WORLD-WIDE STANDARD FOR MILITARY AND SPORT FREE FALL APPLICATIONS

AUTOMATIC PARACHUTE RIPCORD RELEASE

Model 12000

NSN 1670-01-111-1050

FXC Corporation is the industry leader of Automatic Ripcord Releases, supplying in excess of 80,000 units to Armed Forces all over the world.The Model 12000 design reflects an accumulation of over 20 years of research and development of personnel safety equipments.

The Model 12000 is the most advanced state-of-the-art Mechanical Automatic Parachute Ripcord Release. It has been specifically designed as an emergency safety device for parachutists making premeditated parachute jumps.

FXC CORPORATION

DESCRIPTION

The FXC Model 12000 Automatic Parachute Ripcord Release is a precision device, designed for parachutists making premeditated parachute jumps. It was designed, developed, and is manufactured by FXC Corporation, the world's largest manufacturer of Automatic Parachute Ripcord Releases.

The Model 12000 is completely Mechanical in action — not dependent upon batteries, squibs, or pyrotechnic devices. Its design is both compact and rugged in order to withstand the service normally found in parachute jumping. The Model 12000 can be used on both the main and/or reserve of a tandem system, as well as a chest mounted reserve.

The Model 12000's function is to automatically withdraw the parachute ripcord pins in the event the parachutist reaches the point of the unit's preset altitude, and for whatever reason, the parachutist's rate-of-descent is exceeding 65 feet per second. Under normal conditions the Model 12000 would not operate, due to the parachutist having deployed his main chute, thus slowing his rate-of-fall below 40 feet per second, prior to reaching the Model 1 2000's release altitude setting.

The Sensing Mechanism senses the rate of fall vertically (Velocity Downward).

IMPORTANT

The Model 12000 has a "Safety Lockout Knob." The Jumper, before climbing into the aircraft, must turn the knob to "JUMP." If the Jump is aborted for any reason, the "Safety Lockout Knob" must be turned to "OFF." This is done to avoid any possibility of the unit firing in a rapidly descending aircraft when below the release altitude setting.

MANDATORY OPERATIONAL PROCEDURES

The Model 12000 Automatic Parachute Ripcord Release altitude setting must be PRESET on the ground at the Drop Zone BEFORE EACH JUMP. Never calibrate the Model 12000 in an aircraft in flight. Serious injury and/or fatality can result from calibration at locations other than the Drop Zone.

OPERATION

1. The Model 12000's Altitude Control may be set from 1,000 to 4,000 ft. Above Ground Level (AGL). Ground level may be anywhere from sea level to 10,000 ft. elevation. The Altitude Control, while on the ground, reads directly in feet Above Ground Level (AGL) at which it has been set to operate. Knowledge of field elevation and/or barometric pressure is not required.

2. Beginning with serial #4000, the release trigger mechanism rate-of-descent has been preset during manufacture at 40 feet per second NO FIRE and 65 feet per second ALWAYS FIRE .

3. The Model **12000 WILL NOT OPERATE** when the parachutist is above the unit's altitude setting, regardless of his rate-of-descent.

4. The Model 12000 **WILL NOT OPERATE** when the parachutist reaches the unit's altitude setting and his rate of-descent is less than 40 feet per second.

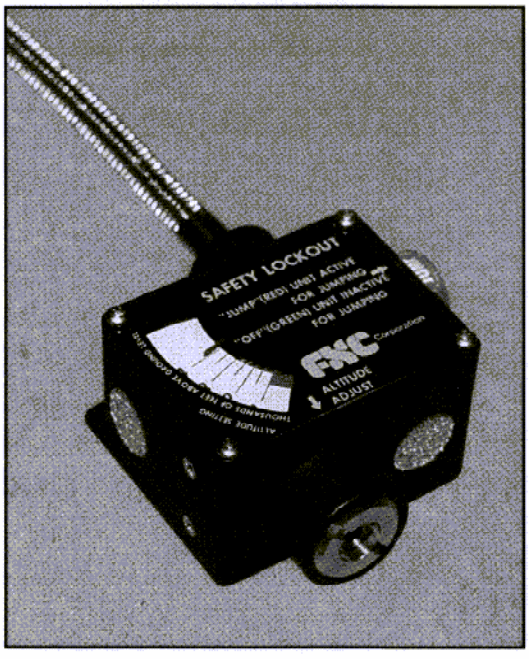
5. The Model **12000 WILL OPERATE** when the parachutist reaches the unit's altitude setting and his rate-of-descent is greater than 65 feet per second.

6. The Model **12000 WILL OPERATE if** the parachutist is at, or below, the altitude setting and his rate-of-fall increases from less than 40 to more than 65 feet per second.

Typical Example:
If the Model 12000 has been set to operate at 1,000 ft. Above Ground Level (AGL) and the parachutist opened his main canopy at 2,500 ft. Above Ground Level (AGL), the Model 12000 would NOT OPERATE at 1,000 ft. because the parachutist's rate-of-descent would not be great enough to trigger the unit into operation.

An example can be illustrated by the following incident: A jumper has the Model 12000, which has been preset at 1,500 ft. Above Ground Level (AGL), attached to his reserve parachute. The jumper opens his main parachute at 3,000 ft. Above Ground Level (AGL) and descends under an open canopy to an altitude of 1,500 ft. At this slow rate-of-descent, the Model 12000 will not fire. HOWEVER, at 1,200 ft. Above Ground Level (AGL) a mid-air collision occurs collapsing the jumper's canopy. As soon as the jumper's rate-of-descent is increased to greater than 65 feet per second, the Model 12000 will trigger, pulling his reserve ripcord pin.

Altitude Control



TYPICAL INSTALLATION
Harness & Container

Caution!
The Model 12000,when installed in a tandem system, harness flexing/elongation is being experienced which can cause the altitute control hose to stretch and to possibly cause a premature actuation To ensure that this problem does not occur, the hose must be allowed to move freely. The use of Loops to secure the hose to the harness is recommended rather than excessive tacking.

Chest Mounted Reserve

Before installing the Model 12000 into a Reserve Chute, the following must be performed:

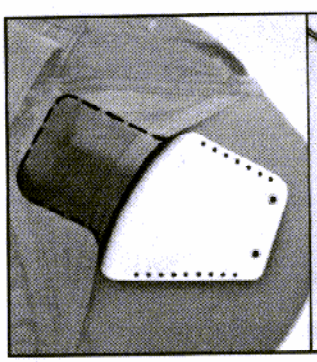


FIGURE 1

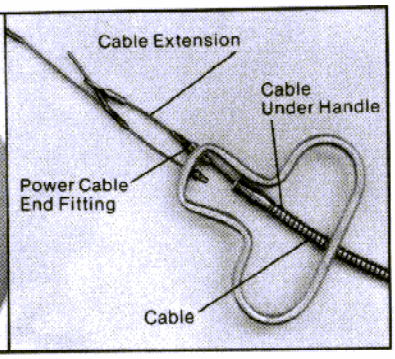
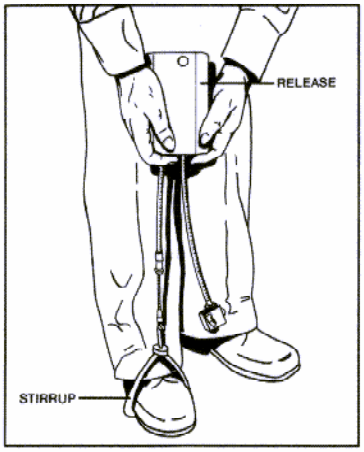


FIGURE 2

A.The FXC Ripcord Housing Mounting Plate (Figure 6A) must be slid into the existing ripcord pocket as deep as possible and secured by stitching the Plate to the pack flap as shown in (Figure 3). Also a standard eye must be sewn to the Plate (Figure 3) in order to hook the side opening band.

B. Arming the Model 12000



Arm the Model 12000 by fastening the Ripcord Pin Terminal (Fig. 6K) at the end of the Power Cable; then using Arming Tool (Stirrup, Fig. 6J) and with Power Cable straight, apply a pull-force of approx. 80 lbs. and a travel of two inches until the Power Cable latches.

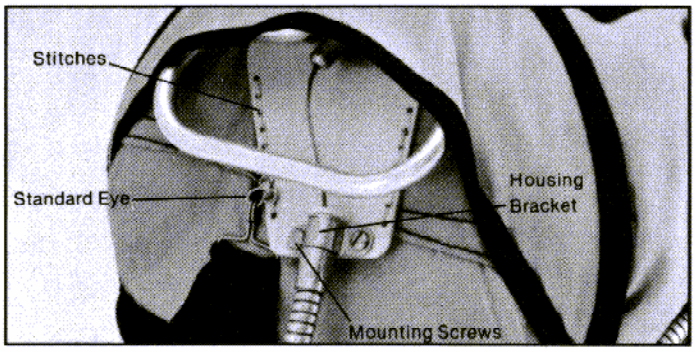


FIGURE 3

C. Secure the Power Cable End Fitting to the Ripcord Housing Mounting Plate with the Ripcord Housing Mounting Bracket (Figure 6C) and two (2) Mounting Screws (Figure 6D). Slide the Ripcord Assembly into the existing Ripcord Pocket as shown in (Figure 3). Then insert manual ripcord pin into terminal eye as shown in (Figure 2) before closing

FIGURE 4

D. Before closing the pack, the two bottom opening bands should be secured as shown. The Power Cable should be secured by tacking stitches (Figure 4).

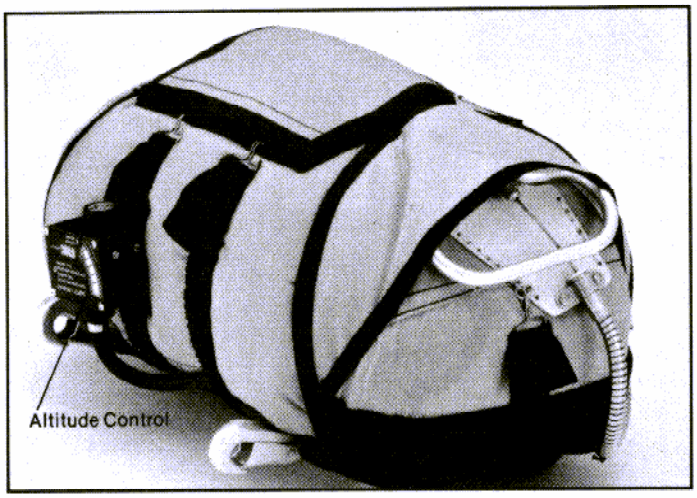


FIGURE 5

E. The Model 12000 Altitude Control and Air Hose, should be secured as shown in (Figure 5) and by feeding the opening band through the Altitude Control Bracket.

Note:
Installation of the Model 12000 can only be accomplished by the Harness/Container manufacturer or an FAA parachute rigger.

DISCLAIMER

The FXC Model 12000 is a Back-up Safety System. It is not designed to be the primary means to deploy the parachute system.

It is mandatory to maintain and operate your Model 12000 in accordance with this owners manual.

Failure to maintain and operate your Model 12000 in accordance with this owners manual, may cause improper operation.

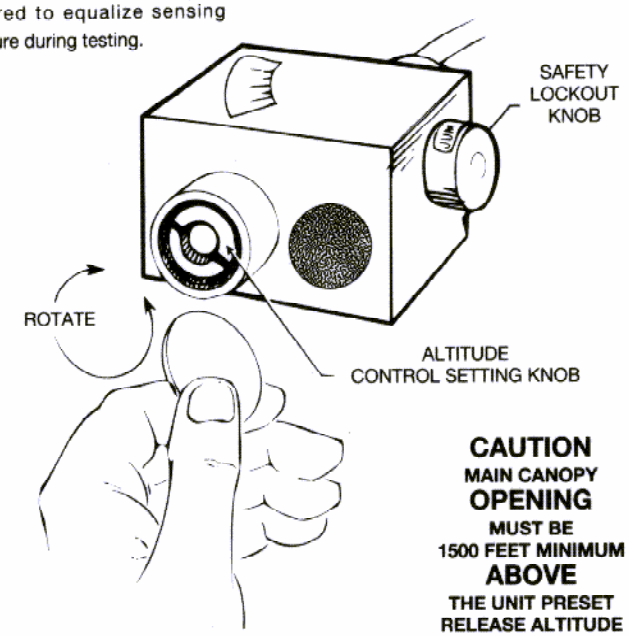
SYSTEM CHECK

The Model 12000 can be activated after installation in the parachute pack, guaranteeing ripcord pin release, by inserting the Altitude Control Assembly into a plastic bag with the Safety/Lockout Knob set on "JUMP" and by applying pressure or blowing into the bag, the unit will activate.

Warning: This test (using a plastic bag) can not be substituted for a functional test in an altitute test chamber.

Caution: A rubber cushion must be used between the power housing end and the ripcord pin terminal when functionally testing the Model 12000

Note: One minute delay is required to equalize sensing pressure during testing.



Altitute Setting

STEP 1
Set Safety Lockout Knob to "JUMP"

Step 2
Fit a coin or token into the slot of Altitude Control Knob as shown and by rotating clockwise or counterclockwise, adjust needle to desired altitude setting. No other step or tool is required.

Warning: Never establish a preset altitute in the red zone marked on the scale

Note: Turning the safety lockout knob to JUMP/OFF/JUMP in an aircraft in flight is safe and does not affect the preset altitute setting or the mechanism.

MAINTENANCE AND INSPECTION

Control of the Model 12000

MAINTENANCE

1. The Model 12000 is a delicate instrument. To maintain its reliability the user MUST NOT:

- Drag it through sand.
- Submerge it in any kind of liquid.
- Alter, misuse, tamper, or strike the unit.

2. FXC Corporation will perform free of charge a complete functional test, and any repair necessary due to manufacturing defect during warranty period. If repair is required due to misuses or neglects, FXC will advise customer of costs involved before repairing the unit.

3. If the Model 12000 is ever submerged in any kind of liquid, it must be returned to FXC for complete disassembly. FXC will advise costs involved before proceeding to repair the unit.

4. When returning a unit to FXC, it should be forwarded freight prepaid and will be returned by FXC freight collect.

5. For international customers, send air parcel post only and do not claim the value above $250.00 U.S. for custom duties purposes. Otherwise any additional costs for customs will be added to the repair charges.

PERIODIC CYCLING INSPECTION

1. If the Model 12000 is used on a Reserve Pack, it must be functionally tested in an altitude chamber at each repack cycle.

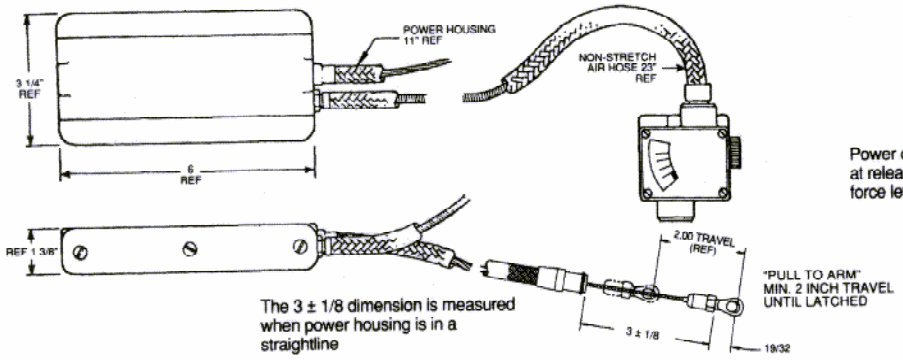
2. If the unit is used on a Main Parachute, it must be functionally tested in an altitude chamber every six months.

3. All returned Model 12000's will be automatically upgraded to the latest revision level.

SERVICING

The Model 12000 Rev. "A" thru "G" require annual factory servicing, while Rev."J" and later required factory servicing every two years.

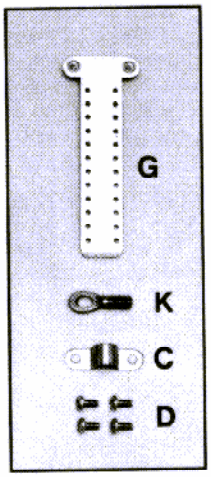
WARRANTY is one (1) year from date of manufacture. Warranty after servicing is one hundred twenty (120) days.



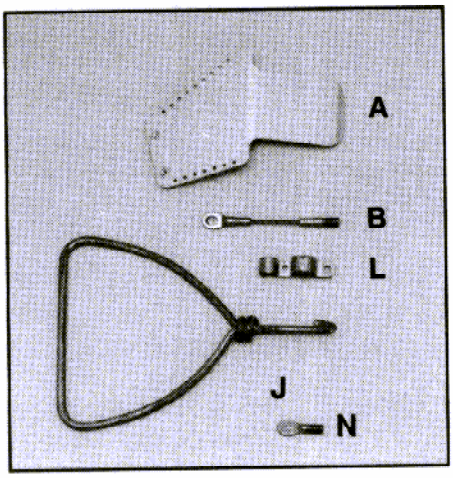
Power cable actuates an 80 lb. pull force at release point, with 30 lb. minimum pull force left at the end of 2" stroke.

MODEL 12000 MOUNTING HARDWARE (Figure 6)

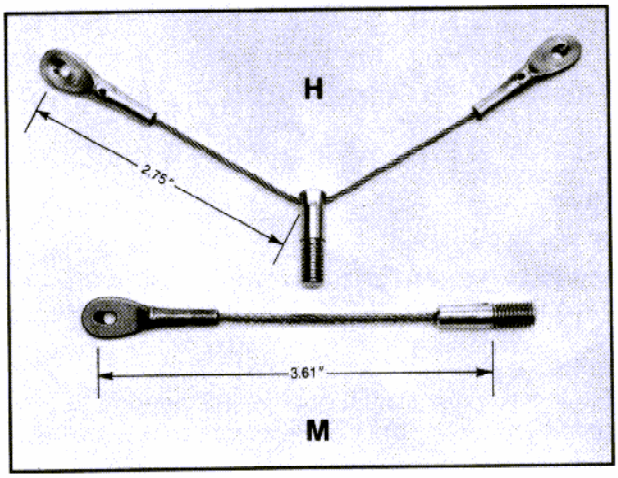
Standard



Optional

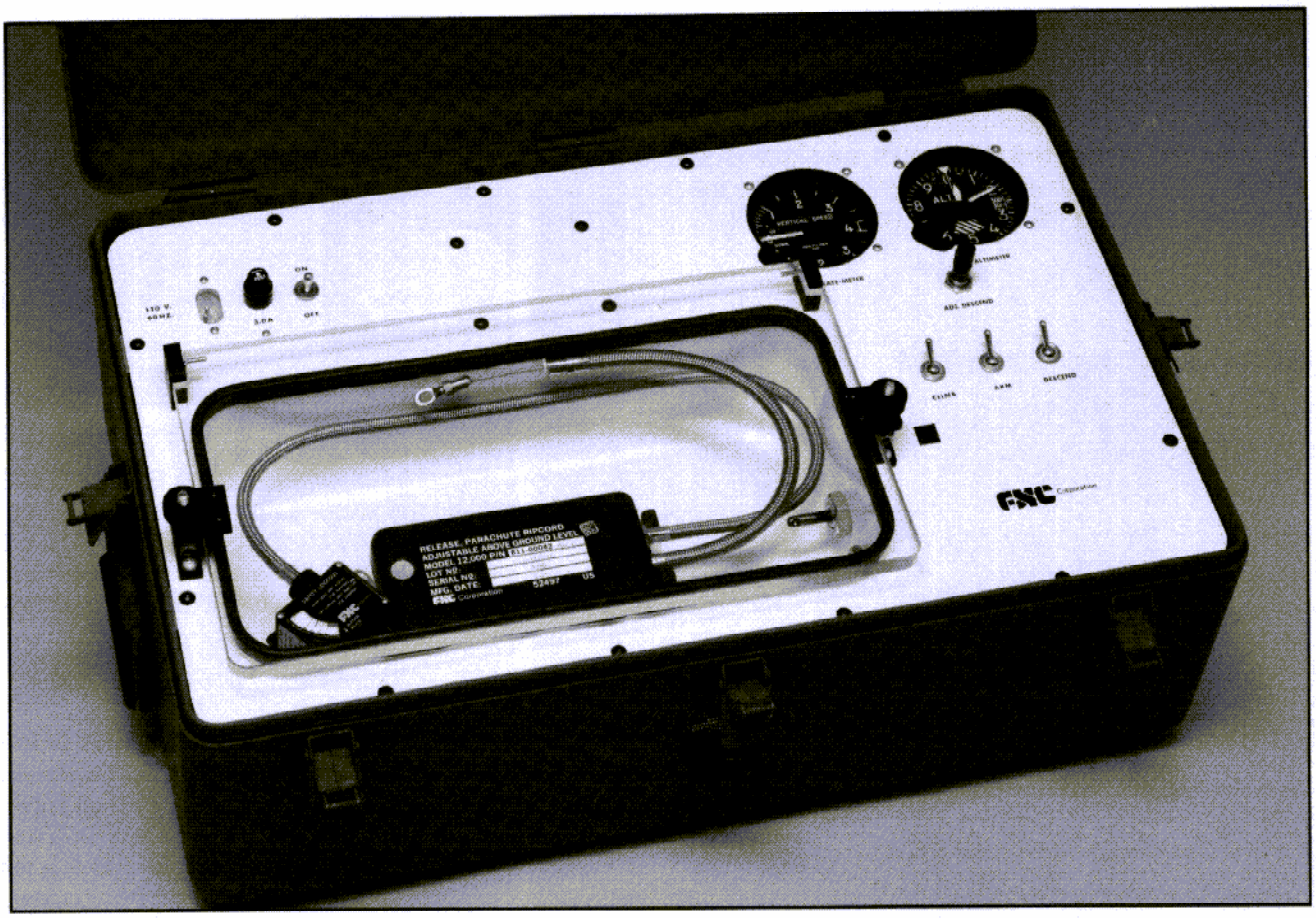


Optional



HARDWARE	TANDEM	2 PIN CHEST RESERVE	1 PIN CHEST RESERVE	PART NO.
A. Ripcord Housing Mounting Plate (Reserve Chute)		1	1	511-00115
B. Ripcord Cable Extension		1		411-00096
C. Ripcord Housing Mounting Bracket (Single)		1	1	311-30112
D. Screws	4-6/32	4-6/32	4-6/32	311-80103-9
G. Ripcord Housing Mounting Plate (Main Chute)		1		511-00116
H. "Y" Ripcord Cable Extension (small hole)				411-00097-1
J. Arming Tool (Stirrup)				311-10267
K. Ripcord Pin Terminal		1		311-311-20016-1
L. Ripcord Housing Mounting Bracket (Dual)		1		311-30115
M. Ripcord Cable Extension (small hole)			1	411-00096-1
N. Ripcord Pin Terminal (small hole)				311-20016-4

Systems Test Equipment



ALTITUDE TEST CHAMBER

PART NO. 711-07146 (110 VAC 60 Hz)
PART NO. 711-07146-1 (220 VAC 50 Hz)

This Test Chamber has an adjustable "Rate-of Descent" switch to accurately check the MODEL 12000 rate of descent requirement. It also has an arming piston to check the altitude accuracy of the KAP-3, FF2, Irvin Hitefinder and the FXC Model 2100.

FXC CORPORATION

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