time reference point when it is correlated with the oscillograph tape on which the pulse has also been recorded. Impact and certain of the non-data (documentary) cameras generate a pulse that is recorded on the oscillograph for time correlation. The oscillograph uses a Norman timing system to place the time scale on the oscillograph tape. This scale is graduated in hundredths of a second. The Norman timing system provides a time base that is accurate to one one-thousandth of a second over a period of fifteen minutes. A 150-cycle sine wave produced by a Gibbs standard is also recorded on the oscillograph tape to serve as a check on the Norman system and to serve as a time reference in the event the Norman system fails. In addition to recording the camera pulses, the oscillograph records the output from the geophone and sound microphone net and the output from the Clarke Model 167 E receivers that form a part of the telemetering net. These receivers are used primarily for receiving signals from a Bendix airborne transmitter that is used in determining the instant of bomb or missile release. The transmitters have either one or six channels, and each channel has sub-carriers capable of handling six (6) events, provided the sequence of the events is known in advance.

TARGET ARRANGEMENT AND INSTRUMENTATION: Two precision target areas, located at the extremities of the range area, contain towers equipped with transits for locating unit impacts, a radar reflector for use in radar bombing, a geophone and sound microphone net, and have adjacent to them an impact camera installation for