

AUDIO ENGINEERING

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Meet the Cinécruiser

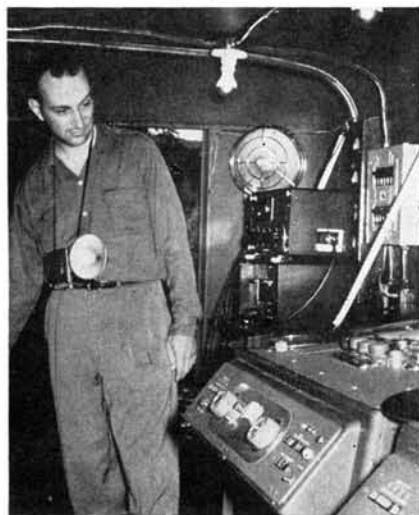
New mobile location unit provides synchronous magnetic tape facilities for recording motion picture sound tracks.

MANY MEMORIALS to great people and great places have been carved in granite, put to canvas, and in other ways immortalized. Too often, it has been complained, they are artists' conceptions and usually idealize the mien, pose, poise and relative stature of their noble subjects. But no medium portrays as realistically as does the motion picture camera. Nothing else preserves the great mortals for posterity more completely than does the motion picture with its sound track.

The Jerome Hill Foundation, a philanthropic organization, is sponsoring a project to immortalize the great through the medium of cine-sound. Toward this end, the foundation engaged the services of C. Robert Fine, a prominent audio engineer. Mr. Fine's assignment was to design and construct a completely mobile "location unit." With a thirty day deadline, the unit described and illustrated on these pages was designed and constructed, laboratory and road tested, and driven aboard a freighter bound for Europe and its first assignment. By the end of October 1951, both Mr. Fine and the "location" unit will have returned to the States and left for their second "assignment for immortality" in California.



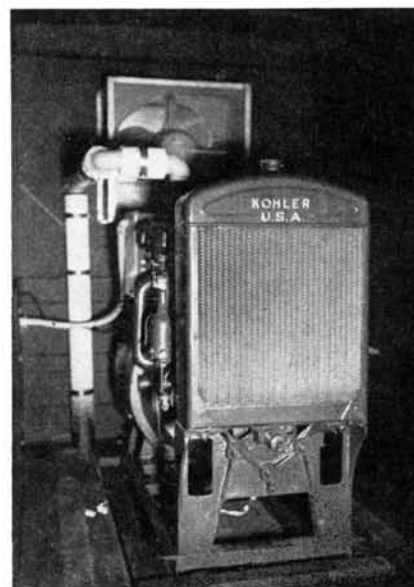
The "location" unit (it hasn't been christened with a name as yet) consists of a 1-ton, 6-cylinder Chevrolet truck with an aluminum body. It is equipped with an extra gas tank to take care of those long stretches between European re-fuelling stations. All of the operating equipment is contained inside the truck which has sufficient space for two operators to move about without crowding or stooping. There is adequate floor space for sleeping cots, in case of emergencies.



The meter panel monitors both splits of the power line feed from the trailer. Each line is metered for voltage, current load and frequency. Should the power line frequency fall below 59 cycles, an alarm is tripped which warns the operator that there is danger of out-of-sync operation. There are twelve main-power outlets. Each is protected by an individual magnetic circuit breaker. By selecting the proper outlets, or by manipulating the circuit breakers, the loads on the split-line feed can be kept in balance, one side of the line with the other. For camera, truck and trailer intercommunication, a Masco system is provided.



The two wheel trailer contains the power generating equipment and can be quickly hitched or unhitched by one man. It is equipped with electric brakes and signal lights. The louvers, which can be seen on the front of the trailer, pivot freely. Behind them is a large ventilating fan. When the generator is started, power is supplied to the fan motor and the louvers open automatically and are raised by the air stream. This makes certain that they will be closed when the equipment is idle, keeping out dust and rain.



The power generator, contained inside the trailer, is a 10kw Kohler driven by a 4 cylinder gasoline engine. The trailer carries its own gasoline supply tank. The output of the generator is 220 volts a.c., 60 cycles. The 220 volt line is split to 110-0-110, so that all American and some of the European equipment encountered can be operated from the one source. The ventilating fan can be seen just above the generator, at the rear. Six hundred feet of cable, in six 100' lengths, enable the generator to be adequately sound-separated from the truck.



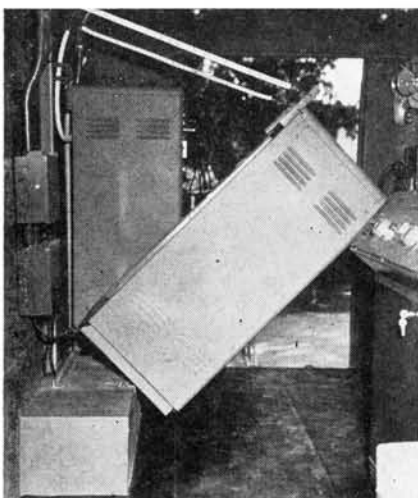
C. Robert Fine, designer and builder of the "location" unit, is shown using the synchronous 16mm magazine loading Maurer camera which is being used for color work. A Telefunken microphone is at the end of the boom. The microphone and camera are equipped with 200' of extension cables. Since the recording truck can operate 600' from the generator trailer, it is thus possible for the microphone to be as far as 800' from the generator. This is quite useful for work done in the narrow winding streets which are characteristic of numerous historical European towns and villages. Remote controls enable one man to operate all equipment that is inside the truck while he is at the camera or microphone boom.



The microphone and audio mixer is a Magnecord PT6-P. It can be operated inside or outside the truck. Below the Magnecord mixer can be seen a small Jensen bass-reflex baffle equipped with long extension lines so that it can be placed near the subject being photographed.

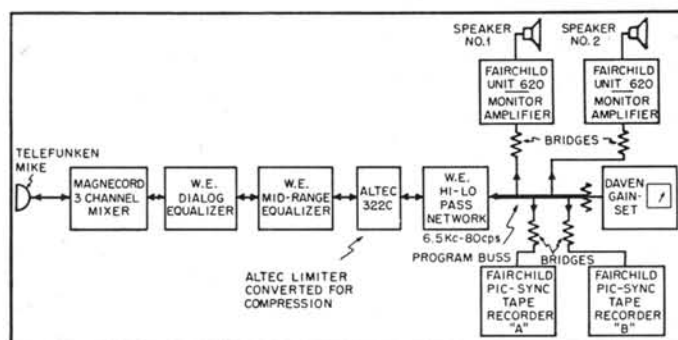


The driver and his co-pilot are provided with seats at the front cab of the truck. The seats fold forward and out of the way to allow as much floor space as is possible. The entire truck and trailer can be operated while in motion.



The two racks of equipment shown in the block diagram are mounted against the bulkhead opposite the Magnecord mixer location. The racks are hinged at the bottom and secured at the top with wing nuts and bolts so that they can be made to swing forward and rest against the restraining chains, exposing their interiors for service and inspection.

For recording sound tracks, all equipment is normalised through jacks. Inputs and outputs of the separate units in the system can be lifted and multiples are also provided. For wide-range recording, the dialog equalizer and the mid-range equalizer are "patched around."



All sound tracks are recorded on two Fairchild Pic-Sync Magnetic Tape Recorders, operating simultaneously for an original and a safety. The monitor speaker is secured to the bulkhead of the truck and just above the Fairchild Tape Recorders. The tape equipment is mounted on Barry shock-mounts. Heavy coil springs, secured to the outsides of the recorder cabinets, insure that they will not "roam about" the floor of the truck while travelling. At the same time, these springs do not inhibit the effectiveness of the shock-mounts.