TRUE MOBILITY®
WIRELESS MICROPHONE SYSTEMS

SWM7000 Series
2.4 GHz
Smart Spectrum™

1 and 2-Channel Systems

THE FIRST REAL BREAKTHROUGH IN WIRELESS TECHNOLOGY

BUILT-IN DSP:

FBX FEEDBACK EXTERMINATOR®

PARAMETRIC FILTERS

MICROPHONE SUPERMODELING™

COMPRESSOR/ LIMITER

DE-ESSER

SABINE®
ADAPTIVE AUDIO

Sabine 2.4 GHz Wireless:

The Only Wireless Mic

with a Future.

Wireless microphones offer several advantages over their wired cousins, but they also bring along some undesirable baggage. Three major issues haunt the wireless mic user. RF problems, sound quality problems, and battery problems all combine to make the wireless experience a real challenge. Until now…

UHF: Here today, gone tomorrow

Your read all about it these days. Digital television is gobbling up UHF frequencies. Just when you need more wireless mics, government restrictions squeeze the UHF band tighter and tighter. UHF mics you buy today may well be useless tomorrow.

■ **2.4 GHz Band**: **The Clear Alternative**. By international agreement, the 2.4 GHz band can be used anywhere in the world. Now you can buy one system and travel anywhere – the ultimate in unlimited roaming. You don't have to think about available TV channels, and your 2.4 GHz mics will coexist with all the conventional UHF mics out there.

■ **70 Simultaneous users**: 70 channels to choose from and the added bandwidth of this high frequency range allow you to use all 70 at one time!

■ **Smart Spectrum™:** Moving beyond the spread spectrum concept, Sabine's patent-pending Smart Spectrum system combines spread spectrum filtering with a variation of FM technology. This innovative breakthrough provides for a more interference-resistant system with many more simultaneous channels.

Superior wireless audio quality

Conventional wireless systems cannot supply the same audio quality as their wired counterparts. Low frequencies are typically rolled-off below 100 to 150 Hz, prompting most of us to wish for that extra performance from our wireless mics. Sabine's new SWM7000 series utilizes a new scheme for transmission and reception that provides flat response from 20 Hz to 20 KHz – ideal for use with both voice and musical instruments.

Built-in digital signal processing for every mic

Every Sabine receiver comes with its own stack of built-in processors. This *Targeted Input Processing* allows you to customize the sound of each mic without resorting to outboard gear, or even your mixer. Every system has six DSP products:

■ **FBX Feedback Exterminator**: Wireless microphones invite movement, and as the mic moves, feedback may be waiting in ambush. Like having an automatic parametric filter set on the job, The FBX is the industry standard for transparent, automatic feedback control, providing maximum gain and increased clarity on every mic.

■ **Parametric Filters**: Every receiver provides 10 filters per channel, and these can be individually selected as either parametric or FBX filters

■ **High and Low Cut Filters**: Use these for broad sound shaping or problem solving.

■ **Mic SuperModeling**: You'll love our rugged, all-metal SWM7000 series dynamic or condenser handheld mics just the way they are. But if your application calls for another mic "personality," a push of a button calls up a library of "virtual capsules" that model the sounds of your favorite microphones. You'll be ready for any vocalist or speaker, in any situation. It's like getting a suitcase full of microphones in a single system!

■ **Compressor/Limiter**: Manage gain for all types of performers with Sabine's famous digital compressor.

■ **Adaptive De-Esser**: Improve intelligibility with this adaptive de-sser with surgical control over sibilance (harsh "s," "ch" and "t" vocal sounds) that adapts for various voice types.

Batteries that last for years

Sabine's rechargeable NiMH batteries come with every transmitter, and the Tireless Wireless Battery Charger systems mean you'll save enough money to pay for the system, with no compromise in battery life or performance. Every transmitter has a charger input, and when you keep your hand-held microphone cradled in its

SW72-NDR Two-Channel Receiver with Network & Digital Interface

Charger Clip, the battery will be continually charged. A full charge is good for a minimum of 9 hours for the handheld system, or 11 hours for a belt pack transmitter. Non-rechargeable alkaline batteries will last at least 14 hours with either transmitter. Both handheld and belt pack transmitters have LCDs which indicate battery strength and hours of use, and this information is transmitted to the receiver (along with the type of battery in use), which flashes a warning when the battery charge is low.

Handheld mic mounted in holder with built-in charger

Simple operation

Ergonomic controls and displays give you quick information and easy control of essential features. Sabine's Tweek 'n Peek function displays the precise value of every function on the LCD with the touch of any front panel control. Ten recallable preset configurations allow you to customize and save your setups. Transmitters also have programmable LCDs with behind-the-door switches to prevent unintentional changes, and the external on/off switches are programmable.

...and flexible control

Choose from full front panel control, or limit which controls are accessible on the front panel. Or use Sabine's SWM Remote Software to control up to 70 channels (ND System required, which also includes digital audio output). Use the *Sabine Audio Control Snake* to run your serial control down a mic snake, allowing front-of-house control of stage-mounted receivers. Or use any serial remote control system to access each receiver in your system – perfect for touch-panel control and recalling customized presets for each user.

All at a price you can live with

Get a dozen problem-solving features for no more than you are already paying, all with superior audio quality. Our price looks even better when you choose a two-channel unit, which takes up no more room in your rack. Let your ears tell the story – try the new 2.4 GHz Smart Spectrum Wireless Microphone Systems from Sabine today.

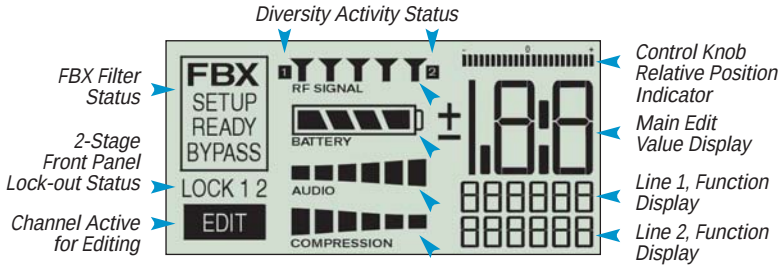
SW71-R One-Channel Receiver

Handheld Mic with Dynamic Element

New! Lighter, stronger, with supple grip

Tweek 'n' Peek™ Hands-On Controls

Touch any knob on the receiver and the function Name, Parameter, and Value all display instantly.



RF Signal, Battery Voltage, Audio Level, and Compression Gain Reduction Meters

Beltpack Transmitter

Remote and Hands-On Control

SWM7000 Remote Control Software

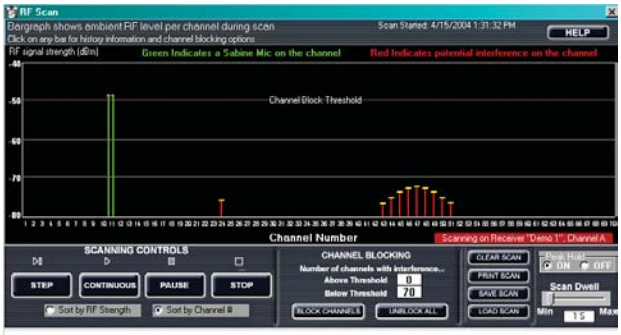
All Sabine 2.4 GHz receivers come with the SWM7000 Remote Control Software for Windows, and all receivers have an RS232 connection for your computer. Choose the ND Series of receivers which includes a pair of RS485 connectors for controlling up to 70 channels in one software session. This intuitive software allows you to view and control all of the receiver's most powerful features, including:

■ View and edit up to 70 channels using the Multi-Channel display, or choose Command display to control all functions of a single channel

■ View all transmitter status telemetry: Battery Voltage, Battery Run-Time Hours, Battery Type, Mute Status, Pad Status, and Capsule Type

■ Parametric EQ for each channel: 10 filters independently switchable to full parametric or FBX Feedback Exterminator (Fixed or Dynamic); graphic editing of filters

■ Compressor/Limiter Controls: Unique ColorComp Meter shows multi-color graphic display of compressor functions; additional control of Release, Knee, and Mute



■ RF Scanner Function reports ambient signal strength of spectrum on each of 70 channels. Continuous Scan records and displays a history of RF activity on each channel. Displays clear channels and allows for automatic disabling of interference channels based on user-controlled thresholds.

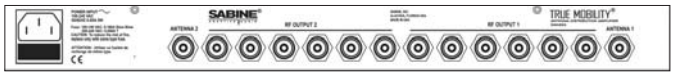
■ Name Channels and Receivers

■ Save individual or all channel settings to a file; save RF Scans; copy any function or setting to one or all channels

■ Print parameters for all channel settings; print RF Scans

■ Flash RAM upgradeable firmware or Mic Modeling.

SWA6SS Antenna Distribution Amplifier



Receivers

SW72-NDR: Two-channel Receiver w/Network & Digital Interface
SW71-NDR: One-channel Receiver w/Network & Digital Interface
SW72-R: Two-channel Receiver
SW71-R: One-channel Receiver

Transmitters

SW70-T: Beltpack Transmitter
SW70-H13: Handheld Microphone w/Dynamic Element (Audix OM3)
SW70-H15: Handheld Microphone w/Dynamic Element (Audix OM5)
SW70-H19: Handheld Microphone w/**Voice Technologies** Condenser Element

Microphones

SVT70BW-TA4 **Voice Technologies** Headworn Mic (Black)
SVT70LW-TA4 **Voice Technologies** Headworn Mic (Light Tan)
SWTVT50-TA4 **Voice Technologies** Omni Lavalier Mic
SWT24L-TA4: Cardiod Lavalier Mic
SWT56W-TA4: Headworn Mic
SWT70G-TA4: Instrument Input w/cable

Batteries

SWBC1: Rechargeable NiMH C for SW70-HD
SWBAA2: Rechargeable NiMH AA set for SW70-T and SW70-H1

Antennas

SWA6SS: 2.4 GHz Antenna Distribution Amplifier for 6 systems
SWASS-EXT: 2.4 GHz Extension Antenna Kit (Set of 2)
SWATNC-N: RF Adaptor Cables, Set of 4, TNC to NBJ (RG58 to RG8)

Accessories

SWC70CL-1: SW70-H1 Series Mic Clip, with charger
SW70CL-12: Stage Clip for SW70-H1
SWCPOWR: Plug-in charger for SW70 Series Transmitters
SWC-DB9-XLR: Sabine Audio Control Snake cables, RS232 to XLR, set of 2

2.4 GHz Smart Spectrum™ Wireless Systems Engineering Specifications

SW70 Series Receivers, 1- or 2-channel

Carrier Frequency Range: ISM Band 2.400 - 2.483 GHz
Frequencies: 70 pre-programmed
Oscillation Mode: PLL synthesized
Receiving Mode: True diversity
Sensitivity: 6 dBV at S/N over 70 dB
Image Rejection: >63 dB
Spurious Rejection: >76 dB
Stability: 10 ppm
Maximum Deviation: +/- 100 KHz
Dynamic Range: > 100 dB
S/N Ratio: 95 dB (Typical)
THD: <0.1%
Frequency Response: 20 Hz - 20 KHz +/- 1 dB
Antennas: 2, ¼ wavelength coaxial dipole
Power Supply: 100-240 VAC 50-60 Hz
Rack-Mount case
Working Range: >100 meters
Outputs: XLR-mic level, TRS-line level, all balanced
Serial Interface: RS232 or USB
RS485 Serial Network**
AES3 Digital Audio Output with Sync Input**
Dimensions: 1-U rack-mount, 19 x 1.75 x 9 in.
(48.3 x 4.5 x 21.6 cm)
Weight: 5.3 lb. (2.4 kg)

SW70 Series Handheld Microphones

Dynamic Mic Capsule: Audix OM3 or OM5
Condenser Mic Capsule: Voice Technologies
Antenna: Built-in
FM Deviation: +/- 100 KHz
RF Frequency Stability: 10 ppm
RF Output: < 25 mW
Spurious output: < -50 dB of rated output
Telemetry: Battery Voltage, Type, and Hours;
Mute Status, Capsule Type, Low Cut, and Pad
Programmable LCD
Programmable On/Off switch
Battery: Sabine Rechargeables or two 1.5V Alkaline AA cells
Rechargeable Battery Life: 9 hours per charge,
500 charge cycles (typical)
Alkaline Battery Life: 14 hours (typical)

SW70 Series BeltPack Transmitter

FM Deviation: +/- 100 KHz
RF Frequency Stability: 10 ppm
Spurious output: < -50 dB of rated output
RF Output: < 25 mW
Telemetry: Battery Voltage, Type, and Hours;
Mute Status, Low Cut, Pad, Mic or Instrument
Programmable LCD
Programmable On/Off switch
Mic input impedance: 47K Ohms
Mic bias: 3.3V
Mic connector: TA4
Antenna type: Internal
Battery: Sabine Rechargeables or two 1.5V Alkaline AA cells
Rechargeable Battery Life: 11 hours per charge,
500 charge cycles (typical)
Alkaline Battery Life: 14 hours (typical)

SWA6SS Antenna Distribution Amplifier

Two antenna inputs
Six pairs of RF outputs to receivers
Bandwidth: 2.40 - 2.484 GHz +/- 3 dB
P_{1dB}: -20 dBm
Noise Figure: < 3.7 dB (Center Band)
Input/Output Gain: +2dB nominal (Center Band)
Output Port Isolation: 30 dB minimum
Connector: TNC type
Power Supply: 100-130 VAC or 200-240 VAC 50/60 Hz

Digital Signal Processing

FBX Filters
Ten independent digital filters per channel, controlled automatically from 20 Hz to 20 KHz
Filter depth: 3 dB steps from 0 dB to -40 dB
Filter width: .1 or .2 octave*
Resolution: 1 Hz from 20 Hz to 20 KHz
Time required to find and eliminate feedback: typically 0.3 seconds @ 1 KHz

Digital Compressor/Limiter
Threshold: -30 dB to 0 dB
Ratio: 1:1 through infinity
Knee: soft
Attack: 1-99 msec
Release: 5-500 msec

Adaptive De-Esser
Cut range: 0 to -24 dB

Presets

10 User Presets – Saves all configurations

Microphone SuperModeling

Dynamic Capsules*
Shure SM-58
Shure Beta 58A
Audio-Technica ATM 41a
AKG D3800

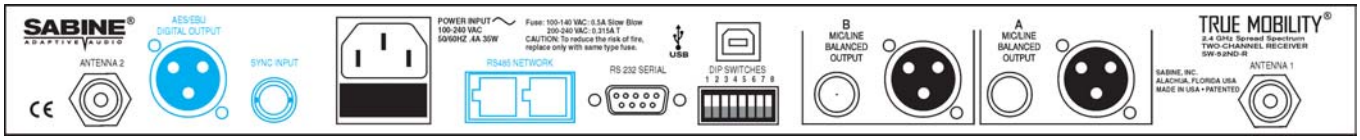
Condenser Capsules*
Shure Beta 87A
AKG C535 EB
Audio-Technica ATM 89R

**Below approximately 200 Hz the feedback filters become slightly wider to increase the feedback and rumble capture speed at these low frequencies.*

***ND Series Receivers Only*

****Company names, product names, and trademarks listed here are the property of their respective owners and are used only to identify evaluated microphones used to develop digital processing; they in no way imply association, endorsement, or approval by any named manufacturer.*

(SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE)



SW72-NDR Two-Channel Receiver back panel shown. Single-Channel Receivers also available. Features indicated in blue are on ND Series Receivers Only.

One-year limited warranty
Patented†
Other Patents Pending
Made in USA

SABINE®
ADAPTIVE AUDIO

Complete Operating Guide available at our website

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†FBX and FBX Feedback Exterminator are registered trademarks of Sabine, Inc., and are the brand names of its line of automatic feedback controllers. Covered by U.S. Patent No. 5,245,665, Australian Patent No. 653,736, German Patent No. 69118486.0, U.K. Patent No. 0486679, and Canadian Patent No. 2,066,624-2. Other patents pending.