

## APPENDIX K

# PSYOP Dissemination Battalion Operational Procedures

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This appendix describes missions, organization, and procedures for the PDB. The PDB is the primary unit responsible for the planning and dissemination of PSYOP products in the mission area. The PDB provides printed, audio, audiovisual, and communications support based upon mission statements IAW FM 100-5.

### Mission

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The PDB provides television and radio production and broadcast support to the 4th POG(A). It also provides audio support, specifically, making prepacked loudspeaker products for the tactical and regional battalions. It installs and operates organic AM/FM/SW and television broadcast systems. It operates foreign production and broadcast facilities in support of conventional and special operations. It also acquires, records, and disseminates U.S. and friendly nation's broadcasts transmitted into target area.

### Organization

The PDB consists of the headquarters and support company and three airborne companies that are specifically organized to support PSYOP and PSYOP units: the broadcast company, the signal company, and the print company. The battalion headquarters receives administrative and logistics support from the broadcast company.

### Support Relationship

During routine garrison operations, the PDB receives missions from the 4th POG(A) S3 in the form of taskings. The PDB S3 receives the missions and tasks them to the battalion's subordinate units. Units requiring PDB support must submit taskings or work orders through the 4th POG(A) S3.

During deployments, exercises, and contingencies, the PDB receives missions from the POTF S3 in the form of orders and messages with clearly defined mission statements. The PDB S3 coordinates tailored support for PSYOP elements based upon these mission statements.

### Role of the PDC

The PDCs within the 4th POG(A) play a significant role in ensuring the PDB produces and disseminates products in a manner that supports the overall mission and commander's intent. Critical factors in this role are—

- Providing a mission statement to the PDB.
- Conducting pretests and posttests of developed and disseminated products.
- Ensuring that adequate time for the preparation and production of PSYOP products is planned for and provided.

## Broadcast Company

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The broadcast company contains audio and visual dissemination assets used by the PDB to accomplish its mission. Use of assets within this unit depends on mission, target audience, and availability of the target audience to this type of medium.

### Mission

The broadcast company provides television and radio production and broadcast support to the 4th FOG(A). It installs and operates organic AM/FM/SW and television broadcast systems. It also operates foreign production and broadcast facilities in support of GP and SO forces.

### Organization

The broadcast company consists of radio-electronic maintenance platoons, each performing diverse missions. The operational platoons (media and radio) are organized as discussed below.

**Media Platoon.** The media platoon consists of 1 officer and 30 soldiers. The media platoon provides radio and television production support to POTF elements in support of PSYOP campaigns.

**Platoon Headquarters.** The platoon leader and sergeant provide C<sup>2</sup>, mission priorities, and oversight to the production elements. The platoon leader normally acts as the media production liaison officer to the POTF when the entire platoon is deployed.

**Electronic News Gathering (ENG) Teams.** Four ENG teams form the nucleus of the platoon. Each ENG team consists of a broadcast journalist (military occupational specialty [MOS] 46R), one video cameraman (MOS 25P) and a television technician (MOS 25R). Each ENG team is independently deployable with its own radio and TV editing equipment and can provide video camera and editing support to a deployed PDC or POTF. Due to equipment constraints, the broadcast company can only support two simultaneous ENG missions that require on-location editing capability. The ENG teams also have the capability to receive and record local AM, SW, and FM radio broadcasts of foreign nation or other U.S. agency programming. This programming can be incorporated into future POTF programming or can be rebroadcast over broadcast company transmitted.

**Engineering Section.** The engineering section provides maintenance support to the deployable systems and maintains the 4th POG(A) Media Reduction Center (MPC) at Fort Bragg, NC. The deployment engineering section consists of eight television technicians.

**Graphics Section.** The graphics section provides computer graphic and illustration support to television broadcast and POTF operations as required. This section can also deploy afield darkroom that can develop both black and white and color film and color slides. However, to develop color still products, a clean source of running water must be available, and the photographer also must be able to control the water temperature. The graphic section consists of seven illustrator (MOS 25Q) and three still photographers (MOS 25S).

**Radio Platoon.** The radio platoon consists of 1 officer, 1 warrant officer (WO), and 25 soldiers. Its mission is to broadcast the radio and television products made by the media platoon and to provide PSYOP-unique electronic maintenance for the 4th POG(A).

**Platoon Headquarters.** The platoon leader and sergeant provide C<sup>2</sup>, establish mission priorities, and supervise the broadcast elements. The broadcast platoon leader normally serves as LO to other broadcast elements participating in the friendly broadcasting effort (e.g., COMMANDO SOLO, HN, other government agencies [OGA]).

**Electronic Maintenance Shop (EMS).** The EMS is led by a WO and consists of soldiers with MOSs 29E and 25R. The EMS section provides GS maintenance for loudspeaker and broadcasting systems with mobile contact teams and walk-in support. EMS currently provides DS maintenance of SOF-unique communications equipment only at Fort Bragg due to test equipment constraints. DS repair of tactical radios must be provided by theater, corps, or divisional assets during deployment.

**Broadcast Teams (4 each).** Each team provides one unique broadcast capability using commercial-band AM, FM, SW, or TV transmission systems. Each team consists of personnel with MOSs 29E and 25R.

*NOTE: Operational platoons have a secondary mission to repair and operate HN and/or foreign radio or TV production or broadcast facilities.*

### **Organic Equipment**

To provide sufficient radio and television support to PSYOP mission planners, the broadcast company contains specialized dissemination equipment. The following paragraphs describe the equipment and capabilities currently found in the broadcast company.

**Media Production Center.** The MPC at Fort Bragg is the stay-behind strategic production center with capabilities similar to commercial production facilities. The MPC has audio and video studios, video standard conversion, video graphics, computer presentation graphics systems, and a complete darkroom for

photographic work. The MPC remains manned during broadcast company deployments to satisfy video requirements beyond the capabilities of the deployed teams. All video production is done in the U-MATIC and/or 8-mm formats.

**TVT-5 (AN/TSQ-171).** This system is a television broadcasting system that consists of three parts. The following paragraphs briefly describe each part:

**ENG.** This part consists of one truck-mounted M1028 with S-250 shelter housing a basic mobile video production system. Its microwave transmitter provides a real-time television link back to the control or transmitter facility. The system is manned by one ENG team and can be put into operation in less than 5 minutes. The system is used primarily to gather video footage in the field and to accomplish basic production. Live video can be transmitted via microwave between the ENG and the AN/TSQ-171 control unit. The shelter and truck can be transported in one C-130 aircraft.

**Control.** This part consists of one S-280 shelter on a dolly set. It provides sophisticated video production capability which approaches that of the MPC (minus video graphics, digital effects, and audio studio capabilities). It uses microwave links to the ENG and transmitter shelters. Manned by one ENG team, it can be operational in less than 2 hours. The system requires a minimum of 15-kw power, which is provided by a towed generator. It can be transported without a prime mover in one C-130 or in one C-141 with a prime mover (M9225A2 5-ton truck) that also shuttles the generator.

**Transmitter.** This part consists of one S-280 shelter on a dolly set with a 100-meter broadcast tower. This 5-kw, multistandard color TV transmitter has a range of approximately 70 km and can broadcast on any channel from 7 through 13 (National Television Standards Committee [NTSC]) or 5 through 12 (PAL/SECAM). The broadcasts can be directional or omnidirectional. Erecting the tower requires a special team (ASIF-2 qualified) with an installation time of 3 to 5 days. Existing towers can be used and could extend the range to more than 100 km. The system is manned by a broadcast team from the radio platoon. The transmitter may be unmanned, with only periodic service visits, if existing programming is retransmitted using microwave (maximum 15 to 20 miles). (The transmitter system can be transported without prime mover (M925A2 5-ton truck) and without tower in one C-130 or in one C-141 without a prime mover but with the tower system.) The complete AN/TSQ-171 system with prime movers requires one C-5 for air transport.

**AN/TRT-22.** This system is a radio production and broadcast system. The 50-kw AM transmitter can broadcast on any frequency from 535 Khz to 1620 Khz to a range of approximately 120 to 150 km. This range can be extended up to three times over salt water or other conductive terrain. Range is reduced over nonconductive terrain, such as desert. The system is manned by one 8-man broadcast team from the radio platoon. The 256-foot antenna tower requires a special team (with additional skill identifier [ASI] F-2) to erect with an installation time of 5 to 7 days. This antenna erection team, which consists of one NCOIC and five enlisted personnel from the signal/communications support element at Fort

Huachuca, AZ, must be deployed from other units; the PDB does not have organic capability to erect this antenna. Site preparation work, such as the construction of artificial ground planes to compensate for nonconductive soil or concrete pads to support the tower or shelter on unusually loose soil, may lengthen the time required for installation. The complete AN/TRT-22 system consists of nine S-280 shelters with dolly sets, two 200-kw generators, a large heliax cable spool, and a prime mover (M35A2). The system requires one C-5 for air transport.

The AN/TRT-22 can retransmit using Racal receivers. It can delay retransmission using Ampex tape decks and Racal receivers. It can also—

- Originate transmission with the use of studio and audio control shelters.
- Delay original broadcast using Ampex tape decks, and studio and audio control shelters.
- Use any combinations or mixtures of the above.

**AN/TRR-18.** The AN/TRR-18 is a component of the AN/TRT-22. It can receive AM, FM, SSB, and CW radio frequencies. The approximate maximum receiving range of the receiver is 6,436 km. The AN/TRR-18 is contained in an S-280 shelter. It consists of four Ampex tape decks, four Racal receivers, and one PM receiver.

**Mobility.** The AN/TRT-22 has limited mobility in that it is designed to be deployed to one location. Redeployments will keep the station off the air for up to a month. Overland vehicle requirements of the system include one dolly set per S-280 shelter, one 2 ½-ton truck (per dolly set), and one 5-ton truck with trailer. Aircraft requirements for air transport of the system include eight C-130s, five C-141s, and one C-5A. Material-handling equipment required to load, unload, or move the system includes one 10,000-pound forklift, one container mover, one K-loader, and one 10,000-pound crane.

**Broadcast Power Requirement.** The 50,000-watt transmitter requires two 200-kw generators working alternately for 24 hours of broadcast power consuming 568 to 605 liters of fuel per 24 hours. A frequency converter must be provided to access non-U.S. commercial electrical power sources.

**TAMT-10.** This system is a 10-kw AM radio production and broadcast system, which can broadcast on any frequency between 530 Khz and 1630 Khz with a range of approximately 70 to 90 km. The system is manned by one broadcast team from the radio platoon. An HF/SW broadcast can be done simultaneously with the AM from 2 Mhz to 30 Mhz. Using a skywave, an SW broadcast can range up to 1,000 km for a point target. The 37-m AM tower requires 6 hours (and a specially qualified team) to set up. The SW transmitter (without AM) can be installed and operational in 2 hours. The AM system can be installed and operational in 8 hours. AM frequency changes require 8 hours. The system consists of one S-280 shelter on a dolly set and one antenna trailer. The system minus prime movers (two M35A2s) requires one C-141 for air transport. With prime movers, the system requires a C-5 or two C-141s.

**PAMDIS (Modular).** This system combines FM radio and television transmitter systems and is manned by four personnel. It includes two separate low-power (a

100-w FM and a 200-w TV) transmitters that can broadcast FM radio (97.5 Mhz) 9 to 15 km and television 3 to 8 km. The television system can broadcast original programming or rebroadcast over any channel from 7 through 13 (NTSC) or channel 5 (PAL/SECAM) Text can be added over broadcasts and retransmitted on different channels. The systems are stored in portable transit cases and can be set up and operational in 4 hours. Power is supplied by an organic commercial 4-kw portable generator. The system can be transported in the bed of an M1008 commercial utility cargo vehicle (CUCV) or checked as baggage on a commercial aircraft. The modular PAMDIS is extremely mobile and flexible, making it ideally suited for NEO operations.

**PAMDIS (Mobile).** This system combines AM and FM radio and television transmitter systems and comes with organic transportation (Figure K-1). It includes two separate low-power (a 100-W FM and a 200-w TV) transmitted that can broadcast FM radio 97.5 Mhz with a range of 15 to 20 km and television on channels 7 through 13 (NTSC) or channel 5 (PAL/SECAM) with a range of 10 to 15 km. The AM transmitter uses a 1-kw transmitter on 530 to 1620 Khz to broadcast 50 km. The system is manned by four personnel, and setup time is 4 hours. The PAMDIS (mobile) consists of an S-280 shelter transported on an M35A2C truck and a 15-kw generator that is mounted on a twin 15-w generator trailer. The shelter must be removed from the truck for air movement on C-130 and C-141 aircraft. On C-5 aircraft, the shelter does not need to be removed.

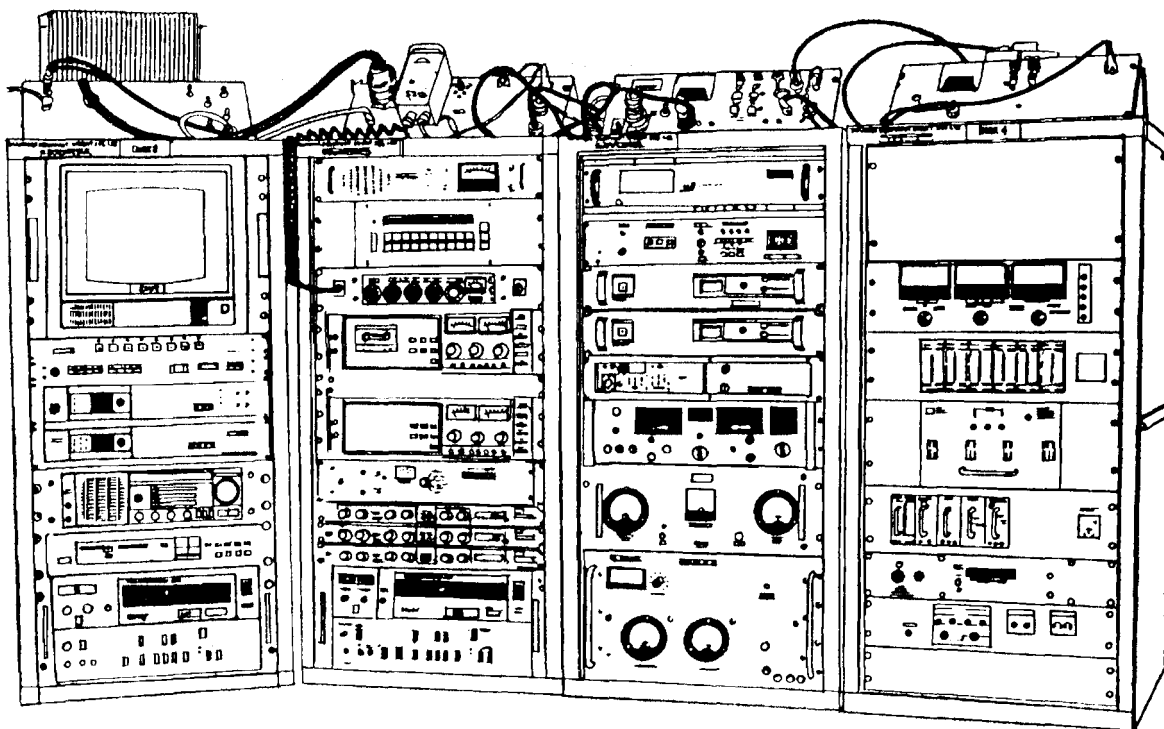


Figure K-1. PAMDIS (Mobile) system.

## Planning Factors

The primary broadcast goals for combat or contingency operations are to keep the civilian and/or military populations informed and to broadcast programming in support of approved PSYOP or information campaigns.

To accomplish these goals, detailed planning and mission analysis by the regional PSYOP battalion forming the POTF and the PDB must determine—

- Who is the target audience?
- What should they hear and/or see on the radio and TV?
- What assets are currently in place to broadcast this message?
- How will the message be broadcast to achieve the desired results?

The primary goal should be to keep the station the target audience is watching on the air. The goal is normally met by using indigenous broadcast facilities.

Once the target audience is specifically defined, all radio and television stations broadcasting to that audience must be considered a potential PSYOP broadcast asset. Organic broadcast assets can complement fixed-station transmitters or replace them temporarily until they can be back on the air.

Once the broadcast indigenous fixed facilities are obtained, programming must be planned to support the anticipated or approved campaigns. This planning will be an ongoing effort to produce sufficient quality programming.

There are various levels of production and broadcast that can be achieved for any given situation. From least to most intensive, they are—

- Providing individual radio or television “spots” produced on organic or friendly assets to HN broadcast facilities to be put on the air.
- Augmenting friendly production or broadcast facilities to assist in full time production of daily programming.
- Providing full operation of friendly and/or captured stations and rebroadcasting existing friendly programming.
- Deploying and operating organic broadcast systems and retransmitting existing programming from friendly sources.
- Deploying and operating organic broadcast systems and providing full-time original programming support.

## Product Production

Product production is the responsibility of the broadcast company to provide radio and television production support to the POTF. In an ideal situation, friendly and/or HN broadcasts provide the bulk of the programming. This production effort will normally consist of cooperation with HN broadcast personnel to produce specific spots or programs to support the various campaigns. Without HN assistance, the broadcasters and personnel in the PDCs will normally be unable to produce effective products for a large foreign audience due to language and cultural barriers.

The broadcast company can provide limited radio and television programming operations (i.e., conducting daily extended broadcasts); however, these operations are extremely manpower intensive and should only be done when daily HN or friendly programming sources are not available.

POTF responsibilities include providing overall campaign guidance and approved product concepts. Included is the commander's intent on broadcast operations. It provides HN or indigenous broadcast talent with cultural and language expertise. This assistance must be full time if daily programming is to be conducted. An experienced broadcast journalist dramatically increases the listening and/or viewing audience. The POTF also provides—

- Realistic time frames and assets to accomplish required missions.
- Assistance with obtaining target-culture production materials, such as music.
- Script outlines, themes, and concepts to the media project director.

The broadcast company provides broadcast journalists for overall development of radio and/or TV products. It provides radio and/or TV engineer, studio, and camera support.

The broadcast company provides a broadcast LO to the POTF to ensure all PSYOP broadcast concepts are technically practical, realistic, and achievable. It also provides liaison to any HN production facilities available and provides technical assistance as required.

Sufficient time is always required to put together a professional video or radio product. For video, a basic rule of thumb is that 1 hour of production is required for every minute of video produced. Naturally, it is possible to condense and cut corners when required, but it must be a deliberate decision by the POTF to trade time for quality.

There must be a clear, distinct, and limited approval process. Finished video is extremely difficult to change, once editing and mastering have occurred. The time for changes is during the conceptual phase. The overall concept and script plan should be approved by the entire chain of approval before initial production is begun. Once production has begun, change authority during the review process should be restricted to the smallest number of personnel possible.

Radio and television production usually require a dual approval process. Concept approval is required before production can begin, and final approval is required after the production is complete. These approvals are required because even subtle changes in images, sounds, and so on can lead to major differences in the way that a product is received.

HN assistance is almost always required. The journalists are often expected to adopt a different cultural approach or style during production. Language support will almost always be required, and trained native speaking broadcasters must be identified and retained.



## Broadcast Operations

The broadcast company provides broadcast systems and technical expertise in the dissemination of programming through radio and television. Normally, the most effective means to accomplish this distribution is through the use of existing fixed location facilities. Use of organic systems should be based on nonavailability or gaps in the fixed facility broadcast environment. Advantages of using existing facilities are described below.

Existing facilities will have the power and range required to reach an existing target audience with radios and/or televisions. The transportable systems maintained by the PDB are extremely low-powered when compared to most commercial broadcasting facilities. Power and broadcast ranges are the trade-off for transportability.

There is no interruption of service during the transition from purely HN programming to programming with POTF input. If a PSYOP system occupies the channel that was used by another facility, there may be a significant loss of audience due to a drop in the transmitting power.

Programming can be introduced immediately onto the airwaves, without having to wait for the installation of transportable systems.

The target audience already uses or is familiar with the frequencies or channels of existing stations, so it will be easier to get them to tune in or stay tuned.

PSYOP systems are normally used to complement the use of existing facilities. The advantages PSYOP systems have over existing facilities areas follows:

- PDB technicians can quickly replace a damaged or destroyed indigenous facility temporarily until the damaged facility is repaired.
- Maintenance and reliability are proven with the organic systems. Foreign facilities are always custom engineered systems. As a result PDB engineers will have limited familiarity other than basic conceptual understanding of the technology and knowledge of the systems' individual components.
- Organic systems are all frequency agile, meaning they can be tuned to nearly any channel on the commercial spectrum. Fixed station facilities normally do not have this capacity.

Combining existing and organic systems is the best solution in most instances. The availability and coverage capability of existing systems will normally determine which PDB assets will be used.

Several factors must be considered prior to the employment of PDB systems. For example, where specifically is the target audience located? Once the target is identified, the ideal broadcast location can be identified. AM and/or FM radio and television require a line of sight from the top of the tower to the target audience. SW can use a skywave. POTF will determine specific target audience.

The channels and/or frequencies that should be used will be based upon channels available and on analysis of the target population. If the TV channel 9 was the most

popular channel, but is now vacant, a potential audience is already there. Radio frequencies should be memorable, since they will have to be advertised by other means such as print or word of mouth. The POTF and broadcast company will determine ideal frequencies and staff them through the theater radio frequency manager.

When frequencies have been determined, they must be added to the protected frequency list to prevent friendly jamming efforts that could mistake our broadcasts as hostile. This is a likely scenario, since most PSYOP broadcasts will be in the opponent's language.

The programming source will need to be determined. All PDB broadcast systems can be used to retransmit signals to other broadcast platforms. All broadcast systems have a retransmit capability. For example, the TAMT-10 can be used as a studio to broadcast the program by SW to COMMANDO SOLO. The program can then be broadcast on FM, AM, and SW or rebroadcast to the TRT-22, which can then broadcast the signals on AM.

For television broadcasts, the broadcast system and the color format must be determined. In any case, the PDB cannot currently broadcast television on channels 2 through 6 or on UHF channels above channel 13 (U.S.).

The transmitters are not designed for jamming other broadcasting. Their power is normally not sufficient to produce a significant effect on an existing signal. In addition, PDB systems must operate on open channels and cannot compete with strong existing signals. COMMANDO SOLO has a limited jamming capability which should be planned for accordingly. Other jamming resources must be coordinated through the POTF and its supported commands.

Since our broadcasts are uniquely intended to be intercepted and heard by an opponent force, defense against opponent jamming is difficult. Whenever we change to a different frequency to avoid jamming, our target audience must also be told where to tune. This action also informs the jammers to change frequency. The best technique is to put the maximum number of systems possible on the air, which will overload opponent jamming capability. This redundancy of broadcasting systems (Voice of America, HN, COMMANDO SOLO, etc.) require a coordinated effort at the POTF level to ensure proper coverage and programming balance is obtained with all systems. Coordination must also occur with other U.S. broadcast elements to ensure that competing programming efforts are not being broadcasted simultaneously into a target area.

## **Deployment**

The deployment of a broadcast assessment team (BAT) as part of an advanced echelon is essential. Duties of the BAT include—

- Determining the availability of production and/or broadcast facilities for use by broadcast company teams.
- Determining which broadcasts and programming sources are being received by the target audience. This assessment determines the broadcast environment and develops potential open frequencies for use.

- Developing and integrating an overall broadcast plan to support the POTF campaigns.
- Recording typical radio and television programming from HN and target sources. These recordings are used to develop cultural and stylistic insight for production purposes, and to increase the development of local station stock footage for use in other projects.

### Employment

Often the PDB headquarters will not be deployed. Its subordinate elements may be attached to a POTF or JPOTF. The following depicts an ideal product flow when a PDB headquarter slice is not deployed. The media platoon leader will normally serve as the broadcast LO to the POTF to ensure integration and proper production priorities are assigned to each product or programming concept. HN and organic production and broadcast operations are coordinated at this level. Radio and TV products are produced using HN production facilities and, if required, their own basic organic equipment. Contingency plans must be developed with the Army Special Operations Forces and/or JSOTF elements to ensure keeping the radio and television facilities in potential target areas operational IAW POTF priorities.

Ideally, the radio platoon initially occupies and operates HN broadcast facilities and then positions organic systems as required for operation. Organic systems are installed and operated on order. Broadcast systems deploy IAW time required to begin operations. The low-powered systems are installed first, followed by the larger systems that require more time to install. Table K-1 reflects this incremental capability over time.

**Table K-1. Broadcast capabilities planning chart.**

System	Capabilities	Airlift	Antenna Height	Install/Frequency Change Time Range
PAMDIS	AM Radio	1 X C-130	60 feet	4 hours/ 2 hours 50 to 80 kilometers
PAMDIS	FM Radio	1 X C-130	50 feet	4 hours/ 1 hour 15 kilometers
PAMDIS	Television	1 X C-130	50 feet	4 hours/ 5 minutes 3 to 8 kilometers
TAMT-10	AM Radio	1 X C-141	125 feet	8 hours/ 8 minutes 100 kilometers
	Shortwave	1 X C-141	40 feet	2 hours/ 5 minutes up to 1,000 kilometers
AN/TRT-22	AM Radio	1 X C-5	256 feet*	10 days/ 1 hour 150 kilometers
AN/TSQ-171	Television	1 X C-141	330 feet*	5 days/ 5 minutes 70 kilometers
*Antenna installation requires a special installation crew (ASI F-2 qualified) .				

Once on the air, all broadcast platforms (Army, HN, COMMANDO SOLO) must operate in coordination with the POTF broadcast plan. The broadcast LO at the POTF will manage the integration of the assets. Broadcasts will normally continue until permanent broadcast facilities are established in the target audience AO.

## Print Company

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The print company contains the primary assets available to the PSYOP commander to use in accomplishing his PSYOP mission. The following paragraphs describe the mission, organization, and capabilities of this unit.

### **Mission**

The print company provides print, leaflet rolling, and leaflet dissemination support to the 4th POG(A). It operates organic and foreign printing systems in support of GP and SO forces.

### **Organization**

The print company consists of a headquarters section and five platoons that are equipped to print a variety of products. Four platoons have a combination of light print systems, medium print systems, and modular print systems. These platoons are deployable. The fifth platoon, the heavy print platoon, consists of stationary Heidelberg presses and supporting equipment. This platoon is located at Fort Bragg, NC, and is not deployable.

### **Operational Capabilities**

The print company produces multi-color products ranging in size from calling cards to tabloid-type newspapers. In addition, print personnel have experience in product layout (newspapers) and press repair. To maximize the full capabilities of these assets, PDCs should plan to include print liaison personnel in their planning.

**Light Print System.** There are nine systems in the inventory. Each system contains a press shelter and an editorial shelter, each mounted on an M35A2 truck.

The press shelter contains a small 1250 duplicating press with T51 head and a paper guillotine. This press is capable of producing two cobs at one time. The maximum paper dimensions for printing on this system are 11 by 17 inches. On this paper size, largest product that can be produced will be 11 by 14 inches due to margin (border) space.

The editorial shelter contains a small darkroom with vertical camera and platemaker. A VariTyper (graphics computer), two small light tables, a 1418 film dryer, and a P1400 diffusion transfer processor are also included.

The light print system is powered by two 15-kw generators. Setup and recovery take 1 hour per shelter. Both shelters have climate control. The light print system may be run on commercial power (110 or 220 volts), if available.

The light print system is transportable in one C-131 without prime movers and generators. With prime movers and generators, it is transportable in one C-5B or two C-141.

**Medium Print System.** There are three systems in the inventory. Each system consists of a 5-ton expandable van, a camera semitrailer, an editorial semitrailer, and a finishing semitrailer. All trucks and trailers have climate control systems.

The 5-ton expandable van contains a Heidelberg GTO2P52 press. It can produce two colors at one time. It can also do one color on the front and back (which is called perfecting). Paper storage is also available in the van. Maximum paper dimensions that can be printed on the GTO2P52 are 14 by 20 inches. This correlates to maximum product size of 13 3/18 by 19 3/4 inches excluding margins.

The camera semitrailer has a darkroom complete with a vertical camera and a flip-top platemaker. It also comes equipped with small and large light tables, P1400 diffusion transfer processor, 1418 film dryer, and a temperature control sink.

The editorial semitrailer has the varityper system, one large light table, and two small light tables. It also has a two-drawer safe for classified storage and a shredder.

The finishing semitrailer has a Champion 305 medium-sized paper guillotine, a 1250 duplicating press with T-51 head capable of producing two colors at one time, and a temperature control sink. The maximum paper dimensions that can be printed on this press are 11 by 17 inches.

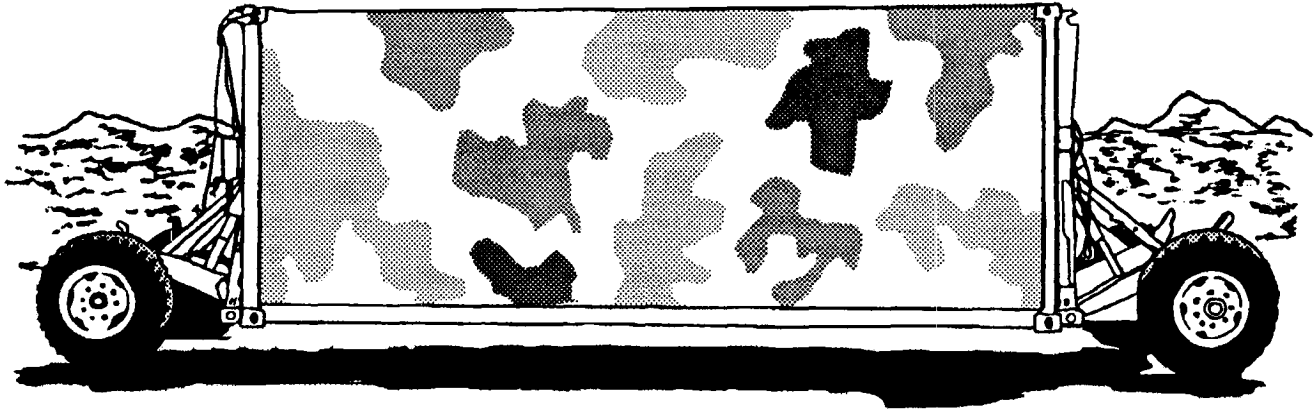
The camera, editorial, and finishing semitrailers are towed by a 5-ton tractor (M818). The entire system is powered by one 30-kw generator. Setup and recovery times are approximately 4.5 hours each. The air movement of this system requires two C-5B aircraft. An Air Force waiver is required to transport the 5-ton expandable van.

**Modular Print System (MPS).** There are five systems in the inventory (Figure K-2, page K-14). Each system contains modules A, B, and C. Module A is a light print system. It is used as the camera-ready module. It has the same capability as the light print systems, although the MPS light print sections are newer.

Module B includes two expendable shelters, each containing a Heidelberg GTO2P52 press, and a temperature control sink. It has the capability of printing two colors at the same time and can do perfecting. Paper storage is also available in the shelter. Maximum paper dimensions that can be printed on this press are 14 by 20 inches.

Module C includes one expendable shelter that contains a large Challenger MPC paper guillotine with a 3800 cut memory. It can also be used to store paper. These shelters have been modified to add a platemaker and a small light table.

All shelters (modules B and C) have trailers (dolly sets) used for limited mobility. A 5-ton cargo truck (M925A2) tows each shelter; shelters and generators are shuttled due to insufficient organic prime movers. For distances in excess of 80 km, modules B and C should be moved with a flat-bed vehicle for each shelter.



**Figure K-2. Modular print system.**

One 15-kw generator and two 60-kw generators are organic to the MPS (modules A, B, C). It can, however, be powered by one 60-kw generator. All shelters are climate controlled. A minimum of three C-5B aircraft are required for air movement of one complete MPS.

Setup of the MPS requires 4 hours. The MPS also requires a large, open, hard packed area for setup because of the extreme lack of mobility of modules B and C.

*NOTE: All mobile systems can be powered by generators or wired into a commercial power hookup. Commercial hookups provide more stable power and better noise discipline. If commercial power is used, the print system must be within a radius of approximately 15 m due to power cable length.*

**Heavy Print Facility (Fort Bragg, NC).** There is one facility in the inventory. It contains the following:

- Two single-color Heidelberg presses.
- Two two-color Heidelberg presses.
- Two large paper guillotines.
- Two paper stitchers.
- One 60-page collator.
- One complete camera section.
- One paper folder.

- Two 1250 duplicating presses.
- One VariTyper system.
- Two classified-storage safes.
- Two facilities equipped for large production.

Time required for print production on a single Heidelberg press is shown in Table K-2, page K-15.

**PSYOP Development Workstation (PDWS).** There are two systems in the inventory (Figure K-3, page K-16). The PDWS is a desktop publishing package. It consists of a central processing unit (CPU), a super video graphics array (VGA) color monitor, a 300 dots per inch (DPI) color scanner, a thermal color printer (also 300 DPI), and an STU III for communications.

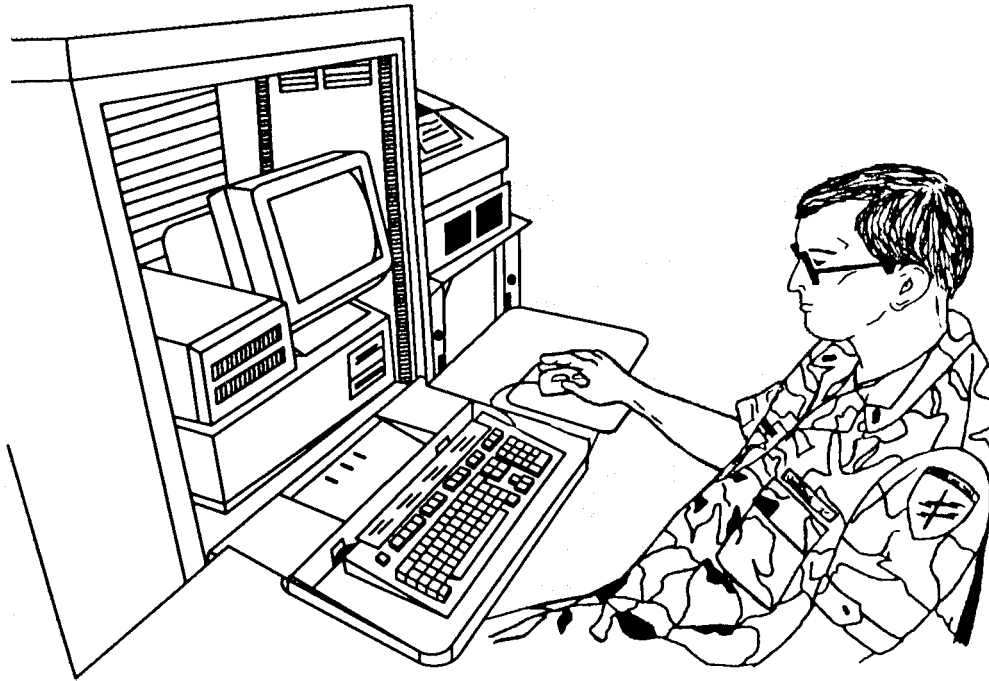
Using organic software, a trained operator can scan in images drawn by illustrators or illustrations from any printed source for use in preparation of camera-ready art. The scanned image can be used as is or as a template to make a computer graphics drawing. Either image can be used in a page layout program to develop a product, combining graphics with text. Graphic images may also be drawn directly on the computer, and clip art files can be used as is or modified.

Once the product is completed on the computer, it can be printed as a color proof or color separations by the printer. The software can make automatic color separations, either in spot version or four-color version. The black on white separations are then ready for the camera stage of the press operation.

The output quality of the computer system and printer is limited by the quality of the image scanned or drawn and by the 300 DPI limit of the printer. These limitations are most evident when a press reproduction of a photograph is desired. The end image does not compare to commercial magazine quality, but it is more than adequate for PSYOP products.

**Table K-2. Print production time requirements.**

Job	Task	Time
2X color 6 x 3 inches 100,000 leaflets	Camera work and layout	4 hours per color (8 hours)
	Press time	12 hours
	Total time	20 hours
*3X colors 6 x 3 inches 100,000 leaflets	Camera work and layout	12 hours
	Press time	24 hours
	Total time	36 hours
*Double the amount of press time for each additional color.		



**Figure K-3. PSYOP Development Workstation (PDWS).**

programmed improvements to the PDWS include upgrading to DOS and better software that will increase functions and speed production time. The proposed upgrades of the scanner and printer will dramatically improve product quality allowing the printing of commercial magazine type products.

**Risograph.** The risograph is a direct image processing machine that produces small to medium amounts of good-quality one- or two-colored products on medium-sized bond paper (Figure K-4, page K-17). It has the same basic output speed as a small press, but it is very portable and about the size of an office photocopier. It is completely self-contained and needs none of the support equipment (darkroom and platemaker) that a press requires, eliminating harmful photochemicals and hazardous waste disposal problems. The operator simply removes the ink drum and replaces it with another to print another color. With the proper cables and interface, it can be connected directly to a desktop publishing computer like the print development workstation for printing, eliminating the need for a separate color printer. It is designed to provide an immediate method of producing small quantities of products for quick-reaction teams until larger presses can arrive in theater. It requires a small generator for power and a small paper cutter for finishing. Currently, the PDB is in the process of establishing a lease contract for several risographs.

### **Leaflet Operations**

The print company has the capability to produce and disseminate leaflets in support of the PSYOP mission. Such operations include all the factors involved in



planning, producing, and disseminating leaflets by all means available. Refer to Appendix G for a detailed discussion on leaflet operations.

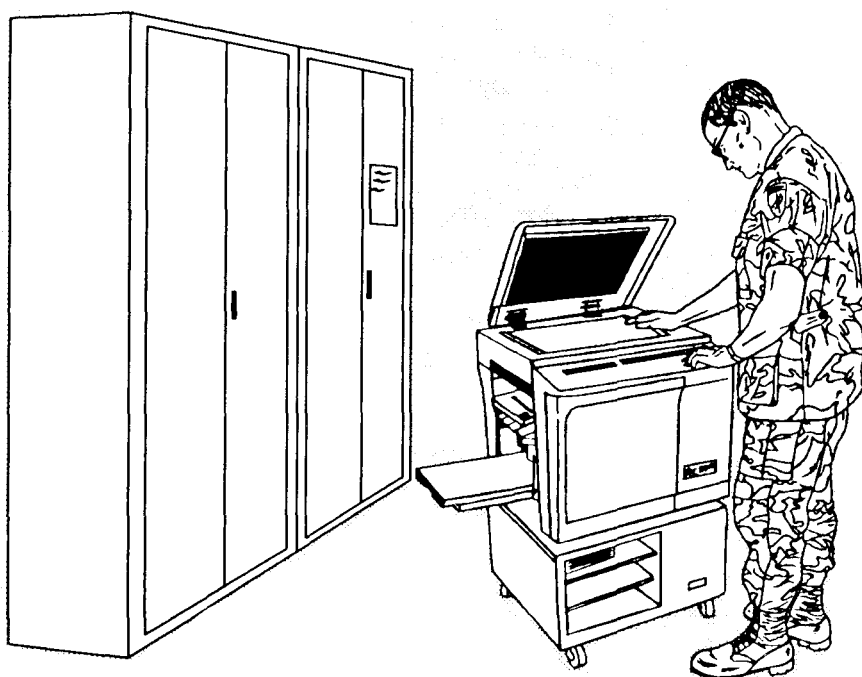
### Deployment

The deployment of a print liaison as part of the advanced echelon is essential. Duties of the liaison include:

- Determining the availability of HN, allied, or U.S. forces print facilities.
- Locating local sources of print supplies (paper, ink, press repair parts, etc.)
- Conducting site surveys for print company equipment including determining maintenance status and availability of existing equipment.

### Employment

The senior member of a deployed print company serves as the print LO to the POTF to ensure integration and realistic production priorities are assigned to each product. The approval process for products is similar to the process described for the broadcast company products. The LO maintains the print production status for each job and a consolidated inventory of existing products. He also maintains a historical data base of all leaflets produced, printed (to include samples of each), and a separate database of disseminated products.



**Figure K-4. The risograph.**

## Signal Company

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The signal company contains the primary assets for continued communications between different elements of the POG. The following paragraphs describe the mission, organization, and capabilities of this company.

### **Mission**

The signal company provides communications support for the 4th POG(A) (five battalions and one headquarter and headquarters company [HHC]). It also supports the 96th Civil Affairs Battalion (Airborne).

### **Organization**

The signal company is organized into three platoons: headquarters, information management, and tactical support.

**Headquarter Platoon.** The company headquarters provides the administrative and operations control of the company. The headquarters platoon consists of an administrative section, an operations/training section, and a supply section.

**Information Management Platoon.** The information management platoon provides message center support for all elements of the 4th POG(A). It provides management of the 4th POG(A) COMSEC account control of the POADS section and technical management of automated data processing systems in the 4th POG(A).

**Tactical Support Platoon.** The tactical support platoon provides tactical communication support to the 4th POG(A). The platoon is organized into four squads. Each squad has a habitual support relationship with one of the three regional battalions and the tactical support battalion in the 4th POG(A).

**Task Organization.** The tactical support platoon is the workhorse of the signal company. Task organized into signal support elements (SSEs), the platoon can support a POTF headquarters, the tactical psychological operations battalion headquarters, the PDB headquarters, the 96th CA Battalion (Airborne), and a number of PSYOP liaison teams. Each SSE can be tailored in both number of soldiers and type of equipment to meet mission requirements.

**Capabilities.** The POTF SSE usually consists of four or five soldiers with an NCOIC (SGT or SSG). A POTF SSE provides single channel tactical satellite (TACSAT) and high frequency (HF) radio communications to the POTF. Single channel TACSAT can pass secure voice, secure FAX, and secure data communications. TACSAT is an excellent resource but is subject to frequent preemption and limited transmission windows. HF radio can pass secure data over a long distance (800 + km), although it may sometimes be interrupted by atmospheric conditions and solar activity.

The tactical PSYOP battalion SSE usually consists of four to five soldiers including an NCOIC (SGT or SSG). It provides single channel TACSAT and HF radio communications to the tactical PSYOP battalion. It can also provide secure

voice, same tactical FAX, and secure data communications using TACSAT. Using HF radio, it can pass secure voice and secure data communications. It also provides internal wire communications for the battalion headquarters.

The PDB SSE usually consists of three to four soldiers with an NCOIC (SGT or SSG). It provides single channel TACSAT and HF radio communication to the PDB. It also can provide secure voice, secure tactical FAX, and secure data communications using TACSAT. Using HF radios, this SSE can pass secure voice and secure data communications. It also provides internal wire communications for the PDB headquarters.

The PSYOP liaison SSE consists of one soldier, usually an NCO (SGT or SSG). This SSE provides single channel HF radio communications for selected PSYOP Los. It can pass nonsecure voice and secure data communications. It can also coordinate access to alternative means of communications for the LO.

### **Mission Support Tasking**

Figure K-5, page K-20, describes the communications flow. Units requiring communications support will do the following:

- The unit determines its requirements for communications based on the mission.
- The unit then submits the tasking for communications support to the 4th POG(A) or POTF S3.
- The 4th POG(A) or POTF S3 tasks the PDB S3.
- The PDB S3 tasks the signal company commander. The signal company commander is the unit's point of contact for communications support taskings.
- The signal company commander meets with the S3 of the requesting unit to work out the details of providing a communications system to support operational requirements.
- Priorities for mission support are determined by 4th POG(A) or the POTF as required.

### **Planning Considerations**

Communications should be one of the first considerations when preparing for deployment. The signal company coordinates communications support for the units in 4th POG(A). The signal company allocates its organic assets IAW stated requirements. The group CE officer coordinates for any communications support outside of the group (e.g., interface with corps, EAC, or theater communications systems).

PSYOP battalions should route mission statements or communication concepts and requirements through the POG S3 and PDB S3 to the signal company. Requesting specific equipment and number of personnel should be avoided. The signal company commander (based on the supported unit mission requirements)

will determine the best mix for communications. Answers to the following questions will help determine the best communications package to be deployed:

- What is the location of deployment?
- What is the duration of deployment?
- What is the scheme of maneuver for the deployment?
- Are there any special communications requirements (e.g., must communicate with airborne assets, need a relay team)?
- What other communications requirements are there other than voice (FAX, data)?
- Is there secure storage for COMSEC?
- Are commercial phones available?
- Who is providing secure phones?
- Will wire be used in the AO?
- Will the communications systems of the units (corps, theater) be near the deployed unit and will these systems be accessible?

#### Power

The primary radio systems used by the signal company are push-to-talk systems. These radio systems can be powered by either vattery or power supply. The BA5590/U lithium battery is used to power all pimary radio systems.

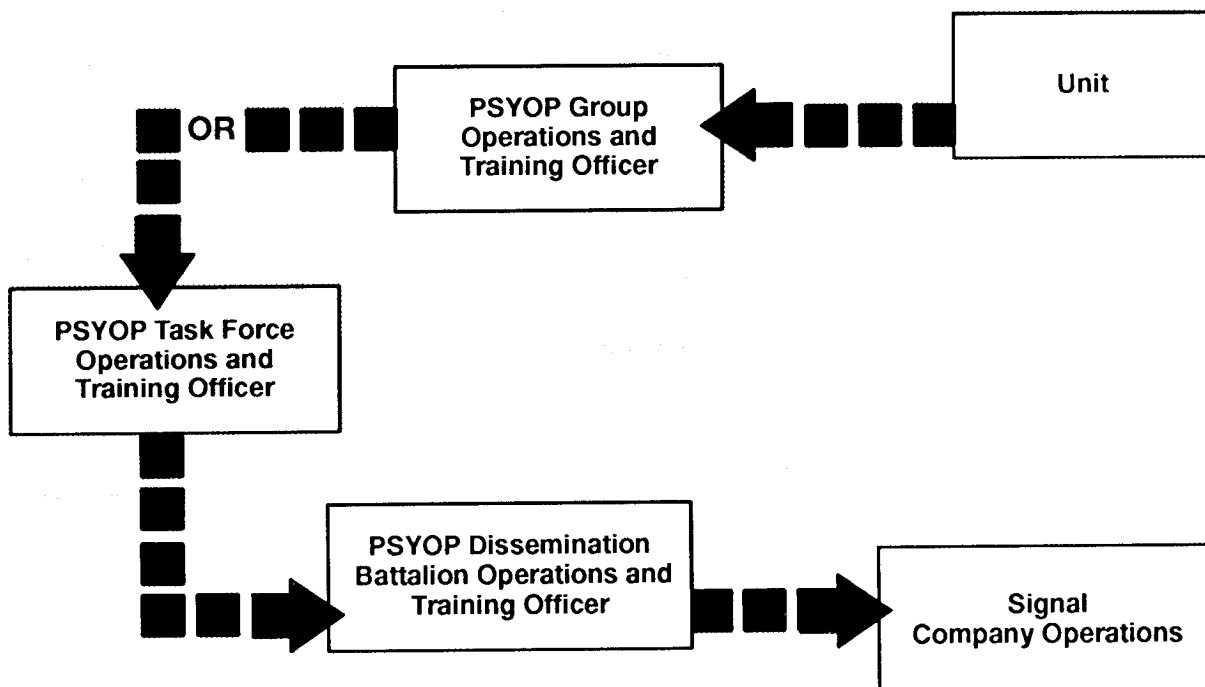


Figure K-5. Communications flow.

The signal company has power supplies that can be used when commercial power is available. The signal company will coordinate with the deploying unit for the specific power requirements.

### **Vehicles**

Signal company has six organic vehicles: two M1009s and four M1008s that can be used for both C<sup>2</sup> of the signal company's assets and for team support during deployment.