



**TY-13020D**  
**20W VHF Digital Transmitter**

Technical Specification  
V3.01

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# 1. 20W VHF DIGITAL Indoor TV Transmitter



## 1.1 Outline

Thanks for your interested in our products.

TY-13020D works on VHF band (170-230MHz), output power is 20W. VHF series digital transmitter is a kind of product (meet with euro- standard) that specially designed to supply common or pilot frequency coverage and subsidiary station by consuming small and medium power for terrestrial digital TV transmission. It applies to modulation modes like DVB-S, DVB-S2, nQAM, DVB-T, DVB-T2 and DTMB-T and so on. It is applicable to built-up areas, basement, tunnel and remote mountainous areas. Its main advantages include installation convenience and simple process in debugging and maintenance, etc. And in any combination of multiple antenna-feeder system it can supply local coverage and subsidiary station of wireless digital signal in the blind area.

## 1.2 Main features

- ⊕ Wide-band frequency response and low noise design
- ⊕ Design of low power consumption and linearization advances emitting power of the transmitter and reduces nonlinear distortion.
- ⊕ Very low group delay feature, suitable for digital signal transmission
- ⊕ ALC keeps output of constant power, output VSWR detecting protection

- ⊕ Apply to single-channel or multi-channel VHF digital television transmission system
- ⊕ Be used in the Wide-band frequency repeating of HFC, AML, or MMDS digital TV signal
- ⊕ Realize wireless network coverage of digital TV at a low cost.
- ⊕ Modular design simplifies installation, field services and upgrade.
- ⊕ Automatic and manual switching backup systems available.
- ⊕ Build-in lightning protector with current-dividing series power prevents lighting surge and instant overvoltage.
- ⊕ Indoor type with large LCD panel system real time working condition, maintenance and management of system can be achieved easily.

### 1.3 Technical Specification

RF Output Frequency	170~230MHz(frequency band carrier signal takes could be set arbitrarily)
Output Power	20W
Bandwidth	6MHz/7MHz/8MHz or multi-channel system Maximum Bandwidth≤24MHz
Modulation Mode	COFDM/16QAM/32QAM/64QAM/QPSK,etc.
Shoulder Ratio	≥40dBc(COFDM/64QAM)
RF Output Interface	50Ω/N connector Return Loss: 20dB
RF Frequency Response	BW: 60MHz Passband Fluctuation: ≤2.0dB Any Within 10MHz: ≤1.0dB
Group Delay Characteristics	≤40nsec
IF Input Level	-25~-10dBm
Input Frequency	170~230MHz
IF Input Interface	75Ω/F connector Return Loss: 15dB
In-band Spur Restraint	-60dBc(relative digital signal level)

Automatic Level Control	≥20dB
Gain Modulation Error	Gain Control: 0~20dB,error≤±0.5dB
	Gain Control: 20~31dB,error≤±0.75dB
Gain Control Range	0~31dB, 1.0dB stepping
Environmental Conditions	Working Temperature Range: -20°C~+45°C Humidity: no condensation Relative Humidity: 0~95% nonsaturation
Working Voltage	AC 220V±10%,50/60Hz
Package Dimensions (L*W*H)	58*48*33cm
Package Weight(Kg)	19Kg

## 2.TYE Series Transmitters

Item	Product name	Frequency Range	Output Power	System
1	VHF Analog TV Transmitter	170MHz-230MHz	20W-2KW	PAL/NTSC/SECAM
2	VHF Digital TV Transmitter	170MHz-230MHz	5W-300W	DVB-T/T2/S/S2/C,QAM Omnidirectional transmission
3	VHF Live/Mobile Transmitter	300MHz-350MHz	5W-30W	Point to point transmission
4	UHF Analog TV Transmitter	470Mhz-860MHz	20W-2KW	PAL/NTSC/SECAM
5	UHF Digital TV Transmitter	470Mhz-860MHz	10W-1KW	DVB-T/T2/S/S2/C,QAM Omnidirectional transmission
6	L Band TV Transmitter	1.3GHz-1.5GHz	20W-50W	DVB-T/T2/S/S2/C,QAM Omnidirectional transmission; Point to point transmission
7	S Band (MMDS) Digital TV Transmitter	2.0GHz-2.9GHz	10W-500W	DVB-T/T2/S/S2/C,QAM Omnidirectional transmission; Point to point transmission; PAL/NTSC/SECAM(Analog signal)
8	8GHz TV Transmission Module Set	7.8GHz-8.3GHz	500mW-2W	DVB-S/S2(8PSK/QPSK) Omnidirectional transmission; Point to point transmission
9	Ku Band (MVDS) TV Transmitter	10.7GHz-12.0GHz	200mW-24W	DVB-S/S2(8PSK/QPSK) Omnidirectional transmission;

				Point to point transmission
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