Digital Computer Laboratory
Massachusetts Institute of Technology
Cambridge, Massachusetts

SUBJECT: MEMORY TEST COMPUTER START-STOP PANEL

To: MTC Engineers

From: Robert vonBuelow

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Abstract: The MTC Start-Stop panel in the console contains controls for the
computer and its power. The function of each component is described
here.

General

Attached are the panel marking (SA-54878) and schematic (SC-54151)
diagrams of the Start-Stop Panel.

Computer Control

START-OVER

The START-OVER button actuates a pushbutton pulse generator which
causes the computer to start performing whatever instructions have been set
into it. This button is parallel with a similar button on the auxiliary start-
stop panel.

RESTART

The RESTART button actuates a pushbutton pulse generator which cause
the computer to continue on a program which has been interrupted for any reason.

STOP

The STOP button stops the program in the computer by preventing the
end carry pulse from starting a new operation or program cycle. The STOP but-
ton is in series with a similar button on the auxiliary start-stop panel. These
STOP buttons are in series with the HALF-INSTRUCTION switch.

Lights

Four toggle switches in a vertical line control the lights in the
computer room. The top switch controls the lights behind the control, and
the bottom switch controls the lights behind the console.

Power Control

        The components in this section will not be in operation until the
Power Supply Control panels have been installed.

        The pushbutton marked COMPUTER POWER ON when pushed turns the COM-
PUTER POWER OFF light off and the COMPUTER POWER ON light on. This button
also starts the filaments cycling on. When the filaments are completely on
the FILAMENTS OFF light goes off and the FILAMENTS ON light goes on. After
the filaments have come on, the DC voltages are applied in sequenced groups:
the -450, -300, and -150 volt supplies first, -30 and -15 volt supplies a
few milliseconds later, +90 volt supply next, and +150 volt and +250 volt
supplies last. As each group of supplies goes on, the appropriate light on
the panel goes on. The DC OFF lamp goes off when all DC is applied.

        When the COMPUTER POWER OFF button is operated, all DC VOLTAGE ON
lights go off and the DC OFF light goes on. The COMPUTER POWER OFF lamp goes
on and the COMPUTER POWER ON lamp goes off. The filaments start to cycle
down, the FILAMENTS ON lamp goes off, and the FILAMENTS OFF lamp goes on.

        If the computer is off when the STAND BY button is pushed, the
filaments cycle on but DC voltages are not applied. If the computer is on
when the STAND BY button is pushed, the DC voltages are turned off but the
filaments remain on.

        The EMERGENCY STOP button turns off all AC and DC in the computer.
The filaments are not cycled down.

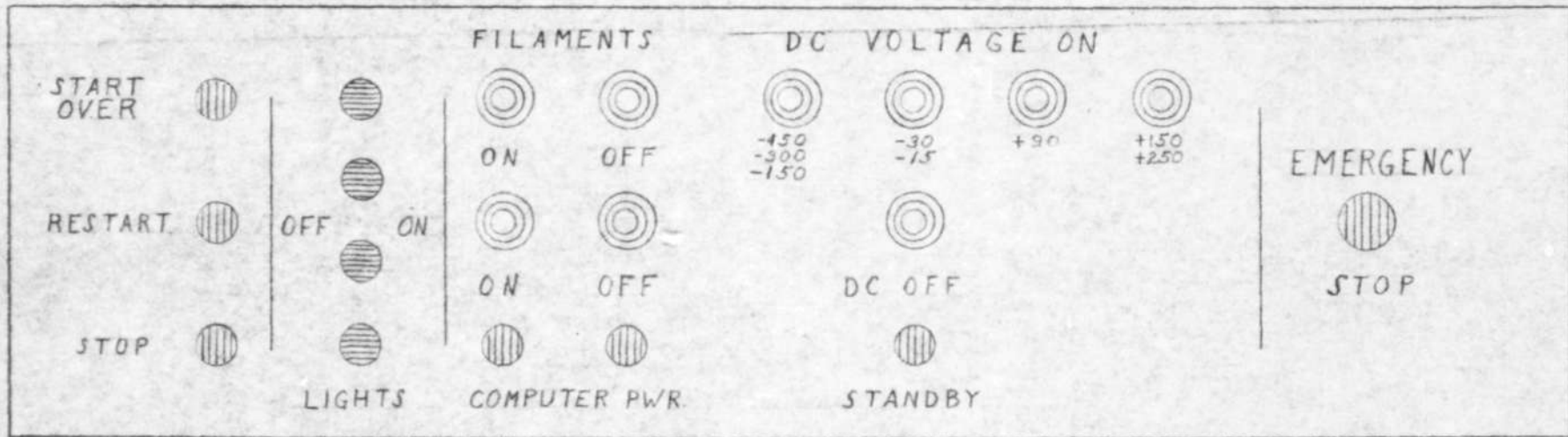   Signed R. von Buelow
                                                  R. vonBuelow

                                          Approved K H Olsen
                                                    K. H. Olsen

RvB:jrt

Attached drawings: SA-54878
                     SC-54151

SA-54878

MTC
START-STOP
PANEL MARKING

R.B. 5-5-53   SA-54878 √

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
DIGITAL COMPUTER LABORATORY
DEPT. OF ELECTRICAL ENGINEERING – D. I. C. PROJECT NO.

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