

PYRO SIM CONTROLLER

CT-05

USER MANUAL



CONTENTS

1 PRODUCT INTRODUCTION	A1
1.1 PRODUCT INTERVIEW	A1
1.2 PRODUCT ACCESSORY	A2
2 TECHNICAL PARAMETER	A3
3 SCREEN OPERATION GUIDE	A4
3.1 PANEL INTRODUCTION	A4
3.1.1 FRONT PANEL INTRODUCTION	A4
3.1.2 LEFT PANEL INTRODUCTION	A4
3.1.3 RIGHT PANEL INTRODUCTION	A5
3.1.4 BACK PANEL INTRODUCTION	A5
3.2 STATUS ICONS	A6
3.3 DMX PARAMETER LIST	A6
3.31 SPARK MODE	A7
3.32 FLAME MODE	A8
3.4 IP ADDRESS	A9
3.5 NATIVE CONSOLE'S ADDRESS	A10
4 OPERATION NOTES	A10
4.1 WORKING CONDITION REQUIRED	A11
4.2 SAFETY TIPS	A12
5 MACHINE OPERATION	A13
5.1 PREPARATION	A13
5.2 MENU SETTING	A14
5.2.1 MONITOR	A14
5.2.2 MANUAL CLEAN	A15
5.2.3 FILE	A16
5.2.4 CUE STACK	A17
5.2.5 CALENDAR	A18
5.2.6 AUDIO	A18
5.2.7 MIDI	A19
5.2.8 SMPTE	A20
5.2.9 RDM	A21
5.2.10 CAN	A22
5.2.11 SET	A23
5.2.12 LOCK UP	A24
5.2.13 ABOUT	A25
6 MACHINE MAINTENANCE	A25

DISCLAIMER

Please read the manual carefully before installing and using this product. Failure to read or comply with this manual may result in injury to products and personnel, and Spark Fabrica shall not be responsible for this. This product is a professional machine, we do not assume any responsibility for accidents or losses caused by the use or maintenance of this product by personnel without professional training and permission. If the information contained in the manual or the product specifications are changed, Spark Fabrica will not inform you further and is responsible for any errors or omissions. Our company reserves the right to modify the user manual at any time.

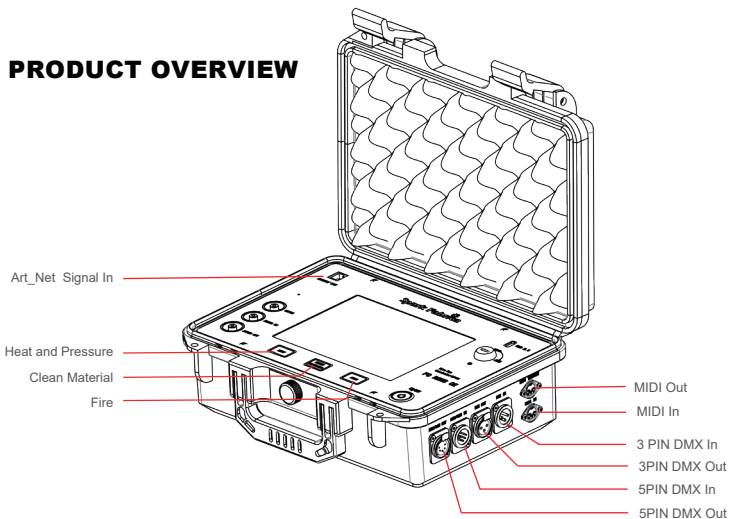
PREFACE

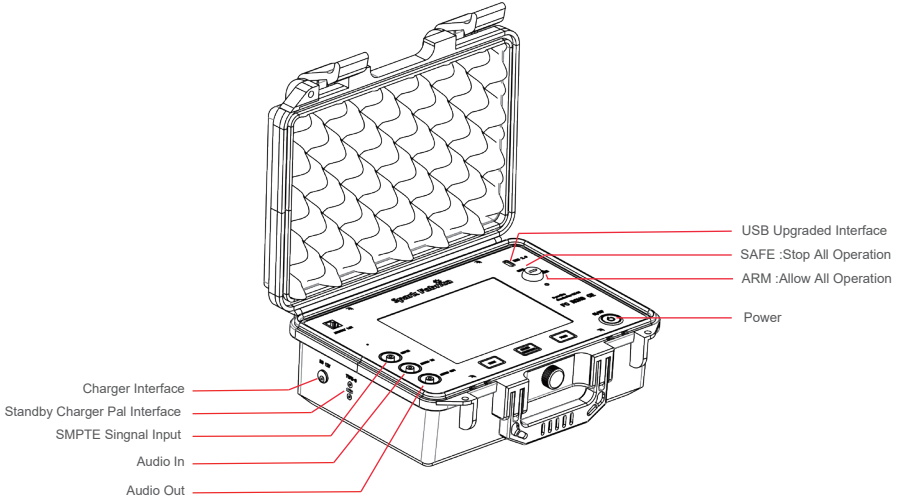
This manual includes warning, caution and notice concerning the safe operation of equipment. These warning, caution and notice come with the following icons. Please read them carefully!

1 PRODUCT INTRODUCTION

This product belongs to sparking special effects. Flaming special effects equipment, only for professional use. This product belongs to a newest digital console which can work with special effects, audio and video synchronously. Through multiple networking protocol, it affords serious control, such as controlling spark machines remotely. This new console achieves more perfect sparking effect for wedding, content, sport events and meeting, etc.

1.1 PRODUCT OVERVIEW





1.2 PRODUCT ACCESSORY

Security Key
Battery
USB To MIDI Interface Cable
Charger
Charger Power Cord
3 Meters Network Cable

3 Meters MIDI Cable
3.5mm Audio Cable
Allen Key M2
3 Pin DMX Signal Cable
5 Pin DMX Signal Cable

NOTICE

Open the package carefully and make sure all the goods are in good condition.

2 TECHNICAL PARAMETER

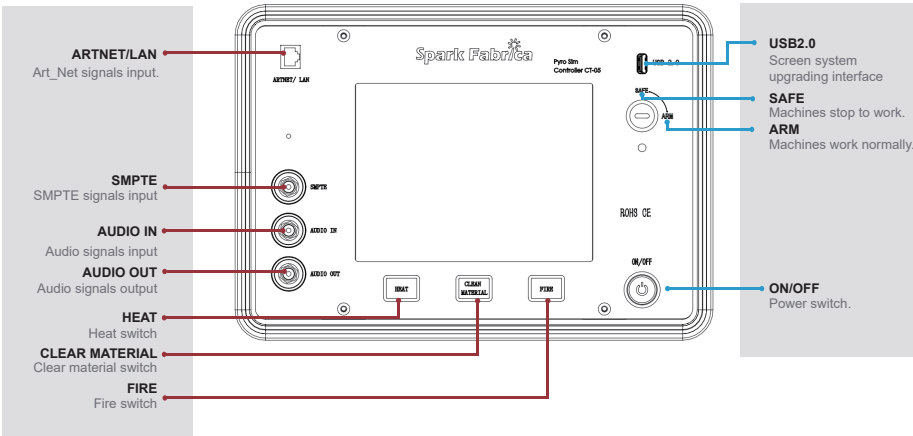
Identification	Category	CT-05 PYRO SIM CONTROLLER
	Model	CT-05
AC Power	Input Voltage& Rate	12.6V DC
	Nominal Total Power Consumption	5W
	Power Input Connector	12.6V 3A Charger
Accessory	Power Cord	Charger
	MIDI Cable	3M
	Audio Cable	3M
Certification	CE	√
	ROHS	√
Weight	Net Weigh	3.1Kg
	Gross Weight	3.3Kg
Dimensions	Machine Dimension - L*W*H	300mm*200mm*120mm
	Packing Dimension - L*W*H	335mm*260mm*130mm
Special Effect	Special Effects 1	From Left to Right
	Special Effects 2	From Right to Left
	Special Effects 3	From Center to Side
	Special Effects 4	From Side to Center
	Special Effects 5	Volley Firing
Control	AUDIO	√
	RDM	√
	CAN	√
	SMPTE	√
	DMX	√
Technical Parameter	Heigh	Setting Height Level 1-10
	Continuous Time	0.1 -- 30s
	Sparking Delay	0.1 -- 30s
	Repeat Delay	0.1 -- 30s
	Repeat Times	1-99
	Controllable Quantity	1-60units

3 SCREEN OPERATION GUIDE

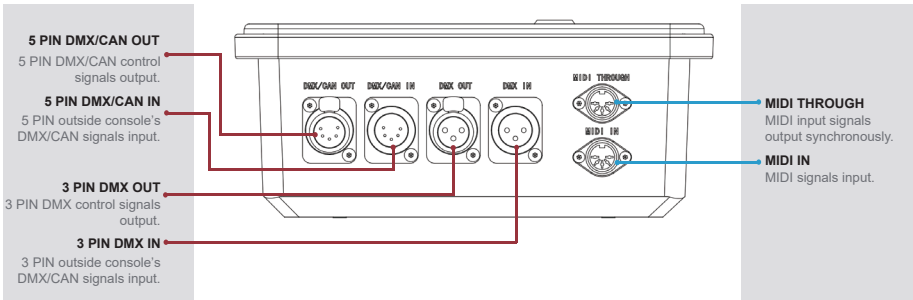
3.1 PANEL INTRODUCTION

3.1.1 PANEL INTRODUCTION

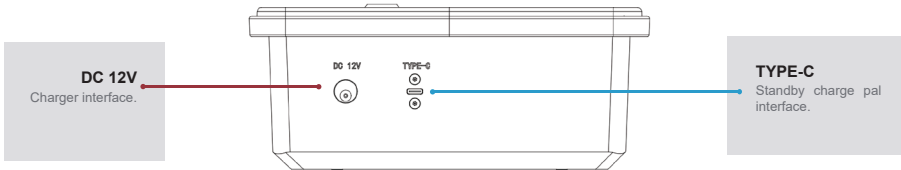
This product has 4 panels according to function:front,left,right and back panel introduction.



3.1.2 LEFT PANEL INTRODUCTION



3.1.3 RIGHT PANEL INTRODUCTION

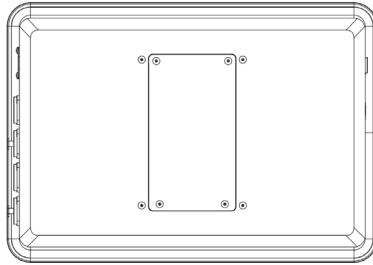
**CAUTION**

DC 12V: The required voltage for this interface is 12.6V.

CAUTION

TYPE-C: The required voltage for this interface is 5V, and the current should be more than 3A.

3.1.4 BACK PANEL INTRODUCTION



Explanation for each accessory is as follow:

Battery installation location

NOTICE

Unscrew the 4 Allen screws in the small square where can install 6 batteries(18650).

3.2 STATUS ICONS

 1	 4		 0	DMX:3			2023-12-09 11: 43: 30		
 1	Current File List								
 4	Current File								
	Current File Effect								
 0	Sparking / Flaming Quantity								
DMX:3	DMX Model								
	Heating								
	Clearing Material								
2020-12-09 11: 43: 30	Time								
	Charging								
	Electric Quantity								

3.3 DMX PARAMETER

NOTICE

This product has Sparking Mode / Flaming Mode

NOTICE

Please set the quantity of spark machines before set DMX parameter,each unit can be set 1-60.

3.3.1 SPARK MODE



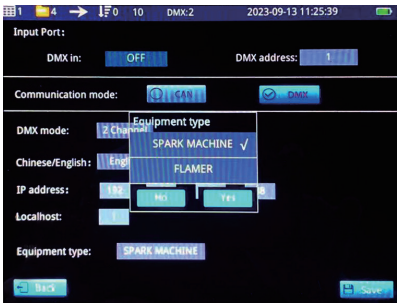
DMX CHANNEL 2 MODEL

FIRST CHANNEL DMX VALUE	FUNCTION
0	Stop
25	Fountain Height 1
50	Fountain Height 2
75	Fountain Height 3
100	Fountain Height 4
125	Fountain Height 5
150	Fountain Height 6
175	Fountain Height 7
200	Fountain Height 8
225	Fountain Height 9
255	Fountain Height 10
SECOND CHANNEL DMX VALUE	FUNCTION
0	Preheat Off
15	Emergency Stop (Preheat Off)
75	Clear Material
255	Preheat On

DMX CHANNEL 3 MODEL

FIRST CHANNEL DMX VALUE	FUNCTION
0	Stop
25	Fountain Height 1
50	Fountain Height 2
75	Fountain Height 3
100	Fountain Height 4
125	Fountain Height 5
150	Fountain Height 6
175	Fountain Height 7
200	Fountain Height 8
225	Fountain Height 9
255	Fountain Height 10
SECOND CHANNEL DMX VALUE	FUNCTION
0	Preheat Off
15	Emergency Stop (Preheat Off)
75	Clear Material
255	Preheat On
THIRD CHANNEL DMX VALUE	FUNCTION
0-255	Density

3.3.2 FLAME MODE
DMX CHANNEL 6 MODE



CHANNEL	FUNCTION
CH1	Manual Angle setup: (0~255) angle change from -105° to 105°, (128) is straight upward (0°)
CH2	Manual Speed setup: (0) Max Speed, (1~254) Speed increase, (255) Max Speed.
CH3	Ignition ON/OFF: (0~253) Ignition OFF, (254~255) Ignition ON.
CH4	Firing Duration setup: 0 and 255 is permanent fire (8s is limit duration time); 1~254 is 10~2540ms duration time (Manual firing duration = DMX Value * 10ms)
CH5	Program sequence setup: (0-2) no preset sequence; (3-255) preset sequence. DMX value = 2 + Sequence No.*2.55 (ROUND OFF)
CH6	Mode setup: (0~49) Pressure Relief Mode (Emergency Stop), (50~200) Compression Mode, (201~255) Pressure Relief Mode (Emergency Stop).

3.4 IP ADDRESS

It is mainly used for timing code synchronization which can transmit the special effect file(edited by computer) to console through network cable.

NOTICE

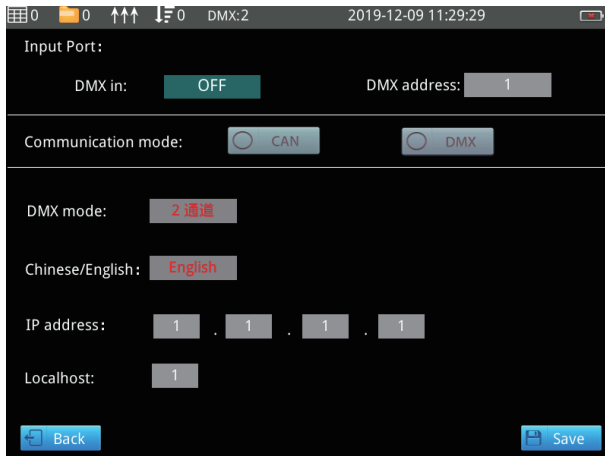
Same gateway

Files can be transmitted only when console' s and computer' s IP address have the same gateway which can be achieved by modifying console's first 3 groups data or computer's IP gateway.

NOTICE

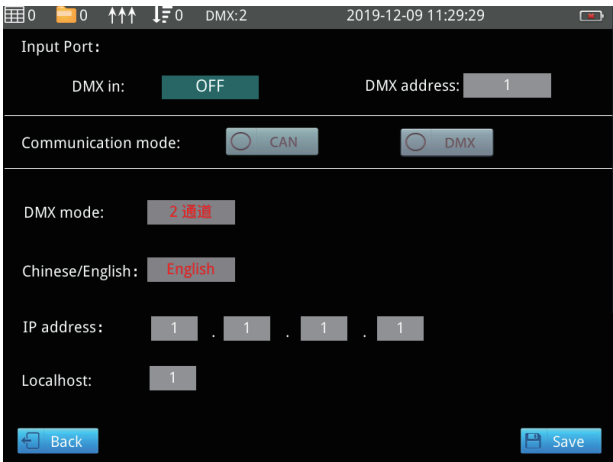
Different IP address

Console's and computer's IP address must be different, otherwise files will be transmitted failed. For example: If computer's gateway is 192.168.88.1, and computer's IP address is 192.168.88.189. Then, console's IP address should be 192.168.88.*** (The value *** can be any number from 0 - 255 except 189)



3.5 NATIVE CONSOLE'S ADDRESS

It is mainly used for timing code synchronization. When native console's address is 1, the correlative effect equipment is 1st-60th. When native console's address is 2, the correlative effect equipment is 61st - 120th.



4 OPERATION NOTES

4.1 WORKING CONDITION REQUIRED

NOTICE

Please do not use this console in steamy environment to avoid screen fogging on the surface.

NOTICE

Please prevent long-term use of this console in dusty, overheated, wet or chemical environment, otherwise the inside of console will be damaged.

NOTICE

Please place it out of strong light environment to extend its life.

NOTICE

Please do not use it in enclosed spaces, and keep it in a well-ventilated place.

4.2 SAFETY TIPS

WARNING

Please do not knock or scratch the display screen with sharp/pointed hard object to avoid damaging the screen.

WARNING

Please do not spill liquid (such as drinks/soups) into the display screen surface to avoid damage to the console.

WARNING

Please do not expose the console to rain and moisture to avoid fire or electric shock.

WARNING

Please make sure the power cord is not curled or damaged.

WARNING

In order to avoid unnecessary wastage and extend the life of the machine, please unplug power during the period of not using.

WARNING

The console is a precision electronic equipment, please clean the machine regularly, do not use any chemical cleaner.

WARNING

If there is something wrong with shell or wire, please do not operate the product and immediately send the damaged parts to the authorized technician for replacement.

WARNING

Do not open the shell to repair, or it may cause serious accident.

WARNING

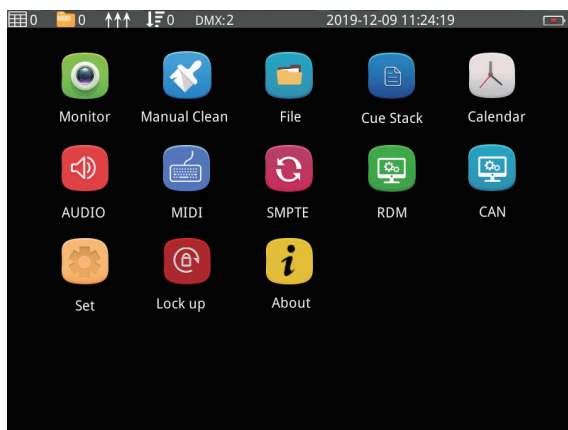
If there is a serious operation problem, please stop using this product immediately.

5 MACHINE OPERATION

5.1 PREPARATION

* Before using the console, please confirm that the required accessories are all ready.

* Please prepare the required audio and special effects files in advance.



5.2 MENU SETTING

5.2.1 MONITOR

HEATING

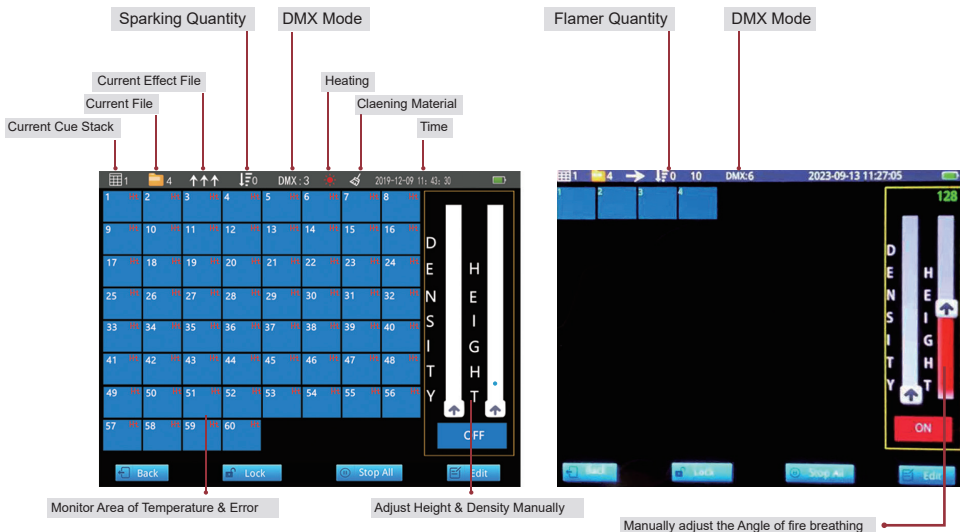
Press the "HEAT" key, the spark machines / Flamers will enter the heating state, and the heating indicator lights corresponding to spark machines on the screen will appear red. When the indicator lights turn green, it indicates that the heating is completed and spark machines / Flamers are ready to spark.

DENSITY AND HEIGHT

Density and height can be adjusted through the "DENSITY" and "HEIGHT" push rods under the state of "ON"

LOCK

Lock the current page by clicking the "Lock" at the bottom of the screen to avoid unnecessary errors.



STOP ALL

Click "Stop All" to stop all spark machines / Flamers to spark

5.2.2 MANUAL CLEAN

There are 2 kinds of cleaning ways after entering the cleaning page: clean all & clean some.

CLEAN ALL

Press the "CLEAN MATERIAL" button at the bottom of the screen, and the indicator lights of all spark machines on the screen will turn red, which means that all the spark machines are cleaning material.

CLEAN SOME

Click the indicator lights corresponding to the cleaning-required spark machines on the screen, and machines will start to clean material when the selected indicator lights turn to red.

Click "Stop All" or press "CLEAN MATERIAL" key to complete cleaning operation.



5.2.3 EFFECTS EDITING PAGE

First machine number

Unit Start No.: 1

Number of the last machine

Unit End No.: 4

The selected effect

Effect: Left To Right

High for the spark machine

Height: 10

Density for spark machine

Density: 100 %

number of flamer

Sequence: 10

File Number: 4

Duration: 5 S

Trigger Delay: 8 S

Repeat Delay: 5 S

Repeat Counts: 99

0.0 S / 0.0 S × 0

Sparking up to 30s
Flaming up to 8s

If the number of repetitions is greater than 1, the interval can be set

Save to take effect

Back

Test

Save

5.2.3 FILE

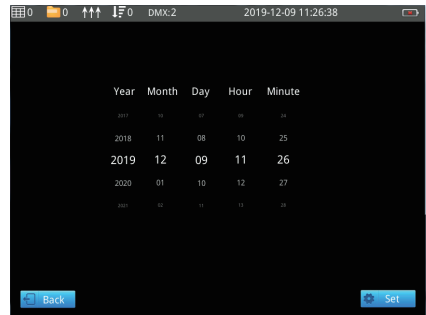
This page can be used to edit or select sparking / Flaming effects file.(There are 80 effects files in this page for selecting)

ONE SPECIAL EFFECTS FILE

After selecting a special effects file, click “Select file” and press “FIRE” to perform this effects file, or click “Edit” to edit this file in the editing page.

DELETE FILE

Select one or multiple effects files and click " Lock & select" first, then delete the selected files by clicking "delete".



5.2.5 CALENDAR

The default is the current time, which can be changed by sliding up or down.

5.2.6 AUDIO

SELECT SPARK MACHINES / Flamer

Select spark machines by filling in "Unit Start No." and "Unit End No."

SELECT SENSITIVITY

Sensitivity has 0-9 levels, bigger value means higher sensitivity, and 7 is a recommended level.

TRIGGER SOURCE

This product has 2 trigger sources: sound trigger  and audio line input signal trigger .

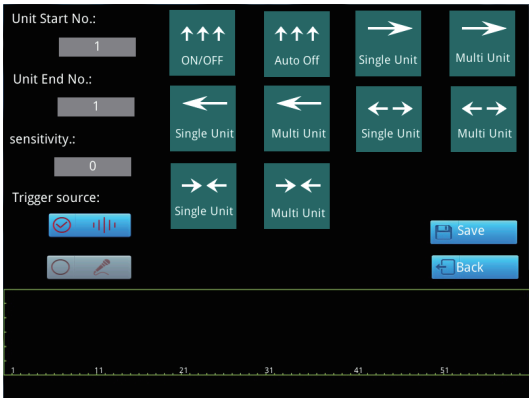
PERFORM SPECIAL EFFECTS

Input audio file to perform special effects.



CAUTION

This function can only be operated after selecting an effects file at least.



5.2.7 MIDI

Synchronization between console and MIDI keyboard can be achieved in this page.

RECORD

Click "Record" and select corresponding spark machines' indicator lights. Red lights mean recording is underway, and click "Save" to complete recording.

PLAY

Click "play" and select the recorded MIDI key to synchronously open the recorded device.

DELETE

Select the recorded MIDI key, and click "delete" to empty the record.

 CAUTION

Each key can not be recorded repeatedly, and please empty previous record before starting to record.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

File Number:

Back Save Record Delete Play

5.2.8 SMPTE

LTC timing code (or MIDI timing code) can play with spaecial effects package synchronously in this page.

EDIT EFFECTS PACKAGE

Edit effects package according to " Computer Special Effects Editing Software Description ".

SELECT EFFECTS PACKAGE

Select required effects and click "Enter" to save it.

DELETE EFFECTS PACKAGE

Select required effects and click "delete".

TRANSMIT EFFECTS PACKAGE FROM COMPUTER TO CONSOLE

Using network cable to connect console with computer, and the computer's effects package will display in the timing code synchronization page.

AUDIO TIMING CODE ACTS AS TIMING SYNCHRONIZATION CODE

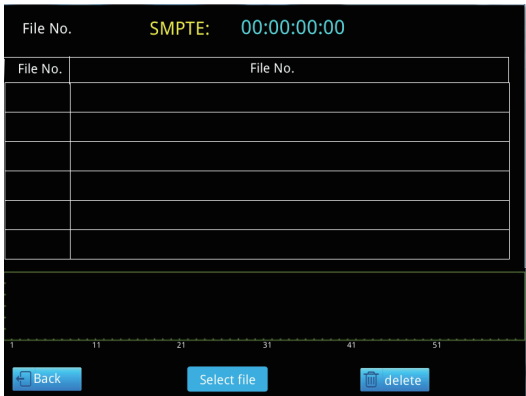
Using audio cable to connect computer's audio output interface with console's SMPTE interface.

MIDI TIMING CODE ACTS AS TIMING SYNCHRONIZATION CODE

Using USB to MIDI cable to connect computer's USB interface with console's MIDI IN interface.

SYNCHRONIZATION OF MULTIPLE CONSOLES' TIMING CODE.

Using network cable to connect multiple consoles, then one timing synchronous input signal can be synchronized with these consoles.



5.2.9 RDM

This product has RDM function which can set spark machines' / Flamers' DMX address and initial temperature remotely.

SEARCH RDM DEVICE

Click the “search RDM device” in the top right corner, and the search result will display in the list.

SET PARAMETER

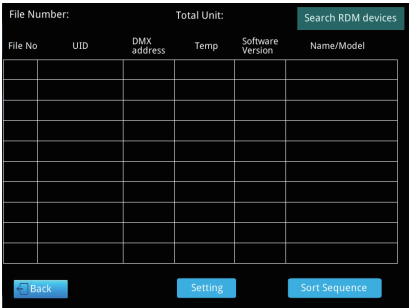
This product can set spark machines' / Flamers' parameter singly or multiply.

NOTICE

After searching RDM equipment, click “ sort sequence” to sort search result for view.

NOTICE

DMX address and temperature only can be set singly.



5.2.10 CAN

This product can arrange other equipment through CAN signal.

SEARCH CAN DEVICES

Click the “search CAN device” in the top right corner, and the search result will display in the list.

SET PARAMETER

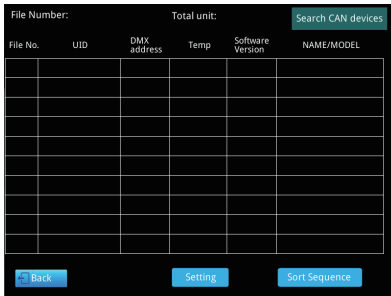
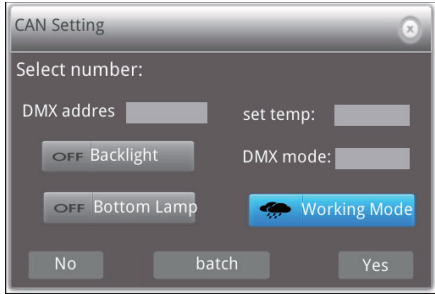
This device allows single or batch parameters setting of the Spark machines / Flamers

NOTICE

After searching CAN equipment, click “sort sequence” to sort search result for view.

NOTICE

DMX address and temperature only can be set singly.



5.2.11 SET

Other signal input state can be opened when "DMX in" is set to ON. This product can receive other DMX- consoles' signals through the DMX input interface (or act as input control through Art net). By this timethis console can be used to monitor temperature and error information.

When other consoles or Art net act as input control. DMX input offset address should be the first address- of the channel

For example:When machine 1 is controlled by 1-3 channel of DMX console. the offset address should be 1When machine 1 is controlled by 2-4 channel of DMX console, the offset address should be 2.

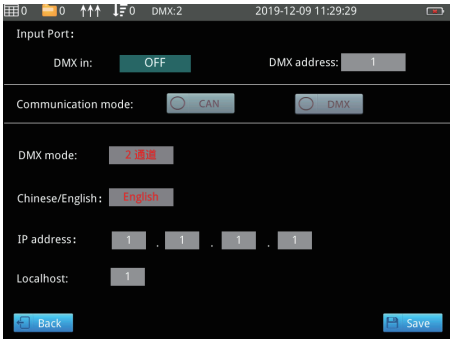


CAUTION

Please switch "DMX input" to OFF state when no other DMX signal input .

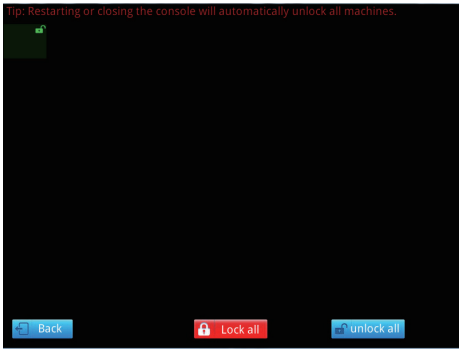
NOTICE

Switching is allowed between DMX and CAN communication.(The default is CAN communication, and it is recommended.)



5.2.12 LOCK UP

In case of emergency, the machine can be locked up to stop working.



5.2.13 ABOUT



CAUTION

If the above error message appears, please contact a professional to solve the problem.

6 MACHINE MAINTENANCE

NOTICE

Please disconnect power and remove the battery in the device during storage.

NOTICE

Please use dry soft cloth to clean the equipment , and do not wipe the console screen with thinner, spray cleaner or other solvents to avoid damage to the screen or machine.

NOTICE

Please put the equipment in a cool, dry, ventilated place to avoid damp , and keep the product away from high temperature environment.

Spark Fabrica

www.sparkfabrica.com



| marketing@sparkfabrica.com

| +86 138 7585 1139