

GETTING THE MOST FROM YOUR FOLLOWSPOT

an
Operator's Handbook



by
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FORWARD

Education of our membership, to keep pace with technological advancement, is a keystone of this I.A.T.S.E. administration.

Bert Morris, a member of I.A.T.S.E. Local No. 22, makes a major contribution to our craft with the publication of this text.

I recommend the followspot Operator's Handbook to all professional Spotlight Operators.

ALFRED W. DITOLLA
International President
I.A.T.S.E. & M.P.M.O.

Followspot Operating



FOLLOWSPOT CAN make a bold, blinding statement, or be unobtrusive, a soft glow. It can capture the eye and drag it around, or subtly provide fill and accent. For operators, the challenge of running a lamp is being a creative part of technical presentation.

The art of the follow spotlight covers a wide field – every type and style of show in the entertainment industry. Experienced operators know each show is different and, in practice, there is really only one basic rule for all:

Be professional, give 'em what they want.

If you have never operated a followspot and what to learn, ask a good, qualified operator to teach you the fundamentals of preparing and operating a lamp (this is a MUST for carbon-arcs). Do it now, while you have the time to learn and the luxury to make mistakes. Don't wait 'til 1/2 hour.

No booklet guarantees learning, nor does putting in hours on a lamp. Craftsmanship has no shortcuts. You must concentrate, listen selectively, and pay attention to details. Experience reinforces skill, but only interest and attitude can improve it. Good operators teach

themselves to be good by working to meet adopted standards. You must decide that for yourself

In the professional theatre, the average touring attraction is seen by a followspot operator for the first time, on the job, with a paying audience. This is true of ice shows, concerts, the circus – almost any format you can name. And the majority of these shows come off without a hitch, due to the competence of good operators.

This booklet will identify some pitfalls and mistakes. I hope it encourages you to ask questions, develop solid work habits, and improve your ability – on the job. **GETTING THE MOST FROM YOUR FOLLOWSPOT** is really about getting the best from you.

The Followspot as a Lighting Element

The function of good stage lighting (visibility, plausibility, composition, and mood), are expressed through the qualities of light: intensity, color, distribution (direction), and movement (being any changes in these properties). Follow spotlights can exhibit all these qualities plus one more: synchronous pursuit.

Following makes a very dynamic, unique lighting statement. A followspot beam, tracking a performer, can change in size, shape, color, intensity and focus as it moves. It can create, build, diminish, or sustain moods and moments unparalleled by any other lighting instrument.

With the first limelight, the followspot became a theatrical convention. The stark, presentational white-hot front light will always be with us, yet there are other ways followspots are used, and from every conceivable throw in arenas, theatres, and auditoriums.

A followspot combines lighting features of many instruments with another special quality – it allows direct fusion of man and machine into one instrument, a lamp that thinks. Today's followspot operator is a craftsman whose skill with the lamp not only helps make possible the lighting designer's concept, but immeasurably adds to a performance. Enhancing the technical presentation helps form and strengthen the visual and emotional bond that an audience experiences as the true magic of theatre.

The Performance Environment

For background, a description of follow spotlight procedure follows. Experienced operators should skip this part and go on.

A ballet performance using a followspot from the *front* house position (balcony or booth) will serve as an example most familiar with. A traditional wing and border set is hung for a proscenium stage.

Typically, a stage manager or a lighting director is in constant communication with the follow spotlight operator by means of a two-way headset/microphone system. When a performer is to be picked up, the stage manager verbally cues the operator over the headset. The information consists of a “*warning*” on the pickup: an indication of color to be used, who is being picked up, and from where they will be entering. This is followed by a “*stand by*” and shortly thereafter, a “*go*”. For example, a cue in our example ballet might be for the entrance of a ballerina. The sequence as spoken by the S.M. over the headset would be:

“*Warning* on pickup, spot number one...Frame three... full body on a girl in white... entering down right in one.”

“Stand by spot one, frame three on the girl...”

“... Spot one...GO. Stay with her until she exits.”

The audience sees the ballerina appear from behind the left proscenium portal leg in a head-to-toe spot of pink light (frame three), that follows her around the stage. The light and the dancer move as one. When she exits, the light goes out the instant she crosses behind the black legs into the wings. It looks clean and professional.

The followspot operator achieves these results by first carefully preparing the lamp ahead of time, checking its balance and tracking (freeswing travel), doing cleaning, maintenance, and putting colors in their proper color frame holders.

Each control handle is tested, adjusted to suit the operator’s touch, and finally the spotlight is aligned by a pickup sight, or reference beam to points on the stage.

During rehearsals and subsequent shows, the pattern set for cueing the followspot pickups is roughly the same. On “*warning*” the operator engages the color frame the stage manager indicates, then swings the lamp into preset position, using the pickup sight or aligning the reference beam onto indicator marks on the wall. The iris is opened to the size necessary to properly cover the performer. On “*go*” the douser is opened and the pickup is made.

As the show runs, this careful process of presetting the lamp, making the pickup, following, then fading out on the exit, is repeated as many times as there are cues, until the end of the show (or last cue).

There are other specialty pickups that depend on the show. These will include pickups for mirror balls, panning the stage or audience in a ballyhoo, pickups at the aisles on entrances from the house, or “acknowledging” special guests of honor or dignitaries in the auditorium.

With proper information and preparation, the execution of all types of pickups is a matter of routine. But often, operators are not given the time to prepare or the best structure from which to work. Arena presentations for circus, rock concerts, and ice shows use many follow spotlights located on perches or small platforms, eliminating the convenient wall for setting marks (although many ingenious attempts to improvise have been made).

And in many situations, regardless of the type of house, pickups have to be made in areas not previously marked. Blind pickups such as these test the skill and concentration of the operator. Most good operators learn to feel out the toughest pickups if they work at their craft on a regular basis.

Pickup Sights

When operating in the open, on perches, platforms, and truss locations, reference systems do not exist. All pickups are blind; success depends on quickly adapting to the new environment – the lamp, throw, and the angle to the stage.

In this situation an operator must make a special effort to make pickups. Many operators have equipped follow spotlights with home-made sighting devices to insure a degree of perfection with difficult pickups. These have ranged from cardboard cut-out bomb sights, to can tabs, carbon stubs, and matches taped to lamp barrels. A quality sight has long been needed.

Now, there really is one, and it is the best solution for presetting your pickups. The PERFECT-PICKUP™ Follow Spotlight Sight is an inexpensive, easy-to-use tool that is small, lightweight, and portable. It attaches permanently or temporarily to any followspot barrel. And, its magnetic base can be gaffer-taped to non-magnetic lamps.

Best of all, it is accurate, providing automatic means for correctly positioning the lamp prior to a pickup, regardless of where it may

occur. Because the sight is referenced to the followspot beam itself and not to points on the stage, operators cannot miss once a performer is in sight. The PERFECT-PICKUP™ has been used with very excellent results by operators for tough pickups, pin-spots to the face, dancers and skaters in motion, and especially from truss and bridge locations.

To use the PERFECT-PICKUP™ Sight, you align the sight, aim at the performer, and make the pickup. You can't miss with it.

This sight eliminates the *finding time* required with conventional chalkboard and reference beam systems. With them you are constantly taking your eyes off the stage. Use a PERFECT-PICKUP™ and your eyes will never leave the stage.

Picking up a performer on the move is especially difficult if the new pickup is a tight shot (a frequent move if you are the only followspot pickup up consecutive soloists). The PERFECT-PICKUP™ makes this task a breeze; your light falls on the performer exactly where you want it and without hesitation. This sight frees you to concentrate on the art of following, making even difficult pickups look smooth and effortless. The PERFECT-PICKUP™ Sight is a welcome addition to the tools of the trade.

Operating Controls

Each basic followspot function can be controlled by a knob, lever, handle, or wheel. Additional controls dampen the panning and tilt (friction brakes), lock or release color frames, make optical alignment adjustments, or regulate voltage and ballasts. Our main concern is the controls that change or shape the light while operating. Briefly, they are:

Fades: in/out	Douser
Beam diameter	Iris diaphragm
Hard/soft Edge	Focus (lens)
Masking	Shutters (choppers)
Color Changes	Frame handles

Speed & Timing

Followspot moves vary in speed with the timing of entrances, stage business, and other lighting cues. Fast, instantaneous *bumps* are as quick as you can make them, such as a blackout. Other moves

are set as part of a cue and timed out in counts (as a 3 count fade in). Color cross fades are simultaneous douser fades, in and out.

Frame changes that are neither bumps nor crossfades are called rolls and done in counts. Irising (also in counts) is done both directions, and called

(in): “close to” or “pull to”.
(out): “open to” or “widen to”.

Pickups

Regardless of the theatrical setting or type of follow spotlight you use, pickups you make will fall into three categories: set, sight, or blind pickups.

The Set Pickup

You are told where the pickup point will be, and after aiming your lamp, open up on cue. The performer (who has been standing by), then enters the beam, or is already in place, waiting for your light. This is sometimes called a *found* pickup.

The Sight Pickup

This is your stock-in-trade. You are given the pickup location on the “warning” call (or “standby”). On the “go”, open up as you see the performer enter. Note: the pressure is on you. Jump the gun, and the audience will see a spot with no performer in it. React too late, and the audience sees the performer walk out of your light, which then has to swing over to catch up. To avoid this unprofessional look you must be prepared to move your lamp the instant you see the performer. Ideally the lamp will already be moving with the performer as you open up the douser.

The Blind Pickup

It is the most difficult to make. You have no reference points to preset your pickup. The performer is onstage (somewhere), not stationary, or coming on from an unknown entrance. But you must take the pickup as quickly as possible without sliding the light around the stage. Only experienced hand/eye coordination enables you to make a clean, blind pickup.

In most sight and blind pickups, stage managers take into account the lag time involved, however slight, between their “go” and the appearance of the follow spotlight beam on the performer. There will

be times, however, when they insist that your light appear precisely on their call. They are taking responsibility for the cue, judging the performer's position at the entrance, and calculating the exact time for them to appear in your light. It is important not to hesitate, but execute the cue immediately, even if you don't see the performer. The stage manager, judging your reaction time accordingly so the light will appear when wanted. Do it that way – it has become a set pickup.

Making Pickups

Properly executed, a pickup reveals the performer exactly on cue, at the proper color and intensity, with the beam of light centered and focused for size of spot called for. These six items apply to every pickup.

A Perfect Pickup Is:

1. ON CUE (TIME AND LOCATION),
2. PROPER COLOR,
3. CORRECT INTENSITY (BRIGHTNESS),
4. CENTERED,
5. SIZED,
6. FOCUSED.

Poor operators concentrate on making the pickup on cue, in the right color, but correct centering, sizing, and focusing while following the performer.

This is unavoidable to an extent but, if not checked, can develop into a bad habit, that “ready-fire-aim” approach to pickups. Its hallmark: an overly large spot (covers a lazy operator's inability to pin-point the performer). An operator who makes all pickups in an 8 to 10 feet wide beam, picks up the performer, plus half the set, the legs, and the apron lip. Your lamp is not a work light.

Beam Size

After your first few minutes on every follow spotlight, you should have a feel for the iris and lens controls and noted the position of the spot size controls for each basic pickup size:

Full body (head-to-toe),

Three quarter body (head-to-knees)

Half body or waist (head-to-waist)
Quarter body or head-'n'-shoulders, &
Head or pin-spot (tight to face)

You will often make pickups in between these sizes to accommodate a performer's wardrobe; cutting off a dress hemline, framing for various coat and jacket lengths, or cheating up to include large hats, canes, parasols, etc. There are also various sized beams required for specialty pickups, mirror balls, etc.

Beam size constantly adjusts to stage activity. A full body spot, adequate for an actor or singer, is too small to cover a dancer's moving arms and legs. With distance (increased throw), any given beam diameter widens. You must compensate by decreasing size as performers move away from you, and vice versa.

When you follow an active performer, the smaller the coverage requested, the more difficult it will be. Because a full body spot illuminates the entire performer, you have the movement of the whole body for visual cues. You can easily see and react to any change in motion. But smaller sized spots reduce the cues you sense and a performer can easily slip out of your light if you are not careful. The bane of every followspot operator's existence is being asked to put a pinspot on the face of a performer who then proceeds to weave and sway, or worse yet, run all over the stage.

Care must also be given to the manner in which the lamp is handled during a change in the spot size. As you iris in or out, always keep the upper edge of the beam in the same relative position above the performer's head during following. Only the bottom edge of the beam should appear to move.

As you spot down, you continually raise the lamp; the center of the beam travels up the performer, the sides and the bottom edge of the circle until the move is complete.

Poor operators just raise the lamp and then try to iris in. Again, this spills unwanted light upstage of the performer, looks awkward, and calls attention to itself. Don't be lazy.

When reversing direction (from small to large), the same rule applies; the top edge of the beam always stays in the same place above the performer while the bottom and sides appear to grow down and outward to the desired spot size. Tip the lamp slowly as you iris out, doing both motions smoothly together, so there is no unwanted spill at any time during the move.

Centering

Your beam is generally centered on the performer's person so as he or she moves around but it is common practice to cheat off center to include an outstretched arm or leg.

When you open to full body on performers dressed in period costumes, include their gowns, capes, and flowing trains. Always try to frame your subject completely, composing your beam around them. Wardrobe and properties are part of a character, so include them. The performer looks better and the costume designer will thank you.

As a rule, keep your coverage as close to the size the stage manager wants without losing vital parts of the anatomy to the dark – especially the face.

Focusing

A beam can be focused to either a sharp edge or made very soft, with variations in between. A hard edge beam is traditional presentational lighting used in ice shows, the circus, and spectacle attractions where notice me followspot practice prevails.

Softer edge focus offers the same visibility (brightness), but does not call attention to itself (the eye is not drawn to that hard edge). It highlights rather than punches an act.

The exact look is usually chosen by the lighting designer or stage manager to compliment the period and style of the production and is generally kept throughout the show. It is your responsibility to maintain that focus with each pickup.

Lamp Movement

Since each directional move a performer makes means a corresponding move from you, the force it takes to control the tracking of your lamp is important.

Excess friction causes a *stiff* lamp. It can beat you to death in a half hour or less depending on the amount and frequency of onstage movement. Equally tiring is the strong-arming required when a lamp has no friction controls or is impossible to balance. If your hands left it for even a second, the light would dive into the pit or shoot to the ceiling. Any time spent making adjustments and maintenance in this area will more than repay you.

Ideally, your lamp should have a firm, unmoving base, no freeplay in the upright support and a steady yoke carriage. This eliminates any

chance of wobble when you lock off the vertical (tilt) but are free to pan horizontally. The lamp should not drift to the left or right but stay where you leave it when you take your hands off.

When the panning control is locked but the lamp is free to tilt, the lamp should have a center of gravity well below the pivot axis bolts. This ensures vertical stability throughout the range of tilt. Again the lamp should pass the hands off test – almost no moving up or down.

Operating can be more consistent when a featherlight touch is all that you need to make the lamp respond. An instrument with good tracking makes following pleasurable. Your response is reflexive; the followspot has become an extension of yourself.

The Operators Responsibility

You are the last link in a chain of command. The only thing you control is your lamp. Its operation, maintenance, and cleanliness are your responsibility. Above you is a stage manager (or whoever calls the show), a lighting designer, an artistic director, and maybe a technical director (in the case of TV productions).

You are an extension of these people and their objectives must become yours when it comes to the follow spotlight. An ability to be flexible and intelligently execute their cues is the reason you are there.

Operating Standards

Good followspot operating takes skill, concentration, and experience. But being consistent is the most desirable quality of all. If you're good, your work will be smooth, controlled, and flawless because you demand it of yourself every second you are operating.

Difficult situations present you with an opportunity to see a problem or accept a challenge. Good operators will recognize the challenge. Poor operators just don't care.

Because laziness goes hand-in-hand with bad habits, sloppy lamp handling often follows sloppy pickups. Such operators cheat both shows and audiences. They always have excuses for poor work and often blame *limits* on the equipment. Only a poor craftsman blames his tools. The real *limits* are in their minds. Follow spotlights should represent the potential in lighting design and control, not its limits.

Your best work is your next cue.

If you are a craftsman, then you owe it to yourself to be the best that you can be. This means applying yourself to every show that

comes along with a willingness to give your best to the performers and audience. You will make accurate pickups in situations both easy and difficult, consistently, and without complaints. To do this well, you must adopt the operating standards of good form.

Good Form

Good form is responsible control over:

- **Following** – not just with but as the performer moves.
- **Presentation** – composing coverage around the performer so the light spills on little else while tracking. When possible, try to keep off the:
 - Apron lip,
 - Proscenium,
 - Upstage, set areas,
 - Back wall / drops / cyc, and
 - Other performers.
- **Handling** – color changes, iris-ing, focus changes, fades, etc., must be ABSOLUTELY fluid, executed with an invisible technique that does not call attention to itself.
- **Awareness** – of the effect your beam has, both on the performer and how it reveals the performer against the background (not the stage deck you see, but upstage set the audience sees).
- **Attitude** – caring to make each pickup your best; concentrating as much for an exit as an entrance, tracking fully as you fade out, never letting the performer walk out of the light.
- **Lamp condition** – a well maintained, clean, balanced followspot rewards an operator: smooth responsive service.

The Followspot

Knowledge of your lamp is essential for heading off potential problems. If a lamp in operation breaks down, it does so for a reason, usually neglect: improper handling or installation, lack of cleaning or maintenance. Paying attention to these areas will eliminate all but the unpredictable.

Bulbs burn out, carbons snap, internal mechanisms break or jam from heat or metal fatigue. Resistors, rectifier diodes, feed motors,

and power supplies can overload or short out; wiring harnesses get corroded; reflectors and lenses crack.

If possible, solve minor problems without shutting down your lamp. Often small adjustments can eliminate major problems. But, if faced with insurmountable trouble, don't keep it a secret, get help fast. Ask other operators to cover your cues for you and talk to the stage manager immediately. Be specific and brief. Explain the problem as you understand it. The chances are good that another operator can talk you through a step-by-step solution. Try your best to finish the show.

If all else fails, you will have to shut down. Sometimes it is just unavoidable, so don't take it personally. Be calm and take it in stride; it comes with the territory.

The Stage Manager

Stage managers come in all colors, shapes, and sizes, with varying degrees of experience, background, and temperament. You will have to work with all of them, so make up your mind to cooperate. Most are very grateful for conscientious operators and will be exceptionally sympathetic to problems you may encounter – after all, your problems are theirs, too.

Always execute your cues exactly the way the stage manager calls them. Try to be consistent. Be professional: do what you are told...on cue. Arguing or cursing over the headset is unacceptable. *Never* do it.

The Show

When, on occasion, you are presented with the opportunity to wing a show on your own, let the show in front of your eyes dictate the followspot requirements.

Attention to detail, controlled application of skill, and consistency throughout the performances, will outweigh any flashy moment you can create with your light. Whether the handling style is subtle or bold, your work must never distract an audience. They don't pay to see followspot effects.

Yourself

Finally, be responsible for the craft itself. Take pride in doing only good work, and discipline yourself towards that end. Learn at every opportunity, share your knowledge, and work at improving your ability.

Try to be aware of developments in followspots and in theatrical lighting generally.

Most important: encourage new operators. Show concern for their instruction and subsequent performance on the job. Talk to them and teach them by your example and attitude. Support training sessions and informal classes. Welcome their questions and be open with them. And on the job, be helpful and remember: it's always the first time for somebody.

Followspots have a production value and an operational price tag. The producer who sees quality followspot work judges its value and accepts the cost. The opposite is also true. Incompetent operators are a waste of good money. Damaging the show is not cost effective. It also hurts the craft. We cannot afford to be thought of as costly and unreliable. In our industry no practice is indispensable and no person is irreplaceable (the show *will* go on, with or without you).

The Secret

Make yourself invaluable. As craftsman, the satisfaction and pleasure in your own growth will only increase. Who knows, someday it might directly affect your employment and income.

General Operating Tips

CHECK DOUSER FIRST BEFORE DOING ANYTHING.

Keep your light off walls, proscenium, ceiling, and house curtain. NEVER after house has been opened to patrons.

Pay attention; don't let this ancient Greek quote apply to your operating:

*"Though he is on the spot, in fact, he is
as good as absent."* – Polybius

Tear a small 1/4 " strip of gaffers tape to wrap around the handle of frame #3 – upi wo;; feel instantly by this reference where the others are, without looking.

Never use oil or petroleum distillates (WD-40) to lubricate iris leaves. Use dry powdered graphite after thorough cleaning.

Don't EVER lock off your lamp and walk away while on a performer.

Never sneak light on stage (however dim) in order to preset a pickup point during the show. *Absolutely* never!

Don't chatter unnecessarily on headsets.

(Give us all a break).

Cover for a fellow operator in trouble.

Mark your colors lightly at the edge with a grease pencil, never in the center.

Jot down frame, color stock, and name on POST-IT™ Notes to stick next to handles.

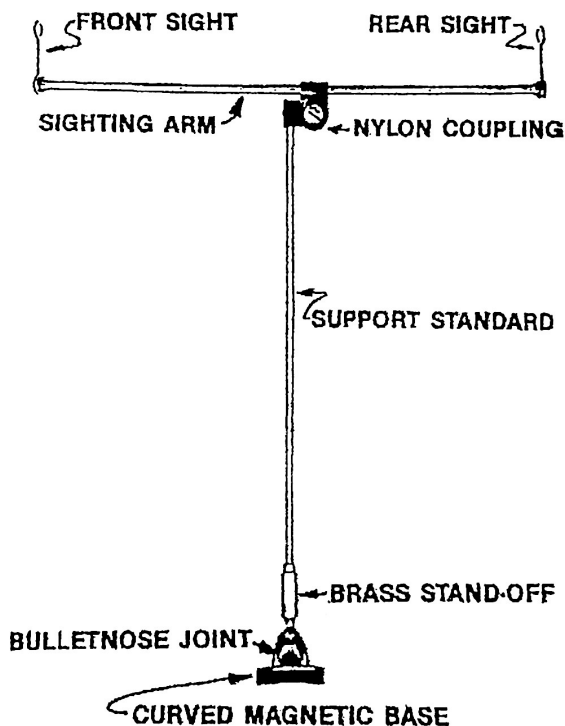
Sample:

Lamp#	Show:	
Frame	Stock	Color
1	R 119	Frost
2		
3		
4		
5		
6		

Know location of circuit breaker/fuse box for lamp circuit – have spare fuses.

Leave the booth cleaner than you found it.

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