8. Controller Manual 280-ARC

Contents

1. Introduction

The Tanco Autowrap Bale Wrap Controller enables the operator to monitor and control the operation of the bale wrapper at any stage of the wrapping cycle. The controller is designed for models: 280ARC, 404EH, 580A, and 1080A table-type wrappers.

There are 2 main operating modes – Automatic and Manual. The automatic mode permits 'one-touch wrapping' to ease the workload on the operator. In addition to the standard auto-wrap cycle where the bale load arm is operated manually, for the 580A and 1080A wrappers, bale loading and unloading can be incorporated into the standard auto-wrap cycle (the 'AUTOLOAD' option).

The controller is fully programmable to optimise wrapping performance. Bale counts are automatically logged in any one of 10 selectable memory stores, in addition to a grand total memory store.
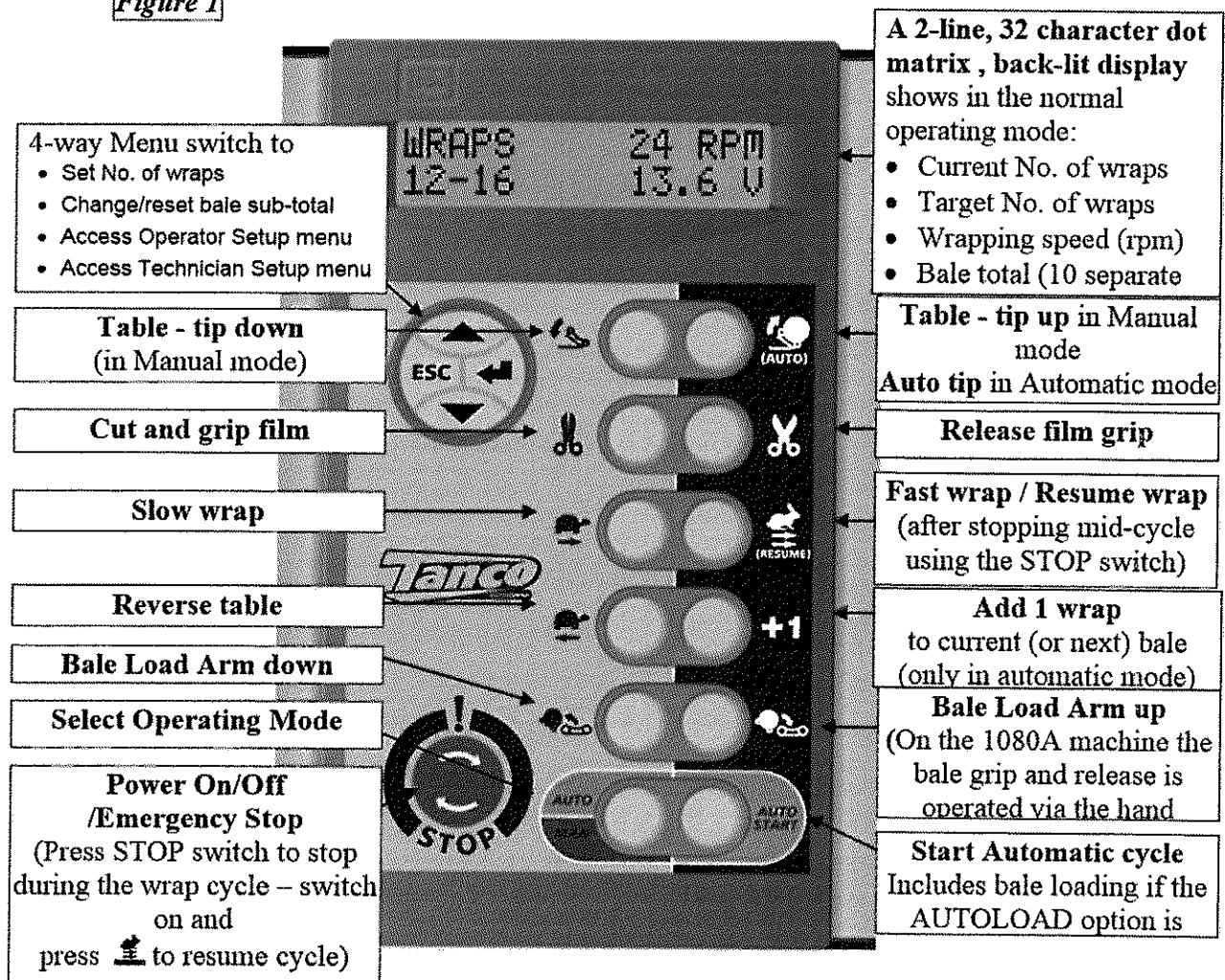
1.1 IMPORTANT SAFETY INFORMATION!

* Please read and understand the instructions for using this controller before operating the machine.
* This controller is fitted with a pushbutton type On/Off Emergency Stop switch. Always ensure the controller is switched OFF via this switch before attempting any adjustment or maintenance to the machine.
* The machine is fitted with a safety beacon which is automatically activated when a loading, wrapping or tipping operation is initiated via the controller. If the beacon is off, do not assume it is safe to move into the proximity of the machine unless you have confirmed that the controller is switched off and the machine power source is disengaged.
* For safety reasons the 280ARC machine beacon will begin flashing 3 seconds before the automatic cycle commences, after initiating the wrapping cycle via remote control. If the beacon begins flashing when you are in proximity to the machine, then **immediately** stand clear.
* Please follow ALL other safety instructions given in the manufacturers' Operator Handbook for the machine.

1.2 Main operating Functions and Display

The principal instrument features and operating functions are shown in figure 1 below.

Figure 1

4-way Menu switch to
* Set No. of wraps
* Change/reset bale sub-total
* Access Operator Setup menu
* Access Technician Setup menu

Table - tip down (in Manual mode)

Cut and grip film

Slow wrap

Reverse table

Bale Load Arm down

Select Operating Mode

Power On/Off /Emergency Stop
(Press STOP switch to stop during the wrap cycle – switch on and press 🡇 to resume cycle)

A 2-line, 32 character dot matrix , back-lit display shows in the normal operating mode:
* Current No. of wraps
* Target No. of wraps
* Wrapping speed (rpm)
* Bale total (10 separate

Table - tip up in Manual mode
Auto tip in Automatic mode

Release film grip

Fast wrap / Resume wrap (after stopping mid-cycle using the STOP switch)

Add 1 wrap to current (or next) bale (only in automatic mode)

Bale Load Arm up (On the 1080A machine the bale grip and release is operated via the hand

Start Automatic cycle Includes bale loading if the AUTOLOAD option is

2 Operation

2.1 Operation in Automatic mode

The controller is generally used in automatic mode. With AUTOLOAD set-up (580A / 1080A only), bale loading is incorporated into the automatic cycle for complete 'one touch wrapping'.

'A' on the display indicates that the controller is set in Automatic mode. If not, press 🔘 to select.
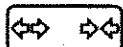
AUTOLOAD Sequence

Bring the machine up to the bale and press the 🔘 switch to commence the automatic sequence – Load, Wrap and Tip Off.

NOTE: The load arm cannot be operated manually to ready the next bale during the wrapping cycle.

Non-AUTOLOAD Sequence

1. Bring the machine up to the bale, then press and hold the 🔘 switch to load the bale.
    NOTE: On the 1080A machine, the bale grip and release function is operated via the ⟨⇔ ⇔⟨ buttons on the hand controller.

2. Press and hold the 🔘 switch to lower the lift arm.

3. Press the 🔘 switch to commence the automatic wrapping cycle. The cycle is completed when the target number of wraps has been reached.

4. Press the 🔘 switch to tip the bale off and automatically position the table for loading.

2.2 Manually interrupting an automatic wrapping cycle

⚠ Press the STOP switch. Pressing the 🔘 switch after switching the controller back on will resume the auto-wrap cycle from where it stopped.
For safety reasons, if it is necessary to work on the machine (e.g. in the event of a film break or the film running out), then it is strongly recommended that you disengage the machine power source.

2.3 Manual options in Automatic mode

With the controller in automatic mode, the following manual functions are possible.

🔘 **SLOW WRAP** (only enabled outside of the wrapping sequence). Press 🔘 to resume the normal fast wrap.

🔘 **REVERSE TABLE** (only enabled outside of the wrapping sequence). Press this button to nudge the table backwards to the desired position.

➕ **ADD 1 WRAP** Each time you press this button an additional wrap will be put on the current bale if the wrapping sequence is in progress, or onto the next bale if the automatic cycle has not yet been started. You can add as many wraps as required.

🔘 **LOAD UP /LOAD DOWN** If the 'Autoload' sequence is not selected (580A /1080A only), 🔘 then you can engage and pick up the next bale while the current bale is being wrapped.

2.4 Operation in Manual mode

'M' on the display indicates that the controller is set in manual mode. If not, press 🔘 to select.

In manual mode you have total control of every stage of the wrapping cycle.

The software logic determines which manual functions can be activated at any point in the wrapping cycle. Should the operator incorrectly select a function at a certain stage during the wrapping cycle, then that operation will not be performed.

2.5 The Display Menu

The Display menu is divided into 3 sections. At the top level are the settings used during the daily work with the machine – i.e. Store totals and No. of Wraps.
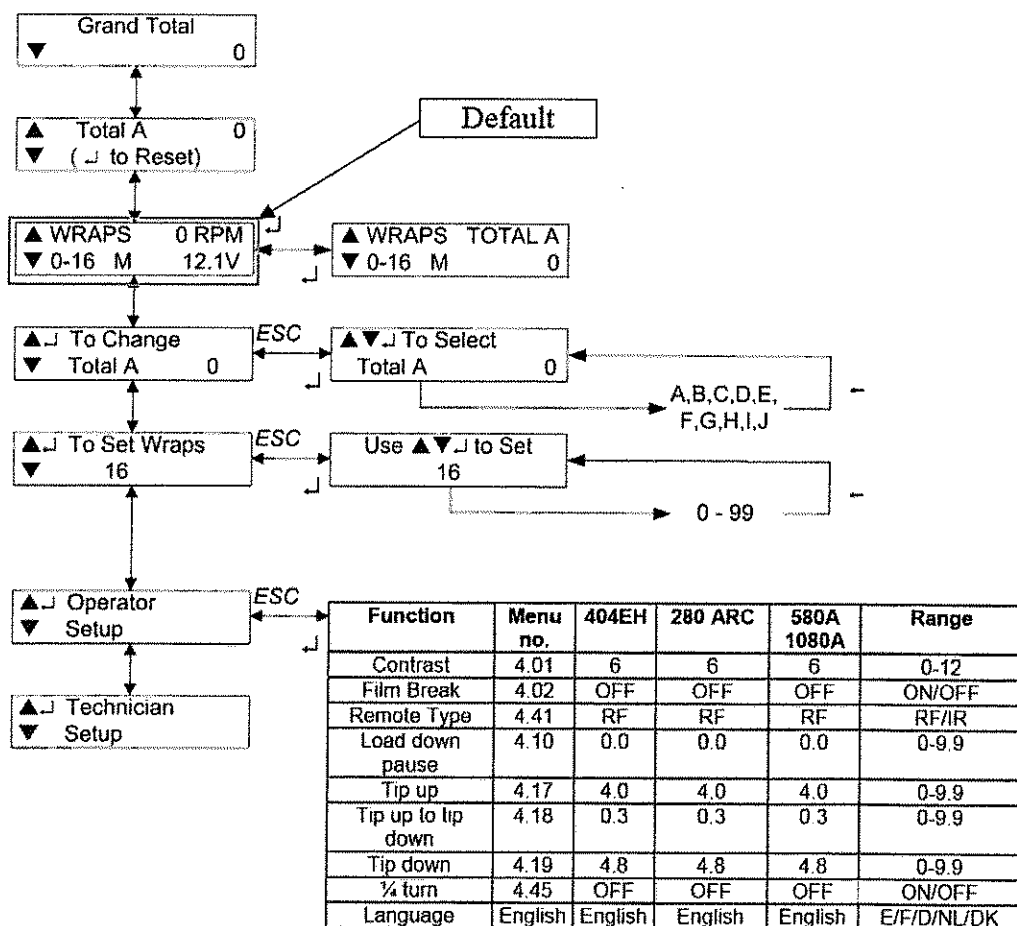
The Operator Setup' section enables the operator to perform adjustments to the machine operation – e.g. time duration and time delay settings during the automatic cycle.

The 'Technician Setup' menu is not normally accessible to the operator without a PIN access code. 'Technician Set-up' is not covered by this manual.

Use the 4-way switch to navigate the menu. Each menu screen indicates which keys to press to make the settings. The instrument will default back to the main operating display after 30 seconds if no other key is pressed

Here is a summary of the display menu:

```
┌─────────────────────┐
│   Grand Total       │
│ ▼               0   │
└─────────────────────┘
         ▲│
┌─────────────────────┐
│ ▲  Total A      0   │
│ ▼  ( ↵ to Reset)    │
└─────────────────────┘                    ┌──────────┐
         ▲│                                │ Default  │
┌─────────────────────┐  ↵   ┌─────────────────────┐
│ ▲ WRAPS    0 RPM│     │ ▲ WRAPS  TOTAL A    │
│ ▼ 0-16  M   12.1V│    │ ▼ 0-16   M        0 │
└─────────────────────┘ ↵    └─────────────────────┘
         ▲│
┌─────────────────────┐ ESC  ┌─────────────────────┐
│ ▲↵ To Change    │     │ ▲▼↵ To Select       │
│ ▼  Total A      0   │  ↵   │ Total A          0  │
└─────────────────────┘      └─────────────────────┘
                                        → A,B,C,D,E,  —
         ▲│                                F,G,H,I,J
┌─────────────────────┐ ESC  ┌─────────────────────┐
│ ▲↵ To Set Wraps │     │ Use ▲▼↵ to Set      │
│ ▼        16     │  ↵   │         16          │
└─────────────────────┘      └─────────────────────┘
                                        → 0 - 99
```

```
┌─────────────────────┐ ESC
│ ▲↵  Operator    │
│ ▼   Setup       │  ↵
└─────────────────────┘
         ▲│
┌─────────────────────┐
│ ▲↵  Technician  │
│ ▼   Setup       │
└─────────────────────┘
```

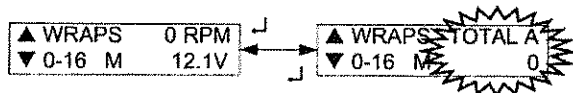| Function	Menu no.	404EH	280 ARC	580A 1080A	Range
Contrast	4.01	6	6	6	0-12
Film Break	4.02	OFF	OFF	OFF	ON/OFF
Remote Type	4.41	RF	RF	RF	RF/IR
Load down pause	4.10	0.0	0.0	0.0	0-9.9
Tip up	4.17	4.0	4.0	4.0	0-9.9
Tip up to tip down	4.18	0.3	0.3	0.3	0-9.9
Tip down	4.19	4.8	4.8	4.8	0-9.9
¼ turn	4.45	OFF	OFF	OFF	ON/OFF
Language	English	English	English	English	E/F/D/NL/DK

NOTE: There are additional sequences selectable in the Operator Setup menu but not shown in the table. These sequences are for wrapper models to which this manual does not apply. Please refer to section 3 for further explanation of the Operator Setup functions given in the table above.
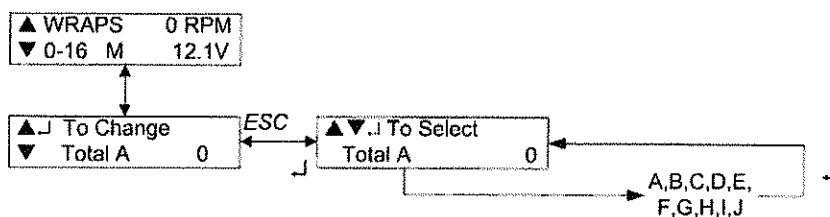
2.6   Selecting a Store Total

There are 10 individual memory registers labelled 'Store A' to 'Store J' for bale totals. Each time a bale cycle is completed, the currently selected store total and the grand total increments by 1.

The currently selected store is displayed on one of the two screens selectable in the normal operating mode.
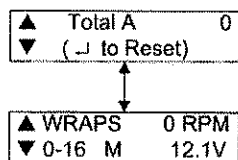
```
┌─────────────────┐      ┌─────────────────┐
│▲ WRAPS    0 RPM │ ⅃    │▲ WRAPS  TOTAL A │
│▼ 0-16  M   12.1V│◄────►│▼ 0-16  M      0 │
└─────────────────┘  ⅃   └─────────────────┘
```

The default setting is Store A. To select a particular store, navigate the display menu using the 4-way switch.

```
┌─────────────────┐
│▲ WRAPS    0 RPM │
│▼ 0-16  M   12.1V│
└─────────────────┘
         ▲
         │
┌─────────────────┐  ESC  ┌─────────────────┐
│▲⅃ To Change     │◄─────►│▲▼⅃ To Select    │◄──────────┐
│▼   Total A    0 │   ⅃   │    Total A     0│           │
└─────────────────┘       └─────────────────┘    ┌──────────────┐  ◄─
                                    └───────────►│ A,B,C,D,E,    │
                                                 │ F,G,H,I,J     │
                                                 └──────────────┘
```

Press the up/down arrow keys to select the store, then press the ENTER key to confirm the selection.
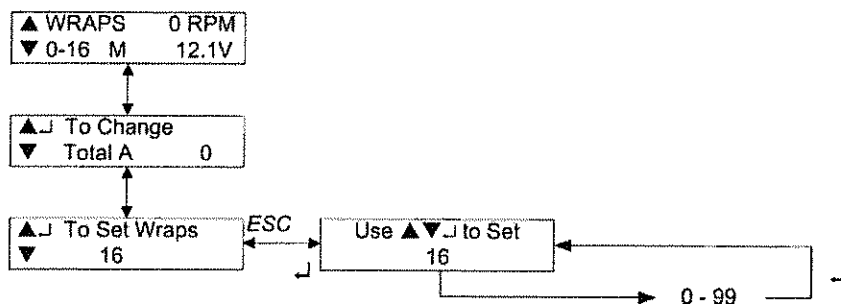
2.7   Resetting a Store Total to Zero

Stores A to J can be individually reset to zero at any time. The Grand Total store cannot be reset. First select the store to be zeroed, then navigate the display menu as shown below.

```
┌─────────────────┐
│▲    Total A   0 │
│▼   ( ⅃ to Reset)│
└─────────────────┘
         ▲
         │
┌─────────────────┐
│▲ WRAPS    0 RPM │
│▼ 0-16  M   12.1V│
└─────────────────┘
```

Press the ENTER key to reset.

2.8   Setting the Number of Wraps

The default number of wraps is 16. You can set the target number from 0 to 99 by navigating the display menu as shown below.

```
┌─────────────────┐
│▲ WRAPS    0 RPM │
│▼ 0-16  M   12.1V│
└─────────────────┘
         ▲
         │
┌─────────────────┐
│▲⅃ To Change     │
│▼   Total A    0 │
└─────────────────┘
         ▲
         │
┌─────────────────┐  ESC  ┌─────────────────┐
│▲⅃ To Set Wraps  │◄─────►│ Use ▲▼⅃ to Set  │◄──────────┐
│▼      16        │   ⅃   │       16        │           │
└─────────────────┘       └─────────────────┘           │
                                    └──────────► 0 - 99 ─┘   ◄─
```

2.9 Film Break Alarm (Optional)

If the film breaks or runs out during the wrapping cycle, the instrument will sound an audible alarm and the display will show '**FILM BREAK**'.

Wrapping will stop at this point. Press ![icon] when you are ready to resume the auto-wrap cycle.

3 Operator Setup Menu

The default settings for the machine are developed by Tanco for optimal operation of the machine. However, the operator can change certain parameters in the 'Operator Setup' menu to take account of operational conditions.

Parameter	Default	Application	Description
'Film Break'	OFF	ARC machines	If sensor is fitted and selected the cycle is interrupted if there is a film break
'Load down pause'	0.0	All	Time after load arm sensor is active before stops.
'Tip up'	4.0s	All	The time period required for table to tip up. Increase setting if the bale is not tipped off the table.
'Tip up to down'	0.3s	All	The time period tip up to tip down. May be increase if you require more time for the bale to drop before tip down commences
'Tip down'	4.8s	All	The pause duration after the load arm reaches its uppermost position, to allow for the bale to transfer onto the table rollers. Adjustment may be required depending on the size/type of bale. Increase setting if the bale does not transfer in sufficient time.
'Tip UP'	4.0s	All	The time period required for the table to descend to the horizontal position. Increase setting if the table does not return to down position.
¼ Turn	OFF	ARC machines	Select if you want turntable to turn 90° after Tip
Language	English	All	Sets the language for the display prompts.