

# FM+ C

## FM T55C/FM T55CD



The new FM+ C transmitter integrates professional WaveCAST Wi-Fi audio server technology into a FM assistive listening system. Users can now listen with either an FM receiver or our dedicated WF R1/WF R2 receiver, or with their own smartphone (via the WaveCAST Receiver App). Venues no longer need to choose between providing FM or Wi-Fi assistive listening systems. Along with this flexibility comes exceptional audio quality, as the FM+ C is built on a DSP.

**NOTE: The FCC requires this device to be used with approved, FCC 15.203 compliant antennas and be professionally installed. Refer to Williams AV's 72 MHz Antenna Selection Install Guide for compliant antennas for this product.**

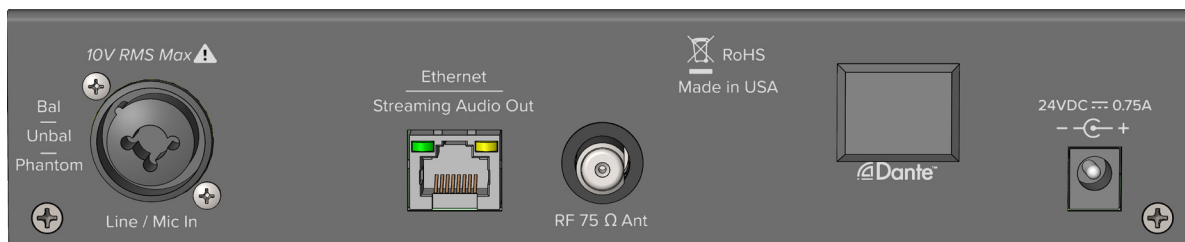
### FM T55C / FM T55CD

Dimensions	8.45" W x 8.25" D x 1.72"H (21.5 cm x 21 cm x 4.4 cm)
Weight	Transmitter: 3.2 lbs (1.45 kg)
Color	Black
Rack Mount	Standard 19" Rack, one EIA rack space high, 1/2 space wide 1-2 units can be mounted in a single rack space with optional RPK 005 (single) or RPK 006 (double) Rack Mount Kits
Power Supply	Desktop Style Transformer (TFP 062); Input: 100-240 VAC, 50/60 Hz. IEC Line Cord; Output: 24 VDC, 750 mA, 18W. 2.5mm ID center positive barrel connector
Power ON Indicator	Push On/Push Off latching power button with backlight. Green backlight indicates power ON, backlight off indicates power OFF.
Temperature Range	Operating: +32° F to +122° F (0° C to 50° C); Storage: -4° F to +158° F (-20° C to 70° C)
Ethernet	RJ-45 on back of unit supports CAT 5e cable lengths up to 328 feet (100 meters); 10/100 Base-T IEEE 802.3 compliant, unique MAC address. RJ-45 jack used for web interface and streaming audio out. An external Router/DHCP Server is required to stream audio to receiving devices.
Dante	(1x) RJ-45 jack. Only available on FM T55CD
User Interfaces	1. 3.12" High Resolution OLED display with selections via buttons, 2. Hosted Web page, 3. Telnet commands over ethernet (see our "WaveCAST and FM+ Programmers Guide" for available commands and protocol).
<b>RF Section</b>	
Operating Frequencies	72.1-75.9 MHz, 17 wideband channels (selectable)
Frequency Accuracy	± 2 ppm stability, 0-50° C
Deviation	± 75 kHz maximum
Pre-Emphasis	75 µsec

RF Field Strength	Does not exceed 80 mV/m at 3 m
Compatible Antennas	ANT 005, ANT 021, ANT 024, ANT 025, ANT 028, ANT 029, ANT 034 <i>Refer to Williams AV's 72 MHz Antenna Selection Install Guide for FCC-compliant antennas for this product.</i>
Transmission Range	Up to 1000 ft (304 m) with ANT 005 coaxial antenna mounted on rear chassis F-connector
RF Outputs	(1x) #10-32 stud connector in center of unit (pcb mounted) (1x) F-connector on rear chassis
RF Transmit (RF) Power Indicator	1 OLED On Air Indicator with 4 states indicating power level Off, Low, Medium and Full Power.
RF Time Out (sleep mode)	30 min. duration, 4 hr. duration, or Always On; selected via web interface. When audio drops below -18 dB, the selected duration begins, and when it expires the unit stops transmitting and goes into a low-power ("sleep") mode. Any button press or resumption of audio above -18 dB "awakens" the unit and it begins transmitting again.

**Audio Section**

Audio Inputs	(1x) Combination 3-pin XLR, 1/4" (TRS) jack for balanced or unbalanced line level, or balanced or unbalanced microphone with selectable phantom power. Optional RJ-45 Dante Input ("D" models only).		
Audio Processor Functions	DSP based; Compression: 1:1, 1.5:1 or 2:1; High-pass and Low-pass Filter Frequency control, Music, Voice and Hearing Assistance Audio Presets		
Frequency Response	31-16000 Hz, ±3 dB (re: 1 kHz) ("Music" Audio Preset)		
Signal-to-Noise Ratio	64 dB (typical) Transmitted RF @ 1kHz		
Total Harmonic Distortion	Less than 0.25% @ 1 kHz (RF output)		
Common Mode Rejection	>57 dB @ 1 kHz, Mic or Line mode		
Audio Input Gain Adjust	Adjustable from +24dB to -60 dB, in 1dB steps from front screen or web interface.		
Phantom Power	14.4 VDC applied through 2.2 kΩ resistors to analog combo jack: Pin 2 and Pin 3 on XLR jack, or tip and ring on 1/4" TRS jack		
Audio Level Display	Front screen bar graph display, each segment representing 3dB. It ranges from -18 (1 segment lit) to +12dB (10 segments lit). Over-range warning is indicated by 'OVL'D' and flashing empty bar.		
Headphone Output	1/4" TRS stereo jack, mono signal, 7.8mW total power with 33 Ω.		
Dante Input	(1x) RJ-45 jack, only available on FM T55CD.		
Input Level (Bal or Unbal) (at Audio Input Gain = 0dB) at 1 kHz	Nominal (@ 7th Segment Lit) Indicated by Audio Level Display	Overload Warning Indicated by Audio Level Display "OVL'D"	Absolute Max. Rating Stresses above these ratings may cause permanent damage or degrade reliability.
Microphone	-45 dBV (5.6 mV RMS)	-20 dBV (100 mV RMS)	+20 dBV (10.0 V RMS)
Line	-8.4 dBV (380 mV RMS)	+16 dBV (6.5V RMS)	+20 dBV (10.0 V RMS)



Approvals	FCC, RoHS3, WEEE, Industry Canada
Warranty	2-year parts and labor

## Architectural Engineering Specifications

### FM T55C / FM T55CD

This product shall be the Williams AV model FM T55C or FM ca.

Shall have a combination 3-pin XLR and 1/4" jack for audio inputs.

Shall have a 1/4" TRS stereo headphone jack, mono signal, 7.8 mW for headphone power (33Ω).

Shall have an RJ-45 ethernet port for providing a network connection.

Shall have a power source at 24VDC.

Shall be housed in a 8.45"W x 8.25"D x 1.72"H device enclosure.

Shall be covered by a two-year parts and labor warranty.

**NOTE: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.**