YASKAWA
PARTNER SUPPORT
Shared Integration Experience

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.

What Can be Copied To/From MotoSim & Controller

Introduction

When using MotoSim or when working on the controller what files and data can be copied back and forth between them?

Below will be a list of the types data that can be copied between MotoSim and a controller and the process for copying the data.

Types of Data that Can be Transferred

The list of data types can be transferred between MotoSim and a Controller is quite long. Here we will focus on the most common and important types of data that are used. Later, there will be a full list of all data types.

Data Types	Description
JOB DATA:	Job files (programs)
TOOL DATA:	defines the TCP, mass, Cg, and Inertia of the tool
USER COORDINATE DATA:	User Frame data
VARIABLE DATA:	Variable data
TOOL INTERFERE DATA:	Functional Safety Files
AXIS RANGE LIMIT DATA:	
AXIS SPEED MONITOR DATA:	
ROBOT RANGE LIMIT DATA:	
SPEED LIMIT DATA:	
TOOL ANGLE MONITOR DATA:	
APPR WARNING BUZZER DATA:	
SYSTEM BACKUP (CMOS.BIN):	• This one file will recreate the entire controller (minus 3D models of the cell) in MotoSim. • It is only one-way…from controller to MotoSim. • It is also used as a general backup…in case of emergency or controller firmware upgrades.

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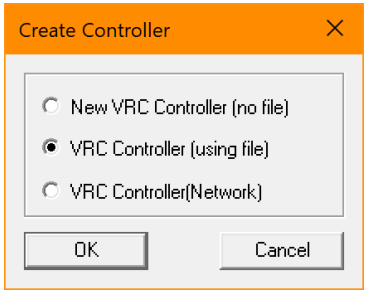
How to Transfer the Data

To use the CMOS.BIN file…from the real-world controller:

1. Create a new simulation
2. Create a new controller…from file



3. Confirm the selections and the cell will be replicated…minus any 3D model cell data.

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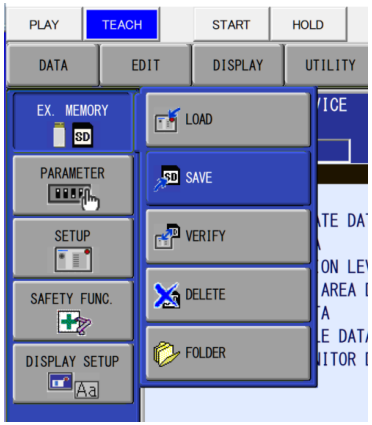
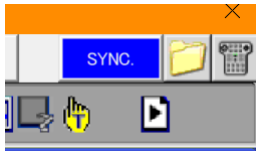
To Copy files from MotoSim to a real-world controller:

1. In the virtual pendant cursor over to EX. MEMORY and select SAVE



2. Use the arrow keys to move to the section of data to copy the files from (EX: JOBS DATA) and press the spacebar.
3. Arrow down to each job to copy and press the spacebar again to place a star by it

4. Press enter to copy the file(s) to the "Storage Card"
    a. In the real controller the Storage Card is either a USB flash drive or SD card plugged into the pendant.
    b. In the Virtual controller the Storage Card is a subfolder in the sim's controller folder. It can be easily accessed from the yellow folder icon at the top of the virtual pendant.
5. Pressing the folder button opens it in windows, where the data can be manually copied to a flash drive, which in turn can be inserted into the real controller.



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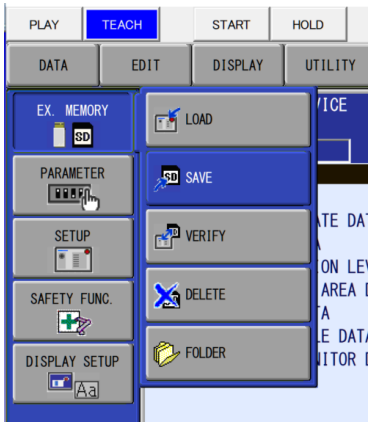
Loading files into MotoSim or the real-world controller is simply the reverse…with a few exceptions

1. In the virtual pendant cursor over to EX. MEMORY and select LOAD



2. When loading job data make sure the SERVOS are ON
3. When load system data make sure the SERVOS are OFF

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Full List of Data that Can be Transferred

JOB DATA	**FILE/GENERAL DATA**	**PARAMETER**	**I/O DATA**	**SYSTEM DATA**	PENDANT LOG	**SYSTEM BACKUP**
	TOOL DATA	BATCH PARAMETER	CIO PRGM	USER WORD		CMOS.BIN
	WEAVING DATA	ROBOT MATCH PARAMETER	IO NAME DATA	SV MONITOR SIGNAL		
	USER COORDINATE DATA	SYS DEF PARAMETER	PSEUDO INPUT SIGNAL	VARIABLE NAME		
	VARIABLE DATA	COORD ORG PARAMETER	EXTERNAL IO NAME DATA	FLAG VARIABLE NAME		
	SHOCK DETECTION LEVEL	SYS MATCH PARAMETER	REGISTER NAME DATA	SECOND HOME POSITION		
	TOOL INTERFERE DATA	CIO PARAMETER	YSF LOGIC FILE	ALARM HISTORY DATA		
	INTERFERENCE AREA DATA	FCTN DEF PARAMETER	USER GROUP INPUT	HOME POS CALIB DATA		
	USER MENU DATA	APPLI PARAMETER	USER GROUP OUTPUT	SYSTEM INFORMATION		
	AXIS RANGE LIMIT DATA	TRANSMISSION (UNIV)		CONTROLLER INFORMATION		
	AXIS SPEED MONITOR DATA	SENSOR PARAMETER		WORK HOME POS DATA		
	ROBOT RANGE LIMIT DATA	SERVO PARAMETER		I/O MESSAGE HISTORY DATA		
	SPEED LIMIT DATA	SERVOMOTOR PARAMETER		KEY ALLOCATION DATA		
	TOOL ANGLE MONITOR DATA	MOTION CTRL PARAMETER		EXTERNAL IO ALLOC DATA		
	APPR WARNING BUZZER DATA	SERVO POWER BLOCK PARAMETER		IP NETWORK SET DATA		
	TIMER VARIABLE DATA	MOTION FUNC PARAMETER		LOGDATA		
	TOTAL CRC MONITOR DATA	SERVOPACK PARAMETER		ENCODER MAINTENANCE		
		CONVERTER PARAMETER		PM(HARDWARE) FILE		
		ROBOT EXPAND PARAMETER		INSPECTION RECORD FILE		
				ROBOT STOP FACTR FILE		
				SETTM SETUP FILE		
				TIMER VARIABLE NAME		
				PM TIME MANAGEMENT DATA		
				JOB MONITOR DATA		
				SET DIAG. DATA		