

# professional mixing consoles

# consoles

## 521

**521**

standard configuration  
20 inputs / 16 channels  
(12 mono + 4 stereo)



## 523

**523**

standard configuration  
28 inputs / 24 channels  
(20 mono + 4 stereo)



### modular mixing consoles with built-in 2 x 160 programs stereo multieffects processor

521 and 523 mixing consoles can suit the need for a sophisticated but streamlined mixing board: two built-in multieffect processors with 160 programs each, 4 monitor sends plus 2 effect sends, 3-band EQ with variable mids on all mono channels, plus a graphic EQ on the outputs, housed in a compact, rugged modular frame.

**Montarbo**



Reliability and sonic accuracy blend with the greatest ease of operation.

# 521/523

521 and 523 differ only in frame size. The 521 frame houses a maximum of 4 input modules while the 523 can house 6. Input modules house 4 mono channel strips (MN4), or 4 stereo channel strips (ST4).

## MAIN FEATURES

### • MONO INPUT MODULE (MN4)

balanced XLR MIC input (with switchable phantom power); unbalanced jack LINE input, also usable as insert; **INSERT OUT** point; channel GAIN control; **3-band EQ** with parametric control of the mid range (HF/MF level/MF freq/LF); **4 aux** sends A/B/C/D (pre-fade, post-eq); **2 effect** sends E1/E2 (post-fade, post-eq); channel PFL (solo) switch; stereo panning (PAN); channel 'ON' switch (with LED indicator); peak LED indicator; VOLUME fader (100 mm).

### • STEREO INPUT MODULE (ST4)

same features of the mono channels except for **2 MIC** XLR inputs and 2 unbalanced LINE jack inputs (L/R); MONO button (selects 'R' input as a mono input); They also feature **3-band EQ** and stereo balance (BAL).

### • MASTER MODULE

the **2 built-in stereo multieffect processors** (56-bit DSP with 24-bit Delta-Sigma conversion) each with **160 programs** and independent controls feature: 2-line (E1/E2) Liquid Crystal Display; PROGRAMS selection wheel; E1/E2 button (allows operating on LCD line E1 or E2); LOAD button (loads the selected program); dual 5-segment INPUT LEVEL LED array; TONE controls; A/B/C/D monitor sends (pre-fade); stereo balance (BAL); effect 'ON' switch (with LED indicator); VOLUME fader (100 mm); FOOTSWITCH jacks for remote control of the 2 effects processors (E1 and E2 FT/SW); **2 external effects sends** (EFF SEND 1/2) with independent level controls; **2 stereo returns** (each with VOLUME control and stereo BAL control) routable to the master L/R and to the 4 aux (A/B/C/D) outputs; **4 aux/monitor lines** each with: 3-band EQ with parametric control, unbalanced XLR AUX output, INSERT stereo jack socket, 10-segment output level LED arrays, PFL switch and VOLUME fader (100 mm); **L/R MASTER outputs** (unbalanced XLRs) + INSERT stereo jack sockets; **MONO OUT** (unbalanced XLR) for the master L/R mono signal, with volume control, PRE/POST master switch and INSERT stereo jack socket; **TAPE IN/OUT L/R** (in/out stereo PIN sockets) with input level control; **MASTER PHANTOM** power switch; **10-segment output level LED arrays** for L and R master outputs; **10-band stereo graphic EQ** with EQ/FLAT switch; stereo **PHONES output** with volume control and PFL switch; **MASTER L/R volume faders** (100 mm).

I due modelli si differenziano tra loro solamente per le dimensioni del telaio: il **521** alloggia 4 moduli di ingresso da 4 canali ciascuno, mentre il **523** ne alloggia 6. I moduli di ingresso sono disponibili sia in versione mono (MN4), sia in versione stereo (ST4).

## CARATTERISTICHE GENERALI

### • MODULO CANALI DI INGRESSO MONO (MN4)

ingresso MIC bilanciato XLR (con alimentazione phantom inseribile); ingresso LINE sbilanciato su Jack, utilizzabile anche come insert; uscita **INSERT OUT**; regolazione guadagno (GAIN); EQ a **3 bande** con medi parametrici (HF/MF level/MF freq/LF); **4 mandate monitor** A/B/C/D (pre-fade, post-eq); **2 mandate effetti** E1/E2 (post-fade, post-eq); pulsante PFL; PANpot per il controllo della stereofonia; pulsante ON; indicatore LED di picco; fader di VOLUME da 100 mm.

### • MODULO CANALI DI INGRESSO STEREO (ST4)

a differenza dei canali mono dispongono di **2 ingressi microfonici XLR bilanciati (L/R MIC)** e **2 ingressi jack di linea sbilanciati (L/R LINE)**; pulsante MONO (per selezionare l'ingresso linea R come mono), EQ a **3 bande** fisse e bilanciamento stereo (BAL).

### • MODULO MASTER

i **2 processori multieffetto stereo** incorporati (DSP a 56 bit con conversione Delta-Sigma a 24 bit) con **160 programmi** ciascuno dispongono di: display a cristalli liquidi (su 2 righe, E1 ed E2); manopola PROGRAMS per la selezione dei programmi; pulsante E1/E2 per programmare il processore E1 o E2 sul display; pulsante LOAD per caricare il programma selezionato; rampe a 5 LED per il livello di ingresso (INPUT LEVEL); controlli di TONO; mandate monitor A/B/C/D (pre-fade); controlli BAL; pulsanti ON; fader di VOLUME da 100 mm; prese jack per interruttore a pedale (E1-E2 FT/SW); **2 mandate effetti** (EFF SEND 1/2) con volumi indipendenti; **2 ritorni effetti stereo** (con controllo di volume VOL e bilanciamento stereo BAL) indirizzabili alle uscite master (L/R) e aux (A/B/C/D); **4 linee aux/monitor** ognuna con: EQ a 3 bande con medi parametrici, uscita AUX sbilanciata XLR + jack stereo INSERT, indicatori di livello a 10 segmenti, pulsante PFL e fader di VOLUME (100 mm); uscite **MASTER L/R** (XLR sbilanciati) + jack stereo INSERT; uscita master **MONO OUT** (XLR sbilanciato) con volume indipendente, pulsante PRE/POST master e jack stereo INSERT; prese **TAPE IN/OUT L/R** con volume d'ingresso; interruttore master alimentazione **PHANTOM**; indicatori di livello a 10 segmenti per le uscite master L/R; EQ grafico stereo a 10 bande con pulsante EQ/FLAT; uscita cuffia stereo (PHONES) con controllo di volume e pulsante PFL; fader di volume L/R MASTER (100 mm).

Die Mischpulte 521 und 523 unterscheiden sich lediglich durch die Abmessungen des Rahmens. Das Modell **521** kann bis zu 4, die Version **523** bis zu 6 Eingangsmodule aufnehmen. Diese 4-Kanal-Module gibt es sowohl in Mono-(MN4) als auch in Stereokonfiguration (ST4).

## ALLGEMEINE EIGENSCHAFTEN

### • MONO EINGANGSMODUL (MN4)

symmetrische XLR-MIC-Eingänge (mit Schalter für Phantomspeisung) und unsymmetrische LINE-(Klinken)-Eingänge, die auch als Insert benutzbar sind; **INSERT OUT**-Ausgang; GAIN; **3-Band EQ** mit parametrischen Mitten (HF/MF level/MF freq/LF); **4 Monitor-Wege** A/B/C/D (pre-fade, post-eq); **2 Effekt-Wege** E1/E2 (post-fade, post-eq); PFL Taste; PAN-Poti; ON Taste; Peak-Anzeige; 100mm Fader.

### • STEREO EINGANGSMODUL (ST4)

mit den gleichen Features, nur **2** symmetrische XLR Mikrofon-Eingänge (MIC) und **2** asymmetrische L/R LINE-Eingänge; sie verfügen auch über MONO-Schalter, **3-Band EQ** und Stereo-Balance (BAL).

### • MASTER-MODUL

Die **2** eingebauten stereo multieffekt-Prozessoren, (56-Bit DSP mit 24 Bit Delta-Sigma Konverter) je mit **160 Programmen**, verfügen über: Zweizeilen-Flüssigkristall-Sichtanzeige; PROGRAMS-Drehknopf für die Auswahl der Programme; E1/E2-Knopf zum Wählen von E1 oder E2 auf der Sichtanzeige; LOAD-Knopf zum Laden des ausgewählten Programms; 5-Segment Eingangs-pegel-LED-Anzeigen (INPUT LEVEL); Klangregler (TONE); A/B/C/D Monitor Send (pre-fade); Balance-Regler (BAL); ON-Schalter; 100 mm-Fader; Klinken-buchsen für Ein/Aus Fußschalter (E1 u. E2 FT/SW); **2 Effekt-Send** (EFF SEND 1/2) je mit unabhängigem Lautstärkeregler; **2 Stereo-Effekt>Returns** (mit Volumenregler VOL und Balance-Regler BAL) je mit separater Routingkontrolle für die L/R Masterausgänge und die 4 Monitorausgänge (A/B/C/D); **4-Aux/Monitorausgänge** je mit: 3-Band EQ mit parametrischen Mitten, asymmetrische XLR AUX-Ausgangsbuchsen + INSERT Stereoklinkenbuchsen, LED-VU-Meter, PFL-Taste, 100 mm VOLUMEN-Fader; **L/R MASTER-Ausgänge** (XLR, asymmetrisch) + INSERT Stereoklinkenbuchsen; **MONO OUT** Master-Ausgang (XLR, asymmetrisch) mit Lautstärkeregler, PRE/POST-Master-Schalter und INSERT Stereoklinkenbuchse; Stereo Ein/Ausgänge für Tonbandgerät (TAPE IN/OUT L/R) mit Eingangsvolumen; **PHANTOM**-Schalter; Master L/R LED-VU-Meter; **10-Band-Stereo Graphischer-EQ** mit EQ/FLAT-Schalter; **PHONES** Stereoklinkenbuchse mit Lautstärkeregler und PFL Schalter; **MASTER L/R Lautstärke-Fader** (100 mm).

## 523

### standard configuration

5 mono modules (MN4)

1 stereo module (ST4)

1 master module including

2 DSP processors

## 521

### standard configuration

3 mono modules (MN4)

1 stereo module (ST4)

1 master module

including

2 DSP processors



# mixing

- MONO INPUT CHANNEL
- STEREO INPUT CHANNEL
- MASTER MODULE with 2 STEREO MULTIEFFECT PROCESSORS



# professional mixing consoles



# 521/523

521 y 523 se diferencian entre sí solo en las dimensiones del bastidor: la 521 aloja hasta 4 módulos de entrada con 4 canales cada uno, la 523 hasta 6.

Los módulos de entrada existen tanto en versión mono (MN4), como en versión estéreo (ST4).

## CARACTERÍSTICAS GENERALES

• **MODULO CANALES DE ENTRADA MONO (MN4)** entrada microfónica (MIC) balanceada XLR (con alimentación phantom); entrada de línea (LINE) desbalanceada jack, utilizable también como insert; salida INSERT OUT; regulación de la ganancia (GAIN); EQ de 3 bandas con control paramétrico de los medios (HF/MF level/MF freq/LF); 4 envíos monitor A/B/C/D (pre-fade, post-eq); 2 envíos de efectos E1/E2 (post-fade, post-eq); pulsador PFL; PANpot; pulsador ON; indicador LED de pico y atenuador de 100mm.

• **MODULO CANALES DE ENTRADA ESTÉREO (ST4)** son prácticamente idénticos, salvo por la presencia de 2 entradas micro balanceadas XLR (L/R MIC) y 2 entradas de línea desbalanceadas jack (L/R LINE). Comprenden además: botón MONO (para seleccionar la entrada de línea 'R' como entrada mono), EQ de 3 bandas fijas y control del balance (BAL).

• **MODULO MASTER** los 2 procesadores multiefecto estéreo incorporados (DSP de 56 bit con conversión Delta/Sigma de 24 bit) cada uno con 160 programas, son dotados de: display con cristales líquidos (de dos líneas, E1 y E2); botón regulador PROGRAMS que permite seleccionar los programas; pulsador E1/E2 que permite pasar de la línea E1 a la E2 en el display; pulsador LOAD que permite cargar el programa seleccionado; rampas de 5 LED para el nivel de entrada (INPUT LEVEL); controles de tono (TONE); envíos monitor A/B/C/D (pre-fade); controles BAL; pulsadores ON; atenuadores de 100 mm; tomas jack para conmutadores de pedales (E1 y E2 FT/SW); 2 envíos de efectos (EFF SEND 1/2) con mandos independientes; 2 retornos de efectos estéreo (con control de nivel VOL y control del balance, BAL) dirigibles a las salidas master (L/R) y a las 4 salidas aux (A/B/C/D). 4 salidas aux/monitor cada una con: EQ de 3 bandas con control paramétrico de los medios, salida AUX desbalanceada XLR + jack estéreo INSERT, rampas de 10 LED para el nivel, pulsador PFL y atenuador de volumen (100 mm); salidas MASTER L/R (XLR desbalanceadas) + jack estéreo INSERT; salida master MONO OUT (XLR desbalanceado) con volumen independiente, pulsador PRE/POST master y jack estéreo INSERT; tomas TAPE IN/OUT L/R con volumen de entrada; pulsador PHANTOM; rampas de 10 LED para el nivel de las salidas master L/R; EQ gráfico estéreo de 10 bandas con botón EQ/FLAT; salida para casco estéreo (PHONES), con control de nivel y pulsador PFL; atenuador de volumen L/R MASTER (100 mm).

Les deux modèles ne se différencient qu'au niveau des dimensions du châssis. Le 521 peut contenir jusqu'à 4 modules d'entrée de 4 canaux chacun, tandis que le 523 peut en contenir jusqu'à 6. Les modules d'entrée existent dans la version mono (MN4) et dans la version stéréo (ST4).

## CARACTÉRISTIQUES GÉNÉRALES

• **MODULE CANAUX D'ENTRÉE MONO (MN4)** entrée MIC symétrique XLR (avec alimentation phantom); entrée LINE asymétrique jack utilisable en tant que insertion; sortie INSERT OUT; réglage du GAIN; égaliseur à 3 bandes avec médium paramétrique (HF/MF level/MF freq/LF); 4 départs moniteurs A/B/C/D (pre-fade, post-eq); 2 départs effets E1/E2 (post-fade, post-eq); poussoir PFL; potentiomètre PAN; poussoir ON; LED de crête et fader de 100mm.

• **MODULE CANAUX D'ENTRÉE STÉRÉO (ST4)** ils sont pratiquement identiques, mais possèdent en plus 2 entrées micro symétriques XLR (L/R MIC) et 2 entrées ligne asymétriques jack (L/R LINE); poussoir MONO (pour sélectionner l'entrée ligne 'R' comme entrée mono). Égaliseur à 3-bandes et balance stéréo (BAL).

• **MODULE MASTER** les 2 processeurs multieffets stéréo intégrés (DSP à 56-bit avec conversion Delta-Sigma à 24-bit) chacun à 160 programmes, sont dotés de: affichage à cristaux liquides (à 2 lignes, E1 et E2); bouton PROGRAMS; bouton E1/E2 qui permet de choisir si agir sur le processeur E1 ou E2; bouton LOAD pour charger le programme sélectionné; rampes niveaux d'entrées à 5 LED (INPUT LEVEL); contrôles de tonalité (TONE); départs monitor A/B/C/D (pre-fade); contrôles BAL; poussoirs ON; faders de 100 mm; prises jack (E1 et E2 FT/SW) pour interrupteurs à pédale des deux effets; 2 départs effets (EFF SEND 1/2) avec volumes indépendants; 2 retours stéréo (avec contrôle de VOLUME et balance stéréo, BAL) dirigeables vers les master L/R et les 4 auxiliaires (A/B/C/D). 4 départs aux/monitor chacun avec: égaliseur à 3 bandes avec médium paramétrique, sortie AUX asymétrique XLR + prise jack stéréo INSERT, crête mètres à LED à 10 segments, poussoir PFL et fader de volume; sorties MASTER L/R (XLR asymétriques) + prises jack stéréo INSERT; sortie master MONO OUT (XLR asymétrique) avec volume indépendant, poussoir PRE/POST master et prise jack stéréo INSERT; prises TAPE IN/OUT L/R avec volume d'entrée; poussoir PHANTOM; crête mètres à LED à 10 segments pour le contrôle des niveaux des sorties L/R; égaliseur graphique stéréo à 10 bandes avec poussoir EQ/FLAT; sortie stéréo pour casque (PHONES) avec contrôle de niveau et poussoir PFL; fader de volume L/R MASTER (100 mm).



# 521/523

# mixing

Designed and manufactured in Italy by:

## Montarbo



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### 2 x 160 PROGRAMS / EFFECTS INDEX

**000 010 STEREO GEN.** Adds a short delay to the signal to create a pseudo stereo effect out of mono sources.

**011 030 HALO** It's a digital recreation of the old magnetic Montarbo reverb. A typical 60s effect, with a real vintage character.

**031 040 ECHO** Classic multiplex effect. Delay time increases with program number.

**041 050 ECHO + REV.** Delay and reverb blended together make for the impressive effect you can listen on most contemporary productions.

**051 060 VOICE REV.** Reverbs specially tailored to enhance vocals' character.

**061 070 PERCUSSION REV.** Ambience effects that enrich both acoustic and electronic percussions. It is specially suited to sampled signals (keyboards, electronic drums, samplers..).

**071 080 HALO + REVERB** Halo and Reverb effects blended together.

**081 089 PING PONG** Basically an auto-panned delay, popular on many rock hits, the samples are being routed alternatively to full left and full right master.

**090 BOUNCE** This effect produces repeats whose frequency starts widely spaced to become closer and closer.

**091 100 EARLY REFLECTIONS** Adds early reflections without the decaying reverb. Useful to thicken many different sounds. It is specially suited to sampled signals (keyboards, electronic drums, samplers..).

**101 110 STEREO FLANGER** It may be considered as a very intense chorus, with two voices crossing their stereo image and with feedback acting as 'comb filter'. The frequencies corresponding to the filter's notches and peaks change continuously, producing thus the typical flanging sound.

**111 120 STEREO CHORUS** It produces a warm and rich sound. Three voices are derived from the input signal and are sent to the Left and Right channels and to the center. The result is that even the thinner voice will sound like an ensemble. It is ideal to enliven a guitar accompaniment and to 'fatten' a voice.

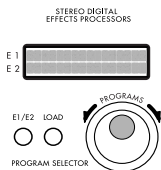
**121 130 DETUNE** Slightly after the tuning of the source to stimulating a 'doubling' effect with an increased tuning alterations.

**131 136 DUAL PITCH** A wonderful 'harmonizer' with two voices trasposing the input signal pitch in real-time. Your voice will be automatically accompanied by a chorus.

**137 140 SINGLE PITCH** Harmonizer with one voice trasposing the input signal pitch in real-time.

**141 150 PITCH CHANGE + REV.** The combination of the two effects will make your voice sound warmer and thicker. The Pitch Change will add a voice in the center of the stereo image, thus creating an harmonizer effect. A warm Plate-type Reverb effect, particularly suited to voice, is added in cascade.

**151 160 PITCH CHANGE + REV.** Unmistakably a 'must' of many 80's records, starts at low level, builds up and quit abruptly. Usually served with percussion.



## SPECIFICATIONS

**• Mono input channels:**  
Micro (sensitivity / impedance)  
Line (sensitivity / impedance)  
Insert-in (sensitivity / impedance)  
Phantom power supply  
Channel gain range  
Equalization

- 60dB / 2,2 kΩ  
- 30dB / 33 kΩ  
0dB / 33kΩ  
48 V  
30dB  
HF ±15dB @ 15 kHz  
MF (freq) 0,18÷3 kHz  
MF (level) ±15dB  
LF ±15dB @ 50 Hz

**• Stereo input channels:**  
Micro (sensitivity / impedance)  
Line L/R (sensitivity / impedance)  
Channel gain range  
Equalization

-60dB / 2,2 kΩ  
- 48dB / 10K.Ω  
34dB  
HF ±15dB @ 15 kHz  
MF ±15dB @ 600 Hz  
LF ±15dB @ 50 Hz

**• All channels:**  
Equivalent input noise  
Crosstalk (between channels)  
Peak LED indicator  
Fader (throw / attenuation)

-127dB  
> 70dB / 1kHz  
+ 16dB, 6dB before clipping  
100mm / > 80dB

**• Dual Multieffect DSP**  
A-D and D-A conversion  
Internal DSP  
Bandwidth

24 bit Delta-Sigma conversion  
56 bit  
40Hz + 15kHz

**• External effect send**  
Nominal level

2  
-10dB

**• Effect return (stereo)**  
Nominal level

2  
-10dB

**• Monitor outputs**  
Nominal level / max. level  
Insert-in/out: nominal level  
Equalization

4  
0dB / +22dB  
0dB  
HF ±15dB @ 15 kHz  
MF (freq) 0,18÷3 kHz  
MF (level) ±15dB  
LF ±15dB @ 50 Hz

**• Master outputs**  
Nominal level / max. level  
Insert-in/out: nominal level  
Frequency response  
THD  
SN ratio  
Stereo graphic equalizer  
Center freq./range

**L, R, Mono**  
0dB / +22dB  
0dB  
25Hz + 30kHz, (+0dB/-2dB)  
< 0,03%  
80dB (nom.levels, EQ flat)  
31-63-125-250-500 Hz,  
1-2-4-8-16 kHz / -12dB

**• L/R Tape in-out: Nominal levels**

In: -20dB Out: -10dB

**• Headphones: Load impedance**

200 ÷ 600Ω

**• Dimensions:**

521: 82 (W) x 10,5 (H) x 69 (D) cm  
523: 106 (W) x 10,5 (H) x 69 (D) cm

**• Weights:**

521: 20 kg  
523: 28 kg

