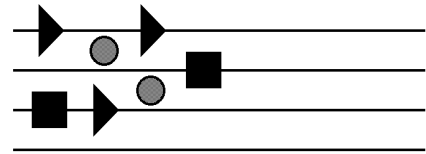




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Version 5.0
Powering Units for Tube Studio Microphones

DN221

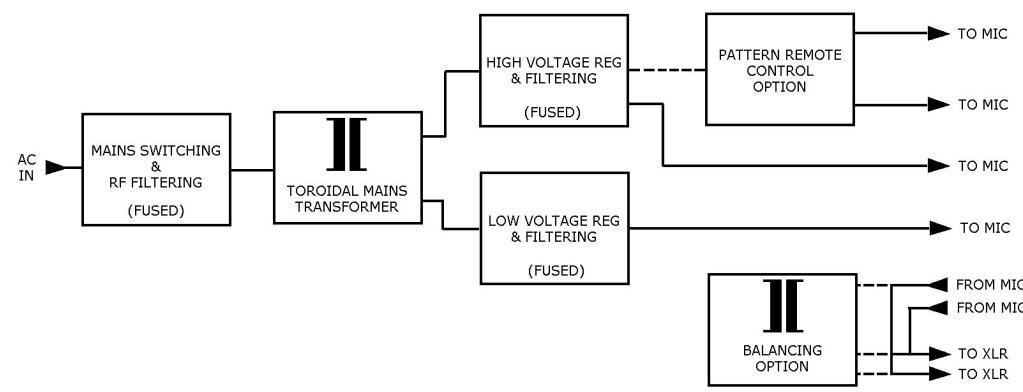
PRODUCT INFORMATION

The DN221 Version 5.0 power supply series are based on years of experience in the manufacture of tailor-made powering units for vacuum tube studio microphones. In this context, the DN221 product line has proven excellent with virtually any type of tube microphone, whether from the 1930s or current models.

An international range of professional users already highly appreciates the DN221 series' high reliability and operational safety, their rugged design and excellent recording results – no matter which microphone model the unit is combined with. All DN221 powering units are individually aligned to the desired microphone model and are shipped after critical performance tests only. Their technical and design properties are in line with the stringent standards of German studio and broadcast equipment, both concerning workmanship and the application of highest-grade components.

General Information

All circuit stages are fused against external overload. The case is permanently protective-grounded. This leads to a high degree of safety and reliability during everyday operation, even in case of external problems like cable defects or microphone failure.



Block Diagram Series DN221 V5.0

All DN221/DN-RC units are equipped with highly efficient filtering against mains interference and accept even strong mains voltage fluctuations without affecting signal quality. The generously dimensioned toroidal transformer minimizes internal interference as well as interference radiation on neighbouring devices in the studio.

All output voltages are multiple-filtered and electronically regulated, thus bringing the microphone's noise figure down to a startling minimum, both in terms of ripple and broadband noise.

Mains Voltage

DN221 units can be operated worldwide, on mains systems from 100 to 240 VAC. The desired mains voltage is factory-preset. Conversion to other mains systems can be executed either by us or on-location by a trained technician. External voltage selection is available on request.

Output Voltages

All output voltages are precisely aligned to the individual microphone model prior to shipping. Thus the microphone is always operated exactly complying with the mic manufacturer's original specifications. For microphones with more 'uncommon' power requirements, there are customized versions of the DN221 available. Even if the powering data of your microphone are completely obscure, these can easily be determined by sending us the mic for testing. We'll find the right unit version and setting to make the mic perform as fine as possible.

The DN221's parameter stability and ripple usually exceed those of older original powering units by far.

Mains Connection

is provided via a 3-pin IEC/CEE connector. Mains cords complying with this standard are available worldwide, making the use of the DN221 in countries with other wallplug types as easy as imaginable.

The mains system must provide protective earth. Protective earth (PE) is not connected to signal ground in order to avoid ground loops. However, this connection can easily be made by adding a simple wire bridge inside the microphone plug if required.

Microphone Connection

The microphone is connected via a thread-locking Minituchel socket, which is compatible with the vast majority of vintage tube microphones used worldwide.

As an option, DN221 units can also be delivered with other connector types (e.g. Grosstuchel, XLR, Cannon comp.).

Outputs

Signal output is equipped with a standard three-pin XLR terminal with AES/EBU pinout (2= in phase, 3= out-of-phase, 1= 0V). The electrical characteristics of the output signal equal those of the microphone, with the exception of the DN221-T version, which provides an internal insulation/balancing transformer.

OPTIONS

Basically, there is a DN221 model available for any tube microphone type known. However, one of the following standard versions will already cover most tube microphone models currently in use:

DN221 / 221-E

Standard version for most small-diaphragm and several large-diaphragm tube microphones with dual supply voltage (Neumann KM, CMV3, M269, Schoeps M221...)

DN221-C

Special version for inverted supply voltages (Schoeps CM6...)

DN221-VR

For Neumann U47/U48 fitted with original tube (VF14)

DN221-T

For measuring microphones in recording use, as well as microphones with unbalanced output. With high-grade insulation/balancing transformer for flawless operation with balanced signal paths.

DN221-R

Special version for microphones with remote-controllable directional pattern. With high-quality rotary switch with nine settings (omni – 3* wide cardioid – cardioid – 3* hypercardioid – figure-of-eight). Suitable for e.g. Neumann SM269 / M49 / AKG C12 / C12A...

DN-RC

Special version for stereo microphones with dual pattern remote control. Available for tube and solid-state microphones, e.g. Neumann SM2 / SM23 / SM69 / SM69FET / AKG C24 / AKG C422....)

Technical Specifications

Mains:	100 to 240V~ factory-preset, 50/60Hz, 6W max.
Voltage tolerance:	+5% / -20% typ.
Operation environment:	0...50°C, dry environments
Mains connection:	IEC-CEE, third-wire protective earth
Microphone connection:	Tuchel compatible or as requested
Signal outputs:	XLR 3-pin, according to AES/EBU
Case:	extruded aluminium, anodized
Dimensions:	165 x 80 x 110 mm
Weight:	1.4 kg approx.
CE conformity:	EG-Niederspannungsrichtlinie 73/23/EWG, Anhang I DIN EN 50081-1:1992

dre 1/2006 – Technical improvements reserved

