

FCC LICENSE REQUIREMENTS  
TEMPORARY VIDEO SERVICES USING PORTABLE MICROWAVE EQUIPMENT

1. GENERAL

1.01 This section describes the use of Southwestern Bell Telephone Company licenses KAN91 and KX8882.

1.02 This section is issued to replace Plant Administration Practice, Section V68.302.

1.03 Customer requests for temporary video services can be provided with portable microwave equipment using existing licenses in one of the following two services as defined by the FCC Rules and Regulations:

KAN91

As Temporary Fixed stations in the Point-to-Point Microwave Radio Service (Subpart I of Part 21).

KX8882

As Mobile TV Pickup stations in the Local Television Transmission Service (Subpart J of Part 21).

1.04 Significant differences between these two Services pertain to:

- (a) Authorized uses
- (b) Frequencies
- (c) Interference considerations
- (d) Licensed-operator requirements
- (e) Prior Notice requirements to the FCC

2. AUTHORIZED USES

2.01 Mobile TV Pickup stations may be used to provide video and associated audio signals for broadcast or non-broadcast services such as:

- (a) From a remote location to a TV station or a TV network feedpoint, usually an existing toll office or microwave relay station, to provide a temporary video program of a special event such as a parade, political convention, sporting event, etc.
- (b) From a broadcast network feed to a remote location such as a broadcast studio, convention hall, classroom, etc., in order to deliver a temporary video program of a special event.
- (c) From the scene of events to another location in order to deliver a temporary closed circuit video program, sporting event, or religious conference to a remote classroom, theater, church, etc.

2.02 Temporary Fixed stations may be used to provide temporary services as follows:

- (a) Video service, same as a above.
- (b) Video service, same as b above.
- (c) Video service, same as c above.
- (d) For restoration of permanent communication facilities due to emergency circumstances involving danger to life or property, or danger to equipment.

- (e) For maintaining existing radio service on a temporary basis due to unforeseen rearrangements of existing facilities (building, tower, antennas) not included in construction permit authorization.
- (f) For service occasionally requiring alternate or backup facilities and involving permanent towers, antennas, etc.
- (g) For permanent services for which there is an immediate need and the permanent land line facilities (not radio) are not available when required (6 month limit).
- (h) For permanent service for which construction permits have been authorized for the permanent radio facilities but are not available when needed due to unforeseen circumstances beyond the control of the licenses.

2.03 In general, Temporary Fixed stations can be used to provide any service authorized under tariffs.

3. FREQUENCIES

<u>Temporary Fixed</u>	<u>Mobile TV Pickup</u>
2,110 - 2,130 MHz	-
2,160 - 2,180 MHz	-
3,700 - 4,200 MHz	-
5,925 - 6,425 MHz	6,425 - 6,525 MHz
10,700 - 11,700 Mhz	11,700 - 12,200 MHz

3.01 Temporary Fixed services share frequencies with regular Point-to-Point stations operated by telephone companies, Long Lines, and Specialized Common Carriers and with transmit and receive earth stations.

3.02 Mobile TV Pickup stations use frequency bands adjacent to the Point-to-Point bands. Mobile TV Pickup frequencies are not presently shared with any other service, although 11,700 - 12,200 MHz may later be shared with satellite services. A limitation is that only three channels are available in the 6 GHz band.

4. INTERFERENCE CONSIDERATIONS

4.01 Because Temporary Fixed services use frequency bands which are shared with other carriers and with our own stations, computer interference studies are required to be made by the microwave engineers for each use. The continued rapid construction of regular microwave stations will eventually restrict Temporary Fixed transmitter and receiver locations and will limit channel availability. Interference into another carrier's station may result in a citation.

4.02 The Mobile TV Pickup service frequencies are now used only for Mobile TV Pickups. Interference considerations involve only other Mobile TV Pickup stations which may be ours or another common carrier. Interference cases are much less likely than for Temporary Fixed Stations. Usually no interference potential exists.

5. LICENSED OPERATOR REQUIREMENTS

5.01 For Mobile TV Pickup stations, Rule 21.205(j) applies. A licensed technician must be on duty to maintain effective operational control at the transmitter or at a remote control point. (A remote control point is considered to be at a central office, or other distant location. The transmitter control cabinet, remote control console, or equivalent, is considered part of the transmitter. This unit is within several hundred feet of the transmitter head.) At the remote control point, the Rules have been interpreted to require: a means to turn the trans-

mitter on and off, a visual indication when the controls are in the "on" position, and inaccessibility from non-authorized personnel.

#### 5.02 For Temporary Fixed stations Rule

21.205(1) applies the same as for any of our regular Point-to-Point stations which are operated on an unattended basis. No person is required to be in attendance at a station, provided:

- (a) Licensed radio personnel who are responsible for the maintenance of the radio station are available on call at locations which will assure expeditious performance of such technical servicing and maintenance as may be necessary, and
- (b) The quality of transmission over such station is subject to the supervision of responsible personnel (licensed or non-licensed) for the radio station with which the unattended station is directly associated.

NOTE: The second requirement can be fulfilled by having the transmitter alarmed to an alarm center which is manned or have other means of monitoring the signal being transmitted. This could include such additional provisions as:

1. Alarm derived from a Low Signal Alarm circuit at the receiver.
2. Full-time monitoring of the signal at the TOC or other through-location with a TV monitor or with an oscilloscope scanning the baseband signal.

#### 6. PRIOR NOTICE REQUIREMENTS TO THE FCC

6.01 For Mobile TV Pickup stations, no Prior Notice to the FCC is required unless remote operation is proposed. On these rare remote control occasions, Prior Notice consists of notifying only the Local Engineer-in-Charge of the following:

- (a) Call Sign and transmitter location
- (b) Frequencies to be used
- (c) Location of remote control point

#### 6.02 For Temporary Fixed stations, Prior

Notice is required for every use. Prior Notice consists of notifying the Commission in Washington and the local Engineer-in-Charge, of the following:

- (a) The call sign, manufacturer's name, type of model number, output power and specific location of the transmitter.
- (b) The maintenance location for the transmitter.
- (c) The location of the transmitting or receiving station with which it will communicate and the identity of the correspondent operating such facilities.
- (d) The exact frequency or frequencies to be used.
- (e) The public interest, convenience and necessity to be served by operation of the proposed installation.

(f) The commencement and anticipated termination dates of operation from each location. In the event the actual termination date differs from the previous notification, written notice thereof promptly shall be given to the Commission and its Engineer-in-Charge.

(g) A notification of operations to be conducted within the coordination distance contours of a fixed earth station shall include compliance with the provisions of Rule 21.706(c).

(h) Where the notification contemplates initially a service which is to be rendered for a period longer than 90 days, the notification shall contain a showing as to why application should not be made for regular authorization.

NOTE: Prior Notice is to be given five days prior to installation of the facilities, unless reasons are given to support notification less than five days in advance.

## 7. CONCLUSIONS AND RECOMMENDATIONS

7.01 When the length of time of operation does not warrant the establishment of unattended operation, use of the Mobile TV Pickup license is preferable:

- (a) No requirement for prior notice to the FCC
- (b) Interference-free bands of frequencies.

7.02 For unattended operation in either service, prior notice is always required. Assuming that there are no frequency equip-

ment limitations, select the service which will allow the Rules to be met with less difficulty for the particular occasion, either:

- (a) For Mobile TV Pickup stations provide Remote Control features with a licensed operator at the control point, or
- (b) For Temporary Fixed stations, provide a means to "supervise the quality of transmission" (assumes licensed-operators will be called out if needed).

7.03 Remote Control for Mobile TV Pickup stations can be established by providing a cable-pair circuit to the transmitter to control the radiation switch or to insert the radiation attenuator. A licensed-operator is required to be at the remote control location, and there should be a lamp to indicate when the switch is turned on.

7.04 For Temporary Fixed stations, the quality of transmission may be supervised by the monitoring of a picked-up signal when it passes through a TOC or other location which is manned. Personnel at the monitoring location would call licensed operators when required.

7.05 Alarm features could also be used to supervise the quality of transmission. For example, a cable pair could be used to extend the alarm leads from the Low Power Indicator or alarm bus at the transmitter to a manned location. It may be preferable, however, to extend Low Signal Indicator alarm leads from the receiver to the manned location (in the same building, perhaps). The objective, with any method, is to assure that good quality service is delivered to the customer.

8. SUMMARY

8.01 For short term video services when un-attended operation is not convenient to establish, use Mobile TV Pickup stations. Use Temporary Fixed stations only if there are insufficient Mobile TV Pickup frequencies during multi-pickup situations.

8.02 For temporary video services, when it is planned to operate without licensed operators on duty at the transmitter, consider methods in which the quality of transmission can be supervised using Temporary Fixed stations.