MILL**PWR**^{G2}
SOFTWARE
UPDATE

ACU-RITE®

June 19, 2017
MILL**PWR**^{G2} **2 & 3 Axis**
Release of Version R5SP2

For Use with Consoles (ID#1113777-NN) ONLY

NOTE: HEIDENHAIN Corporation recommends making a backup of the control with the USB Recovery Drive before updating the control software. Please refer to the manual included with the drive for the backup procedure. Reference compatibility chart below.

- Prior to updating to R5 SP2, confirm that R5 SP1 is installed and that you have resized the hard drive partitions. Due to the enhanced features since release 5, restructure the console's hard drive is required. USB Recovery Drive ID# 680480-04 includes an option for resizing the control's hard drive partitions. This can only be performed on consoles ID#1113777-NN that are running software release 4 service pack 4 (R4 SP4) or R5. Please insure the console is updated to one of these releases prior to restructuring the drive and installing release 5 (R5SP2).
- R5 cannot be installed unless you have R4SP4 installed first. If you have previous version of software such as R1, R2, or R3 SPx (release 1, release 2, or release 3 with any service pack) download and install R4 SP4 then proceed to update to R5.
- Recovery Drive Kit ID# 1127022-01 can be purchased from your local ACU-RITE distributor.

If a special PLC for AMI functions was created for your MILLPWR system. The PLC for R5SP2 may need to be modified in the same manner. Any OEM/User customizations to the PLC will need to be reintegrated into the new PLC project.

All users can verify your software version from the **DRO** screen by pressing SETUP. If one of your soft keys is labeled More Commands, you have release 1 (R1) software. If one of your soft keys is labeled Install Setup, press this key. Enter the password 8891 and press Enter. The installed software version will be displayed at the bottom left of your screen.

If any issues are encountered, please contact your service representative for assistance.

You can download the software release update free of charge from our web site at www.acu-rite.com. If you wish to purchase the software and operation manual from ACU-RITE, contact your authorized dealer to place an order.

Installing the software onto your MILLPWR^{G2} system:
Use a blank USB memory stick (1 GB or larger) to update the software. Do not use any memory stick with a smaller storage capacity. The software installation files are required for updating the software. When a USB memory device in placed in a USB port prior to boot up with the update files setup.zip, and setup.ini located within a folder named **"install",** at boot up your G2 control will detect the upgrade software files and proceed to install.

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Procedure for downloading the update files and placing them on a USB drive.

Download the update from http://www.acu-rite.com/software-updates.html found under the Controls Tab.

- Unzip the downloaded archive insuring the target is the root level of your USB drive.
- Insure the files setup.zip and setup.ini are transferred to a folder at the root level of your USB drive named install, //MY USB DRIVE/install/
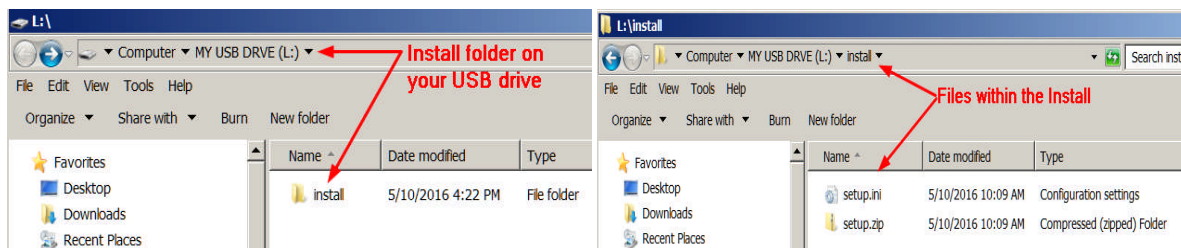
Procedure for updating the software

- Shut down the control software using the normal method of pressing the Shutdown soft key and then confirming the shutdown by pressing Yes.
- Wait for the screen message which indicates that it is safe to switch off power, or restart.
- Insert the USB memory device containing the folder named "install" on the USB memory device.
- Press ENTER to restart the system.
- The software update will now be done automatically, taking approximately 10 - 20 minutes.

! A confirmation box will appear. If necessary, use the LEFT or RIGHT ARROW keys to select Yes and then press ENTER.

When the update is complete, it will prompt you to remove the USB drive and restart. At this time, remove the USB drive and press ENTER to restart. If the USB memory stick used for installation is not removed, then the prompt to install the software will continue to appear on subsequent power cycles.

! After installation and upon restart, you may receive a message prompt to confirm a firmware update, accept the changes and RUN UPDATE.

- *(Note: This particular NC startup screen can take several minutes to display. Please be patient. Do not shutdown control and reboot.)*
  After the system has restarted, it will start up normally to the control software.
- Confirm that your count directions are correct. *(These values should not change when upgrading software.)*
- If special machine functions were active, Press the SETUP hard key, then the "Install Setup" soft key, enter passcode 8891, press ENTER
- In the "Installation" dialogue, arrow down to the last option "Machine Functions" and press ENTER
- Configure the dialog to match your machine Note:(only required if special machine function options are installed like demo, AMI, guards, etc.)
- Press the USE hard key, then press the "Save Changes" soft key

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- After a moment, you will get a reboot prompt
- Acknowledge the reboot and you are all done at the next startup.

MILLPWR^{G2} Recovery Drive Compatibility

- Due to hardware differences the original MILL**PWR**^{G2} console and the current console require different software upgrade paths.
- Consoles can easily be identified by the color of the front bezel. The current design has a darker grey color than the original design.
  - The current G2 console will proceed to release 5 (R5) and all its service packs.
  - The original G2 console will remain with release 4 (R4) and all of its service packs.

Console ID# and Software Revision	Recovery Drive ID# 1114023-01	Recovery Drive Kit ID# 1201909-01 USB ID# 680480-03	Recovery Drive Kit ID# 1127022-01 **USB ID# 680480-04**
745604-NN	Yes	Yes	No
R1	Yes	Yes	No
R2	Yes	Yes	No
R3	Yes	Yes	No
R4	Yes	Yes	No
R4 SP4	Yes	Yes	No
1113777-NN	No	Yes	Yes
R1	No	Yes	Yes
R2	No	Yes	Yes
R3	No	Yes	Yes
R4	No	Yes	Yes
R4 SP4	No	Yes	Yes
R5	No	No	Yes
Post R5	No	No	Yes

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Console ID # 745604-NN   Console ID # 1113777-NN

G2 consoles (ID#745604-NN)

- These consoles **cannot be upgraded to R5** and will continue to receive service packs under the R4 release. Please do not attempt to install release 5 (R5) onto these consoles.
- System drive restructuring on this original design consoles will cause the console to become un-operational and require in house service to correct the issue. **Do not restructure the drive on these consoles.**
- **Not all software enhancements will be included in future R4 releases**. We will continue to support console ID# 745604-NN with service packs through the R4 released software that will mainly include minor enhancements or fixes.
- USB Recovery Drive Kit 1201909-01 includes a compatible USB Recovery Drive ID# 680480-03 for original G2 consoles (ID#745604-NN) and should be ordered when replacing a recovery drive for these consoles. This drive does not include the restructuring option, so the unit cannot be restructured accidentally.

G2 consoles (ID#1113777-NN)

- **R5 cannot be installed unless you have R4SP4 installed first**. If you have previous version of software such as R1, R2, or R3 SPx (release 1, release 2, or release 3 with any service pack) download and install R4 SP4 prior to updating to R5.
- Due to the enhanced features of release 5, it has become necessary to restructure the console's hard drive. USB Recovery Drive ID# 680480-04 is now included in Recovery Drive Kit ID# 1127022-01 which supports all G2 consoles and all software versions to date or planned for the near future. This new recovery drive includes an option for resizing the control's hard drive partitions. This must only be performed on current consoles (ID#1113777-NN) that are running software release 4 service pack 4 (R4 SP4). Please insure the console is updated to this release prior to restructuring the drive and installing release 5 (R5). Hard drive restructuring is required on these consoles prior to the upgrade to release 5 (R5).

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These enhancements/changes were made:

- Corrected some issues with the graphics when running Gcode programs, in which the contour layer could be erroneous and toggling it on/off could yield unpredictable results.
- Corrected an issue in which the control might not detect a condition where an axis was commanded to move, but the movement did not actually occur as commanded. To correct this, the system now constantly monitors the amount of "servo lag" or "following error" for each controlled axis movement. There are four settings pertinent to this, which apply limits on the amount of allowed lag. For constant speed motion, a warning is issued for lag greater than 0.15mm, and an error for lag exceeding 0.2mm. For direction/transitional changes, a warning is issued for lag greater than 0.2mm, and an error for lag exceeding 0.3mm.
- Fixed an issue that would cause line fragments to appear sometimes while switching to geometry calculator when a simulation is in progress.
- Corrected a potential issue in which when running a program, a user could receive a false error that the system was "Unable to run".
- A new subsystem library is now being used, which fixes an occasional system crash that could occur randomly after the control was running for several days or weeks.
- Fixed blockform calculation issues for certain NC programs and MPT programs (with nested Rotate and Mirror steps).
- Corrected an issue in which adding any step after a contour island step did not break path continuity of the pocket as it should have. Also addressed some issues with the implicit set tool behavior in which a graphics-only run would overwrite the tool data from the machining channel. Finally, the implicit set tool behavior now works correctly when a SET TOOL is disabled in a program.
- Fixed issue in Program listing where scrolling through lines of a Gcode program would sometimes indicate an incorrect "active tool". This "active tool" preview feature is now disabled for G code programs.
- Corrected an issue in which the Date / Time dialog could sometimes open without any softkey menu or focus.
- Implicit tool only written to config for MPT programs or gcode programs where the tool diameter comes from the tool table.
- New graphic images with better representation of radial slot features.
- The circle pocket diameter must be more than 50% larger than the tool diameter in order to ramp (plus side finish allowance). Previously, the Circle Pocket step was too restrictive in determining if the pocket was large enough.
- Fixed DXF import issue: When a DXF file was being imported, the converted MPT file would have the default ztype value as "Position". But when the same MPT file was edited, the ztype display value would show "Drill" thus confusing the users. Now the default ztype value has been changed to "Drill" for newly imported DXF files.
- Corrected an error in the PLC in which a spindle overload condition did not stop the running NC program.

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- All input dialogs now correctly disable all softkeys while they are open, such that the user must complete the task before attempting other actions.
- In the View Setup dialog, pressing the Reset Graphics soft key was resetting too many settings; only Pan/Rotate/Zoom should be reset.
- In Installation Setup, the Max Servo Speed setting would only allow entering a lower value than the currently active max speed. It now properly allows any speed between 10 and 100 inch per minute, regardless of what max speed is currently active in the system.
- Fixed an issue where creating a directory in the USB drive failed sometimes.
- Fixed an issue where the "Redraw" button and/or decimal key would not properly cancel and re-start a new simulation if a simulation was already in progress.
- More (F8) softkey was missing when focus on the pocket/contour parameter in cycles that support the pocket/contour parameter.
- Fixed an issue where a "Module missing" error appears sometimes when a simulation is cancelled.
- Corrected an issue with AMI systems in which the axes lubrication output would not function properly in R5+ versions.
- Fixed an issue where the Cancel button does not respond while copying the files sometimes.
- Scale factor not applied to DRO display values on power-up. Changing the scale factor from Job Setup corrects the display values. The datum form and program execution are not affected by this problem.
- Fixed an issue where Set Spindle Speed gives an unnecessary prompt to press the GO key.

If any issues are encountered, please contact your service representative for assistance or contact technical support at millpwrservice@heidenhain.com if you have any questions.