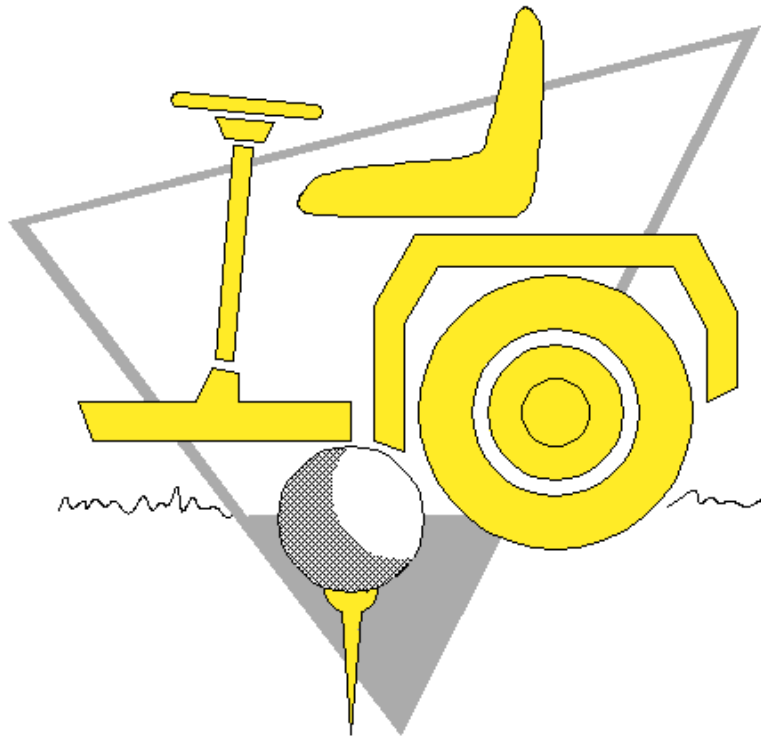


# **European Golf Machinery**

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## **MODEL '052' Mk.III**

### **BALL DISPENSER CONTROLLER**

### **INSTALLATION AND**

### **OPERATING INSTRUCTIONS**

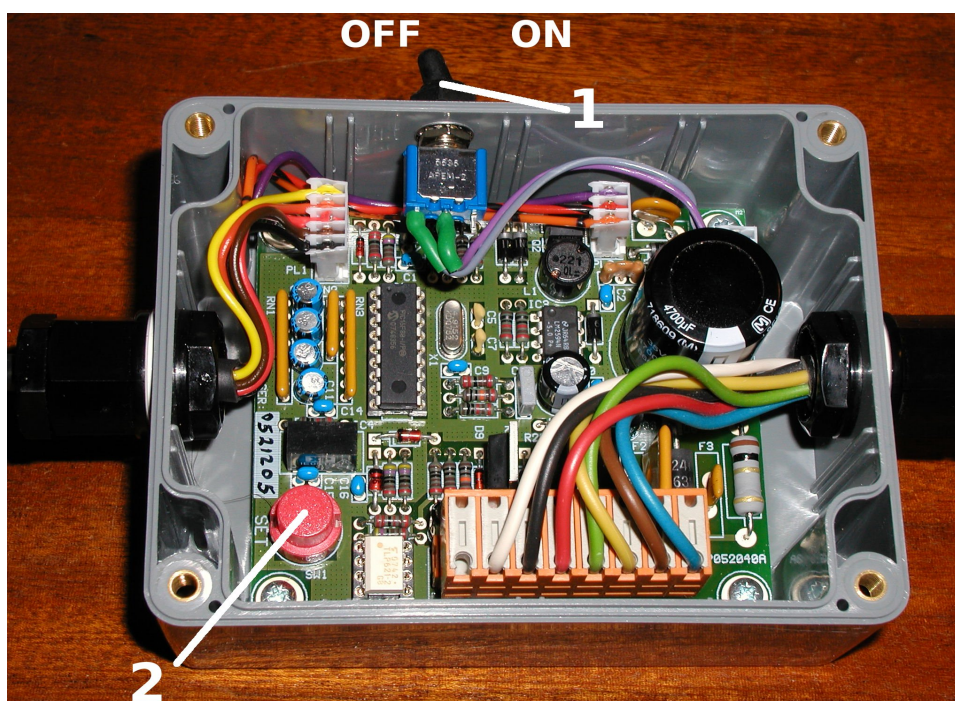
## 1. INSTALLATION NOTES

The controller should be connected to the dispenser in accordance with wiring diagram GDP052006. Note that the thermal cut-out device (shown on the diagram in the black 7-core wire to the tipping motor) is not necessary with Mk.III '052' controllers, since motor protection is fitted internally to the controller.

## 2. USER CONTROLS

There are two user controls fitted to the controller, as follows (refer to Fig. 1):

- 1: ON/OFF switch: When 'OFF', dispenser operation is inhibited. When 'ON', operation of the dispenser is enabled and the green 'ON' indicator will light.
- 2: SET switch: Used to set operating and configuration parameters. Refer to 'SETTING UP', below.



*Fig. 1: Location of user controls*

## 3. NORMAL OPERATION

When power is first applied to the controller, the green 'ON' indicator fitted to the front of the machine should light after about one second. The machine is now ready to dispense. When the correct sum of money or appropriate token has been inserted into the coin acceptor, one or more dispensing cycles will take place to deliver the balls to the user.

If more than the required sum of cash has been inserted, the excess will be stored as credit to be added to any further sums inserted for the next dispensing cycle(s). As soon as the amount accumulated is equal to the price set, further cycles will take place.

It is not necessary to wait for a tipping sequence to complete before inserting more money or tokens, since the controller will count in coins at all times, except when a fault is indicated.

Note that any credit stored in the controller is lost when power is removed, when a fault condition is encountered or when 'SET-UP' mode is selected.

## 4. SETTING UP

The sum of money required to initiate a tip sequence, and the number of tipping cycles given for that sum, is set up by selecting 'SET-UP' mode from inside the controller. Note that the operation for fixed-value ('token') inputs is not affected by this procedure. The procedure required is as follows:

Remove the controller cover by loosening the four screws in the corners of the cover.

Ensure that power is applied to the controller and that the green 'ON' indicator is alight. If this is not the case, switch the power off, wait for 10 seconds and then switch on again. The motors must both be stationary before setting up is possible.

Locate the red push-switch in the corner of the printed-circuit board (refer to 'USER CONTROLS', above). The switch is identified on the board by the text 'SW1' and 'SET' printed adjacent to it. Press **AND HOLD** the switch for a minimum of two seconds. Release the switch and check that the green 'ON' indicator is now extinguished. The controller is now in SET-UP mode. Note that this operation will cancel any credit left over from previous dispensing operations.

Insert cash coins into the acceptor to add up to the value required, to a maximum of £20.00. Note that the green 'ON' indicator flashes briefly once for each cash coin inserted. If more than the intended amount is accidentally inserted, complete the remaining steps of the sequence and then repeat the sequence from the beginning to set the correct price.

When the correct cash amount has been inserted, press the red switch briefly as many times as the number of tipping cycles required to dispense the balls. For example, if 3 cycles are required, press the switch briefly three times.

Press **AND HOLD** the switch for a minimum of two seconds. Release the switch and check that the green 'ON' indicator is now alight normally. The controller is now in normal mode and ready to dispense.

Insert cash coins to the exact value set and check that the required number of dispensing cycles occur. Replace the controller cover and tighten its screws.

## 5. FAULT INDICATION

Should the controller detect a fault condition, it will indicate the nature of the fault by flashing a code on the the green 'ON' indicator. Further operation is prevented until the indication is cancelled by switching the power off, waiting for 10 seconds and then switching on again. Whilst the fault indication is present, the controller will not count coins.

The fault code is indicated by a sequence of 4 flashes of the green 'ON' indicator, followed by a short period during which the indicator is off completely. Each of the 4 flashes can be either long or short. The various codes that are indicated are distinguished from each other by different patterns of long and short flashes. The faults detected, and their corresponding flash patterns, are as follows:

### **SUPPLY VOLTAGE TOO LOW (short - short - short - long)**

This occurs when the supply voltage falls below the minimum level of 10V necessary for correct operation. This may be caused by a faulty mains power supply unit, an electricity supply distribution problem, the use of an incorrect type of battery or a

battery becoming discharged. If this fault is indicated only when a ball delivery is about to take place, it may be caused by the power supply or battery being incapable of supplying adequate start-up current for the motors, or there may be a poor connection in the wiring between the power supply or battery and the controller.

**SUPPLY VOLTAGE TOO HIGH (short - short - long - short)**

This occurs when the supply voltage rises above the maximum recommended level of 22V. This may be caused by a faulty mains power supply unit or the use of an incorrect type of battery.

**TIP SEQUENCE FAILURE (long - short - short - short)**

This is most likely to occur in a dispensing cycle immediately after the tipping mechanism has been obstructed by a jammed ball or foreign body and is due to the fact that the cycle commenced when the tipping mechanism was already positioned part-way through its normal sequence.

**TIP MOTOR OVERLOAD (long - short - short - long)**

This will occur when a jammed ball or other obstruction prevents the tipping cycle from completing and the motor's movement is blocked, causing the motor to draw excessive current. When this condition is detected, power is removed from the motor to prevent damage through overheating. When power is removed and re-connected to clear this fault, it is recommended that a test dispensing cycle is carried out, since the mechanism may not be in its correct 'parked' position and, as a result, a 'TIP SEQUENCE FAILURE' fault may occur when the next delivery cycle is attempted.

**TIP MOTOR PARKING FAILURE (long - short - long - short)**

This will occur when the controller detects that the tip motor has run for a longer period of time than is expected to complete one delivery cycle. This may be caused by a faulty motor parking switch or a wiring fault. When this condition is detected, power is removed from the motor to prevent continuous and uncontrolled ball delivery from taking place.

## **6. MAINTENANCE**

There are no replaceable fuses or other user-serviceable parts inside the controller. Circuit protection devices are fitted to protect the tipper and agitator motors and also to protect the auxiliary 12V feed on the orange/black wire against overload. These devices will reset automatically after a period of 30 seconds once power is removed.

**WARNING: The controller's on/off switch DOES NOT remove power from the unit.**