

Today's Truck

One Size Does not Fit All



Figure 3.28 A walk through a "show" truck. The top two pictures are the audio compartment and the equipment and transmission areas, which are at opposite ends of the trailer. The audio compartment is large enough to accommodate not only the A1 shown here, but also a couple of A2s to handle sub-mix duties on a large music show. The bottom picture shows part of the production compartment in the foreground, with tape (left) and video (right) toward the rear.

Today's television remote truck fleet has a number of niches that various trucks are designed and built to fill. At one end is the ENG/EFP market — trucks that usually support one or two cameras. Moving up from there are the SNG trucks. Although the main job of an SNG truck is to provide a backhaul path via satellite, we will see shortly that they can also become production trucks in their own right. There are also a sizable number of mid-production vehicles that can bring extremely powerful production tools to support sophisticated productions, limited only in that they physically don't have the size to contain the number of sources, cameras, VTRs and graphics devices as the big trucks do. On the plus side, these mid-range trucks can often go where the big trucks can't.

At the high end, production trucks are often designed as "sports" or "show" trucks. The purpose of a "sports" truck is obvious. A "show" truck is geared toward entertainment — award shows, concerts, talk shows, etc. The needs of these two high-end segments are slightly different. Sports trucks generally have larger tape compartments with more VTRs and video servers to

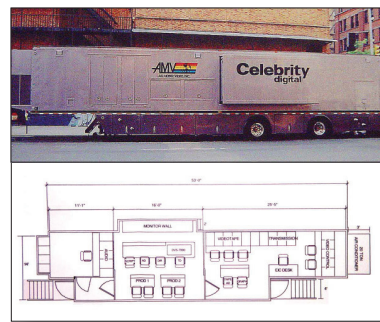


Figure 3.29 This truck is representative of today's high-end production truck. It is a dual expando, having a large expandable section on the curb side, and a smaller one on the street side. The audio compartment is almost always at one end of the trailer, next to the production compartment. The production compartment is often oriented toward the street side of the trailer, with an expando section containing the monitor wall, as seen in this photo, allowing for more people space. Production compartments in show trucks often have this orientation as it accommodates more monitors in a larger monitor wall, which allows for more sources. Shows can require more sources than sports. Production compartments with monitor walls orientated perpendicular to the curb usually allow for three benches for seating, often accommodating the extra graphics used for sports. Videotape, video and transmission often share a common area. Another common attribute is the spread of the two axles, allowing a better distribution of weight. (Source: AMV)



Figure 3.30 Sony/NMT brochure highlighting one of NMT's HD trucks. HD trucks are the toughest to build, maintain and operate of all remote trucks on the road. The equipment takes up more space, consumes more power and generates more heat. The productions can also be more involved, as clients often want HD and SD out of the truck at the same time.

ON THE ROAD WITH ON LOCATION

The tale of a community television production truck, by Judy Skeie-Voss



Figure 3.31 It's labeled the On Location production truck. It was purchased in 2000 from Wolf Coach to replace Suburban Community Channel's 1984 production van (also a Wolf Coach). Operated by the award-winning On Location Community Events Production Department, this \$180,000 truck travels into 12 suburban communities northeast of St. Paul, MN. From parades, county fairs and outdoor concerts to car shows, school plays and local sporting events, this three-camera remote studio on wheels is ready to roll.

As a division of the Ramsey and Washington counties' Suburban Cable Commission, On Location sets out to bring the tag line of "Capturing the COLORS of Our Communities" to life. With just three full-time staff people in the department, On Location relies on its dedicated community volunteers to assist with productions. Varying skill levels, ages and personalities can make even the most routine shoot more challenging. But, thanks to the easygoing attitude of On Location's mobile production coordinator, every shoot is a success and a shining example of how teamwork pays off.

With an average of 12 new community programs produced per month by On Location, the folks in these neighborhoods are accustomed to seeing the big blue-and-white truck set up at various events. When they realize that they can be on our crew and learn to operate a professional level switcher, character generator or audio board; do replays; be a camera operator; or even put their vocal talents to work as an announcer/commentator, they are amazed.

Typically it's not the crew that creates the hardest challenges for us – it's the weather! Living in Minnesota can mean extreme changes in temperature within just a few short hours. Sub-zero temperatures require us to cancel shoots, as do hot days above 95 degrees. Another thing that can quickly put a stop to a production is a wet, spongy baseball field – like the one we got the truck stuck in. That cost us over \$700 in ground repairs after the tow truck ripped our truck, and the sod, off the field.

Acquiring the new truck meant demonstrating to commission members, representatives from all 12 cities, that there was a need. Even though the old truck only had about 30,000 miles on it, our On Location productions had outgrown it. A detailed informational video was produced to help the commissioners understand why a new truck was needed. It worked!

The next challenge we face here in the community television world is outfitting the truck with new camera gear. The plan is to go with a triax cable system to replace the multicore cables currently in use, and the best cameras we can get in the \$15,000 - \$20,000 range (without lens). We're in the fact-and-figure-finding stage now, but expect to acquire new gear by the time this book is published (or sooner).

It should be known that trucks like the one we operate are used all around the United States by cable companies or non-profit organizations like ours. It's the cable franchise fee that typically is used to help operate community television centers and local origination production departments like On Location. Without this funding community television would not exist as it does today. This would be very unfortunate because, as we all know, local broadcast stations aren't about to go out and do complete coverage of a second-grade music concert or the big game matchup between two rival high school hockey teams. That's a job for the On Location production truck – let's roll!

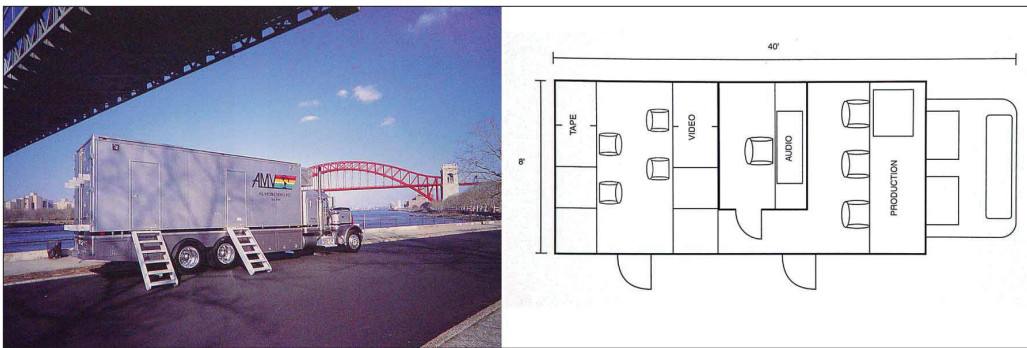


Figure 3.32 A 32-foot production truck (40 feet including engine and cab) that can support up to eight cameras. (Source: AMV)

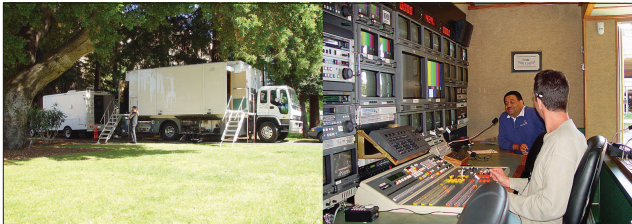


Figure 3.33 A 34-foot production truck and utility truck. This mid-sized truck is an expando that allows for up to 11 operators. The crew faces nine racks of monitors and equipment. The expandable wall allows a second production bench behind the main production bench shown here. This truck supports up to six cameras and even has its own 22kW/220/100A generator onboard, powered by the truck's engine.



Figure 3.34 Step van that can accommodate up to five operators, but is laid out so that only a couple inside the truck are necessary. This truck also has its own 7kW/110V/60A generator.



Figure 3.35 A cutaway view of a production/Ku uplink truck. The front compartment is production, the middle is audio, and the rear is for video and the satellite uplink equipment. (Source: Wolf Coach)



Figure 3.36 An actual truck similar to the model to the left. This truck has three 350W Ku uplink transmitters.



Figure 3.37 The ENG/SNG truck shown above and to the left can use microwave or satellite paths back to the television station. Because the truck is physically smaller, the satellite dish it carries will be slightly smaller than ones found on larger trucks, which results in slightly less gain for the satellite signal.

handle lots of replays and other tape packages (stories). Show trucks have larger audio and production compartments, as the audio needs are often more complex — not necessarily in numbers of sources, but in the expected quality. The production compartment will often require more people for a show, as music and art directors and other assistant directors and producers are often present. Since these large trucks contain a finite amount of space, the space given to one area must come from another. Thus, show trucks generally take space from the tape compartment to



Figure 3.38 The ENG helicopter is a common sight over larger cities today. This one has a camera mounted under its nose that is controlled by a camera operator onboard. There might also be a reporter onboard, but the pilot often has the job of communicating with the television station because he can talk on air and fly at the same time. Midway back, where the skids attach, is the omnidirectional microwave transmit antenna.

allow for larger audio and production compartments. Entertainment or show productions can generally be accommodated in a sports truck, but sports productions in a show truck can be hampered by the lack of space in the tape compartment. Most trucks are laid out as sports trucks.

Close Relatives



Figure 3.39 A new breed of remote truck, this truck was not designed to do "classical" remotes, but rather to support other trucks at a venue. The compartment in the upper right can be used as a high-end production suite, as master control, or as a release center when a group of trucks are needed for a production. The bottom right photo shows more editing stations (right side), an extensive audio compartment (left), and even an announce booth (door at center). The bottom left photo is transmission, and a quality assurance (QA) station. This trailer has extensive computer networking throughout, and over 5000 feet of fiber optic cable installed.



Figure 3.40 People outside the industry sometimes ask if the production truck also has a studio. There are studio trucks. If announcers and commentators need to be close to the pits for a car race, this movable announce booth can be used. The booth is on scissor lifts that raise it approximately 15 feet into the air. The expandable section is where the cameras are placed. Two of the cameras are robotically controlled, while the third can either be manned, or locked down on a wide shot. Since race venues are usually very large geographically, and this truck is often far from the main television compound, it also acts as a video and audio termination point. That means microphones and miscellaneous video sources can be run to this truck, which multiplexes the various signals onto a few fiber runs back to the main truck compound.



Figure 3.41 This truck contains television, animation and other equipment that represents the curriculum of a school that offers training in recording arts, game design, film and video production, animation, and show production. Notice the inside stairs in the right photo. The floor the two gentlemen are standing on would be where the equipment bays are in a production truck.



Figure 3.42 This 9.5-ton truck's output is not to satellite or fiber, but to the 149 square foot display on a pneumatic pedestal above it. The display has close to 300,000 LEDs, and folds in half (top rear against bottom rear) when it is stored parallel with the sides of the truck. The truck has only VTR playback capability, or can take an external feed.



Figure 3.43 What might a military remote truck look like? (Source: Wolf Coach)



The number of niches that remote truck vendors have found continues to increase. Technology advances resulting in increased reliability, smaller size and lower power consumption, along with vehicle construction techniques, have allowed the smallest trucks to carry more production capability than the largest first- and second-generation trucks we looked at earlier. At the same time the largest trucks on the road today can handle more sources than many broadcast facilities within a building could. Next we will look at how these big trucks are built. ■

Figure 3.44 Finally, a remote boat! This 4900-pound, 24-foot Zodiac rigid inflatable boat, manufactured for the U.S. Navy, is intended for use on water-based reality shows. The camera is mounted on an M-60 gun mount.