FM 558 Systems

FM 558 systems are complete turnkey solution that include both FM and Wi-Fi transmission from the same box.

The FM R38 is a multi-channel FM receiver with a high-resolution OLED screen. The receiver comes with earphones and batteries, but is otherwise identical to the PPA R38. The R38 offers a quick view of receiver status and immediate entry to all user settings. On-screen channel selection with easy access to 17 pre-set, wide-band frequencies (72-76 MHz). The system is expandable, accommodating any number of listeners. This system complies with 2010 ADA guidelines for hearing assistance all for nearly the same cost as traditional FM systems.

Systems

FM 558	(1) FM T55 transmitter (4) PPA R38N receivers (4) EAR 022 surround earphones (2) NKL 001 neckloops (1) IDP 008 ADA wall plaque
FM 558 PRO	(1) FM T55 transmitter (4) PPA R38N receivers (4) EAR 022 surround earphones (2) NKL 001 neckloops (2) BAT KT6 two-bay chargers and rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558 PRO D	(1) FM T55 D transmitter (4) PPA R38N receivers (4) EAR 022 surround earphones (2) NKL 001 neckloops (2) BAT KT6 two-bay chargers and rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558-12	(1) FM T55 transmitter (12) PPA R38N receivers (12) EAR 022 surround earphones (3) NKL 001 neckloops (1) IDP 008 ADA wall plaque
FM 558-12 PRO	(1) FM T55 transmitter (12) PPA R38N receivers (12) EAR 022 surround earphones (3) NKL 001 neckloops (1) CHG 3512 12-bay charger (12) BAT 026-2 AA NiMH rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit

FM 558-12 PRO D	(1) FM T55 D transmitter (12) FM R38N receivers (12) EAR 022 surround earphones (3) NKL 001 neckloops (1) CHG 3512 12-bay chargers (12) BAT 026-2 AA NiMH rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558-24	(1) FM T55 transmitter (24) PPA R38N receivers (24) EAR 022 surround earphones (6) NKL 001 neckloops (1) IDP 008 ADA wall plaque
FM 558-24 PRO	(1) FM T55 transmitter (24) PPA R38N receivers (24) EAR 022 surround earphones (6) NKL 001 neckloops (2) CHG 3512 12-bay chargers (24) BAT 026-2 AA NiMH rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558-24 PRO D	(1) FM T55 D transmitter (24) PPA R38N receivers (24) EAR 022 surround earphones (6) NKL 001 neckloops (2) CHG 3512 12-bay chargers (24) BAT 026-2 AA NiMH rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit

FM T55

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/Silver with silver legends on the front, white legends on the back
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, backlit green indicates power ON, backlight off indicates power OFF, fading from bright to dark indicates Sleep Mode.
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
Dante	Only available on FM T55 D
User Interface	3.12" High Resolution OLED display with selections via buttons. Hosted Web page. Remote control and monitoring.

RF Section

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, or ANT 025
Transmission Range	Up to 1000 ft (304 m) with ANT 005 coaxial antenna mounted on rear chassis connector
RF Outputs	(1x) #10-32 stud connector in center of unit (pcb mounted) (1x) F-connector on rear chassis
RF Transmit Indicator	1 Green LED On Air Indicator
RF Power	Full, Medium, Low or OFF indiacted by menu icon.
RF Time Out (sleep mode)	30 min. duration, 4 hr. duration, or Always On selected via menu. Starts when audio is below -18 dB level with no button pressed for selected duration.

Audio Section

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, ±3 dB) ("Music" Audio Preset)
Signal-to-Noise Ratio	67 dB (typical) Transmited RF
Total Harmonic Distortion	Less than 0.25% @ 1 kHz (RF output)
Common Mode Rejection	>57 dB @ 1 kHz, Mic or Line
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

Audio Input Gain Adjust	In menu, adjustable to 0 to -50 dB, in 1dB steps
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 Indicators	10-LED array that reads -18 to +9 dB at 3 dB intervals. 7 Green, 2 Amber, and 1 red LED. Green LEDs indicate normal operating audio level peaks, Amber LEDS indicate close to overload peaks, Red LED indicates overload peaks
Headphone Output	1/4" TRS stereo jack, mono signal, 14.85 mW at +9 dB, maximum in 33 Ω (level adjustable in menu 0 to -40 dB in 2 dB steps)
Line Output	RCA jack (black), -10 dBV (.32 VRMS); Output impedance 100 Ω at +9 dB

Input Levels (Bal or Unbal) (at Audio Input Gain = 0dB)	**Nominal (1st Amber LED)**	**Overload Warning (Displayed On Screen)**	**Absolute Max. Rating***
Microphone	-55 dBV (1.7 mV RMS)	-22 dBV (80 mV RMS)	+20 dBV (10.0 V RMS)
Line	-25 dBV (55 mV RMS)	+16 dBV (6.3 V RMS)	+20 dBV (10.0 V RMS)
Approvals	FCC, RoHS3, WEEE, Industry Canada		
Warranty	2-year parts and labor		

NOTE: Specifications are subject to change without notice.

* Stresses above these ratings may cause permanent damage or degrade reliability.

ANT 005

Connector type	F-connector
Cable type	RG 59 coax
Nominal Impedance	75 Ohm
Total Cable Length	22 ft
Active Antenna Length	80 in

CHG 3502 *(Included in BAT KT6)*

Dimensions:	4-7/8" x 3-7/8" x 2" (12.4 cm x 9.8 cm x 5.1 cm) (LxWxH)
Shipping Weight:	1.1 lbs (0.5 kg)
Enclosure:	Black, ABS plastic
Charger Power:	Input: 6 VDC, 300 mA, Center Positive Output: 100 mA per bay

Power Supply:	Williams Sound TFP 041 Input: 100-240 VAC 50-60Hz, 0.5-0.3 A Output: 6 VDC, 1.5A
Charging Time:	16 hours nominal, based on Williams Sound BAT 026-2 NiMH battery
Unit Capacity:	2 Units
Indicators:	2 Red LEDs - one for each bay. LEDs are lit when charging.
Warranty:	1-year
Approvals:	CE, FCC, RoHS

CHG 3512

Size	9.5"L x 7.4"W x 1.7"H (24.1 cm L x 18.8 cm W x 4.3 cm H)
Weight	1.2 lbs (.54 kg), excluding power supply
Color	Black ABS
Power Supply Input	90 - 240 VAC input
Power Supply	TFP 037 Switching AC adapter, 5 VDC - 4A output
Charging Rate	16 Hour Charge: 140 mA Pulse/Maintain: 140 mA
Charging Time	16 hours nominal
Unit Capacity	12 Units
Indicators	Individual Charging Indicators: Red LEDs. LEDs blink when batteries are charged
Warranty	1 year (cables and power supply warrantied for 90 days)
Approvals	CE, WEEE, RoHS

EAR 022

Style	Around-ear speaker
Plug	3.5mm mono
Cord	39"
Driver Size	23 mm
Nominal Impedance	32Ω
Freq. Response	20 - 20kHz
Weight	15g
Max Power Input	30 mW
Sensitivity	118 dB @ 1kHz

IDP 008

Size	10-3/8" (L) x 6-¼" (W) x 1/8" (H)

PPA R38

Dimensions:	4.1" x 2.85" x 1.38" (104 x 72 x 35mm)
Weight:	4.6oz (130g) with batteries. 2.6oz (73g) without batteries
Color:	Black/Silver. Black ABS Plastic case with Aluminum faceplate.
Battery Type:	(2) AA Alkaline or (2) AA NiMH Rechargeable
Battery Life:	(2) AA non-rechargeable alkaline batteries (BAT 001-2), approx. 50 hrs (2) AA rechargeable NiMH batteries (BAT 026-2), 1500mAh, approx. 32 hrs
Current Consumption:	47mA nominal at 2.4VDC
Operating Temp. Range:	32° – 122°F (0° to 50°C)
Channels:	17 Wideband, accessed via menu
Operating Frequencies:	72.1, 72.2, 72.3, 72.4, 72.5, 72.6, 72.7, 72.8, 72.9, 74.7, 75.3, 75.4, 75.5, 75.6, 75.7, 75.8, 75.9 MHz*
FM Deviation:	75 kHz
De-Emphasis:	75 µS
Display Screen:	1" OLED
Power Indication:	Power button, backlit green. Good battery strength - glows solid. Low battery - slow flashes. Error - fast flashes with 1 sec delay.
Sensitivity:	2 µV at 12 dB Sinad with squelch defeated
Input Overload:	100 mV
Frequency Response:	200 Hz – 15 kHz, ±3dB
Modulation:	FM, +/- 75 kHz peak deviation
Signal-to-Noise Ratio:	Minimum 65 dB @ 1.0V
Receive Antenna:	Integral with earphone/headphone cord
Audio Output:	35 mW max at 16 Ω
Headphone Connector:	3.5 mm stereo jack, mono output for stereo or mono earphones, headphones, or neckloops
Power Save - Display Off/ Sleep Mode/Auto-Off:	**Display Off:** 5, 30, or 60 seconds of no button pushes (adjustable in menu) **Sleep Mode:** 6 mins of no RF signal or button pushes; wakes up with RF Signal or any button push **Auto Off:** 2 hours of no RF signal or button pushes
Soft Audio Turn-On:	Upon Power ON or Channel Change, mutes audio, then ramps up 1 numeric step per 1/10th second until set volume is reached
Approvals:	FCC, Industry Canada, RoHS, WEEE
Warranty:	Lifetime PLUS Limited Warranty, 90 Days on most accessories.

Wireless Access Point

Dimensions	9.3" x 7" x 1.65" (236cm x 178cm x 42cm)
Weight	1.8 lbs. (0.82 kg)
Standards Compliance	2.4GHz: IEEE802.11n, IEEE802.11g, IEEE 802.11b; 5.xGHz: IEEE 802.11n, IEEE 802.11a; 802.11ac IEEE802.3, IEEE802.3u, IEEE802.3ab
Interface	One 10/100/1000M WAN Port (Auto MDI/MDIX); Four 10/100/1000M LAN Ports (Auto MDI/MDIX); One USB 3.0 Port
Antenna	Four 5dBi Detachable Omni-Directional Antennas
Power	Input: 12VDC @ 3A
Max Power Consumption	35W
Wireless Speed	2.4GHz: 1000Mbps; 5GHz: 2167Mbps
Frequency	Concurrent 2.4GHz and 5GHz
Wireless Security	WPA/WPA2-PSK, WPA/WPA2, AES
Warranty	Three (3) year, parts and labor
Approvals	CE, FCC, RoHS, IC, RCM

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