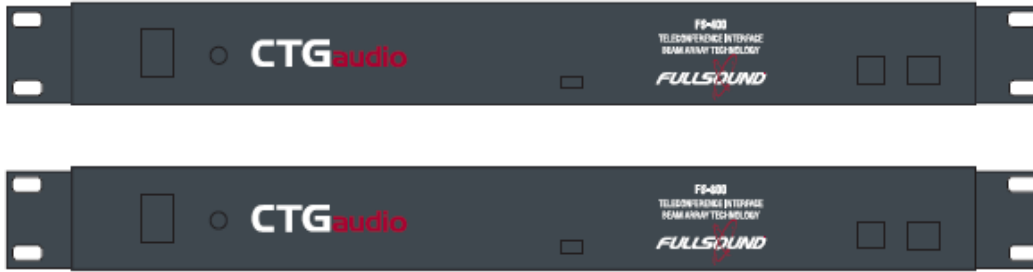


# CTG FS-400 and FS-800 With “*BEAMFORMING*” Technology



## Features/Benefits

Using multiple microphones, this mixer calculates the direction and source of every sound in a room. It can determine if a sound is speech or noise. By measuring the difference in time and intensity of the speech in each microphone, the mixer effectively forms a beam aimed at the person speaking and adaptively follows that person as they move about the room. Constantly monitoring each microphone in real time, acoustic information is added from microphones that do not appear in other microphones.

An additional De-Reverberation sensor eliminates room reverberations such as voices reflecting off of walls. The result is a degree of voice clarity and intelligibility unprecedented in the past.

CTG offers two versions of the Beam Forming Mixer. The FS-400 has four microphone inputs with independent Echo and Noise Cancellation on each microphone, plus an additional De-Reverberation Echo Canceller.

The FS-800 offers eight Microphone inputs with both Echo and Noise Cancellation for each microphone, plus an additional De-Reverberation Echo Canceller for every four microphones.

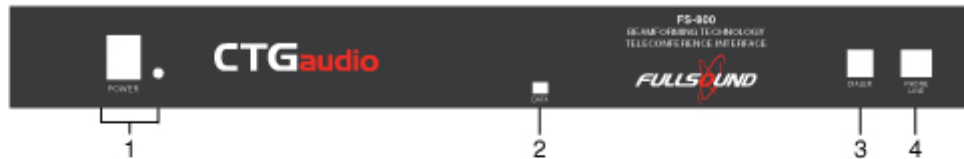
Each Mixer can be daisy chained to additional mixers to support an unlimited number of microphones. Every unit can be either master or slave. Microphones may be installed in the ceiling, walls or on tables.

An included telephone line (PSTN) add and an included wired remote dialer or soft dialer will turn either mixer into a self contained audio teleconferencing system, and line level output and input connections will allow connection to a video codec for video teleconferencing.

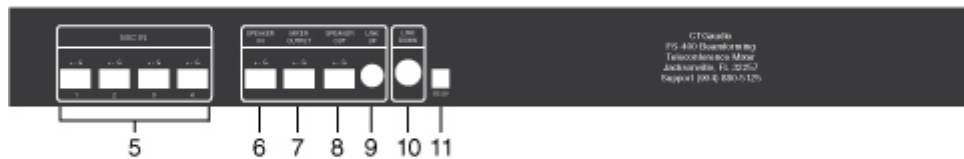
Used with CTG CM-01 Ceiling Microphone, or the TM-01 and TM-02 table top or table implant microphones, high quality conferencing can be available even in many rooms previously considered acoustically unsuitable.

## Panel Descriptions

### Front Panel FS400, FS800



### Back Panel FS400



### Back Panel FS800



### Front panel of FS-400 or FS-800

1. **Power on/off Switch with LED indicator**
2. **USB mini B:** Used for PC Communication, both audio and setup
3. **Dialer:** Input for dial pad to dial, connect and disconnect calls
4. **Phone Line:** Input (standard RJ11) to connect phone line from wall plate

### Back panel of FS- 400

5. **Microphone inputs (1-4):** CTG ceiling microphones, table microphones, or implant microphones are connected here.
6. **Speaker In (mandatory):** This is the return audio from the video codec

7. **Output:** This output is connected to a line level input of the video codec
8. **Speaker Out:** This will be connected to the speaker amplifier.
9. **Link Up:** This is an expansion port which allows multiple units to be linked together and function as one system for large rooms.
10. **Link Down:** This is an expansion port which allows multiple units to be linked together and function as one system for large rooms.
11. **Power Connector: USB:** Power supply through USB mini B @ 5 V DC automatically adjusts to 110 to 240 volt mains.

### **Back Panel FS- 800**

12. **Microphone inputs (1- 4):** CTG ceiling microphones, table microphones, or implant microphones are connected here
13. **Speaker In (mandatory):** This is the return audio from the video codec
14. **Mixer Output:** This output is connected to a line level input of the video codec.
15. **Speaker Out:** This will be connected to the speaker amplifier.
16. **Link Up:** This is an expansion port which allows multiple units to be linked together and function
17. **Microphone inputs (5-8):** CTG ceiling microphones, table microphones, or implant microphones are connected here.
18. **Link Down:** This is an expansion port which allows multiple units to be linked together and function as one system for large rooms.
19. **Power Connector** USB provided power supply through USB mini B at 5 VDC automatically adjusts to 110 to 240 volt mains.

## **Specifications**

### **Microphone Inputs (4 or 8)**

Number of inputs:	4 or 8 (with limitless chaining capability)
Type:	Phantom powered balanced Input
Connector:	Phoenix Balanced
Phantom Voltage:	24 Volt
Input Impedance (load):	590 ohm
Maximum input level:	60 mVpp (input gain 30)
Frequency response:	20 Hz - 8 KHz
Mic requirements	Microphone sensitivity to fall between -31 and -45 dB re 1V at 1Pa If more sensitive mics are required please contact CTG

### **Speaker Input**

Type: Balanced Input (single ended can also be implemented by connecting the negative input to GND)  
Connector: Phoenix Balanced  
Input Impedance: 5 K ohm  
Maximum input level: 2 Vpp  
Frequency response: 20 Hz - 8 KHz

**Speaker Output**

Type: Differential  
Connector: Phoenix Balanced  
Maximum output level: 2 Vpp  
Output Impedance: <60 ohm  
Frequency response: 20 Hz - 8 KHz  
THD+N: <-50dB  
Dynamic range: 90 dB

**Expansion**

Unlimited daisy chain capability

**Protection Features:**

Power supply input: Not protected - Input voltage should not exceed 6V DC, only use included power supply

Speaker and audio out: Both protected against short circuit at the output