

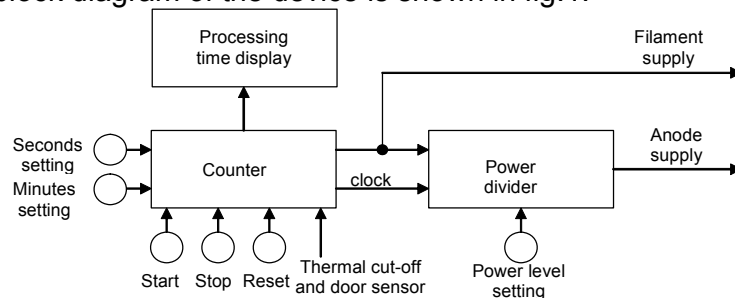
# RESEARCH ABOUT THE DESIGN AND REALIZATION OF AN ELECTRONIC DEVICE FOR MICROWAVE INSTALLATION COMMAND AND CONTROL

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The rising interest of science and technique towards the microwave processing technologies is emphasized by the worldwide development and implementation of these technologies at an unprecedented scale. It is very important to adequately design and build installations, according to the selected application. Also, in the case of large industrial installations, the energetic efficiency becomes economically very important. The author designed and made an electronic device for command and control of the microwave installation, which provides precise time setting, power level setting in 10 steps by magnetron emission division, and the choice of the clocking signal frequency for the power divider. Also, this device provides command interlocking and continuous supervision of the installation. The block diagram of the device is shown in fig.1.



**Fig.1. The block diagram of the designed and realized device.**

In this configuration, the microwave installation operates in a more stable manner and the results are reproducible. The obtained power levels are compatible with more processes that imply microwave exposure: decontamination of fruit and seeds, medical diathermy, reconditioning of patrimony books etc. In the future, this electronic device can be developed and improved, for wider setting ranges, miniaturization, automation and computer connection. Safety is ensured by the manner in which the device supervises the microwave installation and by the command interlocking. This electronic device can be comprised in industrial, scientific, medical and household microwave installations.

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