



Kingdom New 10 Cue Sequencer

KFE2213 **Instruction Manual**

Contents

| | |
|------------------------------|------|
| Disclaimer----- | P2 |
| Warning----- | P2 |
| Description----- | P2 |
| Technical date----- | P2 |
| What is included----- | P3 |
| What is not included----- | P3 |
| Controls ----- | P3 |
| Program Modes ----- | P3P4 |
| Programming----- | P4P5 |
| Dormancy Mode----- | P5 |
| Trouble shooting----- | P6 |
| Over-loading protection----- | P6 |
| Optional Upgrade----- | P7P8 |

Disclaimer:

The manufacturer(s), distributor(s) and / or seller(s) accept no responsibility whatsoever for any damage, injury or loss, financial or otherwise, resulting directly or indirectly from the use, misuse, function or malfunction of this device. By purchasing and using this device you understand and accept this disclaimer.

Warning:

1. Only the person who has fireworks license is allowed to purchase the product, or the person of whom there isn't fireworks purchase limit in his/her country or district is allowed to purchase the products. Kingdom is not with responsibility for any illegal usage.
2. Safety is the user's responsibility. All pyrotechnic effect and firework safety guidelines should be followed completely.

Description:

It is a 10+1 cue sequencer for firing fireworks and pyrotechnics that allow you to add unique effects with your fireworks shows using your current firing system. With this device you will be able to add sequencing programs such as: All Firing, Same Time Firing between cue delay, and Different Time Firing between cues. The sequencer is started by supplying a 6-30DC volt pulse into the Trigger Input terminals. At the end of the sequence, a pulse will come out of the Trigger Output terminals. This can be used to start another sequencer. In this way, many sequencers can be linked together for a longer sequence. The system with over-loading protection function. It is a advanced technology which can ensure the system for long time use.

Congratulations in choosing one of the best consumer sequencer machines!

Technical date:

| | | | |
|-------------------------|---------------------|--------------------|--------------------|
| Module Size (cm) | 15.8 x12 x 4.2 | Built-in power (V) | 2x 9V AA batteries |
| Unit weight (kg) | 0.28 | External power (V) | DC 12-24V |
| Over-loading protection | New version in 2014 | Test current (MA) | 0.8 |

What is included:

1 Piece of 10+1 Cue Firing Module.
1 Piece of external power cable.

What is not included:

Batteries for module.

Controls:

| Button | Full Name | Description |
|-----------|-------------|--|
| ADD | Address | 1. Set addresses when using more than 1 sequencer and controlled by Step Firing mode. 2. It simply serves as a address mark. |
| T/M | Time Mode | Change between Same Time and Different Time mode. |
| | Right Arrow | Move through menu / digits. |
| | Up Arrow | Increment digits |
| OK/DELETE | OK/Delete | Save new settings or Delete old settings. |

Program Modes:

All Fire:

Upon the sequencer being triggered, it will fire all 11 cues at once.

Same Time Delay:

Upon the sequencer being triggered, it will fire whatever time delay that you choose between every cue.(Time delay range: 0.1 -9.99seconds)

Variable Time Delay:

This advanced function allows you to program different times between every cue. In this mode you can control the tempo of the show without the need of constantly pushing buttons. (Time delay range: 0.1 -9.99seconds)

Stepper Mode:

Step to the next cue on each trigger input pulse.

Power requirements:

This device may be powered by using(2) 9V batteries. In this power mode, you will be able to fire 1 igniter per cue. For the consumers who require a higher voltage output, you may use any external battery to power the sequencer between 12 and 24volts. At this voltage level, you may be able to fire more than 1 igniter per cue. Use of the external battery will require the use of the 2 power adaptor plugs which are provided.

Auto Igniter Check:

When you power the system on, the unit will begin to automatically run a continuity test on all cues including the output trigger. Any cues with faulty igniters or wire will indicate with the LED reading. E and the faulty cue number. If all cues pass and the output trigger terminal is connected to a second system or sequencer, then the LED will read: PAS. You do not need to have the output trigger connected to anything unless you want it to trigger a cascading daisy chain to secondary systems.

Programming:

1.To set program mode you push the OK/Delete Button until the LED screen reads SA 0.00

2. SA 0.00 stands for same time delay between cues. You can cycle through the number places by pushing the (Right Arrow) button. The first digit before the decimal dot is the whole second place. You push the (UP Button) to select a number. (ex. a 1 in this place indicates a 1 second delay between every cue. **SA 1.00**) You can then push the (Right Arrow Button) again to select the next number to the right of the decimal.

3. To reset any pre-programmed time code, simply push and hold the OK/Delete Button until the LED screen shows SA 0.00.

4. How to set the time code where you have different time delays between cues.

Step 1. Push the OK/ Delete button until you see SA 0.00.

Step 2. Push the Right Arrow Button until the first 0 is flashing.

Step 3. Press the T/M button. The LED will indicate 010.00. The 01 indicates the 1st cue. Then scribe through the Right and UP buttons till you have a number between 0.01 and 9.99. This is the time delay between the first and second cue. When you have the number entered, press OK/Delete.

Step 4. The LED will now read: **02** 0.00. This indicates you are ready to program the time delay between cues 2 and 3.

Step 5. Eventually you will see the LED indicate 10 0.00. This serves as the time delay between the 10th cue and the output trigger. (This is how you can daisy chain thousands of these sequencers together) when you enter this time and hit OK/Delete, the LED will read D/DIF which stands for Delay different mode. When the system detects a voltage pulse between 6V and 30V, the sequencer program will execute.

5. To Program "ALL" mode push the OK/Delete button until the LED reads **SA** 0.00. you then keep pushing the Right Arrow button until you scribe completely through all the digits and you see the LED read "ALL". In this mode, as soon as the system detects a volt pulse between 6V and 30V. every Cue (including the output trigger) will fire.

Dormancy Mode:

This system has a built in power conservation mode by where the LED will not light. Additionally, the firing LEDs will not light during firing. The system will still fire however. The dormancy mode is there to conserve power and since you only need to see the LED and firing LEDs during programming and testing. There is no need to for these lights during actual operation as you won't be near the units during the show.

Trouble Shooting:

Low Power Indicator is Flashing:

System is detecting depleted batteries or external battery connection is poor. Replace with fresh batteries or recharge external battery. If the external power port is used, ensure that there is a good connection.

1) System will only light 1 igniter per cue: System is being powered by 2x 9 volt batteries or the 12 volt to 24volt external power source needs to be recharged.

2) After a few minutes of being left on, the LED screen goes off:

The system is in Dormancy mode and is operating properly. The unit will fire as programmed to. Pushing any of the program buttons will "wake up" the unit.

3)When initially powered up, the LED is reading: E00

The system is operating as designed and is completing the continuity checks. Number after the E indicates a faulty igniter or e-match. Replacing the indicated cue with a good e-match or igniter will fix this. When all cues pass this test, the words "PAS" will display.

** If you are not connecting the external output terminals to a second sequencer, you will see an **E10** code. This indicates that the system does not detect any device in the external output to daisy chain.(If you do not need to daisy chain, you may use this terminal as an 11th cue)

For old product the firing indicator LEDs is illuminated all the time regardless of whether or not anything is connected to the cue. This indicates a burnt-out cue circuit from a high amperage direct short. The system has been destroyed due to user negligence and must be replaced.

Over-loading protection:

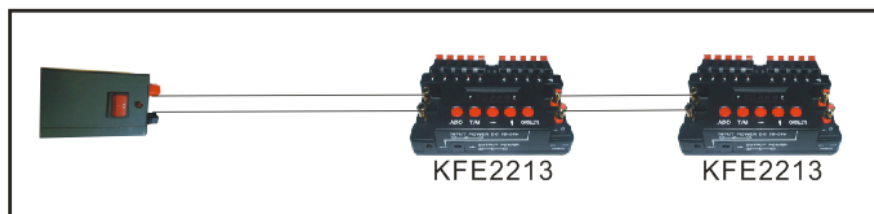
2014 New version firing systems have Overload Protection. The function is not through fuse, it is through special design in hardware and firmware. You don't need to worry about short igniter or any misoperation will damage the firing systems and don't need to replace fuse. It is a advanced technology can ensure the system for long time use.

Optional Upgrade

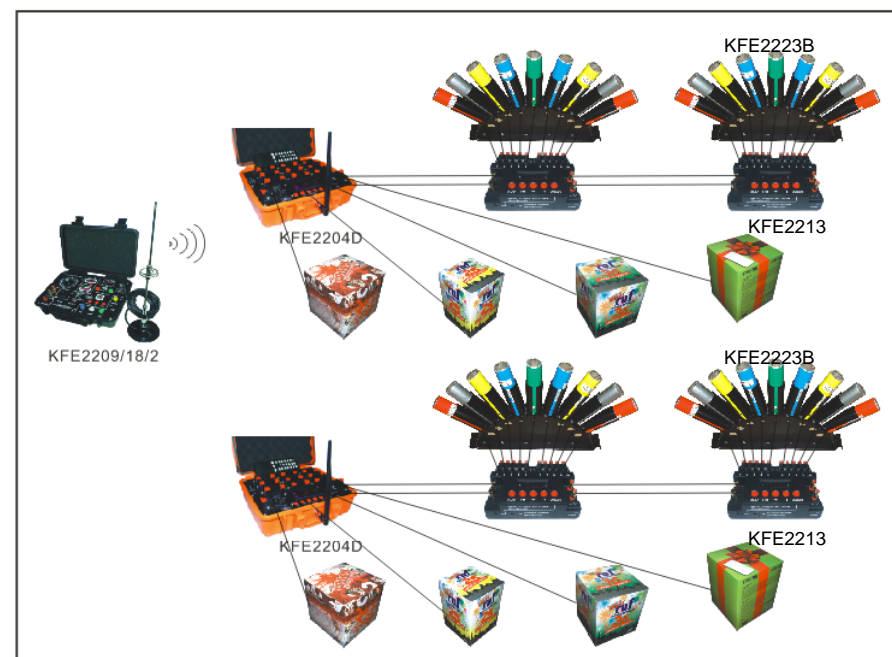
1.Combine it with the new 1cue firing unit- KFE2201C, can be turned into a set of 11cue remote control firing system. Set it in STEP firing mode, it can ignite 11 pieces of fireworks independently.



2. How to use it as a wired firing system(Step firing mode).



3. It triggered by the input voltage of DC 6-30V. This function can make it combined with other firing systems from different manufacturers to be used in professional fireworks display shows or special effect performance.



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