

# **I-PLAY**, an intelligent PLAY for Atari XC12 tape-recorder.

Description of alteration.

Sometimes one needs to turn PLAY on in order to set a tape-recorder to the beginning of a programme or to find some free space on the tape. However, it is not possible if your computer “disagrees”. I-PLAY allows you to start playback always when you press the PLAY button, and at the same time the computer keeps the recording and playback processes under control.

It all requires to install a small electronic circuit mounted on a 30x30 mm board and a slight alteration in the tape-recorder. The scheme of the circuit can be seen in *the photo 1*, paths on PCB board in *the photo 2*, and the arrangement of the paths in the mirror image to be made with a thermal transfer or photo transfer method – in *the photo 3*. The board pattern should be downloaded (right click and choose an option “save the graphics”), and next print it with the 30x30 mm print size because this is the size of the board.

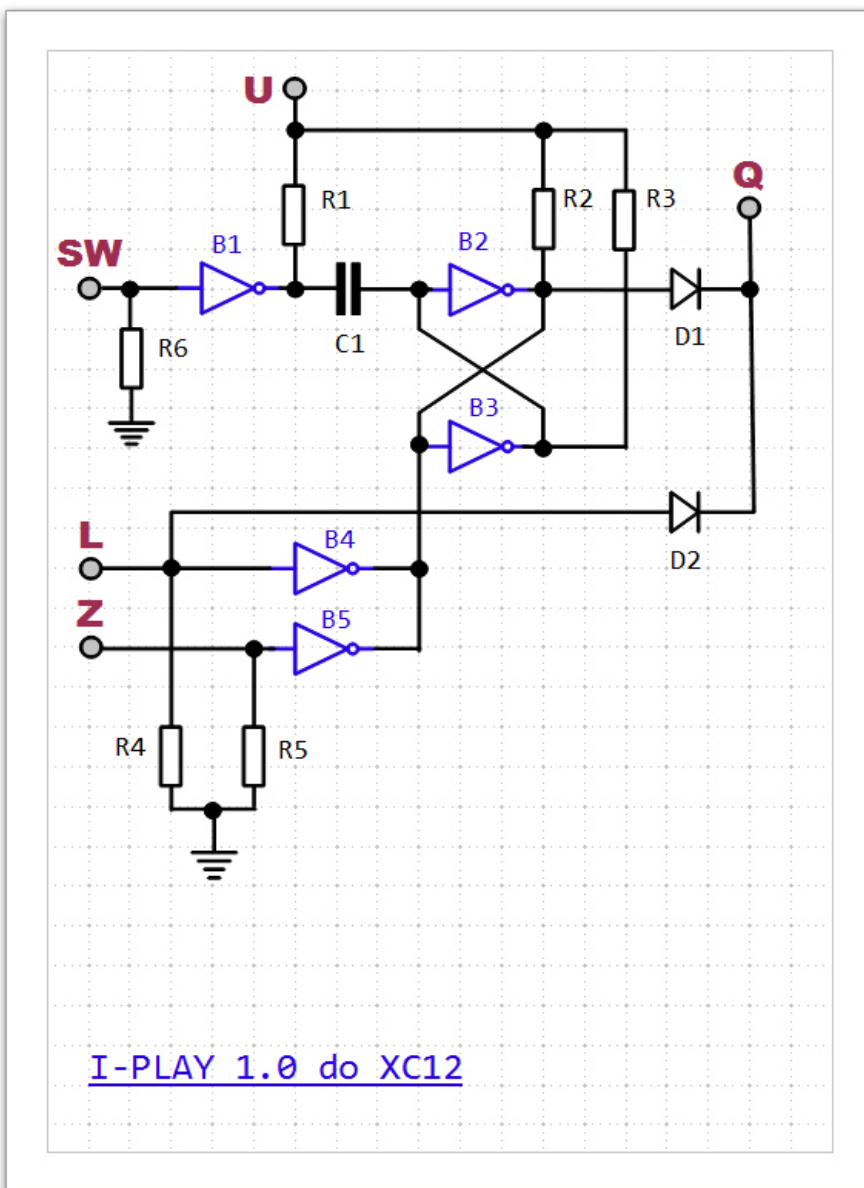


Photo 1

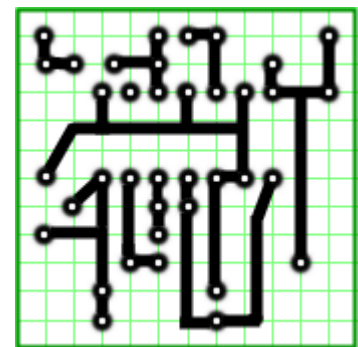


Photo 2

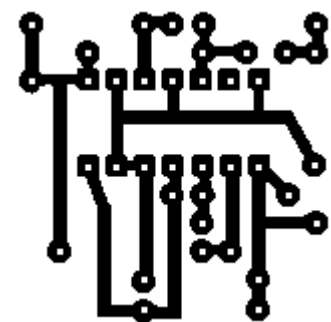


Photo 3

### List of the components

R1, R2, R3, R4, R5 – **6k8** (5 pcs.)  
R6 – **820R**  
C1 – **22nF**  
D1, D2 – **1N4148** (2 pcs.)  
B1÷B5 (U1) – **74LS06** integrated circuit  
All resistors 0.25W

### Alteration step by step:

*(Look at the photo 4 and photo 5).*

1. Disassemble the tape-recorder, separate two black cables soldered from the above to PCB board, and next twist off the board itself.
2. Unsolder the wire from the place marked **X1** and connect it to the point **L** of I-PLAY board. Because the original wire will probably be too short, we extend it and in order to avoid an accidental short circuit we put on a heat shrink tube in the connection place.
3. We connect points **X1** and **X2** with the wire.
4. We unsolder and take out one leg of R3 resistor, the one which is closer to the board edge, marked **X3** (look at the photo 5, in a brown frame). You can find R3 resistor next to the forwarding switches. Next connect the free end of the resistor (or **X3**) with the point **Q** on I-PLAY board.
5. Now you should connect the points which are marked in the same way on the tape-recorder board and I-PLAY assembly diagram, so **masa-masa** [ground], **U-U**, **SW-SW** and **Z-Z**.  
*Connection Z needs a few words of explanation. When you press RECORD button it results in engine stop. Then the tape-recorder starts working when you send the order from the computer. But the possibility to start recording without the computer has also some advantages, e.g. you can easily erase a track you do not want or create some breaks between the next programmes. If such a solution seems to be more attractive to you, you do not connect anything to the point Z (you leave free space).*
6. It is almost finished but before you connect the tape-recorder, it is good to check if we have done everything correctly. Remember to solder two black cables that you have separated in the step 1. If you have done everything right, you should have no surprises.
7. We mount I-PLAY board in some free space inside the tape-recorder (photo 6). Remember to place the wires so that they do not block any moving parts of the mechanism.
8. At the end you can only choose one of the stickers (right click and choose an option "save the graphics"), print it and stick it on the casing. I suggest to set the print size to 40x10 mm. If you have no possibility to print on self-adhesive paper, you should use normal paper with 160 paper weight. Next you should stick on the other side a piece of a self-adhesive double sided tape and you cut out the piece you need.

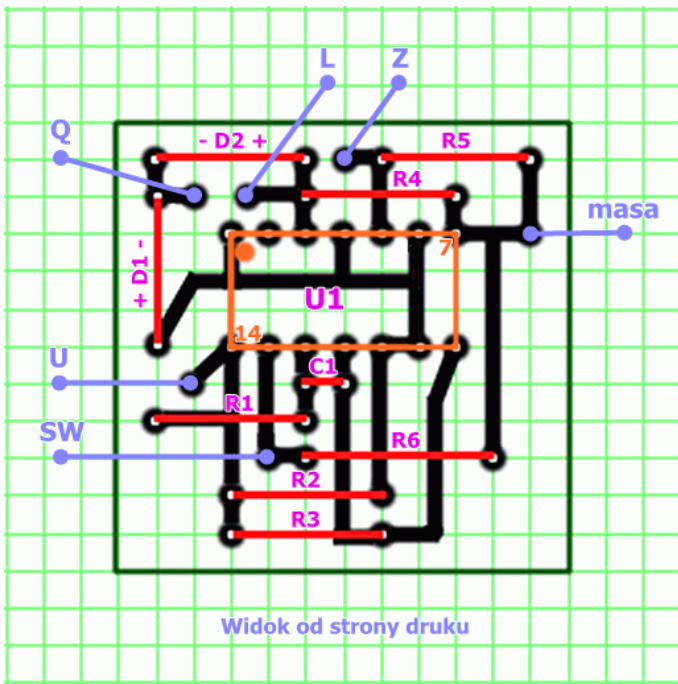


Photo 4 - assembly diagram  
(view from the side of the paths)

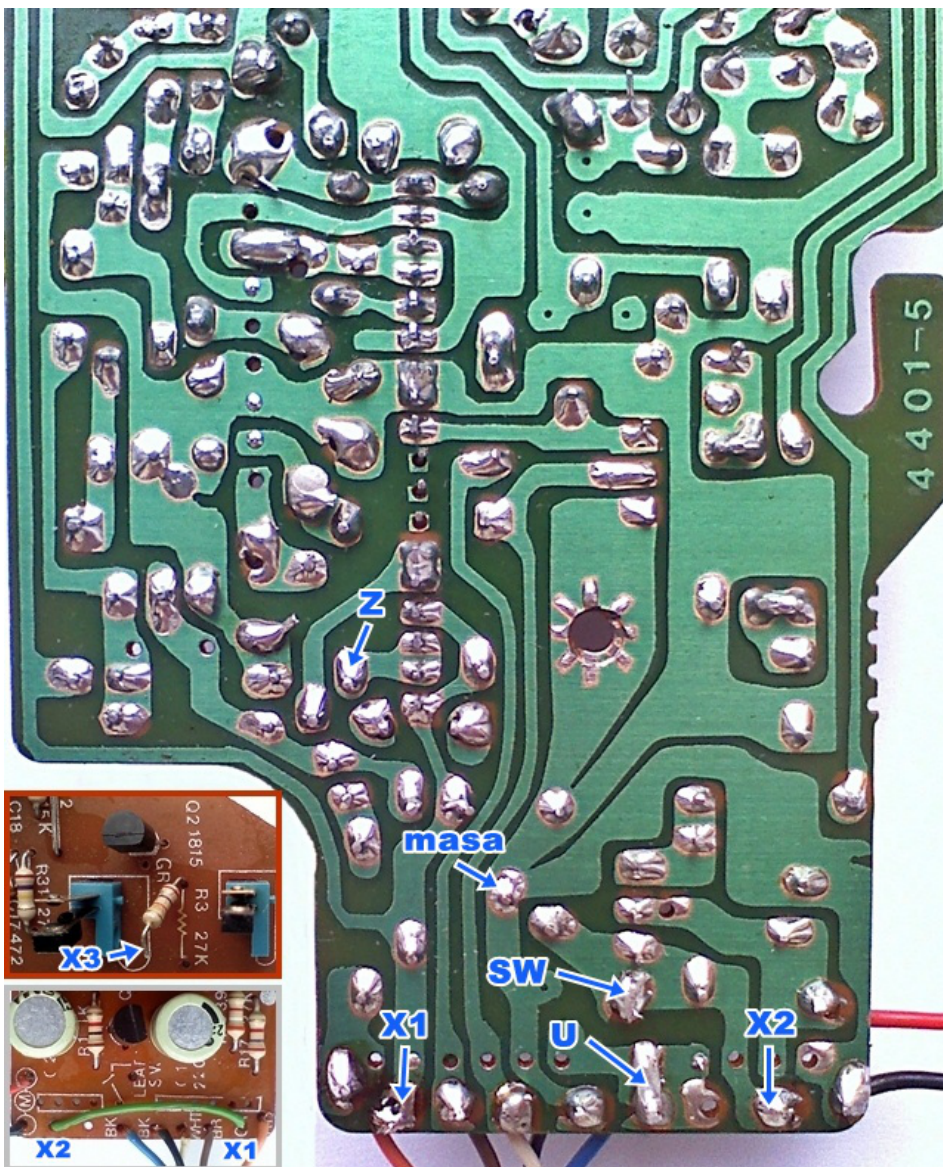
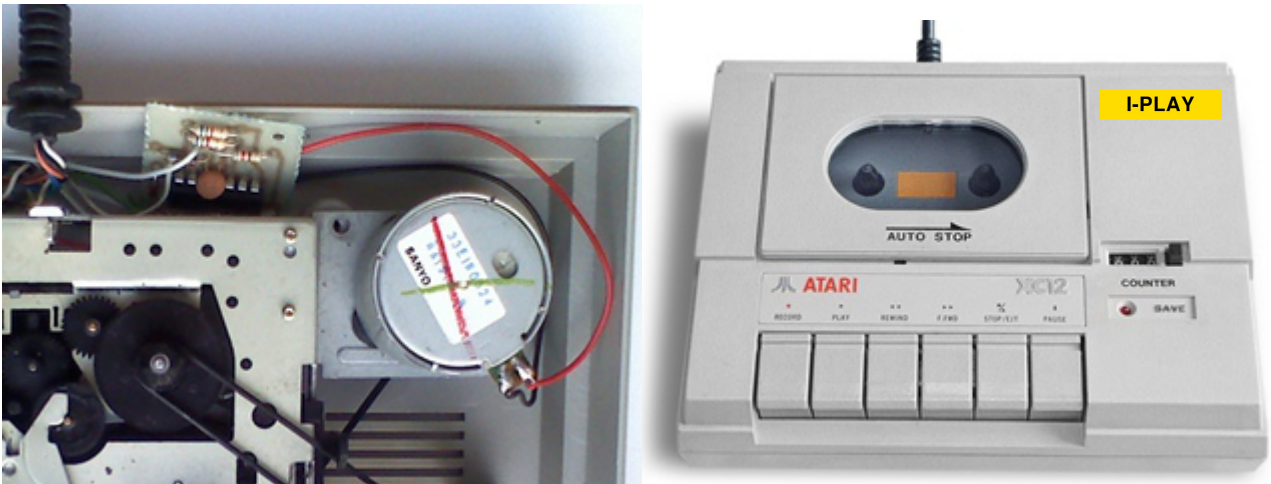


Photo 5



**Photo 6** - example of placing the I-PLAY plate and the tape-recorder after assembling the casing.

Stickers to choose from:



**IMPORTANT!**

- Whatever you do with your tape-recorder, you do it only at your own risk. If you damage anything you are the only person who is responsible.
- First read the whole description with understanding and then start working if you think you can do it.
- Be careful, do not do anything by force so that you do not damage the sensitive device.
- Tiny components (e.g. the screws) put into a box you should prepare in advance.
- Etching the printed board you should remember you use **some dangerous caustic substance**. So follow the necessary means of security. The information about it you will find on the packaging. It is especially important to keep and use such substance always out of the reach of children.
- The author is not responsible for any possible mistakes in the description.

***“I-PLAY” Project cannot be used for commercial purposes.***