Acorn CNC12 v4.64 Acorn Wizard Input and Output "canned" PLC functions and M codes   7-21-22

Input Wizard Name	Description / Purpose	Related M codes or macros	Notes:	Cat.
Axis(1,2,3,4)DriveOk	Individual Drive Fault input for each axis. Axis1DriveOk, Axis2DriveOk, etc.. corresponding drive fault message "X axis drive Fault", "Y axis drive Fault" etc..		Individual DriveOk Signals, On (Green) = Good, Off (Red) = Fault	all
BackGear	An input from a switch. that indicates the position of the "back gear" on a milling machine head.			All, mill
ChuckFootPedal	Input typically used for Lathe Chuck foot pedal.		When Input is Closed (Green), will toggle between Chuck Open and Chuck Close or toggles ColletOpenClose On/Off	All, Lathe
ChuckIsClosed	An input from a switch. that indicates the position of the chuck			All, lathe
ChuckIsOpen	An input from a switch. that indicates the position of the chuck			All, lathe
CutOffIsDown	An input from a switch. that indicates the position of a lathe auto cut off actuator			All, Lathe
CycleCancel2	input for 2nd external button, (same action as button on VCP with same name, user can use either button)			All, mill, lathe, router
CycleStart2	input for 2nd external button, (same action as button on VCP with same name, user			All, mill, lathe, router

	can use either button)			
DrawBarReleased	An input that is typically used on ATC router spindles. Input is active when Draw Bar/Pull Stud is active indicating that the tool is released from the spindle.		Displays message that "Draw Bar is Released" when input is active, then follow up message when input is inactive. "Draw Bar Clamped". Is treated same way as ToolisUnclamped logic wise. ToolisUnclamped and DrawbarReleased are not selectable at same time.	All, mill
DriveOK	An input coming from the Servo Drive to let Acorn know that there are no faults from the Drives			All, mill, lathe, router
FeedHold2	input for 2nd external button, (same action as button on VCP with same name, user can use either button)			All, mill, lathe, router
HomeAll	A single input for all Home switches for automatic homing of all axes. The recommended homing method for Acorn.	Cncm.hom, cnct.hom	Related VCP buttons: Reset Home, cycle start	All, home
LimitAll	An optional single input for all limit switches for over-travel protection above and beyond software travel limits.		Related VCP buttons: Limit Override	All, limit
LubeOK	An input from a Lube pump low lube indicator			All, mill, lathe, router
PartChuteIsIn	An input from a switch. that indicates the position of a lathe auto part chute actuator			All, Lathe
PressureLowMessage	Input for Low pressure Alarm, issue message when input is Active, finishes current G code job (does not stop current Job that is running).		works just like low lube….issues warning message, continues to run until job is complete	All, mill, lathe, router

PressureLowStop	Input for low pressure sensor, Issues Estop condition when input is active.		Issues a Message and Estop condition when input is active.	All, mill, lathe, router
ProbeDetect			Input that sense whether a touch probe is plugged in. See probe setup manual for more detailed information.	All, probe
ProbeTripped			Input that sense whether a touch probe has been tripped. See probe setup manual for more detailed information.	All, probe
RPM_Sensor			RPM_Sensor Input for one pulse per revolution Spindle Speed indicator that uses an Input, typical use with Hall Effect sensors. (note: can not be used for threading, threading requires a spindle encoder, spindle encoder and RPM_Sensor can not be used at the same time. If you have an encoder installed CNC12 reads the spindle speed from the encoder and the RPM_Sensor is not necessary. RPM_Sensor is for machines without a spindle encoder but the user wishes to have a true spindle RPM readout within CNC12 and displayed on the main screen. In the Wizard input definitions menu.	All, Lathe
SafetyDoorLockConfirmed	Input used for machine tool safety, typically for a switch with a locking mechanism.			All, safety
SafetyDoorSwtichClosed	Input used for machine tool safety, typically a door switch but could also be used for other safety device input		P985 =1 allows slow jog with door open, P85=2 Does not allow any movement with door open.	All, safety
SpindleTempAlarmMessage	Input for Temperature Alarm, issue message when input is Active, finishes current G code job (does not stop current Job that is running).		works just like low lube….issues warning message, continues to run until job is complete	All, mill, lathe, router
SpindleTempAlarmStop	Input for Temperature Alarm, Issues Estop condition when input is active.		Issues a message Estop condition when input is active.	All, mill, lathe, router
SlavedHomeInput	Input used for slave axis home switch.		Required for auto squaring. See Acorn Axis pairing guide for more info.	All, mill, router.
SpindleOk	An input coming from the Spindle VFD to let Acorn know that there are no faults from the VFD.			All, mill, lathe, router

SpindleLowRange	An input from a switch. or the VCP button with same name that indicates the position of the spindle gear Range.	M41 select Low Range		All, mill,lathe
SpindleMedRange		M42 select Med Range		All, mill, lathe
SpindleHighRange		M43 select High Range		All, mill,lathe
SpindleOk	An input coming from the Spindle VFD to let Acorn know that there are no faults from the VFD.			All, mill, lathe, router
SpindlesOriented	An input from a VFD orient card which indicates that the spindle is oriented. Typically used for ATC's			All, mill, lathe, router
ToolCheck2	input for 2nd external button, (same action as button on VCP with same name, user can use either button)			
ToolUnclampButton	Input for External button that when pressed activates the "ToolUnclamp" output. When input is made, ToolUnclamp output is energized.	Input fo external Tool Unclamp Button , these are typically mounted on the spindle for manual tool changes. Press the button and the tool is released from the spindle. This button is deactivated when running a job.		All, mill, lathe, router
ToolTouchOffDetect			Input that sense whether a tool touch device is plugged in. See probe setup manual for more detailed information.	All, probe
ToolTouchOffTriggereed			Input that sense whether a tool touch device has been triggered. See probe setup manual for more detailed information.	All, probe
ToolIsUnclamped	Input used with a sensor to verify that the tool is actually unclamped, typically used with ATC spindles.		Is treated same way as DrawBarReleased logic wise. ToolisUnclamped and DrawbarReleased are not selectable at same time.	All, mill, lathe, router
VFDUpToSpeed	Input from VFD to confirm that spindle has reached the specified speed. Used in G code and Tool Change macros	M100 or M101/5000X where X in the input number	PLC can be modified to issue message if desired.	All, mill, lathe, router

VFDZeroSpeed	Input from VFD to confirm that spindle has stopped. Used in G code and Tool change macros.	M100 or M101/5000X where X in the input number	PLC can be modified to issue message if desired.	All, mill, lathe, router
ZriHomingAll	Input used for all Zri (index pulse) homing.	cncm/t.hom	M105 /X P(ZriHomingAll input number) F3 ;Move X plus at 3ipm until input closes	All, home
FirstAxisHomeOk	Used as an alternative to HomeAll. Home switches for each axis are wired into a dedicated input.	Uses up inputs unnecessarily, Use HomeAll instead. Only used in special cases where the Home Switches can not be wired in series or parallel.		All,home
SecondAxisHomeOk				
ThirdAxisHomeOk				
FourthAxisHomeOk				
FirstAxisHomeLimitOk	Special Case: Used when it is desired to have one switch perform both the homing and limit functions.	Uses up inputs unnecessarily, Use HomeAll, LimitAll, and Software Travel Limits instead. Only used in special cases where the Limit Switches can not be wired in series or parallel. Or it is desired to have individual inputs for each switch. Used in conjunction with OPTIONAL FirstAxisMinus(or Plus)LimitOK for the over-travel limit switch. opposite. (The recommended method is to use HomeAll and then Optional LimitAll see schematic S14954)		All, homelimit
SecondAxisHomeLimitOk				
ThirdAxisHomeLimitOk				
FourthAxisHomeLimitOk				
FirstAxisMinusLimitOK	Special Case: Used for an individual limit Switch.	Uses up inputs unnecessarily, Use LimitAll instead. Only used in special cases where the Limit Switches can not be wired in series or parallel. Or it is desired to have individual inputs for each switch. Use Software Travel Limits instead.		All, limit
FirstAxisPlusLimitOK				
SecondAxisMinusLimitOK				
SecondAxisPlusLimitOK				
ThirdAxisMinusLimitOK				
ThirdAxisPlusLimitOK				
FourthAxisMinusLimitOK				
FourthAxisPlusLimitOK				

Output Wizard Name	Description / Purpose	Related M codes or macros	Notes:	
ATCAirBlowActivate	Output to control (on/off) air blow solenoid	M15	Activates with UnclampTool	All, mill, router
Axis1BrakeRelease	Individual Output used to control an individual Axis Brake. Brakes are typically an electromechanical brake. Activates with Estop condition, deactivates with axis motor movement. Can be used with external brakes or 'brake motors'		When Axis is Powered, Brake is Released (Green). Estop/Fault applies brake (Red), M93 Releases power (brake ON Red)	All, mill, lathe, router
Axis2BrakeRelease			When Axis is Powered, Brake is Released (Green). Estop/Fault applies brake (Red), M93 Releases power so brakes (Red)	All, mill, lathe, router
Axis3BrakeRelease			When Axis is Powered, Brake is Released (Green). Estop/Fault applies brake (Red), M93 Releases power so brakes (Red)	All, mill, lathe, router
Axis4BrakeRelease			When Axis is Powered, Brake is Released (Green). Estop/Fault applies brake (Red), M93 Releases power so brakes (Red)	All, mill, lathe, router
CloseChuck	Used to control a solenoid or relay to close a chuck on a Lathe.	M11	Parameter 992 is timer (ms) for Turnoff or Fault if ChuckIsClose Input is selected. M11 Turns on CloseChuck, Turns off when timer or Input is seen, M11 Turns off M10 See Chuck appendix attached to this document. And related OpenChuck output.	All, lathe
ColletOpenClose	An output typically used for 5C collet open close function		Output typically used for a Dunham stryle air operated chuck. output and edit a vcp button to skinevent 74 which uses OUT1130 for the LED. See Chuck appendix attached to this document.	All, lathe
CutOff	Used to control a solenoid or relay to activate a Cutoff tool on a Lathe		Parameter 995 is timer (ms) for Turnoff or Fault if Cutoffisdown Input is selected, M13 Turns on Cutoff, Waits for input or timer, turns off Cutoff, M14 is optional turnoff	All, lathe
DriveResetOut	Output that is primarily used to reset a servo or stepper drive after a drive fault condition.		Output is Active (Green) with Physical Estop depressed (Estop condition from the actual Estop button input). Output is inactive (RED) when Estop is released. Requires a physical estop button to work, the Reset button on the VCP is not an Estop.	All, mill, lathe, router

DustCollectionOn	An output typically used for Dust Collector control.	M35 activates output to start Dust Collector. M36 turns Dust Collector Off.	All, mill	DustCollectionOn
DustFootActivate	Output to control (on/off) dust foot		Requires Macro, M94/28. (Note: Example use contained in M57 & M58)	All, router
Flood	Used to control a VFD or relay for a flood pump	M8 Flood ON, M9 Flood Off		All, mill, lathe
G540SpinRevOff	Used with GeckoDrive G540 in Legacy mode, not recommend. Use G540 in "Drive Only" mode. See schematic # 14979 for recommend G540 hookup			all
G540SpinFwdOff				all
LaserAlignActivate	Output to control (on/off) cross hair material alignment laser marking		Requires Macro, M94/29. (Note: Example use contained in M57 & M58)	All, router
LaserEnable	Output to control Safety Interlock circuit of Laser such as a J-Tech laser		M37 - Enables Safety Interlock and Resets Laser.

M38 - Disables Safety Interlock after a delay to allow component cool down.

See Acorn to laser schematics for typical use. | All, mill, lathe, router |
| LaserReset | Output to control Safety Interlock circuit of a laser such as a J-Tech laser | | Momentary output to Reset Laser.
See Acorn to laser schematics for typical use. | All, mill, lathe, router |
LubePump	Output used to turn on and off a lube pump.		See Centroid Operator manual chapter 15 for info on Parameter #179 to change the way this output functions to match the type of lube pump being used.	All, mill, lathe, router
Mist	Used to control a solenoid or relay for a mister	M7 Mist ON, M9 Mist Off		All,mill,lathe
NoFaultOut	Output that is primarily used to control an Estop contactor	asdf	Output is active when there are No Faults with the CNC System. Output is inactive during an estop condition. (an Estop condition can be triggered by many things)	All, mill, lathe, router

OpenChuck	Used to control a solenoid or relay to open a chuck on a Lathe	M10	Parameter 992 is timer (ms) for Turnoff or Fault if ChuckIsOpen Input is selected. M10 Turns on OpenChuck, Turns off when timer or Input is seen. M10 Turns off M11. See Chuck appendix attached to this document.	All, lathe
OrientSpindle	Used to send output signal to orient card to go ahead and orient the spindle	M19 turn on spindle orient output and wait for "SpindlesOriented" input to activate. , M20 turn off spindle orient output.	All, mill, lathe, router	OrientSpindle
PartChute	Used to control a solenoid or relay to activate a part chute on a Lathe		Parameter 994 is timer (ms) for Turnoff or Fault if PartChuteIsIn Input is selected, M22 Turns on Partchute, Waits for input or timer, turns off Partchute, M23 is optional turnoff	ll. Lathe
PopUpPins	Output to control (on/off) material alignment pins typically air solenoid.		Requires Macro, M94 (Note: *Example use in M55 & M56)* *P419 adding adding 2 will deactivate popuppins with M3/4. Setting is also in the Acorn Wizard.*	All, router
PWMOutput	Pulse Width Modulation output for lasers and spindles		PWM signal output, DB25 connector pin#14 (note. Relay 2 is sacrificial and must be disconnected and can not be used when using PWMOutput) See Acorn to laser schematics for typical use.	All, mill, lathe, router
PWMSelect	Select between Spindle or Laser		Output to move PWM signal from Spindle to Laser. See Acorn to laser schematics for typical use.	All, mill, lathe, router
RouterDustCollection	Output to control (on/off) Dust Collection motor thru relay or contactor	M8	Works exactly like Flood, uses M8/M9 and uses same button on the VCP as Flood. Cant assign Flood and Dustcollection at same time.	All, router
RouterVacuumHoldDown	Output to control (on/off) material Vacuum hold down typically air solenoid	M7	Works exactly like Mist, uses M7/M9 and uses same button on the VCP as Flood. Cant assign Mist and Dustcollection at same time.	All, router
SafetyDoorLockOpen	Used to energize a lock solenoid to allow the safety door to be opened.		Energized when not running a job, If P985 = 1, will unlock door if feedhold and spindle is not on, If p985 = 2 only unlocks if no job in progress.	All, safety

SpindleBrakeRelease	Output used to energize a brake release, energizes when spindle is commanded to spin		Parameter #990 sets the delay timer in milliseconds. Default is 250 milliseconds (a quarter of a second)	All, mill, lathe, router
SpindleCooling	Output to control (on/off) spindle cooling, typically a fan or water pump		Requires Macro, M94 (Note: *Example use in M55 & M56)*	All, mill, lathe, router
SpindleCooling_Fan	Output to control (on/off) spindle cooling fan		Output for Spindle Cooling, Output turns On/Off with Spindle.	All, mill, lathe, router
SpinFWD	Used to command a VFD or relay	M3, M5	See acorn wiring schematics for more details.	All, mill, lathe, router
SpinREV	Used to command a VFD or relay	M4, M5	See acorn wiring schematics for more details.	All, mill, lathe, router
TailStockInOut	Output that is typically used to activate air solenoid to move a Lathe TailStock In or Out. SPDT relay can be wired either way.	M32, M33	M32 Turns on TailstockInOut, will stay on unless m33 is issued, even through resets and Faults	All, lathe
TurnClampOn	Output to control (on/off) material hold down clamps, typically an air solenoid or a Spindle Clamp	M10 Clamp ON,M11 Clamp Off	Can Also be used for a Spindle Clamp on/off or any other general clamp use.	All, mill, router
UnclampTool	Output that activates to release a tool from an ATC spindle. Typically used to control a Air solenoid. Typically output is Active for release. Not active for tool clamped.	M15/M16		All, mill, lathe, router
VacuumOn	An output typically used for Vacuum Hold down ON/OFF		M33 activates output to start Vacuum. M34 turns vacuum off.	All, mill
VfdEnable	Output used to enable a VFD. Lets VFD know that it is good to go.	M3/M4/M5	Used in conjunction with VfdDirection. see schematic #S15009 for wiring example.	All, mill, lathe, router

VfdResetOut	Output used to reset a VFD after a fault.		Output is Active (Green) with Physical Estop depressed (Estop condition from the actual Estop button input). Output is inactive (RED) when Estop is released.	All, mill, lathe, router
VfdDirection	Output to activate when motor direction is commanded to reverse. For support of SPDT VFD to Relay connections just like Allin1DC and Oak. See chuck for more info.	M3/M4/M5	VCP spindle CW/CCW buttons.	All, mill, lathe, router
WorkLight	Simple output used to turn on a worklight, works in conjuction with the Worklight VCP button.	Worklight defaults to ON when control is powered up, use the VCP worklight button to turn the work light ON and OFF. Controls for Worklight on startup are in the Acorn Wizard under CNC control preferences. (P419 adding 1 disables worklight on startup.)		All, mill,lathe router
Output1	General Purpose output, can only be assigned to Output number with same number.	M61 activates Output1 M81 deactivates Output1	User editable M codes so it is easy to modify for any kind of use. M89 will turn off those outputs all at once	All, custom
Output2		M62 activates Output2 M82 deactivates Output2		
Output3		M63 activates Output3 M83 deactivates Output3		
Output4		M64 activates Output4 M84 deactivates Output4		
Output5		M65 activates		

		Output5 M85 deactivates Output5		
Output6		M66 activates Output6 M86 deactivates Output6		
Output7		M67 activates Output7 M87 deactivates Output7		
Output8		M68 activates Output8 M88 deactivates Output8		
GreenLight	Output for use with a LightStack lights. Parameter 890 toggles the lights from being solid to flashing when activated. P890=1 Solid when activated P890=0 Blinking when activated	GreenLight is on when Job in progress and no faults.		All, mill, lathe, router
AmberLight		AmberLight is on when no job in progress and no faults (Machine in idle)		All, mill, lathe, router
RedLight		RedLight is on when machine is in fault condition		All, mill, lathe, router
M94M955111	General purpose outputs, for use by power users that wish to activate any output within a custom Mcode using the M94 (output ON) and M95 (Output Off) commands. For example: Set M94M955111 to an ouput	M94/111 turns on the output that "M94955111" is assigned to. M95/111 turn off the output that "M94955111" is assigned to.		All, custom
M94M955112		M94/112 turns on the output that "M94955112" is assigned to. M95/112 turn off the output that "M94955112" is assigned to.		All, custom
M94M955113		Etc..		All, custom
M94M955114				All, custom
M94M955115				All, custom

M94M955116	using the Acorn Wizard. For this example lets set it to output 8. Then to turn on output 8 use the M94 (output ON) m code in a custom macro like this. M94/111 ; this will turn on output 8 G4 P2 ; wait 2 seconds M95/111 ; this will turn off output 8 Example two: set M94M955120 to output 36 on the Ether1616 output menu using the Acorn Wizard. This is one way to use it in a custom macro. M94/120 ; this will turn on output 36 G4 P2 ; wait 2 seconds M95/120 ; this will turn off output 36		All, custom
M94M955117			All, custom
M94M955118			All, custom
M94M955119			All, custom
M94M955120			All, custom
M94M955121			All, custom
M94M955122			All, custom
M94M955123			All, custom
M94M955124			All, custom
M94M955125			All, custom
M94M955126			All, custom

Acorn Stock M-codes: *Please Refer to the CNC12 Mill and Lathe Operator manuals for more details on individual M codes*	
M3	Spindle CW
M4	Spindle CCW
M5	Spindle OFF
M6	Tool Change, if no custom mfuncm6.mac exists then the CNC12 default M6 is used.
M7	Mist, Refer to the CNC12 Mill and Lathe Operator manuals for more details on this M code RouterVacuumHoldDown ON
M8	Flood, Refer to the CNC12 Mill and Lathe Operator manuals for more details on this M code RouterDustCollection ON
M9	Mist and Flood OFF, Refer to the CNC12 Mill and Lathe Operator manuals for more details on this M code RouterDustCollection and RouterVacuumHoldDown OFF
M10	; Mill: SET ClampOn ; Lathe: SET ChuckOpen, RST ChuckClose
M11	; Mill: RST ClampOn ; Lathe: RST ChuckOpen, SET ChuckClose
M13	Cutoff Tool ON
M14	Cutoff Tool OFF
M15	Tool unclamp macro
M16	Tool clamp macro
M19	Spindle Orientation Macro
M20	Turn Spindle Orientation Off Macro
M22	PartchuteIn macro
M23	Turn off PartchuteIn macro
M27	VacuumOn macro
M28	Turn off VacuumOn macro

M32	Turn on TailStockInOut			
M33	Turn off TailStockin, Turn on TailStockOut			
M34	Unused Macro and Available for customization			
M35	DustCollection On			
M36	Turn off DustCollection			
M37	LaserEnable			
M38	LaserReset			
M41	Selects Low Range Spindle			
M42	Selects Med Range Spindle			
M43	Selects High Range Spindle			
M48	Aux 1 macro			
M49	Aux 2 macro. Sets specified axis to 0 part 0	VCP Aux 2 Button		
M50	Aux 3 macro. Sets all axes to part 0	VCP Aux 3 Button		
M51	Unused macro and Available for customization			
M52	Unused macro and Available for customization			
M53	Unused macro and Available for customization			
M54	Unused macro and Available for customization			
M55 (mfunc55.mac)	User Customizable Macro, pre mapped to VCP Aux 8, press Aux 8 for instructions on how to edit and customize,The macro contains examples of customization's in the macro itself, open it to see them.			
M56	User Customizable Macro, pre mapped to VCP Aux 9, press Aux 9 for instructions on how to edit and customize,The macro contains examples of customization's in the macro itself, open it to see them.			
M57	User Customizable Macro, pre mapped to VCP Aux 10, press Aux 10 for instructions on how to edit and customize,The macro contains examples of customization's in the macro itself, open it to see them.			

M58	User Customizable Macro, pre mapped to VCP Aux 11, press Aux 11 for instructions on how to edit and customize,The macro contains examples of customization's in the macro itself, open it to see them.	
M59	Reset Home Position, pre mapped to VCP Aux 12 "Reset Home" , runs macro to reset home without have to reboot the machine tool.	
M61	Use Acorn Wizard i/o map to set Acorn Output 1 = to "OUTPUT1" then this macro (M61) will turn on that output	
M62	Use Acorn Wizard i/o map to set Acorn Output 2 = to "OUTPUT2" then this macro (M62) will turn on that output	
M63	Use Acorn Wizard i/o map to set Acorn Output 3 = to "OUTPUT3" then this macro (M63) will turn on that output	
M64	Use Acorn Wizard i/o map to set Acorn Output 4 = to "OUTPUT4" then this macro (M64) will turn on that output	
M65	Use Acorn Wizard i/o map to set Acorn Output 5 = to "OUTPUT5" then this macro (M65) will turn on that output	
M66	Use Acorn Wizard i/o map to set Acorn Output 6 = to "OUTPUT6" then this macro (M66) will turn on that output	
M67	Use Acorn Wizard i/o map to set Acorn Output 7 = to "OUTPUT7" then this macro (M67) will turn on that output	
M68	Use Acorn Wizard i/o map to set Acorn Output 8 = to "OUTPUT8" then this macro (M68) will turn on that output	
M69	Move all axes to machine Zero	
M70	Sets an axis to zero	
M71	Axes Home Tripped Check (Used in Paired Axes Auto Squaring)	
M72	3rd Axis Homing (Used in Paired Axes Auto Squaring)	
M73	Independent Axis Homing (Used in Paired Axes Auto Squaring)	
M74	Paired Axes Auto Home/Squaring (Used in Paired Axes Auto Squaring)	
M75	Pair Axes (Used in Paired Axes Auto Squaring)	
M81	Use Acorn Wizard i/o map to set Acorn Output 1 = to "OUTPUT1" then this macro (M81) will turn OFF that output	
M82	Use Acorn Wizard i/o map to set Acorn Output 2 = to "OUTPUT2" then this macro (M82) will turn OFF that output	
M83	Use Acorn Wizard i/o map to set Acorn Output 3 = to "OUTPUT3" then this macro (M83) will turn OFF that output	

M84	Use Acorn Wizard i/o map to set Acorn Output 4 = to "OUTPUT4" then this macro (M84) will turn OFF that output		
M85	Use Acorn Wizard i/o map to set Acorn Output 5 = to "OUTPUT5" then this macro (M85) will turn OFF that output		
M86	Use Acorn Wizard i/o map to set Acorn Output 6 = to "OUTPUT6" then this macro (M86) will turn OFF that output		
M87	Use Acorn Wizard i/o map to set Acorn Output 7 = to "OUTPUT7" then this macro (M87) will turn OFF that output		
M88	Use Acorn Wizard i/o map to set Acorn Output 8 = to "OUTPUT8" then this macro (M88) will turn OFF that output		
Park.mac	User editable machine tool parking macro that is used when shutting down the machine for the day. Allows user to override the default park behavior with any customization necessary. With Acorn Typically park is used to return the machine tool to the home position when using "Simple Home" (M26) or very close to the home position so homing out the next morning is fast and easy.	Editable from the Acorn Wizard or in the 'system' folder. The macro contains examples of typical park sernatoris in the macro itself, open it to see them.	
MPGmacro1.mac	Macros used in conjunction with the corresponding Macro 1, Macro 2, Macro 3, Macro 4 buttons on the Wireless MPG. Editable/Customizable from the Acorn Wizard or from the 'system' folder with Notepad++	Macro 1 button on the MPG	
MPGmacro2.mac		Macro 2 button on the MPG	
MPGmacro3.mac		Macro 3 button on the MPG	
MPGmacro4.mac		Macro 4 button on the MPG	
cncm.hom	Mill and Router Machine tool homing program located in \cncm directory, Acorn Wizard will auto generate based on settings		
cnct.hom	Lathe Machine tool homing program located in \cnct directory, Acorn Wizard will auto generate based on settings		
Notes:			

Notes:

"RouterDustCollection (M8)" can not be used with "Flood (M8)" at the same time.
DustCollectionOn (M35) CAN be used with "Flood (M8)" at the same time.

"RouterVacuumHoldDown (M7)" can not be used with "Mist (M7)" at the same time.
VacuumOn (M33) CAN be used with "Mist (M7)" at the same time.

VfdDirection (M3/M4) can not be used in conjunction with SpinFWD (M3), SpinREV (M4), G540SpinRevOff, G540SpinFwdOff outputs, see schematics for proper hookups and use

Refer to the CNC12 Mill and Lathe Operator manuals for more details and example of M codes
https://www.centroidcnc.com/centroid_diy/centroid_manuals.html

Acorn CNC12 v4.64 Lathe Chuck and Collet Functionality Appendix

1.) Air operated Collet Systems: "Dunham" style https://www.dunhamtool.com/air-closers/

Discussion: Air operated collet systems typically have two air lines going to either side of a piston to actuate the collet chuck.   Air pressure to one air line (one side of the piston) closes the chuck. Air pressure to the other air line (the other side of the piston) opens the chuck.   Typically only one single pull double throw air solenoid is used and that solenoid requires only one Output from the Acorn.

An "Collet Open/Close" button on VCP is a toggle button that toggles the Collet Open Close output to the opposite state. (ON or OFF)   The VCP Collet Open Close button is "spindle interlocked" and is disabled when spindle in ON.

The "Collet Open Close" output can also be activated by a foot pedal Acorn input. The Foot pedal is just like the VCP button, it toggles the Collet Open Close output from open to close or close to open each time you depress the foot pedal. Foot pedal functionality is deactivated when spindle in ON. Foot Pedal works with or without a "Collet Open/Close" VCP button

M10 will also activate the "Collet Open Close" output. M11 deactivates the "Collet Open Close" output.

An optional LowAirPressure input indicates to CNC12 that the Air pressure is absent or too low to activate the collet closer and CNC12 will not allow a job to run until the Low Air Pressure warning has been cleared.
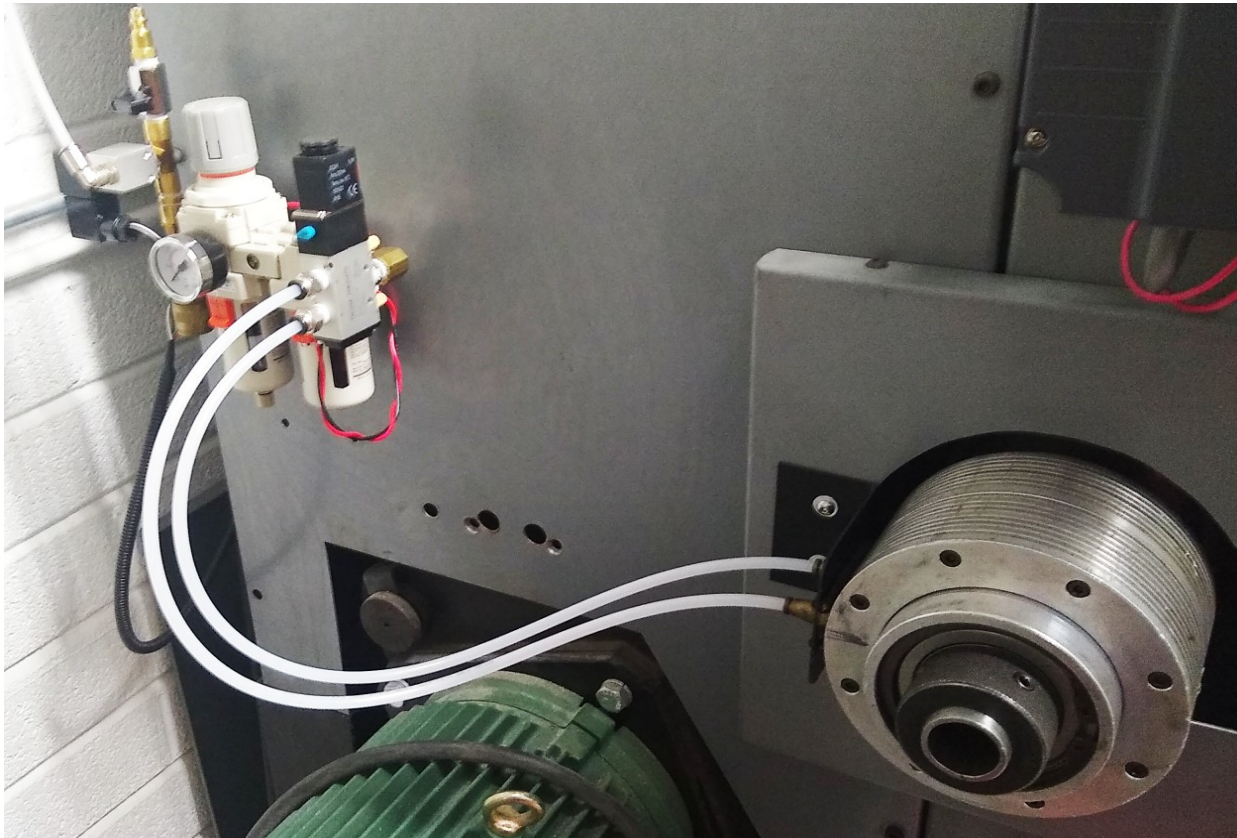
2.) Hydraulic Chuck:

A common Hydraulic chuck configuration has two hydraulic lines going to the chuck. One line opens the chuck the other closes the chuck. Typically there are two solenoids controlled by dedicated outputs. The Acorn CNC setup Wizard calls these outputs 'OpenChuck' and 'CloseChuck'.

The Open Chuck button on VCP activates the Open Chuck output for a user specified amount of time in milliseconds and is specified by editing parameter #992.   The VCP Close Chuck button activates the Close Chuck output for a user specified amount of time typically milliseconds and is parameter #992. The VCP button is Spindle Interlocked so that when the spindle is ON the VCP buttons do not function. Also when the timer is running the spindle will not turn on until timer is finished. Timers are typically required with hydraulic chucks so the chuck clamps at a consistent force and so solenoids do not over heat. Note: Typically hydraulic chucks do not require the solenoid to be on to hold the part the hydraulic pressure holds when the solenoid valve is closed.

The Open Chuck and Close Chuck output can also be activated by the foot pedal Acorn input. The single Foot pedal toggles between open and closed each time users steps on it. Example: Step on pedal and that activates the Chuck Close output for a user specified amount of time (in milliseconds and is parameter #992), Step on the foot pedal again and the Foot Pedal activates Chuck Open for a user specified amount of time (in milliseconds and is parameter #992) Foot pedal functionality is interlocked with the spindle and is deactivated when spindle in ON. Also, spindle will not turn on until the timers are finished. Foot Pedal works with or without a the Chuck Open and Chuck Closed VCP buttons

M10 will also activates the "OpenChuck" output for the users specified amount of time. M11 activates the "CloseChuck" output for the users specified amount of time.

An optional LowPressure input indicates to CNC12 that the pressure is absent or too low to activate the collet closer and CNC12 will not allow a job to run until the Low Pressure warning has been cleared.

Notes.

A common design for a two-position two-coil solenoid valve is to have detents in each position.

Even though the power to the coil may be turned off, the valve shuttle remains in its last position, and pressure continues to be applied in that direction (as long as the hydraulic pump continues to run).

A less-common design is a three-position, two-coil valve with springs that return the shuttle to a center, all-ports-blocked position when power is removed from the coil. A valve like that would cease providing pressure when power is removed. That would be useful for a hydraulic slide with a jogging action (one that you can stop at any intermediate position); but it would be a poor choice for a hydraulic chuck actuator.

Compare diagrams 'B' and 'C' on the second page of this document:
https://cdn.automationdirect.com/static/specs/nitradirectionsolenoidavs5.pdf
Those are pneumatic solenoid valves, but the same principles apply to hydraulic ones.

If your parts haven't flown out of the chuck since you enabled the shut-off timer, then your valve is almost certainly as shown in diagram 'B'.

Note: These two stock methods (chuck and collet) of controlling a Lathe part holding are provided for your convenience and are the most common and typical way of controlling a CNC chuck