Populating Technical Data for 4.9GHz P-P Links on the Import Data Worksheet

The following guidelines describe the process of populating applicant 4.9 GHz technical data for fixed point-to-point (P-P) and point-to-multipoint (P-MP) links using the Import Data Worksheet. APCO Headquarters will collect the import data sheets on behalf of your agency and upload them into an application to be filed with the FCC.

Note: For 4.9 GHz point-to-point (P-P) or point-to-multipoint (P-MP) a separate application for each transmit location is required. A separate spreadsheet needs to be filled out for all receiver locations that are transmitting as well. For example, a Point-to-Multipoint application with 1 transmit "master" antenna and 7 "remote" receive locations will require a total of 8 separate spreadsheets in total.

Point to Point (P-P) links:

Enter the technical data for each point-to-point (P-P) link on a separate row. If you only have 1 P-P path, you should only have 1 row filled out, directly below the Column Headers in Row 2 (shaded Green on the import data sheet) (See Figure 1).

Station Class (PF and PB)	Transmitter Coordinates (NAD 83) (Latitude) Location Data 7) Format 38-40-00.1 N (PF and PB)	Transmitter Coordinates (NAD 83) (Longitude) Location Data 8) Format 38-40-00.1 N (PF and PB)	Transmit Antenna Number	Transmitter Antenna Center Line Height (m) Transmitter Antenna Height-to-tip (m) (Base/Mobile) Supp 2 Path Data 7) (PF and PB)	Transmitter HAAT (m) (Repeater/Base) (PB Only) LEAVE BLANK	Transmitter Frequency (MHz) Supp 4 Freq Data 4) (PF and PB)
FXO	36-11-48.8 N	081-40-10.9 W	1	21		4977.5

Figure 1: Sample Data for 1 Point-to-Point (P-P) path

Enter the technical data for the second point-to-point (P-P) link, if applicable, directly underneath the data entered for path 1 in the next row (See Figure 2). Remember to change the "Transmit Antenna Number" to "2" for the second link.

Station Class (PF and PB)	Transmitter Coordinates (NAD 83) (Latitude) Location Data 7) Format 38-40-00.1 N (PF and PB)	Transmitter Coordinates (NAD 83) (Longitude) Location Data 8) Format 38-40-00.1 N (PF and PB)	Transmit Antenna Number	Transmitter Antenna Center Line Height (m) Transmitter Antenna Height-to-tip (m) (Base/Mobile) Supp 2 Path Data 7) (PF and PB)	Transmitter HAAT (m) (Repeater/Base) (PB Only) LEAVE BLANK	Transmitter Frequency (MHz) Supp 4 Freq Data 4) (PF and PB)
FXO	36-11-48.8 N	081-40-10.9 W	1	21		4977.5
FXO	36-11-48.8 N	081-40-10.9 W	2	15		4970

Figure 2: Sample Data for 2 Point-to-Point (P-P) paths

Populating the spreadsheet in the described manner should cover at least 90% of the existing configurations currently deployed. Agencies with the following Point-to-Point configurations deployed should contact APCO for additional instructions:

1. Point-to-Point paths operating with two transmit frequencies over a single polarized antenna (i.e., 2+0).
2. Point-to-Point paths operating with two transmit frequencies, one operating on vertical, and the other operating on horizontal polarization (i.e., 2+0).
3. Point-to-Multipoint paths operating with one transmit Master Station antenna communicating with multiple fixed remote stations.

List of Technical Data to be Uploaded

The following technical data will be uploaded for fixed point-to-point (P-P) and point-to-multipoint (P-MP) links for each link.

Note 1: Please use the same identical data format as shown in the Sample Data column. For example, use dashes in the coordinates between the degrees, minutes, and seconds (as shown below) or the data will not upload correctly.

Header Legend

Green is for Transmit information

Purple is for Receiver information

Gray should be left blank

Column headings include the applicable page and question number on Schedule I (Location Data 7) this would be the location data page question 7.

Transmitter Data

	Column	Title	Sample Data
1.	A2	Call Sign	ABC123 (enter the existing PA call sign)
2.	B2	Station Class	FXO
3.	C2	Coordinates (Latitude)	38-20-38.4 N
4.	D2	Coordinates (Longitude)	89-22-59.4 W
5.	E2	Antenna Number	1,2, or 3 (etc…)
6.	F2	Antenna Center Line Ht (m)	50
7.	G2	HAAT (m)	Reserved for Station Class PB (Leave Blank)
8.	H2	Frequency (MHz)	4965
9.	I2	Emission Designator	20K0W1W
10.	J2	ERP (W)	Reserved for Station Class PB (Leave Blank)
11.	K2	EIRP (dBm)	15
12.	L2	Calculated EIRP (W)	Reserved for Internal Use (Leave Blank)
13.	M2	Units	Reserved for Station Class PB (Leave Blank)
14.	N2	Area of Operation	Reserved for Station Class PB (Leave Blank)
15.	O2	Polarization	Enter H, V, or S
16.	P2	Tolerance (%)	.000003
17.	Q2	Modulation Type	16QAM, 32QAM, 64QAM, or 128QAM, etc.
18.	R2	Antenna Manufacturer	CommScope
19.	S2	Antenna Model	HP2-5
20.	T2	Antenna Gain (dBi)	26
21.	U2	Ground Elevation (AMSL/m)	162
22.	AC2	Transmitter-Rcvr Azimuth (°)	275
23.	AD2	Location Name	Main Bldg
24.	AE2	Beamwidth (°)	361
25.	AF2	Street address	123 West Main St.

26.	AG2	City	Daytona Beach
27.	AH2	State	FL
28.	AI2	County	Volusia
29.	AJ2	Overall Height AGL w/o Appt (m)	38
30.	AK2	Overall Height with Appts (m)	41
31.	AL2	Support Structure Type	GTOWER
32.	AM2	Baseband Digital Rate (kbps)	45000
33.	AP2	Transmitter Manufacturer	ENCOM WIRELESS
34.	AQ2	Transmitter Model	E-LITE 4.9 INT

Receiver Data

	Column	Title	Sample Data
1.	V2	Coordinates (Latitude)	28-20-0.1 N
2.	W2	Coordinates (Longitude)	89-20-15.5 W
3.	X2	Antenna Manufacturer	Nokia
4.	Y2	Antenna Model	SR25-1
5.	Z2	Antenna Gain (dBi)	24
6.	AA2	Antenna Centerline Ht (m)	41
7.	AB2	Ground Elev. (AMSL/m)	205
8.	AN2	Beamwidth (°)	258.5
9.	AO2	Location Name	West Bldg

Path Azimuth Data

	Column	Title	Sample Data
1.	AC2	Antenna Xmitter-Rcvr Azm (°)	140.5

Note 2: Columns shaded gray listed as “PB” only are for Fixed Base/Mobile systems. they are reserved for future use and should be left blank. The are also listed as “Do Not Import.”
Note 3: Column J2 listed as “Calculated Transmitter ERP (W)” is for internal use and should be left blank.
Note 4: Contact the Equipment Manufacturer for technical data you do not find on your link documentation.