sent on startup of XG Manager (cf. the setting described below) and the on-demand messages sent via MIDI → ‘Send XG System On message’.
- **On startup send XG System On message to XG synth:**  
This is essential for devices whose default mode isn’t XG. However, after sending this message, XG Manager by default waits a full second to give the device time to switch, so if this message is *not* necessary (e.g. for devices (like the DBXG50) for which XG mode is the default), you can skip this message. You can customize the delay after this message via the ‘Delay ...’ setting mentioned above.
- **QS300 (requires DB50XG, MU10 or SW60XG):**  
If this setting is enabled, XG Manager supports the QS300 synthesizer as hosted on the DB50XG daughterboard, the stand-alone MU10 module and the SW60XG ISA card.

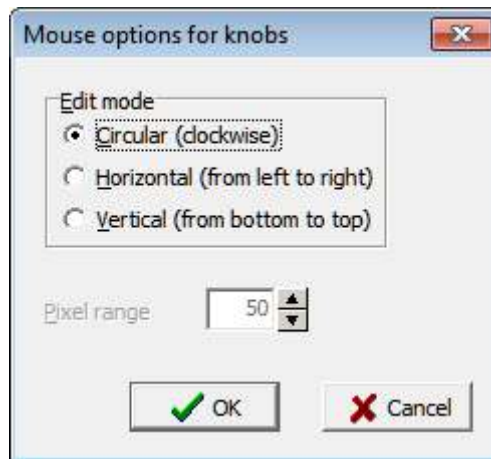
Options → Hints:

Opens a dialog box in which you can set options affecting the hints that are displayed when you move the mouse cursor over buttons etc.:



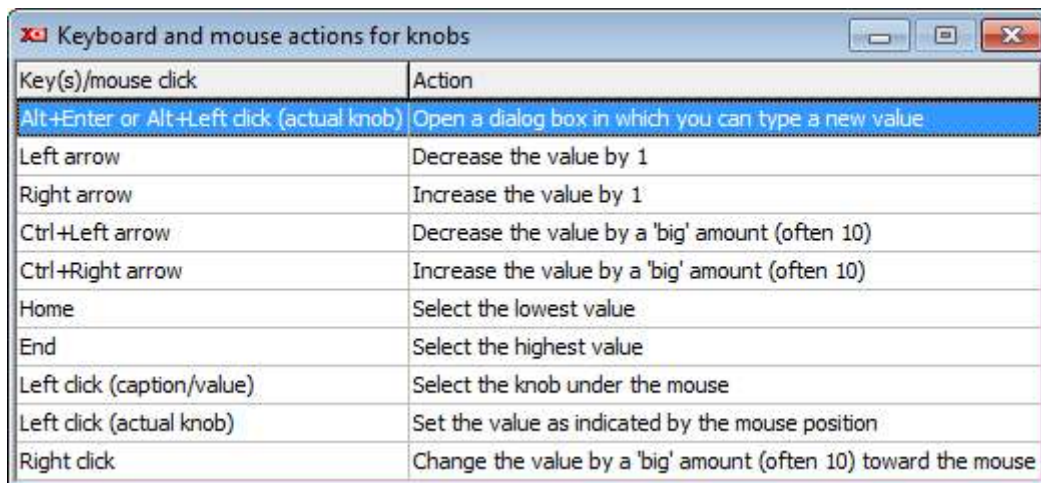
Options → Mouse:

Opens a dialog box in which you can set the way in which the mouse turns the parameter knobs:



Help → Keyboard and mouse actions for knobs:

Opens a table containing the computer keyboard and mouse actions that you can apply to parameter knobs:



| Key(s)/mouse click                        | Action   |
|---|--|
| Alt+Enter or Alt+Left click (actual knob) | Open a dialog box in which you can type a new value            |
| Left arrow                                | Decrease the value by 1  |
| Right arrow                               | Increase the value by 1  |
| Ctrl+Left arrow                           | Decrease the value by a 'big' amount (often 10)                |
| Ctrl+Right arrow                          | Increase the value by a 'big' amount (often 10)                |
| Home                                      | Select the lowest value  |
| End                                       | Select the highest value                                       |
| Left click (caption/value)                | Select the knob under the mouse                                |
| Left click (actual knob)                  | Set the value as indicated by the mouse position               |
| Right click                               | Change the value by a 'big' amount (often 10) toward the mouse |

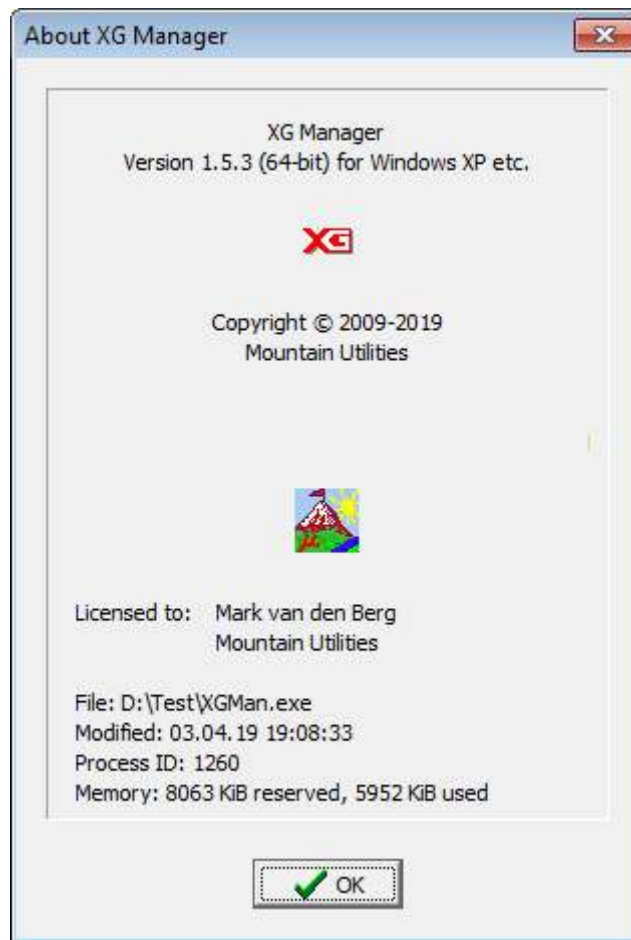
This is basically the same table as the one in §8 in this manual.

Help → Manual:

Opens this manual in the external application associated with the file extension 'pdf'.

Help → About XG Manager:

Opens a dialog box containing information on XG Manager, such as its version number and memory usage:

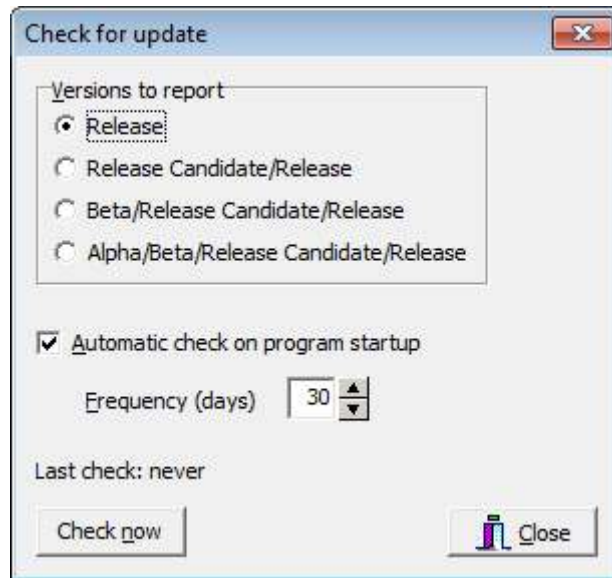


Help → Mountain Utilities web site:

Provided you're connected to the internet, your web browser opens the Mountain Utilities web site, where you can find up-to-date information about XG Manager and other matters related to XG synths.

Help → Check for update:

Opens a dialog box in which you can set the frequency at which XG Manager automatically searches for updates at the Mountain Utilities web site, and which types of updates you are interested in:



If you set 'Versions to report' to 'Release', you will only be notified about Release versions. 'Release Candidate/Release' will also notify you about Release Candidate versions, etcetera.

When an update is available, the program asks you whether you wish to open the pertinent web page at the Mountain Utilities site. You can also check for updates manually, by pressing the 'Check now' button.

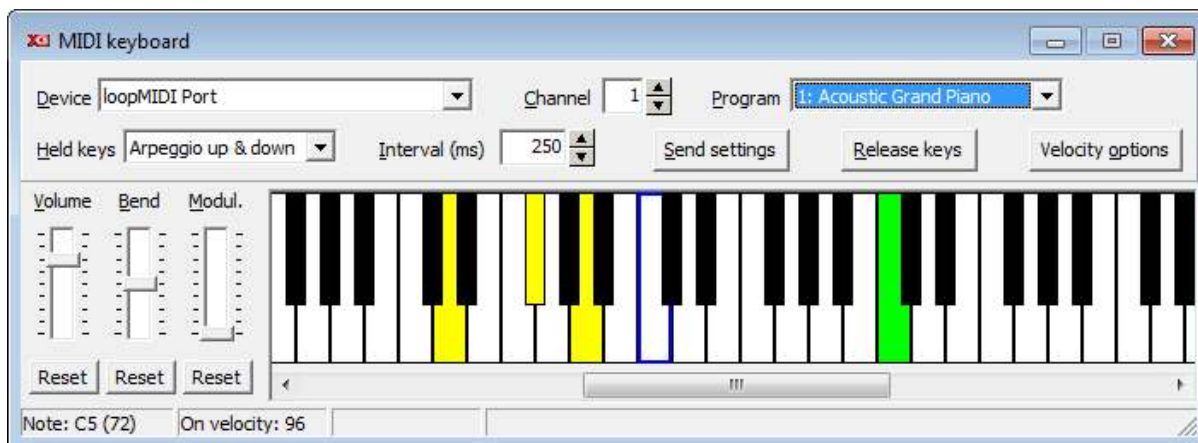
*Note: If your firewall catches the program's connection attempt and asks you whether you want to allow this, you can safely say yes: no information identifying you or your computer will be sent to the Mountain Utilities web site.*

Help → Donate:

Makes your web browser open the Donate page at the Mountain Utilities web site (<https://mountainutilities.eu/donate>), at which you can express your appreciation of XG Manager and support its further development by making a donation.

## 7. The MIDI keyboard

The MIDI keyboard is accessible from the main window's View pull-down menu (→ MIDI → Keyboard).



From the MIDI keyboard you can send note messages (and several related other messages) to any MIDI output device (e.g. a synthesizer):

- Note names displayed on the status bar follow the Roland octave numbering protocol.
- On the keyboard, Middle C (#60, C4) has a blue border.
- Pressing the 'Send settings' button sends the selected program, volume, pitch bend and modulation to the selected MIDI output device.
- To play an *individual* note, *left-click* on a key: the key turns green for as long as you keep the mouse-button pressed.
- To *hold* a note, *right-click* on a key: the key turns yellow, until you click it again (or clear all held keys).
- The 'Held keys' drop-down box determines how the held keys are interpreted: they can be played as a chord (i.e. simultaneously) or as arpeggios.
- 'Interval (ms)' determines the chord or arpeggio time interval.
- Pressing the 'Release keys' button clears all currently held keys.
- If you hold the Shift key while left-clicking or right-clicking, all currently held notes are cleared before the newly selected note is played or held. (In other words: it's as if you've pressed the 'Release keys' button.)
- Beware: the chord/arpeggio timing is not very accurate, because the 'simple' Windows timer is used (rather than the multi-media timer, which is more exact but also puts a larger strain on the computer). In particular, performing actions like opening a listbox may stall the timer. In other words: don't try to use the chord/arpeggio modes for actual music production!

## 8. Using the computer keyboard and mouse

XG Manager's user interface uses mostly standard widgets (buttons, checkboxes, pull-down boxes etc.). This means that it may sometimes be easier to use the keyboard instead of the mouse for particular operations.

Of particular interest are the keystrokes and mouse-clicks that you can apply to parameter knobs. The following actions are defined:

| Key(s)/mouse click                                     | Action  |
|--|---|
| Alt+Enter<br><i>or</i><br>Alt+Left click (actual knob) | Open a dialog box in which you can type a new value (this only works for purely numerical knobs, i.e. knobs without items like 'Off') |
| Left arrow   | Decrease the value by 1   |
| Right arrow  | Increase the value by 1   |
| Ctrl+Left arrow  | Decrease the value by a 'big' amount (often 10)   |
| Ctrl+Right arrow                                       | Increase the value by a 'big' amount (often 10)   |
| Home   | Select the lowest value   |
| End  | Select the highest value  |
| Left click (caption/value)                             | Select the knob under the mouse   |
| Left click (actual knob)                               | Set the value as indicated by the mouse position  |
| Right click  | Change the value by a 'big' amount (often 10) toward the mouse  |

And here are a few standard Windows keystrokes worth mentioning:

| Control       | Key(s)            | Action                        |
|---------------|-------------------|-------------------------------|
| <i>Any</i>    | Tab               | Select the next control       |
|               | Shift+Tab         | Select the previous control   |
| Checkbox      | Space             | Toggle the setting on/off     |
| Pull-down box | Left/Up arrow     | Select the previous item      |
|               | Right/Down arrow  | Select the next item          |
|               | Home              | Select the first item         |
|               | End               | Select the last item          |
|               | Alt+Up/Down arrow | Open/close the pull-down list |

## 9. Known problems

### MIDI Thru:

XG Manager's MIDI Thru feature only passes on *short* MIDI messages, i.e. any message *except* SysEx (System Exclusive).

This is because XG Manager achieves its MIDI Thru feature by simply calling the midiConnect function in Windows' MMSystem library: basically Windows handles all Thru traffic behind XG Manager's back, but unfortunately midiConnect doesn't pass on SysEx messages.

I may try to find a work-around for this in a future version of XG Manager. In the meantime you should use MIDI-OX if you need to pass on SysEx messages via a MIDI Thru connection. (Apparently MIDI-OX doesn't use midiConnect, but handles all MIDI Thru traffic manually, which might actually be marginally slower than midiConnect, for non-SysEx messages that is...)

### USB MIDI ports:

While XG Manager is running, connecting or disconnecting a MIDI device via its USB cable must be avoided, since it may lead to nasty error messages; instead, you must exit and restart XG Manager manually. I've been working on a fix, but I don't know if and when this will be made available.

### Window widths:

If the screen dimensions are too small, big windows of *fixed* size can get cut off. Normally you're safe with a screen of 1024 × 768 pixels, but you can run into problems when you decrease the screen size of a virtual machine running XG Manager.