

# H-H DiSEqC-Motor

# DG-120



JAEGER



## Jaeger Brings Movement to the Antenna

**W**hen dealing with moving antennas with diameters greater than one meter (3.3 feet) most DiSEqC motors would simply give up or, at the very least, would have a very difficult time with it. But Jaeger's new model DG-120 that operates under DiSEqC 1.2 makes the job of moving a heavy 120cm (4-foot) antenna very easy.

The advantage of all DiSEqC motors is that all motor commands as well as the power for the motor are routed through the existing coax cable that runs between the receiver and the LNB. As a result, very little material is needed for the actual installation. This is true not only for the electrical connections but (and here especially with the DG-120) also for the erection of the antenna and its alignment with the satellites in the Clarke Belt. If a mast is already available because it was at one time used for a simple fixed offset dish, it could in most cases be used for the DG-120.

The Jaeger can be mounted on almost any size mast up to 78mm (3.0 inches) in diameter. The only thing you need to know before setting it up is your own geographical location (latitude only) or the elevation for the southerly direction. The exact latitude for your location can easily be found on the Internet or in a good atlas. The correct value is then simply set on the right side of the motor. If you only know the elevation of the southern position, this is also no problem. This value is set up on the left side of the motor. The declination angle is very important for polar mount systems. This value can be found in a list that is provided in the very informative user manual. The correct value is simply subtracted from the elevation setting. Next the entire assembly is aligned to true south. If you don't happen to have a compass handy, a satellite at your southerly position would also do the trick. If, for example, you happen to live in Munich, Germany, you would use the HOTBIRD satellite. The small 1.2° offset from true south can be corrected

later by slightly rotating the entire antenna assembly on the mast to make up for this offset. Or you could move the motor itself 1.2° and then rotate the antenna assembly until the signal from HOTBIRD is once again at maximum as measured on a receiver or on an antenna measurement unit. There are two watertight buttons mounted directly on the motor that allow you to manually move the DG-120. This is a very practical feature. The DG-120 is a true hori-



### Coax-Connectors and manual control-buttons

zon-to-horizon motor since it can be moved 80° in both directions. The rule-of-thumb is: at a point where a satellite to the south is at an elevation of 40°, the satellites located roughly 75° east or west of the southerly position and beyond are below the horizon and can't be seen. The large azimuth range of this motor requires a sufficient amount of satellite positions. With 60, the DG-120 has more positions than most receivers with DiSEqC 1.2. As is normal, east and west motor movement limits can be set. If a realignment is necessary, there's a calibration function known as "Goto 0°". This is something similar to a Reset function.

A DiSEqC motor is typically not all that fast. At 13 volts this motor moves at 1.9° per second and at 18 volts this speed increases to 2.5° per second. To make up for its speed, the DG-120 is

very quiet. Your neighbors would hardly hear it moving. During our tests, the DG-120 was fitted with a 120cm (4-foot) Prodelin antenna weighing in at about 28kg (60 pounds). Even after extreme use, there was no noticeable mechanical play in the DG-120. If the receiver in use does not have DiSEqC 1.2, Jaeger also has an interface box with remote control to drive the antenna.

## Conclusion

The DG-120 is an extremely robust DiSEqC motor that can easily handle heavier antennas. The azimuth range of 160° is truly a special benefit. The installation and alignment of this motor are thankfully very easy.

Note: Most modern receivers do not include a positioner for standard antenna actuators (36 Volt). Help is in sight! At the moment the JAEGER EZ-6000 positioner is being tested by our test department. A detailed test report will appear in the 11-12/2002 issue of TELE-satellite.

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**Model:**  
DG-120

**Function:**  
DiSEqC H-H Motor

**Protocol:**  
1.2

**Maximum Antenna Size:**  
120cm (4 feet)

**Speed:**  
1.9°/sec. at 13V, 2.5°/sec. at 18 V

**Position Sensor:**  
Hall Effect

**Power Consumption:**  
200mA-350mA

**Calibration Function:**  
yes, Goto 0°

**Satellite Positions:**  
60

**Limit Protection:**  
yes

**Azimuth Angle:**  
160° total

**Elevation Angle:**  
25-75°

**Globally Compatible:**  
yes