

## 3KW FM Stereo Transmitter

This 3KW FM broadcast transmitter uses a new digital FM broadcast exciter, high efficiency RF power amplifier and highly reliable N + 1 switching power supply and other components. It is modularized to form a compact 3KW cabinet with high performance and high reliability FM broadcast transmitter.

The transmitter adopts a modular structure to facilitate the maintenance of the transmitter; it can also be configured to automatically switch between the main and backup dual exciters to further improve the reliability of the whole transmitter.



## FEATURES

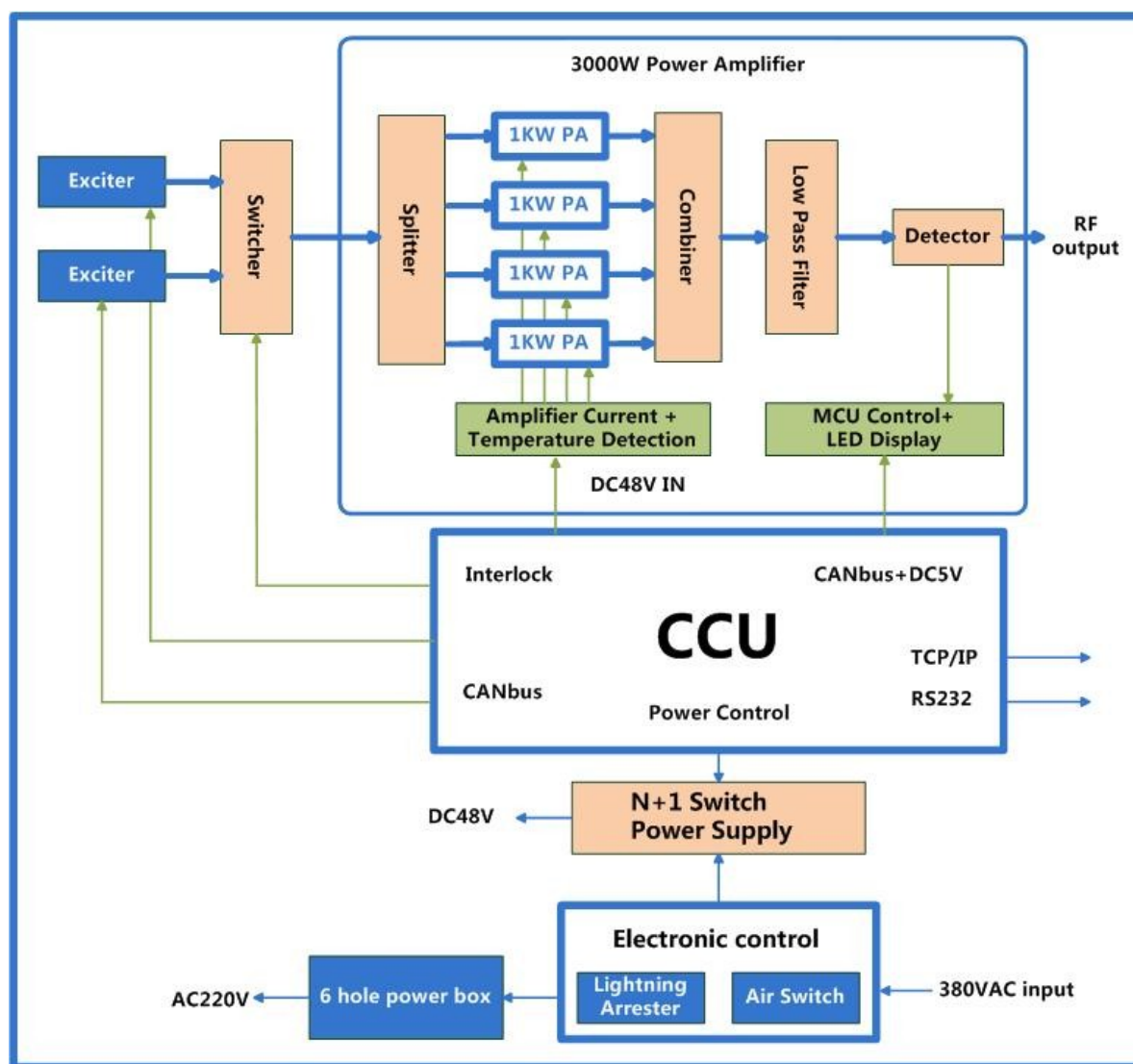
1. Modular design concept, each functional module is assembled with building blocks, which is easy to maintain and repair.
2. The main and backup dual exciter configurations can be used to reduce the stop rate (spare exciter and automatic switcher are optional).
3. The 3KW power amplifier is installed in a 3U high 19-inch standard chassis. The interior is composed of four identical 1KW power amplifier modules for low loss, high isolation, and in-phase synthesis. The power redundancy design has large margin and high reliability.
4. The 1KW power amplifier module uses the latest high-efficiency LDMOS tube and adopts micro-band impedance conversion technology, which is simple, efficient, and consistent, and easy to replace.
5. The power amplifier radiator adopts the patented thermal simulation design tooth profile, which has small wind resistance, large heat dissipation area and high heat conduction efficiency.
6. Three high-quality long-life large-flow axial flow fans are connected in parallel, and the redundant air volume is large. A single damage will ensure the normal operation of the machine.
7. The power supply of the amplifier adopts 3x2.5KVA high-reliability switching power supply, and adopts flexible 2 + 1 hot-swap configuration scheme and parallel current sharing centralized power supply. Even if one of the power sources is repaired, the whole machine can still output 3KW.
8. The switching power supply is provided with protections such as over-voltage, over-current, under-voltage, over-temperature, short-circuit, phase loss, and lightning protection.
9. The transmitter is provided with VSWR, over power, over temperature, over voltage, over current and lightning protection.
10. The whole machine is installed in a 19-inch standard cabinet, and the height can be customized according to customer requirements.
11. The bottom of the cabinet is equipped with universal wheels (lockable) to facilitate the movement of the equipment.
12. Various technical parameters can be read through the touch LCD display of the

central control unit (CCU) panel, which is intuitive and convenient.

13. Complete technical data detection and monitoring system and computer control software with complete functions.

14. Power control uses closed-loop automatic gain control to ensure stable output power without drift.

15. With TCP / IP and RS232 remote control interface, it is easy to realize local management and remote monitoring of the computer.



**ZHC618F-3000W/M2 Diagram**

## Technical Specifications:

1. RF frequency range	87MHz~108MHz
(other frequencies can be customized), stepping 10kHz	
2. Output power	0~3000W continuously adjustable
3. Allowable deviation of output power	< $\pm 10\%$
4. Output power stability	< $\pm 3\%$
5. Output impedance	50 $\Omega$
6. RF Output Interface:	7/8' or 1-5/8' Flange
7. RF efficiency	$\geq 70\%$
8. Residual wave radiation	< -70dB
9. Parasitic amplitude modulation	< -50dB
10. Carrier Frequency precision:	$\pm 200\text{Hz}$
11. Analog audio input	-12dBm ~ +8dBm
12. Input audio Level Gain	-15dB~+15dB Step 0.1dB
13. Analog audio input impedance	600 $\Omega$ balance
14. AES input impedance	110 $\Omega$ balance
15. AES input level	0.2~10Vpp
16. AES sampling rate	30kHz ~ 96kHz
17. RDS input	Unbalanced (optional) BNC type connector
18. Pre-emphasis:	0 $\mu\text{S}$ , 50 $\mu\text{S}$ , 75 $\mu\text{S}$
19. Audio response:	$\pm 0.01\text{dB}$ (30Hz~15000Hz)
20. Left and right channel level difference	<0.01dB (100% modulation)
21. Stereo separation	$\geq 70\text{dB}$ (30Hz ~ 15000Hz)
22. Stereo signal-to-noise ratio	$\geq 90\text{dB}$ (1KHz, 100% modulation)
23. Distortion	<0.01% (30Hz ~ 15000Hz)
24. Power supply Three-phase four-wire AC 380V or single-phase AC 220V or two-phase AC 110V	
25. Cooling method	Forced convection
26. Temperature range	-5 $^{\circ}\text{C}$ ~ + 45 $^{\circ}\text{C}$
27. Chassis dimensions	19 inches wide (574mm) $\times$ height (1000mm) $\times$ depth (880mm)
28. Transmitter weight	150kg