ENGLISH

Double-L Antennas & Devices

USER MANUAL

Model: AC-17

Automatic Control Unit

USER MANUAL

Specifications:

- **7 (seven) programmable relays;**
- **Manual Switching;**
- **Selectable Power Voltage;**
- **Automatic Switching by Band Data (BCD);**
- **Computer Control (through USB port) by the software.**

www.hamdevices.com

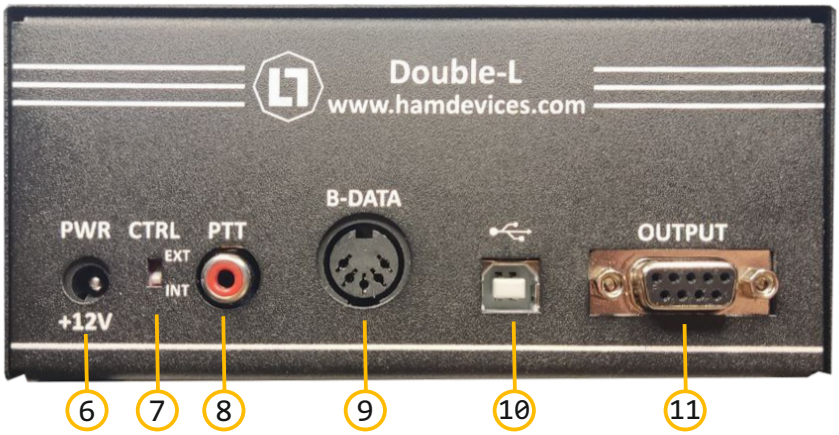
info@hamdevices.com, Double-L Antennas & Devices, UKRAINE

Front Panel

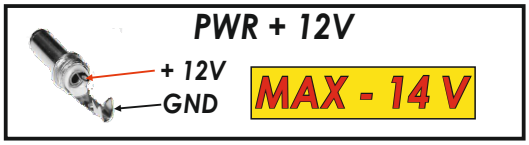
1. LED **"PWR"**: +12 VDC Voltage applied
2. LED **"BUSY"**: Radio is in "TX" mode – switching interlock engaged in "TX" mode
3. LED **"CONN/Vc":**
- lighted up when USB control is connected;
- blinking when there's no control voltage.

4. LED's 1…7: active antenna indication
5. Buttons 1…7: antenna selector

Rear Panel

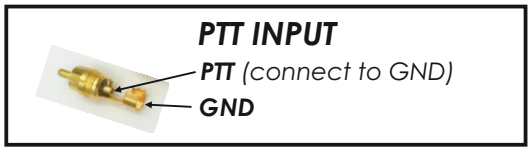


6. Power **12 VDC 1 A**



7. CTRL Switch – Power DC voltage selector:
INT – internal – control voltage +12 VDC in parallel to the unit control voltage connector PWR +12V
EXT – external – control voltage from the external power source through the OUTPUT connector (common positive or negative)

8. PTT: PTT Input



9. B-DATA: Data Input from the radio (BCD, Band-data)

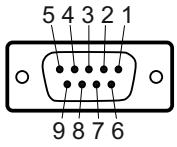
B-DATA

pin	descr	pin	descr
1	Data D	4	Data C
2	GND	5	Data B
3	Data A		

10. USB (type-b): computer connection through USB port

11. OUTPUT - relays outputs to control the antenna switch and external power source input

OUTPUT
(female)



pin	descr	pin	descr
1	Output relay # 1	7	Ground (GND)
2	Output relay # 2	8	Output relay # 7
3	Output relay # 3	9	Output relay # 6
4	Output relay # 4		
5	Output relay # 5		
6	**EXTERNAL power INPUT**		

SETTINGS

1. Power Voltage Selection (External or Internal)

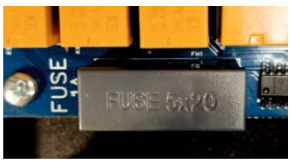
To select the source of the control voltage put switch CTRL in the EXT or INT:

- Internal (INT): for using the internal power source of +12 VDC (in parallel with “PWR +12V” connector);
- External (EXT): for external power source (“+” or “-“) on pin 6 of the OUTPUT connector.

WARNING!

Please use only DC voltage with maximum of 1 A current.

For proper indication of the error in case of losing the DC voltage (blinking CONN/Vc LED) it is necessary to set the polarity (positive or negative) of the DC power source. In order to do that, move COMMON switch, which is located on the board) either to Posistive (for “+”) or to GND (for “-“) position.



To secure control relays from the short circuit, a 1 A (5x20) is installed on the board.

2. Programming of the relay depending on the Active Button position:

a) Turn Off the unit DC power ;
b) Select and depress corresponding knob for programming, and keep depressing it while turning on the DC power;
c) BUSY LED should start blinking, which would indicate the start of the relay programming mode;
d) by pressing knobs 1 to 7, select the corresponding relay needing to be programmed. The number of the knob corresponds to the number of the relay. Any possible configuration is required, including “all active” and “all off”;
e) to save settings depress and hold the selected button for at least two seconds until corresponding LED starts to blink.

3. Saving default settings for antenna/knob depending on the band (B-Data(BCD)):

- select desired band on your radio;
- select needed antenna by pressing the knob of the selected antenna number on the unit;
- depress and hold it (for at least 2 seconds) until the corresponding LED starts to blink.

CONTROL

To select desire antenna, depress (once) corresponding antenna knob (1…7) on the unit.

Even if you press the antenna selector knob in the transmit mode, the antenna will not be switched in the “TX” mode (while you transmit and LED BUSY is lighted up), but the selected antenna LED will start blinking, indicating that this antenna will be selected upon the end of current transmission, i.e. after switching from “TX” to “RX” mode.

RESET TO DEFAULT SETTINGS

a) Turn Off the power of the unit;
b) Depress knobs #1 and #7 simultaneously, and while holding them, apply DC power to the unit;
c) LED's 1…7 will blink twice, it means unit is set to default:

- relays are set to their corresponding numbers, relay 1 to knob 1, realy 2 to knob 2, etc.;
- automatic switching on all bands (B-Data(BDC)) is set to knob #1