

Welcome to PVTV LEARNING, from ParkerVision. This curriculum represents the most advanced and effective way to teach high school and college students the science of modern television broadcast. Until now, most broadcast curriculums focused on methodology that evolved over 30 years ago. This curriculum, however, covers basic production techniques and equipment, and then transports the students into the advanced automation technologies that are quickly becoming the norm in today's television broadcast industry.

If you have elected to download only the PDF versions of the Teacher's and Student's Editions of PVTV LEARNING, feel free to jump right into teaching. Throughout the chapters, you will see references made to additional materials in the way of on-line lessons and tests, and explanatory videos and animations.

This additional material is available to educators at a significantly discounted cost in electronic format (on a CD ROM). For more information on obtaining this additional material for your school, visit our LEARNING web site at [www.PVTVLEARNING.com](http://www.PVTVLEARNING.com) or contact us as shown below.

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# EFP



# Electronic Field Production

There are a number of styles and techniques used in television production. They can typically be divided into single-camera or multi-camera style, and **ENG** (electronic newsgathering) or **EFP** (electronic field production).

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## Objectives:

After completing this section you will be able to:

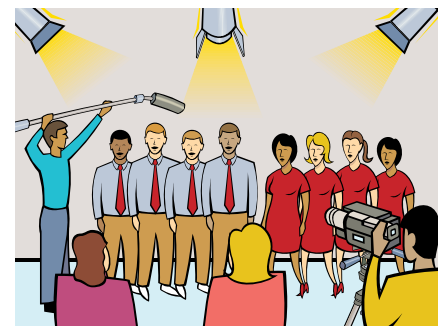
- Define EFP
- Describe methods of signal transmission
- Identify the personnel and equipment requirements of EFP news remotes

**EFP** is a combination of both **ENG** and studio production methods and is used in news, event coverage, documentary, corporate and professional production applications. It can be as basic as a reporter and videographer doing a story segment with a single camera, or as complex and elaborate as televising professional sporting events or the Academy Awards from remote locations using many cameras and a portable studio.

**ENG** is specifically related to news reporting and capturing live events. The equipment is minimal - sometimes just a handheld camera with a light and microphone mounted on it, rarely more than a camera, microphone and tripod. In **ENG** the priority is to get the story content over technical production value.

**EFP** typically differs from **ENG** in the time available to develop the story, the time to shoot and edit, and consequently the production values (lighting, sound quality, etc.) in the final segment or program. An **EFP** team will include a crew with specialists in each production area. In **EFP**, technical quality is much more of an overriding issue.

A small crew may do **EFP** with a handheld camera, or the project may involve taking a portable studio out into the field and doing a studio production in a nonstudio environment.

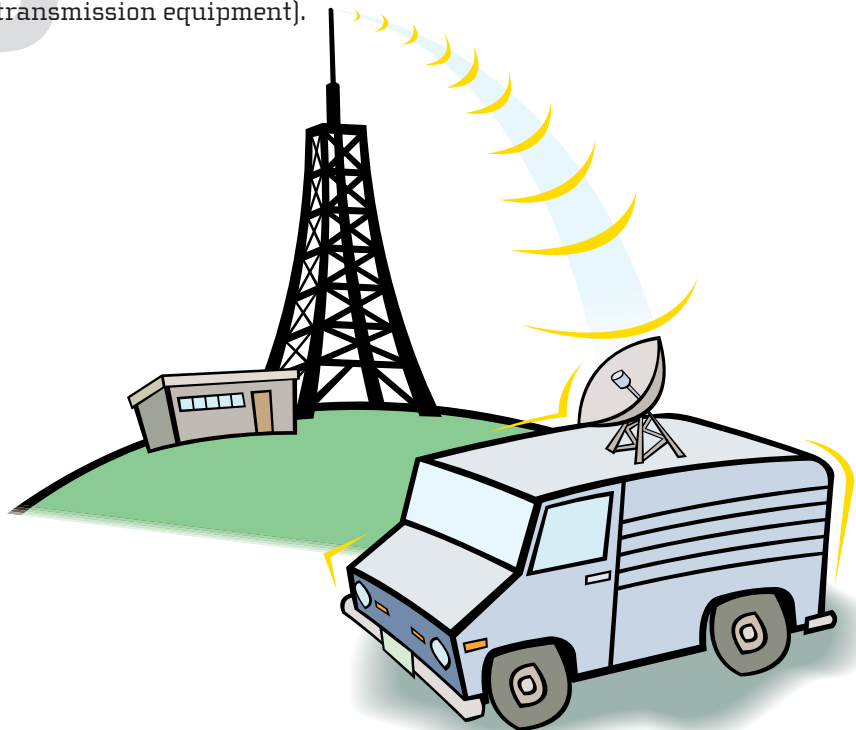
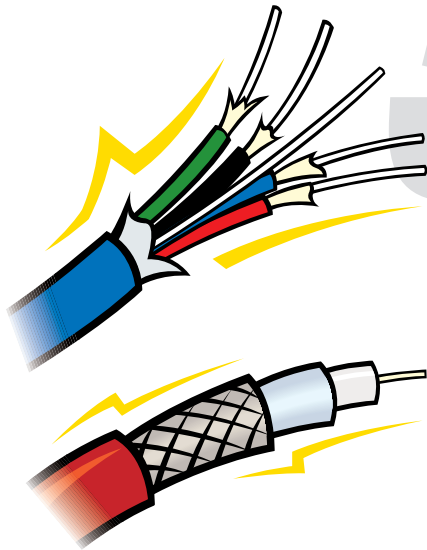




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The drive to go live often pushes ENG crews to become EFP crews. A bare-bones example of EFP in news production is a reporter appearing on camera, interviewing subjects and writing the story at the scene, while the photographer acts as the camera operator and editor. In a two-person operation such as this, the photographer is in charge of sending the signal out for broadcast, transmitting a story from a "live truck" (a truck with special signal transmission equipment).

Signals are transmitted back to the studio from remote locations via microwave or satellite. Buildings such as a city hall, a courthouse or a sports complex may be wired with coaxial or fiber optic cable to allow for signal transmission, but this is a costly venture, so it is limited to locations that are used often enough to merit the expense of wiring.





Moving beyond this smallest operation that can be classified as **EFP**, more typical ones include a producer/director, talent, a camera operator, and an audio person. In union “shops” (stations), job descriptions are strictly identified and observed, but in nonunion shops each person may have at least two jobs. For instance, a director may assume the role of talent, the camera operator takes responsibility for lighting, and the audio technician serves as the grip. Also, one of these three will be the driver. In the event of breaking news, a basic **EFP** team can act as a “first response” crew.

Larger **EFP** news operations are used when the story merits extended coverage. Bigger productions add even more crew members in specialized roles. The equipment requirements increase as well. Besides a producer/director, camera operator and audio technician, any or all of the following may be added: technical director, lighting technician, additional camera operators, graphics operator, boom mic operator, **VTR** operator, production assistants, grips, talent.

**EFP** operations on a large scale are also called “remotes.” Remotes have their own studio on wheels. A large tractor-trailer, called a remote truck, is the ultimate in field production and contains all the equipment necessary to produce broadcast-quality programming. Most remote trucks are arranged in this order: the director, assistant director and technical director are in the first section of the truck; the producer and the production assistant occupy the next section, followed by the graphics operator. The audio console is usually located behind graphics, and the rear section contains **VTRs** and monitors.

## <<<rewind



1. What is EFP?

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2. Contrast EFP with ENG.

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3. Describe the way in which microwave and satellite signals are transmitted for broadcast. What are the drawbacks to each?

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4. What is the definition of a "remote"?

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# Multi-

Multi-camera EFP is a good choice for speeches, interviews, debates and similar events that you cannot re-create in your studio. The key to a successful multi-camera event is being able to control both the talent and the flow of activity. You also get the benefit of shooting in a real-world environment.

planning and production.

One of the first things to do when planning a field production is to conduct a site survey. Check out possible camera placement, power sources, lighting concerns and cable pathways, and make alternate plans in case of bad weather. Find out how early you can set up and what time you must leave. Ask what areas are permissible for cameras.

Most of the rules for outdoor productions also apply indoors. There are advantages to shooting indoors: you are not at the mercy of the weather, and power supplies are usually

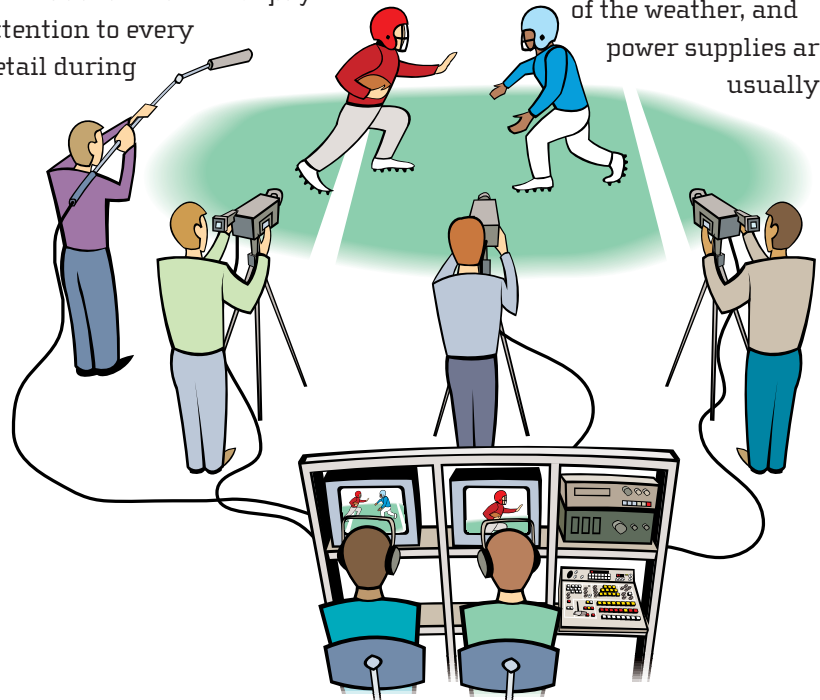
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The major concerns you will have when doing a remote are that there is much more that can go wrong technically, you will have more to coordinate logistically and there will be more people you must work with technically and creatively. The best way to deal with all of these added issues is to pay attention to every detail during

## Objectives:

After completing this section you will be able to:

- Create and implement an EFP plan for indoor and outdoor events
- Organize equipment and materials for a multi-camera field production
- Observe safety procedures for field production



adequate and sometimes even conveniently located. As for outdoor production, follow the rules about where you'll be allowed to place cameras and set up other equipment. If you need someone to unlock the facility, arrange in advance when and where to meet, as well as who's responsible for locking up when you're finished. Next make a list of what equipment you will need. Your basic equipment list may look something like this: Cameras, mics, batteries, cables and connectors, videotape, tripods, switcher, monitors, VTR and intercom system. After you're up and comfortably running this type of production you can think about adding, when appropriate, an audio mixer, graphics, portable lights, even a TelePrompTer. The following items may be helpful to have on hand: gaffer's tape, scissors, extra copies of script or production schedules, extra batteries for wireless intercom system, carpet or rubber mats (to lay over cables where people must walk), several small flashlights with extra batteries, rain gear, large plastic bags to cover equipment and umbrellas.

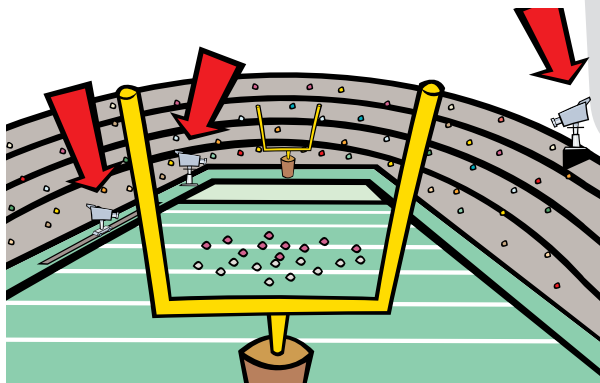
When breaking down equipment after the shoot, have a design-

nated person check off equipment as it is packed and loaded and be sure to leave the site in as good condition as you found it.

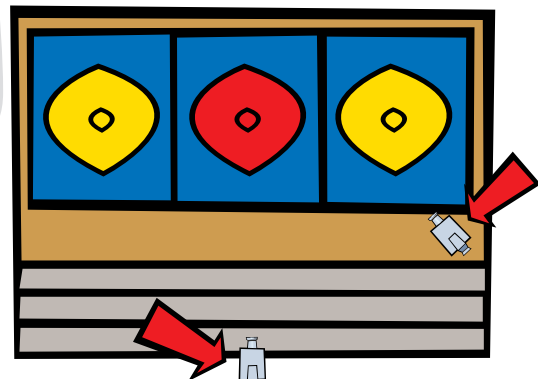
Sporting events are among the most common multi-camera productions. There's a big difference between watching a game from a spectator's view and seeing it from the player's perspective, and EFP covers both. The spectator shots provide a point of reference to the viewer, but it's the shots from a player's point of view that create the real visual excitement. It can be challenging to get those action shots.

For obvious safety reasons, cameras must maintain a minimum distance from the playing field. This is where correct camera placement and shooting strategies become very important. If you've never shot a sporting event, watch a similar type of event on television, then estimate how many cameras were used and where they were located. Obviously you'll have to adapt your shooting strategy to the number of cameras and other equipment available to you. Look at the types of shots used and the sequence in which they are shown. You may want to take notes. Learning the basic rules of the game helps, too.

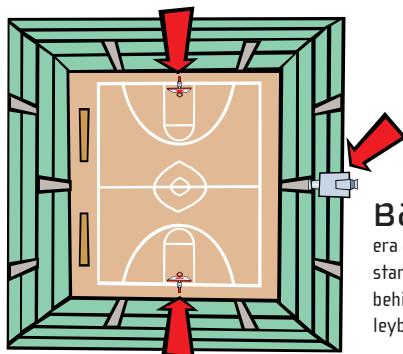
Here are some suggested camera placements for sports:



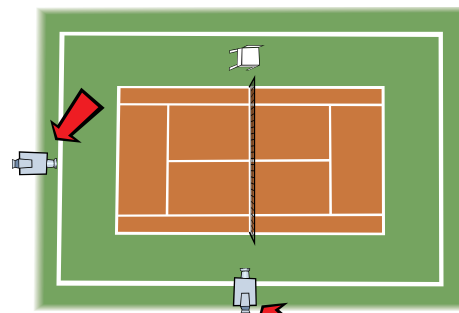
**FOOTBALL** camera at fifty-yard line at top of stadium; second camera to cover sidelines and goal. It is ideal to have a third camera on a dolly to follow the action parallel to the field (also works for soccer, track and most anything that takes place in a stadium setting).



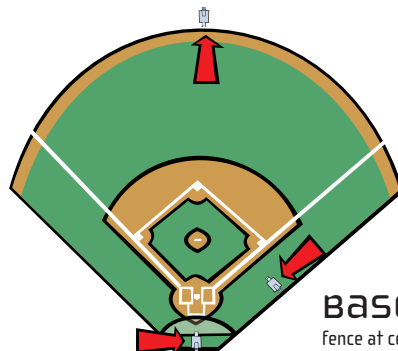
**WRESTLING** first camera at high angle overlooking mats; second camera on sidelines.



**BASKETBALL** camera at center court line in top of stands opposite team benches, behind baskets (also works for volleyball).



**TENNIS** first camera at one end of the court; a second camera, if available, for sideline shots.



**BASEBALL** camera near first base line, outside fence at center field, behind home plate (outside fence).

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1. List ways to prepare for a field production covering a sporting event.

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2. Choose one sport from the reading and draw a camera placement diagram. List the equipment and other materials you would need to produce this.

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