

# MC Test Run Library



✓ Perform precise positioning using an MPG\* when teaching and maintaining a machine.

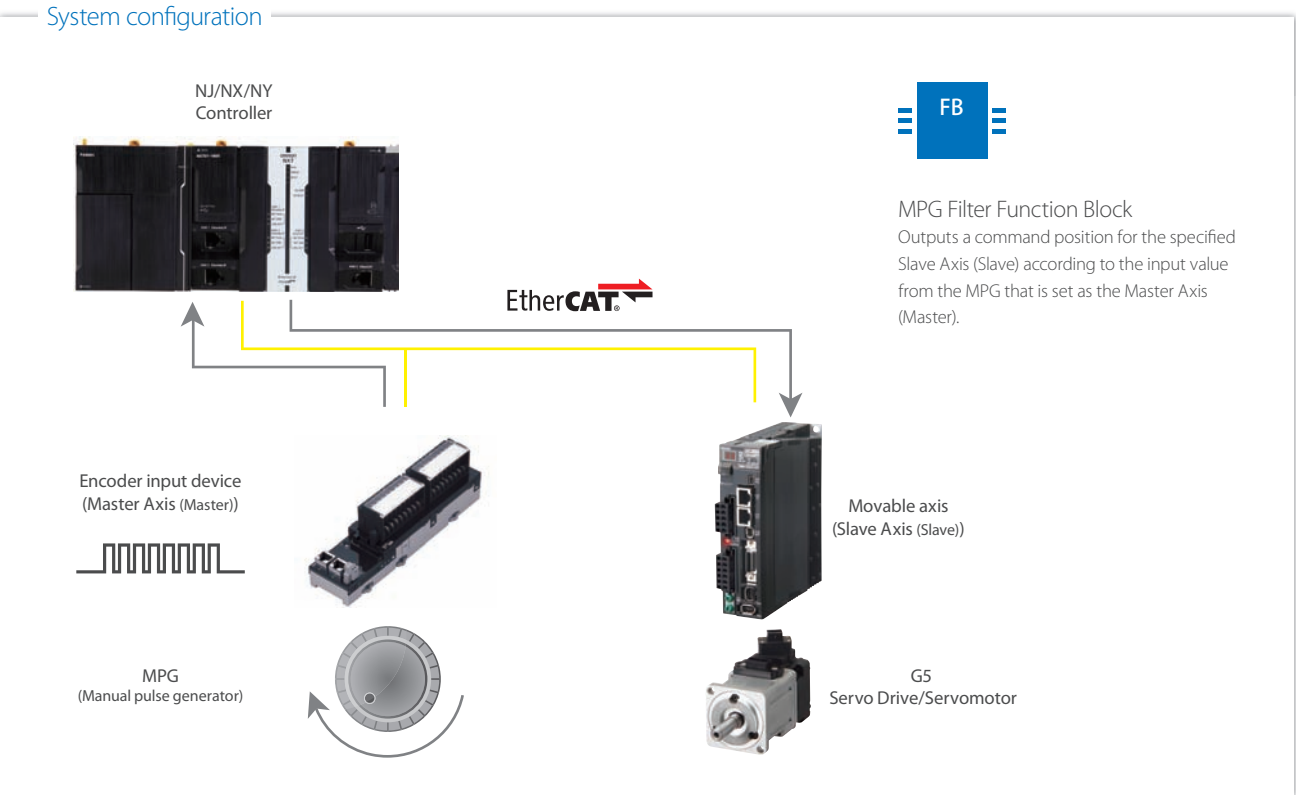
**Issue 1** A machine vibrates due to fluctuations in the motor rotation speed when the axis is moved using an MPG\*.

**Issue 2** A complicated filter processing program is required to keep the motor rotation speed constant.

\* MPG is an acronym for manual pulse generator. An MPG is sometimes called a manual handle.

## MC Test Run Library offers solution!

Thanks to the MPG Filter Function Block, precise positioning using an MPG can be achieved with simple programming.



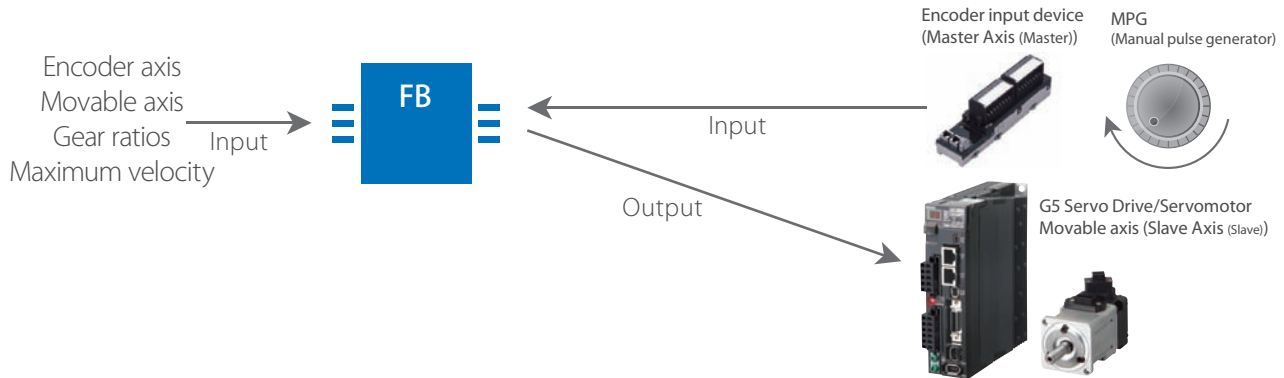
## [Example] Manual operation using the MPG Filter Function Block

**From**

- When an MPG is used, fluctuations in the motor rotation speed cause vibration and noise in the machine.
- A complicated filter processing program is required to keep the motor rotation speed constant.

**To**

- Precise positioning using an MPG can be achieved with simple programming using the MPG Filter Function Block. Input variables specify the gear ratios and maximum velocity.
- The MPG Filter Function Block eliminates the fluctuations in the speed to move the movable axis smoothly, providing precise positioning.



### Compatible Models

Name	Model	Version
Machine Automation Controller NJ/NX CPU Unit	NX701-□□□□/ NJ101-□□□□*1	Version 1.10 or later
	NJ501-□□□□/ NJ301-□□□□	Version 1.10 or later
	NX1P2-□□□□□□(1) *2	Version 1.13 or later
Industrial PC Platform NY IPC Machine Controller	NY5□□-1	Version 1.12 or later
Automation Software Sysmac Studio	SYSMAC-SE2□□□	Version 1.14 or higher
G5 Servo Drive with Built-in EtherCAT Communications	R88D-KN□□□-ECT	Version 2.10 or later
Encoder input device	NX-EC□□□□、GX-EC0211/EC0241	Version 2.10 or later
NX-series Pulse Output Unit	NX-PG0□□□	Version 1.10 or later

\*1. This Library is not available for NJ101-90□□ CPU Units.

\*2. This Library is not available for NX1P2-90□□□□ CPU Units.

### Function Block (FB) Specifications

Name	FB name	Description
MPG Filter	MPGFilter	Creates a command position for the specified axis according to an MPG input.

Sysmac is a trademark or registered trademark of OMRON Corporation in Japan and other countries for OMRON factory automation products. EtherCAT® is registered trademark and patented technology, licensed by Beckho, Automation GmbH, Germany. Other company names and product names in this document are the trademarks or registered trademarks of their respective companies.

Note: Do not use this document to operate the Unit.

**OMRON Corporation Industrial Automation Company**  
Kyoto, JAPAN

Contact: [www.ia.omron.com](http://www.ia.omron.com)

#### Regional Headquarters

##### OMRON EUROPE B.V.

Wegalaan 67-69, 2132 JD Hoofddorp  
The Netherlands  
Tel: (31)2356-81-300/Fax: (31)2356-81-388

##### OMRON ELECTRONICS LLC

2895 Greenspoint Parkway, Suite 200  
Hoffman Estates, IL 60169 U.S.A.  
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

##### OMRON ASIA PACIFIC PTE. LTD.

No. 438A Alexandra Road # 05-05/08 (Lobby 2),  
Alexandra Technopark,  
Singapore 119967  
Tel: (65) 6835-3011/Fax: (65) 6835-2711

##### OMRON (CHINA) CO., LTD.

Room 2211, Bank of China Tower,  
200 Yin Cheng Zhong Road,  
PuDong New Area, Shanghai, 200120, China  
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

#### Authorized Distributor:

© OMRON Corporation 2015 All Rights Reserved.  
In the interest of product improvement,  
specifications are subject to change without notice.

CSM\_2\_1\_1116  
Cat. No. P093-E1-01

1115(1115)