CLAIMS:

1. A narrow space rescue training device comprising:

a three dimensional grid framework; wherein the grid framework comprises a plurality of multidirectional connectors disposed at equally spaced apart distances and in multiple layers;

wherein:

two adjacent multidirectional connectors are plug-connected by a horizontal frame pipe, and two adjacent multidirectional connectors disposed in adjacent layers are plug-connected by an erect frame pipe, so that four adjacent erect frame pipes in each layer form a space unit;

each multidirectional connector comprises multiple pin plugs, such that two adjacent pin plugs are substantially perpendicular to each other; with each multiple pin plug comprising at least: (a) two slotted pin plugs; or (b) a slotted pin plug and a double slotted pin plug; or (c) two double slotted pin plugs; and (d) an internally threaded pin plug; such that slots of the slotted pin plugs/double slotted pin plugs are matched and spliced to form a joint, and the internally threaded pin plug is secured by a screw on a top or bottom of the joint;

detachable barriers are disposed in the space units to create obstacles for training; and

mesh plates are disposed on floors in the space units or sidewalls in some space units, so that some space units form channels in the rescue training device.

2. A device according to claim 1, wherein each of the multidirectional connectors located at the four corners of the top layer comprises a three-directional connector, the multidirectional connector located at the side comprises a four-directional connector, and the multidirectional connector located at the interior of the grid framework comprises a five-directional connector.

3. A device according to claim 2, wherein the three-directional connector comprises two slotted pin plugs and an internally threaded pin plug, such that slots of the two slotted pin plugs form an L-shaped joint, and in use, a square washer and the internally threaded pin plug are respectively disposed on the top and bottom of the spliced L-shaped joint, and the screw passes through the square washer and L-shaped joint in a top down manner.

4. A device according to claim 2, wherein the four directional connector comprises one slotted pin plug, one double slotted pin plugs and one internally threaded pin plug, such that two slots of the slotted pin plug and the double slotted pin plug form a T-shaped joint, and in use, a square washer and the internally threaded pin plug are disposed respectively on the top and bottom of the spliced T-shaped joint, and the screw passes through the square washer and T-shaped joint in a top down manner.

5. A device according to claim 2, wherein the five-directional connector comprises two double slotted pin plugs and one internally threaded pin plugs, such that two slots of the double slotted pin plugs form a cross-shaped joint, and in use, a square washer and the internally threaded pin plug are respectively disposed on the top and bottom of the spliced cross-shaped joint, and the screw passes through the square washer and cross-shaped joint in a top down manner.

6. A device according to any one of claims 3-5, wherein the slotted pin plug comprises a plug portion and a slot portion, one end of the plug portion has holes and the slot portion has an open slot, and wherein the double slotted pin plug comprises two symmetrical plug portions disposed on each side of a slot portion, with the plug portions having threaded holes and the slot portion has an open slot.

7. A device according to claim 1, wherein the multidirectional connectors located on the four corners at the intermediate level comprises a four directional connector, the multidirectional connector at the side comprises a five-directional connector, and the multidirectional connector at the interior comprises a six-directional connector.

8. A device according to claim 7, wherein the four-directional connector comprises two slotted pin plugs, a hollow pin plug and one internally threaded pin plug, such that the slots of the two slotted pin plugs form an L-shaped joint, and in use, the hollow pin plug and the internally threaded pin plug are respectively disposed on the top and bottom of the spliced L-shaped joint, and the screw is inserted through the hollow pin plug and L-shaped joint in a top down manner.

9. A device according to claim 7, wherein the five-directional connector comprises one slotted pin plug, one double slotted pin plug, a hollow pin plug and one internally threaded pin plug, such that two slots of the slotted pin plug and double slotted pin plug form a T-shaped joint, so that in use, the hollow pin plug and the internally threaded pin plug are respectively disposed on the top and bottom of the spliced T-shaped joint, and the screw is inserted through the hollow pin plug and T-shaped joint in a top down manner.

10. A device according to claim 7, wherein the six-directional connector comprises two double slotted pin plug, a hollow pin plug and one internally threaded pin plug, such that two slots of the double slotted pin plugs form a cross-shaped joint, so that in use, the hollow pin plug and the internally threaded pin plug are respectively disposed on the top and bottom of the spliced cross-shaped joint, and the screw is inserted through the hollow pin plug and cross-shaped joint in a top down manner.

11. A device according to claim 1, wherein the multidirectional connectors located on the four corners at the bottom level comprises a three-directional connector, the multidirectional connector at the side comprises a four-directional connector, and the multidirectional connector at the interior of the grid framework comprises a five-directional connector.

12. A device according to claim 11, wherein the three-directional connector comprises two slotted pin plugs and one internally threaded pin plug, such that slots of the two slotted pin plugs form an L-shaped joint, so that in use, the internally threaded pin plug is disposed on top of the L-shaped joint, whilst a square washer and a rectangular plate are disposed at the bottom, and the screw passes through the rectangular plate, the square washer and L-shaped joint with the screw being part of a ground screw.

13. A device according to claim 11, wherein the four-directional connector comprises one slotted pin plug, one double slotted pin plugs and one internally threaded pin plug, such that two slots of the slotted pin plug and the double slotted pin plug form a T-shaped joint, and in use, the internally threaded pin plug is disposed on the top of the T-shaped joint, whilst a square washer and a triangular plate are disposed at the bottom, and the

screw passes through the triangular plate, the square washer and T–shaped joint with the screw being part of a ground screw.

14. A device according to claim 11, wherein the five-directional connector comprises two double slotted pin plugs and one internally threaded pin plug, such that two slots of the double slotted pin plugs form a cross-shaped joint, so that in use, the internally threaded pin plug is disposed on the top of the cross-shaped joint, whilst a square washer and a square plate are diposed at the bottom, and the screw passes through the square plate, the square washer and cross-shaped joint with the screw being part of a ground screw.

15. A device according to claim 1, wherein the horizontal frame pipe (in row or column) or the erect frame pipe comprises square metal pipes, the connecting parts of the two ends of the metal pipe comprise through holes.

16. A device according to claim 1, wherein the multiple barriers comprise a door panel, two door panels, the diagonal opening plates, round plate, square plate, rectangular plate, manhole plate, ladders, tunnels, ramps or ladder board.

17. A method of configuring a spatial rescue training device comprising:

forming a three dimentional grid framework comprising a plurality of multidirectional connectors disposed at equally spaced apart distances and in multiple layers, plug connecting two adjacent multidirectional connectors disposed in a layer with a horizontal frame pipe, and plug connecting two adjacent multidirectional connectors disposed in two adjacent layers with a vertical frame pipe so that the four adjacent erect frame pipes between two adjacent layers form a space unit;

disposing barriers or obstacles in some of the space units; and

disposing mesh plates on floors of the space units or sidewalls in some of the space units to form channels in the spatial rescue training device;

wherein, each of the multidirectional connectors have multiple pin plugs, such that two adjacent pin plugs are substantially perpendicular to each other; with each multiple pin plug comprising at least: (a) two slotted pin plugs; or (b) a slotted pin plug and a double slotted pin plug; or (c) two double slotted pin plugs; and (d) an internally threaded

pin plug; such that slots of the slotted pin plugs/double slotted pin plugs are matched and spliced to form a joint, and the internally threaded pin plug is secured by a screw on a top or bottom of the joint.