

# TAMC24F Series Tactical Audio Monitoring Console CONTROLS DIAGRAM

## USB-C Power Input Jack & Battery Charger

Use supplied USB-C "PD" (Power Delivery Charge Adapter and 24-pin USB-C to USB-C cable. Also compatible with 2 Amp USB type A to USB-C cables.

## Battery Lid Thumbscrews

Twist to open/close battery compartment

## Sensor Input Level Gain Control

"IN" sets the initial sensitivity level to the selected input. Adjusts between 1x and 32x the sensor's signal level (0 to +30 dB gain).

## High Frequency Level Control

"HF" determines the degree to which high frequency content is audible. Knobs adjusts the upper -3dB roll-off frequency to between about 1 to 10 KHz. Filter: 2<sup>nd</sup> order, -12 dB/octave rate (~25% level per freq. doubling).

## Microphone Jack

3.5mm TRS (Tip-Ring-Sleeve)

mini phone type.  
Tip = Mic Signal  
Ring = +5V Mic Power  
Sleeve = GND

## Low Frequency Level Control

"LF" determines the degree to which low frequency content is audible. This control adjusts the lower -3dB roll-off frequency to between about 100 and 2000 Hz. Filter: 2<sup>nd</sup> order, -12dB/octave rate (Signals reduced ~25% per halving of frequency).



## Headphone Volume Control Knobs x4

Adjust headphone volume at each Headphone Jack. Adjusting this control does NOT change the Line Level Output level. However, adjusting the line level "OUT" knobs DOES adjust the volume at the headphone jacks.

## Headphone Jacks x4

3.5mm TRS (Tip-Ring-Sleeve) mini phone type.  
Tip = Left  
Ring = Right  
Sleeve = GND

## Line Level Output Connector

3.5mm TRS-type line level signal output jack.

Tip = Left  
Ring = Right  
Sleeve = GND  
Connect to a recorder's stereo LINE LEVEL input. The signals from this jack are suitable for most commercial off-the-shelf audio equipment which require a "consumer line level" signals.

## Power Switch

Left = ON (Lit) or Right = OFF

## Line Level Output Gain Control

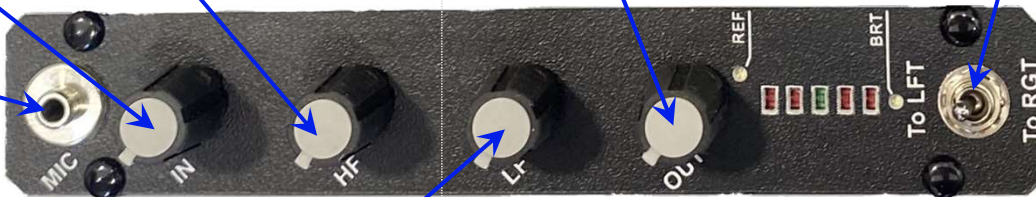
"OUT" adjusts the final gain applied after any filtering and prior to the RCA output connector and the input to the headphone amplifier.

## Left or Right Switch

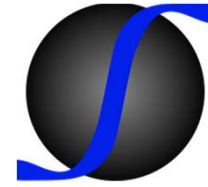
Sets this mic's signal to be heard in the Left ear or the Right ear. Set to MIDDLE to SILENCE this mic's signal.

## Line Level LED Bar-graphs

Indicates the real-time audio levels going to Line Level Output and the input side of the four Headphone Amplifiers. These signal levels are somewhat arbitrary, based on ambient microphone levels in any particular environment. Miniature "REF" adjustment knob can be used to set the center (GREEN) nominal level to light when a planned microphone level is reached, or a fixed signal level can be input while "REF" is adjusted. Ask Blueline Sensors about calibrating to a known level if this service is of interest.



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## QUICK START GUIDE

FOR

## Tactical Audio Monitoring Console w/ Filters

(Model TAMCx4F Series  
TAMC24F: 2 inputs / 4 outputs  
TAMC44F: 4 inputs / 4 outputs)



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# STEP – BY – STEP SETUP INSTRUCTIONS

## STEP 1: Check Battery Installation

- Loosen two (2) thumbscrew on battery compartment cover and remove lid.
- Check that two (2) 18650 lithium cells are fully inserted into battery holders with the polarity as marked. If no batteries are present, install fully charged batteries (**Use PCB-Protected Cells ONLY! Protected cells are labeled as such**).
- Close battery cover and re-tighten two (2) thumbscrews, finger tight, only.


## STEP 2: Connect a WASP or Under-Door microphone the ‘MIC’ input connector

- Turn the “IN” input level gain knob fully counter-clockwise to avoid excess input level on start-up.
- Plug a microphone into the 3.5mm TRS jack labelled “MIC”. Twist the locking ring to retain mic, if desired.
- Plug in additional microphones in each of the remaining input audio channels, if desired.

## STEP 3: Turn Levels Down & Apply Input Gain

- Check that “IN” knobs of each channel are turned down (fully counter-clockwise).
- Check that “VOL” knobs of each headphone channel are turned down (fully counter-clockwise).
- Switch the POWER ON (Red rocker switch, lower right-hand corner of front panel).

## STEP 4: Adjust Audio and Headphone Listening Settings

- Ensure “VOL” knob is fully counter-clockwise, then insert headphone into  jack and begin listening to sensor audio. Adjust “VOL”, “IN”, “HF”, “LF”, and “OUT” knobs as desired (**See reverse side of instructions for details on each control’s function**).
- Recommended initial listening settings, then adjust as needed:
  - “IN” – ¼ to ½ full-scale (increase slowly until clipping occurs, then turn back down until no clipping).
  - “HF” – 0 to ¼ full-scale (can cause “hissing” noise if set too high, but useful for some types of signals).
  - “LF” – ¾ to full-scale (reduce if “humming” or “rumble” noises are present. Compensate with higher “HF” settings).
  - “OUT” – ¼ to ½ full-scale (“OUT” sets line level after input gain and filtering. “IN” should be increased before increasing “OUT”. Setting input just below clipping tends to minimize amplification of noise-floor with low-level signals).

## STEP 5: Adjust LINE OUTPUT LEVEL and Record mic/sensor audio

- Plug a 3.5mm (1/8”)-type mini-phone plug/patch cable into “LINE OUT” jack to connect to an audio recorder or other device, such as a laptop sound card or analog-audio-to-USB input adapter.
- Use the Line Level LED Bar-graph display to adjust the LINE OUTPUT level until the signal is typically lighting the center, GREEN LED. This lights at approximately “consumer line level”. The monitor is capable of feeding higher pro-audio line levels, if needed, by increasing the “OUT” knob in the clockwise direction.
- Adjust “OUT” knob to control the signal level. If using a C.O.T.S. recorder, adjust the recorder’s input level and monitoring volume as needed for comfortable listening and to ensure that clipping of the signal is not occurring during recording.

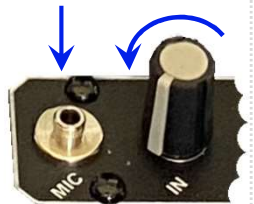
## STEP 1

Remove battery cover thumb screws, then check that two “PCB-protected” batteries are fully inserted in the battery compartment. (Unit will operate without batteries on USB-C power, if necessary).



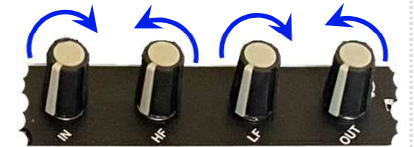
## STEP 2

TURN “IN” and “VOL” knobs down, Plug mic(s) into 3.5mm TRS Jack(s)



## STEP 3

Turn Levels Down to Protect Your Hearing, THEN:



## STEP 4

Adjust Audio Gain & Filter Knobs, as Needed

## STEP 5

Adjust “OUT” Knob for Nominal LINE-LEVEL, for best listening level or as needed by an audio recorder LINE LEVEL INPUT jack.



Plug 3.5mm to 3.5mm Cable for LINE OUTPUT to a recording device.



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