

Easy operation

Simplicity, safety, flexibility

Basic operation of the magnets is reduced to a simple ON/OFF action from the operator station. To minimise the risk of accidental power off, switching off the magnets is always a two-handed operation requiring the simultaneous pressing of two separate buttons: OFF and ENABLE (see controls 2 & 3 in Figure 1:), located on opposite sides of the operator station. In multiple-magnet systems you may choose to switch on or off all or only selected magnet groups (see group buttons 4 in Figure 1:).

Magnet and crane controls in a single unit

In the case of overhead cranes operated from the factory floor the magnet and crane controls will generally be integrated into a single radio remote control unit similar to the one shown in Figure 1:

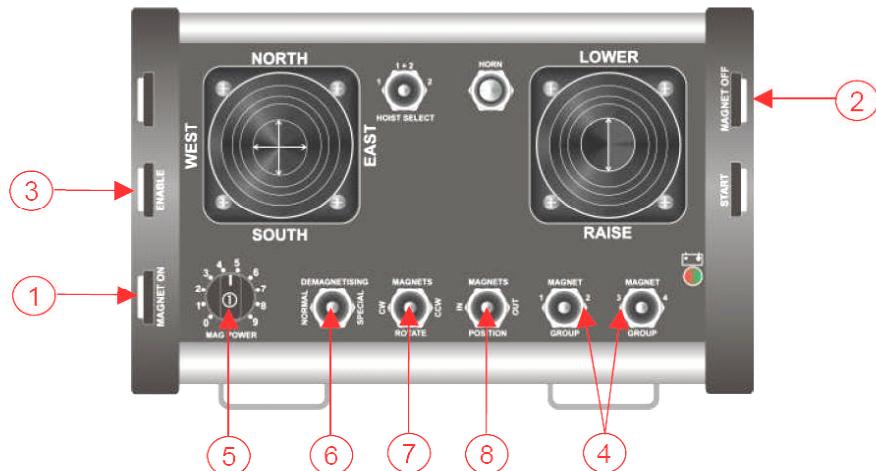


Figure 1: Typical radio remote control unit for crane and magnets

Automatic handling of crane interface functions

To ensure safe, seamless interworking with the crane all basic crane control signals and interlocks are handled automatically by the SmartPick unit. The following crane interlock signals are provided as standard and prevent or restrict movement of the crane if the magnets are not in the appropriate state:

- Hoist Lock: prevents activation of the crane hoist if the magnets have not reached a stable power setting. During power-up the first stable power state corresponds to the pre-selected Partial Load level. When the operator issues the power-off command, the crane hoist remains locked until the magnet current has reached zero.
- Travel Lock: the crane travel is immobilised or restricted to slow speed until the magnets have switched to full lifting force(Full Load).

As an additional safety feature, if the crane provides a LOAD SUSPENDED signal SmartPick will ignore a magnet OFF command issued while a load is still suspended.

Working with reduced power

It is not always necessary or desirable to use the full lifting force of the magnets. For example when you want to lift small quantities of a material or selectively drop certain items such as plates, you will need to reduce the magnet power. There are two ways of controlling magnet lifting force:

- Pressing the ON and ENABLE buttons together (1 and 3 in Figure 1:) will cause the magnets to switch to the pre-selected partial load setting. The magnet lifting force can then be further adjusted by turning the rotary selector switch (see control 5 in Figure 1:)
- Once the magnets are in partial load, the lifting force may be gradually reduced by keeping the ON button pressed. This operation (Partial Drop) is convenient for plate handling when you need to drop only the bottom few plates.