

# PCN - 1800N Series

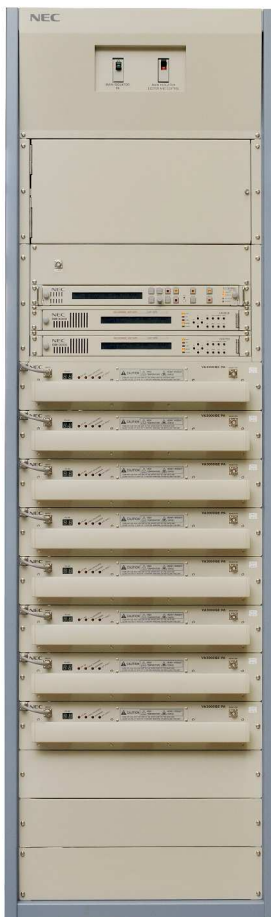
## High - Power Liquid - Cooled VHF Analog TV Transmitter

Through NEC's extensive experience and richness in supply records, as well as the feedback received from their end-users, NEC has completed a new high-power VHF Analog Transmitter, the PCN-1800N Series. The system's new features and good characteristics were all came from the previous Series with enhanced functions.

The PCN-1800N is more suitable and user-friendly that could provide a more comfortable use to its customers.

### Key Features

- Highest power density: 20kW per a rack
- Switch-over from analog to DVB-T
- Easy modification from analog to digital
- Flexible System configuration
- Mounted same components with DTV-80
- Possible to share spare parts with DTV-80



### Main Features

#### Small footprint

By installing the latest LDMOS, the newest technology,

The PCN-1800N Series has realized that it could provide up to 20kW output power using 8 sets of PA units in a single rack, an achievement by having a footprint of only 590 (W) x 2,000 (H) x 1,000 (D) mm, making it one of the smallest VHF transmitter foot-prints in the world.

#### Simple upgrade to Digital Transmitter

The PCN-1800N is now ready to meet the future requirements of the end-users for digital service, by simply combination with our own digital exciters, the transmitter is ready for DVB-T/ DVB-T2/ ATSC/ISDB-T broadcast.

#### Same components with digital VHF transmitter

The PCN-1800N has provided same Power Amplifiers and cooling system as our Digital TV Transmitter (DTV-80) which allows the system to easily switch from Analog to Digital.

\* For more information and details, kindly refer to product brochure of DTV-80.

## PCN-1800N Series Lineup and Configuration Table

Output Power	Model Name	Equipment Composition [sets]				Size (mm)
		Exciter	Exciter Switch	PA	Rack	
5.0kW	PCN-1805SSQN/1C	1	-	2	1	590 (W) x 2,000 (H) x 1,000 (D)
	PCN-1805SSPQN/1C	2	1			
7.0kW	PCN-1807SSQN/1C	1	-	3		
	PCN-1807SSPQN/1C	2	1			
10.0kW	PCN-1810SSQN/1C	1	-	4		
	PCN-1810SSPQN/1C	2	1			
12.0kW	PCN-1812SSQN/1C	1	-	5		
	PCN-1812SSPQN/1C	2	1			
15.0kW	PCN-1815SSQN/1C	1	-	6		
	PCN-1815SSPQN/1C	2	1			
17.0kW	PCN-1817SSQN/1C	1	-	7		
	PCN-1817SSPQN/1C	2	1			
20.0kW	PCN-1820SSQN/1C	1	-	8		
	PCN-1820SSPQN/1C	2	1			
30.0kW	PCN-1830SSQN/1C	1	-	12	2	1,180 (W) x 2,000 (H) x 1,000 (D)
	PCN-1830SSPQN/1C	2	1			
35.0kW	PCN-1835SSQN/1C	1	-	14		
	PCN-1835SSPQN/1C	2	1			
40.0kW	PCN-1840SSQN/1C	1	-	16		
	PCN-1840SSPQN/1C	2	1			

**PCN-18xxSSQ:**  
Single Transmitter with Single Drive & Single liquid cooling system

**PCU-18xxSSPQ:**  
Single Transmitter with Dual Drive and Multiple Pas & Redundant liquid cooling system

Other configuration available on request:  
**PCN-18xxSSW:** Dual Transmitter in Active Reserve

## PCN-1800N Series Specification Table

### Analog general

Items	Specification
Analog Television Systems	B/G, D/K, M
Color Systems	PAL, NTSC
Sound Systems	Monaural, IRT, BTSC, NICAM

### Analog Video Performance

Items	Specifications
Video input level	1V p.p
Regulation of Output Power	± 0.5dB
Variation of Output Power	± 2%
Vision Sideband Response (+1.5MHz Ref.)	for B/G
-4.43 MHz	<-30dB
-4.43 MHz to -1.25 MHz	<-20dB
-1.25 MHz to -0.75 MHz	<+0.5dB
-0.75 MHz	<+0.5dB / >-4dB
-0.5 MHz	<+0.5dB / >-1.5dB
-0.5 to +4.5 MHz	± 0.5dB
+5.0 MHz	<+0.5dB / >-2.5dB
+5.5 MHz	<-26dB
Frequency Stability	± 2x10 <sup>-7</sup> /3month
Differential Gain	<5 °
Differential Phase	<5%
Incidental Carrier Phase	± 4 °
Signal-to-Noise Ratio(Weighted)	-60dB
2T K Factor	<2%
20T Equivalent Gain and Delay	Gain: ± 10% Delay: ± 50ns
Spurious (inter-modulation) and Harmonic Radiation	-60dB
In-Channel Intermodulation	-53dB

### Analog Sound Performance

Items	Specification
Frequency Stability	± 2x10 <sup>-7</sup> /3month
Modulation Capability	± 100kHz
Aural Input level at 400Hz	0dBm
Pre-emphasis	50us
Frequency Response	± 0.5dB
Harmonis Distortion	<0.5%
FM Noise	-55dB or better
AM Noise	-45dB or better
Synchronous AM Noise	-40dB or better

ISO 9000 Series



ISO 9001 JMI-0119  
NEC Broadcast and Video

ISO 14001



JQA-E-90066  
NEC

### Safety precautions

To install, make connections and operate this product, please carefully read and observe instructions, precautions and recommendations in our instruction manuals.

The colours in this brochure may differ from those of the actual unit. Designs and specifications of this product is subject to change without prior notice.

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