

Transjob

Introduction

Transjob is a stand-alone program that comes with MotoSim EG and MotoSim EG-VRC. It is used for converting jobs from robot model to another as well as one robot controller type to another.

Supported controllers

1. TransJob is supported only from MRC and newer controllers
 - A. MRC, XRC, NX100, DX100/DX200, FS100, YRC1000/YRC1000micro
 - B. INFORM II language and newer.
2. Does not support ERC or INFORM I language
3. Designed for forward compatibility.
 - A. Backward compatibility is possible, but some INFORM instructions in new controllers may not be available in older controller models.
 - B. The incompatible instructions will have to be removed or modified to load the JOBS on the older controller.
4. Base axis and External axis positional data will not be considered or changed, and the data will be copied unmodified to the new robot model. Only the robot's positional data will be considered.

Position Variables are not converted.

This document captures ideas, experiences, and informal recommendations from the Yaskawa Partner Support team. It is meant to augment – not supersede manuals or documentation from motoman.com. Please contact the Partner Support team at partnersupport@motoman.com for updates or clarification.

Before you Begin..... The following Data is needed:

1. Current robot model and the new robot model
 - A. Current: MA2010 on DX200 system / New: AR2010 on YRC1000 Systems jobs (.jbi files)
 - B. Current jobs that will be converted
 - C. Ask customer for a CMOS.bin file as well as all backed up individual files.
 - D. Can create a MotoSim simulation based on the CMOS.bin file to get robot layout position as well as all the necessary files for TransJobs.
2. ALL.PRM
 - A. All.prm file from current controller for current robot model or can find a default All.prm file from within MotoSim robot file folders
 - B. Sometimes the All.prm file from the actual system will not be read by TransJobs software.
 - C. When this happens, you can find a default All.prm for robot models in MotoSim:

C:\Program Files\MOTOMAN\MotoSimEG-VRC 2019SP3\Robots
3. TOOL.CND
 - A. TOOL.CND file from current system. Make note to verify tool data is set correctly to match tool currently being used.
 - B. TOOL.CND file for new robot and again make note to verify tool data is properly set for the new tool to be used.

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TOOL DATA FILES:

1. Review the job header of all jobs to be converted.
2. In the job header you can see control group job with recorded command positions the job is referencing.
3. Make sure the header is referencing Tool 0 and Tool 1 if 2 tools are being used. More, if they are set up and used in the jobs

```
1 /JOB
2 //NAME CUT
3 //POS
4 //NPOS 4,0,0,0,0,0
5 //TOOL 0
6 //POSTYPE PULSE
7 //PULSE
8 C00000=85233,50424,8241,-190,-130463,27334
9 C00001=95552,3946,-56304,-236,-113208,20384
10 C00002=79229,41199,-3094,-377,-127870,-54902
11 C00003=79229,41199,-3094,-377,-127870,-54902
12 //INST
13 //DATE 2020/06/24 11:46
14 //ATTR SC,RW
15 //GROUP1 RB1
16 //LVARS 25,25,25,25,25,25,0,0
17 NOP
18 MOVJ C00000 VJ=15.00
19 MOVJ C00001 VJ=10.00
20 ' get current posion
21 GETS LPX000 $PX000
22 'convert local p-var to UF#5
23 CNVRT LPX001 LPX000 UF#(5)
24 ' set start x position
25 SET LD001 EXPRESS ( R001 * 0.5 + R000 ) * 25.4 * 1000
26 'calc y start pos
27 SET LD002 EXPRESS -R002 * 25.4 * 0.5 * 1000
28 ' set start cut position
```

4. Using the correct tool file number is critical when converting jobs.
5. TransJob converts the pulse information from the current/source robot model to a defined XYZ coordinate system then transfers this information to the new/destination robot model (applying the shift amount to compensate for position differences) and then converts the update position back to pulse values based on the destination robot

Multiple Robot Systems to be converted:

1. Review the job header of all jobs to be converted to check if it is a R1, R2, R3 or even a R4 job.
2. Transjob will convert of the above robot jobs, regardless if it is a R2 or other.
3. If the job is anything other than a R1 job, it will convert that job, but change the header information to R1.

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4. Once the job is converted, that was not a R1 job, you will have to use Notepad to change the header information back to the robot it was originally assigned to.
5. If any of the jobs contain a station, like R1S1 or R1S2, etc. Transjob will ignore the station data, convert the robot positional data only.
6. Once the conversion has been performed, double check the header for all jobs and load them.

Do not assume the jobs are good and hit PLAY. Always test start through the jobs to make sure all positions are good.