

## GEMS Gaze-Control

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- The Gems Gaze-Control unit provides simple automatic variable head movements for the Gems series of poseable mannequins.
- It is a replacement for the standard neck and no modifications are needed for it to be fitted.
- The Gaze-Control unit allows any figures in an existing display to be updated easily with virtually no disturbance to their setting.
- At the simplest the only connection required is a pair of thin wires for the low voltage power supply to the unit, such wires can be easily tucked away out of sight.

## BEHAVIOURS

When fitted to a figure it allows two lifelike behaviours.

Standard Behaviour -

- Rotation of the head from side to side at random intervals and degree of turn.
- The direction of the heads gaze is adjustable from Left to Right and the random motions are made about the preset direction.
- Speed of movement is presetable and the interval between turns and the degree of turn are scaleable to allow the reproduction of all behaviours from motionless through barely perceptible and graceful to agitated.

Triggered Behaviour -

- Whilst operating in Standard Behaviour mode the head can be triggered to look in either of two presetable directions. This is done by activating one of the two trigger inputs. These inputs are suitable for connecting to pressure pads, light-beam equipment and infra-red motion detectors etc. consequently the figure can respond to the presence of people.
- For each input an auxiliary output is activated when the head has turned to its preset position, this allows triggering of external equipment such as voice playback for announcements, welcoming messages, greetings etc..
- When the head turns to a preset direction it always does so at full-speed, regardless of the setting of the Speed Control knob.
- Periodic auto triggering can be set for Gaze-1, see below.

## CONTROLS and CONNECTIONS

### Controls

- Speed** - Sets the speed of movement.  
Turn the control fully clockwise for Fast,  
anti-clockwise reduces the speed  
and fully anticlockwise is for Stopped.  
Start with speed set to fast and reduce as desired.
- Gaze** - Clockwise turns the head to the Right  
Anti-clockwise turns the head to the Left.  
Start with the control pointing straight up,  
this corresponds to the figure looking straight ahead.
- Frequency** - Fully clockwise sets a quarter of a second delay between moves,  
fully anti-clockwise a maximum of about one minute between moves,  
the actual delay will be a random time between a quarter of a second and the setting  
of the Frequency control.  
Start with this control fully clockwise and reduce as desired.
- Turn** - Fully clockwise gives large turns, and fully anti-clockwise is for stopped.  
The actual amount of turn will be a random amount in-between no turn and the  
setting of the Turn control.  
Start with this control turned fully clockwise and reduce as desired.
- Gaze-1** - This control works similarly to the Gaze control  
but sets the position the head will go to when Trigger input 1 is activated.  
Start with this control set fully clockwise or fully anticlockwise.  
Trigger input 1 has priority over trigger input 2.  
If Trigger input 1 is closed on power-up then auto-  
trigger is set and the head will go to the Gaze-1  
position about every eight moves.
- Gaze-2** - This control works similarly to the Gaze control  
but sets the position the head will go to when Trigger input 2 is activated.  
Start with this control set fully anti-clockwise or fully clockwise.  
Trigger input 1 has priority over trigger input 2.

Note new settings of the controls are only taken into account from the start of a new movement,  
if Speed or Frequency were turned down then this may take some time, (up to two minutes).  
To avoid waiting for the new settings to be read, simply unplug the power connector from the  
Gaze-Control box wait 5 seconds and plug it back in, this will start everything off afresh with the  
new settings.

## Connections

**Power** - The lead from the Low Voltage Power Supply Unit plugs into this socket.

12Vdc, 200mA from the double insulated low voltage power supply unit, (9 to 16 Vdc unregulated).

2.1mm power connector, centre pin positive.

**Head** - The lead from the Neck unit plugs in here.

Note there is a bump on the plug which matches the cutout on the bottom of socket.

The lead from the Neck unit has an extra connector near the top, this connector is for expansion units.

**Trig 1** - Trigger Input 1, when activated the Head goes to the position set by the Gaze-1 control.

Takes a 3.5mm mono-jack-plug,  
requires a No-Volt switch closure,  
eg a simple push switch or Pressure-Pad.

(No-Volt switch to be rated above 12Vdc and 100 mA).

**Aux 1** - Auxiliary Output 1, takes a 3.5mm mono-jack-plug.

When the Head has reached the position set by the Gaze-1 control an isolated switch will be closed for 5 seconds while the Head remains stationery.

This can be used to trigger other equipment.

Relay contacts rated at 30 V and 1A maximum, isolation 50V maximum. (ie a No-Volt switch).

**Trig 2** - Trigger Input 2, when activated the Head goes to the position set by the Gaze-2 control.

Takes a 3.5mm mono-jack-plug,  
requires a No-Volt switch closure,  
eg a simple push switch or Pressure-Pad.

(No-Volt switch to be rated above 12Vdc and 100 mA)

**Aux 2** - Auxiliary Output 2, takes a 3.5mm mono-jack-plug.

When the Head has reached the position set by the Gaze-2 control an isolated switch will be closed for 5 seconds while the Head remains stationery.

This can be used to trigger other equipment.

Relay contacts rated at 30 V and 1A maximum, isolation 50V maximum. (ie a No-Volt switch).