SBM90 On Air mixer
Product Information

The SBM90 is a "Heavy Duty" ON-AIR mixer for local and community radio stations designed for 24/7/52/many* use with an absolute minimum of maintenance. A professional and multifunctional product which combines its user-friendly working surface with tremendous reliability. With all communication facilities built in, and the Penny & Giles studio faders broadcasters around the world adapted the SBM90 for their daily work.

THE SBM90 CH25 FRAME FOR MAX. 17 INPUT CHANNELS
(+ scriptspace and monitor module)

SBM configuaration:

➢ S91 Microphone input;

➢ S92(E) Stereo Line input
(with or without equalizer);

➢ S93 Telephone I/O
(with or witjout internal hybrid);

➢ S96 Script space / master module;

➢ S97 Control Room Monitor;

➢ S98 Studio Monitor;

Facilities:

➢ Internal foldback / communication busses;

➢ LED PPM or VU meters

➢ Cue Amplifier and LSP optional;

➢ Separate Studio LSP and HPH output;

➢ Faderstart, Button start/stop;

➢ Transformer balanced main outputs;

➢ On-Air switch optional;

* 24/7/52/many = 24 hours a day, 7 days per week, 52 weeks, many years.

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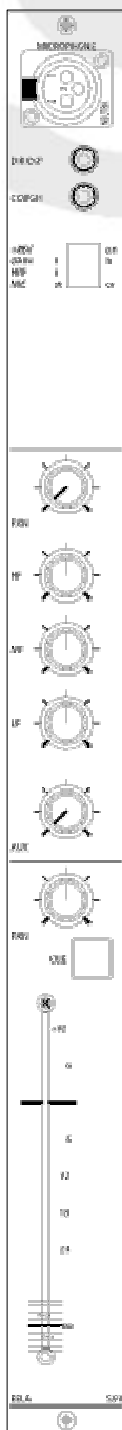
MICROPHONE INPUT S91

Can be configured for a controlroom microphone when the console is used in SELF-OP or for a studio microphone with full logic interlocks. Standard facility is a direct output on cinch and a "cough"* input.

INPUT: it is differentially balanced on an XLR connector, and supplies + 48V phantom power to condenser microphones and is fully protected against misuse. A switchable high pass filter is also provided

GAIN: can be set over a 50dB range (Hi) or 28 dB (Low) to accept all kinds of microphones in all practical situations.

3 band EQUALIZER: has a restricted range, tailored to direct ON AIR use of the console.

AUX: a "free" aux output, internally there are busses for studio foldback and cleanfeeds.

**PANPOT:** positions the signal anywhere in the stereo mix.

CUE SWITCH: sends the pre- fader signal to the CUE system, only when the fader is closed. This function is used quite often to make continuous contact with the studio. When AUTOCUE is on, the signal is switched to the main monitor circuit instead of the small speaker.

FADER: generates a DC-voltage to control the channel VCA, the actual level setting device.
Other inputs that control the VCA are the LIMITER circuit for overload protection and a signal from the COUGH SWITCH in the studio. The latter facility is only available in the STUDIO status, and closes the fader while opening the CUE path. This gives a REVERSE TALK- BACK function from the control room initiated by the studio. This action is indicated by a LED.

*Cough input: an external switch that closes the fader and opens a 2-way communication path to the studio.

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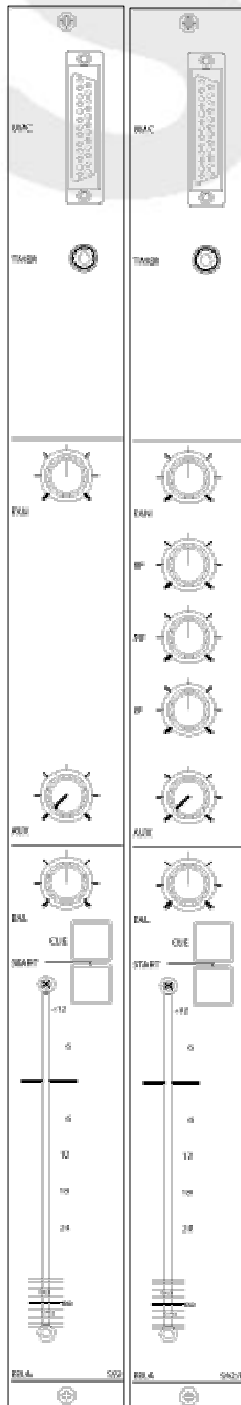
STEREO LINE INPUT S92

Designed for the direct connection of balanced or unbalanced source equipment. The 25-pin UMC connector provides inputs, outputs and all signalling to connect a wide variety of equipment. Cabling of source equipment can be done with standard 25 way screened computer cable. The signals can be split close to the source equipment.

INPUTS: are fully balanced on UMC. This connector also provides outputs, remote CUE, fader INHIBIT, TIMER start, FADERSTART and STOP.

EQUALISER: available as an option with the same curves as the one in the microphone channels. S92 stereo line input without e.q. S92/E is with e.q.

AUX: a "free" aux output, internally there are busses for studio foldback and cleanfeeds.

BALANCE: to obtain the correct balance between the left and right signals.

CUE: a stereo prefader listening facility, only when the fader is closed. With internal LED.

START: Isolated start (or stop) signal, available on the UMC connector.

FADER: generates a DC-voltage to both channel VCA's for left and right with very accurate tracking. The LIMITER also controls the gain of the channel VCA in case of over modulation. Opening and closing of the fader generates an (isolated) output signal for remote control The character of the signals can be set to continuous or pulsed by an internal jumper. All faders are PENNY & GILES plastic conductive faders for all inputs.

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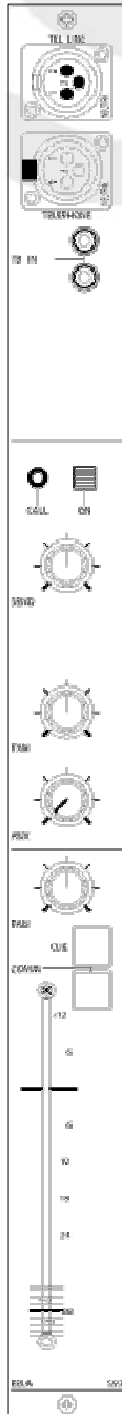
TELEPHONE IN/OUTPUT S93

A complete input/output channel with built in HYBRID for direct connection to PTT line and telephone. A maximum of two such modules can be used in the SBM90 with automatic cross conversation when on air. The rejection of the SEND in the received signal can be optimised by an internal trim.

As an option a version without internal hybrid but with cleanfeed to connect an external hybrid is available.

TB IN: Input and loop to connect the Talkback microphone preamplifier.

CALL: Led and ON button, the LED will blink upon an incoming call, with the ON button the hybrid is switched on.

SEND: Volume control for the SEND signal to the caller. The necessary cleanfeeds are provided internally.

GAIN: can be set over a 20dB range.

AUX: a "free" aux output, internally there are busses for studio foldback and clean feeds.

PANPOT: positions the signal anywhere in the stereo mix.

CUE: a stereo pre fader listening facility, only when the fader is closed. With internal LED. The CUE here is mainly used for communication with the caller with the channel fader closed by listening via the CUE speaker and talking by holding the COMM button.

COMM: Push-to-talk, also will dim the CUE speaker to prevent howl round. When the fader opens, both talk and listen functions are disabled to prevent communication entering the program mix.

FADER: generates a DC-voltage to control the channel VCA, the actual level setting device.

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MASTER S96

This combined SCRIPTSPACE / MASTER module houses the following circuits:

MAIN I/O: MIX AMPS for the left and right main mix followed by the line amps to drive the TAPE OUTPUTS and the outputs on the UMC connectors in the stereo input modules. Two LINE AMPS for driving the MAIN OUTPUTS. The lineamps feed the output transformers and an optional ON AIR RELAIS. A MONO output on XLR is also available. **AUX**: The AUX master output on XLR.

OFF-AIR (Optional): The OFF-AIR inputs to monitor a tuner (or other external) signal.
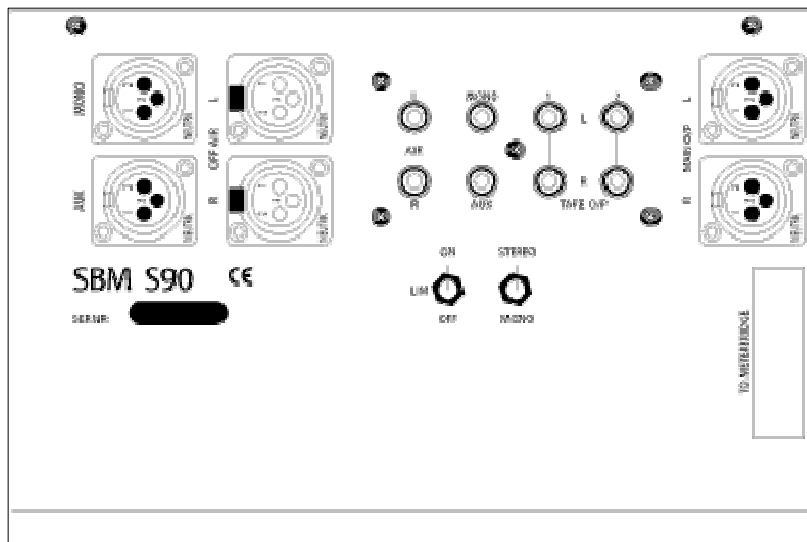

MAIN OUT: main outputs are transformer balanced, with XLR connectors, to drive transmitters or transmitter links with the correct interface.

TAPE OUT: the same signals unbalanced on PHONO connectors for the inputs of recording devices.

LIMITER: an internal limiter controls the output level in a unique and practical oriented way: the output level is measured and compared to a reference. If the output exceeds this threshold, a control voltage is generated and applied to all channel VCA's and causes a gain reduction. This means that all post fader signals, such as foldback, telephone sends etc. are also held under control. A LED displays the limiter action in the meter bridge.

MONO / STEREO: A mono / stereo switch is available to select a mono transmission. In this case also the LIMITER side chain and MONITOR will also switch to mono.

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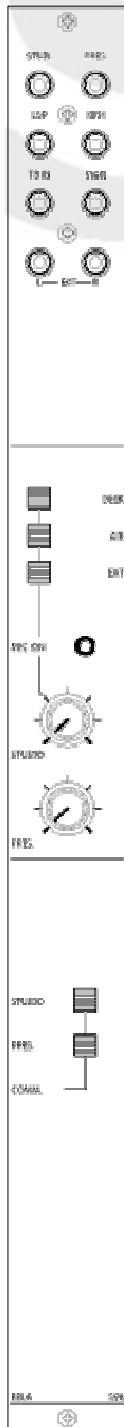
STUDIO MONITOR S98

This module is required for foldback and signalling when a studio or booth is used. The system has two circuits, one for guests and a separate for the presenter. You can connect headphones or active loudspeakers with or without mute when a fader of a studio microphone is opened.

When one or more microphones are open, the loudspeaker foldback is replaced with a mix of all post fader signals except the contribution of the studio microphones to enable to the guests to hear the program without the risk of acoustical feedback.

A separate circuit for the presenter allows for a TB signal without interrupting a guest.
The various signals are available on cinch connectors. Using a EA853 studio interface is recommended to make optimum use of these facilities.

MONITOR: Interlocking push buttons that selects DESK (main output), AIR (of-air signal), or EXT (external) signal as foldback.

MIC ON: LED to signal a studio microphone is on.

STUDIO: Main level control for the studio foldback signal.

PRES: Level control for the signal to the presenter headphones. The signal for the presenter is always the output from the selector independent of the status of the microphones.

COMM: push-to-talk buttons for communication to the studio or presenter.

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CONTROL ROOM MONITOR S97

This module feeds the main monitor loudspeakers, headphones and the meter output. It also includes a signalling circuit for e.g. RED LIGHT. The various signals are available on cinch connectors.
A separate MONO CUE output derived from the stereo CUE signal is available to feed a small console speaker via a MUTE switch.

MONITOR: Interlocking push buttons that selects DESK (main output), AIR (of-air signal), or EXT (external) signal to the monitor output. A DIM circuit is active upon operation of any TALKBACK button. The level of the monitor signal is then reduced for approx. 20 dB.

MIC ON: LED to signal a studio microphone is on.

SPEAKER: Main level control for the control room monitor signal.

CUE / AUTO: AUTOCUE LED and switch. When AUTOCUE is on, the selection of the monitor inputs is replaced by the (stereo) CUE signal when one or more channel Cues' are active.

PHONES: ¼" jack for the headphones with individual volume control without MUTE and DIM.

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METERBRIDGE

The METERBRIDGE houses the standard LED PPM, Talkback microphone and volume control.
A version with 2 VU meters is also available.
Optional: CUE amplifier and loudspeaker and ON-AIR relays circuit with inputs on XLR.

Options and additional units:

The most important addition is the EA853 4-way headphone amplifier / studio interface with separate audio circuits for presenter and guest. It features individual level control for 4 headphones, red-light signaling and a cough-button to open communication to the C.R.

The EA862 is an electronic switching unit for "on-air" lamps 110/230V. Mains voltage is switched with solid state relays. The 2 inputs and 3 outputs for Studio, C.R and both.

For information and prices please contact:

Power supply:
External, 19" rackmount unit, 2HE
Input: 115 or 230 Volt, 50/60 Hz
Cable: 4 meters included

Please contact your local EA dealer for more information about Eela Audio products.
All information can be subject to changes.
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