



Figure 2.75 Although a crew is made up of people with diverse talents, those involved with remotes often help with common tasks. Once the truck is parked, an early task is to run the necessary cables. Most of the crew is involved. (Source: Tim Stoffel)

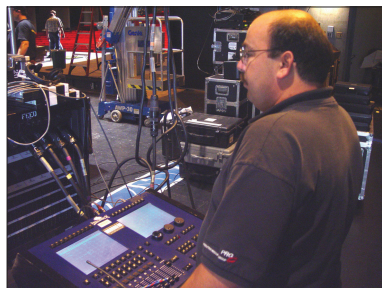


Figure 2.76 Besides setup directly associated with the truck, often activity at the venue that dwarfs truck setup occurs, such as lighting setup required for the show.

Crew Call

A Diversity of Skills

It takes a number of different skills to produce a television show. The need for these skills is amplified when the show is produced in the field. Often the pace of the show is much quicker than in a television studio. The amount of equipment, even for most run-of-the-mill remotes, is far greater than what is typically used inside a studio. In a studio, the use of four cameras would be considered a large production. That number in the field today would be considered on the small side. Most field productions require more cameras, VTRs/servers, and graphics and communications equipment than the majority of production done inside a television station or production house.

Many operators in a typical television station never see the station's studio cameras broken down into a lens, camera head, pan/tilt head, and dolly or pedestal, as separate pieces sitting on the floor. Figures 2.83 through 2.86 demonstrate a camera being built.) Truck folks are expected to gather all the pieces required to "build" a camera from the trailer bays, haul them out to their required locations and assemble the pieces into a complete working camera.

Venues that see a lot of television coverage usually have pre-installed cables that run between the deployed equipment and the truck. Trucks working in venues that don't have these cables need to run their own. The larger the production, the more cables. When cable has to be run, most of the crew usually pitches in. The camera operators will generally work on running the triax cable out to the various camera positions, along with any other video coax necessary to support the production. The audio folks, which includes the person who actually runs the audio mixer and one or more assistants, work on running the required audio lines. The person who runs the audio board is considered the lead in this area and thus is known as the "A1." The assistants are known as "A2s." The audio crew also usually handles running the intercom to



Figure 2.77 Drivers are often possessive of their rigs. Here, one looks after the trailer.



Figure 2.78 At crew call people arrive who will operate cameras and VTRs/servers, control the look of the cameras from inside the truck, mix audio, and switch between the various video sources. For a typical daytime baseball, basketball or hockey game, crew call would be 7 or 8 a.m. Night games would be 1 or 2 p.m. Football often will have a day for setup. The Super Bowl has weeks of setup. The Olympics takes months. But the majority of remotes are S-cubed: single-day set, shoot, strike. This crew is working together to run, or "pull," the necessary cables for a production (in this case camera triax). (Source: Tim Stoffel)



Figure 2.79 Besides more equipment, remotes also take more people. These people must know not only how to operate the equipment, but also how to assemble it into whatever topology is needed to fulfill the client's needs. Here, microwave receive gear is installed on a small scaffold. (Source: Jason Taubman)

where it is needed outside the truck. This task is often as large as the actual audio requirements for the show.

Early Production

Often the needs of the client free some of the crew from cable-running and equipment-building duties. The client may want to start preproduction in the truck immediately. Preproduction might entail producing the show's open or close, or sending a handheld camera and VTR out to gather raw footage, which is edited in the truck into a package for playback during the show. Today a lot of preproduction is loading and creating all the graphics needed for sports productions. The TD is often needed to support the preproduction efforts, and must often load the transition moves into the effects devices — known as digital video effects (DVE) or digital memory effects (DME) — and the video switcher. These effects are most notably evident when switching between live action and replays in sporting events.



Figure 2.81 Building a camera starts with a base for the camera, called a pedestal. The legs are adjustable to change the height. To support the weight of a camera, most early pedestals had steel legs and a cast-iron frame. Today aluminum, and even carbon fiber, are used to build tripods designed to support 200 or 300 lbs. Early tripods weighed over 50 lbs — today's are down around 30 to 40 lbs.



Figure 2.80 Truck compounds can quickly become surrounded by spectators. (Source: Core Technologies/SWTV)

The truck EIC generally assists the setup crew by showing the crew where equipment is stored. Good crews, especially ones that have worked on a particular unit before, will need very little of the EIC's help. They know what parts are needed for their task and where they can be found. At the other end of the spectrum, crew members that aren't up to the challenge can make more work for the rest of the crew and can be an EIC's nightmare. Often these folks gain their reputation by being careless or hard on equipment.

Another important duty of the EIC is as the onsite representative of the truck vendor to the client. As in any business, clients can be very demanding. They want what they want and they want it now. Even when proper show planning and surveys have been done, things often change once on location. Numbers of cameras, intercom drops and monitor placement often increase, and ones originally planned for can often change location. Preproduction demands can start as soon as the truck arrives. Most EICs have stories of the client with tapes in hand waiting impatiently as the truck is still being parked, thinking that as soon as the stairs are up preproduction will commence. Often a trailer must undergo an environmental stabilization process before equipment can be turned on. For instance, in the winter, the truck needs to be warmed up to drive the condensation out of equipment first. Some HVAC units on trucks actually need their compressor prewarmed before they can be started up to warm the truck. In the summer, in many places with high humidity the HVAC must run for a while to drive down the moisture in the truck.



Figure 2.82 Next a pan/tilt head is mounted. The bottom of the head has a threaded column that is keyed and mates with an opening at the top of the pedestal. An inside threaded ring, usually brass, is screwed on from inside the pedestal (where the gloved finger is pointing). These heads are about as heavy as the tripod. They have a counterbalance mechanism to provide up to $\pm 60^\circ$ balanced tilt range for camera, lens and teleprompter combinations weighing up to 154 lbs.



Figure 2.83 Next the camera head is slid into a V-shaped wedge plate on the top of the pan/tilt head and locked into position with a lever that pushes a pin into the camera's base from the wedge plate.



Figure 2.84 Then the zoom lens is mounted. It literally hangs on a thin, inverted V-wedge plate along the top front of the camera. Gravity, via the leverage of the heavy lens extending out from the camera, forces the bottom of the lens to firmly push against the camera. To play it safe a small knob extending from the bottom of the camera controls a quarter turn plate that the tab extending from the rear bottom of the lens fits into.

Any Ku (satellite uplink) or ENG (microwave) truck operator will tell you that they can't handle that wait, as they often race to the scene of breaking news and are expected to be feeding a signal back to the station within minutes of arriving at the scene. And they have equipment that fails occasionally because of this. These trucks usually are concerned with delivering a single camera's video and the output of a single mic back for broadcast. As long as the Ku or ENG's transmitters work, along with a single camera and a microphone, their show goes on pretty much as normal. On the other hand, the large production vehicles used for producing an entire show usually have clients who count on using almost all of the production unit's infrastructure. As Murphy's Law would dictate, if only one item fails, it will most likely be the thing that has the most impact on the production. The show would still go on, but maybe not as planned, and with a client that is not as happy as they could be.

When the cable networks arrived on the scene in the early '80s, most had no technical facilities of their own. They paid a company with excess facilities to run their programs and commercials, and uplink that signal to cable headends around the country. When these fledgling cable networks did remotes a couple looked at the truck as a second technical facility, complete with control and tape rooms, and they decided that they didn't need two. On location for the remote, the vendor's truck would essentially become the network. Sometimes the truck vendor didn't know this was the case and found that an hour after power-up that their truck was feeding *I Love Lucy* to the country, and inserting commercials. At the same time, the crew still had to prepare for the show they were hired to do.

At this point, we've run the necessary cables, set up cameras, placed mics and mounted other gear, and started preproduction duties inside the truck. In the next section we'll look at why we need so many dog-gone cables to make this enterprise work. ■



Figure 2.85 TD loading effects into switcher based on input from the director and other production staff. The video switcher is taught the sources to select and manipulate during the effect. A single effect can have multiple transitions and actions, each anchored as a keyframe. Each keyframe is loaded manually the first time, and a timeline is entered as to how much time will elapse between successive keyframes. Then the whole effect is stored. Now, the push of a single button — or even an external event, such as a flag signal from an official's box in a sporting match — can run the effect. Most effects do not have to be built from scratch, as the client's production department will often bring them on disk or even download them over the Internet straight into the switcher and DVE/DME. In addition, keyframes from one effect can be used to build a new one.