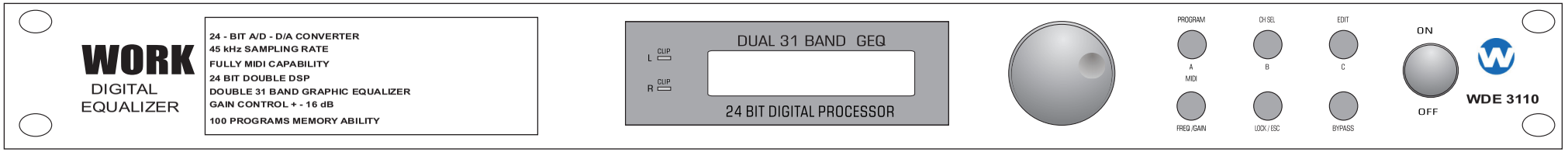
WORK

WDE 3110 31 BANDS STEREO DIGITAL EQUALIZER



USER MANUAL

VERSION 1.0

ATTENTION:
The unit is carefully packed and the packaging is designed to protect the unit from rough handing, however, we recommend you examine the packaging and its content carefully for any signs of physical damage which may have occurred during the transportation.

If the unit damaged, please notify your dealer and the shipping company immediately, otherwise claims for damage or replacement may not be granted. The consignee must make shipping claims.

The unit can be installed into a standard 19" rack of space (1.75"). We recommend 4" depth to be left for the rear panel's connectors. It should be situated in an area with proper ventilation for cooling. It should not be placed on an amplifier or other equipment that produce heat.

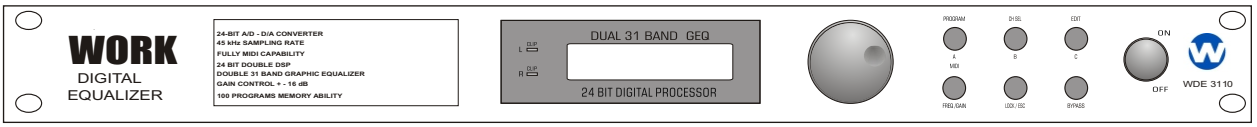
WD 3110 requires one power cable and one standard IEC socket for power connection. It meets all international safety certification requirements.

Please make sure that all units have a proper ground connection. For safety sake, please do not remove the ground connection within the units or at the supply, or fail to make this connection at all.

If the unit is switched to another operating voltage, the fuse rating must be changed. Please see the technical specification in the appendix.

Only qualified service personnel should be allowed to install and operate the unit. When installing and operating it, the user and the ground must keep good electricity touch, otherwise the electric charge of static may effect the work.

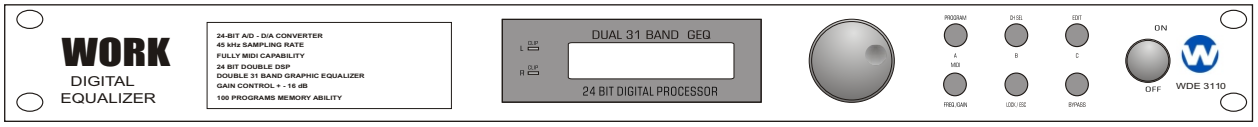
WORK WDE 3110



24-bit double DSP
24-bit, 48kHz sampling rate, Δ – Σ, A/D, D/A
Double 31 band graphic equalizing
Gain control: ± 16dB, ±0.5dB adjustment length
Internal digital noise gate
100 programs, programming and memory ability
L/R channel duplicate and flat straight function
Lock function with pressing key
Back-Lit 16X2 LCD Display
Full MIDI control

TABLE OF CONTENTS

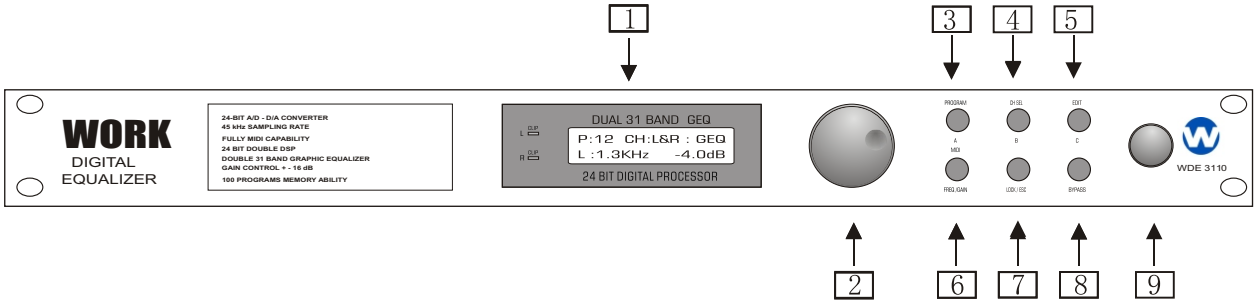
1. Control Panel



Picture 2.1 WDE 3110 Front Panels

WDE 3110 has 6 function buttons to change selected parameter or preset codes together with a LCD display.

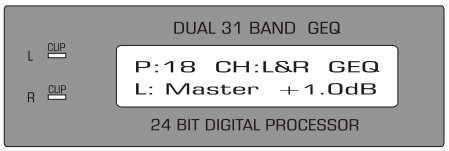
1.1 Menu Function Description



1. LCD display shows function menu, operation instruction and present mode.
2. Select Frequency / Adjust Gain/ Load program, when change values, clockwise to increase, counterclockwise to decrease.
3. Select program / indication A—P: 1~100 memory program for free choice.
4. Select channel/ indication B—CH: L, R, and L&R SELECTION.
5. Edition key/ indication C—edit L and R channel through duplicate and flatten.
6. Frequency/Gain/start Midi—when press the button, ":"appears before frequency value and gain value, to indicate selected item. Press the buttons for about 3 seconds, to open or close Midi function.
7. Lock/Esc—when press the button shortly, the previous action of pressing button/edit is cancelled; when press the button for about 3 seconds, change into Key Lock mode with "Lock" appeared in LCD display, and other function keys are all locked; only when press the key for another 3 seconds, the Lock mode is cancelled without "LOCK" appearing.
8. Bypass—press the button, the filter changes between the mode of "Bypass" and "Graphic Equalizing".
9. Power

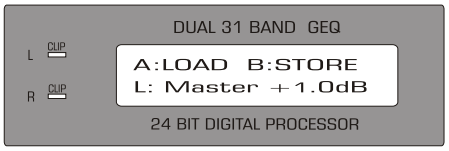
1.1 Operation Method

1. Once start, LCD shows as picture 1, rotate encoder button, the user can select the frequency rate in 20Hz~20kHz, press 6, then rotate encoder button to adjust Gain value of selected frequency between –16dB to +16dB, then press 6 again, rotate encoder button, select frequency, press 6, rotate encoder button to adjust new Gain value of frequency. Continuously press 6 to adjust Gain value of all frequency from 20Hz~20kHz. If press 6 for about 3 seconds, Midi mode can be set with MIDON appearance; if press the key for about 3 seconds, MIDI function is closed with MIDOF appearance.

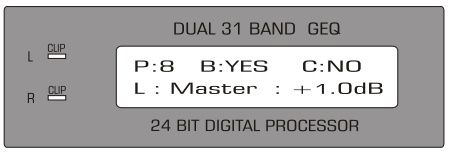


Picture 1: Start condition (Menu)

1. When in Menu, press 3, LCD appears as picture 2, press 3 to select A, execute any program stored in P: 1~100, as picture 3; when in the condition of picture 2, press 4 to select B, store present parameter into any program in P: 1~100, as picture 3, select program code P: 1~100 by rotating encoder button.

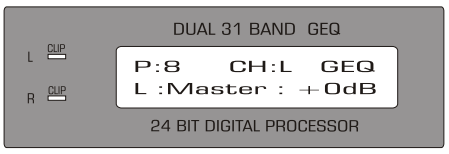


Picture 2: Use Stored Program/Store Program



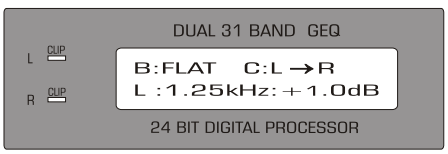
Picture 3: Select Use/Store Program Code

1. When in Picture 3, if press B, it indicates to confirm selection of program code, in the first line of LCD "SAVE…" is appeared, after 3 seconds, display screen return to Main Menu screen as picture 4; if press C, cancel the selection, display screen also returns to Main Menu screen as Picture 4.



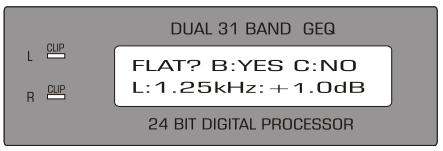
Picture 4: Control Menu of Main Voice Volume

1. When in Main Menu, press 4 shortly to select L/R Mono, press 4 longer to select L&R (Stereo Mode), the appearance of "L&R" indicates the adjustment of L channel and R channel in the same time.
2. When in Main Menu, press 5 as picture 5, enter into the preparation for flattening Frequency Gain Value of present program or the selection of L and R copy, if press B as Picture 6, the present frequency Gain Value will be flattened to 0dB, returns to Main Menu; if press C, cancel the operation and returns to Main Menu.

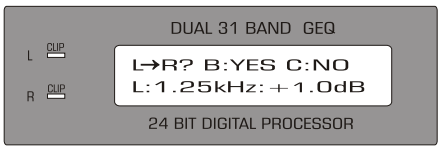


Picture 5: Edition Selection (Flatten/Copy)

1. When in Main Menu, press 5 as picture 5, if press C, enter into the preparation for copying all frequency from L-CH to R-CH as picture 7; if press B, frequency Gain Value is copied from L-CH to R-CH, then display screen returns to Main Menu; in press C, the copy operation is cancelled, display screen returns to Main Menu.

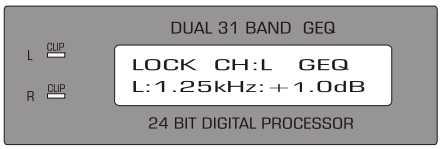


Picture 6: Flattening Selection

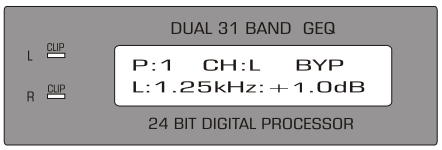


Picture 7: Copy Selection

1. When in Main Menu, press 7 for about 3 seconds, all functional keys and encoder switch will be locked as picture 8, another pressing of 7 for about 3 seconds will cancel the lock, and display screen returns to Main Menu. (Note: MIDI communication is prohibited in lock condition.)

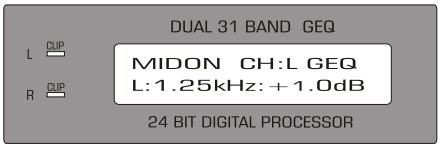


Picture 8: Lock

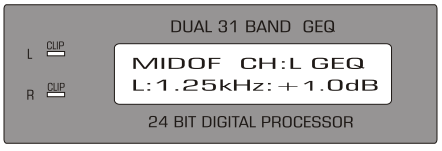


Picture 9: Bypass

1. In any menu mode, press 7 shortly, the previous operation is cancelled and returns to Main Menu.
2. In Main Menu, Press 8, present Channel enters into Bypass condition as picture 9, then press 8, and returns to equalization condition and retums to Main Menu.
3. Press 6 for about 3 seconds as picture 10, then press 6 longer as picture 11. Under “MIDON” mode, the data in the program change can be transmitted through MIDI interface and it is convenient to operate. When unit A is connected with unit B through MIDI interface, data is transited from unit A to unit B, when adjust operation of unit A, such as program transfer, frequency Gain Value change and etc., unit B can work with unit A, if both of them is in MIDI mode.

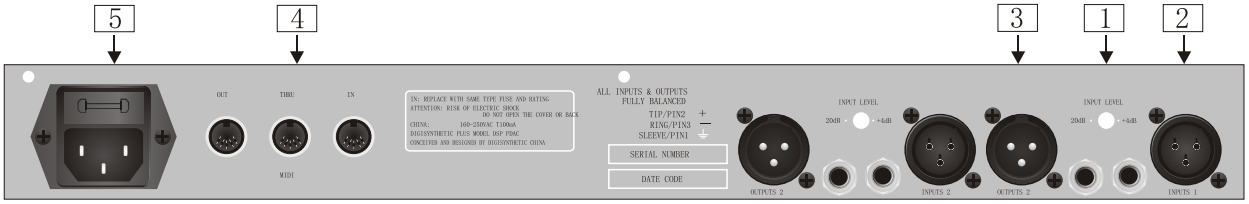


Picture 10: Open MIDI Function



Picture 11: Close MIDI Function

2. Rear Panel



(1) INPUT LEVEL can be adjusted to different levels ranging from –20dB to +40dB, and the common setting is in middle mark of regulator.
(2) ANALOG INPUTS – each unit possesses XLR and TRS inputs and outputs. Each XLR and TRS is wired paralleled and can be used either balanced or unbalanced.
(3) ANALOG OUTPUTS – each unit possesses XLR or TRS inputs and outputs. Each XLR and TRS is wired paralleled and can be used either balanced or unbalanced.
(4) MIDI connectors (MIDI OUT/ THROUGH/ IN) via these connectors total remote control is possible.
(5) MAINS CONNECTOR/ FUSE HLODER/ VOLTAGE SELECTOR before you connect the unit, please make sure that the displayed voltage corresponds to your Mains supply.

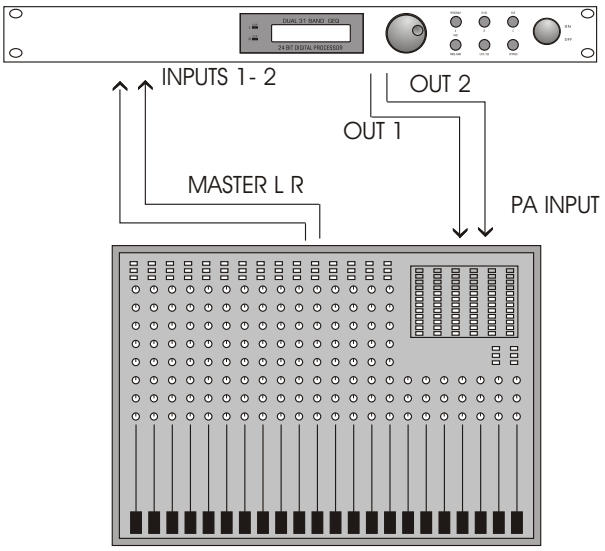
1. MIDI control

When select MIDI “ON”, all parameter can be sent or received.
MIDI IN
Any MIDI data sent to the unit (sequencer, MIDI footswitch, etc.) are received via the MIDI IN jack.
MIDI THRU
The MIDI THRU jack is used to loop through incoming MIDI data, i.e. Any control data received at the MIDI IN of the unit will be transmitted via the MIDI THRU jack to other MIDI devices/ instruments.
MIDI OUT
The MIDI OUT jack allows transmitting MIDI data that originated from the unit.

1. Application

1.1 Application In the Subsidiary Main Lines

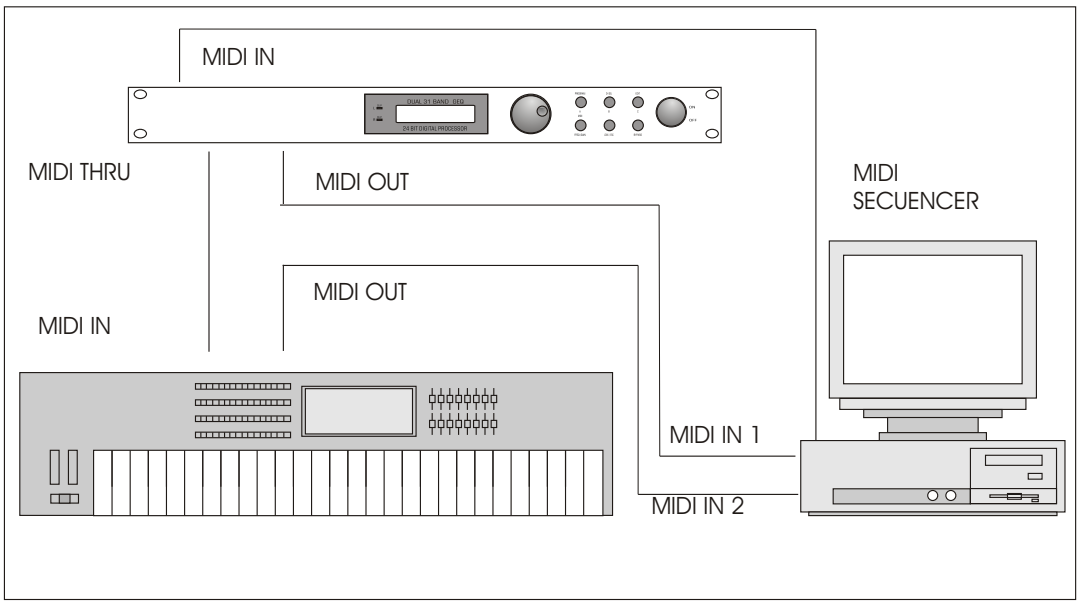
When WDE 3110 is used in the subsidiary main lines of mixers, signals from one channel, several channels or all channels can be sent into WDE 3110. If WDE 3110 is used in the subsidiary main lines, they must be connected as the following picture.



Picture 4.1 Connections of Subsidiary Main Lines

1.1 Application in MIDI System

Use the internal MIDI interface, WDE 3110 can be connected with any MIDI system in which it executes program change through changed order sent or received by encoder or any other MIDI equipment. Connect and dispose WDE 3110 as the following picture.



Picture 4.2 WDE 3110 is connected with Encoder/Computer and Keyboard through MIDI

1. Appendix

1.1 Specifications

Analog Inputs

Connectors	XLR and 1/4” jack
Type	RF filtered, servo balanced, 20kOhms unbalanced
Impedance	40kOhms balanced, 20kOhms unbalanced
Nominal Operating Level	-20dB to +4dB
Max. Input Level	+16dB at +4dB nominal level, +2dB at -20dB nominal level

Analog Outputs

Connectors	XLR and 1/4” jack
Type	Electronically servo-balanced output stage
Impedance	66Ohms balanced, 33Ohms unbalanced
Max. Input Level	+16dB at +4dB nominal level, +2dB at -20dB nominal level

System Specifications

Bandwidth	20Hz to 20kHz, -1dB
Noise	95dB, weight,20Hz to 20kHz
THD	0.0065% typ. 0dB, 1kHz
Crosstalk	-95dB, 20Hz to 20kHz
MIDI Interface Type	5-Pin-DIN-Socket IN/OUT/THRU
Battery	CR2032 Lithium Battery, 3V, 180MAH
Lifespan of Battery	3 years typ.

Digital Processing

Converters	24-bit Sigma-Delta, 64/128-times Over-sampling
Sampling Rates	48KHz

Display

Type	Back-Lit 16X2 LCD Display

Power Supply

Mains Voltages	General Export Model ~ 100-120VAC, ~200-240 VAC
Fuse	100-120 VAC: 250mA (slow-blow) 200-240 VAC: 125mA (slow-blow)
Power Consumption	10 Watts
Mains Connection	Standard LEC receptacle

Physical

Dimensions (H*W*D)	45mmX482mmX152mm
Net Weight	2kg
Gross Weight	3kg

Equipson, S.A.
www.equipson.es
support@equipson.es

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