

# How to configure the FXS PLAR in the IMACS

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## Scope

This document pertains to following products: IMACS 600, 800 and 900.

## Introduction

This document is a guide on how to configure the FXS PLAR in IMACS. The PLAR (Private Line Automatic Ringdown) is one of the mode options of FXS (Foreign Exchange Station). The PLAR provides point-to-point un-switched connections between two telephone sets. This configuration is usually not attached to any switch or exchange; rather it provides a “hot line” between two locations. The PLAR need be configured (identically) at both ends. So one side picks up the phone, another end automatically rings, without dialing any digits.

## Requirements

### Hardware:

- Ring generator is required at both IMACS.
- FXS cards are needed at both IMACS.
- A private between two IMACS.

### Software:

- VT-100 terminal software (such as Windows HyperTerminal).

## Configuration Steps

### 1. Configuring the FXS PLAR

**Note:** The configuration is identical on both side IMACS.

- 1a.** From the IMACS main menu, move the curser to the proper FXS (2w\*8) card, hit **Enter**.
- 1b.** Set STATE to **ACTV**.
- 1c.** Set WAN/ SERV to the proper source . For example, if the source is from WAN1-1, set WAN/ SERV to **W1-1**.

- 1d. Set TS (time slot) of the channel. For example, if the channel is WAN1-1, time slot 10, set TS to 10.
- 1e. Set MODE to **PLAR**.
- 1f. Choose one PLAR TYPE you prefer. The default is **d3-m1**, which is most commonly used. It doesn't matter which type you choose, as long as both side IMACS have the same type configured.

```

unknown | W3/U7 FXS 2Wx8-6 Rev CO-0 Ser 23409 | 07-11-30 00:47
STATE   *1    2    3    4    5    6    7    8
WAN/SRV w1-1  w1-2 none none none none none none
TS      10   22  n/a  n/a  n/a  n/a  n/a  n/a
MODE    plar fxs  fxs  fxs  fxs  fxs  fxs  fxs
TYPE    d3-m1 loop loop loop loop loop loop loop
Rx TLP  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
Tx TLP  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
CODING  u-law u-law n/a  n/a  n/a  n/a  n/a  n/a
TC CGA  idle  idle  idle  idle  idle  idle  idle  idle
LB      off  off  off  off  off  off  off  off
PATTRN  none  none  none  none  none  none  none  none
HYBRID  set1  set1  set1  set1  set1  set1  set1  set1
RINGBK  off  off  off  off  off  off  off  off
SIG CONV off  off  n/a  n/a  n/a  n/a  n/a  n/a
RATE    64K  64K  64K  64K  64K  64K  64K  64K
ADPCM   n/a  n/a  n/a  n/a  n/a  n/a  n/a  n/a
ISDN CON off  off  off  off  off  off  off  off

Save | Undo | Refresh | Copy | Test | Dial | Main

```

## 2. Testing the PLAR

**Note:** You should tell if the PLAR works if you hear the remote phone ringing. If you can't hear the remote phone or the phone does not ring, the following test procedures may help find the problem.

- 1a. From the FXS configuration screen, press **T** to Test window.
- 1b. Monitor the **Tx ABCD** and **Rx ABCD** bits. The tables below describe the call processing states for two different types of PLAR and the proper signaling bits respectively.

PLAR Type D3 Call Flow:

State	Tx AB	Rx AB
IDLE	00	00
One side off hook	11	00
Other side answers	11	11

PLAR Type D4 Call Flow:

State	Tx AB	Rx AB
IDLE	11	11
One side off hook	00	11
Other side answers	00	00

```

unknown | V3/U7 FXS 2Wx8-6 Rev CO-0 Ser 23409 | 07-11-30 01:42
SIG MON - OFF
      1      2      3      4      5      6      7      8
TEST   off   off   n/a   n/a   n/a   n/a   n/a   n/a
Tx ABCD mon  mon  mon  mon  mon  mon  mon  mon
Rx ABCD mon  mon  mon  mon  mon  mon  mon  mon
T-R-CNTL mon  mon  mon  mon  mon  mon  mon  mon
TO USER n/a  n/a  n/a  n/a  n/a  n/a  n/a  n/a
TO NTWK n/a  n/a  n/a  n/a  n/a  n/a  n/a  n/a

Tx ABCD 0000 0101 n/a  n/a  n/a  n/a  n/a  n/a
Rx ABCD 1111 1111 n/a  n/a  n/a  n/a  n/a  n/a
T-R-CNTL RbTg RbTg RbTo RbTo RbTo RbTo RbTo RbTo
T-R-STAT off  off  off  off  off  off  off  off
MODE    plar fxs  fxs  fxs  fxs  fxs  fxs  fxs
TYPE    d3-m1 loop loop loop loop loop loop loop loop
STATUS  call  idle noWAN noWAN noWAN noWAN noWAN noWAN

Save | Undo | Refresh | Main | sig mon
    
```

## Troubleshooting

**Problem:**

I pick up the phone, but don't hear anything.

**Answer:**

- If you don't even hear the talk battery, check if the ring generator is plugged in.
- Make sure the configurations at both ends are identical.
- Make sure you are using the same WAN and same channel at both ends.
- Monitor the Tx and Rx bits in the test screen to find which side does not transmit or receive properly.