

Turning Target Instructions.

The Turner controls have 4 components :-

- PA 25 MC Timer control
- Remote control unit(s)
- Relay Box
- Air Actuators

The turners in both ranges work in the same way. Ensure there are no people or kit obstructing the targets when you power the units on – they may rotate quickly !!

PA25 Timer control

The PA25 is mains (240V AC) powered – Do NOT attempt to open the casings !



There are 3 wired connections to the PA25 – Mains (240V) input, Control Signal Output (24V) and Remote Control Input (24V). They are all on the rear of the unit.

To power the PA25, ensure the unit is plugged into the mains, and then switched on (rotate the key from 0 to 1) ; the LED display should come on. It will display **PA25-V1.3A** , and then change to whatever programmed sequence it is set to. If it does not power on, seek assistance. Do NOT attempt to fix it yourself !!

Ensure the Control Signal output is plugged in – this is a 3-Pin DIN plug on the rear of the unit, and is wired to the Relay box at the target end of the range.

Plug the Remote Control input in, if required – this is a 5-Pin DIN plug on the rear of the unit. This will be a two-button controller on a long or short lead. Or... if you are using the radio controlled two-button controller, a receiver unit. In that case, you will also need to power the remote's 'receiver' unit – an adapter that is also plugged into the mains – and ensure you have the remote key-fob to hand.

There are a number of touch-sensitive buttons on the PA25's front panel; each is described later. These are membrane switches – a gentle 'stab' is required; do not hold them down or they may register two pushes. The LED displays **Exposures / Edge time / Face time**, and counts up on operation of a sequence, once started.

Understanding the LED Display

Note – Haring PA25 units are built in Germany – thus some of the display's wording is in German. As long as the display is the same as the instruction / sequence, you should have no problem !!

There are a number of pre-programmed sequences that should NOT be altered; these correspond to the commonly used sequences in Gallery Rifle competitions. There are also a number of pre-programmed sequences that CAN be altered; these are usually designated as 'TRAINING' sequences. These can be configured using the buttons in Programme Mode. (reverts to default at 'Power Off'.) These are all described later.

The Remote control unit

The (optional) Remote control units plug into the 5 pin DIN socket on the rear of the PA25 unit. There are two types of remote control :

- Wired – this is a two-button unit on a long or short lead.
- Wireless – this consists of a wireless receiver unit that plugs into the PA25, plus a wireless two-button key-fob transmitter. The receiver also requires a 12v feed that is powered by the accompanying mains powered transformer.

In each case the two buttons perform a similar 'Toggle' feature, replicating the front panel functions of :-

- Toggle - Start or Stop the timed sequence
- Toggle - Manually Face or Edge the targets

The Relay Box

The Relay box requires mains power for the internal transformer. This unit converts the 24V pulse 'control' signal from the PA25 into a simple open / close relay. This in turn powers the air actuators by acting as a switch to the 12v battery power supply. There are no controls or operator actions required on the relay box, other than to ensure it has mains power and is connected to the air actuator relays.

The Air Actuators

The Air Actuators are powered from a 12V car battery and are either Open (Target Edge) or Closed (Target Faced). Ensure the battery is connected, and the control leads from the Relay Box are also connected. The Relay box acts as a switch, to power or interrupt the 12V feed. Also, ensure the compressor air pipe is connected and the compressor is actually powered on. (located in the Fire escape in 50M range / Plant room for the 25M range).

Programmes

The PA25 will hold up to 19 pre-programmed sequences, as described below :




<u>No.</u>	<u>Description</u>	<u>No of Repeats</u>	<u>Edge Time in Secs</u>	<u>Face Time in Secs</u>
1	20 SEC M1 EINZEL / DAUER	E 0	7	20
2	90 SEC M2 EINZEL / DAUER	E 0	7	90
3	165 SEC M3 EINZEL / DAUER	E 0	7	165
4	35 SEC M4 EINZEL / DAUER	E 0	7	35
5	12 SEC M5 EINZEL / DAUER	E 0	7	12
6	120 SEC M6 EINZEL / DAUER	E 0	7	120
7	TRAINING 1 EINZEL **	T 1	5	120
8	TRAINING 2 EINZEL **	T 6	5	2.0
9	TRAINING 3 EINZEL **	T 3	5	3.0
10	TRAINING 4 EINZEL **	T 1	5	8.0
11	TRAINING 5 EINZEL **	10	10	10
12	COMBAT	C 1	5	5.0
13	4 SEC EINZEL	E 0	3	4.0
14	6 SEC EINZEL	E 0	3	6.0
15	8 SEC EINZEL	E 0	3	8.0
16	10 SEC EINZEL	E 0	7	10
17	20 SEC EINZEL	E 0	7	20
18	150 SEC EINZEL	E 0	7	150
19	DUELL 5 ZYKLEN	S 5	7	3.0

Einzel = Single run Dauer = Continue for a Duration 5 Zyklen = 5 Cycles

Note: – ** TRAINING 1 to 5 can be customised – do not alter the others !!

PA25 - Front Panel Controls.

The following membrane switches are on the PA25 front panel. Remember – a gentle ‘stab’ is required; do not hold them down or they may register two pushes !

	Select the EDGE parameter to change (in Programme Mode)
	Select the FACE parameter to change (in Programme Mode)
i	Display the current Programme (Exposures / Edge Time / Face Time)
+	Add to the time, or number of exposures (in Programme Mode)
—	Reduce the time, or number of exposures (in Programme Mode)
1X ∞X	Enter / Exit Programme Mode and used to Select the EXPOSURES parameter to change (in Programme Mode)
P	Scroll up (^) and down (v) the pre-programmed sequences
S	Toggle - Start or Stop the timed sequence (replicated on the remote)
	Toggle - Manually Face or Edge the targets (replicated on the remote)

Operation

Select the programme required , using the **P** function. Ensure all targets are facing you, using the Manual Face / Edge toggle. Then, ensuring all shooters are ready, press the **S** button to start the sequence. The sequence should end with all targets edged. Re-face them, using the Manual Face / Edge toggle, then score.

Closing Down

When you have finished shooting, power off all mains units, turn off the compressors and disconnect the 12V battery leads. Failure to do so will drain the battery and may cause the other units to fail, over time.

Configuring Custom Programmes.

If the sequence you require is not already configured as one of the pro-programmed options, you can set custom timings on some of the sequence.

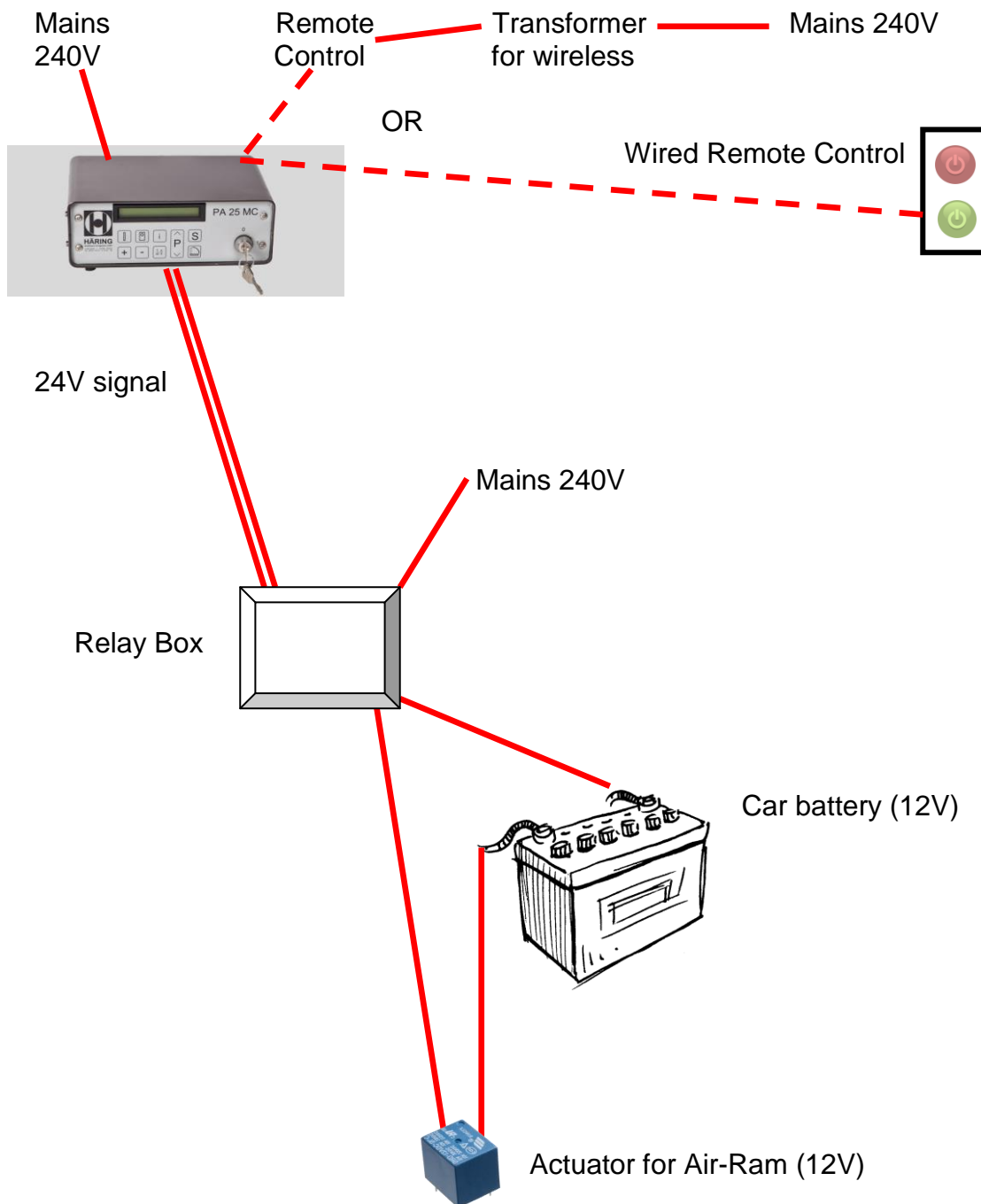
- Select one of the TRAINING programmes (TRAINING 1 to TRAINING 5)
- Press the **I** button to show the current configuration.
- Press the **1 X** to enter the programming mode.
- Select the **EDGE** parameter and using + and -, set the required timing
- Select the **FACE** parameter and using + and -, set the required timing
- Select the **EXPOSURES** (**∞X**) parameter and using + and -, set the required number of repeats.
- Press the **I** button to check the revised configuration.
- Ensure all targets are facing you, using the Manual Face / Edge toggle.
- Then, ensuring all shooters are ready, press the **S** button to start the sequence.
- The sequence should end with all targets edged.
- Re-face them, using the Manual Face / Edge toggle, then score.

Notes :-

Powering the unit off may reset any custom programmes back to their original default settings.

Do not set FACE and EDGE timings to less than 2 seconds – the system cannot react that quickly to changes and you may break the turning mechanisms.

Wiring of the system



DISCLAIMER

This system utilises a mixture of 12v DC, 24v DC and 240v AC to power it's components. FDPC Ltd can take no responsibility for any adverse outcome if anyone undertakes any modification to this wiring, unless authorised to do so by the committee.