

EL-POS Ethernet Setup — Destination IP & MAC Addressing

Putting an Ethernet Link (EL-POS) unit on a customer subnet: broadcast vs. unicast, and how to find the destination MAC

Who this is for: On-site installers, IT contractors, and our own support techs setting up a CallerID.com **EL-POS / Ethernet Link** unit (EL-POS8, POS-2, POS-4, Basic/Deluxe Ethernet) on a customer's local network. This is the doc I want you to reach for when the setup tool asks for a **Destination IP** and a **Destination MAC** and you're not sure what to type.

1. The short answer

In almost every install you **do not look up a MAC at all**. Leave the destination set to the **broadcast pair** — Destination IP `255.255.255.255` and Destination MAC `FF-FF-FF-FF-FF-FF`. That is the factory preset, and it delivers every caller ID record to *every* PC on the subnet. You only enter a real IP and MAC when you deliberately send the data to **one specific computer** (unicast).

VERIFY

For a typical EL-POS8 going onto a customer LAN like `192.168.20.x`: set the unit's *own* IP into that subnet (or leave it on DHCP if the customer prefers), and **leave the destination at** `255.255.255.255` / `FF-FF-FF-FF-FF-FF`. Done — every POS station on that network will hear the records.

2. How the EL box delivers data (why this matters)

An Ethernet Link unit keeps four addresses in non-volatile memory: its **own (source) IP and MAC**, and a **destination IP and MAC**. When a call comes in, the box sends one caller ID record as a UDP packet (default port **3520**) to that destination. So the destination is simply "where do I send the records?"

BROADCAST (default)

EL-POS8 --> 255.255.255.255 / FF-FF-FF-FF-FF-FF --> every PC on the subnet

UNICAST (one collector PC)

EL-POS8 --> 192.168.20.50 / 00-22-A8-B1-99-55 --> that one PC only

Because the broadcast address reaches the whole subnet, it is the right default for nearly every site — whether one PC or ten are running the POS. You don't have to know any computer's address.

3. Setting the Destination IP

Situation	Destination IP	Destination MAC
All PCs on the subnet should receive records (the normal case)	255.255.255.255	FF-FF-FF-FF-FF-FF
Only one dedicated PC collects records, or the network filters broadcasts (managed switch / VLAN)	that PC's static IP (e.g. 192.168.20.50)	that PC's MAC (see Section 4)
Off-site / over-the-internet monitoring (rare)	the remote target	the local router's MAC (the packet must exit through the gateway)

WATCH OUT

Only switch off broadcast if you have a real reason. The two reasons that come up are: (1) the customer wants a single machine to be the only one logging calls, or (2) their network drops broadcast traffic so the records never arrive. If you're changing the destination because of #2, fixing the broadcast filtering on the switch/VLAN is often the cleaner answer — **check with me before you redesign their network.**

4. Determining the Destination MAC (for a unicast install)

If — and only if — you're sending to one specific PC, you need that PC's MAC address. Here are the three ways to get it, easiest first.

1 Let the setup tool grab it automatically (easiest)

Run the Ethernet Link setup/configuration utility **on the PC that will collect the records**, then use its **connect** function (the **N** "connect to host computer" command). It automatically loads that PC's IP *and* MAC into the unit's memory. No manual typing, no mistakes.

2 Read it off the receiving PC with `ipconfig /all`

On the receiving Windows PC, open a Command Prompt and run:

```
ipconfig /all
```

Find the active network adapter and read its **Physical Address** — that is the MAC (e.g. `00-22-A8-B1-99-55`). Enter it as the Destination MAC, and set the Destination IP to that PC's static IP.

3 Find it from another PC with `ping` + `arp -a`

From any PC on the same LAN, ping the receiving PC so its address lands in the ARP table, then list the table:

```
ping 192.168.20.50
```

```
arp -a
```

The `arp -a` output pairs each IP with its Physical Address (MAC). Copy the MAC for the PC you care about.

5. The ARP-table gotcha

Occasionally a receiving PC will quietly ignore the unit's packets until you tell Windows where the device lives. The fix is a **static ARP entry** on that PC that maps the *device's* IP to the *device's* MAC:

```
arp -s [device IP] [device MAC]
```

For example: `arp -s 192.168.20.20 00-22-A8-B1-99-55`

TIP

Get the unit's **own** IP and MAC from the setup utility's device list, or by sending the discovery broadcast (the `x` command) — the unit answers with all of its current parameters, including its IP and MAC. You can also view the PC's current ARP table any time with `arp -a`.

6. Quick recipe for a 192.168.20.x site

1. Set the EL-POS8's **own** IP into the subnet (static is best, e.g. `192.168.20.20`), confirm the listener port is `3520`.
2. **Leave the destination at** `255.255.255.255` / `FF-FF-FF-FF-FF-FF` — this is what you want 95% of the time.
3. On any POS PC, run the loop/monitor test and confirm records arrive. If they do, you're finished.
4. Only if the customer wants a single collector PC (or broadcasts are filtered) switch to unicast: use Section 4 to get that PC's IP + MAC, enter them as the destination, and re-test.

7. Troubleshooting

Symptom	Likely cause	Fix
No records on <i>any</i> PC, broadcast set	Unit and PCs aren't on the same subnet, or the switch/VLAN drops broadcast traffic	Confirm the unit's own IP is in the customer subnet; verify the listener port (3520); test broadcast forwarding on the switch.
Records on <i>most</i> PCs but not one	That one PC's POS app or firewall is blocking UDP 3520	Allow inbound UDP 3520 on that PC; confirm the POS is listening on the right port/format.
Switched to unicast and now nothing arrives	Wrong destination MAC, or the receiving PC needs a static ARP entry	Re-verify the MAC (Section 4); add <code>arp -s [device IP] [device MAC]</code> on the receiving PC.
Worked, then stopped after the PC was replaced/renamed	Unicast destination still points at the old PC's MAC	Re-run the setup tool's connect on the new PC, or go back to broadcast.

IMPORTANT

If you're considering a unicast destination only to "reduce traffic," don't. One small UDP packet per call is negligible. Broadcast is simpler, survives PC swaps, and is what every other CallerID.com install uses — stay on it unless there's a concrete reason not to.

8. Related references

- [Tech Support Training Manual — Appendix: Printable Article Library](#)
 - [Ethernet Link Supplement](#) — the programmer's reference: full packet format, the **M / C / N / X** setup commands, IP/MAC/port configuration, and sample parser source. Hand this to a customer's POS/CRM developer.
 - [ESC by FieldEdge — Whozz Calling Ethernet Setup Guide](#) (TCP port 3520 configuration, firewall rules).
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