M1KE OPERATOR TRAINING

KEY POINTS GUIDE

Shark RF M1KE Multi-Network Operating Guide
Synthesized from Revision 1 and Revision 2
September 5, 2026

CORE OPERATING RULE

PROFILE → CONNECT → STATUS → LISTEN → TALK

The M1KE is intended to make it easy to move between different amateur-radio networks without rebuilding the radio configuration each time.

The operator should not need to understand the technical details behind each network.

The normal operating procedure is:

Select the Profile → Select the Destination when needed → Connect → Operate

The saved profile contains the network configuration. The operator normally should only need to select the profile and then select the desired destination, talk group, reflector, room, or node.

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1. PURPOSE OF THE M1KE

The M1KE should function as a **multi-network amateur-radio device**, not as a computer configuration project.

An operator should be able to move among:

- EchoLink
- DMR
- DMR+
- D-STAR
- C4FM/WIRES-X
- SVXReflector
- AllStar

without rebuilding the network configuration every time.

The technical work belongs in the saved profiles.

The operator's job is to select the appropriate profile, establish the connection, select the desired destination, listen, and operate.

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2. THE BASIC M1KE OPERATING METHOD

When changing to another network:

1. **Finish the current QSO.**
2. Select the desired saved profile.
3. Allow the M1KE to disconnect from the previous network.
4. Allow the M1KE to establish the new connection.
5. Check **Status**
6. Verify that the intended connector/network is active.
7. Select the desired destination, reflector, room, node, or talk group when required.
8. Listen before transmitting.
9. PTT and operate normally.

Important

Normally, change modes by **changing profiles**.

The operator should **not** have to rebuild the connector or reset the M1KE simply to change networks.

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3. THE SIX OPERATING PROFILES

Profile	Network	Normal Operator Procedure
1	EchoLink	Profile → Destination → Status → Listen → Talk
2	DMR	Profile → Favorite TG → Status → Listen → Talk
3	DMR+	
4	D-STAR	Profile → Favorite Reflector → Status → Listen → Talk
5	C4FM/WIRES-X	Profile → Favorite Room → Status → Listen → Talk
6	SVXReflector	Profile → Favorite TG/Destination → Status → Listen → Talk
7	AllStar	Profile → Favorite Node → Status → Listen → Talk

The exact profile numbers can be changed during final programming if necessary, but the **one-profile-per-network concept should remain**

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4. SWITCHING BETWEEN NETWORKS

This is the most important part of normal M1KE operation.

For example:

EchoLink → DMR → SVX → D-STAR

The operator should:

Select EchoLink Profile → Operate

Select DMR Profile → Wait → Status → Select TG → Operate

Select SVX Profile → Wait → Status → Select Destination → Operate

Select D-STAR Profile → Wait → Status → Select Reflector → Operate

You should not need to go into advanced connector settings during this process.

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5. WHAT SHOULD NOT HAPPEN

Normal operation should **not** require the operator to:

- Rebuild the connector every time a profile is selected.
- Re-enter the same destination repeatedly.
- Re-enter server information that is already saved.
- Use Advanced Settings simply to change networks.
- Reset the M1KE to change modes.
- Reconfigure the entire radio after returning to a previously used network.

If the profiles are properly configured, changing profiles should be the normal method of changing networks.

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6. FAVORITES AND PTT DESTINATIONS

Favorites are intended to make operation simple.

The operator should not have to remember or repeatedly enter:

- Long talk-group numbers
- Reflector names
- Gateway information
- Node numbers
- Room names
- Frequently used destinations

Frequently used destinations should be saved in Favorites.

PTT Destination Settings

On the M1KE, a **long press of the Down button** from the Main or Ongoing Call screen opens the PTT Destination Settings screen.

From there, destinations can be viewed, edited, and saved to Favorites.

Recommended use

DMR: Save frequently used talk groups.

D-STAR: Save frequently used reflectors and gateways.

C4FM/WIRES-X: Save frequently used rooms and destinations.

SVX: Save frequently used reflectors/talk groups.

AllStar: Save frequently used nodes.

EchoLink: Save frequently used stations, repeaters, or conferences.

The objective is simple:

The operator selects a Favorite instead of repeatedly entering complicated destination information.

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7. DMR

The DMR profile should contain the DMR connector and the appropriate network configuration.

The operator's normal job is:

Select DMR Profile → Select Favorite Talk Group → Check Status → Listen → Talk

Chicagoland DMR

The required Chicagoland destinations are:

TG9 — Local

TG3555 — Chicagoland

These two destinations should be readily available in Favorites.

They should not be buried in a large general-purpose list.

The operator should be able to select the DMR profile and quickly select either:

- **Chicagoland Local — TG9**
- **Chicagoland — TG3555**

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8. ECHOLINK

EchoLink is primarily destination-oriented.

Normal operation:

Select EchoLink Profile → Select Destination → Check Status → Listen → Talk

The important local destination used during testing is:

WX4ER

If a desired EchoLink station or repeater is difficult to find in a large list, it should be saved as a Favorite or shortcut.

The operator should not have to rebuild the EchoLink configuration simply because a particular destination is not immediately visible.

If Status indicates that EchoLink is disconnected, first:

1. Wait for the connection process to finish.
2. Check Status.
3. Verify network connectivity.
4. Only then consider troubleshooting settings.

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9. D-STAR

D-STAR uses reflector and gateway destinations.

The operator should normally use Favorites rather than rebuilding gateway information.

Training Favorites

Parker, Colorado

KoPRA

B / KoPRAG

KCWIDE

XLX458 / XRF458

Module A

These should be readily available as Favorites for normal operation.

Other D-STAR destinations can be added later without changing the basic operating procedure.

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10. C4FM / WIRES-X

C4FM/WIRES-X should operate through the saved C4FM profile.

Normal operation:

Select C4FM Profile → Select Saved Room/Destination → Check Status → Listen → Talk

Frequently used rooms and destinations should be stored in Favorites.

Training destinations include:

C4FM / Fusion / WIRES-X

The Favorites should include, at minimum:

- **KC Wide — WIRES-X Room 28054**
  - America-KC-Wide
  - YSF: 32453 / US-KCWIDE
  - KC Wide specifically says Fusion radios should use **DN mode**.
- **SkyHubLink — WIRES-X Room 09799**
  - This is the current SkyHubLink WIRES-X room.
  - SkyHubLink also identifies **YSF 92722 — US SkyhubLink** for hotspot access.
- **America Link — WIRES-X Room 21080**
  - Useful as a second major Fusion/WIRES-X choice, particularly for the SkyHubLink system's scheduled net.

And the guide should explain the important distinction between **WIRES-X rooms and YSF reflectors** so an operator doesn't treat 09799 and 92722 as the same number. SkyHubLink explicitly says they are different systems/identifiers connected by a bridge.

where supported by the selected network.

The operator should not have to rebuild the network configuration merely to change from one WIRES-X room to another.

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11. SVXREFLECTOR

SVXReflector is part of the SvxLink system.

A simple way to understand it is:

M1KE = Radio Gateway

Reflector = Meeting Place

Talk Group = Conversation Channel

SVX and DMR both use talk groups, but they are **different network systems**.

A DMR talk-group number should not automatically be assumed to work on SVX.

The SVX Favorite must match the actual configuration of the reflector being used.

Normal M1KE SVX Operation

Select SVX Profile

↓

Wait for connection

↓

Check Status

↓

Select saved SVX destination/talkgroup when required

↓

Listen

↓

Talk

Training Destinations

The training configuration should include:

KC Wide

Use the actual configured KC Wide SVX destination/talk group.

SkyHub

Include as a saved SVX destination where supported by the selected reflector/network.

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12. SVX WITH A NORMAL FM HANDHELD

SVXLink also allows a normal analog FM handheld to participate through an SVX-linked repeater.

The basic path is:

FM Handheld → SVX-Linked Repeater → Internet → SVX Reflector → Other SVX Nodes

The handheld remains an ordinary analog FM radio.

It does not need:

- DMR
- D-STAR
- C4FM
- A digital hotspot
- An M1KE

The local repeater handles the connection to the SVX network.

The operator normally needs:

- A 2-meter or 70-cm FM handheld
- Access to an SVX-linked repeater
- The repeater's frequency and offset
- Required CTCSS/DCS information
- The local repeater's operating instructions

Some SVX repeaters allow DTMF commands to select or disconnect talk groups.

Important: DTMF commands vary by repeater. The local repeater's published instructions should always be used.

The basic operating style remains the same:

Listen → Key up → Pause briefly → Speak → Identify as required

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13. ALLSTAR

AllStar should have its own saved profile.

The purpose is to allow the operator to move into and out of AllStar without changing the configurations used by the other networks.

Normal operation:

Select AllStar Profile -> Wait for connection -> Check Status -> Select Saved Node/Destination-

↓

Listen

↓

Talk

To return to another network:

Select that network's saved profile.

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14. STATUS — THE OPERATOR'S FINAL CHECK

Before transmitting after changing profiles, verify:

1. Correct Profile - Is the desired profile active?

2. Correct Connector - Is the intended network/connector connected?

3. Correct Destination - Is the desired talk group, reflector, room, node, or station selected?

4. Connection Complete - Has the M1KE finished changing connections?

5. Channel Clear - Is another operator already using the destination?

If all five are correct:

Listen → PTT → Talk

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15. SIMPLE TROUBLESHOOTING

No audio after changing profiles

First action:

Wait for the connection to complete.

Check Status.

Listen before changing settings.

Wrong network appears active

Verify the selected profile.

Allow the M1KE time to complete the profile change.

Destination is difficult to enter

Use the saved Favorite or PTT Destination.

Do not repeatedly enter long destination information.

Calls fail after changing profiles

Check:

- Status
- Network connection
- Selected destination

Do not immediately start changing advanced settings.

M1KE appears to repeatedly change screens or connections

Stop changing settings.

Allow the current operation to finish.

Then check Status.

Authentication or credential failure

Verify the saved:

- Callsign
- Account information
- Password

for the affected network.

Do not assume that a normal operating problem requires rebuilding the entire profile.

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16. ADVANCED SETTINGS

Advanced Connector and Settings pages are primarily for:

- Initial configuration
- Troubleshooting
- Network changes
- Maintenance

They are **not normal operating controls**

An operator who has been properly trained should rarely need to use them during normal operation.

This distinction is important for training.

The goal is to prevent operators from treating the M1KE like a computer that must be reconfigured every time they want to use a different network.

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17. OPERATOR TRAINING METHOD

The M1KE should be taught as a **multi-network radio**.

It should not be taught as a computer configuration project.

Training Sequence

- **First:** Teach Profiles.
- **Second:** Teach Favorites and Destinations.
- **Third:** Teach Status.
- **Fourth:** Teach Listen Before Transmitting.
- **Fifth:** Teach normal movement between networks.
- **Last:** Introduce Advanced Settings and troubleshooting.

The operator does not need to understand the underlying network technology to operate the M1KE successfully.

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18. THE OPERATOR'S MENTAL MODEL

The operator should think: **Which network do I want?**

Select the profile. **Where do I want to go?**

Select the Favorite/destination. **Am I connected?**

Check Status. **Is anyone talking?**

Listen. **Ready?**

PTT and talk.

That is the entire normal operating concept.

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19. ONE-PAGE QUICK REFERENCE

MODE	PROFILE	OPERATORSEQUENCE
EchoLink	1	Profile → Destination → Status → Listen → Talk
DMR	2	Profile → Favorite TG → Status → Listen → Talk
DMR+ D-STAR	4	Profile → Favorite Reflector → Status → Listen → Talk
C4FM/WIRES-X	4	Profile → Favorite Room → Status → Listen → Talk
SVXReflector	5	Profile → Favorite TG/Destination → Status → Listen → Talk
AllStar	6	Profile → Favorite Node → Status → Listen → Talk

THE M1KE OPERATOR MEMORY AID

PROFILE-> CONNECT-> STATUS-> LISTEN-> TALK

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20. BOTTOM LINE

A properly prepared M1KE should behave like a **multi-network radio**.

The operator should be able to:

Choose the network

→ **Choose the destination**

→ **Verify the connection**

→ **Listen**

→ **Talk**

The technical configuration belongs in the saved profiles.

The operator should **not** have to repeatedly rebuild that configuration simply because he wants to change from EchoLink to DMR, D-STAR, C4FM/WIRES-X, SVXReflector, or AllStar.

The profile is the key to making the M1KE simple.

END OF M1KE OPERATOR TRAINING — KEY POINTS GUIDE

SVXReflector

This needs more than “KC Wide and SkyHub.”

The guide should explain the **choices the operator sees and what each choice means**:

- **KC Wide**
  - Select the configured KC Wide SVX destination/TG.
- **SkyHub**
  - Select the configured SkyHub SVX destination/TG.
- **Local / Local TG**, if provided by the particular SVX configuration.
- **Other configured reflectors/TGs**
  - These should be presented as Favorites rather than requiring the operator to remember numbers.

And I want to keep the important warning from Rev. 2: **we should not simply put DMR TG 313136 into the SVX section and call it SVX.** SVX talk-group numbering is determined by the particular SVX reflector/configuration.

That distinction is important.

AllStar

The AllStar section should teach the operator that **AllStar uses node numbers** and that a Favorite should therefore be something like:

Favorite	AllStar choice	Purpose
SkyHub	**46079**	SkyHub Link main AllStar hub
Local/Florida node	**Actual node number**	Local/regional operation
Other Favorite	**Actual node number**	Frequently used destination

SkyHubLink currently identifies **AllStar node 46079** as its main hub.

For Florida, there are also numerous AllStar-capable repeaters, but I don't want to invent node numbers. The current Florida listing shows 65 AllStar-capable repeaters, and the AllStarLink directory provides the authoritative searchable node list.

So I think the correct revision is:

Do not just add a paragraph. We should rebuild the **Fusion, SVX and AllStar portions of the document as real operator-choice sections**, with:

1. **What the network is**
2. **What the M1KE operator actually selects**
3. **The Favorites that should be preloaded**
4. **The destination/name/number**
5. **What happens after selecting it**
6. **What the operator should hear/see**
7. **How to return to the main network**
8. **Warnings about choices that look similar but aren't the same**

That will make the document genuinely usable for training rather than just describing the technology.

I agree with your criticism: these three sections need to be expanded substantially before we call this the final synthesized document.

yES, THAT IS WHAT IS missing

Yes. **That is the missing piece.** The document needs to tell the operator **what choices are actually available**, not merely tell them that choices exist.

I also checked the current network information so we can correct the choices rather than carrying forward old assumptions. For example, SkyHubLink currently identifies **WIRES-X Room 09799**, **YSF92722**, and **AllStar 46079**; KC Wide currently identifies **WIRES-X 28054** and **YSF32453**.

I would expand Rev. 2 with a section like this:

M1KE OPERATOR TRAINING

Expanded Network Choices — C4FM/Fusion, SVXReflector and AllStar

1. C4FM / YAESU FUSION / WIRES-X

C4FM/Fusion should be treated as a network with **specific rooms and destinations**, not simply as another profile.

The M1KE should have the C4FM/Fusion network configuration stored in its profile. The operator should normally select the profile and then select the desired room or destination from Favorites.

Recommended C4FM/Fusion Favorites

Favorite	System	Number	What it is
KC Wide	WIRES-X	**28054**	America-KC-Wide
KC Wide YSF	YSF	**32453**	US-KCWIDE
SkyHubLink	WIRES-X	**09799**	Current SkyHubLink WIRES-X room
SkyHubLink YSF	YSF	**92722**	US SkyHubLink
America Link	WIRES-X	**21080**	Major WIRES-X room

KC Wide currently lists WIRES-X Room 28054 and YSF 32453 as its primary Fusion/YSF access choices.

SkyHubLink currently identifies WIRES-X Room 09799 and YSF reflector 92722. These are **different numbers and should not be confused**

Important Fusion distinction

The operator may encounter:

- **WIRES-X room numbers**
- **YSF reflector numbers**
- **C4FM/Fusion repeaters**

They are related, but they are not interchangeable.

For example:

SkyHubLink

- WIRES-X = **09799**
- YSF = **92722**

Therefore, the operator should select the correct Favorite for the connection type being used.

KC Wide

KC Wide provides several digital-network doors into the same system. Its current published choices include:

- WIRES-X Room **28054**
- YSF **32453—US-KCWIDE**
- YSF **28054—US-XLX458** as another listed YSF option
- DMR TG **313136**
- D-STAR XLX458/XRF458 Module A

The M1KE operator does **not** need to understand all of these bridges to operate. The important point is to select the correct Favorite for the network being used.

SkyHubLink

SkyHubLink is particularly important because it is interconnected through several digital systems.

The current published choices include:

- **WIRES-X 09799**
- **YSF 92722**
- **AllStar 46079**
- DMR **310847**

SkyHubLink explains that its YSF reflector and WIRES-X room are connected by a bridge. Therefore, the operator should not assume that the YSF number and WIRES-X number are interchangeable.

C4FM operating sequence

C4FM PROFILE → FAVORITE ROOM/REFLECTOR → STATUS → LISTEN → TALK

The operator should:

1. Select the C4FM/Fusion profile.
2. Wait for the M1KE to complete the connection.
3. Check Status.
4. Select the desired Favorite.
5. Listen.
6. PTT and talk.
7. When finished, return to the appropriate profile.

Do not rebuild the network configuration simply because you want to change rooms.

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2. SVXREFLECTOR / SVXLINK

SVXReflector needs to be taught differently from DMR.

SVXLink uses **reflectors and talkgroups**, but SVX talk-group numbers are controlled by the individual SVX system. A number used by DMR does not automatically mean the same thing on SVX.

The M1KE should therefore contain **named Favorites** that correspond to the actual SVX configuration.

Recommended SVX Favorites

Favorite	Purpose
KC Wide	Connect to the configured KC Wide SVX destination
SkyHub	Connect to the configured SkyHub SVX destination
Local / Local TG	Local SVX operation, if provided by the configuration
Other Favorite Reflector	Frequently used configured SVX destination

KC Wide on SVX

The M1KE should contain the **actual configured KC Wide SVX destination/TG**

Do not simply copy the KC Wide DMR number into the SVX Favorite.

KC Wide publishes **DMR 313136**, while its other digital access methods use different identifiers.

SkyHub on SVX

The same principle applies to SkyHub.

The M1KE Favorite should contain the actual SVX destination configured for SkyHub. Do not assume that:

- DMR 310847
- AllStar 46079
- WIRES-X 09799
- YSF 92722

are interchangeable SVX destinations.

They belong to different access systems, even though SkyHubLink bridges many of them together.

SVX operator sequence

SVX PROFILE → FAVORITE → STATUS → LISTEN → TALK

The operator:

1. Selects SVX.
2. Waits for the connection.
3. Checks Status.
4. Selects KC Wide, SkyHub, or another configured Favorite.

5. Listens.
6. Transmits.

SVX with a normal FM handheld

SVX is not limited to the M1KE.

A normal FM handheld can operate through an **SVX-linked analog repeater**:

FM HANDHELD → SVX-LINKED REPEATER → INTERNET → SVX REFLECTOR → OTHER LINKED SYSTEMS

The handheld remains an ordinary analog FM radio. It needs the repeater frequency, offset and required tone. The repeater provides the Internet connection.

Some SVX repeaters allow the operator to connect or disconnect reflectors using DTMF commands. The actual commands vary by repeater and must be taken from that repeater's instructions.

This is important for training:

M1KE: connects directly to SVX over its Internet connection.

FM handheld: connects by RF to an SVX-linked repeater.

The operating experience can therefore reach the same general network from two very different access methods.

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3. ALLSTAR

AllStar deserves its own detailed operator section.

AllStar is based on **nodes**. A node is the destination the operator connects to.

The M1KE should therefore have AllStar Favorites that are **named**, so the operator does not have to remember node numbers.

Primary AllStar Favorite

Favorite	Node	Purpose
SkyHubLink	46079	Main SkyHubLink AllStar hub

SkyHubLink currently identifies **AllStar node 46079** as its main hub.

Additional AllStar Favorites

The M1KE can contain additional frequently used AllStar nodes such as:

- Local Florida node
- Local repeater node
- Regional net node
- Frequently used national node
- Other personal Favorites

The actual node number should be taken from the current AllStarLink node directory rather than being guessed. AllStarLink maintains a searchable node list for this purpose.

AllStar operator sequence

ALLSTAR PROFILE → FAVORITE NODE → STATUS → LISTEN → TALK

1. Select the AllStar profile.
2. Wait for the M1KE to connect.
3. Check Status.
4. Select the desired AllStar node from Favorites.
5. Listen.
6. PTT and operate.
7. When finished, select another saved profile to move to another network.

Why AllStar should be a separate profile

Store the AllStar configuration in its own M1KE profile.

The operator should **not** have to change the DMR, D-STAR, Fusion or SVX configuration in order to use AllStar.

The goal is:

- **Profile 1 → EchoLink**
- **Profile 2 → DMR**
- **Profile 3 → DMR**
- **Profile 4 → D-STAR**
- **Profile 5 → C4FM/Fusion**
- **Profile 6 → SVX**
- **Profile 7 → AllStar**

The operator changes networks by changing profiles, not by rebuilding the M1KE.

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4. THE IMPORTANT NETWORK-CHOICE TABLE

This table should be in the operator's quick-reference section.

Network	Favorite	Identifier

• **C4FM/WIRES-X**	• KC Wide	• WIRES-X **28054**
• **C4FM/YSF**	• KC Wide	• YSF **32453**
• **C4FM/WIRES-X**	• SkyHubLink	• WIRES-X **09799**
• **C4FM/YSF**	• SkyHubLink	• YSF **92722**
• **C4FM/WIRES-X**	• America Link	• WIRES-X **21080**
• **SVX**	• KC Wide	• **Configured SVX destination/TG**
• **SVX**	• SkyHub	• **Configured SVX destination/TG**
• **AllStar**	• SkyHubLink	• **46079**

Critical rule

Do not mix identifiers between systems.

For example:

- KC Wide DMR = **313136**
- KC Wide WIRES-X = **28054**
- KC Wide YSF = **32453**
- SkyHubLink AllStar = **46079**
- SkyHubLink WIRES-X = **09799**
- SkyHubLink YSF = **92722**

These numbers identify different network access methods. The fact that the systems are bridged does **not** make the numbers interchangeable.

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5. WHAT THE OPERATOR SHOULD SEE

The training should teach the operator to think in terms of **names**, not numbers.

Instead of:

"I need to remember 09799."

Teach:

"I want SkyHubLink on WIRES-X."

Instead of:

"What was the AllStar node?"

Teach:

"Select SkyHubLink from the AllStar Favorites."

Instead of:

"What is the SVX talk group?"

Teach:

"Select KC Wide or SkyHub from the SVX Favorites."

The M1KE's purpose is to hide the technical complexity from the operator.

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6. THE TRAINING PRINCIPLE

The operator should learn:

CHOOSE THE NETWORK → CHOOSE THE DESTINATION → CHECK STATUS → LISTEN → TALK

The numbers and technical identifiers belong in the **Favorites configuration**

They should not be something the operator has to memorize every time the radio is used.

That is the level of detail I think we were missing. **The Fusion section now has actual choices, SVXexplains what its choices mean without incorrectly borrowing DMR numbers, and AllStar has a real node choice instead of just "select a node."**

One important correction from my earlier answer: **SkyHubLink's current WIRES-X room is 09799**, while its site also documents 46361 as an older/main-room reference in some material. For the training document, I would use **09799 as the current choice** and flag older numbers as historical rather than confusing the operator.

The important improvement is that C4FM/Fusion, SVXReflector, and AllStar now have **actual operating choices**, rather than just saying "select a destination." The M1KE documentation also confirms that Favorites are specifically intended for saved PTT destinations and can be recalled from the device.

PROFILE → CONNECT → STATUS → FAVORITE → LISTEN → TALK

And make one point very clear to the program writers:

Changing networks should normally mean selecting another saved profile—not rebuilding the configuration.

The key things I would preserve are:

- **PROFILE → CONNECT → STATUS → FAVORITE → LISTEN → TALK**
- Six distinct profiles: **EchoLink, DMR, DMR+, D-STAR, C4FM/WIRES-X, SVXReflector, AllStar**
- Real Favorites/destinations where we have verified information.
- A clear explanation that **network identifiers are not interchangeable**.
- Switching profiles should **not require rebuilding or resetting the M1KE**.
- Keep the operator instructions simple enough that another ham can follow them without understanding all the underlying networking.