

Operational Description

The duplicator scans the original by the scanner and processes the image in the CTL-PCB. The master making unit then receives the processed image and perforates the image on to the master. The master is then loaded on to the drum unit and the ink inside the drum unit is transferred on to a paper via perforated holes on the master.

The RF Board (No. 1 on the Block Diagram) is supplied by 5Vdc from the Power Supply (2) of the duplicator, and under the control of the CTL-PCB (3) built in the duplicator. (Electrically, the 5Vdc is directly from the duplicator's Power Supply, although it is through the CTL-PCB physically.)

Connected on the RF Board are two Antennas: one in an "O" shape (4) and for communication with the RF-TAG pasted on the master roll (5); the other in a "D" shape (6) and for communication with the RF-TAG pasted on the ink bottle (7).

As soon as the duplicator is turned on, information of the master and the ink stored in the RF-TAGs is read by the RF Board, through the Antennas, and sent to the CTL-PCB, where it is used to adjust the duplicator (to the most suitable condition).

Every time the duplicator starts master-making, information of the master (stored in the RF-TAG on the master roll) is updated by the RF Board (through the O-shape Antenna).

When the duplicator prints, information of the ink is regularly updated in a similar way.

The RF-TAG has no internal power supply. The RF-TAG can only transmit data, while receiving electromagnetic field from the RF-MODULE. Therefore, the RF-TAG is passive and can not transmit data by itself.