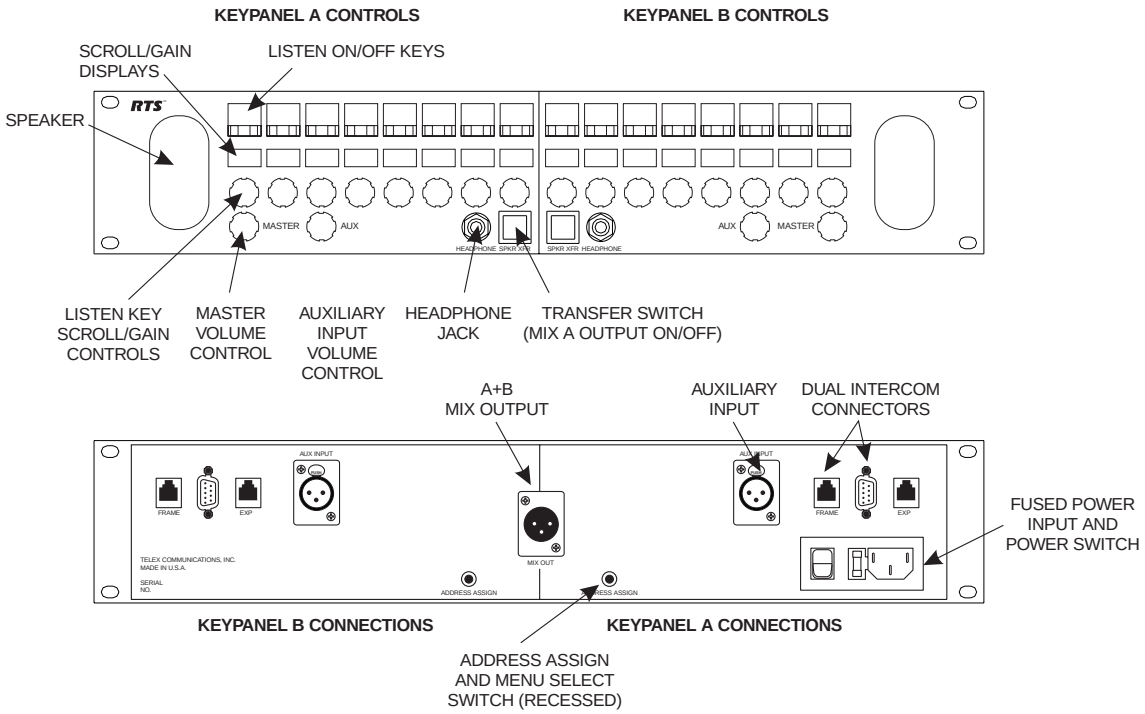
USER INSTRUCTIONS

PAM-100 PRODUCTION AUDIO MONITOR



General Description

The PAM-100 Production Audio Monitor combines two listen-only keypanels in a single, rack-mountable unit. It is ideal for two persons operating side-by-side in a studio or mobile production environment. Each person can monitor 8 intercom ports and 1 auxiliary audio source. Separate volume controls for each audio source provide complete control over the audio mix. Each keypanel can be used as a stand-alone monitor, using either headphones or the internal speaker. Or, the output from one or both keypanels can be transferred to a common audio mix output for connection to the line input of an adjacent keypanel or similar device.

Connections

Keypanel Connections

Connections are identical for each keypanel.

1. Intercom connection: Use a standard RJ11 or DB9 intercom cable (Figures 1 and 2). Connect from the FRAME connector to an available intercom port.

Note: the expansion connector (EXP) is not used.

2. Optional auxiliary input connection: Connect an auxiliary audio input to the AUX INPUT connector on the back panel.

   AUX INPUT Specifications
   Input level: 0 to +8 dB
   Connector: 3-pin XLR Female
   Pin 1: Shield
   Pin 2: Audio+
   Pin 3: Audio –

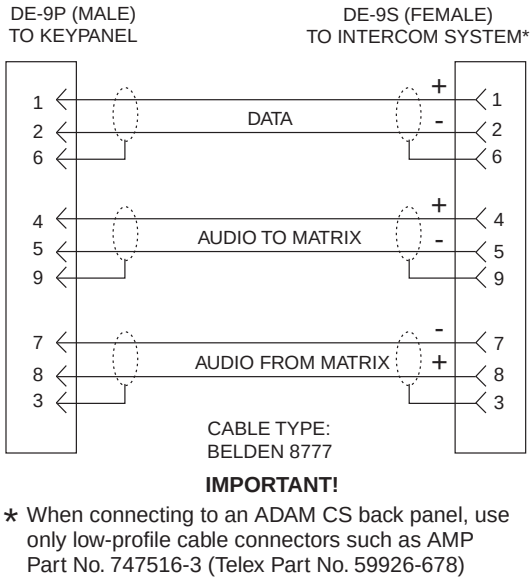


Figure 1. 9-pin Intercom cable wiring diagram

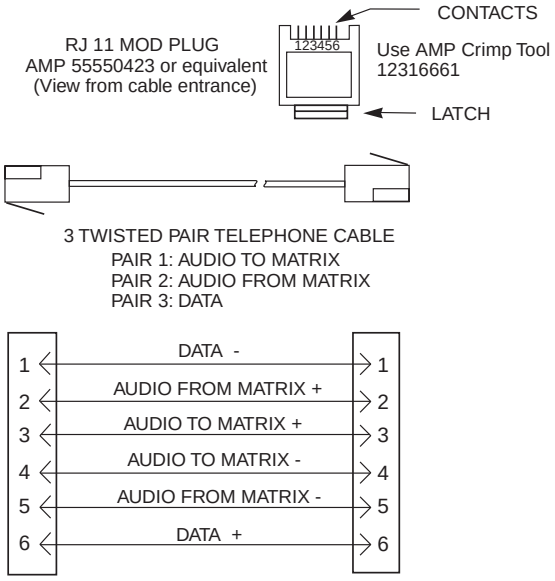


Figure 2. RJ-11 Intercom cable wiring diagram

3. Optional headphone connection: When no headphones are connected, audio output routes to the speaker. When headphones are connected, the speaker switches off and audio routes to the headphones. Stereo headphones are required for monitoring in both ears.

   Headphone Connector Specification:
   Connector type: 3-conductor, 1/4-inch phone jack
   Tip: Right
   Ring: Left
   Sleeve: Common

Optional MIX OUT Connection

Connect from the MIX OUT connector to the LINE IN connector of a keypanel or some other audio listening device.

MIX OUT Specifications
Output level: +8 dB
Connector: 3-pin XLR Male
Pin 1: Shield
Pin 2: Mix Audio+
Pin 3: Mix Audio –

Power Connection

Connect power to the universal power input module. This module accepts 100VAC-240VAC, 50/60 Hz input. (Note: the fuse holder is built into the module and can be ejected by removing the power cord and then prying the holder out. Replace fuse only with same type and rating.)

Power Up

Set the MASTER and AUX controls to minimum, and turn on the power switch. Asterisks may briefly appear in the alphanumeric displays. After a few moments, the displays should show listen key assignments (or dashes where there are no assignments). If either keypanel continues to display asterisks, it cannot establish communications with the intercom system. In this case, check the intercom cable and connections.

The SPKR XFR switches are off at power-up, so the mix output will also be off.

Setup Menu

Before using each keypanel, you must set the keypanel address. There are also several optional settings which should be configured for each keypanel. Set the keypanel address and options for each keypanel as follows:

1. On the back panel, press and release the ADDRESS ASSIGN switch. This will activate the setup menu. The first item in the menu, DIM ADJ, will appear in the two left-most displays on the front of that keypanel. Rotate the MASTER volume control to scroll through the list of menu items (Table 1).

2. To select a menu item, click the MASTER volume control. (Press and quickly release the control.)

3. Rotate the MASTER volume control to choose from the list of available settings for the selected menu item.

4. Click the MASTER volume control again to select the desired setting and return to the list of menu items.

5. Select other menu items and change settings if desired.

6. When all menu items are set as desired, double-click the MASTER volume control to exit the menu system and save the new settings. While the new settings are being saved, the displays will briefly show asterisks. Then normal operation will be restored. The new settings will be retained after power is turned off.

Table 1. Setup Menu Items

Menu Item	Description
DIM ADJ	Adjusts the display brightness level from 1 to 7. (The new level will appear in the 2 left-most displays during adjustment, and will appear in all displays after completely exiting the menu system.)
DISP VER	Displays PAM-100 firmware version. (Click again to return to menu list.)
SET ADDR	Sets keypanel address based on the port number the keypanel is connected to. Look up the port number in Table 2, then select the correct address number in the display.
SET MODE	Selects ONE or MANY mode for listen keys. See Listen Key Operation for details.
SET OPER	Selects SCRL mode (scroll) or GAIN mode for the Scroll / Gain controls. See Scroll / Gain Control Operation for details.

Operation

Operation is identical for each keypanel.

SPKR XFR Switch (Mix Out)

At power-up, the SPKR XFR switch is off, so the mix audio is routed to the speaker (or headphones if connected). To transfer the mix audio to the MIX OUT connector, tap the SPKR XFR switch.

Master Volume Adjustment

Adjust the overall intercom audio listen level with the MASTER volume control.

Auxiliary Volume Adjustment

Rotate the AUX control to adjust the auxiliary input volume (if any).

Scroll / Gain Control Operation

SCRL Mode: Scroll mode gives you immediate access to the point-to-point scroll list (the list of intercom ports for the intercom system). Rotate the Scroll / Gain control to scroll through the list of intercom ports. When you see the desired port, click the Scroll / Gain control to assign the port to the listen key.

You can also change the listen level in SCRL mode as follows:

1. Click the Scroll / Gain control. This will temporarily place the control in GAIN mode, and the red LED will light in the listen key.

2. Rotate the control to adjust the listen level.

3. Click the control to return to SCRL mode. The red LED will turn off, and normal scroll operation will resume. (IF you do not click, the control will automatically timeout and return to scroll mode after several seconds.)

GAIN Mode: GAIN mode gives you immediate access to listen level adjustment. Rotate the Scroll / Gain control to change the listen level. You do not need to click to select a new gain setting.

You can also change the key assignment in GAIN mode as follows:

1. Click the Scroll / Gain control. This will place the control in SCRL mode, and the red LED will light in the listen key.

2. Rotate the control to view the list of intercom ports.

3. Click to select the desired intercom port and return to gain mode. The red LED will turn off, and normal gain mode operation will resume.

Listen Key Operation

ONE Mode: ONE mode gives preference to a single active key, but also lets you activate many keys if desired. Tap a key to turn it on. The green LED will light. When you tap another key, the first key will turn off and the second key will turn on.

To latch a key in the on position, press and hold the key for a moment. Both the red and green LEDs will turn on. You can latch many keys on if desired. Tap any latched key to turn it off. Note that you can still operate other keys in ONE mode along with the latched keys.

MANY Mode: MANY mode gives preference to many keys being on at once, but also lets you quickly isolate to one listen if desired. Tap any key to latch it in the on position. The green LED will be lit while the key is on. You can tap several keys to latch them on. To quickly isolate to one key, press and hold that key for a moment. Both the red and green LEDs will turn on, and all other keys will turn off. Tap the isolated key to turn it off. When you do this, the keys that were previously latched on will be restored to their on state.

Table 2. Address Numbers for Intercom Ports

Settings for ADDR	Intercom Port Numbers																								
1	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161	169	177	185	193
2	2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162	170	178	186	194
3	3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123	131	139	147	155	163	171	179	187	195
4	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124	132	140	148	156	164	172	180	188	196
5	5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125	133	141	149	157	165	173	181	189	197
6	6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126	134	142	150	158	166	174	182	190	198
7	7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127	135	143	151	159	167	175	183	191	199
8	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160	168	176	184	192	200
1	201	209	217	225	233	241	249	257	265	273	281	289	297	305	313	321	329	337	345	353	361	369	377	385	393
2	202	210	218	226	234	242	250	258	266	274	282	290	298	306	314	322	330	338	346	354	362	370	378	386	394
3	203	211	219	227	235	243	251	259	267	275	283	291	299	307	315	323	331	339	347	355	363	371	379	387	395
4	204	212	220	228	236	244	252	260	268	276	284	292	300	308	316	324	332	340	348	356	364	372	380	388	396
5	205	213	221	229	237	245	253	261	269	277	285	293	301	309	317	325	333	341	349	357	365	373	381	389	397
6	206	214	222	230	238	246	254	262	270	278	286	294	302	310	318	326	334	342	350	358	366	374	382	390	398
7	207	215	223	231	239	247	255	263	271	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399
8	208	216	224	232	240	248	256	264	272	280	288	296	304	312	320	328	336	344	352	360	368	376	384	392	400
1	401	409	417	425	433	441	449	457	465	473	481	489	497	505	513	521	529	537	545	553	561	569	577	585	593
2	402	410	418	426	434	442	450	458	466	474	482	490	498	506	514	522	530	538	546	554	562	570	578	586	594
3	403	411	419	427	435	443	451	459	467	475	483	491	499	507	515	523	531	539	547	555	563	571	579	587	595
4	404	412	420	428	436	444	452	460	468	476	484	492	500	508	516	524	532	540	548	556	564	572	580	588	596
5	405	413	421	429	437	445	453	461	469	477	485	493	501	509	517	525	533	541	549	557	565	573	581	589	597
6	406	414	422	430	438	446	454	462	470	478	486	494	502	510	518	526	534	542	550	558	566	574	582	590	598
7	407	415	423	431	439	447	455	463	471	479	487	495	503	511	519	527	535	543	551	559	567	575	583	591	599
8	408	416	424	432	440	448	456	464	472	480	488	496	504	512	520	528	536	544	552	560	568	576	584	592	600
1	601	609	617	625	633	641	649	657	665	673	681	689	697	705	713	721	729	737	745	753	761	769	777	785	793
2	602	610	618	626	634	642	650	658	666	674	682	690	698	706	714	722	730	738	746	754	762	770	778	786	794
3	603	611	619	627	635	643	651	659	667	675	683	691	699	707	715	723	731	739	747	755	763	771	779	787	795
4	604	612	620	628	636	644	652	660	668	676	684	692	700	708	716	724	732	740	748	756	764	772	780	788	796
5	605	613	621	629	637	645	653	661	669	677	685	693	701	709	717	725	733	741	749	757	765	773	781	789	797
6	606	614	622	630	638	646	654	662	670	678	686	694	702	710	718	726	734	742	750	758	766	774	782	790	798
7	607	615	623	631	639	647	655	663	671	679	687	695	703	711	719	727	735	743	751	759	767	775	783	791	799
8	608	616	624	632	640	648	656	664	672	680	688	696	704	712	720	728	736	744	752	760	768	776	784	792	800