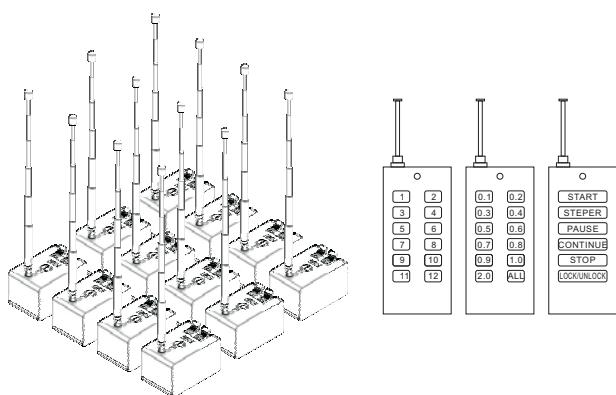


New AlphaFire / New AlphaFire Pro

User's Manual

Safe, Easy and Reliable,

With remote controllable service.



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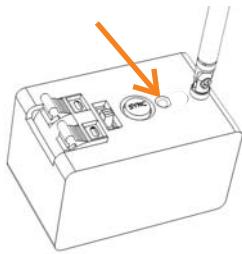
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Warning!!!

A. The purpose of this device is to cause the ignition of fireworks. Fireworks are explosives and may cause personal injuries or death to yourself or others, including spectators. You are responsible for the safe and legal use of this device according to the laws and regulations of your country and/or state / province / district. RFRemotech is not responsible for illegal or unsafe use of this device. The buyer/user assumes all responsibility and liability in the use of this device and further agrees, by purchase and/or use of this device, to indemnify and hold harmless RFRemotech against all liability for injury, loss, or damage direct or consequential arising out of the use of, or inability to use this device.



B. If the marked red LED left keeps turned on whenever the rod of the switch is at OFF or ON, don't use the module any more, the unit will fire e-match or igniter randomly. It is dangerous and may do damage to body!

A. Firing Module

Two Working Modes:

1-TEST: To check if the connection continuity of igniter / e-match is in good condition. See "B.Test" below.

2-ARM: Ready to fire igniter / e-match. There are 3 firing modes selectable. See "E. Three Firing Modes" below.

Specifications:

Model No.: RF1X (OOK)

Modulation: 433.92MHz

Type: Learning Code

Cue: 1

Power: 1x 6LR61 9V battery

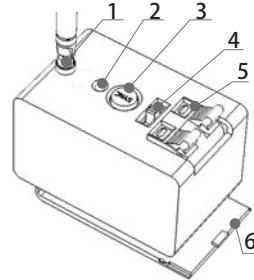
Firing Current: >750mA, Max.6A

Test Current: <1mA

Sizes: L62xH46xW38mm, antenna is retractile and can be folded.

With Power/Low Power Indication, Firing Indication, RF Signal Indication, Overload Protection and Short Warning Indication etc..

Parts:



1-Antenna, retractile and can be folded.

2-3-color LED, states:

Bright Red.

Firing. If the red LED keeps on all the way, it indicates the module shorts out.

Dim Red.

Sleeping. Once the module fires, 5 minutes later, the module will go to sleeping mode to save power. Press SYNC button or shift the switch to wake it up.

Green. Igniter is connected and tested well.

Green Blinking.

An matching RF signal is received, or the module is counting the firing sequence number. If the wiring terminals are connected igniter and the battery is low, the LED will be Green Blinking.

Orange (Red and Green LEDs are on in the same time).

No igniter is connected.

Orange Blinking.

If the Wiring Terminals are not connected igniter and the battery is low, the LED will be Orange Blinking.

3-SYNC Button. Used to synchronize transmitters or delete synchronization.

4-Switch, ON / OFF.

5-Wiring Terminals for igniter connection. Red for anode, black for cathode.

6-Battery Cover. The battery compartment contains 1x 6LR61 9V battery.

Read the contents above to find the meaning of the following keywords: **Firing, Short Out, Sleeping, Wake Up, Low Power, Count Sequence Number**.

B. Test

When an igniter is connected to Wiring Terminals #5, the LED #2

1

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Buttons START, PAUSE & CONTINUE of Transmitter C are unusable when the transmitter works with FSK firing module RF1K2.

Note: When firing modules are OOK type, no Transmitter C works with them.

D. Synchronization (SYNC)

Before SYNC:

Users should be aware of the following information or do some operations below.

It's better users clear codes of firing modules before make the modules to be synchronized to transmitters.

Only when a firing module has been synchronized to transmitters, it can work with the transmitters.

If Transmitter B or Transmitter C is synchronized but Transmitter A is not, the Transmitter B or Transmitter C will not function.

A firing module can store codes of 1x Group Sequence, 1x Button of Transmitter A, 1x Transmitter B & 1x Transmitter C. If users synchronize the same type of transmitter / button, the codes of the former transmitter / button will be replaced.

Mode 1: Normal Synchronization

Synchronize Transmitter A:

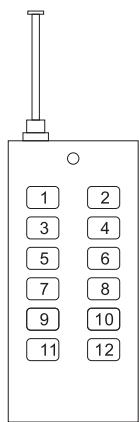
Turn on the module, press and don't release button SYNC #3 more than 3 seconds to make LED #2 turn to another color, and then release button SYNC #3, press one button of Transmitter A within 5 seconds, LED #2 will blink 3 times and then go back to the original color, the button of the Transmitter A is synchronized to the firing module successfully.

Synchronize Transmitter B:

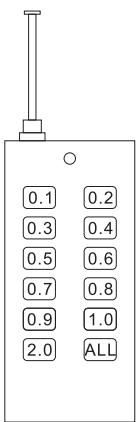
Turn on the module, press and don't release button SYNC #3 more than 3 seconds to make the LED #2 turn to another color, and then release button SYNC #3, press any button of Transmitter B within 5 seconds, LED #2 will blink three times and the go back to the original color, the Transmitter B is synchronized to the firing module successfully.

should light green, otherwise the igniter is broken or the wires are not connected well.

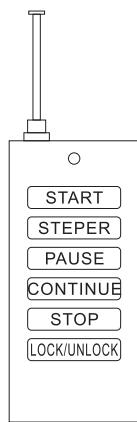
C. Matchable Transmitters



Individual Firing Transmitter A



Interval Firing Transmitter B



Program Firing Transmitter C

A firing module can work with 2 or 3 types of transmitter:

Transmitter A-Individual Firing Transmitter: Normally it is a 12 button transmitter, a button can fire a firing module individually. Buttons have 1, 2, ..., 12.

Transmitter B-Interval Firing Transmitter: It is a 12 button transmitter, the buttons have 0.1, 0.2, ..., 0.9, 1.0, 2.0, ALL, Button 0.1 can fire multiple firing modules in interval 0.1 second, Button 0.2 can fire multiple firing modules in interval 0.2 second etc..

Transmitter C-Stepper Firing Transmitter: It is a 5 or 6 button transmitter, the buttons have START, STEPER, PAUSE, CONTINUE, STOP & LOCK/UNLOCK, Button STEPER can fire multiple firing modules in Stepper Firing Mode, one module each time.

Press Button STOP of Transmitter C, firing will stop when modules are firing in Interval Firing Mode or Stepper Firing Mode.

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Synchronize Transmitter C:

Turn on the module, press and don't release button SYNC #3 more than 3 seconds to make the LED #2 turn to another color, and then release button SYNC #3, press any button except button LOCK/UNLOCK of Transmitter C within 5 seconds, LED #2 will blink three times and then goes back to the original color, the Transmitter C is synchronized to the firing module successfully. Make sure the Transmitter C is not locked during SYNC. Please note that this SYNC is just available for FSK firing transmitters and modules RF1K2.

Mode 2: Group Sequence Synchronization

Note: This SYNC is just available for FSK transmitters and modules RF1K2 but not for OOK transmitters and modules RF1X.

Through Group Sequence Synchronization, a firing module has its determinate group. The group sequence number can be one from 1 to 12. Use Transmitter A to determine Group Sequence.

Press and don't release button SYNC #3 until the Switch #4 is turned on, LED #2 blinks continuously, the firing module is in the mode Group Sequence Synchronization.

Then press again and don't release button SYNC #3 more than 3 seconds to make LED #2 turned always on in another color, and then release button SYNC #3, press one button of Transmitter A within 5 seconds, LED #2 will blink three time and then goes back to original blinking color, the firing module will store the group sequence as the number of the learned button of Transmitter A.

Confirm Synchronization

How to know what group sequence the firing module belongs to and what the sequence of the module is in the group.

Turn on the module, press the synchronized button of the Transmitter A, B or C, LED #2 blinks once, it indicates the code of the button or transmitters are stored in the module.

Press and don't release button SYNC #3 until the Switch #4 is turned on,

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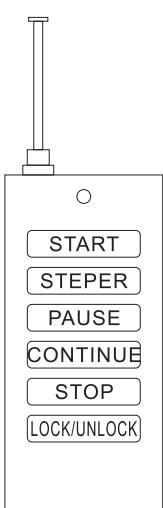
Transmitter B-Interval Firing Transmitter (see the sample right), it can be triggered by the transmitter in the certain firing time.

In this firing mode, if a firing module is with Group Sequence Synchronization, it will fires according the sequence number in the group. If no Group Sequence Synchronization, the module will default the sequence number to the first group.

Mode 3: Stepper Firing

Note: This Firing Mode is just available for FSK transmitters and modules RF1K2 but not for OOK transmitters and modules.

Turn on the module, when the module works with Transmitter C-Stepper Firing Transmitter (see the sample left), it can be triggered in the determinate sequence by Button Stepper of the transmitter. In this firing mode, if a firing module is with Group Sequence Synchronization, it will fires according the sequence number in the group. If no Group Sequence Synchronization, the module will default the sequence number to the first group.



Program Firing Transmitter C



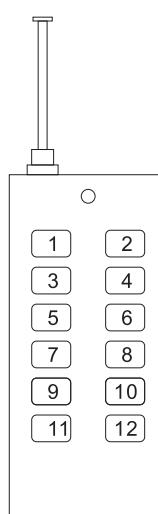
Modules are FCC and CE certificated, most transmitters are FCC and CE certificated.

and LED #3 blinks continuously, press the synchronized group sequence number button of any Transmitter A, LED #3 turns from blinking to solid light, it indicates the group sequence is remembered by the firing module.

Delete Synchronization

Turn on Switch #4, press and don't release button SYNC #3 more than 8 seconds, LED #2 will be turned on and don't release yet until the LED goes off, release button SYNC #3, no synchronization exists any more.

Warning: Only when no igniter is connected, you can do synchronization!

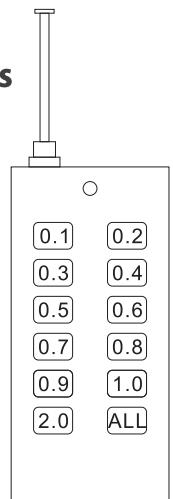


Dividual Firing Transmitter A

E. Three Firing Modes

A firing module must be synchronized to transmitters before the transmitters are able to fire the module.

When a firing module is powered and receives an available RF signal, the GREEN of the LED will blink.



Interval Firing Transmitter B

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Mode 1: Dividual Firing

Turn on the module, when the module works with Transmitter A-Dividual Firing Transmitter (see the sample above), it can be triggered by the synchronized button of the transmitter.

Mode 2: Interval Firing

Turn on the module, when the module works with



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NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.