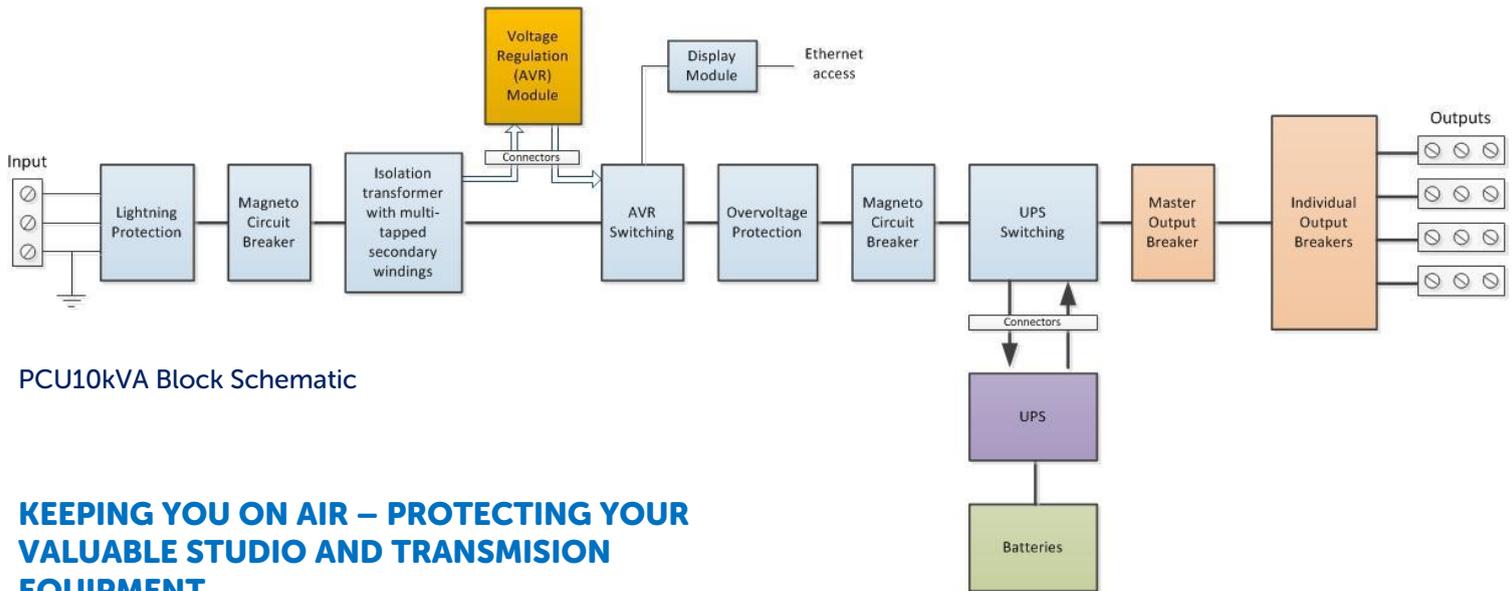




CLYDE  
BROADCAST

The Radio People

# PCU10kVA POWER CONDITIONING UNIT



PCU10kVA Block Schematic

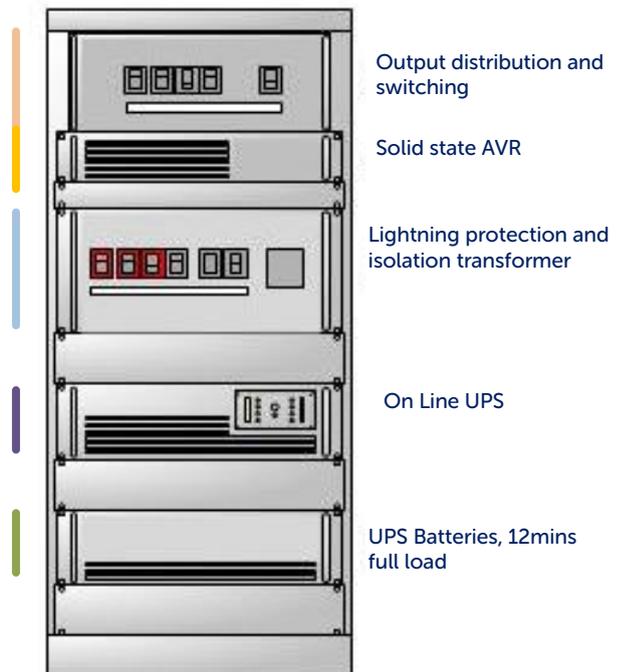
## KEEPING YOU ON AIR – PROTECTING YOUR VALUABLE STUDIO AND TRANSMISSION EQUIPMENT

It is very important to ensure that your studio and transmission equipment is powered from clean and secure supplies, immune from black-outs and brown-outs, as well as from lightning strikes.

Most equipment warranties become void if appropriate measures have not been taken to ensure suitable power supplies, so as well as taking you off-air, costly equipment repairs or replacements can be required if you fail to adequately address this issue.

The Clyde PCU10kVA Power Conditioning Unit has been specifically designed for installations where there is erratic mains power and a high incidence of mains induced lightning strikes, such as in Nigeria and surrounding countries.

In a single 24U high pre-wired rack, the PCU10kVA contains a highly effect Lightning Suppression Unit, a solid state AVR with bypass switch, a UPS (with battery pack) – also with bypass switch, and a set of circuit breakers for feeding a total of 10kVA of power to various studios and other technical areas within the station.



Lightning Protection ✓ Over-voltage ✓ Under-voltage ✓ Loss of mains ✓



## Features

### LIGHTNING PROTECTION

Protection from First and Second Type lightning strikes and surge currents using DEHN surge current arrestors with removable cartridges.

### CIRCUIT BREAKERS

Fast acting high quality circuit breakers to D-Curve, power interruption 25kA with delayed 1A selective residual-current device.

### ISOLATION TRANSFORMER

Massive 1:1 H-Class isolation transformer capable of withstanding voltages between primary and secondary windings of around 20,000V.

### SOLID STATE AVR

Fast acting (typically 2mS) microprocessor controlled, stabilises incoming mains variations of nominal voltage +/-20%. Integrated digital display with remote (web) access to interrogate key system parameters:

- Stabilized voltage
- Current (A)
- AVR Temperature
- Ground loss
- Individual AVR Triac correct operation

### UPS

Online double conversion technology for superior control and extended life, c/w batteries to provide 12 minute minimum back-up operation at half load.

### OUTPUT DISTRIBUTION AND SWITCHING

4 x 2.5kVA breakers plus manual bypass of AVR and UPS, for feeding to (typically) two studios, a Central Technical Area and transmission rack.

## Other power protection products

The PCU10kVA is a complete system offering lightning protection from electrical supply lines, and incorporating an AVR, UPS and power distribution.

In some circumstances not all of these features may be required, particularly if the site already has AVR and UPS capacity.

We offer a range of Lightning Protection Units, of varying power outputs, as well as a range of models which incorporate solid state AVRs, suitable for use where mains voltage is very variable.

The Clyde PCU2, with similar features to the PCU10kVA, also contains a generator control panel, for auto-starting and switching to an external generator under mains power loss.

