

The industry's  
first<sup>(\*1)</sup>

### Simple robot teaching system

# Virtual Robot Programming System (VRPS)

*Utilization of Virtual Reality (VR)  
Realize "Simple robot teaching"  
with intuitive operation*

Teaching using VRPS

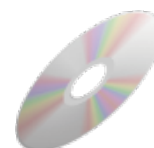
Conventional  
teaching



Panasonic robot:  
GIII/WGIII/WGHIII series



VR equipment<sup>(\*2)</sup>



Optional software VRPS  
YA-1VPCV1

**Efficiency**



Reduced teaching time by utilizing VR equipment

**Usability**



Allowed intuitive operation to the actual work

**For everyone**



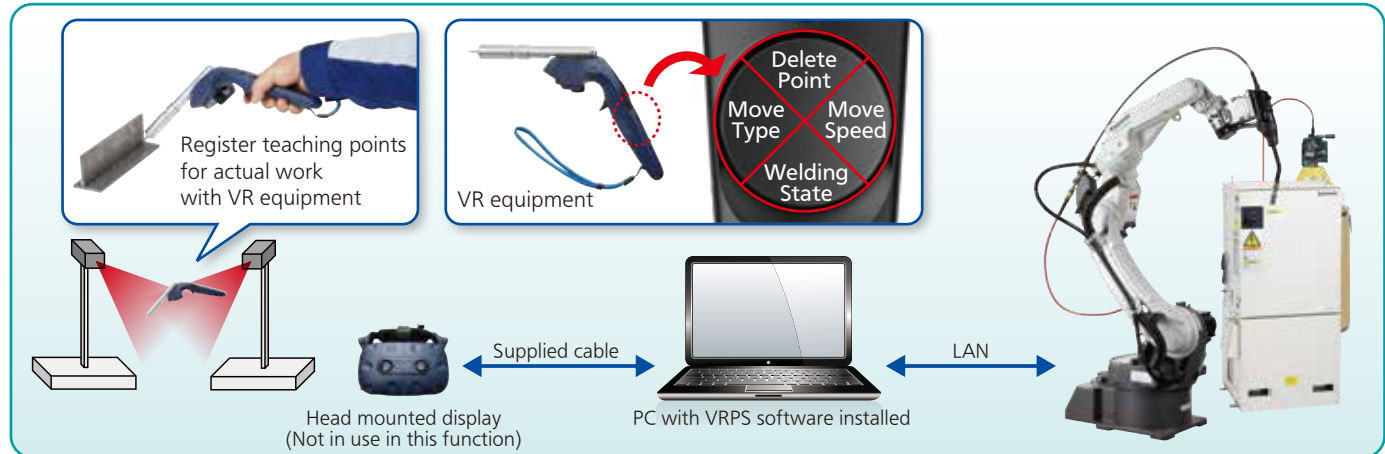
No professional skill is needed for teaching

(\*1) In the industry of the VR teaching equipment of welding robot using actual works. (According to our research as of April 21, 2020)

(\*2) Our company specified equipment

## ■ Outline of “Simple robot teaching” system

It enables a user who is unfamiliar with robot operation to easily perform robot teaching. Use the VR equipment and register teaching points for the actual work.

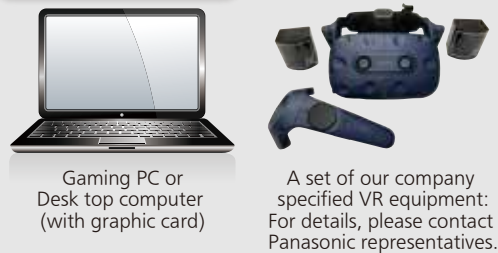


## ■ Product form

### Product of Panasonic



### Customer preparation



Name	Remarks
1. Software (CD-ROM)	Product of Panasonic: YA-1VPCV1
2. USB license key	"
3. Torch model	"
4. PC	Customer preparation
5. VR equipment	Customer preparation (Our company specified equipment)
6. LAN cable	Customer preparation

\*Please setup the PC/VR equipment at customer's end.

## ■ Comparison of teaching time

(Measurements under the condition specified by our company)

Teaching points:  
Approx. 80 points  
(Weld section:  
Approx. 30 points)



Teaching method	Teaching time	Correction time	Addition of weld commands	Total
Actual machine	2 hours (90 s/point)	None	Add while teaching	2 hours
Offline software	1 hour (45 s/point)	30 min.	The same as above	1.5 hours
VRPS (*)	Approx. 7 min. (5 s/point)	30 min.	Approx. 10 min.	47 min.

\* About positional accuracy: Displacement will occur. Prior to operation, perform operating check and position correction.

To improve positional accuracy:

- 1) Maintain the tracking of the head mounted display while teaching.
- 2) Operate the VR equipment about 30 seconds before performing calibration or teaching operation.
- 3) Adjust the TCP of the robot properly.
- 4) Perform the TCP adjustment of the torch model installed on the VR equipment.

## ■ Operating environment

VR equipment	HTC VIVE Pro (Our company specified equipment: For details, please contact Panasonic representatives.)			
CPU	Intel® Core™ i5-4590 or the equivalent or higher class			
Graphics	NVIDIA® GeForce® GTX 1060 or the equivalent or higher			
Memory	4 GB RAM or more			
Video output	DisplayPort 1.2 or higher			
USB port	USB 3.0 port or higher, 2 ports			
OS	Windows®10 or higher			

Make sure that the applied PC should satisfy the above specifications or higher. If not, the software, especially graphic, won't run.



### Safety precautions

- Before attempting to use any welding product, always read the manual to ensure correct use.

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