

# SPIRIT DIGITAL 328 USER GUIDE

**NB** Before you go any further, please read this first page as it will tell you all you need to know about starting off with the Spirit Digital 328

## From all of us to you

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Thank you for purchasing the Spirit Digital 328 mixer, which is brought to you with much pride by Soundcraft. Your Spirit Digital 328 mixer has been manufactured exclusively by Soundcraft in the UK, combining state of the art technology with 25 years experience in professional console design. The Spirit range gives you premier audio quality and features whatever your mixing needs. We hope you enjoy using your Spirit Digital 328 mixer as much as we have enjoyed designing it!

## The User Guide

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This manual has been designed to make the time needed to get to know the Digital 328 as short as possible!

Every function of the 328's operation is covered in the manual. Please also refer to the two supplied booklets namely '**The Spirit Guide to Digital Mixing**' and '**The Spirit Guide to Mixing**' which cover most of the other questions you may have about mixing in both Live and Studio Recording applications.

- Section 1**      Introducing the Spirit Digital 328 - Key features and specifications
  
- Section 2**      Getting started straight out of the box
  
- Section 3**      Reference Section
  
- Section 4**      Automation Techniques
  
- Section 5**      Linked Consoles
  
- Section 6**      Software Upgrade
  
- Section 7**      Troubleshooting



### **Quick Start!**

*If you want to jump straight in, then flip forward to **Section 2** 'Getting started straight out of the box' but please skim through **Section 1** first to get an idea of what features the Digital 328 offers!*

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# **INTRODUCING THE SPIRIT DIGITAL 328**

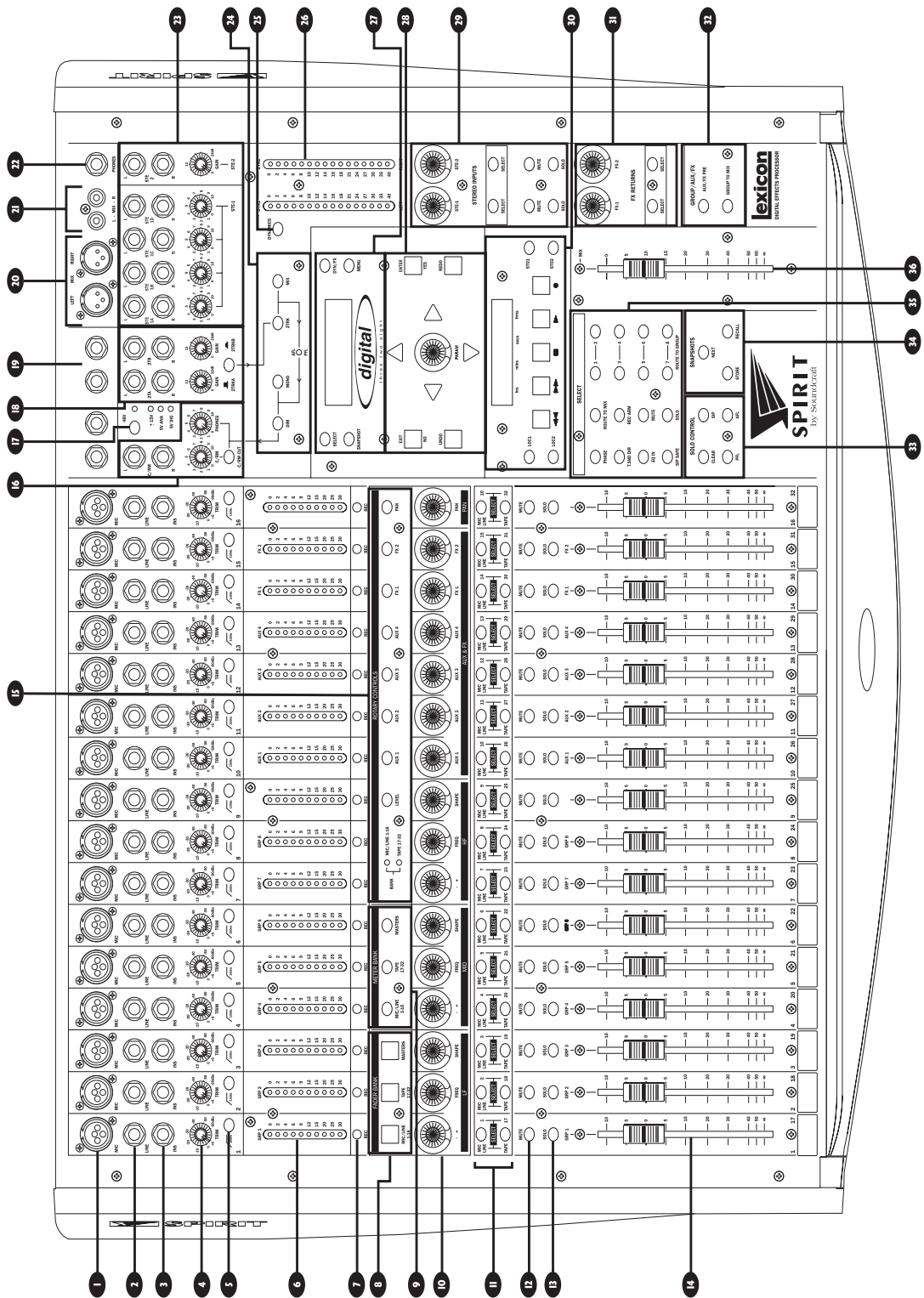
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# 328

## SPIRIT DIGITAL

# THE SPIRIT DIGITAL 328 CONSOLE



- 1 Microphone Input
- 2 Line Input
- 3 Insert Point
- 4 Analogue Trim Pot
- 5 100Hz Highpass Filter
- 6 Meter Bridge for Mic/Line Channels 1-16, Tape Channels 17-32, Group Outputs 1-8, Auxiliary Sends 1-4 and Internal FX Sends 1 and 2
- 7 Record Arm LED
- 8 Fader Bank Select Switches
- 9 Meter Bank Select Switches
- 10 E-Strip Rotary Encoders
- 11 Mic/Line Channels 1-16 and Tape Channels 17-32 Select Switches
- 12 Mute Switches for Mic/Line Channels 1-16 and Tape Channels 17-32
- 13 Solo Switches for Mic/Line Channels 1-16 and Tape Channels 17-32
- 14 Faders 1-16
- 15 Rotary Encoder Mode Switches
- 16 Control Room Outputs; Control Room Output Level Control and Phones Level
- 17 Global 48V Phantom Power Switch
- 18 Analogue 2 Track Inputs A and B; 2 Track Level Controls
- 19 Auxiliary Outputs 1-4
- 20 Balanced Mix Outputs (XLR)
- 21 Unbalanced Mix Outputs (RCA)
- 22 Phones Output
- 23 Stereo Input 1A - 1D and Stereo Input 2
- 24 Monitor Path Controls
- 25 Dynamics Switch
- 26 Main Output / Dynamics Gain Reduction Meters
- 27 LCD Panel and LCD Mode Switches
- 28 PARAM Encoder, Cursor Keys, EXIT/NO, ENTER/YES, UNDO and REDO Switches

- 29 Stereo Input 1 and 2 Control
- 30 Timecode Display and Transport Controls
- 31 FX Return 1 and 2 Control
- 32 AUX/FX Pre/Post and Group/Channel Link Switches
- 33 Solo Control Panel
- 34 Snapshot Control Panel
- 35 Select Panel for Channel Parameters
- 36 Mix Fader

## INTRODUCING THE SPIRIT DIGITAL 328

Okay so what should a digital mixing console be? Should it be something that basically requires you to relearn the way you work on a mixer, with pages and pages of menus offering a lot of great features, but many that you will never really use? Perhaps it should have a combination of buttons and a data wheel where previously you found a simple pan control, or maybe it should have faders that can become auxiliary sends instead of good old auxiliary pots as before! No, we must disagree, we don't think this is the way to design a digital mixer at all.

Like you, we believed in a mixer that firstly, looked like a normal mixer, and secondly did not require hours of diligent study to get a signal in at one end, and out at the other! Speed is so important, both in the studio and at live performances/broadcasts, that we focused on this as our prime aim.

Like you we wanted dedicated pan controls on each channel plus simple and familiar functions like EQ In/Out, Phase In/Out, Channel Mute, dedicated Aux and FX send pots full metering and silky smooth 100mm long throw faders! Add to this fully parametric EQ - with real knobs - on every channel, two warm sounding Lexicon FX processors and two great assignable stereo dynamics processors, plus a few extras like 24 bit 128 x oversampling A/Ds and D/As, machine control, built in ADAT and TDIF 16 channel interfaces and more! Well, we had to do it! So we designed and built you the Spirit digital 328 mixer - enjoy it!

## THE INS AND OUTS OF THE 328

### Analogue Inputs

The Spirit Digital 328 offers 16 Mic/Line inputs, using Spirit's highly acclaimed Ultra Mic Pre-amps. A Global Phantom Power, applying 48V to all 16 Microphone inputs, is accessed by pressing the PHANTOM POWER switch.

All Mic/Line Inputs have an Insert point, Gain control and High Pass Filter. A further 5 Stereo Inputs are also available, and all of the above inputs feature 24 bit 128 x oversampling A/D converters. All have full access to the revolutionary E-Strip which offers 3 band fully Parametric Equalisation, 4 Auxiliary Sends, 2 Effects Sends (routed to 2 x internal Lexicon FX Processors) and a Pan control.

There are also two additional pairs of Stereo 2 Track Inputs for connecting playback machines such as cassette decks and analogue 2 track recorders.



*The 2 TDIF inputs can also be converted to function as 8 additional analogue or 4 digital stereo AES/EBU inputs with the addition of Spirit's external rack mount converter boxes.*

## Digital Inputs

The 16 digital input channels on the rear of the 328 are accessed by two 8 Channel TDIF or ADAT Optical input connectors. There is also a dedicated AES/EBU Input, and S/PDIF Input for connecting CD, Minidisc and DAT Machines. All of these inputs have full access to the E-Strip which offers 3 band fully Parametric Equalisation, 4 Auxiliary Sends, 2 Effects Sends (routed to 2 x internal Lexicon FX Processors) and a pan control.



8 Analogue Group Outputs or 16 Analogue Direct Outputs can be achieved by the addition of Spirit's external rack mount converter boxes.

## Analogue Outputs

The 328 offers an array of Analogue Outputs including MIX Outputs on balanced male XLR and unbalanced RCA phono plugs, 4 Auxiliary Outputs, Control Room Outputs on balanced jacks and a Headphone Output with it's own level control.

## Digital Outputs

There are 16 digital output channels available via the 8 TRK A and 8 TRK B Outputs in the form of 2 TDIF ports and 2 ADAT output ports. Both TDIF outputs and both ADAT outputs are continually and simultaneously active. Either these can be configured as 16 Direct Outputs - sourced from Mic/Line Input Channels 1-16 - or alternatively as two paralleled 8 Bus Outputs sourced from the ROUTE TO GROUP buttons.

The AES/EBU and S/PDIF Stereo Digital Outputs can output signals from any of the following sources:

- MIX Out,
- AUX 1&2,
- AUX 3&4,
- FX 1&2 sends,
- Groups 1&2,
- Groups 3&4,
- Groups 5&6,
- Groups 7&8,
- Control Room output.

The AUX OPTICAL OUT can source its output signal from either the Group Outputs or the MIX bus, AUX 1, 2, 3 and 4 sends and FX 1 & 2 sends.



## Metering

The 328 has full metering of every input and output signal as standard - no need for an extra meter bridge here! The 10 segment bar graph meters have 3 easily selected modes that show either

- MIC/LINE Inputs 1-16,
- TAPE Inputs 17-32
- GROUP Outputs 1-8, AUX Outputs 1-4 and FX Sends 1 and 2.

Under normal operation, the Stereo Output Meters will display the stereo mix bus - in mono when the MONO switch is pressed. When the 2 TRK switch is illuminated the Stereo Output Meters will display the 2-Track return inputs. When any channels are soloed the solo bus will be displayed and the Gain Reduction Level and Gate Open/Closed will be displayed when the DYNAMICS switch is illuminated.

## Faders

The 100mm long throw faders found on the 328 work just as you would expect on an analogue console. There are 4 modes of operation for the channel faders according to the FADER BANK selection:

- MIC/LINE 1-16 - Faders control the level of the MIC/LINE Inputs 1-16
- TAPE 17-32 - Faders control the level of the TAPE Inputs 17-32.
- MASTERS - Faders control output level of GROUP 1-8, Master output level for AUX 1, 2, 3 or 4 and Master output level for FX 1 and 2.
- MIDI controller mode - When none of the FADER BANK buttons are selected the 16 channel faders and 16 ROTARY CONTROLS function as programmable MIDI controllers.

## E-Strip

The E-Strip is a feature unique to the Digital 328 and works just like a conventional analogue channel strip rotated through 90°. The E-Strip has 3-band fully Parametric Equalisation, 4 AUX Sends, 2 internal FX Sends and a PAN control which are available for use on the MIC/LINE and TAPE channels, Stereo Input 1&2 and FX Return 1&2.

The E-Strip can also be configured to work as 16 dedicated Level controls for MIC/LINE Inputs 1-16 or TAPE Inputs 17-32, or as dedicated controllers for AUX Send level 1, 2, 3 and 4, FX Send level 1 and 2 or PAN controls.

## Lexicon Effects Processors



The Digital 328 features two built in Lexicon Stereo FX Processors that include Reverb, Delay, Chorus and Flange effects and are accessed from FX Sends 1&2. The two dedicated Effects Returns - FX 1 and FX 2 - control the amount of effect sent to the Mix Outputs.

## Stereo Dynamics Processors



There are two Dynamics Processors that can be configured for either Mono or Stereo operation, and can be applied to the Mic/Line and Tape Channels, the Stereo Inputs 1&2, the FX Returns 1&2 and the Mix Outputs.

## Snapshot and Dynamic Automation



The Digital 328 has two different types of automation namely 'SNAPSHOT' and 'DYNAMIC AUTOMATION' which give maximum flexibility to the user. Complete recall of all console settings can be stored in up to 100 'SNAPSHOT' memory locations for recall either manually or against incoming SMPTE or MIDI Timecode.

Recording via MIDI to a MIDI Recording device, such as a sequencer, allows complete DYNAMIC AUTOMATION of all the functions found on the 328 except for the input gain controls and 100Hz Highpass Filters.

## Machine Control



The Machine Control section of the 328 can be used to control various recording devices including Hard Disk Editors, Sequencer Packages, Audio Tape Machines and Video Tape Machines. This is achieved using MMC (MIDI Machine Control), RS422 or MIDI Note On/Note Off.

## Audio quality



All analogue inputs and outputs on the 328 have the same crystal clear 24 bit 128 oversampling Analogue to Digital and Digital to Analogue (A/D and D/A) converters, ensuring wide dynamic range and superb sonic performance.