

# **GenSim®**

## **GENERATOR SIMULATOR FOR EXCITATION SYSTEM TESTING**

A microprocessor based Excitation System test set designed for use on all modern excitation systems & voltage regulators, both analog and digital

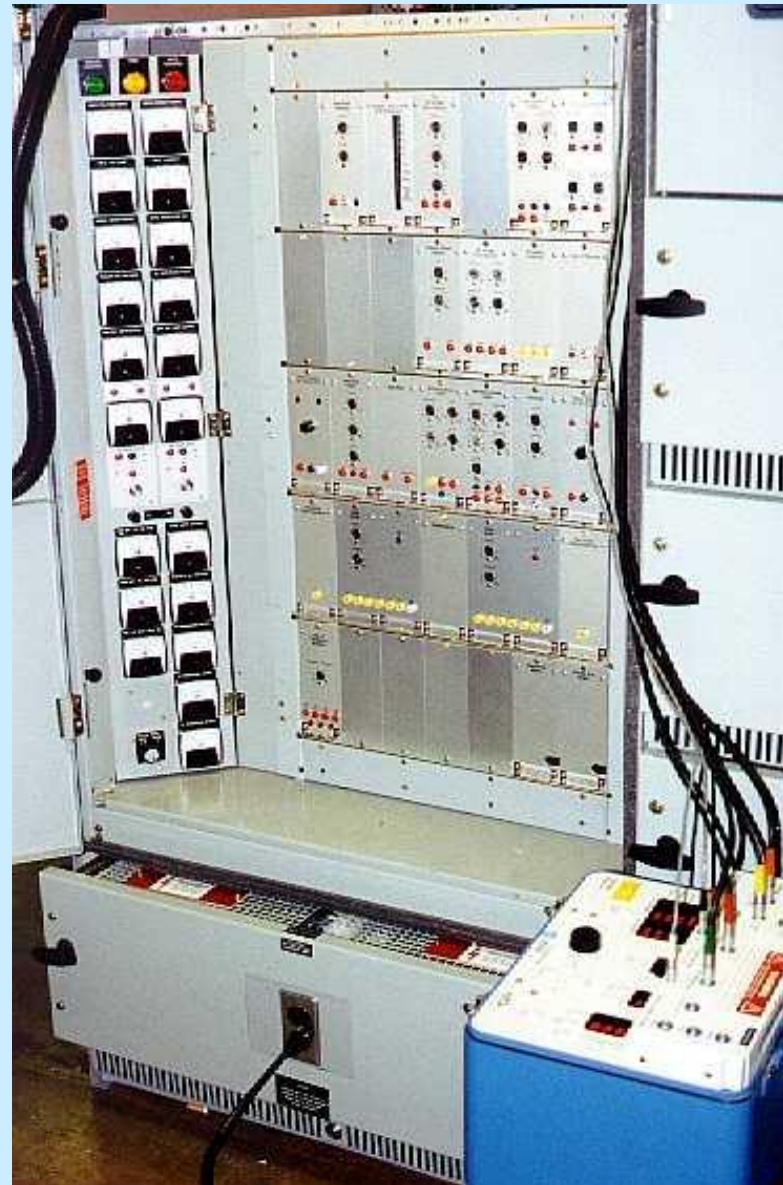
The GenSim® test set is designed for set-up calibration, maintenance testing, and troubleshooting all modern excitation systems and voltage regulators.



This equipment will simulate generator and exciter operation in order to perform a complete test of the excitation system, and related protective devices, while the Turbine-Generator is shut down.

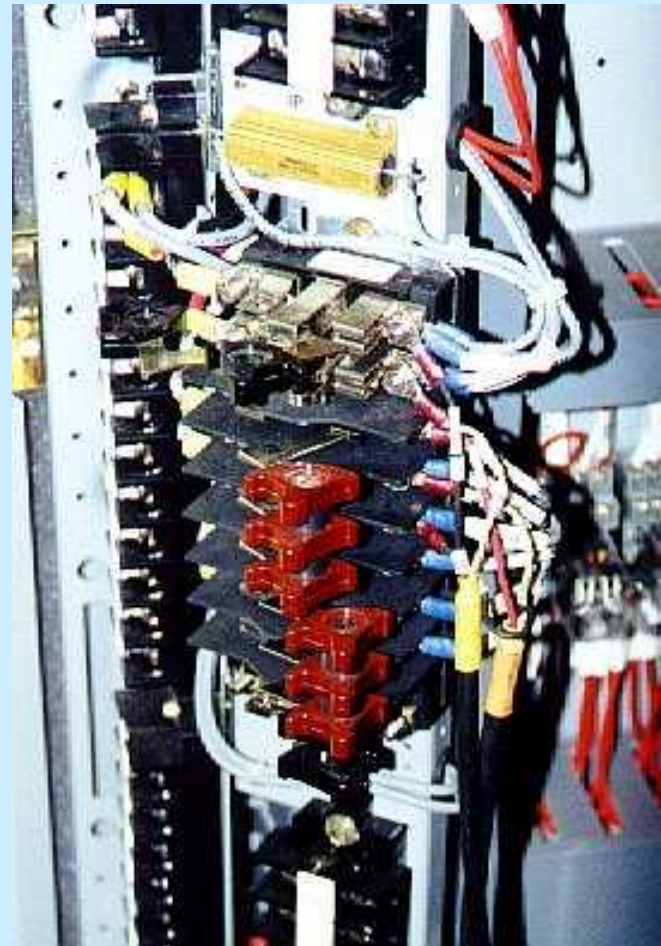
# GenSim hooked up and ready to begin testing

The GenSim output cables are routed through the excitation system for connection to the input terminals in the rear.

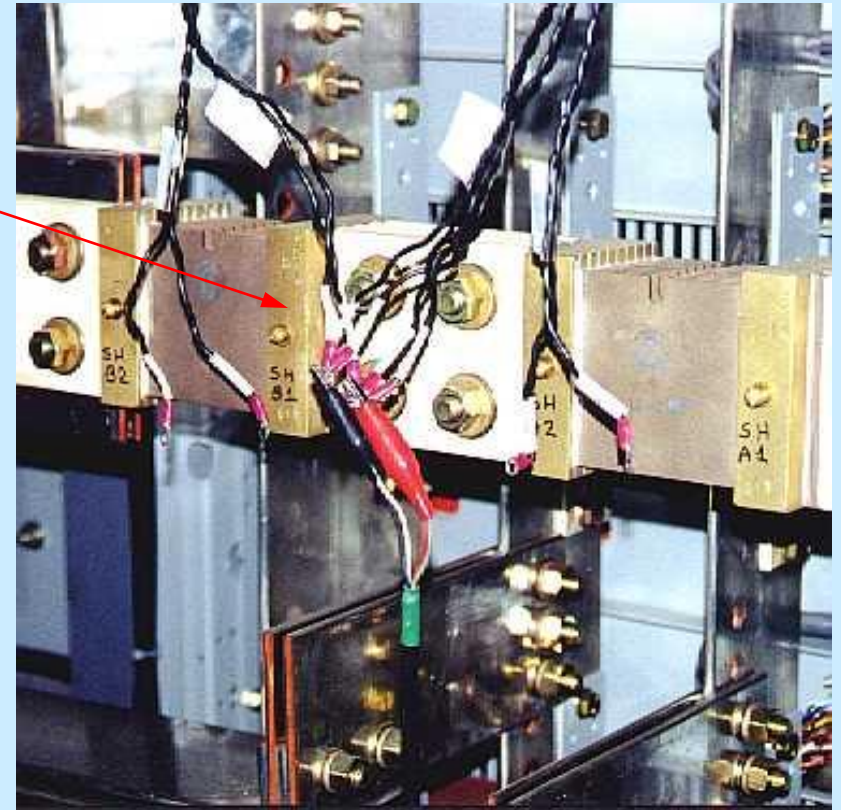


The actual PT and CT leads are disconnected at the input to the knife switch and the simulated PT and CT leads from the GenSim supplied test cables are connected in their place.

The simulated PT and CT signals are used to calibrate the voltage regulator and set the underexcitation and volts per hertz protective devices.

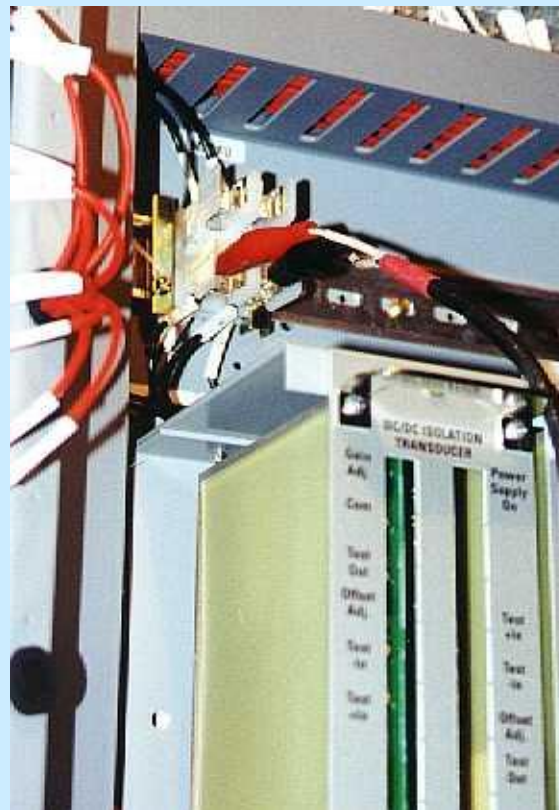


The field current sensing leads are removed from the current shunts and the millivolt output cable from the GenSim is connected to the lifted wires.



The GenSim millivolt source is used to confidently set the critical overexcitation protective devices.

The cable from the GenSim high voltage DC source has been hooked up to simulate the generator field voltage.



A precise calibration curve for the field voltage transducers is expertly obtained using the GenSim unique time delay stepping function.

Connection and setup has been quickly completed.

The GenSim is conveniently plugged into the systems 115 VAC outlet.

Testing has begun with the user easily adjusting the GenSim output quantities for the desired values.



Testing is in progress with the user following his test procedure and recording the test data.





The cables are color coded on both ends for aid in hookup to the equipment under test.

Connectors are keyed with the supplied test lead cables so they cannot be connected incorrectly to the GenSim.

Status and value of all outputs are continuously displayed to the user.



The ergonomic design of the user interface has been well received by the field service engineers who have been using GenSim.

The test technician is fine tuning the excitation system settings based on the simulated values from the GenSim.



# Testing is complete

The test technician and the plant operating personnel are now confident the system will perform optimally with all protective devices available to function when needed.



The GenSim is neatly closed up with all supplied test cables stored within the cover.