BVF-210 / 510 Video Intercom
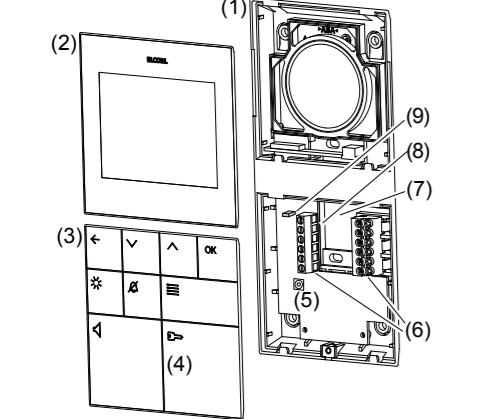(Standard)
BVF-240 / 540 Video Intercom Comfort

Safety instructions

Electrical equipment must only be installed and assembled by a qualified electrician in accordance with the relevant installation standards, guidelines, regulations, directives, safety and accident prevention regulations of the country.

Failure to comply with these instructions may result in damage to the device, fire or other hazards.

These instructions are an integral component of the product, and must be retained by the end user.

Design and layout of the device

Figure 1: Design and layout of the device

(1) Bottom part
(2) Display cover
(3) Button cover
(4) Operation buttons
(5) Potentiometer, video quality cable compensation
(6) Connecting terminals
(7) Cable entry / terminal area
(8) Video terminator to the connecting terminals XX (2-wire device)
(9) Video terminator jumper (6-wire device)

Function

The video intercom allows the display of camera images recorded on door stations or other cameras, communication with other intercoms and activation of a door release. The video intercom is available for installation in the i2-BUS 2-wire and 6-wire video system.

Correct use

- Visual and acoustic signalling of door, storey and internal calls
- Automatic camera picture display on door calls, with hands-free call acceptance
- Opening doors
- Not suitable for video monitoring
- Not compatible with intercom systems of other manufacturers
- Only suitable for use in indoor areas, no drip or spray water

Product characteristics

- Connection for storey call bell push-button
- Light button, e.g. for stairwell or courtyard light (Elcom automatic light required)
- Colour 8.9 cm (3.5", 320 x 240 pixels) TFT display with symbol display

- Manual camera switch-on and change-over for multiple camera
- Brightness, colour, contrast, ring tone melody and button sound volume as well as microphone sensitivity settable
- 16 ring tone melodies
- Ring tone melody can be switched off with control LED
- Menu available in German, English or French
- Half duplex operation settable temporarily and permanently
- System of up to 256 intercoms (video and audio) possible
- Internal calls possible
- Call waiting during current calls
- All buttons with LED display
- Cleaning mode
- Change of special functions lockable using DIP-switches
- Parallel switching of max. 3 video/audio intercoms
- Also suitable for installation on a wall box according to DIN 49073

Additional Comfort product features

- Call forwarding to other intercoms and to telephones using telephone interface
- Parallel call function - calls to another intercom are signalled
- Internal connection to other intercoms without their call acceptance
- 8 special functions can be configured, of which 4 can be configured using buttons
- Door release function to open door without incoming call
- Autom. door release settable for storey call and door call

Term	Definition
Door call	Bell push-button actuation at a door station
Storey call	Bell push-button actuation at an apartment door
Internal call	Call from another intercom
Autom. door release	Automatic door release

Definition of terms

Operation

The intercom is operated using capacitive buttons (Figure 2). A light touch of the button panels is acknowledged with a tone. The buttons trigger different actions, according to the active state of the video intercom. If available, active and activatable special functions are displayed using the LED navigation buttons and a symbol over the navigation button in the display.
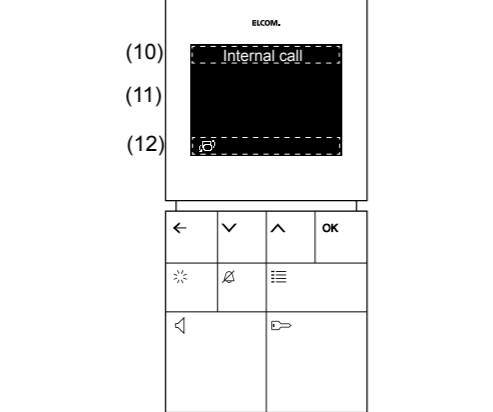

Figure 2: Display areas and button assignment of the video intercom

(10) Status line
(11) Display
(12) Toolbar to display special functions

← Back button
∨ Scroll down button
∧ Scroll up button
OK Input confirmation button
☼ Light button
⌀ Button to turn off the ring tone melody
☰ Menu button
◁ Speak/listen button
⌷ Door release button

Establishing a connection/opening the door

A door call is signalled when the assigned bell button on the door station is pressed. The door call of a video door station is signalled by the ring tone melody, the camera image with the door number data in the display, the flashing LED of the ◁ button and the illuminated LED of the ⌷ button.

ℹ The camera image and LEDs signal the door call for 90 seconds.

A door call is signalled.

■ Press the ⌷ button to activate the door release.

The door of the calling door station is unlocked and can be pushed open. The call is terminated automatically, 10 seconds after the unlocking operation.

or:

■ Press the ◁ button to set up a call to the door station.

The LED of the ◁ button lights up. The call connection is established for a maximum of 3 minutes.

■ Pressing the ◁ button again terminates the connection.

ℹ A door call to another intercom terminates image transmission and the display shows the information **Note End of Call**. The call connection is also terminated when a door call is accepted.

ℹ In the case of a door call from an audio door station, the status line of the display (Figure 2, 10) shows the door number.

ℹ On the door station, DIP-switches can be used to set whether the door release can be also be actuated without a door call.

Switching the ring tone melody on/off

■ Press the ⌀ button to switch the ring tone melody on or off.

■ When the ring tone melody is switched off, the LED of the ⌀ button flashes.

Switching on the stairwell light

The Elcom automatic light is installed.

■ Press the ☼ button briefly (< 3 s).

The stairwell light is switched on for the set delay time.

or:

■ Press the ☼ button for a long time (> 3 s).

The stairwell light is switched on continuously.

ℹ Pressing the button again in continuous light restarts the delay time.

ℹ Alternatively, the ☼ button can be used to control an Elcom i2-BUS relay.
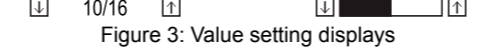
Opening the menu and navigating

■ Press the ☰ button (Figure 4).

The main menu opens.

■ Select the desired item using ∨ / ∧.

The active line in the display is shown in green.

■ Confirm the selected menu item with OK.

The next menu level opens.

ℹ If necessary, an additional selection must be made in the menu, before settings are possible.

Setting the values

Values can be set in some submenus, e.g. **brightness** or **ring tone melody**.

The value to be set appears as a text or bargraph (Figure 3) between the direction arrows to be used for the setting.

⇕ 10/16 ⇕   ⇕ ▮▮▮▮▮   ⇕

Figure 3: Value setting displays

■ Press the ∨ / ∧ button.

Short button-press: change the value by one step.

Long button-press: run through values. Scrolling stops when the button is released.

■ Press the ← button

The device applies the setting and returns to the previous submenu.

or:

■ Press the ☰ button

The device applies the setting and the display goes dark.

ℹ The display goes dark if there is no actuation for 60 seconds. Any settings made are saved.

Submenu Ⓐ1 - Video settings

The video settings submenu is only available during image transmission.

■ Select the display parameters to be set (brightness, contrast or colour) using the ∨ / ∧ button and confirm this with the OK button.

■ Set the desired value with the ∨ / ∧ button.

■ Save the settings with the ← or ☰ button.

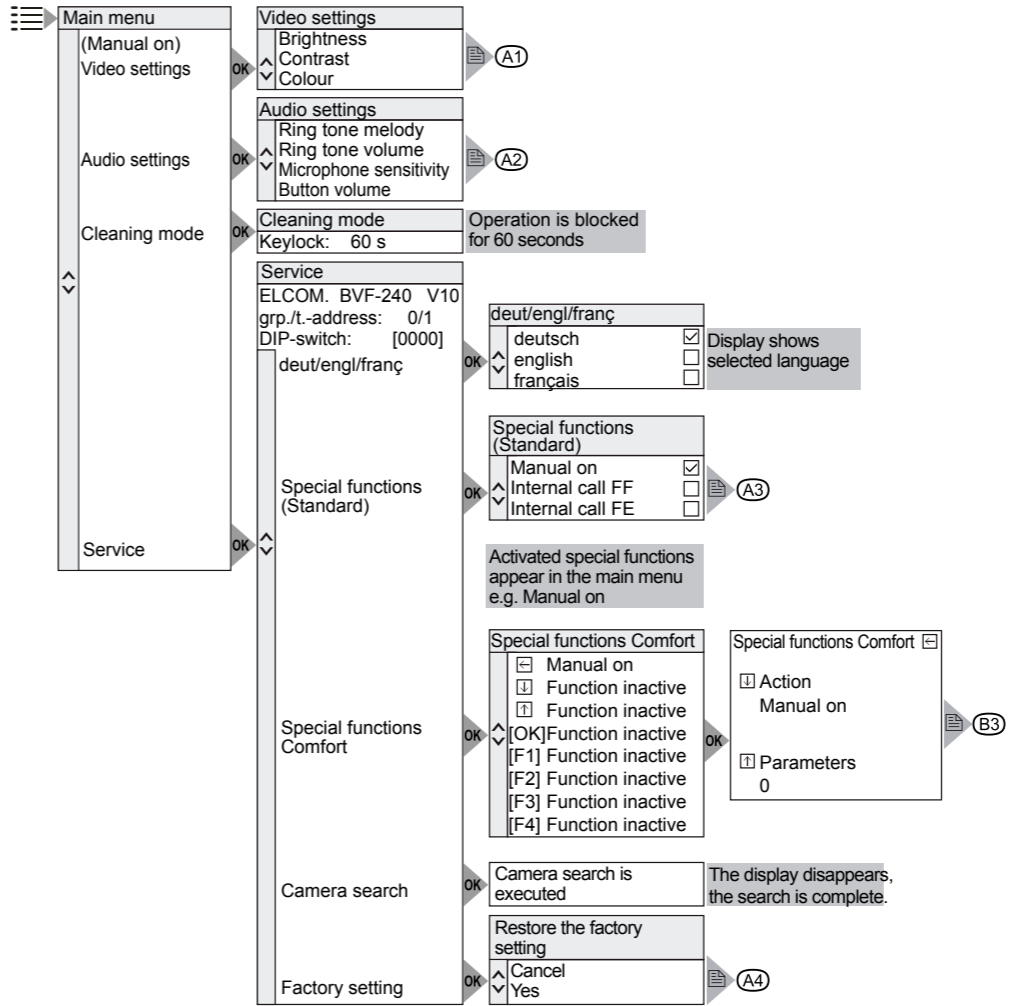Brightness, contrast and colour can be set in 9 levels (see Setting values).

Submenu Ⓐ2 - Audio settings

■ Choose the audio parameters to be set **Ring tone melody**, **ring tone volume**, **microphone sensitivity** or **button volume** using the ∨ / ∧ button and confirm this with the OK button.

■ Make the settings using the ∨ / ∧ button according to Table 1.

Audio parameters	Set with ∨ / ∧	Testing settings
Ring tone melody	1. Select the call source: storey call, internal call, or Door 0 to Door 15	
	2. Select the ring tone melody: Melody 1 to 16	The OK button plays back the current ring tone melody.
Ring tone volume	Level 1 - 3	Pressing the OK button plays back the current volume.
Microphone sensitivity	Level 1 - 5	none
Button volume	Level 1 - 4 and Off	This setting changes the volume.

Table 1: Audio settings

■ Press the ← or ☰ button to save the settings.

Figure 4: Menu overview, video intercom Comfort

6D VIDEO	**BVF-210 Video Intercom** (Standard) Art. no.: 183.210.x
	BVF-240 Video Intercom Comfort Art. no.: 183.240.x
2D VIDEO	**BVF-510 Video Intercom** (Standard) Art. no.: 183.510.x
	BVF-540 Video Intercom Comfort Art. no.: 183.540.x

Operating and assembly instructions   GB

Submenu Ⓐ3 - Configuring special functions (Standard) - Video intercom

Up to 3 special functions can be configured in the Service special functions submenu. To speed up access, configured special functions are sorted at the beginning of the main menu (Figure 4).
The special function can be opened directly via its navigation button (Table 2), if no menu is displayed. If the special function **Manual on** is activated, during a call, the toolbar for special functions (Figure 2, 12) will show, over the ← navigation button, the symbol ⎙ for camera change-over.

A special function **Manual on**, **Internal call FF** or **Internal call FE** is selected in the Service special functions submenu.

■ Activate/deactivate the special function with the OK button.

Active special functions have a checkmark in the box next to them ☑.

■ Save the settings with the ← or ☰ button.

Submenu Ⓑ3 - Configuring special functions (Standard) - Comfort video intercom

Up to 8 special functions can be configured in the Service special functions submenu. To speed up access, configured special functions are sorted at the beginning of the main menu (Figure 4).
The special functions of the navigation buttons ←, ∨, ∧ and OK can be directly called up via these, if no menu is displayed. During a call, the toolbar for special functions (Figure 2, 12) will show the symbol, if available, over the appropriate navigation button. A distinction is made between temporary and switchable special functions. In the main menu, switchable special functions also have a checkbox, which also displays their status (Table 3).

Special function item ←, ∨, ∧, OK, F1, F2, F3 or F4 is selected and confirmed with OK.

■ Select the special function with the ∨ button.

■ If necessary, select the parameter with the ∧ button.

■ Save the settings with the ← or ☰ button.

Executing special functions

The special function is configured.

■ Actuate the configured special function button.

or:

■ Select the configured menu item.

The special function is executed.

Table 2: Special functions, video intercom

Special function	Navigation button	Symbol	Function	Instructions
Internal call FF	⌄	-	Allows internal calls to intercoms with the group address F and subscriber address F.	ⓘ Works in the 2D video system only in its own line and is not transmitted to other lines via coupler. ⓘ Works in i2 audio and 6D video system with multiplex couplers in the concierge line.
Internal call FE	⌃	-	Allows internal calls to intercoms with the group address F and subscriber address E.	ⓘ Works in the 2D video system only in its own line and is not transmitted to other lines via coupler. ⓘ Works in i2 audio and 6D video system with multiplex couplers in the concierge line.
Manual On	←	🖳	Switch-on and change-over of multiple door stations and cameras without previous door call. In addition, it is possible to change between the cameras during a call.	ⓘ The camera search must be performed to display additional cameras. ⓘ Manual switch-on from the video intercom is only possible if it was called once by all the door stations after configuration. ⓘ Works only in its own line and is not transmitted to other lines via coupler.

Table 2: Special functions, video intercom

Table 3: Special functions, Comfort version

Special function	Symbol	Function	Parameters/information	Navigation button LED
Autom. door release ☑	🔓	Automatic unlocking of the system's internal door release after a door call.	Activation length 0=1 s, 1=2 s, 2=3 s, 3=4 s ...	Lights up after autm. door release activation.
SC autm. release ☑	·🔓	Automatic unlocking of a storey door release using BER relay after a storey call.	Activation length of the BER relay 0=1 s, 1=2 s, 2=3 s, 3=4 s ...	Lights up after SC autom. release activation.
SC autm. release KK ☑	·⤙	Automatic activation of the intercom's internal relay after a storey call.	Activation length of the intercom's internal relay KK 0=1 s, 1=2 s, 2=3 s, 3=4 s ...	Lights up after activation.
Video parallel ☑	▢❙❙	During the call setup to an intercom switched in parallel, the display is not switched off.	none ⓘ Works only in its own line and is not transmitted to other lines via coupler.	Lights up after activation of video parallel.
Relay KK ☑	⤙	Activation via navigation button or menu.	Activation length of the intercom's internal relay KK 0=1 s, 1=2 s, 2=3 s ..., F=On/Off	Lit for as long as the relay contact is closed.
i2 relay ☑	➔	Activation of a i2-BUS relay in function relay mode.	Relay address of the i2-BUS switching relay ⓘ Works only in its own line and is not transmitted to other lines via coupler.	Lit for as long as the relay contact is closed. (Can be switched off)
Parallel call ☑	🔔❙❙	Door calls to another intercom with the same group address are also signalled.	Subscriber address of the other intercom. ⓘ Works only in its own line and is not transmitted to other lines via coupler.	Lights up after activation of parallel call.
Call forwarding ☑	🔔➔	Door, storey and internal calls are forwarded to an intercom with an identical group address.	Subscriber address of the other intercom. ⓘ Works only in its own line and is not transmitted to other lines via coupler.	Lights up after activation of call forwarding.
Internal call	-	Allows internal calls to intercoms with an identical group address.	Subscriber address of the other intercom. ⓘ Works only in its own line and is not transmitted to other lines via coupler.	-
Internal call F	-	Allows internal calls to intercoms with the group address F.	Subscriber address of the other intercom. ⓘ Works in the 2D video system only in its own line and is not transmitted to other lines via coupler. ⓘ Works in the i2 audio and 6D video system with multiplex couplers in the concierge line.	-
Door release	🔑	Activates a specific door release, without a previous door call.	Door address of the door station ⓘ Works only in its own line and is not transmitted to other lines via coupler.	-
Internal connection	-	Immediate call connection to another intercom with an identical group address.	Subscriber address of the other intercom. ⓘ No parallel operation to intercoms to be activated. ⓘ Only possible with the intercoms BFT- and BVF-210/240/510/540 ⓘ Works only in its own line and is not transmitted to other lines via coupler.	-
Manual On	🖳	Switch-on and change-over of multiple door stations and cameras without previous door call. In addition, it is possible to change between the cameras during a call.	Door address of the first door station ⓘ The camera search must be performed to display additional cameras. ⓘ Manual switch-on from the Comfort video intercom is only possible if it was called once by all the door stations after configuration. ⓘ Works only in its own line and is not transmitted to other lines via coupler.	-
Camera switch	🖳	Change-over between multiple cameras during a call	ⓘ The camera search must be executed to display additional cameras.	-

Table 3: Special functions, Comfort version

ⓘ The special function **Camera switch** is preconfigured at the factory with the navigation button ←.

ⓘ If the special functions **SC autom. release** and **Relay** are not configured, then the internal relay KK works as a call contact for external signal generators.

ⓘ Contact Elcom regarding special functions when couplers are used.

Submenu (A4) - Resetting to the factory setting

■ Using the ⌄ / ⌃ button, select Yes and confirm with **OK**.

The configuration of the video intercom is reset to the factory setting.

Information for electricians

Installation and electrical connection

Installing the appliance

● Select a suitable installation location on a flat surface.

ⓘ Installation recommendation: use a flush-mounted wall box

● Hold the supplied drilling template on the wall at the recommended installation height of 1.5 m, and mark the fixing holes.

● Drill at the drawn-on markings and push anchors into the drillholes.

● Insert the stripped cable into the housing (Figure 1, 7).

● Fasten the bottom part of the video intercom (Figure 1, 1) to the wall with screws.

● Connect the stripped wires to the connecting terminals (Figure 1, 6) according to the supplied installation instructions.

When installing i2-BUS systems, comply with the general safety regulations for telecommunications systems according to VDE 0800:

- Separate routing of power and i2-BUS cables with a minimum spacing of 10 cm.
- Partitions between power and i2-BUS cables in shared cable ducts.
- Use of standard telecommunications' cables, e. g. J-Y (St) Y with 0.8 mm diameter

ⓘ **Avoid interference!**
 The 13-MHz video carrier frequency used for two-wire video door communication systems can cause reciprocal interference with other devices, such as radios, routers and WLAN devices.

■ Only use shielded cables corresponding to the qualities recommended in this manual.

■ It is essential to comply with the applicable regulations during planning and installation.

■ Route cables, wire the devices, and in particular implement shielding and earthing measures as described below.

ⓘ The connection cable may only be located in the terminal area (Figure 1, 7).

■ On an i2-BUS 6-wire video end device, insert the video terminator jumper (Figure 1, 8) according to the cabling, or remove it in a pass-through device.

or:

■ On an i2-BUS 2-wire video end device, connect the video terminator (Figure 1, 9) in parallel to the 2-wire cable, according to the cabling, or remove it in a pass-through device.

■ On the button cover, set the group address 0-F of the black rotary encoding switch (Figure 5, 13) according to the setting on the BTE-116 button expander.

■ On the button cover, set the subscriber address of the blue rotary encoding switch (Figure 5, 14) according to the door call connection on the BTE-116 button expander.

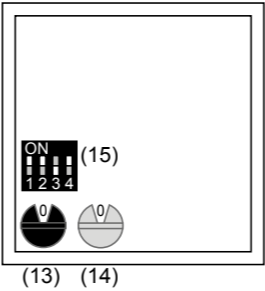ⓘ A maximum of 3 intercoms with the identical address setting may be installed (parallel operation).

Figure 5: Rotary and DIP-switch setting

■ Set the DIP switch for operating modes (Figure 5, 15) according to Table 4 below.

Switches		Function (▭ = Factory setting)
1	OFF	Full duplex speech mode
	ON	Half duplex speech mode
2	OFF	Storey call forwarding blocked
	ON	Storey call forwarding to max. 2 intercoms with the same address.
3	OFF	Configuration / change of special function possible
	ON	Configuration / change of special function blocked
4	OFF	Normal operation (no parallel call to subscriber address 0)
	ON	Parallel call to max. 2 intercoms to subscriber address 0 with an identical group address

Table 4: DIP operating mode switch, settings

ⓘ In full duplex speech mode, the changeover between listening and speaking takes place automatically according to the volume. The changeover behaviour can be optimised by adjusting the microphone sensitivity. This allows reduction of external background noise. Pressing the ◁ button for longer than 2 seconds can switch to half duplex speech mode temporarily in the current call.

ⓘ In half duplex speech mode, the change-over between listening and speaking is made using the ◁ button. Press the ◁ button to speak and release it to listen. Brief actuation of the ◁ button terminates the call. Half duplex speech mode is sensible if there is continuous background noise.

■ Hook the bottoms of the button cover and display clover (Figure 6) into the the bottom part and push them up until the locking hooks engage.

■ Remove the protective film of the button and display cover.

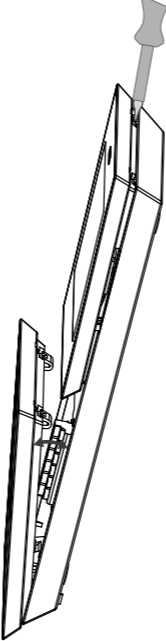ⓘ To dismantle the covers, unlock the locking hooks (Figure 6) using a screwdriver.

Figure 6: Assembly / Dismantling

If interference occurs in telecommunications systems, radio services or other systems during the operation of existing video door communication systems, measures for shielding and earthing the cables and for filtering must be implemented.

■ For this purpose, connect all of the drain wires of the cables in a star shape using a terminal.

■ Connect all drain wires to the PE rail in the distribution box.

Appendix

Technical data

BVF-2xx (6-wire)

Supply voltage a/b	17-22 V
Video supply voltage +/-	15 V
Video input, symmetrical	1 Vpp
Video terminator (6-wire), pluggable	Z=100 Ω

BVF-5xx (2-wire)

Supply voltage X/X	19-25 V
Connectable terminator	Z=100 Ω

BVF-2xx (6-wire) and BVF-5xx (2-wire)

Standby current consumption a/b	approx. 10 mA
Current consumption, video +/- or X/X (Monitor on)	< 180 mA
Internal relay KK	potential-free , max. 24 V/1A
Degree of protection	IP 30
Relative humidity	0-65% (no condensation)
Operating temperature	+5°C … +40°C
Storage/transport temperature	-20°C … +60°C
Maximum cable length	see installation instructions
Connecting terminals for conductor diameter	0.5 ... 0.8 mm
Dimensions W x H x D	96 x 196 x 21 mm

Accessories (extract)

Refer to the catalogue and system manual for more accessories.

For i2-BUS 2-wire and 6-wire video system

TKU-210/240 Universal desk console	230.130.0
BTE-116 Button expander	170.311.6
NTR-812 Power transformer for door release	120.100.4
BLA-100 Automatic light	190.110.0

For i2-BUS 2-wire video system

BTC-500 Camera/door loudspeaker	181.650.0
NGV-500 Video power supply	231.415.0
BSV-500 Line power supply	170.415.0

For i2-BUS 6-wire video system

BTC-200 Camera/door loudspeaker	181.620.0
NGV-860 Video power supply	231.410.6
BSV-200 Line power supply	170.412.0

Cleaning information

Clean by wiping the surfaces with a moist, soft, lint-free cloth. In the case of stronger soiling, use a soapy household cleaner diluted with water (e.g. detergent).

Troubleshooting

In the case of service issues, please contact your systems' engineer.

If you are a certified systems' engineer, please contact the Hager Hotline.

Warranty

We reserve the right to realise technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.