
MITSUBISHI (CITIZEN)

ACQUIRE MACHINE DATA

To report machine data to your applications you have to be able to acquire it from your devices. For **Citizen** machines equipped with **Mitsubishi** controllers you can use the utility programs MitsubishiGui.exe (GUI) or Mitsubishi.exe (Command line) to do so. The program should also work for **Mazak** machines that have Mitsubishi controllers. All programs use the most recent version of Mitsubishi's M700/70 API (Application Program Interface) functions to access the controller and query data.

Although this technique works flawlessly and reliable in production we'd appreciate to get your feedback about the results of testing with your machines, please send an email to support@inventcom.net thank you in advance!

Tip: To be able to verify the results it is recommended to use this utility on a laptop with a network connection at the shop-floor in front of the machine.

SETUP

- Extract all contents of Mitsubishi_citizen.zip to a folder on your Laptop.
- As the program identifies and accesses controllers by using machine numbers the first thing you have to do is to edit the configuration file melcfg.ini.
- Machine numbers are defined in sections, one for each device. The machine number is the numeric part after Machine, e.g. [Machine01] = 1. Note: The second part of this numeric value uses hexadecimal notation from 1 to F, e.g. 01 = 1 and 0F = 15, remember your math lessons.
- If you're testing with one machine it is recommended to leave section [Machine01] as it is. Only in case it doesn't work you can change the value for Controller from M8NX to NCXJ, NCXK, M6B, NX or M7NX.
- It is necessary to adjust section [HOSTS] according to your setup e.g. TCP1=192.168.100.1,683 means that the IP Address of your controller is 192.168.100.1 683 after the comma is the port to be used to access the controller, do not change that.
- For additional machines you have to copy and paste the whole section [Machine01], then change its name e.g. [Machine02] and Device= to a different device in section [HOSTS] e.g. Device=TCP2. In section [HOSTS] you have to add a new device e.g. TCP2=192.168.100.2,683.
- Save melcfg.ini.

USAGE

- In Windows Explorer double click MitsubishiGui.exe
- In field 'Mitsubishi Machine Number' enter the number as defined in melcfg.ini.
- Check 'Basic Test Only'.
- Click on button 'Query'.
- If you don't get an error, repeat the test with 'Basic Test Only' unchecked.
- You should see a result similar to the following:

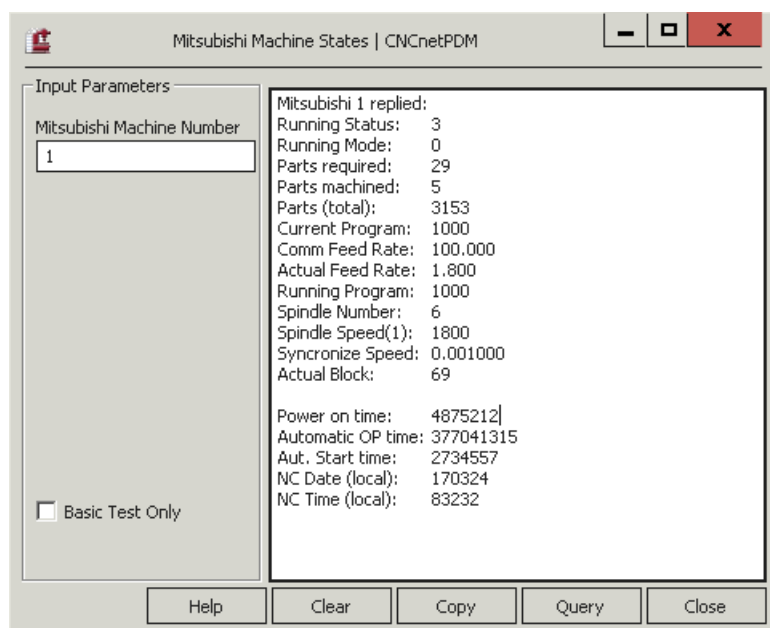


FIG 1: Output of MitsubishiGui.exe (full test)

LICENSING

If you have installed CNCnetPDM on your PC with a license other than a 'free license' and run this program from the folder where CNCnetPDM is installed you get unlimited output. Otherwise the program outputs a restricted set of items. Please see [licensing](#) for details or [contact us](#) if you have any questions.

- Note: If you like to run this program from a different location on your PC you can simply copy your CNCnetPDM.ini file to this directory.

PROGRAM OUTPUT

MitsubishiGui.exe version outputs the following data:

- Running Status (= Basic Test)
- Running Mode
- Parts required
- Parts machined
- Parts (total)
- Current Program
- Comm Feed Rate
- Actual Feed Rate
- Running Program
- Spindle Number
- Spindle Speed(1)
- Synchronize Speed
- Actual Block
- Power on time
- Automatic OP time
- Aut. Start time
- NC Date (local)
- NC Time (local)

STATUS AND MODE OUTPUT

The following tables shows possible values for 'Running Status' and 'Running Mode':

Status	
0	NC Reset
1	Emergency
2	Ready
3	In Automatic running
4	With Synchronization
5	Cross Waiting
6	Stop

7	Hold
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Mode	
0	Memory Mode
99	Tape Mode
5	MDI Mode
3	Handle Mode
2	Jog Mode
1	Manual Feed mode
7	A*Q.01 Step Mode
6	A*Q.01 Rapid Feed Mode
9	A*Q.01 Auto Dog less Zero Return Mode
8	A*Q.01 Zero Return Mode

CONTROLLERS

All programs are tested and work with Citizen machines with the following controllers, others may work as well:

Controller	Mitsubishi Series
MELDAS FCA70LPC-2A	M70
MELDAS M635L	M635
M635L	M635
MELDAS FCA70LPC-2AV	M70
MELDAS FCA70LPC-2AVU	M70
M735LUC	M700
MELDAS FCA70LPC-2AVU	M70
MELDAS FCA70LPC-2AV	M70
M500	M500
MELDAS FCA730LPC-4VS	M730