Voice Communication System

VCS 3020X Rel. 4.1

Short User Manual

04A28 E502.10

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Procedure step number. Press the key or take another action.

Action leads to a reaction.

Introduces an alternative action or reaction.

Stands for, equals.

Symbol for incoming chime tone (for details on all other tones refer to the User Manual VCS 3020X Rel. 4.1, Doc.No. 04A28 E501).

Symbol for special tones (for details refer to the User Manual VCS 3020X Rel. 4.1).

Press PTT, release PTT.

Key text/names (in this example for a function key or sub-menu key).

Key is unavailable for activation.

Key is idle and available for activation.

Key is transient, i.e. blinking between available and active.

Key is active.

Messages on a display.
1. Are your headset/handset and/or your microphone connected to the plug-in panel?
2. Are incoming telephone calls signalled? Check whether CHIME is active or idle - it turns the acoustic indication on and off.
3. Can telephone communication be heard via headset or loudspeaker? Check whether DAI LS, MASTER LS, GG LS are active or idle - they route audio either to loudspeaker or headset.
4. Can radio communication be heard via headset or loudspeaker? Check the LSP toggle key on the frequency control window. Check if AG LS is active or idle - it routes audio either to loudspeaker or headset.
5. Press PAGE to scroll cyclically through the pages available on your panel. Scroll through to become familiar with them and see what the operational area looks like.
6. If you have two panels at your operator position, press SPLIT to activate split position operation. Works only, if split position is enabled on the TMCS, and at least one headset is connected. Result: there is radio and telephone operation on one panel, and telephone operation with radio status indication on the other.
7. Press SET to open the settings window for brightness and volume control.
Main Page

Display area

Function keys

Radio keys

End key

Telephone keys

Select a DA-layer or the phone book

Function keys

Incoming call queue & active call display
On the main page press [SET] to open the settings window.

- Move sliders to adjust:
  - volume levels
  - A/G-G/G-balance
  - panel brightness

Clean the touch panel screen.

Panel calibration carried out by maintenance staff.

Accept new configurations or reset original ones.
Alphabetical list of function keys:

**AIR/GROUND LOUDSPEAKER:** for routing all A/G-audio to a loudspeaker (toggle between headset and loudspeaker)

Key carries the **NAME** of the **ACTIVE ROLE**; for accepting a new layout/role during panel reconfiguration

**CHIME TONE SINGLE OR STEADY:** for toggling between single and steady chime (default: CCB active)

**CHIME:** for toggling the chime for incoming call indication between ON/OFF

**CLIR:** for activating CLIR, i.e. inhibit your identity during an active ISDN-call

**CONFERENCE:** for telephone conference calls

**CUT-IN:** for monitoring and interrupting calls on other operator positions (supervisors only)

**DIRECT ACCESS INTERCOM LOUDSPEAKER:** for routing DAI-audio to a loudspeaker (toggle between headset and loudspeaker)

**DIAL PAD:** for opening the dial pad

**DIVERSION:** for diverting all telephone calls to another operator position

**DOOR:** for activating the door opener

**DROP:** for releasing the last party in a conference call
**FAST COUPLING:** for coupling all frequencies in Tx-mode with one touch

**FREQUENCY FORWARDING:** for forwarding frequencies to another operator position

**FREQUENCY INTERCOM:** for direct communication to all positions having frequencies in traffic or monitor mode

**GROUND/GROUND LOUDSPEAKER:** for routing G/G-audio to loudspeaker (toggle between headset and loudspeaker)

**HOLD:** for holding active telephone calls

**HOOK FLASH SIGNAL:** for sending a hook flash signal to an external open line

**LESS:** for switching from the second layer of function keys back to the first layer

**MAN RING:** for sending a ringing signal for a defined period

**MASTER LOUDSPEAKER:** for routing all audio to a loudspeaker (toggle between headset and loudspeaker)

**MONITORING:** for position monitoring

**MORE:** for switching to the second row of function keys

**LOUDSPEAKER OVERRIDE:** for overriding the automatic transfer of A/G-audio to LS during G/G-communication

**PAGE:** for scrolling through the panel pages
**Function Keys**

- **PICK-UP**: for picking up pending calls from other operator positions
- **PLAY BACK**: for opening the play-back window
- **POSITION CONFIDENCE CHECK**: for activating a hardware test of the operator position
- **PRIORITY**: for increasing the priority of a telephone call
- **PRIVACY MODE**: for protecting supervisor positions from monitoring
- **RELIEF BRIEFING**: for activating a two-way communication between coach and trainee
- **RUNWAY INCURSION**: for toggling the function between ON and OFF
- **SETTINGS window**: for opening the setting windows
- **SPLIT POSITION**: for splitting an operator position for separate A/G- and G/G-use
- **SUBSTITUTE**: for substituting another operator position, i.e. taking over incoming calls from there
- **TRANSFER**: for transferring an active call to another party
- **WIRELESS**: for answering calls with your wireless telephone while you are not at your operator position
- **END**: for terminating telephone calls and certain functions
### Telephone: Key States

<table>
<thead>
<tr>
<th>Key State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DA: Direct Access</strong></td>
<td>Key is unavailable for activation.</td>
</tr>
<tr>
<td><img src="image" alt="DA" /></td>
<td>Key is idle, and available for activation.</td>
</tr>
<tr>
<td><img src="image" alt="DA" /></td>
<td>Key is deselected; there is no acoustic indication for incoming calls.</td>
</tr>
<tr>
<td><img src="image" alt="DA" /></td>
<td>Symbol shows that interface for wireless telephone call activated, incoming calls are redirected to wireless phone.</td>
</tr>
<tr>
<td><img src="image" alt="DA" /></td>
<td>Symbol shows that you act as substitute for this operator position.</td>
</tr>
<tr>
<td><img src="image" alt="DA" /></td>
<td>Key is blinking between idle and active; shows an incoming direct access call (DA) on a DA-key, or in the incoming call queue (configurable).</td>
</tr>
<tr>
<td><img src="image" alt="DA" /></td>
<td>Background active; key shows an active direct access call (DA).</td>
</tr>
<tr>
<td><strong>CA: Common Answer</strong></td>
<td>Key is blinking between idle and active; shows an incoming common answer call (CA) in the incoming call queue.</td>
</tr>
<tr>
<td><img src="image" alt="CA" /></td>
<td>Background active; key shows an active common answer call (CA).</td>
</tr>
<tr>
<td><strong>CD: call display</strong></td>
<td>Background active; key shows an active IA-call on the active call display key (CD).</td>
</tr>
</tbody>
</table>
Background hold; key shows a held direct access call (DA).

Frame steady, background active; key shows an outgoing direct access call (DA).

Frame blinking, background idle; key shows that the called party is busy.

Frame steady, background idle; key shows that the used line is busy.

Frame and background blinking; key shows that this party is selected for transfer.

Background blinking; key shows that this position is out-of-service.

Frame blinking, background blinking; key shows an incoming priority call.

Frame steady orange, background active; key shows that position monitoring is active.

Frame blinking, background blinking; key shows that cut-in call is active.

Background red; key shows that a monitored operator position is muted due to a supervisor’s cut-in call.

Background blinking; key shows that an operator at a muted position tried to set up a hotline-call, which is not possible in this state.
## Direct Access Calls and Direct Access Intercom Calls

**120 DA-keys on four layers.**

**Key to open the phone book.**

**Four keys to open the DA-layers.**

### Incoming DA-calls are indicated:
- on the DA-layers
- on the layer selection keys
- on the CA-keys of the incoming call queue (if configured)

### Set up an outgoing DA-call:

<table>
<thead>
<tr>
<th>1</th>
<th>DA</th>
<th>→</th>
<th>DA</th>
<th>→</th>
<th>DA</th>
<th>2</th>
<th>END</th>
</tr>
</thead>
</table>

### Answer an incoming DA-call:

<table>
<thead>
<tr>
<th>🔔</th>
<th>1</th>
<th>DA</th>
<th>→</th>
<th>DA</th>
<th>2</th>
<th>END</th>
</tr>
</thead>
</table>

### Set up an outgoing hotline call:

<table>
<thead>
<tr>
<th>1</th>
<th>DA</th>
<th>→</th>
<th>keep pressed</th>
<th>DA</th>
</tr>
</thead>
</table>

### Answer an incoming hotline call (intercom):

<table>
<thead>
<tr>
<th>🔔 INTRUSION</th>
<th>DA</th>
</tr>
</thead>
</table>
Indirect Access: On the main page press [DIAL PAD] to open the dial pad.


Incoming CA-calls are indicated:
- on the CA-keys in the incoming call queue

Set up an IA-call:

Set up an MFC-call:

Redial last number:

Answer incoming CA-call:

Set up phone book call:
## Priority Calls

**Set up a priority call**

1. **Prio**
2. **Da** or
3. **End**

**Incoming priority call on a DA-key (with call intrusion):**

1. **INTRUSION**
2. **DA** or
   - **CA**

**Answer an incoming DA-priority call without call intrusion:**

1. **DA**
2. **DA**
3. **End**

**Answer an incoming CA-priority call without call intrusion:**

1. **CA**
2. **IA**
3. **End**

## Short Code Dialling

**Set up a short call:**

1. **Short**
2. **40**
3. **Number**
4. **End**

## Function Codes

**Activate a function:**

1. **Fn**
2. **50**
3. **4-digit access code**
## Frequency/Radio Objects

Without and with radio remote control:

### Non-coverage mode

<table>
<thead>
<tr>
<th>123.456</th>
<th>Rx</th>
<th>1234</th>
</tr>
</thead>
<tbody>
<tr>
<td>123.456</td>
<td>Rx</td>
<td>1234</td>
</tr>
</tbody>
</table>

### Coverage mode

<table>
<thead>
<tr>
<th>123.456</th>
<th>Rx</th>
<th>1234</th>
</tr>
</thead>
<tbody>
<tr>
<td>123.456</td>
<td>Rx</td>
<td>1234</td>
</tr>
</tbody>
</table>

### Open the frequency control window:

1. Open the frequency control window:

   - 123.567
   - 123.567

## Frequency Control Windows

Without and with radio remote control:

### Without radio control

<table>
<thead>
<tr>
<th>DEL</th>
<th>M</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>123.567</td>
<td>Rx</td>
<td>1234</td>
</tr>
</tbody>
</table>

### With radio control

#### and volume control per frequency:

- volume control
- remote
- scan

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Radio: Layouts

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13
Radio: Frequency Settings

On the frequency control window:

Delete frequencies:

Add frequencies:

Cancel delete frequencies, cancel add frequencies:

Select loudspeaker:

Main/standby (Rx- or Tx-mode required):

Couple frequencies (Tx-mode required):

Terminate coupling:
Indications in idle mode:

- Aircraft-initiated call:
  - Set frequency to monitor mode:
  - Transmit on this frequency:
  - PTT-lockout:
  - Out-of-service indication:
  - Transmit on emergency frequency:

- Controller-initiated call:
  - Set frequency to traffic mode:

Status indications when two radio pages are used:

Status indication in detail.
Radio remote control
and number pad:

<table>
<thead>
<tr>
<th>1</th>
<th>Open number pad.</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>= toggle between <strong>AM- and FM-mode</strong></td>
<td>Crypto, Mode99</td>
</tr>
<tr>
<td>Squelch</td>
<td>= toggle between <strong>SQU ON and OFF</strong></td>
<td>FRQ Set</td>
</tr>
<tr>
<td>SQ Level</td>
<td>= toggle <strong>SQU detection</strong> between LOW, MEDIUM, and HIGH</td>
<td>CH Set</td>
</tr>
<tr>
<td>Tx Power</td>
<td>= toggle <strong>Tx-output power</strong> between LOW, MEDIUM, and HIGH</td>
<td>Scan</td>
</tr>
<tr>
<td>Remote</td>
<td>= toggle between <strong>main and standby</strong></td>
<td>Crypto</td>
</tr>
<tr>
<td>Crypto</td>
<td>= toggle <strong>encryption mode</strong> between ON and OFF</td>
<td></td>
</tr>
</tbody>
</table>
### VCS 3020X Rel. 3.2 only: Radio - Short-Term Recording

<table>
<thead>
<tr>
<th>On the main page, open play-back window, and close window again:</th>
<th><img src="image" alt="Playback Window" /></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> PLAY BACK</td>
<td><strong>2</strong> END PLAYBACK</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Navigate and select play-back record:</th>
<th><img src="image" alt="Playback List" /></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Play back</td>
<td><strong>2</strong> Play back</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start and stop play-back:</th>
<th><img src="image" alt="Playback Controls" /></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Play</td>
<td><strong>2</strong> Stop</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Delete all records:</th>
<th><img src="image" alt="Delete Confirmation" /></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Delete all</td>
<td><strong>2</strong> Yes / No</td>
</tr>
</tbody>
</table>

### Record structure:

<table>
<thead>
<tr>
<th>Type:</th>
<th>Time: record start time</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX</td>
<td></td>
</tr>
<tr>
<td>RX</td>
<td></td>
</tr>
<tr>
<td>RTX</td>
<td></td>
</tr>
<tr>
<td>RTX©</td>
<td></td>
</tr>
<tr>
<td>Rx ©</td>
<td></td>
</tr>
<tr>
<td>TX ©</td>
<td></td>
</tr>
<tr>
<td>Ph</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ID:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Frequency</td>
</tr>
<tr>
<td>- Name/number of connected telephone party</td>
</tr>
<tr>
<td>- CONF if the telephone call was a master conference</td>
</tr>
</tbody>
</table>
### Radio: Frequency Coverage / Stuck PTT

<table>
<thead>
<tr>
<th>Manual selection of best receiver and/or transmitter.</th>
<th><img src="image1.png" alt="Diagram" /></th>
<th>or</th>
<th><img src="image2.png" alt="Diagram" /></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>BSS/receiver voting:</th>
<th><img src="image3.png" alt="Diagram" /></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Tx follows best receiver:</th>
<th><img src="image4.png" alt="Diagram" /></th>
<th><img src="image5.png" alt="Diagram" /></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Tx follows best receiver with default Tx:</th>
<th><img src="image6.png" alt="Diagram" /></th>
</tr>
</thead>
</table>

- **Define default Tx:**

- **BSS defines best Rx, Tx follows:**

- **Automatic reset to default Tx:**

<table>
<thead>
<tr>
<th>Stuck PTT:</th>
<th><img src="image7.png" alt="Diagram" /></th>
</tr>
</thead>
</table>

1. **Stuck PTT Error**  
2. **if necessary**
This Short User Manual for the voice communication systems VCS 3020X Rel. 4.1 gives an overview of the touch panel layout, and the most important functions of these user interfaces. For a complete description of the user interface, its features and functions, refer to the User Manual for the VCS 3020X Rel. 4.1 (04A28 E502), delivered with your voice communication system. All warnings and recommendations contained in the User Manual mentioned above are valid.

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Approved: P. Leydold
Released: W. Pestitschek

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