

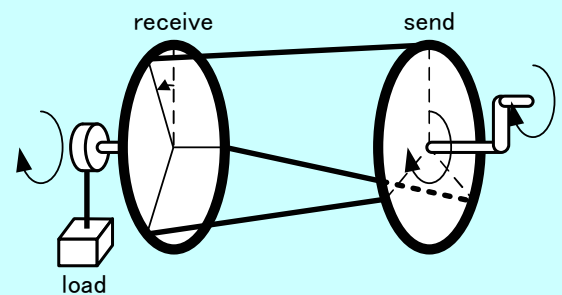


To understand intuitively the concept of  
Power System Steady-State & Transient Stability

## Training System for Power System Stability



This system consists of two small synchronous generators and power system simulator. It promotes directly understanding about Power System Stability, with measuring the rotation of generators and the quantity of electricity, and drawing various data when the power output of the generator is changed or short-circuit fault is caused in the system.



Dynamics model of Power System



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## Features

### ●Observation

- Two generators are placed face to face.  
So we can observe their relative rotation in steady-state and reaction in short-fault simulation with periodical flash.

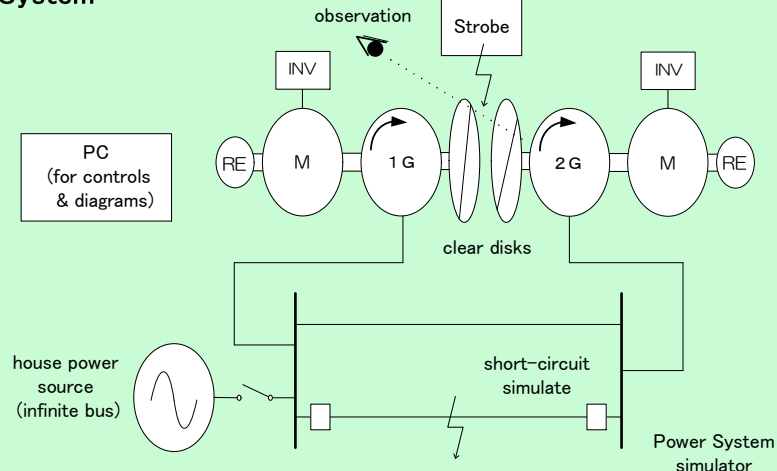
### ●Drawing

- The system draws Power angle curve with measuring axis of rotation.
- Other measuring data (power flow diagram, vector diagram etc.)

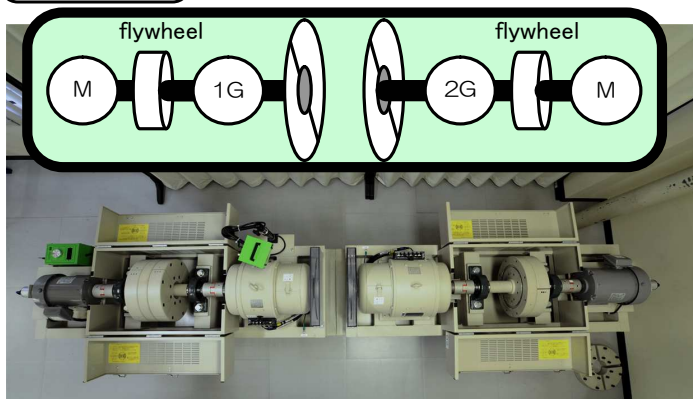
### ●Simulation

- generator controls
- simulate Power System (single machine double-circuit transmission line infinite bus system, islanded system etc.)
- measurement & analysis

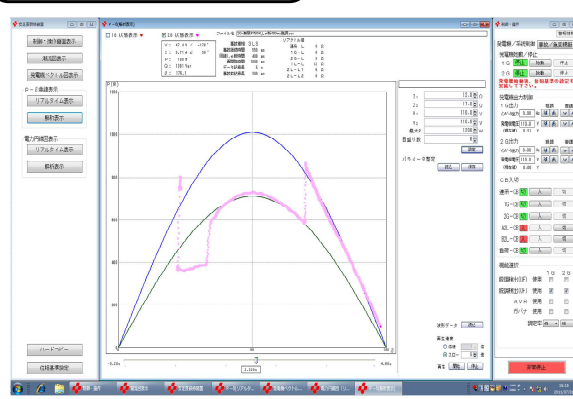
## System



## Generators



## Controls & Diagrams



name	structures	functions & features
Generators	<ul style="list-style-type: none"> <li>•synchronous generators (220V, 2kVA/1kVA)</li> <li>•induction motors with inverter control</li> <li>•adjustable flywheels</li> </ul>	<ul style="list-style-type: none"> <li>•observation with clear discs and flash</li> <li>•measuring axis of rotation with absolute rotary encoder</li> <li>•variable moment of inertia with flywheels</li> </ul>
Power System Simulator	<ul style="list-style-type: none"> <li>•3 transformers (220V/110V, 2kVA)</li> <li>•18 single-phase reactors (12Ω)</li> <li>•a general sequencer</li> </ul>	<ul style="list-style-type: none"> <li>•short-circuit fault simulate (2LS/3LS)</li> <li>•variable model such as single machine infinite bus system or two islanded system.</li> </ul>
Controls & Diagrams	<ul style="list-style-type: none"> <li>•Windows 7 PC</li> <li>•A/D Converter &amp; Analog Input</li> </ul>	<ul style="list-style-type: none"> <li>•easy controls</li> <li>•drawing measurement data (power flow diagram, vector diagram etc.)</li> </ul>



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