

Value Add Hybrid IP-PBX ~ Panasonic: Part 1

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Users looking for value-add in a telephone system need to look no further. In a previous Blog, I posted **“IP-PBXs What’s Selling.”** Recently, I also wrote in **“Swapping Out the IP-PBX”** that we adopted one ourselves for our internal office telephone system- and not the lab.



I’m starting with a feature that every telephone system- TDM, hybrid, pure IP, P2P, and hosted or not should include as a must have for any organization. It’s also a big survivability factor since no one can assume that their system is bullet proof or disaster free. Every telephone system needs power failure transfer (PFT) which is the ability to automatically connect CO (Central office) lines to jacks with telephones that do not require AC power. When a system goes down from disaster, hardware failure or loss of power- PFT becomes a key feature that you don’t want to overlook.

The **Panasonic** KX-TDA 100, 200 and 600 are hybrid-IP PBXs. While no product is perfect, Panasonic delivers on features as advertised. The bugs and fixes for these systems are still numbered less than all your fingers and toes, and that’s been since their initial release on November 1, 2003. Stability isn’t value-add it’s just inherent to Panasonic’s design for which they rightly deserve kudos.

PFT (Power Failure Transfer aka Power Failure Cut Through)

The analog Central Office (CO) cards are available in 8 or 16 port cards. The 8-port CO card has a built in jack with 2 lines for power failure transfer (PFT) and the 16-port CO card has two built in jacks with 2 lines each or a total of 4 lines for power failure transfer. PFT is sometimes an optional feature in other systems and they often use **Godon-Kapes** equipment to accomplish the same thing. Whenever the Hybrid IP-PBX loses power, the analog lines automatically connect to pre-wired jack destinations. Using any 2500 set (that doesn’t require AC power) provides the ability to make and receive calls on that CO line port. The PFT ports are assigned to CO’s 1 & 2 on the 8-port CO Card jack and CO’s 1 & 2 and 3 & 4 on the two jacks of the 16-port CO card. Deciding where to hardwire these ports/lines is important and having “line powered” 2500 telephone sets is too. Examples of PFT destinations are receptionist, security, break/lunch rooms, conference room, common areas, and the of course the boss’s office. **Gai-Tronics** is a leader in providing durable line powered 2500 telephones with or without enclosures and for various operating environments.

For older Panasonic telephones from the 7000, 7100, 7200 and 7400 series; 8-port hybrid station cards are available to support the older telephones. Telephones represent about a 35% of your investment in most telephone systems and reusing them is a sure way to prolong the asset life of the older equipment and still affordably move into a newer system. The hybrid station cards are not high density but can still be used for the 7600 series digital telephones. The cards 2500 set cards are available as either 8 or 16-port single line cards (SLC) and have one or two built in RJ11 jacks. A line cord from the CO card to the station card connects the PFT ports 1 & 2 to the hybrid or SLC station cards. The older style telephones also have an extra jack built in allowing a 2500 set to plug directly into the first two extensions on the card. CO lines 1 and 2 automatically connect to these extensions when the system loses power. The built in PFT jacks on the station cards may be used or not. Cross-connecting the CO PFT ports to desired destinations is the other choice and through cross-connects the CO lines can be assigned virtually anywhere onsite for designated emergency telephones. [A side note: never configure any phone system with all T1’s, SIP trunks and or PRI’s. Analog is still a defacto standard and is a great backup. Also remember each node needs access to their ‘local’ 911 services]

The PFT feature in the Panasonic product line isn’t new and has been a built in feature since the early analog systems. PFT is important for any installation- just note that you must have “line powered” not “AC powered” phones to take advantage of this feature. Then, identify the locations of each PFT port and the associated CO line and number. Label and make it easy to find the PFT or emergency telephones. It’s a detail that is often overlooked since many carry cell phones and most assume they can place a 911 call during a disaster or outage.

PFT Tips

- Use PFT
- Use only 2500 sets that are “line powered” NOT AC powered
- Assign the CO’s and Know the telephone numbers for each
- Use luminescent labels and signs near the PFT telephones displaying the telephone number
- Plan the PFT locations then test to ensure they work
- Include the PFT locations on escape/evacuation plans and maps

PFT Configuration Examples

3Com NBX 100	IP-PBX	1 PFT CO line on each 4-Port CO Card
Aastra Venture IP	P2P	1 PFT CO line on each 4-Port Gateway

Avaya One-X	P2P	1 PFT CO line on each 4-Port Gateway
Panasonic KX-TDA	Hybrid IP-PBX	2 PFT CO lines on each 8 Port CO Card
Panasonic KX-TDA	Hybrid IP-PBX	4 PFT CO lines on each 16 Port CO Card

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