

MILLPWR^{G2} SOFTWARE UPDATE

ACU-RITE[®]

May 27, 2019
MILLPWR^{G2} 2 & 3 Axis
Release of Version R8SP2

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

**These release notes include enhancements/changes for R8SP2.
Please read below for the list of enhancements.**

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

- Prior to updating to R8SP2 you must have R8 loaded, if you have a previous version of software, confirm that R5 SP1 is installed and that you have resized the hard drive partitions. Due to the enhanced features since release 5, repartitioning 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 8 (R8).
- 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 R8SP2 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 is placed in a USB port prior to boot up with the update

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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.

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

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- 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.

MILLPWR^{G2} Recovery Drive Compatibility

- Due to hardware differences the original MILLPWR^{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 8 (R8) 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 SP9	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 R8 or service packs within R8** and will continue to receive service packs under the R4 release. Please do not attempt to install release 5 (R5) R6 R7 or R8 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 repartitioning option, so the unit cannot be repartitioning accidentally.

G2 consoles (ID#1113777-NN)

- **R8 and its associated service packs R8SPX cannot be installed unless you have R5SP1 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 repartition 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 repartitioning is required on these consoles prior to the upgrade to release 5 (R5).

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These enhancements/changes were made:

For AC Bed Mill systems only; Added support for reference switches (active when using Rotary encoders for axes), as well as Max Servo Speeds greater than 100 in/min.

The tool path's start/end point for a closed path is calculated correctly if the first or last step is an ARC defined without a radius (i.e. FROM/TO/CENTER).

The validation check for arc radius was also adjusted. The tolerance check for if the radius is "too small" for the defined FROM and TO points was loosened so as not to report false errors for arcs of 180 degrees.

Corrected an issue in which the calculated blockform and contour did not correctly handle tools which were defined in the tool table rather than in the program.

Corrected an issue in which the Quick Save feature was always prompting for program name, which should only happen if it is a New Program.

Corrected an issue with AMI systems in which manual spindle control would become impossible after opening and closing machine guards, unless a program run was done to reset the spindle state.

Corrected an issue where the Machine Functions soft key was not visible when the program was paused.

Note: **Release 8 (R8) software includes many enhancements**, prior to downloading this version be aware that the graphics of the user interface has changed. The user interface now uses a modern theme congruent with the latest versions of the newly released ACU-RITE digital readout products. Here are just a few of the changes, fonts, larger pop up menu's large qwerty keyboard, color highlighting of steps.

IF YOU WANT TO STAY WITH THE GRAPHICS YOU CURRENTLY HAVE DO NOT INSTALL R8.

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Here are some side by side comparisons:

Stop	Feed: 0.0 100%	Tool: 0.5000 Inch	Datum: 0	Scale: 1.0000	Skew: 0.0000°	Inch
EXERCISE 6 with islands.MPT 1 of 42		Estimated Time 11:20:26	Part Clock 0:00:13	Parts 0	Job Clock 1:05	Time of Day 3:44 pm
001	SET TOOL					
002	*POSITION / DRILL	INC		6.8845	ABS	X
003	*POSITION / DRILL	6.8845				
004	*POSITION / DRILL					
005	*POSITION / DRILL			2.4571	ABS	Y
006	*POSITION / DRILL	INC				
007	*POSITION / DRILL	2.4571				
008	*POSITION / DRILL					
009	*POSITION / DRILL			0.0343	ABS	Z
010	SET TOOL	INC				
011	<input type="checkbox"/> CIRCLE CONTOUR	0.0343				
012	<input type="checkbox"/> RING CONTOUR					
013	<input type="checkbox"/> RADIAL SLOT CONTOUR					
014	<input type="checkbox"/> RECTANGLE CONTOUR					
015	MILL LINE	OVR		1500	OFF	S
016	MILL ARC	100%				
017	MILL LINE					
018	MILL ARC					
019	MILL ARC					
020	MILL LINE					
021	MILL LINE					

Zero X
Zero Y
Zero Z
Shutdown
Machine Functions
Datum
Move Table

Stop Time: --- Tool: 0.5000 Inch Datum: 0 Scale: 1.0000 Skew: 0.0000° Inch

New Program 1 of 1

001 SET TOOL

Tool Number

Size
Diameter Inch
Length

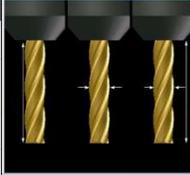
Plunge / Ramp
Angle

Tool Type

Spindle
Off
Speed RPM

Tool Position
X To Abs
Y To Abs
Z To Abs

Require Change
No



Inch
MM
Tool Table

Stop Time: --- Tool: 0.000 MM Datum: 1 Scale: 1.0000 Skew: 0.0000° Inch

New Program 601 SET TOOL

Set Tool

Tool Number

Size
Diameter Inch
Length

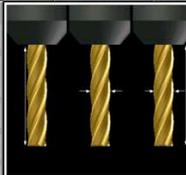
Plunge / Ramp
Angle

Tool Type

Spindle
Off
Speed RPM

Tool Position
X To Abs
Y To Abs
Z To Abs

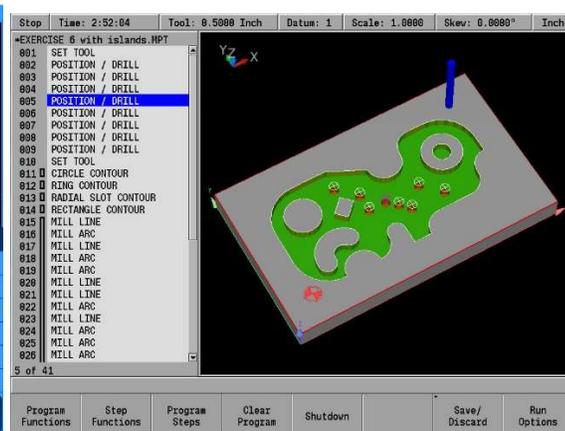
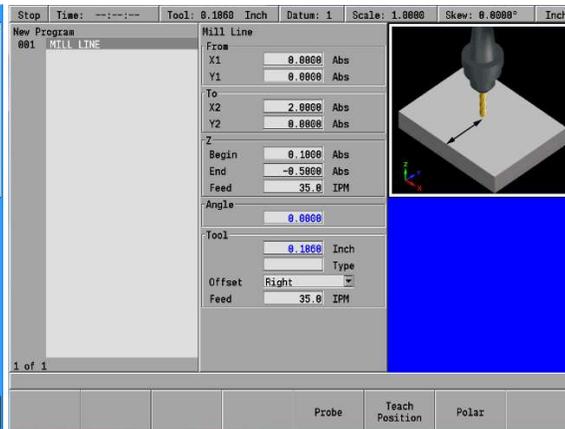
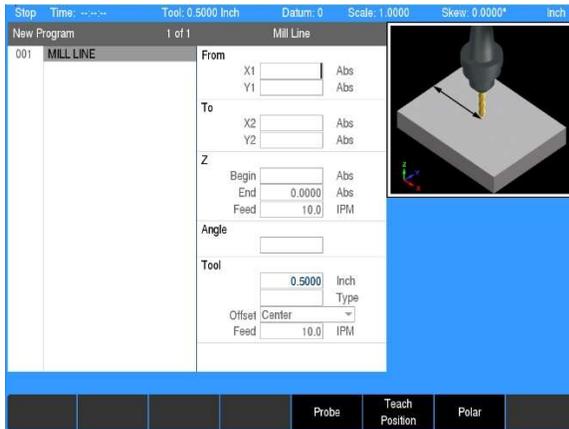
Require Change
No



Inch
MM
Tool Table

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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.