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

ACU-RITE

January 4, 2017

MILL**PWR**^{G2} **2 & 3 Axis**

Release of Version R5

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

R5 is a complete software update.

If a special PLC for AMI functions was created for your MILLPWR system. The PLC for R5 may need to be modified in the same manner. The PLC project has been updated, and rebased on the Basic-NCK-V10 project. Any OEM/User customizations to the PLC will need to be reintegrated into the new PLC project.

Users of auxiliary machine function interface (AMI) will need to first check two configuration settings in their current system. Make note of the values described below so that they can be restored manually after the R5 update, via the Machine Functions menu.
A special password provided by your authorized dealer is required to access the Advanced Configuration from Installation Setup in order to view these settings:

System -> PLC -> CfgOemBool -> NP_MG_guard_inactive – [value]
If the setting is FALSE, then in R4SP1 they should set “Guards” to “Enabled”
Axes -> ParameterSets -> PS_1 -> CfgAxisAnalog – [unipolar]
If the setting is “off”, then in R4SP4 they should set “Polarity” to “Bipolar”

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

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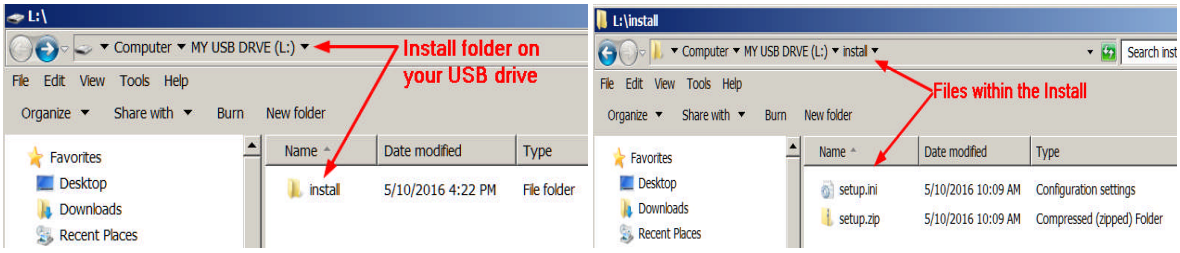
Download the update from http://www.acu-rite.com/software-updates.html found under the Controls Tab.

- 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.
- Press the SETUP hard key, then the “Install Setup” soft key, enter passcode 8891, press ENTER
- In the “Installation” dialogue, scroll 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
- After a moment, you will get a reboot prompt
- Acknowledge the reboot and you are all done at the next startup.

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MILLPWR^{G2} Recovery Drive Compatibility

MILLPWR^{G2} Recovery Drive Compatibility

MILLPWR^{G2} software release R5 requires a change to the CFast partition structure which the existing USB ID# 680480-03 and 1114023-01 cannot provide. As such, an improved USB ID# 680480-04 Recovery Drive Kit ID# 1127022-01 will be made available as a replacement which will provide this and other enhanced capabilities. The new USB recovery drive will look physically different from the old drives to avoid confusion.

Console ID# and Software Revision	Recovery Drive ID# 1114023-01	Recovery Drive Kit ID# 1127022-01 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	Yes
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

- Recovery drive 1114023-01 only supports 745604-NN and all software versions supported by those consoles. Attempting to make a backup on 1113777-NN will fail.
- Recovery drive kit 1127022-01 with USB ID# 680480-03 supports 745604-NN and all software versions supported by those consoles, as well as 1113777-NN consoles with all software versions prior to R5. Attempting to make a backup on 1113777-NN with R5 or higher will fail.
- The new drive kit 1127022-01 with USB ID# 680480-04 supports all MILLPWR^{G2} consoles and all software versions to date or planned for the near future.

These enhancements/changes were made:

Users now have the ability to mark a step to be "skipped" when running program.

The Job Clock was improved to show the number of days when the number of hours exceeds 24.

Added Fine Rough parameter to Rough Mill cycle. Options are Retract (default) and Contour. The contour option is only possible if the radius of the fine roughing tool is more than the half of the radius of the coarse tool; otherwise, Retract is used regardless of setting.

Improved the startup/shutdown views and messages

The following functionality has been restored to run options:

1. "Graphics Only" button added to Run Options menu.
2. Pause and display OIM messages.
3. Support limited VIEW dialog functionality.

Added separate side & bottom finish amounts in the Contour step.

Added the ability to define basic islands using the contour of standard cycles. The supported cycles are: rectangle, circle, slot, radial slot, and ring. These cycles now have a new parameter that specify if the step is a pocket or just a contour. Locate the step immediately before the associated custom pocket cycle choose contour if it is to be used as an island.

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For AMI Spindle Control systems, spindle information is now displayed below the Z axis field in the DRO screen. Also, the active/programmed spindle RPM can be quickly set by pressing the black axis key directly to the right of the spindle display area.

Added ability to edit G code values for addresses R, D, U & W in drilling cycles; previously, it was not possible to edit the values for addresses.

It is now possible to send remote assistance requests from a MILLPWR^{G2} system to a service agent whom use Remote Diagnostics PC software.

Enhanced the Repeat step to also support array and frame patterns.

A Redraw softkey (F6) has been added when in the View form dialogue. Redraw performs the same as the decimal point hot-key. In addition, both methods now re-draw graphics when pressed.

Enhanced the Change Steps feature to allow changes to Z Pass and Z Peck.

All of the settings in the View dialog are now saved and restored upon reboot, with the exception of Pan, Zoom, Rotate, and Dry Run Speed.

Programming of the "staging" point for custom pockets is now optional. Moves to this point are eliminated when no location is provided. If the "staging" point is programmed, moves to this location at the start and end of the step are still executed.

The PLC has been updated. Any OEM/User customizations to the PLC will need to be reintegrated into the new PLC project.

The graphics ruler is now also displayed while running a program in the 2D Line View.

Added support for setting a datum during single cycles.

Soft travel limit messages updated to indicate which limit was exceeded.

The NcKernel base was updated to Milestone 10 Service Pack 4.

These errors have been corrected:

Corrected possible tool path issues when using repeat/rotate/mirror steps.

Removed the option to delay the required reboot after changing settings in the Network Settings dialog, as delaying it could cause unexpected issues.

AUX Function step does not break path continuity when it neighbors a Blend step.

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The max feedrate override setting in Job Setup now correctly enforces the acceptable range of 150% to 200%.

The programmed tool field in step forms and on the status bar shows the correct programmed tool for a tool that is programmed in custom pocket sub-cycles.

Corrected an issue which enabled the user to move the cursor in the active program step listing while the program is running.

Improved block-form calculation for G-code programs.

The tool now arcs off of the Radial Slot's outer pass when there is no side finish specified.

If not set to “Require Change”, a tool change prompt is suppressed unless the programmed tool does not match the current tool.

When starting a program, the tool path (and tool) graphical display was delayed if the program had previously been stopped at the tool prompt.

Corrected an issue in which the file system partition settings for a max scheduled disk check interval were lower than the actual interval at which the check would occur. This could prevent the ability to create a clone image of the system using the new HC Clone Drive. To ensure proper settings and checking, a disk check is now forced after every software update.

When starting a program from a step that does not have a programmed tool step associated with it: 1. The active tool is the last tool mounted. 2. Spindle settings remain OFF.

Improved operational and program management functionality.

Improved spindle direction and speed performance In G-code programs when speed and direction are within the same block.

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.